



**Strategic Management Accounting
Practices in Palestinian Companies:
Application of Contingency Theory
Perspective**

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A thesis submitted for the degree of Doctor of Philosophy at the Norwich
Business School, University of East Anglia, United Kingdom

July 2014

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To Palestine My Beloved Homeland

To My Parents for their endless love, support and encouragement

To My Wife for Her Love, Care and Support

*“We know too well that our freedom is incomplete without the freedom of the
Palestinians.”*

Nelson Mandela

*“We (the Palestinians) are the people who experienced all types of death with all
methods of killing...even the most sophisticated of weapons were used on us
but.....we are the miracle that never dies...we are the miracle that cannot die”*

Mahmoud Darwish

'In the name of Allah, the Entirely Merciful, the Especially Merciful.

All praise is due to Allah, Lord of the worlds

The Entirely Merciful, the Especially Merciful,

The Only Owner of the Day of Recompense.

It is You we worship and You we ask for help.

Guide us to the straight path

*The path of those upon whom You have bestowed favour, not of those who have evoked Your
anger or of those who are astray'.*

(Qur'an 1:1-7)

Acknowledgement

In the name of Allah (God), the Most Gracious and the Most Merciful. Praise be to Allah, Lord of the Universe and to His Messenger, Muhammad PBUH.

First and foremost, I am very grateful to Allah, the Almighty for giving me the strength, courage, peace and blessings to complete this study successfully.

With this dissertation, the long journey of my doctorate studies in the United Kingdom has come to an end. All successes, challenges, and frustrations I've gone through were part of this journey that required patience and self-determination.

My research project could not have been accomplished without the help and support of people and institutions, which contributed to many parts of this research.

First of all, I would like to warmly thank Professor Michael Tayles to act as an external examiner for my PhD viva examination and Mr Peter Russell to act as an internal examiner. Thank you for your time and your valuable comments.

I would like to extend my heartfelt thanks to my academic supervisors Dr Pinar Guven Uslu and Professor Ian Dewing for their encouragements, time, patience and guidance. Without their endeavours, this research is not a reality.

I owe special thanks to Professor Fiona Lettice, Professor Naresh Pandit, Dr Yossi Lichtenstein, Dr Simon Cadez, Dr Fadi Kattan, Dr Roula Dik and Dr Awadh Al-mamari for their extremely helpful comments and their assistance at various stages of this research.

Additionally, I am sincerely indebted to the respondents who had participated in the survey and the interviews. I am indebted to their cooperation, time and support.

I would also like to express my appreciation to the University of East Anglia and Norwich Business School for funding my PhD study. Moreover, I would like to thank all staff at INTO UEA for their encouragements and constant support.

I am thankful to my lovely friends: Dr Mohannad Kafri, Dr Fabiola Gomez, Dr Samina Walimohamed, Richard Carter, Mahmoud Nabahin, Qais Najjar, Ben Reynolds, Adrian Leeder, Basma Hakim, Helen Christopher, Simon Barne, Catherine Baker, John Armstrong and his partner Ruth and all my other friends for listening, offering me advice, and supporting me through this entire process.

Last but not least, all my profound gratitude is also addressed to my family. Without their encouragements, patience and love, this long and abroad study would not be possible.

I am especially grateful to my parents, who supported me emotionally and financially. I always knew that you believed in me and wanted the best for me. Thanks for your constant prayers for my success and health. I certainly would not be where I am today without your nurture, guidance, love and care throughout my childhood, my teenage years, and young adult years. You are, and continue to be, one of my life's biggest blessings. Thanks, Mama and Papa.

In addition, I am indebted to all my brothers and sisters Mahmoud, Hamza, Yousef, Amar, Ahmed, Khaled, Hala and Salam for their love and support. I would also like to thank my father in law Dr Taher Faroun for his constant support and my mother in law for her trust in me and her prayers for my success.

Most of all, my special thanks and love to my dear wife, Dr Mai Faroun for her endless and tremendous support, sacrifice and understanding throughout my studies.

I am deeply grateful for your love and unstinting care and support. You have inspired me to complete this study, thanks for everything you've done for me 'Habibi'.

Once again, to all who have contributed directly and indirectly to the completion of this research, thank you very much.

Abstract

This study uses a quantitative methodology to explore the impact of contingency factors on use of strategic management accounting techniques (SMA), and combined impact of SMA Usage and contingency factors on organisational performance in a less developed country (LDC) context.

The exploratory framework included two main dependent variables, namely SMA Usage and organisational performance. For the former, this study gauged the impact of perceived environmental uncertainty (competitive intensity and market turbulence), business strategy (prospector /defender), organisational structure (formalisation and decentralisation), organisational size and organisational technology on SMA Usage. For the latter, this study explored two dimensions of organisational performance (financial and non-financial) and how the conceptualised dimension(s) of organisational structure, SMA Usage, perceived environmental uncertainty and organisational strategy impact on performance.

Data were collected from Palestinian large companies (cross sectors); was used to test the conceptualised framework. The analysis was based on 175 responses, representing a response rate of 43.75%. The SPSS package was used to confirm the reliability and validity of factors and also statistically estimated the association coefficients of the conceptualised relationships in the framework.

The findings from this study suggest that the usage of SMA techniques is influenced by a number of factors. These are perceived environmental uncertainty (Market Turbulence) and organisational technology. Also, larger organisations tend to use more SMA techniques than smaller.

There is also evidence from this study that suggests defender or prospector type strategy would influence the usage of strategic management accounting techniques.

This study also suggests that SMA usage has a direct positive association with non-financial performance. Perceived Environmental Uncertainty (Competitive Intensity) has a positive influence on non-financial performance but not on financial performance. From the overall evidence it appears that large Palestinian companies give more importance to non-financial element of organisational performance.

The conclusion to this study pinpointed the core empirical points from this research. This study underlines the central importance of SMA usage to achieving strategic goals and enhancing performance in organisations. To maximize strategic alignment however, organisations must ensure that the right steps are taken to manage the internal and external factors and achieve a fit. Essentially too, for this strategic alignment target, and the goal of improving performance, organisations must also bear in mind the national culture and Islamic Sharia regulations driven expectations.

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List of Abbreviations and Acronyms

Abbreviation	Term
SMAU	Strategic Management Accounting Techniques Usage
PEU	Perceived Environmental Uncertainty
OP	Organisational Performance
OT	Organisational Technology
ORGSTR	Organisational Structure
ORGSTRFORM	Organisational Structure-Formalisation
ORGSTRDCENT	Organisational Structure-Decentralisation
PEUCOMPINT	Perceived Environmental Uncertainty-Competitive Intensity
PEUMKTTURB	Perceived Environmental Uncertainty-Market Turbulence
ORGPFRNF	Organisational Performance-Non-Financial
ORGPFRFIN	Organisational Performance-Financial
PCI	Perceived Competitive Intensity
PMT	Perceived Market Turbulence
OS	Organisational Strategy
OSZ	Organisational Size
MAP	Management Accounting Practices
MIS	Management Information System
MCS	Management Control System
PMS	Profitability Management System
EMCS	Environmental Management Control System
LDC	Less Developed Country
PLO	Palestine Liberation Organisation
Intifada	Uprising
WB & GS	West Bank and Gaza Strip: After the Israeli Occupation of Palestine in 1948, Palestine was divided into two parts (West Bank & Gaza Strip) which counts about 18% of Palestinian Territories while the rest of territories is being occupied under the Israeli Occupation Forces (IOF)

1. Introduction to the Study

1.1 Introduction

The focus in this chapter is to provide a general introduction to this thesis. In doing this, six central contexts are addressed, namely the background of the study (Section 1.2), the research rationale and importance, which justifies the need for this research and the theoretical perspectives guiding the framework (Section 1.3), the research aim and objectives (Section 1.4), the research methodology and brief justification (Section 1.5), and the structure of the thesis (Section 1.6).

1.2 Background of the Study

Contingency literature underlines the need for organisations to ensure appropriate strategic approach that allows them to effectively adapt their internal and external environmental factors to enable them compete favourably in the marketplace (e.g., Pratt, 2004; Miles, 2003). A critical organisational activity in this strategic drive and the goal of competing favourably in the marketplace is effective decision making. In this effective decision making regard, scholars not only emphasise the important role that strategic management accounting (SMA) plays, but also underline the need to enhance the understanding of the contingency perspective.

Successful managerial decisions improve overall organisational profitability (Raaij et al., 2003; Lee & Park, 2006). Accounting is relevant to management (Roslender & Hart, 2002), and the history of management accounting reflects “significant scholarly and practitioner” effort (Roslender & Hart, 2002, p. 255) geared towards enhanced managerial decisions for strategic positioning (e.g., Roslender, 1995, 1996; Roslender & Hart, 2002) and overall organisational performance (e.g., Bromwich, 1990; Cadez & Guilding, 2008; Roslender &

Hart, 2002; Sidhu & Roberts, 2008). This management accounting perspective builds on the strategic management accounting foundation (Simonds, 1981).

A core feature of modern-day business environment is fast evolving customer demands (Cadez & Guilding, 2008). To survive in such circumstance, organisations must embrace market orientation. Organisations that do that will profitably satisfy customers (Roslender & Hart, 2003; Opute, 2009), consolidate competitive advantage (Perera et al., 1997), and achieve enhanced performance (Slater & Narver, 1994; Henri, 2006).

Therefore, SMA advocates contend that, for a more market oriented focus, strategically tailored accounting is pertinent. Put in accounting literature terms, “to survive, a firm must continue to offer the cheapest way for consumers to obtain the desired bundle of attributes” (Langfield-Smith, 2008, p.209), and organisations must align their management accounting activities towards this target (Bromwich, 1990).

1.3 Research Rationale and Importance

"Today virtually no one in business makes a decision without acquiring information of some kind. The quality of the decision depends on the quality of the information and how it is used." (Lewis & Chambers, 1989, p. 505).

Strategic management accounting (SMA), which was first mentioned by Simmonds (1981) in the UK professional magazine, *Management Accounting* (p.12), would aid quality decision making if management accounting information is appropriately supplied. Given its importance to quality decision making, scholars have increasingly argued in favour of SMA or strategic cost management (SCM) (across the Atlantic) (e.g., Bromwich, 1990; Bromwich & Bhimani, 1994; Johnson & Kaplan, 1987; Miller & O’Leary, 1994; Roslender, 1996; Kaplan & Norton, 1992, 1996; Roslender & Hart, 2002a, 2002b, 2003; Shank, 2007; Anderson, 2007; Cadez & Guilding, 2007; Langfield-Smith, 2008).

Knowledge about strategic management accounting is however still evolving as both academics and management practitioners search for ways to ensure the maximisation of strategic and organisational performance impact of SMA. For example, Woods et al (2012) comment that while strategic management accounting continues to be of considerable interest to academic accountants, it still suffers from a relative dearth of empirically based research. A major shortcoming in the knowledge about SMA is that the majority of the studies (as evident above) reflect Western world contexts. Therefore, one core knowledge evolution direction is the less developed countries (LDC) context (e.g., Alrawi & Thomas, 2007; Leftesi, 2008; Tuan Mat, 2010; Islam & Hu, 2012).

Furthermore, there are increasing comments about SMA and role in improving organisational performance that need to be enhanced through further research. For example, SMA studies suggest that some accounting officers within organisations play a growing role in the provision of information for strategic decision making (e.g., Bhimani & Keshtvartz, 1999) and that they are increasingly engaged in strategic corporate activities (e.g., Guilding et al., 2000; Guilding & Mcmanus, 2002). Other SMA literature (Palmer, 1992; Simonds, 1981, 1982; Bromwich, 1990) view strategy development and implementation as formal endeavours to which strategically oriented management accounting practices can contribute.

According to further strategy context literature (e.g., Shank & Govindarajan, 1988, 1989 & 1992; Shank, 1996), if strategic management accounting tools (for example cost management approach, value chain analysis, cost driver analysis and competitive advantage analysis) are used this will aid comprehensive and balanced assessment of strategic issues. Another spectrum of management accounting literature which relates to the strategic context includes life-cycle based strategic accounting (Wilson, 1995), target and Kaizen costing (Cooper & Slagmulder, 1997), interactive management controls (Simons, 1995), the balanced scorecard (Kaplan & Norton, 1992, 1996 & 2001), activity-based management systems (Kaplan &

Cooper, 1998), quality costing (Tayles et al., 1996), inter-organisational cost management (Cooper & Slagmulder, 2004), customer accounting (Donelan & Kaplan, 1998; Foster & Gupta, 1994; Ryals & Payne, 2001; Ryals & Knox, 2004; Ryals, 2008) and customer life-value accounting (Jain & Singh, 2002; Gupta & Lehman, 2003; Vogel et al., 2008; Ambler & Roberts, 2005).

Relationship management context literature (e.g., Bromwich & Bhimani, 1994; Roslender & Hart, 2002; Opute et al., 2013) also pinpoints SMA backgrounds that would aid the target of profitably satisfying customers (Roslender & Hart, 2002). According to Opute et al (2013), if the accounting role is effectively performed, the marketing function will be supplied with quality information that would aid strategic marketing decision making and implementation, integration perspective that reinforce previous work by Roslender & Hart (2002). To optimize those outcomes, attention must be given to the contingency factors that shape this relation, Opute et al (2013) further note.

According to organisational performance perspective, while there is notable quantum of attention given to market orientation by strategy and marketing researchers (Hult et al., 2005) this has not been matched by management accounting researchers (Guilding & McManus, 2002). Numerous researches underline the need to explore SMA (or MAPs/MCS) modus, process and effectiveness. Especially on this tripartite (modus, process and effectiveness) contexts, it is important to explain how the internal and external dynamics of an organisation would shape the importance and use of SMA and its interplay to organisational performance (e.g., Leftesi, 2008; Chenhall, 2007; Cinquini & Tenucci, 2010; Cadez & Guilding, 2008; Hwang, 2005; Jusoh, 2010; McManus, 2012), hence the focus in this present study. The core argument in this study is that organisations that are more able to manage these contingency dynamics would achieve a better fit for SMA usage and organisational performance (See Chapter 8).

1.4 Research Aim and Objectives

While interest in SMA is growing (See Roslender & Hart, 2003; Cadez & Guilding, 2009, 2008; Bhimani & Langfield-Smith, 2007; Langfield-Smith, 2008), there is still no consensus as to what constitutes SMA (e.g., Cadez & Guilding, 2008; Roslender & Hart, 2003; Langfield-Smith, 2008). More research therefore is needed to illuminate “the adoption of strategically-oriented management accounting techniques” (op. cit.). Other SMA literature (e.g., Ryals & Payne, 2001; Ryals & Knox, 2004; Ryals, 2008) also flags the need for further examination of the customer accounting, competitor accounting and value chain contexts of SMA.

In trying to understand SMA (including MAPs and MCS), researchers have used a variety of exploratory frameworks, including contingency theory, agency theory and other theories. Of central relevance to this present research is the contingency theory which posits that organisational structures and systems are a function of environmental and firm-specific factors (Chenhall, 2003; Gerdin, 2005; Haldma & Lääts, 2002; Cadez & Guilding, 2008); a viewpoint that underlines the importance of ensuring a fit in the use of strategic management accounting techniques, in order to maximize the performance benefits.

In this contingency perspective, researchers have attempted to investigate the factors that influence the adoption of the SMA techniques, by trying to answer questions on how the types of Organisational Strategy (e.g., Hoque, 2004; Leftesi, 2008; Guilding & McManus, 2002; Hwang, 2005; Dent, 1990; Chenhall, 2003; Langfield-Smith, 2007; Shank & Govindarajan, 1992; Chenhall & Langfield-Smith, 1998; Cinquini & Tenucci, 2010; Cadez & Guilding, 2008), Organisational Technology (e.g., Granlund, 2011; Hald & Mouritsen, 2013; Dechow & Mouritsen, 2005; Haldma & Lääts, 2002), Environmental Uncertainty (e.g., Hoque, 2004; Govindarajan & Shank, 1992; Hope & Hope, 1995; Leftesi, 2008; Foster & Gupta, 1994; Simons, 1990; Libby & Waterhouse, 1996; Guilding & McManus, 2002; Hwang, 2005),

Organisational Structure (e.g., Hwang, 2005; Leftesi, 2008) and Organisational Size (e.g., Leftesi, 2008; Cadez & Guilding, 2008; Cinquini & Tenucci, 2010).

Furthermore, contingency logic suggests that the extent and priority given to the nature of organisational performance are shaped by Organisational Structure (e.g., Miles & Snow, 1994; Hwang, 2005), Organisational Strategy type (e.g., Hoque, 2004; Ittner et al., 1997; Hwang, 2005), Environmental Uncertainty (e.g., Hoque, 2004; Govindarajan, 1984; Chenhall & Morris, 1986; Chong & Chong, 1997; Gul & Chia, 1994; Hoque & Hopper, 1997; Mia, 1993; Mia & Chenhall, 1994; Kohli & Jaworski, 1990; Hwang, 2005) and the SMA techniques in use (e.g., Ittner et al., 1997; Miles & Snow, 1978; Simons, 1990; McManus, 2012; Cadez & Guilding, 2008; Baines & Langfield-Smith, 2003; Cravens & Guilding, 2001; Mahama, 2006; Mia & Chenhall, 1994; Ittner et al., 2003). Finally, the contingency perspective suggests association between the Organisational Strategy type and the environmental uncertainty of the organisation (e.g., Hwang, 2005).

To contribute to the understanding of SMA practices in Palestinian companies, contingency factors and performance implications, this study draws upon the three realms of contingency perspective mentioned above to conceptualise a framework (See Figure 4.1) that has been theoretically justified in chapter three. Two more contingency variables named Organisational Technology and Organisational Size are explored in the study (See Figure 4.1).

The aim of this study is to explain the extent to which Palestinian companies adopt strategically-oriented management accounting techniques, and the contingency factors that influence their adoption and performance of the explored companies (See Chapter 8). To achieve the above specified aim, the objectives of this study are to answer the below research questions:

1. What SMA-techniques do Palestinian Companies use and how do these influence their organisational performance?
2. What influence do the contingency factors have on the choice of these SMA-techniques?
3. What contingency factors influence the organisational performance of Palestinian Companies?
4. What influence does organisational strategy have on organisational structure and organisational performance?
5. What influence does perceived environmental uncertainty have on organisational structure, organisational performance and organisation strategy?
6. What influence does organisation structure have on SMA techniques and organisational performance?

In answering the above questions this LDC-context research will contribute to the knowledge about SMA techniques usage in organisations and the contingencies surrounding the nature and extent of use. Also, this study will contribute to the understanding of the conceptualisation SMA techniques and contingency variables that would influence organisational performance.

1.5 Research Methodology

The unit of analysis for this study is Palestinian companies that meet the defined criteria for the study. Following the tradition in previous studies that examined the contingency perspective of SMA (and MAPs and MCS) usage, positivist research methodology was applied in the study. A questionnaire was used in this study. To ensure appropriateness of the instrument for this study, a pilot study was undertaken, and subsequently the questionnaire

was revised taking into consideration the constructive feedbacks from respondents and finalised for the study. The finalised questionnaire was sent (along with a letter explaining the study) to the Chief Accountant or Chief Controller or Chief Financial Officer (as applicable for the respective companies) of the companies, as (1) these were considered appropriate for a study of this nature (Baines & Langfield-Smith, 2003), and (2) organisations in less developed countries (LDCs) may not have a separate management accounting unit (Smith et al., 2008). The sample for this study included 400 largest Palestinian companies. The total number of completed questionnaires upon which this study is based is 175, representing a response rate of 43.75%.

Descriptive statistics in terms of means and standard deviation were estimated to achieve the descriptive objectives. Factor analysis and then multiple regression analysis were undertaken to test the research hypotheses (See Chapter 5).

1.6 Structure of the Thesis

This thesis comprises of eight chapters. First, this present **Chapter (One)** introduces the study explaining the need and purpose of the study. Also, this chapter summarises the methodological approach used to explore the research questions.

Chapter Two focuses on the Palestinian economy, which is the context in which this study is positioned. Chapter two summarises the core features of the economy, explaining concisely which part of the country and what industrial sectors are covered in the study.

Chapter Three reviews relevant literature pinpointing the theoretical foundations for this study. Three core areas of literature are reviewed in this chapter. First, the theoretical foundations concerning strategic management accounting techniques and dimensions were presented. Also, literature about organisational performance was reviewed, and distinguishing in the process the financial and non-financial dimensions. Finally, chapter three also reviewed

literature concerning the contingencies of strategic management accounting techniques usage and organisational performance.

Chapter Four introduces the framework and specifies its underlining hypotheses for the study while **chapter Five** explains the paradigmatic position of this study as well as reviews relevant methodological literature. Finally, this chapter explains the population and sample of the study, as well as the survey tool used.

Chapter Six presents the descriptive findings. Also, this chapter presents the statistical results for each factor captured in the factor analyses. Overall, the core focus of this chapter was to justify the reliability and validity of factors.

Following that, regression analyses were conducted to test the hypotheses for this study, and the results are presented in **chapter Seven**. The discussion of the findings from this study is also presented in chapter 7.

Finally, **chapter Eight**, which is the last chapter, presents the main conclusions from this study. Chapter eight also pinpoints the theoretical and managerial implications, as well as the limitations of the study. Chapter eight is concluded with a specification of directions for future research.

2. Explaining the LDCs and Palestinian Context of the Study

2.1 Introduction

In chapter one the need for and purpose of this study was explained. The purpose of chapter two is to explain further the justification for this study by outlining why it is important to explore the less developed countries (LDCs) and Palestinian context. Next, the LDC focus in this study is justified (See Section 2.2) and following that Section 2.3 explains why it is necessary to explore the Palestinian context. Finally, Section 2.4 gives a short background of the Palestinian economy.

2.2 Why Explore the Less Developed Countries (LDCs) Context?

A number of reasons justify the focus of the study to explore the contingency perspective of strategic management accounting techniques usage and performance in a less developed countries (LDCs) setting, namely;

1. While the importance of management accounting information to planning, decision making and control in organisational dynamics is well documented, very little research has been conducted on the less developed countries (LDCs) context (Alattar et al., 2009; van Triest & Elshahat, 2007),
2. The studying of the role of novel management accounting practices within contemporary settings is necessary to ensure that management accounting research is relevant (Ittner & Larcker, 2001; Chenhall, 2003; Leftesi, 2008),
3. Culture is a major factor affecting the structure of business and society (e.g., Alawattage et al., 2007) and also accounting practices. While this logic is important, knowledge development in the area of strategic management accounting and contingency features largely reflects western context. Therefore,

researchers (e.g., Kantor et al., 1995; Lybaert, 1998; Alawattage et al., 2007) call for researches that illuminate accounting practices in less developed and Arab economies. This study therefore explores the Palestinian context of the contingency perspective strategic management accounting practices, as well as performance contingencies.

2.3 Why Explore the Palestinian Context?

The competitive global environment in which companies operate is increasingly becoming more challenging (Johnson & Kaplan, 1987). In the past three decades, conventional costs and management accounting practices have come under extensive criticisms for failure to support change and to tailor accounting practices to cope well with changing environment (Hajjawi, 2012). Previous studies justify the importance of exploring the contingency perspective of strategic management accounting techniques usage and performance in Palestinian companies. A number of reasons found in the literature include the following:

1. Combining the views expressed above by Johnson & Kaplan (1987) and Hajjawi (2012), there is a justified need to explore the Palestinian context of strategic management accounting techniques usage, especially given the argument that major acquisitions in Palestine have increased the need for more sophisticated and advance management accounting information towards coping with external market pressures (Hajjawi, 2012),
2. There is need to explore strategic management accounting practices in Arab countries (Dik, 2011, Kattan et al., 2007; van Triest & Elshahat, 2007),
3. There is lack of research about management accounting in less developed countries (LDCs) and Arab countries (Alatter et al., 2009; Lybaert, 1998; Alawattage et al., 2007; Kattan et al., 2007; Leftesi, 2008; Hopper & Hoque, 2004),

4. Exploring the strategic management context in Palestine is necessary (Alatter, 2009; Alawattage et al., 2007; Kattan et al., 2007),
5. While numerous researches have explored management accounting practice in advanced countries (Joshi et al., 2003), it is important to highlight the Arab world and less developed countries contexts because culture (Hofstede, 1980; Alawattage et al., 2007) and governance issues (Alawattage et al., 2007) may shape SMA practices. In their study of management accounting practices in LDCs, van Triest and Elshahat (2007) argue that non-western cultures reflect different norms of reciprocity and interaction. Kattan et al. (2007) also note that “there is enormous diversity among organisations” (p.229),
6. Less developed countries (LDCs) have been marginalised in the drive to enhance knowledge about the use of management accounting tools, although "the bulk of the world's population lives outside locations prominent in mainstream research," (Alawattage et al., 2007, p.183). The accounting needs and concerns of these countries are as pressing and considering the wave of globalisation "they form an essential part of the mosaic of world trade." (Alawattage et al., 2007, p.183),
7. Studying of the role of novel management accounting practices within contemporary settings is necessary to ensure that management accounting research is relevant (Ittner & Larcker, 2001; Chenhall, 2003),
8. Point (1) of Section 2.2 above underlines the importance of management accounting information to planning, decision making and control in organisational dynamics and the need for more research on the less developed countries (LDCs) context (Alattar et al., 2009). This logic also holds for Palestinian companies,

9. Palestinian companies need to cope regularly with various determinants of accounting standards and to focus on the ways management accounting is being used in the prevailing economic conditions where Israeli occupation plays a major role (Hajjawi, 2012). In this connection, contingency theories offer a good empirical base to enhance the understanding of the factors that explain how Palestinian companies use management accounting practices to cope (Hajjawi, 2012).
10. The Palestinian business environment provides a perfect ground for study of management accounting under conditions of environmental uncertainty (Kattan et al., 2007). The business environment has experienced in the last century different periods each with varying degree of uncertainty. In Palestine, the level of 'uncertainty' is high so it's a special case.

Overall, the significance of this study originates from the fact that Palestinian case provides an excellent field for testing of contingency variables for application of SMA practices.

2.4 Background of the Palestinian Economy

This Section is presented with a focus to highlight two core points, namely the occupying influence of Israel in the Palestine nation (Section 2.4.1) and the Palestinian economy under uncertainty (Section 2.4.2).

2.4.1 Israel's Occupying Influence on Palestine

This Section highlights core features of the Palestinian economy and the role Israeli occupation plays in that connection. Highlighting these features is important for the context of this study because these features influence the degree of economic activity in the nation, and this study explores the contingency perspective.

As the Arabs did not accept the 1947 UN partitioning of Palestine into Arab and Israel states a war broke out (Gilbert, 2008). Since winning that war decisively in 1967, Israel has occupied all the land from the Jordan River to the Mediterranean Sea, bounded by Syria and Lebanon in the north, Egypt in the south and Jordan in the east (Bregman, 2002). With no other alternative, Palestinians had to accept the Oslo Peace Accord of 1993, which was believed to be a good option towards achieving peaceful resolution of the conflict (Halliday, 2005).

Unfortunately, the much desired peaceful resolution is far from being achieved; rather the conflict escalates daily, and is intensively fuelled by Israeli army occupation of Palestine and continual building and expansion of illegal Israeli settlements, a move that was not welcomed by the local population (Cleveland & Bunton, 2008). The direct outcome of these developments, as Cleveland & Bunton (2008) further note, are re-generation cycle of violence, incitement, frustration, hopelessness, serious financial problems, and fragmentation of the Palestinian politics and society.

In retaliation for the outbursts on the part of the Palestinians, Israeli army imposed economic blockade and restrictions on Palestinians movement (UN Office for the Coordination of Humanities Affairs, 2007). The direct consequence of this movement restriction for Palestinians is that (1) trade routes are significantly affected due to sheer number of 648 Israeli checkpoints and other physical limitations in the occupied territory (UN Office for the Coordination of Humanities Affairs, 2007) and (2) therefore have no access to external world by land, air or sea, and are enslaved within Israel the occupies 78% of the land (Pappé, 2004).

In these prevailing circumstances, the Israeli-occupied territories of Palestine continue to face harsh multi-faceted problems and suffer serious imbalances despite economic and

institutional reforms (Arnon, 2002). The World Bank estimates show a gross domestic product (GDP) level of US\$1,036 for Palestine per year comparative to US\$22,563 for Israel. While some degree of aids have been given to the Palestinian nation, this has not been sufficient to alter the worsening long-term development prospects that has been triggered by continued loss and erosion of productive base, fragmentation of domestic markets, the construction of a separation wall in Palestine and isolation of Arab Jerusalem, land and natural resources (UN Office for the Coordination of Humanities Affairs, 2007).

The Palestinian economy is completely isolated from neighbouring Arab markets, and the end to this plight would remain elusive as long as Israel's continued occupation, expansion of illegal settlement and control over access to global markets is not put to an end (Siam, 2009). As Ravid (2012) notes, the Palestinian fiscal position is precarious despite efforts made to achieve fiscal sustainability, a circumstance that is driven by dependence on the Israeli economy.

Several interventions have been initiated to support Palestinians and alleviate their economic hardship due to Israeli occupation. Amongst these are the UN Conference on Trade and Development (2009, August) intervention and the integration of Palestine with its Arab hinterland, which "has been interrupted by two generations of war and Israeli occupation", (Hajjawi, 2012, p.31). The direct effect of these interruptions is that there is no substantial boost to the Palestinian economy (Sherwood, 2011), a problem that is also compounded by Paris Protocol (1994) that does not permit needed policy instruments to implement corrective measures for promoting Palestinian socio-economic development (Hajjawi, 2012).

Consequently, the Palestinian macroeconomic state reflects Israel economic policy orientation and political imperatives (Hajjawi, 2012). Thus, as Daud (2011) argued, the Paris Protocol which shaped the Palestinian trade regime and defined the economic and trade relations between Israel and the occupied Palestinian territories was a major constraint on Palestinian development and the trade and industrial policies open to the Palestinians.

The combined effects of the generic factors of the Palestinian environment did not only affect the viability of existing businesses but also discouraged potential domestic and foreign investments (Hajjawi, 2012). The productive base of the Palestinians was relatively deformed as a result of the constraints imposed by Israeli occupation (Cottier & Pannatier, 2000). A further consequence of the restrictions on the movement of Palestinian goods and people is the inflation of business transaction cost (Hajjawi, 2011; UN General Assembly).

2.4.2 The Palestinian Economy under Uncertainty

The Palestinian economy is centred on two Palestinian controlled territories, West Bank and Gaza strip, with West Bank being the larger of the two territories. The two regions are generally low income with nominal per capita income estimated to be less than \$2000 (World Bank, 2004).

The economy is largely dependent on direct foreign aid and remittance from Palestinians living abroad (World Bank, 2004). The country is not endowed with vast oil reserves like most of its Arab neighbours and there are no major foreign exchange earners to spur growth of local industries and investments in infrastructure (World Bank, 2004). Most of its foreign earnings other than remittances and aid are from export of soaps and textiles.

The Palestinian economy has experienced uncertainty in both the political and business environment over the years and has never had continuous period of economic stability in the last two centuries (World Bank, 2004, Kattan et al., 2007). The unending disputes with Israel over territorial boundaries and right for self-determination have placed the Palestinian territories under perpetual political uncertainty that has kept away foreign direct investors thereby denying the region the much needed economic growth (Kattan, et. al, 2007).

However, the political shift that ended the first uprising (Intifada) in 1993, led to a period of relative calm during which the Palestinian territory experienced many economic activities. In the recent past, the economy has experienced a long period of relative calm that has seen the territory's Gross Domestic Product (GDP) grow by up to seven percent in 2009.

There is evidence of application of management accounting among Palestinian organisations (Kattan et al., 2007). The high level of uncertainty in the business environment may have informed Palestinian business managers to incorporate aspects of management accounts information in to their established performance reporting systems.

According to Alawattage et al. (2007), the study of MA in developing countries, such as Palestine, should also focus on the implications of such issues as poverty, political instability and uncertainty, business culture and ethics, corruption and such other ills that affect business (Alawattage et al., 2007).

The Palestinian business environment provides a perfect ground for study of management accounting under conditions of environmental uncertainty (Kattan et al., 2007). The business environment has experienced different periods each with varying degree of uncertainty. The period before the signing of the Oslo Accord in 1993, was one such

period when the country experienced many political activities and turmoil that was not conducive for business (Kattan et al., 2007). With heightened media attention, negative political pronouncements, political demonstrations and military blockades, the country was literally a war zone with aid agencies playing a significant role in meeting the demand for essential commodities. However, the reliance of local businesses has seen the region's economy survive such uncertain period with remarkable success (Kattan et al., 2007).

The seven-year period after the signing of the Oslo Accord was characterised by relative calm and certainty that led many businesses to grow and expand their operations into Palestinian territories (Kattan et al., 2007). The easing of military blockades by the Israeli government ensured free flow of goods and work force in and out of the two Palestinian territories (Kattan et al., 2007). This period experienced high economic growth and political stability that enabled businesses to flourish and grow their value considerably (Kattan et al., 2007). This period also experienced a lot of inflow of donor funds that greatly supported the economy that has little exports to boost its foreign exchange reserves. Equally significant was the increase in remittances from Palestinians living abroad, some of whom relocated to the country to take advantage of the peaceful environment to invest their earnings and savings at home (Kattan et al., 2007).

This period was short-lived as subsequently followed by the second Intifada in 2000, which marked the beginning of renewed violent protests and military activities in all the two Palestinian territories (Kattan et al., 2007). The uprising seriously affected business and led to another uncertain period of slow business activities in the decade that followed (Kattan et al., 2007). The negative impacts of uncertainty such as capital flights, reduced foreign direct investments, and insecurity occasioned by lack of employment for the

youthful population meant that Palestinian companies had to endure hard economic times unless innovative ways were sought to cushion them against such problems.

The Palestinian territory does not have its own currency and uses other regional and international currencies to facilitate trade. The currencies predominantly used include the US Dollar, Euro, Jordanian Dinar and Israeli Shekel for savings and commercial exchanges (PIC, 2008). Transactions such as salaries especially in the private sector are quoted in Jordanian Dinar for local firms while multinational organisations, aid agencies mostly conduct their transactions in the US Dollar (PIC, 2008).

As mentioned earlier, the Palestinian economy is centred on two Palestinian controlled territories: West Bank and Gaza Strip with West Bank being the larger of the two territories. The West Bank and Gaza is a small and open economy (The World Bank Report, 2012). According to macro economic data, there is relatively little private sector investment in the West Bank and Gaza Strip, a circumstance that is largely influenced by Israeli restrictions (The World Bank Report, 2012). Table 2.1 below shows the statistics (number of establishments and employments) in the Palestinian Private Sector as at 2009.

Table 2.1: Number of Establishments and Employment by Economic Activity 2009

	WB & GS		West Bank		Gaza Strip	
	No. of Establishments	Employ	No. of Establishments	Employ	No. of Establishments	Employ
Industrial Activities	15,322	67,052	11,791	54,064	3,531	12,988
Construction	508	5,200	301	4,558	207	642
Internal Trade	61,340	125,033	42,508	82,090	18,832	42,943
Service Activities	24,114	85,756	17,406	61,407	6,738	24,349
Transport, Storage & Communications Activities	1,169	9,568	718	8,107	451	1,461
Total	102,483	292,609	72,724	210,226	29,759	82,383

Source: Palestinian Central Bureau of Statistics (2009)

The research was conducted in the West Bank as this area is the base for the largest companies and moreover, the companies were willing to participate in this research. Also, due to relative ease of access and the convenience it accords the research. Consequently, Gaza Strip was excluded from the study.

According to Mintzberg (1979), organisation size can be measured by the number of employees, the amount of sales, the size of the budget, the size of the capital investment, and other factors.

Palestinian Central Bureau of Statistics (PCBS) defined Palestinian companies' size based on employment size group. For the purpose of this study therefore, the focus was on large companies with the capacity as defined in Table 2.2 below. Furthermore, Federation of Palestinian Chamber of Commerce, Industry & agriculture defined Palestinian companies' size based on capital. For the purpose of this study therefore, the focus was on large companies with the capital outlay standard of \$1,500,000 and more (Federation of Palestine Chamber of Commerce, Industry & agriculture, 2013)³:

Consequently, the companies of interest in this study are Palestinian large companies with capital level of more than \$1,500,000 and moreover must have at least 50 employees for the following reasons:

1. Strategic management accounting (SMA) consists of tools that are usually expected to be used by larger companies (Cadez & Guilding, 2008, Kattan, et al., 2007),
2. Companies with capital less than \$ 1,500,000 or with employees less than 50 might have a struggle to survive rather than thinking of adopting SMA techniques,
3. Finally, it makes sense to assume that higher capital companies and higher employment size are more likely to have higher revenue, a reasoning which further justifies the use of total revenue to measure company size in this study.

Table 2.2: Company Size based on Employment Size	
Company Category	Number of Employees
Micro	1-4
Small	5-19
Medium-sized	20-49
Large	50 or more
Source: Palestinian Central Bureau of Statistics, 2007 ² .	

To determine the sectors of the economy to explore, this study followed existing literature about the Palestinian economy. The main sectors within Palestinian context includes (Palestine stock exchange, 2013)¹:

1. Investment Sector,
2. Industry Sector,
3. Banking and Financial services sector,
4. Insurance Sector, and
5. Service Sector.

In Table 2.3 below the activities of each sector are defined.

¹ See <http://www.pex.ps/marketwatch/English/SectorsMarketWatch.aspx>

² See http://www.pcbs.gov.ps/Portals/_Rainbow/Documents/est_07a.htm

³ See <http://www.pal-chambers.org/en-us/>

Table 2.3: Definition of the main Sectors in the Palestinian Economy

Sectors	Activities
Investment	Real Estate
Industry	pharmaceutical and medical industries, chemical industries, paper and cardboard industries, printing and packaging, food and beverages, tobacco and cigarette, mining and extraction industries, engineering and construction, electrical industries, textiles, leathers and clothing, Glass and ceramic industries.
Banking and Financial Services	banks and diversified financial services
Insurance	Insurance companies
Services	health care services, educational services, hotels and tourism, transportation, technology and communication, media, utilities and energy, and commercial services
Source: (Palestine Stock Exchange, 2013) ² :	

The research has been conducted on all sectors in the West Bank in Palestine of exceptional high level of environmental uncertainty. In a sense, this extremely difficult situation is a unique strength of this study as this research can test a high uncertainty environment.

2.5 Conclusion to the Chapter

This Chapter has completed the justification of this study which was commenced in Chapter one. In doing this, Chapter two explained the justification for the LDCs and Palestinian focus in this study. Also, Chapter two explained the economic environment in Palestine flagging difficulties faced due to Israeli occupation.

Next, Chapter three explains the theoretical foundations relevant for this study.

3. Literature Review - Contingency Theory and Strategic Management Accounting Techniques

3.1 Introduction

Chapter one laid the foundation for, and justified this study. Following that, chapter two explained the geographical and industrial context of this study. In this present chapter (3) a literature review of relevant foundations for this study is undertaken.

In determining the theoretical foundations relevant for this study, three core factors are taken into consideration, namely:

- (1) Research gap;
- (2) Precedence in previous research, and
- (3) Relevance to the geographical and industrial context of this study.

3.2 The Relevant Literature for this Study

This review of relevant literature is done in two stages. First, a review of the definition, and contextualisation of the contingency perspective in literature relating to accounting and strategic management accounting contexts is undertaken in Section 3.2.1. To conclude that section, the conceptualisation, and context of the contingency perspective of this study is summarised. Following that, Section 3.2.2 introduces Table 3.1 which summarises some selected previous studies, pinpointing the contingency variables explored in those studies, as a way of justifying the validity of this present study.

3.2.1 The Contingency Theory Lens of Managerial Accounting Research & Conceptualisation for this Study

Organisational science literature underlines that successful managerial decisions would enhance overall organisational profitability (e.g., Raaij et al., 2003; Lee & Park, 2006).

Accounting is core to management (Roslender & Hart, 2002), and this study focuses on the

use of strategic management accounting as a tool towards enhanced managerial decisions for overall organisational performance (Bromwich, 1990; Cadez & Guilding, 2008; Sidhu & Roberts, 2008; Roslender & Hart, 2002). A core argument in this study, thus, is that organisations that carefully employ appropriate strategic management accounting practices would ensure successful managerial decisions leading to better organisational performance. This strategic management accounting foundation (Simmonds, 1981), rephrased also as accounting for strategic positioning (Roslender, 1995; 1996) is grounded on the logic that a more market oriented and strategically tailored accounting is critical for organisational well-being (Langfield-Smith, 2008).

More research is needed to illuminate “the adoption of strategically-oriented management accounting techniques and accountant’s participation in strategic management processes” (Roslender & Hart, 2003, p.4). Towards enhancing knowledge on this strategically-oriented management accounting realm, numerous researchers also emphasise the importance of exploring the contingency context of SMA (e.g., Chenhall & Langfield-Smith, 1998; Chenhall, 2003; Ittner & Lacker, 1997; Cravens & Guilding, 2001; Gerdin, 2005; Guilding & McManus, 2002; O’Connor et al., 2006; Hwang, 2005; Cadez & Guilding, 2008; Alrawi & Thomas, 2007). Illuminating this realm would enhance SMA understanding, and organisational performance impacts.

As pinpointed in the objectives of this study (Section 1.4), a contingency perspective (Hwang, 2005; Cadez & Guilding, 2008; Chenhall, 2003) is followed in this study of strategic management accounting practices in Palestinian companies. The contingency perspective of management accounting research is an important area for research (Harrison, 1992, 1993; O’Connor, 1995; Taylor, 1996; Chenhall, 2006; Islam & Hu, 2012).

The first major contingency approach in management accounting research was Hofstede's (1967) classic field work. The contingency theory and its relationship concerning organisation control and accounting structure gained increasing attention in the accounting literature since the 1970's (e.g., Waterhouse & Tiessen, 1978; Gordon & Miller, 1976; Watson, 1975; Dik, 2011).

Initiating contingency-based research on management accounting systems, Waterhouse and Tiessen (1978) developed a model for comparative analysis of organisations to identify organisation control mechanisms aligned with management accounting system design issues. On their part, Widener (2004) and Gerdin & Greeve (2004), integrating transaction cost economics and contingency theory, explored forms of contingency fit in management accounting research. Hartmann & Moers (2003) tested contingency hypotheses in budgetary research using moderated regression analysis.

In the strategic management accounting context, the contingency approach is based on the premise that there is no universally appropriate accounting system that fits all organisations in all circumstances (Otley, 1980, Emmanuel et al., 1990; Islam & Hu, 2012). Thus, there is no universal control system that is "best"; rather the appropriateness of the control system is determined by the circumstances and context of the organisation (Waterhouse & Tiessen, 1978; Fisher, 1995; Alrawi & Thomas, 2007). So, the selection proposition of contingency theory (Horngren, 1982) proposes association between an organisation's context and control system used (Selto et al., 1995; Alrawi & Thomas, 2007; Islam & Hu, 2012).

So, as captured in contingency theory, organisational structures and systems are a function of environmental and firm-specific factors (Anderson & Lanen, 1999; Chenhall, 2003; Gerdin, 2005; Gerdin & Greve, 2004; Haldma & Laats, 2002, Cadez & Guilding, 2008; Hwang, 2005; Dik, 2011; Islam & Hu, 2012). The contingency perspective is based on the organisational

theory concept “that an organisation maximizes its efficiency by matching between structure and environment” (Dik, 2011, p.49). Otley (1980) commented thus:

The contingency approach to management is based on the premise that there is no universally appropriate accounting system that applies equally to all organisations in all circumstances. Rather, it is suggested that particular features of an appropriate accounting system will depend on the specific circumstances in which an organisation finds itself. Thus, a contingency theory must identify specific aspects of an accounting system which are associated with certain defined circumstances and demonstrate an appropriate matching” (p.413).

Towards contributing to filling identified research gaps (See Chapter 1), it is important to review existing literature, and thereby pinpoint theoretical foundations upon which this study is based. Also, doing this is necessary to have a basis upon which the findings from this study can be compared against.

Numerous researchers have pinpointed key factors that are essential in the exploration of the contingency view and a number of these are pinpointed next. Cadez & Guilding (2008) suggest four factors that potentially have significant implications for SMA system design: (1) business strategy, (2) degree to which adopted strategy is deliberately formulated, (3) market orientation, and (4) firm size.

In a review of literature on contingency theory of managerial accounting, Islam & Hu (2012) comment that “organisational effectiveness is dependent on a fit or match between the type of technology, environmental volatility, the size of the organisation, the features of the organisational structure, and its information system” (p.5159).

In a much earlier study, Merchant (1985) explored the contingent relationships between (1) size of the firm, (2) product diversity, (3) extent of decentralisation, and (4) the use of budgetary information. Aver & Cadez (2009) propose a sociological lens of contingency theory and argue that sociological developments associate to accountants' participation in strategic decision making process.

Offering a comprehensive framework for the design of accounting information system, Gordon & Miller (1976) analysed variables critical to organisational performance. Their contingency lens suggests (1) environment, (2) organisational characteristics, and (3) managerial decision making style as core contingent variables. Similar to Gordon & Miller (1976), Gordon & Narayanan (1984) also explored accounting information systems context, but considered (1) perceived environmental uncertainty, (2) organisational structure and (3) characteristics of information perceived to be important by decision makers, as core contingent variables.

“Contingency theory studies postulate that organisational outcomes are the consequences of fit or match between two or more contingent factors” (Islam & Hu, 2012, p.5159). For the purpose of achieving the goals of this study, a summary of the key variables that have been explored in selected previous studies is presented in Table 3.1 below. To address the research questions for this study, this study borrows from the insight in previous studies concerning the core variables in the contingency perspective. To avoid repetition, only the basic information concerning explored factors is specified, the relevant empirical factors for each factor would be pinpointed in the sectional review of respective variables.

The concept of fit in the contingency perspective has been defined by Van de Ven & Drazin (1985) in three approaches – selection, interaction, and systems approach. In the ‘selection approach’ fit view, if an organisation wants to be effective, it must adapt to its organisational

context characteristics. For the second (interaction), fit is interpreted as an interaction effect of organisational structure and performance context (Khandwalla, 1977; Van de Ven & Ferry, 1980). In the third case (systems approach), better understanding of organisational design is gained by simultaneously investigating the contingencies, structural alternatives and performance criteria existing in an organisation. This study follows this latter fit lens because it enables the understanding of the effectiveness of the interactions between context and design (Islam & Hu, 2012).

On the other hand, contingency theory has also been criticised for several reasons. For instance, Reid & Smith (2000) argue that contingency theory of MA has limited ways of explaining how particular peculiarities or contingencies shape the adoption of MAS within organisations. This view is contradicted by findings by other researchers that argued that MAS can both influence and be influenced by contingencies (Chenhall, 2003). Moreover, contingency theory lacks clarity and specificity (eg. Variables are ill defined) (Fisher, 1995).

3.2.2 The Contingency Perspective of Managerial Accounting Research: The Core Variables

There are increasing ‘persuasive arguments in favour’ (Langfield-Smith, 2008, p.209) (e.g., Bromwich, 1990; Bromwich & Bhimani, 1994; Cadez & Guilding, 2007; *inter alia*³); of SMA or SCM (across the Atlantic). This contingency approach borrows from previous research (See Table 3.1) concerning the critical variables, their cross interaction and influence on organisational performance.

³ e.g., Johnson & Kaplan, 1987; Miller & O’Leary, 1994; Roslender, 1996; Kaplan & Norton, 1992, 1996; Roslender & Hart, 2002a, 2002b, 2003; Shank, 2007; Anderson, 2007; Langfield-Smith, 2008

Table 3.1: Some selected Studies on Contingency Approach and the Explored Variables

S/Nr.	Studies	Context (National & Industrial)	MA/SMA/ Other	Explored Contingency Variables
1	Guiling & McManus (2002)	Australian companies	SMA	SMA (Customer Accounting), Market Orientation, Intensity of competition
2	Cinquini & Tenucci (2010)	Italian manufacturing companies	SMA	Business Strategy, Strategic Management Accounting, Company Size
3	McManus (2012)	Australian Hotel industry	CA (SMA) & MP	Customer Accounting & Marketing Performance. Factors explored included competition intensity, environmental uncertainty, organisational factors (strategy, structure, market orientation, size), customer measures, Performance (financial and non-financial)
4	Alrawi & Thomas (2007)	UAE Commercial Banks	MAIS	Management accounting, financial accounting, evaluation of banks accounting system, etc.
5	Kholeif et al. (2007)	Egyptian companies	IAP	Enterprise Resource Planning (ERP)
6	Cadez & Guiling, (2008)	Slovenian companies, Multi-industry	SMA	Strategic Management Accounting Variables, Market Orientation, Business Strategy, Company Size, and Organisational Performance.
7	Huang et al. (2010)	Malaysian companies	Intellectual Capital	Environmental Uncertainty, Business Strategy, Technological advancement, market to book ratio, Organisational size, Profitability, industry type
8	Soobaroyen & Sannasse (2007)	Mauritius' Voluntary Organisation	FP & CP	Financial planning, Management accounting (MA) control Techniques
9	Hwang (2005)	South Korean retailing industry	SMI	Environmental uncertainty, Business strategy, market orientation, organisational structure, organisational performance
10	Waweru (2008)	Canadian Manufacturing firms	MACS	Management Accounting Systems, Organisational structure, Organisational size, Intensity of competition, Technology, Competition strategy, Management Accounting Change
11	Dik (2011)	Arab Countries Sharia compliant companies	MAS	Cultural dimensions, Organisational structure, Management accounting instruments, and Environmental circumstances

12	Kattan et al. (2007)	Palestinian Company	MAPs	External Environmental Uncertainties and Management Accounting and Control Systems
13	Waweru et al. (2004)	South African retail companies	MAPs	Management Accounting Practices, Organisational Performance, Environmental uncertainty
14	Guilding et al. (2005)	UK and Australian companies	SMA (cost-plus pricing)	Cost-plus pricing (SMA), Competition intensity, company size, Industry type
15	Cravens & Guilding (2001)	New Zealand, UK & US strongly branded companies	SMA (BVA)	Brand value accounting, Internal Management decision making and control
16	Cadez & Guilding (2007)	Slovenian and Australian Companies	SMA	Strategic Management Accounting techniques
17	Abdul Rasid et al. (2011)	Malaysian Financial institutions	MAS	Technology, Organisational Structure, Innovation, Management Accounting System, and Organisational performance
18	Löfsten & Lindelöf (2005)	Swedish Technology-based firms	MAPs (SMA)	Environmental hostilities, Strategic orientation, Technology, Management accounting techniques, and performance
19	Govindarajan & Gupta (1985)	US firms (multi-industry)	MCS	Strategy, incentive bonus systems, firm control systems, and organisational performance
20	Merchant (1985)		AIS	Company Size, Product Diversity, Strategy, Decentralisation and use of Budgetary Information, and performance
21	Abdul-Kader & Luther (2006)	UK food and drinks industry	SMA	Strategic management accounting practices, Strategy, organisational performance, decision making information
22	Hyvönen (2008)	Manufacturing firms in Finland	MAS	Technology, Strategy, management accounting system, and organisational performance
23	Bhimani & Langfield-Smith (2007)	UK firms (large)	SMA	Structure, formality, financial & non-financial information, strategy implementation and strategic management accounting
24	Haldma & Lääts (2002)	Estonian Manufacturing firms	MAPs	Environmental factors, technology, organisational factors, strategy, management accounting systems, and performance

25	Tuan Mat (2010)	Malaysian Manufacturing industry	MAPs	Strategy, organisational structure, environment, technology, organisation size, management accounting practices and organisational change, and performance
26	Chenhall (2003)	Critical review of past studies	MCS	Management control systems, organisational performance
27	Guilding (1999)	New Zealand Companies	SMA	Strategic management accounting techniques, company size, competitive strategy and strategic mission
28	Hoque (2004)	New Zealand Manufacturing Companies	SMA	Strategic management accounting, Business Strategy, Environmental Uncertainty, and Organisational Performance
29	Nimtrakoon & Tayles (2010)	Thailand manufacturing and non-manufacturing companies	MAPs	Management accounting practices, perceived environmental uncertainty, company size, competitive strategy
30	Guilding et al. (2000)	New Zealand, UK and US companies	SMA	Strategic Management Accounting Techniques, Company size
31	Anderson & Lanen (1999)	Indian firms	MAPs	Competitive strategy, management accounting practices, firm specific factors and performance
<p>Key: MA/SMA = Management Accounting/Strategic Management Accounting; MAI = Management Accounting Information; MAPs = Management Accounting Practices; MA & PC = Management Accounting & Political Control; MAS = Managerial Accounting Systems; IAP = Institutionalised Accounting Practices; FP & CP = Financial Planning & Control Practices; SMI = Strategic Management Implementation; MAIS= Management Accounting Information Systems; CA(SMA) & MP = Customer Accounting & Marketing Performance; BVA = Brand Value Accounting; MACS = Management Accounting and Control Systems</p>				

Source: Facts Collated by the author from past Studies

Justified by the focus defined in the research objectives (See Section 1.4), the strategy and organisational environment (external and internal) contexts are explored, in relation to strategic management accounting usage and organisational performance. Next, the theoretical foundations concerning these realms are reviewed in the following order:

1. Strategic Management Accounting (SMA) Techniques (Section 3.3);
2. Organisational Environment (Section 3.4);
3. Organisational Strategy (section 3.5)
4. Organisational Performance (Section 3.6)

3.3 Strategic Management Accounting (SMA) Techniques

“During the last decade, both academics and practitioners have started to question prevailing traditional management accounting thinking” (Joshi, 2001, p.86). With ever increasing competition and changes in production environment, cost structures, and rapidly developing technologies, a change in management accounting practices is pertinent (Joshi, 2001). These comments underline the logic behind the strategic management accounting (SMA) view.

The transformation of management accounting (Roslender & Hart, 2003) is grounded on the need for accounting for strategic positioning (Roslender, 1995, 1996), a perspective that builds on the strategic management accounting foundation which was first introduced by Simmonds (1981) and subsequently positioned by Bromwich (1990).

Essentially, SMA advocates contend that, for a more market oriented focus, strategically tailored accounting is pertinent (Langfield-Smith, 2008). Since its first mention by Simmonds (1981) in the UK professional magazine, *Management Accounting* (p.12), there are increasing ‘persuasive arguments in favour’ (Langfield-Smith, 2008, p.209) (e.g., Bromwich, 1990;

Bromwich & Bhimani, 1994; Cadez & Guilding, 2007; *inter alia*⁴); of SMA or SCM (across the Atlantic).

According to the strategic management accounting logic, “to survive, a firm must continue to offer the cheapest way for consumers to obtain the desired bundle of attributes” (Langfield-Smith, 2008, p. 209), and organisations must align their management accounting activities towards this target (Bromwich, 1990). In the words of Joshi (2001), if management accounting is to maintain its relevance in today’s increasing level of globalisation, it needs to meet the changing needs of managers” (p.86).

That management accounting view matches the contingency perspective, which proposes that flexibility and adaptability are important for the survival of organisations, and the system needs to be designed to support such adaptability (e.g., Gordon & Miller, 1976; Waterhouse & Tiessen, 1978; Kattan et al., 2007). In the view of Khandwalla (1977) the contingency theory emphasises the need to examine the interface between the organisation and its environment.

The management accounting tools used in the organisation must therefore be strategically designed and implemented to fit the circumstances of the organisation. Undoubtedly, interest in SMA is growing (see Roslender & Hart, 2003; Cadez & Guilding, 2009, 2008; Bhimani & Langfield-Smith, 2007; Langfield-Smith, 2008; *inter alia*). However, there is still no consensus as to what constitutes SMA (Cadez & Guilding, 2008; Roslender & Hart, 2003; Tomkins & Carr, 1996; Nyamori et al., 2001). More research therefore is needed to illuminate “the adoption of strategically-oriented management accounting techniques and accountant’s participation in strategic management processes” (op. cit.). More so, further research will enable the understanding of how accountants fit into the strategic management process.

⁴ e.g., Kaplan & Johnson, 1987; Miller & O’Leary, 1994; Roslender, 1996; Kaplan & Norton, 1992, 1996; Roslender & Hart, 2002a, 2002b, 2003; Shank, 2007; Anderson, 2007; Langfield-Smith, 2008

A review of literature identifies two perspectives of SMA (Cadez & Guilding, 2008, p.838). First, SMA is conceived as a set of strategically oriented accounting techniques. Secondly, SMA is viewed as concerned with the involvement of accountants in the strategic decision making process. In this study, the interest is to capture the use of SMA in Palestinian companies; therefore the first conceptualisation of SMA is used in this study. It is important to explore the use of SMA techniques (Cinquini & Tenucci, 2010; Cadez & Guilding, 2008; Cravens & Guilding, 2001).

In their 2008 study, Cadez & Guilding asked the question “what is strategic management accounting?” (p.838). A number of studies have examined the contingency context and strategic management accounting tools as evident in Table 3.1 above shows. While there is increasing research interest in SMA, “due to the increasing importance to managers” (Cinquini & Tenucci, 2010, p.230), the area is still under defined and no universally accepted SMA framework exists (Coad, 1996; Nyamori et al., 2001; Roslender & Hart, 2003; Tomkins & Carr, 1996; Cadez & Guilding, 2008; Langfield-Smith, 2008; Cinquini & Tenucci, 2010).

Offering a strategic management perspective, Brouthers & Roozen (1999) specified core “strategic functions” that information provided by a strategic accounting system should support, namely environment analysis, strategic alternative generation, strategic alternative selection, planning the strategic implementation, implementing the strategic plan, and controlling the strategic management process.

“Even though the “external orientation” of SMA is well established, it can be interpreted in different ways” (Cinquini & Tenucci, 2010, p.231). This “external orientation” of SMA (Guilding et al., 2000) can be explained as underlining the importance of accounting information about competitors, suppliers and customers. Simmonds (1981, 1982, and 1986) conceptual framework stressed this competitor information (related to costs, prices, market

share, etc.) importance in developing and monitoring business strategy. Several other authors also reinforced the competitor information importance to competitive advantage (e.g., Jones, 1988; Bromwich, 1990; Ward, 1992; Moon & Bates, 1993). Several accounting approaches, financial and non-financial can aid this effort: competitive benchmarking, financial statement competitive analysis and position monitoring (Cinquini & Tenucci, 2010).

Essentially, such “external orientation” drive should focus on the product offer that can satisfy customers’ needs, as well as take into consideration the product attributes costs (Bromwich, 1990), the satisfaction of customers’ needs and the achievement of a desired target profit/cost (Monden & Hamada, 1991; Morgan, 1993; Ewert & Ernst, 1999) or performance (Narver & Slater, 1990). In a more recent study, Anderson (2007) developed an approach based on value chain analysis, introducing a core distinction between structural cost management, which aims to build cost structures coherent with strategy by means of organisational, product and process design tools, and execution cost management, which focuses on effective measurement tools for cost performance evaluation.

Further on the external orientation, a core consideration is that most SMA techniques are “cost-based” (Hoque, 2001). Given the advances in cost management over the last decades that have enabled accounting information to support strategic decision making, this is not surprising (Cinquini & Tenucci, 2010). As the activity-based costing (ABC) approach (Johnson & Kaplan, 1987; Cooper & Kaplan, 1988) spread, the dimensions of cost analysis have been expanded, leading to the refinement in cost information of yet unexplored cost objects, such as activities, customers, product attributes and unused capacity. These developments aid decision making and enhance competitive advantage in an increasingly competitive business environment (Cinquini & Tenucci, 2010).

Additional to cost, the relevance of non-financial information has been increasingly emphasized, as it provides predictive trends in the performance of the overall organisation (Nanni et al., 1992; Ittner & Larcker, 1998).

Guilding et al. (2000) distilled SMA techniques and also provides criteria for viewing a particular accounting technique as strategic. In their view, accounting techniques that qualify as SMA must demonstrate degrees of the following orientations: environmental (outward-looking) and/or long-term (forward-looking). Using these criteria, Guilding et al. (2000) identified 12 SMA techniques from the literature. In a subsequent development, Cravens & Guilding (2001) added another three techniques.

The context of the strategic management accounting technique to be measured in this study is justified on methodological precedence (Cadez & Guilding, 2008), which utilised and extended the distillation of SMA techniques in Guilding et al. (2000) and Cravens & Guilding (2001). Combining Guilding et al. (2000), Cravens & Guilding (2001) and Cadez & Guilding (2008) five categories of SMA techniques are explored in this study. In this study, using the approach in Cadez & Guilding (2008) is appropriate for a number of reasons:

1. Cadez & Guilding (2008) expands on the works of Guilding et al. (2000) and Cravens and Guilding (2001),
2. These techniques demonstrate degrees of the following orientations (Guilding et al., 2000; Cravens & Guilding, 2001; Cadez & Guilding, 2008; Cinquini & Tenucci, 2010): environmental (outward-looking) and/or long-term (forward-looking),
3. This fits the need for multi-dimensionality and measurement typologies (financial/non-financial) (Cadez & Guilding, 2008; Cinquini & Tenucci, 2010),
4. These criteria have been numerously validated in past studies.

Out of the five categories covered in this study, three correspond to management accounting themes acknowledged in many management accounting texts: (1) costing, (2) Planning, control and performance measurement, and (3) Strategic decision making. The last two are “customer accounting” and “competitor accounting”. Next, the theoretical foundations for the five categories of strategic management accounting techniques explored in this study are summarised, namely; Costing (Section 3.3.1), Planning, Control and Performance Measurement (Section 3.3.2), Strategic Decision Making (Section 3.3.3), Competitor Accounting (Section 3.3.4), and Customer Accounting (Section 3.3.5).

3.3.1 Costing

Organisations can develop and identify superior strategies that would generate a sustainable competitive advantage by using cost data based on strategic and marketing information (Cadez & Guilding, 2008). Following the trend in past studies, costing is conceptualised to include five core techniques, namely, attribute costing (e.g., Bromwich, 1990; Roslender & Hart, 2003), life-cycle costing (e.g., Cadez & Guilding, 2008; Cinquini & Tenucci, 2010; Dunk, 2004), quality costing (e.g., Heagy, 1991; Cinquini & Tenucci, 2010), target costing (e.g., Monden & Hamada, 1991; Cadez & Guilding, 2008; Cinquini & Tenucci, 2010), and value chain costing (e.g., Cadez & Guilding, 2008; Shank & Govindarajan, 1992).

Attribute Costing

According to Lancaster (1979), products are made up of a package of attributes which constitute commodities that appeal to consumers. Attributes, which include operating performance variables, reliability and warranty arrangements, the degree of finish and trim as well as service factors, differentiate products and the matching of a product’s attribute with the consumers tastes determines a firm’s market share (Guilding et al., 2000).

Life-Cycle Costing

Several commentaries exist in the literature concerning the life-cycle costing (e.g., Shields & Young, 1991; Wilson, 1995; Cinquin & Tenucci, 2010). Explaining the strategic implications connected to this perspective, Wilson (1995) notes that, rather than appraising costs on an annual basis, the relevant time frame in life cycle costing depends on the stages in a product's life.

Quality Costing

One other strategically oriented approach to costing is quality costing analysis. Whether perceived or real, product or service quality can be a source of competitive advantage (Guilding et al., 2000). Heagy (1991) classifies quality costs as prevention, appraisal and failure costs. Management may monitor these costs to secure an optimal level of relativities (Guilding et al., 2000).

Target Costing

This refers to the process where a product is designed to satisfy a customer need and a target cost is determined for the product (Guilding et al., 2000). This target costing philosophy can be categorised as strategic management accounting as it moves costing away from a quest for accurate monitoring towards forward-looking costing philosophy aimed for competitive advantage (Guilding et al., 2000).

Value Chain Costing

Building on Porter's (1985) value chain analysis, Shank & Govindarajan (1992) proposed a costing approach. According to Porter (1985), marketplace competitive advantage is derived from providing better customer value for equivalent cost, or equivalent customer value for lower cost. Porter describes the series of activities occurring between a product's design and distribution as links in a chain, a thinking upon which the value chain analysis is based. Thus

the value chain analysis concerns identifying how customer value can be enhanced or costs lowered in a firm's relevant segment of the value chain (Guilding et al., 2000). According to Shank & Govindarajan (1992), value chain costing provides (1) a useful extension to conventional cost analysis, and (2) insights for make/buy and forward/backward integration decision making.

3.3.2 Planning, Control and Performance Measurement

The planning, control and performance element of strategic management accounting conceptualisation in this study includes benchmarking (e.g., Elnathan et al., 1996; Brownlie, 1999) and integrated performance measurement (e.g., Chenhall, 2005; Ittner et al., 2003; Kaplan & Norton, 1996; Cadez & Guilding, 2008).

Benchmarking

This technique involves identifying the best practices and comparing the organisation's performance to an ideal standard (Cadez & Guilding, 2008; Cinquini & Tenucci, 2010) with the goal of improvement. While there are many benchmarking typologies (Miller et al., 1992; Mcnair & Leibfried, 1992), they generally underline the external strategic orientation toward competitors (Cinquini & Tenucci, 2010).

Integrated Performance Measurement (Balanced Scorecard)

According to Cinquini & Tenucci (2010), the consideration of both financial and non-financial measures defines an integrated performance measurement system (Cross & Lynch, 1989; Nanni et al., 1992). Cadez & Guilding (2008) note that this system focuses mainly on acquiring performance knowledge based on customer requirements. This measure, they further note, involves departments monitoring the factors critical to securing customer satisfaction.

3.3.3 Strategic Decision Making

The strategic decision making SMA techniques for this study include strategic costing (strategic cost management (e.g., Shank, 1996; Shank & Govindarajan, 1993), strategic pricing (e.g., Rickwood et al., 1990) and brand valuation (e.g., Cravens & Guilding, 1999; Guilding, 1992).

Strategic Costing (Strategic Cost Management)

A number of studies have explored strategic costing (e.g., Shank & Govindarajan, 1991, 1992, 1993). They maintain that to effectively support the pursuit of competitive advantage, the cost analysis must explicitly consider strategic issues. In the words of Cadez & Guilding (2008), this involves “the use of cost data based on strategic and marketing information to develop and identify superior strategies that will produce a sustainable competitive advantage.

Strategic Pricing

It is important to explore strategic pricing as a subset of strategic management accounting (Jones, 1988; Simmonds, 1982; Cadez & Guilding, 2008). Simmonds (1982): strategic pricing which uses competitively-oriented analysis will result in a better-informed pricing decision. Core factors that might be appraised in such an analysis are competitor price reaction, price elasticity, projected market growth, and economies of scale and experience (Guilding et al., 2000; Cadez & Guilding, 2008).

Brand Valuation

As an accounting technique, brand valuation has been the subject of considerable accounting debate (Power, 1990). Taking the management accounting perspective of brand valuation, its potential as a measure of marketing achievements in a strongly branded company becomes apparent (Guilding & Moorhouse, 1992; Guilding & Pike, 1994).

The strategic impact of brand valuation, might, amongst others, be dependent on the valuation method used (Guilding et al., 2000). Guilding & Pike (1994): when the valuation method used is similar to that developed by Interbrand, strategic implications are manifest. Cadez & Guilding (2008) suggest that financial valuation of a brand through the assessment of a brand strength should include factors like leadership, stability, market, internationality, trend, support, and protection combined with historical brand profits.

3.3.4 Competitor Accounting

Three competitor accounting techniques of strategic management accounting are explored in this study, namely, competitor cost assessment (e.g., Bromwich, 1990; Jones, 1988; Cinquini & Tenucci, 2010), competitor position monitoring (e.g., Rangone, 1997; Guilding, 1999), and competitor performance appraisal (e.g., Moon & Bates, 1993; Cinquini & Tenucci, 2010).

Competitor Cost Assessment

Researches have examined competitor cost assessment in contingency studies (e.g., Bromwich, 1990; Jones, 1988; Ward, 1992; Guilding et al., 2000; Cadez & Guilding, 2008; Cinquinin & Tenucci, 2010). Competitor cost assessment has been widely discussed in SMA practice (Guilding et al., 2000); a fact that may be attributed partially to the increased level of technologically advanced investments (Guilding et al., 2000).

Competitor cost assessment concentrates mainly on cost structures of competitors (Simmonds, 1981). There are different sources of competitor cost information (Cinquini & Tenucci, 2010). Jones (1988) outlines a competitor cost assessment approach that involves, amongst others, appraising competitors' manufacturing facilities, economies of scale, governmental relationships and technology-products design. Further to these, Ward (1992) pinpoints indirect sources of competitor information, namely, physical observation, mutual suppliers, mutual customers, and employees (including ex-employees of competitors).

Competitor Position Monitoring

Advocated by Simmonds (1986), competitor position monitoring represents a more holistic approach to competitor appraisal. This SMA technique focuses on the provision of competitor information like sales, market share, volume and unit costs (Simmonds, 1981, 1986; Guilding et al., 2000; Cadez & Guilding, 2008; Cinquin & Tenucci, 2010). Based on these SMA information types, a company is able to assess its position relative to major competitors and, as a consequence, control or formulate its strategy (Guilding et al., 2000; Cinquini & Tenucci, 2010).

Competitor Performance Appraisal

According to literature, a good source for obtaining competitor performance appraisal/evaluation information is public financial statements (e.g., Moon & Bates, 1993; Cinquini & Tenucci, 2010). As Moon & Bates (1993) note, these information types are key sources of competitive advantage, and include monitoring trends in sales and profit levels, and assets and liability movements. Strategically significant insights can be derived from carefully conducted analysis of a competitor published statements.

3.3.5 Customer Accounting

This technique considers customers or group of customers as a unit of accounting analysis (Bellis-Jones, 1989; Guilding & McManus, 2002; McManus, 2012). Customer accounting includes all practices designed to appraise profit, sales or costs deriving from customers or customer segments. This accounting approach is classified as SMA technique, because it is widely related with relational marketing (Cinquini & Tenucci, 2010). The customer accounting conceptualisation includes customer profitability analysis (e.g., Zeithaml, 2000; Guilding & McManus, 2002), lifetime customer profitability analysis (e.g., Foster & Gupta, 1994; Jacob, 1994), and valuation of customers as assets (e.g., Foster et al., 1996; Zeithaml, 2000; Guilding & McManus, 2002).

Customer Profitability Analysis (CPA)

According to literature (Cadez & Guilding, 2008; Guilding & McManus, 2002; McManus, 2012), this involves calculating the profit earned from a specific customer. The profit calculation is based on costs and sales that are traceable to a specific customer (Cadez & Guilding, 2008). This technique is also referred to as “customer account profitability” (Cadez & Guilding, 2008).

Lifetime Customer Profitability Analysis

This is an important customer accounting element of SMA technique (Cadez & Guilding, 2008; McManus, 2012). This technique involves extending the time horizon for customer profitability analysis to include future years (Cadez & Guilding, 2008). It focuses on all anticipated future revenue streams and costs involved in servicing a particular customer (Cadez & Guilding, 2008).

Valuation of Customers as Assets

This technique refers to the calculation of the value of customers to the company (Cadez & Guilding, 2008). This could be done by computing the present value of all future streams attributable to a particular customer.

3.4 Organisational Environment

In this section, a review of literature on organisational environment is undertaken. After the introduction (section 3.4.1), the external environment (section 3.4.2) and internal environment (section 3.4.3) foundations are presented.

3.4.1 Introduction

In management accounting and control literature, environment is a key factor that determines the management accounting and control systems design used by the organisation (Ezzamel, 1990; Gordon & Miller, 1976; Jusoh, 2010). “Environment is an important aspect of contingency theory” (Dik, 2011, p.52). An organisation environment includes all factors and dimensions that surround the organisation. These include all factors that may have potential or actual influence on the organisation (Macy & Arunachalam, 1995, p.67). To profitably satisfy customers in their market, organisations must effectively adapt to the factors and dimensions in their environment (Hwang, 2005; Kattan et al., 2007; Dik, 2011). Many studies call for this factor to be explored because of its association to SMA usage and organisational performance and other contingency factors.

“Environments are viewed as a complex system of interrelated economic, market, technological, social and political variables” (Kattan et al., 2007, p.229). According to Chenhall (2007, p.172) environment refers to “particular attributes such as intense price competition from existing or potential competitors”. Based on literature (e.g., Hwang, 2005; Kattan et al., 2007; Dik, 2011; Tuan Mat, 2010), both internal and external environment factors need to be explored.

Next, the external environment and internal environment literature are reviewed

3.4.2 External Environment of Organisation

The external environment of an organisation includes factors like law, politics, economics, culture and demographics (Tuan Mat, 2010). Researches that explored the external environment factors in the contingency perspective relative to management accounting practices identify two core factors, namely external environment (e.g., Khandwalla, 1977; Merchant, 1990; Chapman, 1997; Hartmann, 2000; Haldma & Lääts, 2002) and culture (e.g., Hofstede, 1984; Harrison, 1992; O'Connor, 1995).

In the strategy decision making (e.g., Elbanna & Child, 2007; Elbanna, 2006; Fredrickson, 1984; Goll & Rasheed, 1997) and contingency (e.g., Haldma & Lääts, 2002; Hwang, 2005; Dik, 2011) literature, the most widely researched aspects are environmental uncertainty and hostility. Reviewing the literature in both realms, a contextualisation difference was evident. While strategy literature largely examines environment uncertainty and hostility differently, contingency perspective tends to embrace both in the conceptualisation of environmental uncertainty.

This present study follows a contingency tradition and examines both as elements of environmental uncertainty. Also, this study explores a single country (Palestine) context, and since the researcher does not expect culture driven differences, the culture element of external factors is not explored in this study. Moreover, in the existing literature in leading management accounting academic journals; despite indicating that culture is influential, did not suggest to include culture in current SMA and performance management literature. It might be that those studies were carried on in western capitalist economies where national culture does not have a direct impact; hence it does not appear as a contingency variable.

In the literature, the concept of uncertainty has been defined in a variety of ways (Hwang, 2005). Decision theorists (Knight, 1921; Luce & Raiffa, 1957) define uncertainty “as those situations where the probability of the outcome of events is unknown, as opposed to risk situations where each outcome has a known probability” (cited in Hwang, 2005, p.19). Miller (1993) defined uncertainty as “the unpredictability of environmental or organisational variables that have impact on corporate performance” (p.694).

Kahneman & Tversky (1982) suggest that a more insightful approach to uncertainty is to equate it with unpredictability, the incapability to predict future events. Cited in Dik (2011, p.52), “environment uncertainty is defined as a lack of information regarding the environmental factors associated within a given decision making situation, not knowing the outcome of a specific decision” (Fisher, 1998). This lens is also supported by Alkaraan & Northcott (2006) who comment that in uncertain environments executives neither have access to all relevant information nor are they are able to anticipate all the consequences.

Thus, environmental uncertainty is the gap between the information which one has and the information that one needs to perform a task (Galbraith, 1977). On the other hand, environmental hostility munificence concerns the ability of the environment to support the sustained organisational growth (Dess & Beard, 1984) and/or the degree of resource abundance (Hodge et al., 2003).

The above contextualisation of environmental uncertainty are also emphasised by Milliken (1987) who categorises three facets of uncertainty, namely; (1) lack of clarity about cause-effect of relations; (2) inability to predict the probability of future event that may favour one alternative or another; and (3) the unpredictability of outcomes. Uncertain environment, which is impacted by high competition, is an important contextual variable in contingency-based research (Tuan Mat, 2010).

Complexity and rate of change are two features that characterise environment uncertainty (Duncan, 1972; Tung, 1979). According to Child (1972), complexity is caused by the heterogeneity of relevant environmental events. Rate of change involves the frequency of changes that occur in the external environment (Daft et al., 1988).

Two levels of uncertainty continuum apply to the aforementioned variables, namely ‘low’ and ‘high’. In low environmental uncertainty conditions, the variables and rules of the environment are generally understood (Kattan et al., 2007; Smart & Vertinsky, 1984). On the other hand, dynamism, highly unpredictable changes, variables and rules that are not easily understood, characterise high environmental uncertainty (Kattan et al., 2007; Hwang, 2005).

From reviewed literature, the core elements of external environment factors, also called external environment uncertainty, include market and competitive pressures (e.g., Greenwood & Hinings, 1996; Powell, 1991; Kholeif et al., 2007; Hwang, 2005; Guilding & McManus, 2002). Other studies also classify socio-political factors as elements of perceived environmental uncertainty of an organisation (e.g., Dik, 2011; Tuan Mat, 2010). In their definition of external environmental attributes, Hickson et al. (2001) include governmental agencies, customers, suppliers, competitors and unions.

The environment creates opportunities and threats to organisations (Hwang, 2005) and shapes organisational structure, processes, and managerial decision making (Duncan, 1972; Keats & Hitt, 1988). In the contingency literature related to strategic management accounting context, environmental uncertainty impacts on organisational structure, performance evaluation, budgeting and budgetary control, and are associated with more open and externally focused accounting systems (Haldma & Lääts, 2002; Astley & Van de Ven, 1983; Hwang, 2005).

Research efforts on environmental uncertainty have mainly examined perceived environmental uncertainty, thus focusing on management's perceptions of uncertainty in the business environment (e.g., Hwang, 2005; Dik, 2011; Jusoh, 2010), and this is the approach in this study.

3.4.2.1 Perceived Environmental Uncertainty (PEU)

The perceptual lens of environmental uncertainty suggests that the environment could be considered certain or uncertain only to the extent that decision makers perceive it to be so (Achrol & Stern, 1988; Duncan, 1972; Pfeffer & Salancik, 1978). According to Daft et al (1988), perceived environmental uncertainty is the absence of information with regard to organisations, activities, and events in the environment. As observed by Ebrahimi (2000) researches largely emphasise perceived environmental uncertainty and the subjective, rather than the objective data produced and used by strategic decision makers.

Empirical results suggest that individuals in decision units facing dynamic, complex environments experience the greatest amount of uncertainty in decision making (Hwang, 2005, p.24). When the marketing environment changes companies face uncertainty, threats and opportunities (Dibb, 1996). Organisations must therefore recognise changes in the environmental factors and respond effectively. Following the pattern shown in previous studies (e.g., Guilding & McManus, 2002; Hwang, 2005; Dik, 2011), the conceptualisation of perceived environmental uncertainty in this study includes market turbulence and competitive intensity. These two attributes are of core research interest in the strategic management field (Baum & Wally, 2003; Alkaraan & Northcott, 2006).

3.4.2.1.1 Market Turbulence

Organisations face dramatic and sudden twists in their environment. When the environment becomes very dynamic, challenging and complex, traditional managerial orientations become inadequate (Hwang, 2005). In such environmental possibilities organisations face the threat of losing market position, declining profits or outright business failure (Cooper, 1979; Covin & Slevin, 1989; Hayes & Abernathy, 1980; Waterman, 1987; Hwang, 2005; Chakravarthy, 1997). “The more hostile and turbulent the external environment, the greater the reliance on formal controls and emphasis on traditional budgets” (Chenhall, 2007, p.173).

According to Smart & Vertinsky (1984) market turbulence is the change that occurs in the factors or components of an organisation’s environment. There are two continuums of a turbulent market situation, they explained: at one end is no change, and at the other is a turbulent or dynamic environmental state where all factors are constantly changing. In highly turbulent environments, unpredictability and uncertainty characterise factors, and variables and their importance levels move in unpredictable manner (Smart & Vertinsky, 1984).

Other literature on market turbulence (e.g., Emery & Trist, 1965; Terreberry, 1968; Thompson, 1967) pinpoints two core characteristics of market turbulence, namely, complexity and dynamism. In their study that discussed the characteristics of information in a turbulent environment, Wang & Chan (1995) defined complexity as “the number and diversity of external factors facing the firm”; and dynamism as “the degree of change exhibited in those factors (p.34). As noted by Wang & Chan (1995), changes in a turbulent environment are characterised by one or more of high complexity, high dynamism, high novelty, and low visibility.

According to Wang & Chan (1995, p.34), “high complexity requires top managers to consider a large number of factors from various environmental segment (e.g., competitive, economic,

political, technological, global) to make decisions. High novelty means that relevant events and trends are discontinuous and unfamiliar to top managers. High dynamism indicates that relevant environmental factors are in a continuous process of change. Low visibility means that, by the time top managers must make decisions, the content of available information is very vague and ambiguous”.

In their notion of environmental turbulence, Ansoff & McDonnell (1990) share similarity with Wang & Chan (1995). They suggest complexity, novelty, rapidity of change, and visibility of the future as four environmental turbulence characteristics. Explaining the four contexts, Ansoff & McDonnell (1990) refers complexity to the variety of factors that management must consider when making decisions and novelty to the discontinuity of successive challenges which a firm encounters in its environment.

Further, the rapidity of change concerns the ratio of the speed of the evolution of changes to the speed of the firm’s response; and the visibility of the future reflects the predictability of information about the future as at the time of decision making (see also Wang & Chan, 1995).

Kohli & Jaworski (1990) note that market turbulence is a subset of environmental turbulence. These scholars define market turbulence as the rate of change in the composition of customers and their preferences (Kohli & Jaworski, 1990; Jaworski & Kohli, 1993). This customer composition and preference perspective is also reinforced by Kandemir et al. (2006). Further support to this view (Calantone et al., 2003) defines market turbulence as characterised by continuous changes in customers’ preference/demands, in price/cost structures, and in the composition of competitors. In a more turbulent market, a firm has to modify its products and approaches to the market more frequently (Kandemir et al., 2006).

Egeren & O’Connor (1998) also support earlier mentioned notion (Kohli & Jaworski, 1990; Jaworski & Kohli, 1993) and argue that market instability or dynamism could be driven by

changes in customers and in consumer preference. They explain that for environments with unchanged consumers' preference, organisations would rarely need to adjust their marketing mix. On the other hand, for environments with constantly changing consumers and consumer preferences, there is greater possibility that the organisation's offerings will differ from consumer needs.

Diverse views exist concerning the impact of market turbulence on the relationship and behaviour of firms (Trkman & McCormack, 2009). On the one hand, when there is a fast changing market, firms would drive to co-ordinate their efforts to reduce uncertainty and respond to changes in demand. On the other hand, a firm might respond more swiftly to such customers' preferences changes, if the firm is operating on its own. For this second option, there might be communication delays, especially where joint decision making is involved, thus limiting the chance for pro-active measures (Chatterjee, 2004).

In line with the contingency theory, both of these views might be correct (Trkman & McCormack, 2009, p.250): a focal firm with a flawed strategy and structure can survive in a less turbulent environment, given low likelihood of potential risks; to the contrary, a focal firm in a turbulent market must have in place a clear strategy for dealing with turbulence, though the strategies may vary based on the organisation type.

Supporting this latter logic, Koo et al. (2007) argue that market turbulence positively influences the adoption level of different generic strategies (cost leadership, market differentiation, innovation differentiation, focus), while it does not have a direct impact on firm performance.

3.4.2 1.2 Competitive Intensity

A number of studies have emphasised the need to explore competitive intensity in the contingency literature (e.g., Hwang, 2005; Huang et al., 2010). Organisations compete for a number of resources, for example, raw materials, selling and distribution channels, quality and variety of products, and product price (Khandwalla, 1977; Gordon & Narayanan, 1984).

Due to intense competition, organisations are increasingly recognising the strategic importance of providing an important source of competitive advantage (Kalagnanam & Lindsey, 1998). Connecting to this logic, other literature (e.g., Yasai-Ardekani & Haug, 1997) maintain that in highly competitive environments, advanced environmental signals must be detected, and timely communication of environmental information is essential in such circumstances. In such circumstances too, to achieve organisation-environment alignment, the speed of decision making in the implementation of strategic decisions is critical (Yasai-Ardekani & Haug, 1997).

Highly competitive environments are those with intense price and non-price competition (Eisenhardt, 1989). The modern day marketplace is characterised by increased focus on quality and better customer service (Hoque, 2004). To compete favourably in such conditions, organisations must maintain an efficient and effective management accounting system (Cooper, 1995).

This logic is supported by further literature: to respond rapidly and effectively, organisations must embrace organisational integration and coordination (Khandwalla, 1972) and organisations need management accounting and controls systems that track both financial and non-financial performance (price, market share, marketing and product competition, number of competitors and competitors' actions) (Kaplan & Norton, 1996; Hoque et al., 2001; Baines & Langfield-Smith, 2003; Cavalluzo & Ittner, 2004).

Competitors' actions and reactions may be very unpredictable, and the speed of adjustment to market becomes a critical survival factor to participants in such environment (Eisenhardt, 1989). Firms must become more flexible in responding to external environment changes characterised by intense competition (Douglas, 1999).

“As competition becomes stronger, the choices available for consumers increase” (Hwang, 2005, p.27). Organisations must therefore find a means to discover customers' wants and build superior customer value than the competitor (Kohli & Jaworski, 1990). The management accounting and control system plays a significant role in this means to achieving a competitive edge. Therefore, as an organisation's competitive environment becomes intense, a more sophisticated management accounting and control system is needed to facilitate improved managerial decision making (Libby & Waterhouse, 1996).

3.4.3 Internal Factors of Organisation

The internal factors of an organisation have also been classified as organisational factors (e.g., Khandwalla, 1972; Cadez & Guilding, 2008; Cinquini & Tennucci, 2010; Waweru, 2008).

The core internal factors include organisational structure (formalisation and decentralisation) (Dik, 2011; Hwang, 2005; Waweru, 2008), organisational size (Cadez & Guilding, 2008; Cinquini & Tennucci, 2010; Tuan Mat, 2010), and technology (Cadez & Guilding, 2008; Haldma & Lääts, 2002; Waweru, 2008). Following this categorisation, these internal factors are reviewed next under organisational factors (section 3.4.5).

3.4.4 Conclusion to the Environment of Organisation

Changes in environmental factors, additional to causing changes in the management accounting and control systems implemented, also influence the role that management accountants play within an organisation (Burns & Vaivio, 2001; Kattan et al., 2007). Other studies that reinforce this logic (e.g., Fisher, 1995; Hartmann, 2000; Chenhall, 2003) argue

that environmental uncertainty is a major explanatory variable concerning the appropriateness of accounting data in evaluating the performance of business units.

Heading research calls (e.g., Dik, 2011; Hwang, 2005; Cadez & Guilding, 2008), this study seeks to contribute to knowledge on this contingency context of organisational environment and management accounting decision system, namely strategic management accounting (SMA), and examines the contexts of environmental uncertainty, organisational structure, and organisational size.

For that target, this study follows the general view of environmental uncertainty (Baum & Wally, 2003) and taps on the views in past studies (e.g., Elbanna, 2007; Elbanna & Child, 2007; Dik, 2011; Hwang, 2005).

This multidimensional exploration of environment uncertainty is necessary because (e.g., Elbanna, 2007; Lewis & Harvey, 2001; Werner et al., 1996; Miller, 1993) each dimension may have different implications for managerial practices and organisational outcomes.

Similarly, this methodological and theoretical logic justifies the multidimensional exploration of organisational structure. While the contextualisation of environmental uncertainty for this study has been specified in section 3.4.2, the contextualisation for the internal factors, also called organisational factors, is explained in section 3.4.5

3.4.5 Organisational Factors

According to relevant literature concerning the contingency theory of organisations, organisational characteristics shape the best management accounting practices that fit for a certain organisation. Haldma & Lääts (2002, p.383) note: “the most common internal factors that have been examined in relation to management accounting are organisational size (Khandwalla, 1972; Bruns & Waterhouse, 1975; Merchant, 1981), technology (Khandwalla, 1977; Merchant, 1984; Dunk, 1992), and companies’ strategy (Miles & Snow, 1978; Gupta & Govindarajan, 1984; Simons, 1987; Chenhall & Morris, 1995)”.

Overall internal factors context of contingency literature however underlines three core characteristics (factors) (e.g., Dik, 2011; Luft & Shield, 2007; Waweru, 2008), namely; organisational structure, organisational size and technology. Following that foundation, these organisational factors (organisational structure, organisational size and organisational technology) are embraced in this study and therefore reviewed in this section. The review of relevant literature concerning these contexts is presented in the following order:

1. General background literature (section 3.4.5.1),
2. Organisational structure (section 3.4.5.2),
3. Organisational size (section 3.4.5.3), and
4. Organisational technology (section 3.4.5.4).

3.4.5.1 General Background Literature

It is important to explore the internal contingency factors in organisational operations (e.g., Waweru, 2008; Hwang, 2005; Tuan Mat, 2010; Joshi, 2001). The internal (organisational) contingencies (e.g., Hwang, 2005; Dik, 2011) include organisational size, organisational structure, technology, and competitive strategy (Libby & Waterhouse, 1996; Hyvönen, 2007; Waweru, 2008; Hwang, 2005; Tuan Mat, 2010).

As argued by literature (e.g., Haldma & Lääts, 2002; Seal, 2001), cited in Waweru, 2008 (p.27), “the list of contingencies and relations in a theoretical framework cannot be considered exhaustive, since it is not possible to identify and include all the factors and impact”.

For this study of the contingency perspective of the use of strategic management accounting techniques in Palestinian companies, three internal factors are explored, namely organisational structure, organisational size, and organisational technology, and the relevant theoretical foundations concerning these contexts are reviewed next. Following these, organisational strategy literature is reviewed in section 3.5.

3.4.5.2 Organisational Structure

Organisational structure influences the interplay between strategic pursuit and accounting information production and use (Dent, 1991; Okumus, 2003; Spanos & Prastacos, 2004; Ezzamel et al., 1997; Mouritsen, 1999; Puolamäki, 2004; Waweru, 2008; Leftesi, 2008).

There is a limited examination of the association between organisational structure and strategic process in organisations (Hwang, 2005). Apart from the research by Chandler (1962) and followers, which are rather specialised (Hwang, 2005); researches have systematically failed to relate strategic content to process, structure and environment. In these contexts, this study aims to contribute to knowledge by examining the association between organisational strategy, strategic management accounting (SMA) usage, organisational structure and organisational environment.

Organisational structure has been defined in different ways in the literature. According to Macy & Arunachalam (1995, p.69), organisational structure represents the patterns and relationships that exist among organisation and work unit elements. Scott (2005, p.468) notes, “organisation structures are the product not only of coordinative demands imposed by

complex technologies, but also of rationalised norm legitimising adoption of appropriate structural models”.

Miller & Dröge (1986) define organisational structure as capturing centralisation of authority, formalisation, complexity and integration. On their part, Organ & Battement (1986, p.607) define organisational structure as “the formal, systematic arrangement of the operations to one another”. Offering a more comprehensive view, Daft (1989) defined organisational structure to consist of formal reporting relationships, which includes the number of levels in the hierarchy, the span of control of managers and supervisors, and the cross-communication between the organisational departments.

A change in structure can be of organisation structure, departmentalisation, decentralisation, centralisation and size (Tuan Mat, 2010; Burns & Scapens, 2000; Smith et al., 2005; Waweru et al., 2004). Other researchers have also tried to dimensionalise and explain the diversity and variety in the structure of organisation (e.g., Burns & Stalker, 1961; Lawrence & Lorsch, 1967; Woodward, 1965) and provide arguments that connect to the aforementioned structure change directions. In their efforts, these scholars draw a principal contrast between mechanistic or bureaucratic and organic structures.

A **mechanistic structure**, they emphasised, would be characterised by vertical hierarchies, numerous departments, limited decentralisation and many rules and procedures. That structure favours centralised authority at the top of the system, standardisation and formalisation, and tight specification of duties and vertical interaction (Bantel, 1993; Marsden et al., 1994). On the other hand, an **organic structure** tends to be open, less structurally complex, fewer rules, extensive decentralisation, and less rigid definition of methods, duties, and powers, and favours horizontal interaction (Bantel, 1993; Johnson & Scholes, 1993; Marsden et al., 1994).

The appropriateness of organisational structure can change over time (Özsomer et al., 1997). Consequently, organisations must manage their structure carefully (Hwang, 2005).

The 1961 study of Burns & Stalker, which investigated 20 manufacturing firms, provides insights that support this environmental factor influence on the appropriateness of organisational structure. They concluded that either the mechanistic or organic form of organisational structure can be successful, depending on the firm's external environment. According to Burns & Stalker (1961), the mechanistic organisational form thrives in stable environment but experience difficulty in rapidly changing and uncertain environments. On the other hand, the organic form, which is less bureaucratic, performs best in such rapidly changing and uncertain environments. Further literature suggests that mechanistic organisations are highly bureaucratic and are characterised by centralisation, many rules, precise division of labour, narrow span of control and formal coordination (e.g., Peters & Waterman, 1982; Schermerborn, 1993).

Finally, in their 1984 study, Gordon & Narayanan investigated the relationship between organisation's structure and information systems. Empirically, that study suggests that organisational structure and characteristics of information sought by decision makers are complementary strategies in response to the perception of the environment. The strategic management accounting techniques are tools for managing organisational financial information towards enabling profitable managerial decision making. Thus, this study supports the view that organisational structure would influence the strategic management accounting practices.

“Researchers began in the 1940's to identify the dimensions of firm structure” (Hwang, 2005, p.45). According to literature (e.g., Hwang, 2005; Johnson & Scholes, 1993; Marsden et al., 1994; Özsommer, 1997; Tuan Mat, 2010; Waweru et al., 2004; Boyd et al., 1995; Gul & Chia,

1994) the core typologies are formalisation, centralisation and specialisation. While the study of Gosselin (1997) also classified three variables, the variables were specified as organisational centralisation, formalisation and differentiation. These three structural variables (formalisation, centralisation and specialisation) are important in shaping the performance of both a strategic unit and its marketing department within the environment of a given competitive strategy (Boyd et al., 1995, cited in Hwang, 2005, p.46). For this study, formalisation and decentralisation are considered, and these are summarised in Sections 3.4.5.2.1 (Formalisation) and 3.4.5.2.2 (Decentralisation).

3.4.5.2.1 Formalisation

Formalisation is a common tool of corporate policy. According to Ruekert et al. (1985), formalisation is the degree to which decisions and working relationships are guided through strict rules and standard policies and procedures. Earlier literature (Zaltman et al., 1973), defined formalisation as “the emphasis placed within the organisation on following specific rules and procedures in performing one’s job”. Also, Hatch (1997) defined formalisation as the extent to which explicit rules, regulations, policies and procedures govern organisational activities. Such rules and procedures serve as guide for work processes and contribute to coordination by ensuring a structured execution of desired activities (Hatch, 1997).

In a highly structured environment, employees perform standardised responsibilities that are regulated through strict rules and operating procedures (Zeithaml et al., 1988). Formalisation might increase the level of certain types of information processing and information use (Galbraith, 1973; Daft & Lengel, 1986). In the study of the effect of organisational structure on management accounting innovation, Gosselin (1997) concluded that, while formalisation correlates positively with the implementation of ABC, it did not for the adoption of ABC.

3.4.5.2.2 Decentralisation

Decentralisation, or its opposite centralisation (Otley, 1980; Williams & Seaman, 2001), form a significant part of the control package in an organisation. In this section, while the focus in this study is on decentralisation, both empirical evidence on centralisation and decentralisation is highlighted, as it is important to mention the opposite views.

Centralisation is an important contingent variable in designing management accounting system (Watson, 1975), and as a supportive mechanism should be consistent with the intent of the formal structural arrangements (Chenhall & Morris, 1986).

Centralisation is probably the most prominent structural factor in previous researches exploring MAS design and changes (e.g., Chenhall & Morris, 1986; Libby & Waterhous, 1996; Tuan Mat, 2010). Centralization refers to the extent to which decision making authority is concentrated at the top level of the organisation (Schaffer, 1984; Miller & Dröge, 1986; Sisk & Williams, 1981; Leftesi, 2008). Centralised management systems favour efficiency over effectiveness and presuppose a stable, constant, and clearly defined external environment (Spillard, 1985, cited in Hwang, 2005, p.46). Centralization helps to conserve scarce managerial resources (Athey et al, 1994). However, as Tuan Mat (2010) notes, “in a centralised structure, the decision making process is less effective and costly because knowledge has to be transferred to the person that has decision rights” (p.39).

Furthermore, centralised organisations will implement changes in their accounting systems less often than decentralised ones (Matejka & De Waegenare, 2000). Chenhall (2008) supports Matejka & De Waegenare (2000) and notes that accounting systems are consistent with horizontal (or decentralized) organisations.

This point mentioned by Chenhall (2008) is of critical importance in this study, which has strategic management accounting as its focus. “Strategic management accounting has characteristics related to aspects of horizontal organisation as they aim to connect strategy to the value chain and link activities across the organisation...” (Chenhall, 2008, p.525). A common approach in horizontal organisation, Chenhall (2008) further notes, is identifying strategic priorities with a customer-oriented focus and then exploiting process efficiency, continuous improvements, flattened structures, and team focus and empowerment, to initiate change. A contrast is however offered by Verbeeten (2010) who found decentralisation to associate negatively with major changes in the decision-influencing components of MACS.

Delegating more decision making authority to lower levels would broaden the scope of lower managers and also provide business units significant freedom to make trade-offs (Jensen, 2001; Prendergast, 2002; Moers, 2006). Decentralisation allows the possibility for lower level managers to change their MACS, as need arises, to meet their local needs (Abernethy & Bouwens, 2005, Moers, 2006). Further management accounting and control research supporting the above view suggests that decentralised decision making would be associated to a strong emphasis on formal management accounting and control system (including financial and non-financial management accounting) and performance information (e.g., Bruns & Waterhouse, 1975; Gordon & Narayanan, 1984; Chenhall & Morris, 1986; Moers, 2006).

These and other scholars (e.g., Kimberly & Evanisko, 1981; Damanpour, 1991) argue that, to manage change effectively, organisations must achieve a balance between allowing organisational subunits the independence to react to its environment through change and the need for control and integration of work amongst all units of the organisation.

Literature connecting to performance suggests that a good fit between decentralisation and management accounting system characteristics is likely to improve managerial performance

(e.g., Gordon & Miller, 1976; Waterhouse & Tiessen, 1978; Gul & Chia, 1994). For a higher managerial performance though, a well structured organisational structure must be complemented with appropriate management accounting system information (Gul & Chia, 1994).

Further literature relating to performance suggests that decentralisation would likely have a positive association to organisational performance when managers perceive their environment to be uncertain (Negandhi & Reimann, 1972). These scholars also argue that centralised decision making would very likely be effective when uncertainty is perceived to be low. Gul & Chia (1994) support Negandhi & Reimann (1972) and suggest a contingent relationship between the degree of decentralisation and organisational performance.

3.4.5.3 Organisational Size

Internal factors are important in the examination of contingency theory. As a result, numerous research efforts address these in relation to management accounting practices in organisations. One internal factor that has been examined in this relation is organisational size (Khandwalla, 1972; Merchant, 1978; Cadez & Guilding, 2008; Cinquini & Tennucci, 2010; Tuan Mat, 2010; Huang et al., 2010).

These scholars argue that firm size influences the way organisations design and use management accounting practices for decision making (see also Bruns & Waterhouse, 1975; Gordon & Narayanan, 1984; Damanpour, 1992; Burns & Stalker, 1961; Miles & Snow, 1978; Guilding et al., 2000). For example too, Luther & Longden (2001) determine that the benefits from management accounting system increases with the size of the entity. Further literature (Libby & Waterhouse, 1996) suggests a relationship between the size of an organisation and the management accounting change propensity, as larger firms have greater resources for

change. While Luther & Longden (2001) measured firm size by annual turnover, Libby and Waterhouse measured it by number of employees.

Related literature also suggests that size is an important factor when relating to the adoption of more complex administration system (Moore & Chenhall, 1994). According to that logic, larger organisations would generally have more sophisticated management accounting systems. Also, larger organisations would have greater access to resources to develop innovative systems compared to smaller organisations. For example, Nguyen & Brooks (1997) provide empirical evidence in respect of the adoption of ABC system that showed that the adoption rates are much higher for larger firms than smaller firms. Other research that enhances the large firm logic suggests that multinational companies' usage level of both traditional and new management accounting techniques are usually high.

As organisations grow larger the information requirement of managers increases to a point where they have to institute controls, such as rules, documentation, and specialisation of roles and functions (Child & Mansfield, 1972). According to Merchant (1981), large firms are more decentralised and use more sophisticated budgets in a participative way.

In their 2002 study, Haldma & Laats provide empirical evidence that support Merchant (1984), and underline that large companies use more sophisticated budgets. They also used more sophisticated performance measurement systems, they reported. According to them, "the level of sophistication of cost accounting system tends to increase in line with company size" (p.395).

According to Mintzberg (1979), organisation size can be measured by the number of employees, the amount of sales, the size of the budget, the size of the capital investment, and other factors. In Woodward's (1965) view, the best indicator of 'bigness' is the size of the management group. A number of other researchers also propose other measures of firm size.

For example, while Kettinger et al. (1994) suggest gross sales or gross value of asset, many others emphasise number of employees (e.g., Aiken et al., 1980; Hoque & James, 2000; Dewar & Dutton, 1986; Govindarajan, 1984). Hoque et al. (2001) suggest sales turnover. In a comparative study involving New Zealand, UK and US companies, Guilding et al. (2000) combined both turnover and assets to measure organisational size.

From overall literature reviewed, in relationship contingency theory of organisation (e.g., Smith et al., 1989; Carpenter & Fredrickson, 2001) and contingency context of management accounting and control (e.g., Jusoh, 2010; Huang et al., 2010; Libby & Waterhouse, 1996; Hoque & James, 2000; Waweru, 2008), the total revenue of an organisation is a good measure of the organisation size. Following this foundation, in my study, the organisational size is measured by the total revenue of the explored Palestinian organisations.

3.4.5.4 Technology

Technology is another important internal organisational factor that needs to be explored in relation to management accounting practices (e.g., Khandwalla, 1977; Merchant, 1984; Dunk, 1992; Cadez & Guilding, 2008; Haldma & Lääts, 2002; Huang et al., 2010; Waweru & Uliana, 2005; Waweru, 2008). The production technology a firm uses influences the type of accounting practices that a firm uses (Otley, 1980), and the investment in technology will enhance management control systems (Huang et al., 2010).

Past studies have identified two dimensions of technology (e.g., Dewar & Hage, 1978). The study of Freeman (1973) investigated technology as a contingent factor. According to these and other literature (e.g., Marsh & Manari, 1981) there is a strong relationship between various characteristics of technology and structure in the organisation.

Technology advancement is a major trigger for management accounting change (Baines & Langfield-Smith, 2003; Libby & Waterhouse, 1996; Waweru et al., 2004).

In his study of Korean manufacturing companies, Choe (2004) found a significant positive association between the level of manufacturing technology and the amount of information generated through the management accounting information system.

According to Emmanuel et al. (1990), technology contingency factors include the nature of the production process, its degree of routine, and how well the means-end relationships are understood. Further context literature suggests that when process technologies are standardised and automated, high budget use (Merchant, 1984), high budgetary controls (Dunk, 1992) and more traditional formal management control systems with highly developed process controls (Khandwalla, 1972) are suitable.

Where there is product inter-dependence, there will be a technological constraint on the design of the accounting system (Haldma & Lääts, 2002). Empirically, new technology will cause a change in the cost structure, and while the technological process continues, the accounting system is very likely to become more complex and sophisticated (Haldma & Lääts, 2002).

It is important for an organisation to have appropriate MAS. For that to aid the company's competitive prospects, manufacturing technology must be consistent with business strategy and organisational structure (Tuan Mat, 2010). An appropriate fit between technologies, MAS, strategy and structure would enhance competitive advantage, thereby enhancing organisational performance (Hyvönen, 2007).

Markets have become more competitive, and there is demand for increased quality and competitively priced products (Tuan Mat, 2010). Organisations must respond to these needs by re-organising the work processes by adopting organisational designs and strategy that have stronger customer orientation. Considerable investments in advanced manufacturing technology such as computer-integrated manufacturing and just-in-time systems are very

necessary in this connection (Baines & Langfield-Smith, 2003). Doing this, organisations would improve quality, productivity and flexibility, as well as reduce costs (Tuan Mat, 2010).

3.5 Organisational Strategy

Company strategy has been identified as a core internal factor to explore in the examination of the contingency perspective of management accounting (e.g., Miles & Snow, 1978; Gupta & Govindarajan, 1984; Chenhall & Morris, 1995; Cadez & Guilding, 2008; Chapman, 1997; Cinquini & Tennucci, 2010; Langfield-Smith, 1997; Leftesi, 2008; Hwang, 2005).

Strategy is defined by Chandler (1962) as:

“The determination of the basic long-term goals and the objectives of an enterprise, and the adoption of courses of action and the allocation of resources for carrying out these goals” (p.13).

Further, strategy is defined by Hambrick (1980) as:

“A pattern of important decisions that guides the organisation in its relationship with its environment; affects the internal structure and processes of the organisation; and centrally affects the organisation’s performance” (p.567).

Supporting the importance of this factor in the contingency context, Chapman (1997) comments that one of the core points in the reflections based on a contingent-based view of accounting is understanding the relationships between strategy and accounting. In the examination of this relationship, four different connotations have been used to distinguish the accounting context in literature, namely; management control systems (MCS) (e.g., Shank & Govindarajan, 1992; Chenhall & Langfield-Smith, 1998); strategic management accounting (SMA) (e.g., Cadez & Guilding, 2008; Cravens & Guilding, 2001; Cinquini & Tennucci, 2010); accounting systems design (ASD) (e.g., Dent, 1990; Chapman, 1997; Langfield-Smith,

2005); and management accounting systems (MAS) (e.g., Langfield-Smith, 1997; Hyvönen, 2008; Dik, 2011).

Strategy represents a core contingency variable (Hwang, 2005), and MAS which is tailored to support strategy can enhance competitive advantage and superior performance (Langfield-Smith, 1997). The fundamental relationship between strategy and management control systems (MCS) is gaining increasing research attention (Dent, 1990; Chenhall, 2003; Langfield-Smith, 2007; Miles, 2003).

In one of the earliest comments in literature, Miles & Snow (1978) state that the strategic choice of a company will influence its MCS, i.e., different types of organisational plans and strategy are likely to cause different control systems configuration. Since the 1980's a number of researchers have investigated the link between particular elements of MCS and the specific strategy adopted by organisations under the contingency approach (e.g., Govindarajan & Gupta, 1985; Simons, 1987, 1990; 1991; 1995; Hope & Hope, 1995; Shank & Govindarajan, 1992; Bruggeman & Van der Stede, 1993; Chenhall & Langfield-Smith, 1998).

Other contingency-based studies (e.g., Govindarajan & Fisher, 1990; Chenhall & Langfield-Smith, 1998) have investigated the relationship between strategy, MCS and performance. Further MCS perspective (Langfield-Smith, 1997, p.207) states that, "the MCS should be tailored explicitly to support the strategy of the business".

Similar investigation of this strategy role has been undertaken by some other researchers in relation to strategic management accounting techniques (e.g., Cadez & Guilding, 2007, 2008; Cravens & Guilding, 2001; Cinquini & Tennucci, 2010). Using another accounting connotation, some other studies (e.g., Langfield-Smith, 2005; Chapman, 1997; Chenhall, 2005) researched the role strategy might play in accounting system design.

Overall, the aforementioned studies maintain that there is an important link between MCS (and SMA) and strategy, and a congruent matching of the two is essential for performance (see also Govindarajan & Gupta, 1985; Simons, 1987). Performance measurement literature also reinforces this link: performance management system encourages actions that are congruent with organisational strategy (Kaplan & Atkinsons, 1998; Kaplan & Norton, 1996; Simons, 2000). For example, supporting this congruence logic, Chenhall & Langfield-Smith (1998) suggest that high performing differentiator strategy firms are associated with management techniques of quality systems, integrated systems, team-based human resource structure, and MAPS incorporating employee-based measures, benchmarking, strategic planning and activity-based techniques (cited in Hwang, 2005, p.41-42).

Further contemporary viewpoints posit that, as a matter of fact, there may be a two-way relationship between these two variables, that is, “MAS shapes, and is shaped by strategy” (Kober et al., 2007, p.425). In their study that underline this reciprocal relationship between management accounting practices and strategy, Perera et al. (2003) suggest that management accounting practices may both change as a result and instruments, and vary between the two in the same organisation. Supporting that notion, Kober et al. (2007) found that the interactive use of MAS mechanisms facilitate strategic change, and mechanisms change to match change in strategy.

While Young & Selto (1991, p.270) observe that strategy influences “the choice of accounting techniques and the manufacturing practices”, Ittner & Larcker (1997, p.295) note that “a key assumption in the strategic control literature is the need to align specific control practices with the organisation’s chosen strategy”.

Miles & Snow (1978, 1994) developed four types of strategy typologies: prospector, defender, analyser and reactor. In 1980, Porter proposed two different types of strategy, namely low

cost strategy and product differentiation strategy. Miles & Snow's (1978) developed strategy typologies, which is based on how companies respond to a changing environment and align the environment with their companies, is the focus in this study. For the purpose of this study two of these generic strategies are explained next. These two strategy types are explored in this study, because they have featured more in the study of contingency perspective of management accounting practices (e.g., Cadez & Guilding, 2008; Cinquini & Tennucci, 2010; Guilding, 1999; Anderson & Lanen, 1999).

Prospector type Strategy

Contemporary management accounting systems literature also underlines the need to explore prospector type strategy. Prospectors are described as dynamic in searching for market opportunities, capable of meeting consumers' needs with new product developments and heavy investments in research and development (Leftesi, 2008).

Prospectors use comprehensive planning and measure performance subjectively (Miles & Snow, 1978). According to Guilding (1999), prospector firms make greater use of and perceive greater need for competitor-focused accounting. Further literature (Cadez & Guilding, 2008): prospector organisations compete through new products and market development. Thus, product lines change over time and the firms constantly seek new market opportunities.

Companies facing high uncertainty will utilise their control more intensively (Tushman & Nadler, 1978). This control viewpoint reinforces earlier study (Khandwalla, 1972) which suggests that companies engaged in continual product development and search for new market segments become differentiated and require elaborate controls, e.g., budgeting techniques, for integration purposes.

Defender type Strategy

For the defender strategy type, Miles & Snow (1978) describe the planning and control systems of defender firms as likely to be very detailed, emphasising uncertainty reduction and problem solving. These systems do not aim for new product development or locating market opportunities, and control systems are usually centralised (Hyvönen, 2008; Cadez & Guilding, 2008). Defenders emphasise cost control, trend monitoring and efficiency rather than scanning for new opportunities in the environment (Miles & Snow, 1978).

Leftesi (2008): defenders have a narrow product range with high production volumes and low diversity of producers; they emphasise the efficiency of operation rather than innovation (p.106). Miller & Friesen (1982) comment that defender firms are conservative, and need a control system that requires innovation. Organisations that are highly structured (stable environment and repetitive operations) usually favour a cost leadership focus (Porter, 1980), a view that has been reinforced by other studies, e.g., Langfield-Smith (1997) who comments that cost control is the priority in firms following the defender strategy.

Anderson & Lanen's (1999) exploratory study suggests that change in MAPs follow economic reforms and is contingent on organisational business strategy (cited in Leftesi, 2008, p.107). Strategy type evidence suggests that a prospector strategy is associated with managers' decision to adopt ABC (Gosselin, 1997). That study also argues that prospectors are likely to embrace innovation in accounting, as they are innovation organisations. Furthermore, Simons (1987) maintains that prospectors are more likely to adapt their cost management systems to a greater extent than defenders.

3.6 Organisational Performance

Strategic management literature underlines the important role that performance measurement system plays in the operations and business strategy implementation of organisations (e.g., Valanciene & Gimzauskiene, 2007; Kloviene & Gimzauskiene, 2009). Organisations must therefore give due attention to maintaining an effective performance management system, as this is critical to its survival (Chow & Van der Stede, 2006). Moreover, this performance focus plays an important role in leading the organisation (Chow & Van der Stede, 2006). Supporting this ‘leading role’ view, Neely et al. (2002) define performance measurement system as a balanced and dynamic system that supports the decision making process through gathering, elaborating and analysing information. This performance measurement lens is of major importance in this exploration of strategic management accounting, where the aim is to ensure strategic positioning through effective decision making.

Overall, as Tuan Mat (2010) argues, “performance may be an antecedent or an outcome factor of management accounting and organisational change (p.43). According to the “performance as antecedent” view, low financial performance is one of the reasons why firms change their management accounting and internal organisational factors, in order to improve performance (Granlund, 2001; Laitinen, 2006). On the other hand, the “performance as outcome factor” view, which is the contingency theory of management accounting view (Tuan Mat, 2010, p.43), and the focus in this study, suggests that “if organisations implement management accounting systems (MAS) that suit their organisational and environmental factors, they are likely to perform better” (Chenhall, 2003; Otley, 1980).

Contingency-based management accounting research should employ organisational performance as the dependant variable (Chenhall & Langfield-Smith, 1998; Chenhall, 2003). According to the contingency theory, company performance is a product of an appropriate fit between the structure (SMA system) and context (contingency factors) (Cadez & Guilding,

2008) or according to Jermias & Gani (2002) performance is dependent on the fit between MAS and its contextual variables. The assumption therefore is that both high and low performing companies exist as a result of more or less compatible combinations of context and structure (Gerdin & Greve, 2004; Ittner & Larcker, 2001; Cadez & Guilding, 2008).

Given the importance of this latter context, over the last two decades several scholars from diverse disciplines have invested much effort into developing performance management systems that reflect fast changing business environments (e.g., Bitton, 1990; Kaplan & Norton, 1993, 1996; Neely et al., 1996, 2000; Olve et al., 1999; Franco-Santos & Bourne, 2005; Franco-Santos et al., 2007) and assessment of their fitness for purpose (e.g., Dixon et al., 1990; Bititci et al., 1998). For these ‘ever changing business environment’ and ‘fitness for purpose’ reasons, these scholars generally advice for a shift from the traditional concept of performance measurement. Thus, scholars call for a comprehensive approach in the examination of organisational performance.

In business strategy literature, multifaceted characteristics of performance have been discussed from different perspectives (Hambrick, 1980; Alarco & Bastias, 2000). In one of these perspectives, strategic decision making literature emphasises the need to examine both financial and non-financial metrics of performance (e.g., Kloviene & Gimzauskiene, 2009; Valanciene & Gimzauskiene, 2007; Husted & Allen, 2007; Robbins, 2005). Aligning to that logic, contingency perspective of performance increasingly advocates for the examination of financial and non-financial elements of organisational performance (e.g., Jusoh et al., 2006; Hwang, 2005; Chenhall, 2003; Hyvönen, 2008; Ittner & Lacker, 1998).

Following the evidence in literature (e.g., Hwang, 2005; Hyvönen, 2008), both financial and non-financial performance, also called ‘traditional and non-traditional performance measures’ (Hyvönen, 2008, p.13) are explored in this study.

In their investigation of non-financial elements of organisational performance of organisations operating in uncertain environment, Hoque (2005) argued that traditional performance measures do not satisfactorily reflect firm performance affected by today's changing business environment. These traditional measures, which highlight only financial criteria like return on investment or net earnings, are narrow in focus, historical in nature, and incomplete (Hoque et al., 2001).

Organisations must also use non-financial performance measures, as this will enable them address environmental change by clearly monitoring organisational process core competencies, create greater efficiency, help managers to assess change in their business environment, determine and evaluate progress towards firm's goals, and enhance overall performance (Kaplan & Norton, 1996). The findings in Baines & Langfield-Smith (2003) support this view: organisational performance is significantly associated with increased reliance on non-financial management accounting information.

In today's ever dynamic, competitive and computer manufacturing-based environment, organisations need multi-dimensional performance measurement approach that should provide continuous signals for identifying the critical clues in their day-to-day activities and where efforts must be directed (Hoque et al., 2001).

There is need to enhance the understanding of business performance measurement in organisations (Marr & Schiuma, 2003). In recognition of this need, diverse management researchers in the fields of strategy management, human resource management, marketing, operations management, organisational behaviour, information systems, management accounting and control are contributing to the field of performance management (e.g., Marr & Schiuma, 2003; Cadez & Guilding, 2008; Franco-Santos & Bourne, 2005). To contribute to

the knowledge on organisational performance, this contingency perspective study explores financial and non-financial performance elements in the Palestinian economic context.

From existing literature, the core measures of financial performance include market share, return on assets, return on investment, sales margin, profit level, capacity utilisation (e.g., Elbanna & Alhwarai, 2012; Boyd, 1991; Pearce et al., 1987; Glaister et al., 2008; Govindarajan & Gupta, 1985; Brush & Van der Werf, 1990; McDougall et al., 1994; Roth & Ricks, 1994; Hwang, 2005; Jusoh, 2010; Tuan Mat, 2010; Cadez & Guilding, 2008), while the core measures of non-financial performance includes employee attitude and moral, personnel performance, customer satisfaction, product/service quality..... (e.g., Anderson & Lanen, 1999; Kaplan & Norton, 1992; Mahoney et al., 1963; Brownell & Hirst, 1986; Govindarajan, 1986; Gul & Chia, 1994; Chenhall & Langfield-Smith, 1998; Chong & Chong, 1997; Hoque, 2004; Jusoh, 2010; Hoque, 2005; Tuan Mat, 2010; Cadez & Guilding, 2008).

3.7 Conclusion to the Chapter

This chapter has presented a review of literature that connects to the contingency variables that are embraced in this study. These include strategic management accounting techniques usage, external business environment, internal business environment (also called organisational factors), organisational (or business) strategy, and organisational performance. Each variable has been explored explaining relevant foundations for this study. It is important to understand these factors so that organisations can deal with the functional relationships and design optimal management control system to fit their environment (Bhimani, 1999).

This chapter reviewed literature on strategic management accounting techniques used in modern organisations. Five categories of strategic management accounting techniques are embraced in this study and these include costing, planning, control and performance measurement; strategic decision making; competitor accounting; and customer accounting.

The environment of an organisation was explained, pinpointing the external and internal elements. The conceptualisation of external environment was discussed pinpointing empirical research in that connection. In this study, the perception of perceived environmental uncertainty (PEU), which researches have conceptualised to include market turbulence and competitive intensity is the focus. The relevant literature relating to these have been discussed in this chapter.

Also discussed in this chapter is internal environment of an organisation, which has also been presented in past studies as organisational factors. Three core elements were conceptualised in this study, namely, organisational size, organisational structure, and organisational technology. The review of relevant literature for each of these elements focused on pinpointing the conceptualisation, and flagging empirical support as evident in previous

studies. Organisational structure has been conceptualised in this study to include formalisation and decentralisation.

Business (or organisational) strategy is another core element in the conceptualised model for this study. The review of literature explained this concept and also showed the evidence in previous studies that embraced this construct. The “prospector” and “defender” strategies are included in this study.

Organisational performance has been conceptualised as an outcome factor in this study. The review of literature focused on conceptualising organisational performance and also showing empirical support in past studies. Two typologies of organisational performance are embraced in this study, namely, financial performance and non-financial performance. Organisational performance is conceptualised to be shaped by perceived environmental uncertainty, business (or organisational) strategy, strategic management accounting techniques usage, and the organisational structure.

Furthermore, strategic management accounting techniques usage and organisational structure are also conceptualised as outcome factors, where strategic management accounting techniques usage is shaped by perceived environmental uncertainty, business (or organisational) strategy, and the organisational factors (organisational size, organisational structure, and organisational technology) on the one hand; and organisational structure is shaped by perceived environmental uncertainty and business (or organisational) strategy.

The framework for this study and justification are explained next in chapter four. In that chapter too, the hypotheses that reflect the expected associations between the factors included in the framework, are also explained.

4. Research Framework and Specification of Research Hypotheses

4.1 Introduction

Two core steps are taken in this chapter. First, the framework is presented and justified (Section 4.2): Following that, Section 4.3 defines the hypotheses behind the conceptualised relationships as pictured in the framework (Figure 4.1). To conclude this chapter, a chapter conclusion is presented in Section 4.4, where the hypotheses for this study are summarised in Table 4.1.

4.2 The Research Framework and Justification

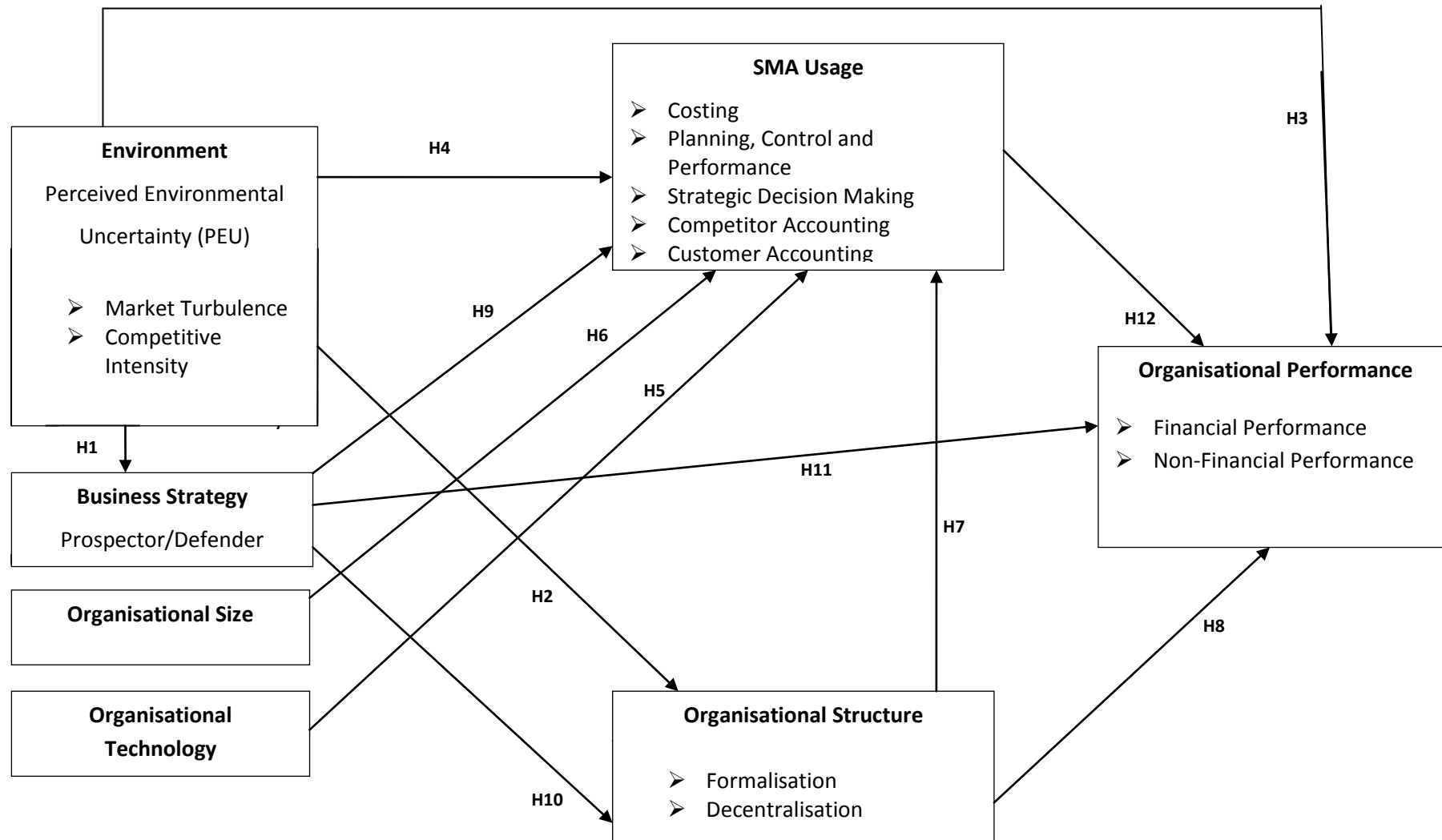
Summarising a review of management accounting research using contingency theory, Islam & Hu (2012) commented that contingency theory has been applied in management accounting research for the aim of addressing three types of questions about: (1) the fit between organisational control and structure; (2) the impact of such fits on performance; and (3) investigation of multiple contingencies and their impact on organisational design. The conceptualisation for this study covers these contexts. The framework for this study is summarised in Figure 4.1 below.

Studying the contingency perspective is necessary in this study because explaining the appropriateness of using advanced management accounting techniques depend on the circumstances in which these techniques are being used (Abdel-Kader & Luther, 2008). According to Fisher (1995), the ultimate goal of contingent accounting research should to develop and test a comprehensive model that contains multiple elements of accounting systems and multiple contingent variables.

Aligning to this logic, the framework summarised in Figure 4.1 includes five (5) categories of strategic management accounting elements, and six (5) categories of contingent variables

(namely; Perceived Environment Uncertainty, Business Strategy, Organisational Size, Technology and Organisational structure.

Figure 4.1: Conceptual Framework of the Research



Specifically, to reflect the contexts in the three question types pinpointed above in page 79, this study suggests a contingency framework that has three outcome factors which are influenced by several antecedents. Firstly, Figure 4.1 proposes that organisational performance is shaped by strategic management accounting technique usage, perceived environmental uncertainty (PEU), business/organisational strategy and organisational structure. Secondly, strategic management accounting technique usage is proposed as an outcome factor of perceived environmental uncertainty, business/organisation strategy, and the organisational factors (organisational size, organisational technology, and organisational structure). Third and finally, Figure 4.1 proposes that organisational structure is influenced by perceived environmental uncertainty and business/organisational strategy. It is proposed too that the business/organisational strategy adopted by a firm would depend on the perceived environmental uncertainty.

External factors indicate the features of the external environment at the level of business and accounting (Haldma & Lääts, 2002). Figure 4.1 thus proposes that external environmental factors impact both on the organisation's internal characteristics and management accounting practice. For example, perceived environmental uncertainty influences the organisational structure, choice of strategy, and application of strategic management accounting techniques. Figure 4.1 also proposes that the internal environment / organisational factors (organisational size, organisational technology, and organisational structure) influence the application of the strategic management accounting techniques.

While the combination and relations pictured in Figure 4.1 is comprehensive, the framework cannot be considered exhaustive, as no single study is all exhaustive. Contingency-based studies assume the existing link between nature and the use of *SMA*⁵ and subsequently enhanced performance (Haldma & Lääts, 2002). Behavioural and organisation perspectives

⁵MAS (Management Accounting Systems) was used in Haldma and Lääts (2002).

also pinpoint other core factors for enhancing organisational performance (e.g., job satisfaction, cross-functional integration, conflict management, and formal and informal control). In this study, the researcher focuses on the following categories of contingencies:

1. External Environment (Perceived Environmental Uncertainty), subdivided into:

- a. Market Turbulence, and
- b. Competitive Intensity.

2. Internal Environment (Organisational factors), subdivided into:

- a. Organisational Size,
- b. Organisational Technology, and
- c. Organisational Structure, involving two constructs:
 - i. Formalisation, and
 - ii. Decentralisation.

3. Business/Organisational Strategy (prospector / defender),

4. Organisational Performance, subdivided into:

a. Financial Performance, involving:

- i. Return on Investment,
- ii. Sales Margin,
- iii. Capacity Utilisation, and
- iv. Market Share.

b. Non-Financial Performance, involving:

- i. Customer Satisfaction,
- ii. Product/service quality, and
- iii. Development of new products/services.

5. Strategic Management Accounting Techniques, involving five categories:

- a. Costing,
- b. Planning Control and Performance Measurement,
- c. Strategic Decision Making,
- d. Competitor Accounting, and
- e. Customer Accounting.

4.3 Specifying the hypotheses

Management accounting literature (e.g., Shields & McEwen, 1996; Foster & Swenson, 1997; Libby & Waterhouse, 1996; Williams & Seaman, 2001; Baines & Langfield-Smith, 2003; Abernethy & Bouwens, 2005; Emsley et al., 2006; Cadez & Guilding, 2008; Cinquini & Tenicci, 2010) suggests that organisations need modern accounting systems to adapt to rapidly changing organisational and social environment. This contingency study of Palestinian companies follows this management accounting view.

In this study, conditional association between several independent variables and dependent variables is hypothesised (Drazin & Van den Ven, 1985; Cadez & Guilding, 2008), and the hypotheses relating to these associations are defined next. To ensure that the numerical order for hypotheses as shown in the framework is followed, the hypotheses for this study are explained in the following order:

1. Perceived Environmental Uncertainty related hypotheses (H1 – H4) (section 4.3.1),
2. Internal Environment/Organisational Factors related Hypotheses (H5 – H8) (section 4.3.2), subdivided into:
 - i. Organisational Technology related Hypothesis (H5) (section 4.3.2.1),
 - ii. Organisational Size related hypothesis (H6) (section 4.3.2.2),
 - iii. Organisational Structure related hypotheses (H7 – H8) (section 4.3.2.3),

3. Business/Organisational Strategy related hypotheses (H9 – H11) (section 4.3.3) and
4. Strategic Management Accounting Usage related hypothesis (H12) (section 4.3.4).

4.3.1 Perceived Environmental Uncertainty (PEU) Related Hypotheses (H1 – H4)

In this section four (4) hypothetical associations are specified. First, the researcher proposes an association between the perceived environmental uncertainty (PEU) and organisational strategy (OS) (H1) in section 4.3.1.1, and after that the proposition concerning perceived environmental uncertainty (PEU) and organisational structure (OSTR) is defined in section 4.3.1.2. In the final part of section 4.3.1, the proposition concerning the association between perceived environmental uncertainty (PEU) and organisational performance (OP) (H3) on the one hand (See Section 4.3.1.3), and strategic management accounting techniques usage (SMAU) (H4) (see section 4.3.1.4) on the other hand, are explained. Tapping from existing literature (See Section 3.4.2), two categories of environmental uncertainty, namely market turbulence and competitive intensity, are covered in this study.

4.3.1.1 The Association between Perceived Environmental Uncertainty (PEU) and Business/Organisational Strategy (OS) (H1)

Researchers have shown interest in the association between business environment and strategy formulation and processes (e.g., Bourgeois, 1978; Harrington et al., 2004, Mador, 2000; Shrivastava & Grant, 1985). An organisation must be aware of and respond to the external environment in order to formulate strategy (Kwock, 1999).

Similar view (Hwang, 2005) suggests that top managers' perception of environmental uncertainty and their willingness to adapt to a changing market are assumed to affect the component of strategic management. This view aligns with earlier research (e.g., Hambrick, 1980; Jemison, 1984) which suggests that managers must cope with uncertainty by

identifying opportunities, recognising threats and implementing strategic adaptations. Fuchs et al (2000): successful firms aligned core strategic elements with the environment.

According to strategy literature (e.g., Miles & Snow, 1978; Miles et al., 1978), the approach a company takes would seemingly be influenced by the nature of problem that it faces, a foundation that has been elaborated in section 3.5. Also, section 3.5 states: (1) the business strategy realm for this study to include the ‘prospector’ and ‘defender’ typologies, and (2) while a ‘prospector’ type company is dynamic in searching for market opportunities, and capably meet consumers’ needs with new product developments and heavy investments in research and development (Leftesi, 2008; Cadez & Guilding, 2008), a ‘defender’ type company aims for cost control, trend monitoring and efficiency rather than scanning for new opportunities in the environment (Miles & Snow, 1978; Hyvönen, 2008; Cadez & Guilding, 2008).

Since the prospector strategy will be highly influenced by environment dynamism, this study follows existing literature (Cadez & Guilding, 2008) and proposes that:

H1 - *Perceived environmental uncertainty would be greater in prospector-strategy than defender-strategy among Palestinian Companies.*

4.3.1.2 The Association between Perceived Environmental Uncertainty (PEU) and Organisational Structure (OSTR) (H2)

There is a long tradition of support for the notion that the environment moderates the effectiveness of organisational structure (Hwang, 2005). The practical beginning of this stream of contention was made in 1967 when Lawrence & Lorsch explored the influence of a business’s technological, market and economic setting on the pattern of organisations and administration.

According to contingency theory, as pinpointed in sections (3.4.2, 3.4.2.1, 3.4.2.1.1 and 3.4.2.1.2) differences in the organisational structure relate significantly to the level of

uncertainty and complexity that an organisation faces. Therefore, whether mechanistic or organic, the environmental circumstances of an organisation shape the structural reactions.

Noting this logic, Özsomer et al (1997) proposed that firms should not only adapt their strategic posture to the environment but also their organisational structure. Researches that link to this view (e.g., Bourgeois, 1985; Porter, 1980, 1985) explain that a firm, through its strategic posture, selects and interprets its environment, responds to those elements it considers fixed, and adapts its strategy to the requirements of the environment.

More recent literature (Hwang, 2005) adds that top managers' perception of environmental uncertainty and their willingness to adapt to a changing market affects the organisational structure. Organisational structure is "the way in which the various parts of an organisation are arranged" (Kwock, 1999, p.17) and "a system of communication and authority that links people and groups together to accomplish tasks that serve an organisational purpose" (Kwock, 1999, cited in Hwang, 2005, p.10). Typical tools for such arrangement include formalisation and decentralisation (Hwang, 2005; Dik, 2011). Whether an organisation formalises or decentralises depends on the extent of environmental uncertainty that the organisation faces.

Thus, when the dynamisms in the environment are high, better management of the organisational structure is required to enable wise decisions to be made. How the organisation uses the dimensions of formalisation and decentralisation would be of importance, in finding suitable response to the environment (Hwang, 2005; Dik, 2011). When the decision making process is decentralised, speedy decision making becomes possible, and this will allow the organisation respond swiftly to its environment. Based on this logic, it is proposed in this study that:

H2 - *Perceived higher environmental uncertainty leads to a more decentralized structure in Palestinian Companies.*

4.3.1.3 The Association between Perceived Environmental Uncertainty (PEU) and Organisational Performance (OP) (H3)

Contingency literature suggests that managers' perceived environmental uncertainty influences the organisational performance (e.g., Kwock, 1999; Hwang, 2005).

According to Ittner et al (2003), "managerial accounting is evolving to encompass more strategic techniques that emphasises the identification, measurement, and management of key financial and non-financial performance drivers of strategic success"(p.715). Consequently, many firms have adopted strategic performance measurement to enable them identify the strategies that are likely to yield the highest performance results and align the organisational processes and procedures with the attainment of the set strategic objectives (Ittner et al., 2003; McManus, 2012). Of great interest to firms would be the ability to obtain accurate measurement of performance for purposes of evaluation and control.

While financial performance evidence is easy to obtain due to their historical and quantitative nature, non-financial performance pose more difficulty to accurately determine. However, there has been a noted correlation between the quantity and quality of measures collected by an organisation and performance (Ittner et al., 2003). Ittner et al (2003), in their study conducted on the US financial sector prior to the crisis, aptly put it, "our results indicate that greater measurement emphasis and diversity than predicted by our benchmark model is associated with higher satisfaction and stock market performance" (p.716). Many organisations still lag behind in this front with majority preferring to base their strategies on financial performance.

Studies have also suggested reliance on non-financial performance as one of the main contributors to higher stock returns of firms (Ittner et al., 2003). Furthermore, firms that focus on non-financial performance alongside financial performance such as return on assets and sales growth have been found to respond more appropriately to the dynamics of the business

environment and consequently record better performance than those that focused largely on financial performance only (Ittner et al., 2003; Hall, 2011). The study of Chenhall & Morris (1986) provides evidence that seem to support this logic. They, supported by McManus (2012), argue that amongst other targets, managers need information that is related to the external environment, is future orientated and non-financial.

Some of the non-financial measures are represented by contingent factors in the business environment that form part of this study includes performance of the economy, changing tastes and preferences of consumers, customer satisfaction, approval or ratings from the general public, brand image and level of satisfaction of other stakeholders in the business such as suppliers. Based on the overall analysis, it is logical to believe that organisations give attention to non-financial performance as a means of responding adequately to the environment of the organisation. It is therefore posited that:

H3 - *Perceived higher environmental uncertainty would lead to increased use of non-financial performance by Palestinian Companies.*

4.3.1.4 The Association between Perceived Environmental Uncertainty (PEU) and Strategic Management Accounting Technique Usage (SMAU) (H4)

An organisation's environment is important in the conceptualisation of contingency theory (Dik, 2011; McManus, 2012). In management accounting and control literature, environment is one of the factors that determine the management accounting and control systems used by an organisation (Ezzamel, 1990; Gordon & Miller, 1976; Baines & Langfield-Smith, 2003; Hoque & James, 2000; Libby & Waterhouse, 1996; Waweru et al., 2004; Tuan Mat, 2010) and management accounting systems differ from one setting to another (e.g., Otley, 1980; Briers & Hirst, 1990; Cadez & Guilding, 2008). Further, the external control model suggests that environment is the most influential factor of organisational actions (Romanelli & Tushman, 1986).

According to relevant literature (Anastas, 1997; Cooper, 1996; Gordon & Miller, 1976) changes in the environment and its associated information needs considerably shape the role of management accountants in organisations. Chenhall & Morris (1986): PEU has a profound effect on a company's information needs. In their positive relationship view of environmental uncertainty, they argue that in highly uncertain environments managers need information that is presented on request, is current, provides rapid feedback on decisions and is frequent, but managers also need information that is related to the external environment, is future orientated (cited in McManus, 2012, p.3).

While there is the belief that the best way to implement a management accounting technique would be shaped by the external features of the organisation (Cadez & Guilding, 2008; Cinquini & Tenucci, 2010), there is still much debate about the influence of external environmental factors on SMA usage and performance (Kattan et al., 2007; Kholeif et al., 2007). It is essential for contingency theory to identify the specific aspects of accounting systems that associate to certain defined circumstances and demonstrate appropriate matching (Kattan et al., 2007).

With the above need in mind, this study aims to enhance the understanding of the influence of environmental uncertainty on strategic management accounting techniques design and implementation.

Based on the foundations pinpointed above, this study argues that changes in environmental factors would cause changes in the management accounting and control systems implemented within an organisation (Burns & Vaivio, 2001; Katten et al., 2007; Cadez & Guilding, 2008; Cinquini & Tenucci, 2010; McManus, 2012). When the perceived environmental uncertainty is high, the use of SMA would seemingly be intensified to generate relevant facts to enable

wise decisions to meet the demands of the environment. Based on these logics, this study follows existing literature (Cadez & Guilding, 2008; McManus, 2012) and proposes that:

H4 – *The perceived higher environmental uncertainty will lead to higher SMA-techniques usage in Palestinian Companies.*

4.3.2 Internal Environment/Organisational Factors related Hypotheses (H5 – H8)

In chapter three, section 3.4 specified external and internal organisational environmental factors. According to environment perspective of strategic management accounting design and implementation, these external and internal factors explain why management accounting systems differ from one setting to another (Briers & Hirst, 1990; Cadez & Guilding, 2008; McManus, 2012). While the hypotheses concerning the former were explained in section 4.3.1 above, this section (4.3.2) explains the internal organisational environment factors (also called organisational factors).

According to relevant literature, a firm's internal characteristics would influence the variation in their management accounting systems. Therefore, the best way to implement a management accounting technique would be influenced by these internal and external features of the organisation (Cadez & Guilding, 2008; Cinquini & Tenucci, 2010). According to contingency theory of organisations, "organisational characteristics such as size, structure, and technology shape the best management accounting practices that fit for a certain organisation" (Dik, 2011, p.50; Luft & Shields, 2007; McManus, 2012).

In the literature, there is still much debate about the influence of internal environmental factors on SMA usage and performance (Kattan et al., 2007; Kholeif et al., 2007). It is essential for contingency theory to identify the specific aspects of accounting systems that associate to certain defined circumstances and demonstrate appropriate matching (Kattan et al., 2007). To enhance knowledge, this study explores the effect of the aforementioned

internal (organisational) factors on the design and implementation of management accounting systems in Palestinian Companies.

The hypotheses concerning these organisational factors are explained next in the following order:

1. Organisational Technology related hypothesis (H5) (section 4.3.2.1),
2. Organisational Size related hypothesis (H6) (section 4.3.2.2), and
3. Organisational Structure related hypotheses (H7 – H8) (section 4.3.2.3).

4.3.2.1 Organisational Technology related hypothesis: The Association between Organisational Technology (OT) and Strategic Management Accounting Technique Usage (SMAU) (H5)

Contingency literature posits that a combination of situational and structural variables may be associated with the strategic management accounting technique fit in an organisation (See Section 3.4.5), and technology is one of these variables (Khandwalla, 1977; Merchant, 1984; Dunk, 1992; Tuan Mat, 2010; Cadez & Guilding, 2008; Haldma & Lääts, 2002; Huang et al., 2010; Baines & Langfield-Smith, 2003; Libby & Waterhouse, 1996; Waweru et al., 2004).

There is need to study the influence of technology in a strategic management context (e.g. Mahmood & Mann 1993, Kaplan & Norton 1996). Information technology aids a firm's ability to develop management accounting systems and strategy (Hyvönen, 2008).

Consequently, firms are faced with the challenge of integrating information technology into accounting practices (Olsen & Cooney, 2000).

Researchers argue that there is a link between management accounting systems and information technology (Chapman & Chua 2000, Ittner & Larcker 2001, Chenhall, 2003).

Also, it is argued that production technique and the complexity of the process impact the internal cost accounting and information system (Otley, 1980). Advancements in information and communication technology (ICT) are core aspects of technology development in the

global banking sector, and overall modern day marketplace structure, leading to developments as business process automation (Grabski et al., 2009).

Empirically, organisations have changed their MAS to a more efficient and effective systems to enable them compete well in the market (e.g., Baines & Langfield-Smith, 2003; Haldma & Lääts, 2002; Hoque et al., 2001). In his study of Korean manufacturing companies, Choe (2004) found a significant positive relationship between the level of manufacturing technology and the amount of information produced by the management accounting information system. Palestinian companies have been keeping pace with development in technology, and accounting as a provider of information to aid managerial decisions, would fit its strategic management accounting practices to meet the change level. Thus, it is expected that:

H5 – *Perceived higher level of information and communication technology would lead to higher SMA usage in Palestinian Companies.*

4.3.2.2 Organisational Size related hypothesis: The Association between Organisational Size (OSZ) and Strategic Management Accounting Technique Usage (SMAU) (H6)

Contingency literature suggests that firm size influences the way organisations design and use management accounting practices for decision making (e.g., Bruns & Waterhouse, 1975; Gordon & Narayanan, 1984; Burns & Stalker, 1961; Miles & Snow, 1978; Guilding et al., 2000; Cadez & Guilding, 2008; Cinquini & Tennucci, 2010; Tuan Mat, 2010; Huang et al., 2010). The theoretical foundations connecting to organisational size have been elaborated in section 3.4.5.3.

This study argues that since the activities and interactions in an organisation would increase along with company size, SMA usage in the explored companies would vary. Following past studies (e.g., Guilding, 1999; Libby & Waterhouse, 1996; Merchant, 1981; Cadez & Guiding, 2008; Hwang, 2005; Cinquini & Tenucci, 2010), this study proposes that:

H6 - *SMA Usage will be greater in larger than in smaller Palestinian Companies.*

4.3.2.3 Organisational Structure related hypotheses (H7 – H8)

The theoretical foundations concerning organisational structure have been pinpointed in section 3.4.5.2. Organisational structure comprises the parameters that define the way an organisation is assembled (Chandler, 1962), and when the dimensions of the organisation's structure are well coordinated to allow the organisation to complete its purpose and meet its goals and objectives, it has established structural effectiveness (Schaffer, 1984; Hwang, 2005).

As pinpointed in section 3.4.5.2, organisational structure has been conceptualised in this study in terms of formalisation and decentralisation (Bruns & Waterhouse, 1975; Chenhall & Morris, 1986; Libby & Waterhouse, 1996; McManus, 2012). Following context literature, two hypotheses concerning organisational structure are used in this study: the first connects to strategic management accounting technique usage (See Section 4.3.2.3.1), while the second connects to organisational performance (See Section 4.3.2.3.2).

4.3.2.3.1 The Association between Organisational Structure (OSTR) and Strategic Management Accounting Technique Usage (SMAU) H7

Organisational structure is a core variable in the exploration of the contingency perspective of strategic management accounting (e.g., Chenhall, 2008; Libby & Waterhouse, 1996; Tuan Mat, 2010). Based on that logic, this study investigates the association between organisational structure and SMAU. According to MAS literature, MAS forms an important part of the information and control systems that support the basic intent of formal structure (Moore & Mula, 1993), and firms that face high uncertainty require a decentralised structure and more sophisticated MAS (Abdel-Kader & Luther, 2008).

Further literature: management accounting in an organisation is both an element of organisational structure and an outcome of chosen organisational structure (Luther & Longden, 2001; Gerdin, 2005). The outcome context is the focus in this study.

Literature (See Section 3.4.5.2.2) has explained theoretical foundations concerning decentralisation (and its opposite “centralisation”). That section also underlines the core connection between strategic management accounting and overall organisational strategy: “Strategic management accounting has characteristics related to aspects of horizontal organisation as they aim to connect strategy to the value chain and link activities across the organisation...” (Chenhall, 2008, p.525).

This study supports the logic that decentralisation (delegating decision making authority to lower levels) would enable organisations adapt the strategic management accounting practices as need arises (Abernethy & Bouwens, 2005, Moers, 2006, Matejka & De Waegenaere, 2000) towards identifying strategic priorities with a customer-oriented focus (Chenhall, 2008).

Organisations that keep a decentralised structure tend to implement changes in their management accounting systems to enable them link various activities across the organisation (Matejka & De Waegenaere, 2000; Chenhall, 2008).

Similarly, organisational structure literature suggests that the level of formalisation in an organisation influences the strategic management accounting practices in an organisation (e.g., Hwang, 2005). Formalisation concerns the degree to which decisions and working relationships are managed by strict rules and standard policies and procedures (Ruekert et al., 1985). In highly structured environment where responsibilities are regulated by strict rules and operating procedures, employees are less likely to act swiftly to exploit opportunities, which will adversely affect the organisation’s customer orientation ability.

This study argues that such a trend will influence the strategic management accounting practices of an organisation.

Combining above highlighted decentralisation and formalisation foundations, it is proposed:

H7: *The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of SMA-techniques usage in Palestinian Companies.*

4.3.2.3.2 The Association between Organisational Structure (OSTR) and Organisational Performance (OP) H8

A firm's performance is usually a result of its organisational structure (Kwock, 1999; Tuan Mat, 2010), a view that reinforces Pennings' (1975) study that reported a fit between organisational structure and performance. Section 4.3.2.3.1 above pinpointed that decentralisation would aid wise decision making for strategy prioritisation towards a customer-oriented focus.

Further literature connecting to this logic suggests that decentralisation would broaden the scope of lower managers and also provide business units significant freedom to make trade-offs (Jensen, 2001; Prendergast, 2002; Moers, 2006). Also, management accounting and control research suggests that decentralised decision making would be associated to a strong emphasis on formal management accounting and control system (including financial and non-financial management accounting) and performance information (e.g., Bruns & Waterhouse, 1975; Gordon & Narayanan, 1984; Chenhall & Morris, 1986; Moers, 2006). These foundations suggest that decentralisation would enhance organisational performance.

“With the increasing use of team based structures *and need for customer orientation*⁶, there is need for easily accessible and relevant information, for top management to evaluate the options of the firm” (Tuan Mat, 2010, p.46). Insights concerning the relationship between organisational design and performance, for example, Pratt (2004) found that increasing employees' involvement in work groups as part of the mission and strategy will increase organisational performance. Decentralisation, explained above, is one organisational structure tool that fits into this team based structure foundation. Another factor is whether the organisational structure should be formalised or not.

⁶ Italics added

Following the foundation highlighted in section 4.3.2.3.1, this study posits that organisations characterised by less formalisation would be more capable to act swiftly and respond to market demands. Thus, such organisations would achieve higher organisation performance.

Based on the insights highlighted above, this study proposes that:

H8 - *The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of performance in Palestinian Companies.*

4.3.3 Business/Organisational Strategy related Hypotheses (H9 – H11)

In chapter three, section 3.5 presented the theoretical foundation concerning strategy for this study. Contingency-based studies suggest a relationship between the specific strategy adopted and organisational performance (e.g., Kwock, 1999). Organisational theorists provide arguments that help explain how the effectiveness of SMA depends on the nature of the contemporary setting. Commenting in this connection, Chenhall (2003, p.128) notes: “perhaps the most important new stream of literature has been that related to the role of strategy”.

Section 3.5 pinpoints connections of organisational strategy to strategic management accounting (SMA) usage, organisational structure, and organisational performance.

In this section, the hypotheses that connect business/organisational strategy and strategic management accounting techniques usage (section 4.3.3.1) on the one hand, and business/organisational strategy and organisational structure (section 4.3.3.2) are specified. A further hypothesis explained in this section relates to the association between business/organisational strategy and organisational performance (section 4.3.3.3).

Supporting the view that strategy represents a very important contingency variable (e.g., Langfield-Smith, 1997; Simons 1995; Miles & Snow, 1978; Cadez & Guilding, 2008), this study explores the contingency influence of organisational strategy and proposes the following hypotheses, as specified in sections 4.3.3.1, 4.3.3.2, and 4.3.3.3.

4.3.3.1 The Association between Business/Organisational Strategy (OS) and Strategic Management Accounting Technique Usage (SMAU) (H9)

Reviewed literature (See Section 3.5) suggests a relationship between an organisation's strategic approach and strategic management accounting (and management control systems – MCS). A number of researchers have investigated the link between particular elements of MCS and the specific strategy adopted by organisations under the contingency approach since the 1980's (e.g., Simons, 1990; Shank & Govindarajan, 1992; Bruggeman & Van der Stede, 1993; Chenhall & Langfield-Smith, 1998).

Literature on strategy typology (e.g., Cadez & Guilding, 2008; Cinquini & Tenucci, 2010) suggests the type of strategy an organisation uses may also influence the nature of SMA usage and the organisational performance. This notion of association between business strategy and strategic management accounting (SMA) techniques is also supported by other studies (e.g., Cadez & Guilding, 2007; Cravens & Guilding, 2001; Langfield-Smith, 1997). Further literature even suggests that MAS which is tailored to support strategy can generate competitive advantage and superior performance (Kaplan & Norton, 1996; Govindarajan & Gupta, 1985; Simons, 1987; Samson et al., 1991).

According to Chenhall & Langfield-Smith (1998), high performing product differentiator firms are associated with management techniques of quality systems, team-based human resource structure, and MAPs incorporating employee-based measure, benchmarking, strategic planning and activity-based techniques. High performing low-cost strategy firms, on the other hand, they explain, are associated with management techniques of improving existing processes, integrating systems, innovating manufacturing systems and activity-based techniques. The recent research by Verbeeten (2010) reports that prospector strategies appear to be positively associated with major changes in MAS.

As Tuan Mat (2010) comments; “it can be concluded that strategy is an important factor in the design and use of MAS” (p.42), a conclusion that reinforces Simons (1987) where MAS was modified in accordance with the strategy of a company. In this study, it is expected that SMA usage will be high in prospector companies, therefore, it is posited that:

H9 - *SMA Techniques would be more widely adopted in prospector than defender Palestinian Companies*

4.3.3.2 The Association between Business/Organisational Strategy (OS) and Organisational Structure (OSTR) (H10)

Organisational strategy priorities should not only be supported by management information system, but also by organisational structure (Chenhall & Langfield-Smith). Achieving appropriate match between organisational strategy and organisational structure enables enhanced organisational performance (Jermias & Gani, 2002).

For H1, the logic was presented that a prospector approach is often used when there is high environmental dynamism. Connected to that logic, H9 posits that more SMA use will be necessary to meet the requirements for a prospector approach. Following these combined logic, this study suggests that such circumstances would be better served if the decision making process is decentralised. Thus, it is argued that:

H10- *Prospector -strategy would lead to more decentralised structure than defender-strategy among Palestinian Companies.*

4.3.3.3 The Association between Business/Organisational Strategy (OS) and Organisational Performance (OP) (H11)

According to contingency literature, successful organisational performance depends on effective implementation of the strategic elements (Stonich, 1982). Strategic implementation involves establishing policies and annual objectives and allocating resources towards accomplishment of formulated strategy (Hwang, 2005). A firm’s performance is usually a result of its strategic choice (Kwock, 1999).

There is the argument that for firms to support and evaluate the achievement of strategic advantages, reliance on financial performance measures alone will not necessarily improve financial results, as financial measures only reveal the outcome of past activities which offer no clue for improving future performance (Choe, 2004). Greater use of non-financial information for business units that follow a customer-focused or prospector strategy positively impact organisational performance (Davila, 2000; Chong & Chong, 1997).

Furthermore, tapping from the combined logic supporting H10, there is a further rationale to believe that if organisations are prospector oriented, they will be more able to respond adequately to the environment, given their dispensation to take advantage of the decentralised decision making process. Logically, therefore, it seems right to suggest that organisations which behave in this form would perform better than those behaving differently. Thus, it is proposed here that:

H11 – *Prospector strategy will lead to higher performance than defender strategy in Palestinian Companies.*

4.3.4 Strategic Management Accounting Technique Usage related Hypothesis (H12)

Since the 1980's there is increasing call for management accounting practices that are tailored to react to changes in the market environment (e.g., Johnson & Kaplan, 1987; Wilson, 1999). These should include management accounting techniques which provide information for strategic decision making, e.g., activity-based costing (Cooper et al., 1992), product attribute costing (Bromwich, 1990), strategic cost accounting (Shank & Govindarajan, 1993) and balanced scorecard (Kaplan & Norton, 2001). Other studies also advocate for management accounting that aid strategic process (Simons, 1990).

A firm's strategic management process includes amongst others, strategic management accounting process and strategic choice (Kwock, 1999). This study follows existing literature and aligns to the notion that strategically aligned management accounting practices would

enhance organisational performance e.g., (Kwock, 1999; Langfield-Smith, 1997), hence the hypothesis explained in section 4.3.4.1 below.

4.3.4.1 The Association between Strategic Management Accounting Technique Usage (SMAU) and Organisational Performance (OP) (H12)

Alarcon & Bastias (2000): company performance can be affected by both the ongoing industry changes and competition strength between companies in the same field. Such ongoing industry changes and competition strength influence the need and use of SMA practices. Consequently, the strategic management accounting practices used by an organisation would influence organisational performance, this study argues. A firm's strategic management process (including, amongst others, strategic management accounting process, strategic choice) shapes organisational performance (Kwock, 1999).

According to literature, MCS are tailored explicitly to support the strategy of the business towards competitive advantage and enhanced performance (e.g., Dent, 1990; Langfield-Smith, 1997; Simons, 1990; Samson et al., 1991). Further literature suggests that MCS contributes to the operation and profitability of the company (Merchant & Simons, 1986).

Other context evidence (e.g., Govindarajan, 1988; Govindarajan & Gupta, 1985) argue that organisations that appropriately match their organisation's environment, strategy and internal structure and system would achieve higher organisational performance.

In literature, when organisations implement MAS that fit organisational and environmental factors, they are likely to perform better (Chenhall, 2003; Otley, 1983), and the most critical performance factor is the fit between MAS and contextual variables (Jermias & Gani, 2002).

While the relationship between SMA usage and performance has been extensively explored, there are big contrasts in the findings (Cadez & Guilding, 2008): most studies suggest positive

association (e.g., Baines & Langfield-Smith, 2003; Cravens & Guilding, 2001; Ittner et al., 2003; Mahama, 2006; Mia & Chenhall, 1994), but others suggest inconclusive relationship (e.g., Scott & Tiessen, 1999; Ittner et al., 2003; Abernethy & Bouwens, 2005). It is important to investigate whether MAS actually helps firms improve performance (Tuan Mat, 2010). In my study, I follow Cadez & Guilding (2008) and propose:

H12 - *Greater SMA usage is positively associated with performance in Palestinian Companies.*

4.4 Conclusion to the Chapter

With the ever increasing wind of globalisation, the environment surrounding organisations operating in less developed countries (LDC) witnesses immense increase in uncertainty, competition in the industry, and technological advancement. To be successful, sustain or improve performance, in these circumstances, a market orientated focus is essential.

Organisations must therefore ensure that their organisational designs and strategies match their environmental circumstances. This is the core argument of this study.

Advancing the steps taken in chapter 3 which presented the theoretical foundations, this chapter (4) explained the framework for this study, as well as summarising the hypotheses that underline the conceptualised associations between the variables in Figure 4.1.

The hypotheses for this study are summarised in Table 4.1 below. In the next chapter (5), the methodological approach for undertaking this study is explained.

Table 4.1: A Summary of the Hypotheses for this Study

Hyp. NR	Description of Hypotheses
H1	<i>Perceived environmental uncertainty would be greater in prospector-strategy than defender-strategy among Palestinian Companies</i>
H2	<i>Perceived higher environmental uncertainty leads to a more decentralised structure in Palestinian Companies</i>
H3	<i>Perceived higher environmental uncertainty would lead to increased use of non-financial performance by Palestinian Companies</i>
H4	<i>The perceived higher environmental uncertainty will lead to higher SMA-techniques usage in Palestinian Companies</i>
H5	<i>Perceived higher level of information and communication technology would lead to higher SMA usage in Palestinian Companies</i>
H6	<i>SMA Usage will be greater in larger than in smaller Palestinian Companies</i>
H7	<i>The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of SMA-techniques usage in Palestinian Companies</i>
H8	<i>The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of performance in Palestinian Companies</i>
H9	<i>SMA Techniques would be more widely adopted in prospector than defender Palestinian Companies</i>
H10	<i>Prospector -strategy would lead to more decentralised structure than defender-strategy among Palestinian Companies</i>
H11	<i>Prospector strategy will lead to higher performance than defender strategy in Palestinian Companies</i>
H12	<i>Greater SMA usage is positively associated with performance in Palestinian Companies.</i>

5. Research Methodology

5.1 Introduction

Following the review of relevant literature in chapter 3, chapter four explained the framework for this study specifying the underlying hypotheses. In this chapter (5), the methodological approach for exploring the framework and relationships pictured in Figure 4.1 of Chapter four is presented. For that goal, first, a reminder of the research objectives is stated. Thereafter, the researcher explains the research design for this study. In that connection, relevant methodological literature to position this study in the philosophy of research is presented. After that, the data collection process (including sampling issues) is described, stating also and validating the survey instrument used. To conclude this chapter, the process of analysis is explained to show the process of ensuring reliability and validity in the research.

At this point, it is important to remind ourselves of the objectives of this thesis, which includes:

1. To identify whether and how Palestinian companies used strategic management accounting practices,
2. To identify, in that connection, the contingency factors that play a role in this their practices, and
3. To identify the degree of association between the conceptualised contingency factors.

To explore the above three research objectives, the study follows the positivism paradigm and uses quantitative tools for data collection, as these fit the research focus. Pre-testing of questionnaire and refining of quantitative mechanism were enhanced through some qualitative metrics.

The methodological approach for this thesis is further explained in the following order:

- The Research Design,
- The Positioning of the Study within Philosophical Paradigms,
- The Methodological Approach (including Population and Respondents), and
- The Validity and Reliability of the Research.

5.2 The Research Design

The purpose of a research design is to ensure that the empirical evidence obtained answers to the research questions in a convincing way (Vaus, 2001; Nachmias & Nachmias, 2008).

Research design is “a master plan specifying the methods and procedures for collecting and analysing the needed information” and as a “framework of the research plan of action” (Zikmund, 1997, p. 40). Social science literature identifies three core research designs (Ghauri et al., 1995), namely “Exploratory”, “Descriptive” and “Causal”. Other social scientists that support this research design categorisation include e.g., Oppenheim (1992) and Chisnall (2005).

“Exploratory designs are concerned with identifying the real nature of research problems, and, perhaps, of formulating relevant hypotheses for later tests” (Chisnall, 2005, p.37), a position that lends support to the view that exploratory design is suited to situations where initial ideas and insights to a research problem are required (Ghauri et al., 1995). Given the objectives of this research (See Section 5.1 above), exploratory research is appropriate. This exploratory approach will fit the aim of adequately obtaining the evidence that answers the defined research questions (Vaus, 2001; Chisnall, 2005). This exploratory research uses hypotheses and is quantitatively based.

Towards explaining the exploratory quantitative focus of this research, section 5.3 highlights next the literature on research paradigms and assumptions, specifying also the positioning of this study in the research paradigm context.

5.3 Research Paradigms and Assumptions

In conducting research it is important to construct a philosophical position (Dainty, 2007). It is essential to ensuring the quality of research (Amaratunga & Baldry, 2001). Also, scholars note that a review of research philosophy minimizes methodological errors (Hughes & Sharrock, 1997; Kvale, 1996). According to (Healy & Perry, 2000, p.118) “scientific research paradigms are overall conceptual frameworks within which some researchers work” (see also Myers, 1997).

Prior literature (Deshpande, 1983, p.101) defines paradigms as “a set of linked assumptions about the world which is shared by a community of scientists investigating the world”. On their part, Guba & Lincoln (1994, p.105) define research paradigm as “the basic belief system or world view that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways.” Thus, a scientist normally works within a paradigm – that determines the problems that are regarded as crucial, the ways the problems are conceptualised, the ideal methods of enquiry, the relevant standards of judgment, etc (Philips, 1987, p.205; Kuhn, 1962).

There are four research paradigms (Healy & Perry, 2000; Guba & Lincoln, 1994):

1. Positivism;
2. Critical theory;
3. Constructivism; and
4. Realism.

Each of these paradigms is comprised of ontology, epistemology and methodology (Guba & Lincoln, 1994; Myers, 1997; Perry et al., 1997). **Ontology** is "the study of being. It is concerned with 'what is', with the nature of existence, with the structure of reality as such" (Crotty, 1998, p. 10). It asks the question: *what is there that can be known about it?* (Guba & Lincoln, 1994). **Epistemology**, which "derives from two Greek words: 'episteme' which means 'knowledge' or 'science'; and 'logos', means 'knowledge', 'information', 'theory' or 'account'" (Johnson & Duberley, 2000, p. 2). Thus, epistemology asks the question: *what is the nature of relationship between the inquirer and the external world?* (Guba & Lincoln, 1994). Finally, **Methodology** "is the technique used by the researcher to investigate reality" (Healy & Perry, 2000, p.119) i.e., a procedure by which knowledge (reality) is to be generated. The methodological question asks: *how can the researcher approach whatever can be known about reality?*(Guba & Lincoln, 1994).

Next, a summary of the philosophical assumptions concerning these three elements of **ontology**, **epistemology** and **methodology** in the research paradigms (Guba & Lincoln, 1994) is presented (See Table 5.1) , and following that a summary of the four research paradigms is presented (Sections of 5.3.1 to 5.3.4), prior to clearly specifying the paradigmatic positioning of this research (Section 5.4).

Table 5.1: Four Categories of Scientific Paradigms and their Elements

Elements	Paradigms			
	Positivism	Critical theory	Constructivism	Realism
Ontology	Reality is real and apprehensible	'Virtual reality' shaped by social, economic, ethnic, political, cultural, and gender beliefs crystallised over time	Multiple local and specific 'constructed' realities	Reality is 'real' but only imperfectly and probabilistically apprehensible
Epistemology	Objectivist: Findings true	Subjectivist: value mediated findings	Subjectivist: created findings	Modified Objectivist: Findings probably true
Common Methodologies	Experiments/Surveys: Verification of hypothesis Quantitative methods	Dialogical/Dialectical: researcher is a 'transformative intellectual' who changes the social world within which participants live	Hermeneutical/Dialectical: researcher is 'passionate participant within the world being investigated	Case Studies/ Convergent Interviewing: triangulation, interpretation of research issues by qualitative methods

Source: Healy & Perry (2000, p.119) based on Guba & Lincoln (1994).

5.3.1 The Positivism Paradigm

Fundamentally, positivism is concerned with explaining human behaviour (Amaratunga & Baldry, 2001, p.96). Supporting this human behaviour point, scholars define positivism as an approach which uses scientific methods of natural science to study human activity in an objective manner (e.g., Hollis, 1994; Delanty, 2005).

Positivism, which "predominates in science" (Healy & Perry, 2000, p.119) assumes a quantitative approach to measuring independent facts about a single apprehensible reality (Guba & Lincoln, 1994; Tsoukas, 1989). It assumes that scientific knowledge is positively verifiable and foundation of knowledge is built on the discovery of general laws (Delanty, 2005).

In positivism the data and its analysis is value free and it does not change because it is observed (Healy & Perry, 2000). Positivism is based on quantitative data while the other three paradigms are mainly linked to qualitative research (Healy and Perry, 2000). Positivism suits the exploration of hypotheses (Hassard, 1999). Primarily, the data collection techniques in this paradigm include controlled experiments and sample surveys, and the research enquiry mode being theory testing or deduction (Perry et al, 1997).

5.3.2 The Constructive Paradigm

In this philosophical realm, “truth is a particular belief system held in a particular context” (Healy & Perry, 2000, p.120). According to Guba & Lincoln (1994, p.112), the study of reality depends on the interaction between the researcher and the respondent, i.e. the researcher has to be a ‘passionate participant’ in the fieldwork. Constructivism may be suitable for social sciences and consumer behaviour researches, particularly studies incorporating notions of religion, beauty, or prejudice (Healy & Perry, 2000) but is rarely considered for management studies as the constructivist perspective excludes concerns about the economic and technological dimensions of business (Hunt, 1991).

5.3.3 The Critical Theory Paradigm

The “critical theory paradigm emphasises social realities incorporating historically situated structures” (Healy & Perry, 2000, p.120). Critical theory researchers aim at critiquing and transforming the social, economic, political, cultural, and gender aspects of the reality (Perry et al., 1997). Critical theory assumptions are essentially subjective; therefore knowledge is grounded in social and historical routines and is value-dependent (Guba & Lincoln, 1994). Though critical theory acknowledges the complexity of reality, it is not very suitable for this study (Guba & Lincoln, 1994).

5.3.4 The Realism Paradigm

The realism paradigm is based on the view that while there is a ‘real’ world to discover it may not be perfectly apprehensible (Healy & Perry, 2000; Marsh & Smith, 2001; Godfrey & Hill, 1995). This philosophy believes that there are deep structures which cannot be directly observed through scientific methods (Marsh & Smith, 2001). According to Marsh & Furlong (2002), realists view the reality world as socially constructed, therefore value and bias from the researcher to the observed object cannot be detached. “Realism is a relevant paradigm for many qualitative researchers” (Healy & Perry, 2000, p.120).

Having explained the four research paradigms, the appropriate paradigm for this study is specified in Section 5.4 while the quantitative tool is explained (Section 5.5)

5.4 The Philosophical Position of this Study and Why?

Scholars should endeavour to examine ontological and epistemological issues, and subsequently address the defined research problems with appropriate methodology (Carson et al., 2001). Choices of methods and techniques depend on ontological and epistemological assumptions (Hughes & Sharrock, 1997).

This study is positioned in the positivism realm. In positivism, things can be studied as hard facts, and the relationship between these facts can be established (Hughes & Sharrock, 1997).

This study draws on this methodological foundation in the exploration of the contingency factors in the strategic management accounting practices of Palestinian companies. The positivism paradigm is applicable for this study for a number of reasons:

1. Positivism is best served by survey and mathematical analysis tools (Healy & Perry, 2000) and this is the suitable approach in this study, as it suits the need to address the nature of questions in this study. This study focuses on addressing the questions of ‘what’ and ‘how’ of contingency relationships in the strategic management accounting practices in Palestinian companies,
2. Primarily, the mode of research enquiry for positivism is theory-testing based on deduction (Layder, 1993). This study, based on foundations generated from past studies, tests theory concerning the relationship between factors in the strategic management accounting theory in Palestinian companies,
3. In connection to the above theory-testing point, this study tests hypotheses. Positivism aids the aim of generating findings and hypotheses testing (Schiffman & Kanuck, 1997; Hassard, 1999; Easterby-Smith et al., 2002), and
4. Also, authors (e.g. Easterby-Smith, 1991) pinpoint implications of the elements of the positivist philosophy, which also justify the positivist paradigm grounding of this study:
 - a) Value-freedom: the choice of what to study, and how to study it, should be determined by objective criteria rather than human beliefs and interests;
 - b) Causality: the aim should be to pinpoint causal explanations and fundamental laws that explain human behaviour;
 - c) Operationalisation: concepts need be operationalised in a way that enables facts to be measured quantitatively;
 - d) Interdependence: the role of the researcher is independent of the researched subject; and
 - e) Reductionism: problems are understood if they are reduced to the simplest possible elements.

Next, the quantitative tool for this study is explained.

5.5 The Quantitative Tool for this Study

The focus in this section is to review literature on quantitative method (section 5.5.1) and thereafter present the justification for the use of quantitative method in this study (section 5.5.2). Following that, the data collection process and tool for the study are explained (Section 5.6).

5.5.1 Quantitative Research Method

Creswell (1994) defines quantitative research as a research that explains phenomena by collecting numerical data that are analysed by using statistical techniques (See also Bryman, 2004). Being deductive (Frankfort-Nachmias & Nachmias, 1992), this study's quantitative approach is based upon formulating research hypotheses and verifying them empirically on a set of data.

According to Johnson & Onwuegbuzie (2004, p.18), "the major characteristics of traditional quantitative research are a focus on deduction, confirmation, theory/hypotheses testing, explanation, prediction, standardised data collection, and statistical analysis". As summarised in that study, the strengths of quantitative research are shown in Table 5.2 below.

Table 5.2: The Strengths of Quantitative Research

1	“Testing and validating already constructed theories about how (and to a lesser degree, why) phenomena occur.
2	Testing hypotheses that are constructed before the data are collected. Can generalise research when data are based on random samples of sufficient size.
3	Can generalise a research finding when it has been replicated on many different populations and sub-populations.
4	Useful for obtaining data that allow quantitative predictions to be made.
5	The researcher may construct a situation that eliminates the confounding influence of many variables, allowing one to more credibly assess cause-and-effect relationships.
6	Data collection using some quantitative methods is relatively quick (e.g., telephone interviews).
7	Provides precise, quantitative, numerical data.
8	Data analysis is relatively less time consuming (using statistical software).
9	The research results are relatively independent of the researcher (e.g., effect size, statistical significance).
10	It is useful for studying large numbers of people.”

Source: Adopted from Johnson & Onwuegbuzie (2004, p.19).

5.5.2 Justifying use of Quantitative Approach in the Study

Quantitative research methods are suitable for positivist research (Healy & Perry, 2000; Easterby-Smith et al., 2002) and this is the logic followed in this study. The exploratory nature of the current study requires a quantitative method, as this study assesses phenomena in a new light (Robson, 1993).

Table 5.3 pinpoints the data collection approaches used in past studies that explored the contingency context of SMA and other MA contexts. In this study, quantitative method is appropriate because of a number of reasons:

1. The most important factor for deciding the appropriate research approach for a study is the nature of the research topic (Creswell, 2003; Saunders et al., 2007). “The reason for this is that for a literature-rich topic, the deductive approach would be more appropriate, whereas for a new topic with little or no existing literature, it may be more suitable to use an inductive approach” (Leftesi, 2008, p.119). For the research

focus in this study (the contingency perspective of strategic management accounting practices), the topic is not new and reasonable literature exists. Therefore a deductive (quantitative) approach is suitable for this study.

2. According to Collis & Hussey (2003), the positive approach is the dominant paradigm in business and management research. It is usually ideal to follow the research methodology that has been adopted by previous studies in a research discipline, they advised. The quantitative method has been used by previous studies that explored the contingency context of SMA (See Table 5.3). In that connection relevant measures have been tested in the past.
3. This study tests specified hypotheses, which suggests relationship between variables. Quantitative tools fit hypotheses testing (Merriam, 1988). Quantitative methods as a deductive approach enable the testing of theory and prove generalisations about a phenomenon (Deshpande, 1983).
4. This study aims to answer the 'What' questions, and the 'What' nature of research questions are better answered using a quantitative approach (Robson, 1993). This study also addresses the 'how' type of questions. Quantitative method is also appropriate for this study because it enables a scientific examination of this nature of questions.

S/Nr.	Studies	MA/SMA/Other	Context (Industry & National)	Methodological Approach
1	Cadez & Guilding (2008)	SMA	Slovenia, multi-industry.	Questionnaire Survey with 193 samples. Also used interviews
2	Cinquini & Tennucci (2010)	SMA	Italian Manufacturing companies	Questionnaire survey with a sample of 215 companies
3	Guilding et al. (2005)	SMA (cost-plus pricing)	UK & Australian companies	Questionnaire survey
4	Alrawi & Thomas (2007)	MAIS	UAE Commercial Banks	Quantitative survey involving 133 managers
5	McManus (2012)	CA (SMA) & MP	Australian Hotel Industry	Quantitative survey involving 165 hotel managers.
6	Kattan et al. (2007)	MAI	Palestinian Company	Case study Interviews & archival data in a company over a 10-years period
7	Waweru et al. (2004)	MAPs	South African retail companies	Interviews and questionnaire
8	Bhimani & Langfield-Smith (2007)	SMA	UK firms (large)	Questionnaire and interviews
9	Hwang (2005)	SMI	South Korean retailing industry	Questionnaires
10	Guilding & McManus (2002)	SMA	Australian Companies	Questionnaires survey involving 124 companies
11	Ghosh & Chan (1997)	MAPs	Singapore companies (multi)	Questionnaires
12	Anderson & Lanen (1999)	MAPs	Indian firms	Questionnaire survey and interviews involving 14 firms
13	Luther & Longden (2001)	MAPs	South African firms	Questionnaire survey involving 139 responses
14	Joshi (2001)	MAPs	Indian companies	Questionnaires
15	Haldma & Laats (2002)	MAPs (cost syst.)	Estonian Manufacturing firms	Questionnaires survey involving 62 responses
16	Firth (1996)	MAPs	Chinese firms	Questionnaires
17	Kholeif et al. (2007)	IAP	Egyptian companies	Questionnaires, documentary evidence, direct observation and face-to-face interviews
18	Soobaroyen & Sannasse (2007)	FP & CP	Mauritius' Voluntary organisations	Questionnaire supplemented by interviews
19	Chenhall (2003)	MCS	Past literature	Critical review of past studies

20	Chenhall & Langfield-Smith, (1998)	Traditional Accounting & SMA	Australian Manufacturing firms	Questionnaire Survey
21	Szychta (2002)	Cost Syst.	Polish enterprises	Survey, interviews and observations and documentation involving 60 enterprises
22	O'Connor et al. (2004)	MAPs	China's State Owned Enterprises (SOE)	Interviews followed by Questionnaires
23	Nimtrakoon & Tayles (2010)	MAPs	Thailand manufacturing & non-manufacturing firms	Questionnaire survey involving 135 responses from accounting managers
24	Löfsten & Lindelöf (2005)	MAPs (SMA)	Swedish Technology-based firms	Questionnaire survey involving 183 NTBFs
25	Govindarajan & Gupta (1985)	MCS	US firms (multi-industry)	Quantitative survey involving 58SBUs
26	Waweru (2008)	MACS	Canadian Manufacturing firms	Questionnaire survey involving 31 companies
27	Wu et al. (2007)	MAPs	64 joint ventures (JVs) and State Owned Enterprises (SOE)	Questionnaires
28	Van Triest & Elshahat (2007)	Cost Syst.	Egyptian firms (multi)	At first Questionnaires. Subsequently, Questionnaires and interviews
29	Leftesi (2008)	MAPs	Libyan firms	Questionnaires followed by interviews
30	Hyvönen (2008)	MAS	Manufacturing firms in Finland	Questionnaire for the first three essays, and case study for the last essay
31	Tuan Mat (2010)	MAPs	Malaysian Manufacturing industry	Questionnaire survey
32	Guilding (1999)	SMA	New Zealand Companies	Questionnaire survey involving 217 companies
33	Hoque (2004)	SMA	New Zealand Manufacturing firms	Questionnaire Survey involving 100 firms
34	Abdul-Kader & Luther (2006)	SMA	UK food & drinks industry	Questionnaire survey and interviews
35	Huang et al. (2010)	Intellectual Capital	Malaysian companies	Questionnaire survey involving 88/520 responses from companies
36	Guilding et al. (2000)	SMA	New Zealand, UK and US companies	Questionnaire survey

Key: MA/SMA = Management Accounting/Strategic Management Accounting; MAI = Management Accounting Information; MAPs = Management Accounting Practices; MA & PC = Management Accounting & Political Control; MAS = Managerial Accounting Systems; IAP = Institutionalised Accounting Practices; FP & CP = Financial Planning & Control Practices; SMI = Strategic Management Implementation; MAIS= Management Accounting Information Systems; CA(SMA) & MP = Customer Accounting & Marketing Performance; BVA = Brand Value Accounting; MACS = Management Accounting and Control Systems.

Source: Facts Collated by the author from past studies.

5.6 The Data Collection Process

A research design “details the most suitable methods of investigation, the nature of the research instrument, the sampling plan and the types of data” (Chisnall, 2005, p.36). A reminder of the research objectives was stated earlier. Following that, the positioning of this study in the paradigmatic context was specified. In the following sections, the sampling process is explained. Also, the quantitative data collection method is explained, justifying its appropriateness, and also detailing out the instrument validation process. Subsequent to that, the actual survey is explained, giving full details on how the research instrument was generated.

5.6.1 Data Collection Method: The Survey Instrument

Survey and multivariate techniques suit the positivism philosophy of research (Healy & Perry, 2000; Guba & Lincoln, 1994). This is thus the approach used in this study. There is need to ensure content validity in research (Fitzpatrick, 1983). For that reason, the survey process and instrument for this study is explained next (Section 5.6.2) detailing out questionnaire design process, and the study sample. The research instrument is presented in section 5.7, and following that, the multivariate steps for this study are explained in Section 5.8.

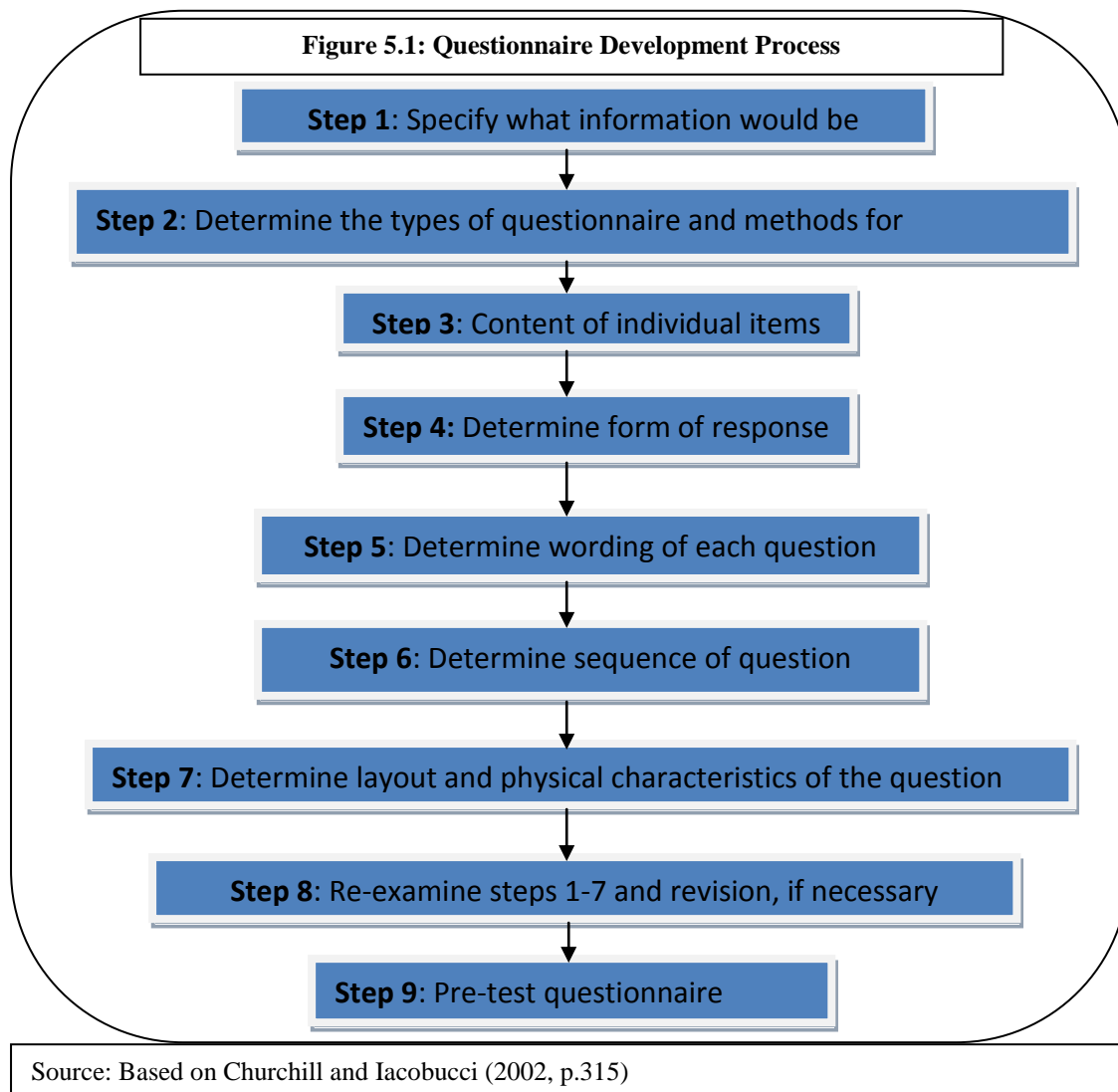
5.6.2 The Questionnaire Design Process and Study Sample

The questionnaire design for this study is explained in section 5.6.2.1, while the sample for this study is explained in section 5.6.2.2.

5.6.2.1 Designing the Questionnaire

Authors (e.g., Chisnall, 2001; Churchill & Iacobucci, 2002) have offered numerous questionnaire development steps, which researchers need to follow to maximize the quality of the questionnaire. According to Oppenheim (2000), questionnaire design processes involve aspects such as item wording or phrasing and the ordering of questions.

Following Churchill & Iacobucci (2002), the questionnaire design process for this study involves a 9 step-by-step procedure as shown in Figure 5.1 below.



5.6.2.2 The Study Sample

In this section, the population and sample for this study are explained. Also, the pilot-testing of the questionnaire and the actual survey are detailed out in this section. This section is concluded by explaining the steps taken in this study to meet ethical standards of research (See Section 5.6.2.2.4).

5.6.2.2.1 The Population for this Study

As stated in Chapter two, the context of this study is the West Bank area of Palestine. The population for this study included all Palestinian companies that met the specified criteria. For the categorisation of industries, to ensure that the categorisation for this study matches the categorisation understood by the respondents, this study used the categorisation specified by the Palestine Stock Exchange, 2013⁷ and also evidenced in the records of Federation of Palestinian Chamber of Commerce, Industry & agriculture, 2013. For that reason, the industrial sectors covered in this study included investment sector, industry sector, banking and financial services sector, insurance sector and service sector. The total population included 476 largest companies in the West Bank area. Each of these companies has a capital outlay of 1,000,000 Jordanian Dinar (about \$1,500,000) or more. The sector by sector demographics are displayed in Table 5.4 below.

Industry Sector	Number of Companies	%age of Population
Investment Sector	21	4.41
Industry Sector	244	51.26
Banking & Financial Services Sector	41	8.61
Insurance Sector	22	4.62
Service Sector	148	31.09
Total Population	476	100

⁷ See <http://www.pex.ps/marketwatch/English/SectorsMarketWatch.aspx>.

The investment sector includes Real Estate. The industry sector includes pharmaceutical and medical companies, chemical companies, paper and cardboard companies, printing and packaging, food and beverages, tobacco and cigarette, mining and extraction companies, engineering and construction, electrical companies, textiles, leathers and clothing, Glass and ceramic companies. Banking and financial services sector includes banks and diversified financial services. Insurance sector includes all insurance companies. And finally, the service sector includes health care services, educational services, hotels and tourism, transportation, technology and communication, media, utilities and energy, and commercial services.

From the population for this study specified above, 400 companies were sampled out for the data collection purpose for this study. The criteria for selecting these large companies included the following:

1. The company is listed in the Federation of Palestinian Chamber of Commerce, Industry & Agriculture register,
2. The company must have at least 50 employees. Palestinian Central Bureau of Statistics report (2007) classified companies with 50 or more employees to be large companies, and
3. The company must meet the capital outlay standard of \$1.5 million or more as defined by in the Federation of Palestinian Chamber of Commerce, Industry & Agriculture disclosure.

5.6.2.2.2 Pilot-Testing of Questionnaire

The questionnaire for this study, which was generated as explained in section 5.7 (The Research Instrument) was pilot-tested to ensure that wordings, language and general content are suitable (Pressey, 2000; Van der Stede et al., 2007) for the study of strategic management accounting practices in the Palestinian context. Pilot-testing is important in management accounting research to improve the reliability and validity of individual questions (Van der Stede et al., 2007; Tuan Mat, 2010). Furthermore, since the variables for measuring the conceptualised framework (See Section 5.7) were adopted from past studies in developed countries, pilot-testing the instrument for this study was also an important approach towards checking the applicability of these variables in the Palestinian environment.

Before the pilot-testing took place, the questionnaire was translated from English to Arabic and later from Arabic to English through two independent scholars who are based in Palestine and have obtained their PhDs in accounting from western countries where the first language is English. This translation process was necessary as most of the sampled companies are indigenous Palestinian companies and the mother tongue is Arabic. The process of the translation is shown below:

1. First, the original English version of the questionnaire was translated to Arabic by the researcher,
2. Secondly, the researcher (a) sent the questionnaire (English version) to a scholar to translate to Arabic, and (b) sent the questionnaire (Arabic version) to another scholar to translate to English.
3. Finally, differences in translations were assessed and consensus was reached to make a preliminary Arabic version of the questionnaire.

In this study, pilot-testing followed the recommendation of Dillman (1978) and participants in the pilot-testing included colleagues and prospective respondents. Thus, academic piloting and field work piloting were used in this study.

For the **Academic Piloting**, the questionnaire was piloted in both languages (English and Arabic) with prominent accounting scholars. The participants in this pilot-testing were six accounting scholars who are located in Britain, Australia and Slovenia who have published on the SMA context, and two accounting scholars who are located in the West Bank in Palestine and have also published on the management accounting context.

These participants were asked to review the questionnaire in terms of structure, format, length and content clarity and appropriateness. The pilot resulted in minor amendments being made to the draft. The areas of comments included the scales of the questions (the need to ensure uniformity), proofreading the draft, adding a 'Glossary' ...etc.

For the **Field Work Piloting**, out of the 400 companies, 26 were chosen for the pilot study. These companies were randomly selected. For four reasons, the Chief Accountant or Chief Controller or Chief Financial Officer was identified as the appropriate respondents for this fieldwork piloting and the subsequent survey:

- 1- The personnel in this capacity are employed at a high managerial level and have got a wide range of experience at that position,
- 2- A phone call made with 26 companies to identify the best person to fill the survey after explaining the aim of the research over the phone identified these contact persons as appropriate for the pilot-testing and survey,
- 3- Organisations in less developed countries (LDCs) may not have a separate management accounting unit (Smith et al., 2008), and

4- Finally, those respondents are identified by previous studies which have explored the contingency perspective of SMA (e.g., Cadez & Gulding 2007; Cadez & Gulding 2008; Cinquini & Tenucci 2010).

The respondents were asked to complete the questionnaire in Arabic and provide comments relating to appropriateness of questions, comprehension, wording, time to complete it and content. This is a very important step to ensure that some SMA techniques are applied.

A total of 26 questionnaires were sent for piloting covering all sectors. 14 questionnaires were sent to companies under Industry sector, 4 to Banking and Financial services sector, 4 to Service sector, 3 to Insurance sector and 1 to Investment sector. Table 5.5 below elaborates further the fieldwork pilot-testing demographics. A total of 12 questionnaires were returned representing a 46.15% response rate. None of the questionnaires collected from the pilot testing were included in the final sample due to changes in the structure and wording in some items of the questionnaire.

Overall, the comments from the respondents concerned mainly contents for measuring the variables. After the pilot testing, the researcher conducted interviews with three respondents, for more clarifications and also to understand clearly if all the concepts in the survey are understood by them. All their comments were taken into account and consequently the questionnaire was revised.

Table 5.5: The Pilot-Testing Demographics

Sectors	Number of Firms	%age of pilot-testing sample
Investment sector	1	3.85
Industry sector	14	53.85
Banking and Financial service sector	4	15.38
Insurance sector	3	11.53
Service sector	4	15.38
Total	26	100

After the pilot-testing, the questionnaire was revised to reflect the input from the academic and fieldwork pilot studies. The final version of the questionnaire [see Appendix 1 for the English version and Appendix 2 for the Arabic version] was then used for the main study.

5.6.2.2.3 The Actual Survey: The Sample and Respondents

The population for this study, as shown in Table 5.4 above includes a mix of industries. For a number of reasons management accounting change is likely to occur in these industries because of dynamism in the modern-day marketplace, for example operational environmental changes like changes in production cost structure (Innes & Mitchell, 1990) and new high technology techniques (Kaplan, 1989). Consequently, organisations would embrace innovative management accounting techniques (Smith et al., 2008; Tuan Mat, 2010). While most prior studies have explored the manufacturing industry (e.g., Abdel-Kader & Luther, 2008; Baines & Langfield-Smith, 2003; Gerdin, 2005; Laitinen, 2006; Tuan Mat, 2010), this multi industry study, in addition to offering LDC insights, might offer previously unavailable multi-industry insights that would enhance knowledge.

According to Baines & Langfield-Smith (2003, p.684), managers' perceptions are considered appropriate for a study of this nature, because:

1. It is managers' perception of the environment which are of interest, as it is these perceptions that influence decisions with respect to strategic choice and changes in other organisational and management accounting variables,
2. It is difficult to objectively measure variables such as the extent of change in the environment, or change in strategic emphasis, and
3. It is understood that individuals have sufficient understanding of their decision process and can give relatively reliable information.

Taking these backgrounds into consideration, the Chief Accountant or Chief Controller or Chief Financial Officer of the sampled organisations were chosen as respondents for this study, as organisations in less developed countries (LDCs) may not have a separate management accounting unit (Smith et al., 2008).

Data were collected using a mailed questionnaire survey as well as a drop and collect method of a questionnaire survey. The sample for this study included 400 largest Palestinian companies drawn from the Federation of Palestinian Chamber of Commerce, Industry & Agriculture disclosure that met the criteria defined in Section 5.6.2.2.1. Questionnaires were distributed to the sampled companies in the proportion displayed in Table 5.6 below.

Sector	Number of Firms	%age of Survey Sample
Investment sector	17	4.25
Industry sector	207	51.75
Banking and Financial service sector	41	10.25
Insurance sector	22	5.5
Service sector	113	28.25
Total	400	100

To enhance the response rate for this study, several steps were taken:

1. Telephone calls or letter of study introduction was made/ sent to the prospective participating companies and responding personnel, and also to obtain the relevant email addresses,
2. The questionnaire was emailed or hand delivered along with a cover letter, explaining the purpose of the study,
3. The respondents were assured in the questionnaire that all information about their individual companies would be kept highly confidential,

4. Respondents were promised that a summary of the finding from the study would be provided to their individual companies, if they wished, and
5. Reminder letters or telephone calls were sent (or made) to the companies.

After three weeks of sending the reminder letter and/or making telephone calls, the researcher personally visited the companies reminding them of the importance of their participation in the study.

In this study, the data collection process lasted four months (July – November, 2012). A total of 88 questionnaires were returned after four weeks of sending the questionnaires. A reminder letter was sent by email to the companies that had not yet completed and returned the questionnaire. This led to 29 additional responses after about four weeks of sending the reminder letters. To further enhance the response rate, the researcher personally visited a number of companies to remind them of the importance of their participation to the research. Through this visit and collect approach, which lasted over two months, additional 118 questionnaires were collected. Overall, 235 questionnaires were returned from respondents.

To determine which responses are suitable for the purpose of further analysis for this study, two steps were taken. First, missing data analysis was conducted, leading to 9 questionnaires with incomplete information being excluded. Secondly, since it was not possible to confirm through desk research which companies satisfied the criteria 2 in Section 5.6.2.2.1, these data were collected through the questionnaire. Consequently, the emergent data were analysed and 51 questionnaires were excluded as the companies had less than 50 employees.

Thus, the total number of questionnaires suitable for analysis in this study is 175, yielding a response rate of 43.75%. This is a good response rate compared to the evidence in past studies, for example, the response rate(s) of 12.3% in Jusoh (2010), 25.8% in Waweru (2008), 30.54%

in Bhimani and Langfield-Smith (2007), 34.3% in Haldma & Lääts(2002), and 38% (UK sample), 13% (U.S. sample) and 23% (Total sample) in Guilding et al. (2000). The sector by sector participation and response rates are shown in Tables 5.7 below.

Table 5.7: Sector by Sector Responses and Percentage of Total Response

Sector	Number of Firms	Percentage
Investment sector	2	1.14
Industry sector	102	58.28
Banking and Financial Service sector	29	16.57
Insurance sector	5	2.85
Service sector	37	21.14
Total	175	100

Non-response error is the statistical difference between a survey that includes only the actual respondents and a perfect survey that would include also those who failed to respond (Zikmund, 2003). To check for potential non-response bias, this study followed the precedence in McManus (2012) and used two methods. The researcher examined for differences between early and late respondents:

1. Mann-Whitney’s *U* tests were performed to compare responses provided for the first questionnaire mail-out with the responses of the second questionnaire mail-out for all survey questions. No significance levels were found to be less than 0.05.
2. Mann-Whitney’s *U* tests were also performed to compare the responses of the first 25% of questionnaires received with the final 25% received. The results did not show any significant differences between the early and late respondents on all questionnaire items.

5.6.2.2.4 Ethical Issues

According to Cooper & Schindler (2001, p.112), ethics are norms or standards of behaviour that guide moral choices about behaviour and relationship with others. The ethics of research ensures that researchers conduct their researches in a way that no one suffers adverse consequences from research activities (Tuan Mat, 2010). According to ethical requirements, the privacy of participants must not be invaded (Nardi, 2006). To conform to ethical requirements, the following steps were taken in this study:

1. A letter was written, or telephone calls made to the sampled companies to explain the research and request their kindness to participate in the study,
2. A formal permission was obtained from the participating companies before the questionnaires were sent to them,
3. A cover letter was sent along with the questionnaire to the respondents explaining the purpose of the research and instructions of how to respond,
4. In the cover letter, respondents were assured that any information provided about their companies would be kept strictly confidential, and
5. The questionnaire and cover letter used in this study were approved by the University's Research Ethics Committee.

5.7 The Research Instrument

Following the pattern shown in majority of previous studies on the contingency perspective of strategic management accounting practices in companies (See Table 5.3), questionnaire (structured) is used for this study. To generate the questionnaire for this study (See Appendix 1), the research instrument was collated from past studies (to enhance the reliability and validity of the measures (e.g., Askarany & Smith, 2008; Baines & Langfield-Smith, 2003, Hyvönen, 2007). Additional to the demographic information (See Appendix 1), the other sections in the questionnaire covered all the 7 main construct blocks as conceptualised in the framework, namely:

1. Perceived Environmental Uncertainty (PEU),
2. Organisational Strategy (OS),
3. Organisational Size (OSZ),
4. Organisational Technology (OT),
5. Organisational Structure (OSTR),
6. Organisational Performance (OP), and
7. Strategic Management Accounting Techniques Usage (SMAU).

When using Likert scale, it is important to ensure the inclusion of at least 5 response categories (Allen & Seaman, 2007). Further relevant literature suggests that, as general rule, it is best to use as wide a scale as possible (Gibbons, 1993). Combining these logics, this study follows past studies (e.g., Cravens & Guilding, 2001; Guilding and McManus, 2002; Cadez & Guilding, 2008) and used a 7-point Likert scale to measure all variables. The research instrument for this study is explained next (See Sections 5.7.1 to 5.7.7), explaining the variables for measuring each of the above outlined constructs and their sources, and summarised in Table 5.8.

5.7.1 Perceived Environmental Uncertainty (PEU)

To measure the two elements of this construct (See Appendix 1), namely perceived competitive intensity (PCI) and perceived market turbulence (PMT), two scales comprising six and four items, respectively, as in Hwang (2005) were used. The response format⁸ for each item was a 7-point Likert scale from “1” (strongly disagree) to “7” (strongly agree).

Perceived Competitive Intensity

It measured the respondents’ perceptions of the degree of the degree of competition. The measures for PCI (6), which have been used in other studies (e.g., Lawrence & Lorsch, 1967; Khandwalla, 1972; Hwang, 2005) included the following:

1. Many promotion wars occur in our industry,
2. Anything that one competitor in our industry can offer, others can match readily,
3. One hears of new competitive moves in our industry almost every day,
4. The current business environment is threatening the survival of our organisation,
5. Tough price competition is threatening our organisation, and
6. Competitors’ product quality or novelty is threatening our organisation.

Perceived Market Turbulence

It measured the degree to which an organisation’s customers and their preferences or purchase criteria were perceived to change over time. The perceived market turbulence (PMT) items (4) were adapted from those developed and utilised by Jaworski & Kohli (1993) and also used in Hwang (2005). These included:

1. Sometimes our customers are very price sensitive,
2. We are witnessing demand for our products and services from customers who never bought them before,

⁸ In Hwang (2005) a 5-point likert scale was used.

3. New customers tend to have product-related needs that are different from those of our existing customers, and
4. Our customers tend to look for new products all the time.

5.7.2 Organisational/Business Strategy

This construct is designed to capture the extent to which the explored companies are prospector or defender in their strategic orientation. To measure organisational strategy, this study used the measure developed by Shortell & Zajac (1990) and also used by Cadez & Guilding (2008). Other studies that also used these measures include Cinquini & Tenucci (2010) and Hwang (2005).

Drawing from these past studies, the instrument for this study assesses organisation's overall strategic orientation on a seven-point scale. Respondents were asked to read the characteristics below and assess which one describes their organisations best. Then place their organisation on the scale provided by circling one of the 7 numbers, whereby a (1) is a perfect representation of organisation A (Defender strategy), and a (7) represents organisation B (Prospector strategy).

1. Stable/diverse products and services,
2. Constant/Dynamic competition,
3. Ignore/Respond to changes in market needs, and
4. Focus on efficiency or Cost control/or not.

5.7.3 Organisational Size

This construct measures the extent to which the size of an organisation shapes its strategic management accounting practices. Strategic management accounting perspectives (e.g., Cadez & Guilding,) uses total revenue of the company, while marketing perspective (e.g.,

Kahn, 2001; Opute, 2009) uses number of employees of the company, to reflect company size. This present study used total revenue of company to measure organisational size.

In the questionnaire for this study, respondents were not asked to score this item on a scale of 1 to 7. Rather, information about this item was collected under the section concerning the demographics of the explored companies. Respondents were asked open ended question, “What is the total revenue of your organisation for the last financial year (US Dollar)?” To enable appropriate analyses, the responses from the participants were structured in a 7-point scale in the dataset.

5.7.4 Organisational Technology

Organisational technology describes the technological environment of explored organisations. As Appendix 1 shows, organisational technology is measured using 4-items outlined below, which were adapted based on the insights gained from past studies (e.g., Verdu et al., 2012; McChlery et al., 2005; Dik, 2011). A 7-point Likert scale, like in Verdu et al (2012)⁹, was used in this study, and respondents were asked to record their perceived understanding of the level of technology in their organisations. These measures were applied on a scale range of “1” (not at all) to “7” (to a great extent):

1. Technology is a core element of the operating system of this organisation,
2. Our production/services techniques are technology based,
3. The accounting information system is computer based, and
4. We invest in software packages to aid our accounting and other operational system.

5.7.5 Organisational Structure

Organisational structure is conceptualised in this study as both exogenous and endogenous factor and is composed of two elements. For Organisational Structure, two constructs

⁹ In Verdu et al. (2012), (1= totally disagree, 7 = totally agree) was used.

(formalisation and decentralisation) are measured (See Appendix 1). These two organisational structure dimensions have been most commonly examined in past researches (Hwang, 2005).

The Formalisation construct is measured with a 3-item instrument (Hwang, 2005¹⁰). These items have also been used in previous studies (Aiken & Hage, 1968; Ferrell & Skinner, 1988; Khandwalla, 1976) though in different combinations. Respondents would be asked to indicate on a scale of “1” (Strongly Disagree) to “7” (Strongly Agree) the extent to which the below features describe their organisations:

1. Employees in our organisation are allowed to make their own decisions without checking with anybody else,
2. My usual experience with our organisation involves doing things “by the rule book”,
and
3. Many activities in our organisation are not covered by formal procedures.

To measure Decentralisation, this study followed Hwang (2005)¹¹ and used three items. These items have also been used in previous studies (e.g., Pugh & Hickson, 1976; Khandwalla, 1974; Song & Thieme, 2006; Opute, 2009). On a scale of “1” (Strongly Disagree) to “7” (Strongly Agree), respondents were asked to indicate the extent to which the below features describe their organisations:

1. Even small matters in our organisation must be referred to someone higher up for a final answer,
2. Any major decisions that employees make must have the approval of top managers,
and
3. Employees who want to make their own decisions would be quickly discouraged.

¹⁰ In Hwang 2005, a scale of “1” (Strongly Disagree) to “5” (Strongly Agree) was used.

¹¹ The information in 2 above applies here too.

5.7.6 Organisational Performance

Organisational performance, the ultimate endogenous construct in the explored model, is a two element construct that includes financial performance and non-financial performance, as a dependent construct. To measure the 7-dimensions of performance (See Appendix 1), this study followed Cadez & Guilding (2008) and respondents were asked to indicate their company's performance relative to their competitors on a scale ranging from "1" (below average) to "7" (above average). In this study, the measures of organisational performance, which have been used in previous studies (e.g., Woodridge & Floyd, 1990; Cadez & Guilding, 2007, 2008; Hoque & James, 2000; Guilding & McManus, 2002; Hwang, 2005) include:

Financial Measures:

1. Return on investment,
2. Sales margin,
3. Capacity utilisation,
4. Market share

Non-Financial Measures:

5. Customer satisfaction,
6. Product/service quality,
7. Development of new products/services, and

5.7.7 Strategic Management Accounting Techniques Usage (SMAU)

Strategic Management Accounting Techniques Usage is conceptualised as both exogenous and endogenous construct in the explored model. Following relevant literature (e.g., Cadez & Guilding, 2008; Cinquini & Tennucci, Guilding et al., 2000) five core elements of Strategic Management Accounting Techniques are explored in my study, namely 'Costing', 'Planning, Control, and Performance Measurement', 'Strategic Decision Making', 'Competitor

Accounting’, and ‘Customer Accounting’. In addition to the aforementioned studies, these elements have also been considered in several other studies as evidenced in Table 5.7.

To measure the 5-categories (See Appendix 1), this study follows past studies (Guilding, 1999; Cinquini & Tenucci, 2010; Guilding et al., 2000; Cravens & Guilding, 2001; Cadez & Guilding, 2007, 2008) and uses the following question: “To what extent does your organisation use the following accounting techniques?” for each item of the techniques. To ascertain the intensity of use of the SMA techniques, this study follows past studies (Guilding et al., 2000; Cravens & Guilding, 2001; Cadez & Guilding, 2007, 2008) and uses Likert scale ranging from 1 (“not at all”) to 7 (“to a great extent”).

The measures used for each of the categories are outlined below (the respective sources are shown in Table 5.7):

1. Costing:
 - a. Attribute costing
 - b. Life-cycle costing
 - c. Quality costing
 - d. Target costing
 - e. Value-chain costing
2. Planning, Control, and Performance Measurement:
 - a. Benchmarking
 - b. Integrated performance measurement (Balanced Scorecard)
3. Strategic Decision Making:
 - a. Strategic costing (strategic cost management)
 - b. Strategic pricing
 - c. Brand valuation

4. Competitor Accounting:
 - a. Competitor cost assessment
 - b. Competitive position monitoring
 - c. Competitor performance appraisal

5. Customer Accounting:
 - a. Customer profitability analysis
 - b. Lifetime customer profitability analysis
 - c. Valuation of customers as assets

Table 5.8: The Variables for measuring the Framework, and their sources

Construct Nr.	Variables to Explore	Source of item
1	Organisational Technology	Past studies that explored this variable (e.g., (Kattan et al, 2007; Dik, 2011; Hwang, 2005; Hyvönen, 2008). The measures for this study were adapted from Verdu et al. (2012)
2	<p>SMA Techniques *</p> <p>Costing</p> <ol style="list-style-type: none"> 1. Attribute costing 2. Life-cycle costing 3. Quality costing 4. Target costing 5. Value-chain costing <p>Planning, control and performance measurement</p> <ol style="list-style-type: none"> 1. Benchmarking 2. Integrated performance measurement <p>Strategic decision making</p> <ol style="list-style-type: none"> 1. Strategic costing (strategic cost management) 2. Strategic pricing 3. Brand valuation <p>Competitor accounting</p> <ol style="list-style-type: none"> 1. Competitor cost assessment 2. Competitive position monitoring 3. Competitor performance appraisal <p>Customer accounting</p> <ol style="list-style-type: none"> 1. Customer profitability analysis 2. Lifetime customer profitability analysis 3. Valuation of customers as assets 	<p>(Bromwich, 1990; Roslender & Hart, 2003) (Czyzewski & Hull, 1991; Dunk, 2004; Shields & Young, 1991; Cadez & Guilding, 2008; Cinquini & Tenucci, 2010) (Belohlav, 1993; Heagy, 1991; Cinquini & Tenucci, 2010) (Cooper & Slagmulder, 1999; Monden & Hamada, 1991; Cadez & Guilding, 2008; Cinquini & Tenucci, 2010) (Dekker, 2003; Hergert & Morris, 1989; Shank & Govindarajan, 1992; Cadez & Guilding, 2008)</p> <p>(Elnathan et al.; 1996; Brownlie, 1999) (Chenhall, 2005; Ittner et al., 2003; Kaplan & Norton, 1992; Kaplan & Norton, 1996; Libby et al., 2004; Cadez & Guilding, 2008)</p> <p>(Shank, 1996; Shank & Govindarajan, 1988, 1993) (Rickwood et al., 1990; Simmonds, 1982) (Cravens & Guilding, 1999; Guilding, 1992)</p> <p>(Bromwich, 1990; Jones, 1988; Simmonds, 1981; Ward, 1992; Cinquini & Tenucci, 2010)</p> <p>(Rangone, 1997; Simmonds, 1986; Guilding, 1999) (Moon & Bates, 1993; Cinquini & Tenucci, 2010)</p> <p>(Bellis- Jones, 1989; Ward, 1992; Zeithaml, 2000; Guilding & McManus, 2002) (Foster & Gupta, 1994; Jacob, 1994) (Foster, Gupta, & Sjoblom, 1996; Slater & Narver, 1994; Zeithaml, 2000; Guilding & McManus, 2002)</p>
3	Organisational Performance The performance dimensions to be explored in this study include:	These measures have been used in past studies (e.g., Woodridge & Floyd, 1990; Cadez & Guilding, 2007, 2008; Hoque & James, 2000; Guilding

	(1) Return on investment, (2) Sales margin, (3) Capacity utilisation, (4) Market share (5) Customer satisfaction, (6) Product/service quality, (7) Development of new products/services	&McManus, 2002; Hwang, 2005) Woodridge & Floyd (1990) and Hoque & James (2000) only used the first 5-measures
4	Perceived Environmental Uncertainty Perceived competitive intensity Perceived market turbulence	The measures for this study have been used in previous studies as shown below. (Bellis-Jones, 1989; Foster & Gupta, 1994; Guilding & McManus, 2002; Lawrence & Lorsch, 1967; Khanwalla, 1972) (Jaworski & Kohli, 1993; Hwang , 2005)
5	Organisational Structure Formalisation Decentralisation	(Hwang, 2005; Aiken & Hage, 1968; Ferrell & Skinner, 1988; Khandwalla, 1976); Opute, 2009) (Hwang, 2005; Dik, 2011; Aiken & Hage, 1968; Ferrell & Skinner, 1988; Opute, 2009).
6	Organisational/Business Strategy: Prospector Defender	(Cinquini & Tenucci, 2010; Cadez & Guilding, 2008; Hwang, 2005; Shortell & Zajac, 1990) (Cinquini & Tenucci, 2010; Cadez & Guilding, 2008; Hwang, 2005; Shortell & Zajac, 1990)
7	Organisational Size Total Revenue of the company	(Cadez & Guilding, 2008; Hwang, 2005; Dik, 2011)
SMA Technique * = All variables listed in the Table were also used in Cadez & Guilding (2008)		

5.8 The Multivariate Steps for this Study

In explaining the multivariate steps for this study, two steps are taken. First, a review of relevant methodological literature on ‘Reliability’ and ‘Validity’ of a Quantitative Research is undertaken, and concluded with an explanation of how these core methodological interest have been ensured in this study. While that is done in section 5.8.1, section 5.8.2 will present the theoretical backgrounds concerning multivariate steps, with the statistical results presented in Chapter 6.

5.8.1 Reliability and Validity in a Quantitative Research

“Empirical research relies on scientific procedures and uses a systematic approach to find answers to research problems” (Khalid et al., 2012, p.15). Reliability and validity are two core concerns in ensuring appropriate scientific procedures for a research (Hwang, 2005; Tuan Mat, 2010; Dik, 2011).

Reliability refers to the consistency of measurement, while validity reflects the accuracy of the measures (Khalid et al., 2012). Reliability is the degree to which a measure is free from random error and reflects the internal consistency of a measurement device (Khalid et al., 2012; Zikmund, 2003). Further literature: reliability refers to the accuracy and precision of the measurement procedure (Thorndike et al., 1991) and can be expressed in terms of stability, equivalence and internal consistency (Cooper & Schindler, 2003). According to literature (Khalid et al., 2012) the indicators of reliability of research measures include those shown in Table 5.9 below

Table 5.9: The indicators of Reliability of Research Measures		
S/Nr.	Indicators	Explanation
1	Stability	The extent to which the results obtained using the measurement instrument can be reproduced. Stability is assessed by administering the same measurement device to the same respondents at two separate points in time (Zikmund, 2000). There are however problems associated with this method (Zikmund, 2000)
2	Equivalence	This shows the degree to which alternative forms of the same measures are used to produce the same or similar results (Cooper & Schindler, 2003)
3	Internal Consistency	This is the extent to which items in a measurement device are homogeneous and reflect the same underlying construct (Cooper & Schindler, 2003). The most commonly used method to assess internal consistency is Cronbach's Alpha (Cronbach, 1951). If one does not report Cronbach's Alpha, the reliability of the items is considered to be low (Khalid, 2012). The higher the Cronbach's Alpha score (usually between 0 and 1), the more reliable is the generated scale (Delafrooz et al., 2009). According to Nunnally (1978), Cronbach's alpha score of 0.7 or above is considered to be acceptable reliability coefficient.
Source: The contents were collated from Khalid et al. (2012, p.22)		

Similarly, a research must ensure validity of its approach (Khalid et al., 2012; Saunders et al., 2009). "Validity is the extent to which a score truthfully represents a concept" (Khalid et al., 2012, p.22). Other researchers (e.g., Cooper & Emory, 1994; Zikmund, 2000) underline that validity reflects the accuracy of measurement device and represents the ability of a scale to measure what it is intended to measure. Validity has two types, namely external and internal validity (Saunders et al., 2009). External validity is about generalisation and internal validity ensures that a researcher's research design follows applicable principles.

The core indicators of validity of research (Khalid et al., 2012, p.22, 23; Neuman, 2005) are as shown in Table 5.10 below.

Table 5.10: The Indicators of Validity of Research Measures		
S/Nr.	Indicators	Explanation
1	Face validity	This is the extent to which a measure reflects the content of the concept in the question. Ensuring face validity is highly critical if an instrument is being developed for the first time. Face validity can be ensured by obtaining subjective judgements by the experts of the concerned field (Bryman & Bell, 2003)
2	Content validity	Content validity is closely related to face validity. The focus in content validity is that a measure should include adequate and representative set of items to cover a concept. This can also be ensured by experts agreement (Sekaran, 2003)
3	Construct validity	This is the degree to which a measure/scale confirms a network of related hypotheses generated from theory based on the concepts (Zikmund, 2000). There are two types of construct validity, namely convergent validity and discriminant validity. Convergent validity: This is confirmed when two or more variables measuring the same construct highly correlate (Straub et al, 2004) Discriminant validity: A device has discriminant validity if by using measures for researching different constructs results in relatively low inter correlations (Cooper & Schindler, 2003)
Source: The contents were collated from Khalid et al. (2012, p.22)Table		

In this study, reliability and validity were ensured through a number of steps (See Table 5.11).

Reliability was assessed by checking the internal consistency of the measurement device. To do this, the Cronbach's alpha values were estimated (See Chapter 6). Also, the sample means and standard deviation values for each measurement item were estimated.

For validity, Exploratory Factor Analysis (EFA) was conducted to check the connectedness between the items for measurement and confirm the factors for this study, towards appropriately gauging the association between the various factors as conceptualised in the framework (See Figure 4.1). Further details to the reliability and validity steps taken in this study are elaborated under data analysis (Section 5.8.2).

Table 5.11: Methodological Steps taken to ensure Reliability and Validity in this Study			
S/Nr.	Reliability/Validity	Methodological Actions Taken	Action taken in
1	Reliability & Validity: Research Problem	Defined based on existing research gaps.	Chapter 1 (Sections 1.3; 1.4)
2	Reliability & Validity: Instrument Development	<ol style="list-style-type: none"> 1. A structured questionnaire was developed from existing instruments (e.g., Baines & Langfield-Smith, 2003; Hoque et al., 2001; Hyvönen, 2007; Hwang, 2005). 2. Pilot-testing the instrument to ensure reliability and validity (e.g., Tuan Mat, 2010; Saunders et al., 2009) 	Chapter 5 (Section 5.7) Chapter 5 (Section 5.6.2.2.2)
3	Face Validity Content Validity	<p>The items for measuring the constructs in this study are not new; rather they have been generated from past studies. Despite that, to ensure the context suitability, face validity was ensured through 8 academic experts who confirmed the suitability of the instrument.</p> <p>Each of the conceptualised constructs in this study is measured using a representative set of items (at least four items in this case) (Sekaran, 2003)</p>	Chapter 5 (Section 5.6.2.2.2) Chapter 5 (Section 5.7); Appendix 1
4	Construct Validity	<p>To confirm the suitability of the constructs for measuring the conceptualised associations (Zikmund, 2000), a number of steps were taken, namely:</p> <ol style="list-style-type: none"> 1. Inter-correlation of variables of each construct 2. Variables to each factor in this study loading highly and match benchmark (Cappelleri et al., 2000) 3. The factor analysis results show that the individual factors are distinct from one another (Cooper & Schindler, 2003) 4. The Bartlett's test of sphericity value and KMO statistics are satisfactory. 	Chapter 6 (Section 6.4)
5	Reliability	<p>Other steps taken to confirm reliability include:</p> <ol style="list-style-type: none"> 1. The sample means and standard deviation values for all measurement items were calculated to demonstrate reliability 2. Cronbach's alpha were calculated for all conceptualised factors 3. The factor means and standard deviation values were calculated and are satisfactory 	Chapter 6 (Section 6.3)
Source: Author			

5.8.2 Data Analysis in this Study

Tables 5.9 and 5.10 above have pinpointed core reliability and validity criteria that a quantitative study has to satisfy. Following that, Table 5.11 summarised the steps taken in this study to satisfy these criteria. Chapter six presents the statistical results that confirm the reliability and validity for this study. Prior to chapter six, the multivariate steps for this study are explained here. In this section, the main aim is to highlight the analytical process that was followed to ensure that emerging data are appropriately analysed towards exploring the conceptualised relationships.

There are two main ways of analysing quantitative data, namely parametric and non-parametric (Field, 2005). The most critical element for deciding whether parametric or non-parametric is appropriate is based on the type of data. In this study, parametric analysis is appropriate for three reasons:

1. The variables in this study were measured through ordinal Likert scaling (e.g., Hair et al., 2003; Sekaran, 2003; Bryman & Cramer, 2004),
2. Most studies in business and management accounting have used parametric tests (e.g., regression) to analyse ordinal data (e.g., Williams & Seaman, 2001; Al-Omiri & Drury, 2007; Brown et al., 2004; O'Connor et al., 2004), and
3. Parametric analysis was also used this study because the fundamental assumption of normality of data distribution was satisfied (Field, 2005; Field et al., 2006; Hair et al., 1998). The normality of data distribution is confirmed in chapter 6.

The core statistical techniques used in this study are summarised next, namely descriptive statistics (Section 5.8.2.1), correlation (Section 5.8.2.2), factor analyses (Section 5.8.2.3) and regression analyses (Section 5.8.2.4).

5.8.2.1 Descriptive Statistics

Following Field (2005), descriptive statistics for all variables used in this study were calculated. Descriptive statistics such as means, frequency and percentages were estimated to show the sample characteristics in terms of the respondents and responding companies. Also, calculating the statistics was necessary to give insights into the sample distribution and research variables that are formulated in the conceptualised hypotheses. Calculating the mean values was aimed at ranking the items and factors according to their relative importance in the decision to adopt SMA techniques. These statistics are presented in Chapter six.

In addition to the above specified descriptive statistics, standard deviation and Cronbachs alpha estimates were also calculated (See Chapter six) to ensure reliability of the measures for this study.

5.8.2.2 Correlation

It is important to examine statistical data to confirm correlation before conducting factor analysis (Rietveld & Van Hout, 1993; Lee & Scott, 2004). Following that logic, construct validity (correlation of variables) estimates were calculated before the factor analysis.

Correlation analysis is used to ascertain if, and the overall strength of a relationship that exists between pairs of variables (Field, 2005). The Pearson's product-moment coefficient is used in this study. The Pearson correlation is +1 in the case of a perfect positive (increasing) linear relationship (correlation), -1 in the case of a perfect decreasing (negative) relationship (anticorrelation) (Dowdy & Weardin, 1983). Correlation, it must be noted, does not imply causation; therefore, correlation cannot be used to infer a causal relationship between variables (John, 1995). For the purpose of checking causes and effects relationships, a regression analysis is used in this study (See Section 5.8.2.4).

To interpret correlation coefficient, one needs to examine the coefficient of correlation (r^2), which explains the variance proportion in one variable that is attributable to another (i.e., the amount of commonality between the two variables (Field 2005).

5.8.2.3 Factor Analysis

The main applications of factor analysis techniques are (StatSoft, online¹²) to:

1. Reduce the number of variables, and
2. Detect structure in the relationships between variables; that is to classify variables.

Thus, factor analysis, which was first introduced by Thurstone (1931), is applied as a data reduction or structure detection method, so that the output can be used in further analysis (Field, 2005). Factor analysis reduces a set of data from a group of interrelated variables into a smaller set of factors (Field, 2005).

There are two factor analysis models (Hair et al., 1998; Hair et al., 2003): principal component analysis (PCA) and common factor analysis (also called exploratory factor analysis). Principal component analysis is appropriate when the aim is to reduce the original set of variables into smaller sets of combined variables, while exploratory factor analysis (EFA) fits the concern of identifying the underlying common dimensions in the original variables (Hair et al., 1998; Hair et al., 2003).

In literature, there is considerable debate as to which of these approaches is more appropriate. Some authors favour EFA (e.g., Bentler & Kano, 1990; Floyd & Widaman, 1995; Gorsuch, 1990; MacCallum & Tucker, 1991; Costello & Osborne, 2005), while others argue that PCA is preferable (e.g., Schoenmann, 1990; Steiger, 1990; Velicer & Jackson, 1990; Guadagnoli & Velicer, 1988). However literature also argues that, empirically both approaches produce similar results and solutions (e.g., Hair et al., 1998; Field, 2005). Field (2005): the differences

¹²<http://www.statsoft.com/textbook/principal-components-factor-analysis/>

between principal component analysis and exploratory factor analysis arise mainly from the calculation and may be difficult to conceptualise to non-statisticians. Since principal component analysis tends to be more stable and is also the most commonly used model in business research (Hair et al., 2003), this study uses principal component analysis. This study follows the seven steps guide for appropriate principal component analysis (See Figure 5.2) as defined by Rietveld & Van (1993).

Using the guide defined in Figure 5.2, the data for this study were examined to identify the latent variables (Field, 2005), identify the factors to retain by weighing the factor loadings and scores, towards further analysis (regression analysis). While the correlation and factors retained and the factor loadings are presented in Chapter 6, the regression results are presented in Chapter 7.

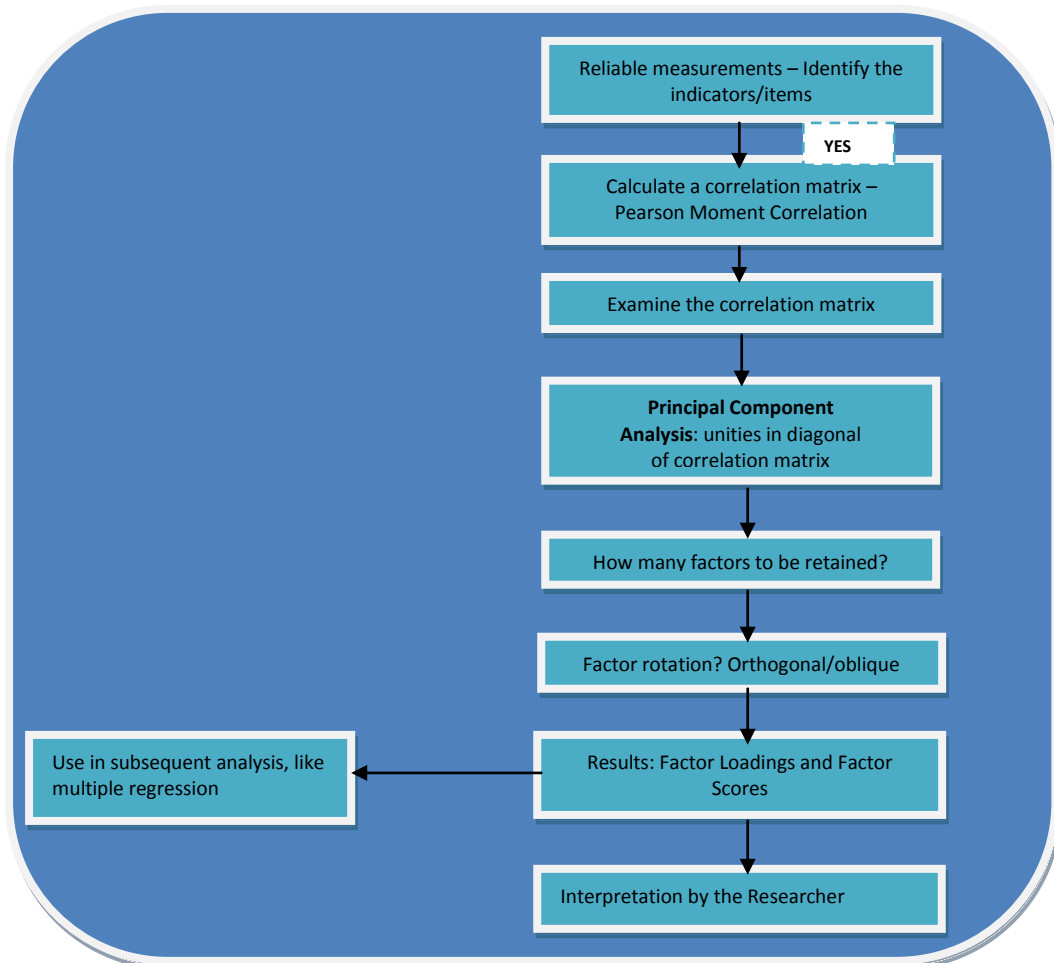


Figure 5.2: The guide for Principal Component Analysis in this study. Adapted from Rietved & Van (1993:291)

There are two main rotation strategies used in factors analysis to ensure a clear pattern of loadings of factors (Gorsuch, 1990; Field, 2005; Costello & Osborne, 2005), namely orthogonal and oblique rotation. As Costello & Osborne (2005) note, “rotation cannot improve the basic aspects of the analysis, such as the amount of variance extracted from the items” (p.3).

Commonly used orthogonal methods include varimax, quartimax and equamax (Costello & Osborne, 2005; Field, 2005). Orthogonal rotation will produce factors that are uncorrelated (Costello & Osborne, 2005). On the other hand, oblique rotation method includes direct oblimin, quartimin and promax. In the oblique method, factors are allowed to correlate.

In this study, oblique rotation method is used because it “should theoretically render a more accurate, and perhaps more reproducible, solution” (Costello & Osborne, 2005, p.3). This reasoning is drawn from social science logic that some correlation is generally expected among factors, “since behaviour is rarely partitioned into neatly packaged units that function independently of one another” (Costello & Osborne, 2005, p.3). According to literature (Fabriger et al., 1999), there is no widely preferred oblique rotation method, as all tend to produce similar results. In this study, the direct oblimin method is used. The results for the PCA for this study are presented in Chapter 6.

5.8.2.4 Regression Analyses

To measure the conceptualised independent and dependent relationships as pictured in Figure 4.1, regression analysis (Field, 2005) was used. In this study, since Figure 4.1 conceptualised a situation where several independent variables predict a single dependent variable, a multiple regression analysis is used (Field, 2005). This approach has been identified in literature as the most widely applied technique for assessing the relationship between two or more variables (Hair et al., 1998). This multiple regression analysis was used to explain the variance in the dependent variable that is accounted for by each individual independent variable.

In the regression analysis, core statistical estimates that are calculated include R^2 , Adjusted R^2 , and Regression F-Value. Also, the β coefficients for each independent variable, t-value and significance levels are estimated. The regression results are presented in Chapter 7.

5.9 Conclusion to the Chapter

This chapter has explained the methodological design for exploring the conceptualised research framework (Figure 4.1). In doing that, the philosophical positioning of this study was first explained, and subsequently the appropriate methodological strategy was defined.

Following that, the research instrument, justification and validation were explained, pinpointing also the industry context, population and sample for the study.

In this chapter too, the steps taken to ensure reliability and validity of research were explained. Using insights from methodological literature, the core steps that are applicable to this research were flagged. This included defining the core reliability measures and factor analysis strategy and justification for this study. Also, the final section of this chapter described the regression analysis approach that is followed to examine the conceptualised independent – dependent relationships.

In the next chapters, the methodological backgrounds defined here would be transported and applied to the data of this study. Chapter six therefore presents the statistical evidence that underlines the reliability and validity of this research, while Chapter seven presents the results of the regression analyses.

6. Data Analyses: Descriptive Statistics, Reliability and Validity of Factors

6.1 Introduction to the Chapter

Table 5.11 in Chapter 5 summarised the methodological steps taken towards examining the hypothesised relationships between the ‘exogenous’ and ‘endogenous’ variables as conceptualised in the framework (Figure 4.1). Following Table 5.11 therefore, the data for this study were screened to confirm, reliability and validity of measures of scales and constructs.

In this Chapter (six) therefore, the focus is to present the statistical evidence that justifies the reliability and validity of this research. Before doing that, the demographics of respondents and companies that participated in the study are summarised in Table 6.1a below. Following that, the justification of normality of data distribution is explained in Section 6.2 and the reliability and validity statistics are presented in Sections 6.3 and 6.4 (and 6.5) respectively. In Section 6.6, a conclusion to this Chapter is presented.

	Participating company Sectors*				
Average	Inv. Sec	Ind. Sec	B & F Sec	Ins. Sec	Svcs. Sec
Total Revenue - Last year (in US\$m)	5.516	15.117	14.723	8.932	12.018
Capital Outlay (in US\$m)	4.956	10.435	7.110	5.312	6.652
Years in Operation (Companies)	7.5	7.3	8.5	8.6	8.5
Total Number of Employees	65	73	55	60	62
Age of Respondents	37	41	39	33	44
Total work experience (Years)	8	9.5	8.5	8	10
Work experience in present role	6.5	6.5	5.5	6.	7.25
Respondents with Bachelors Degree (%)	100%	76.56%	82.76%	60%	89.19%
Respondents with Masters Degree (%)	50%	39.21%	17.24%	None	13.51%
Respondents with PhD Degree (%)	None	2.94%	None	None	5.41%
Respondents with Prof. Qualification (%)	None	None	6.90%	None	5.41%
* Participating Company Sectors: Inv. = Investment; Ind. = Industry; B & F = Banking and Financial Services; Ins. = Insurance; and Svcs. = Service.					

Demographically, the average capital outlay of explored sectors falls between US\$4.956 and US\$10.435. Comparative to other sectors, the industrial sector achieved a higher average revenue (US\$15.117) and also shows a higher average number of employees (73). The average age of respondents for all sectors range from 33 to 44.

Additional to a higher age level, the services sectors seems to have employees with longer years of experience, generally and on their present jobs. The academic demographics show that majority of the employees hold a Bachelor's degree across all sectors. Having said that, the services sector shows a high level of employees with broad academic grounding, with employees holding Bachelor's degree (89.19%), Master's degree (13.51%), PhD degree (5.1%) and professional qualifications (5.1%).

6.2 Normality of Data Distribution

As evident in Section 6.3.1, 15 variables are used in this study. The variables "business/organisational strategy" and "organisational size" are categorical, and are shown only for the purpose of descriptive statistics as one variable, but when testing the hypotheses, these variables will be dealt with as two variables.

For the purpose of generalising the findings from regression analysis, some assumptions must be met. One of these assumptions relates to the variable type (Field et al., 2006). All variables must be metric or categorical (two categories). In this study, all the variables are metric, except for business/organisational strategy and organisational size which are categorical. The most fundamental assumption in multivariate analysis is the normality of distribution (Field, 2005; Field et al., 2006; Hair et al., 1998). To ensure the appropriateness of parametric analysis (Field, 2005), data was examined for normality of distribution.

Normality is the degree to which the distribution of the sample data corresponds to a normal distribution (Hair et al., 1998, p.38). This study followed the methodological logic that

suggests that normality should only be checked for the dependent variable (e.g. Field et al., 2006). According to them, not all predictors need to be normally distributed, as some of them could be categorical (which is the case in this research with business/organisational strategy and organisational size), where normality of distribution cannot be measured.

To check for normality of data distribution, this study followed Diamantopoulos & Schlegelmilch (1997, p.98), and used the median and mean values in conjunction with the frequency distribution, histogram plots and the kurtosis values. If a distribution is skewed, comparing the mean and median values could be helpful in explaining normal distribution (Diamantopoulos & Schlegelmilch, 1997, p.100); and the bell-shaped curve implies that the majority of scores lie around the centre of the distribution (so the largest bars on the histogram are all around the central value, evidence that supports normal distribution assumption tendency (Field, 2005, p.8).

The mean values for the variables in this study (See Reliability Statistics Tables in Section 6.3.1) support a normal distribution conclusion. Also, the histogram plots, and the frequency distribution show normal distribution evidence. The histogram plots show a bell-shaped curve. As Hair et al. (1998, 2003) note, Skewness values within the range of -1 to $+1$ and Kurtosis values within the range of -3 to $+3$ are acceptable. The Skewness and Kurtosis statistics obtained for this study fall within these defined acceptable ranges, therefore the assumption of normality distribution is justified.

6.3 Reliability Statistics of Variables

Having confirmed normality of distribution of data, the reliability statistics of the variables in the framework were estimated. To justify the reliability of this study, Section 6.3 reports the standard deviation, mean values, and Cronbachs alphas for the variables in the conceptualised framework. These statistics are presented in three subsections. First, sub-section 6.3.1

presents the reliability results for the dependent variables. Subsequently, the results for independent variables in the contingency framework are presented and explained in sub-section 6.3.2.

6.3.1 Reliability Statistics for the Dependent Variables

As shown in Figure 4.1 there are three core dependent constructs in this study, namely ‘Strategic Management Accounting Techniques Usage (SMAU), ‘Organisational Structure’ and ‘Organisational Performance’. The reliability statistics, which are summarised in Table 6.1b for the former and Table 6.2 for the latter (organisational structure and organisational performance) are explained in Sections 6.3.1.1, 6.3.1.2 and 6.3.1.3 respectively.

6.3.1.1 Reliability Statistics for the Strategic Management Accounting Techniques Usage (SMAU) Variables

The reliability results presented in this Section relates to Strategic Management Accounting Techniques Usage (SMAU) constructs. As a reminder, the Strategic Management Accounting Techniques Usage (SMAU) is a higher-order construct containing five lower-order constructs. Therefore, higher-order and lower-order estimates were calculated to ensure the reliability for the conceptualised constructs.

Mean values, standard deviation and cronbach’s alpha estimates were calculated to check for reliability of the instrument for SMAU. Table 6.1b shows the results for the SMAU construct which included sixteen (16) variables categorised into five (5) groups. From the sixteen variables, five were used to measure SMAU-Costing, two for SMAU-Planning, Control and Performance Measurement while three variables were used to measure SMAU-Strategic Decision Making. Also, three variables were used to measure SMAU-Competitor Accounting and SMAU-Customer Accounting respectively.

The higher-order construct (SMAU) shows satisfactory Cronbach alpha (α) of .77. The Cronbach alpha for the SMAU dimensions (See Table 6.1b) were 0.90 (**SMAU-Costing**),

0.85 (SMAU-Planning, Control and Performance Measurement), 0.85 (SMAU-Strategic Decision Making), 0.91 (SMAU-Competitor Accounting) and 0.92 (SMAU-Customer Accounting), values that suggest that the constructs were acceptably reliable for the purpose of this study (Cadez & Guilding, 2008; Cinquini & Tenucci, 2010). The values for all the five dimensions, as shown in Table 6.1b show satisfactory mean and standard deviation values that also support the conclusion of satisfactory reliability. Therefore, the use of these five dimensions as subsets of SMAU is legitimate.

Factors	No. of Items	Item Mean	Item Std. dev.	Factor Mean	Cronb. Alpha
SMAU-Costing: Attribute Costing Life-Cycle Costing Quality Costing Target Costing Value chain Costing	5	4.177 4.360 4.726 4.891 4.469	1.578 1.482 1.440 1.448 1.405	4.556	.90
SMAU- Planning, Control&Performance Measurement Benchmarking Integrated Performance Measurement (Balanced Scorecard)	2	4.657 4.291	1.596 1.554	4.474	.85
SMAU-StrategicDecisionMaking Strategic Costing (Strategic Cost Management) Strategic Pricing Brand Valuation	3	4.674 4.994 4.394	1.357 1.399 1.454	4.688	.85
SMAU-CompetitorAccounting Competitor Cost Assessment Competitive Position Monitoring Competitor Performance Appraisal	3	4.537 4.720 4.543	1.445 1.677 1.628	4.600	.91
SMAU-CustomerAccounting Customer Profitability Analysis Life Customer Profitability Analysis Value of Customer as Assets	3	3.623 3.560 3.406	1.911 1.849 1.675	3.529	.92
SMAU Summation	5				.77

6.3.1.2 Reliability Statistics for Organisational Structure

The second core dependent variable in the conceptualised framework (See Figure 4.1) is Organisational Structure, which is composed of two elements, namely Formalisation and Decentralisation. Satisfactory reliability results were achieved for both constructs, which were measured by three items respectively.

Formalisation achieved a high Cronbachs alpha value of 0.91 and a factor mean of 4.627. As evident in Table 6.2, satisfactory reliability results is supported by item mean values ranging from 4.520 to 4.806 and item standard deviation ranging from 1.368 to 1.603. For **Decentralisation**, which was measured by three items, the Cronbachs alpha was 0.78 while the factor mean was 5.482. Satisfactory item means ranging from 5.183 to 5.954 and item standard deviation ranging from 1.082 to 1.107 were also achieved. The Cronbachs alpha results achieved in this study compare favourably with relevant studies (e.g. Song & Thieme, 2006; Opute, 2009; Hwang, 2005).

6.3.1.3 Reliability Statistics for Organisational Performance

Organisational Performance is the third dependent variable in the conceptualised framework. Two dimensions are conceptualised in this study, namely **Organisational Performance Financial** and **Organisational Performance Non-Financial**. The reliability statistics for this construct are shown in Table 6.2. As evident in that Table, satisfactory reliability results were achieved for both financial and non-financial dimensions of Organisational Performance.

The Cronbach statistics for Organisational Performance (Financial) was 0.87 and the items means values range from 4.537 to 4.914. Ranging from 1.087 to 1.272, the standard deviation values for the measurement items are also satisfactory. The mean value for this factor, **at 4.714**, also confirms the reliability of this factor.

The reliability results for the Non-financial element of Organisational Performance are also satisfactory at Cronbachs alpha value of 0.92 and factor mean of 5.202. These statistics are supported by item means ranging from 5.011 to 5.274 and standard deviation values for items ranging from 1.472 to 1.516. Overall, the internal consistency statistics for the Organisational Performance construct are very satisfactory when compared to other studies in this field (e.g. Cadez & Guilding, 2007, 2008; Guilding & McManus, 2002; Hwang, 2005).

6.3.2 Reliability Statistics for the Other Contingency (Independent) Variables

The framework for this study summarised in Figure 4.1, shows that there are six (6) independent constructs in this study. These include Perceived Environmental Uncertainty (PEU), Business/Organisational Strategy, Organisational Size, and Organisational Technology. Also, Strategic Management Accounting Techniques Usage (SMAU), and Organisational Structure, which were already mentioned as dependent constructs, are also independent constructs. In this Section therefore, the reliability statistics are presented in the following order: Dependent cum Independent Variables (Section 6.3.2.1), Perceived Environmental Uncertainty (Section 6.3.2.2), Business/Organisational Strategy (Section 6.3.2.3), Organisational Size (Section 6.3.2.4) and Organisational Technology (Section 6.3.2.5).

6.3.2.1 Reliability Statistics for the Dependent cum Independent Variables

In this study, SMAU and Organisational Structure are not only dependent variables to some variables, but are also independent variables to some other variables. The reliability statistics for these two groups of variables were summarised in Tables 6.1b and 6.2 respectively and also explained in Sections 6.3.1.1 and 6.3.1.2, and would therefore not be repeated here.

6.3.2.2 Reliability Statistics for Perceived Environmental Uncertainty (PEU)

In the conceptualisation of this study, Perceived Environmental Uncertainty (PEU) is a two (2) element construct that includes Competitive Intensity (**COMPINT**) and Market Turbulence (**MARKTURB**). While the measurement instrument for the former contained six items (6), 1 Item 5 of this construct was removed as it had a disturbing effect on this construct and other constructs (See Section 6.4.1 and Table 6.3). The latter (**MARKTURB**) contained four (4) items. As Table 6.2 shows, satisfactory reliability statistics were achieved for the Perceived Environmental Uncertainty variables.

The Cronbachs alpha of 0.86 (**COMPINT**) and 0.85 (**MARKTURB**) are satisfactory (Nunnally, 1978) and compare favourably with past studies (e.g. Hwang, 2005). The factor mean for **COMPINT** is 4.434 while that of **MARKTURB** is 4.381. At the range of 4.320 to 4.674 for **COMPINT** and 4.109 to 4.686 for **MARKTURB**, the item means show satisfactory evidence. Furthermore, the item standard deviation statistics show good results at 1.281 to 1.489 (**COMPINT**) and 1.254 to 1.384 (**MARKTURB**).

6.3.2.3 Reliability Statistics for Business/Organisational Strategy

Organisational Strategy is measured by one (1) item on a 7-point scale that reflects "defender" type organisations on the left and "prospector" type organisations on the right. The item mean was 2.714 while the item standard deviation value was 1.674 for the construct.

6.3.2.4 Reliability Statistics for Organisational Size

Like organisational strategy, **Organisational Size** is a construct measured by one (1) item on a 7-point scale. The reliability statistics are satisfactory for the purpose of this study: the item mean was 2.914 while the item standard deviation value was 1.902

6.3.2.5 Reliability Statistics for Organisational Technology

As evident in Table 6.2, **Organisational Technology** is a construct measured by 4 items. The Cronbachs alpha achieved in this study show a good level of internal consistency (McChlery et al., 2005; Dik, 2011). The Cronbachs alpha for this construct was 0.78 while the factor mean was 4.457. The item mean and standard deviation values also showed a satisfactory level for this construct. While the former ranges from 5.400 to 6.051, the latter ranges from 1.039 to 1.391.

Next, the validity statistics for this study are presented and explained in Section 6.4.

Factors	No. of Items	Item Mean	Item Std. dev.	Factor Mean	Cronb. Alpha
Organisational Technology -Technology is a core element of the operating system of this organisation -Our production/services techniques are technology based -The accounting information system is computer based -We invest in software packages to aid our accounting and other operational system	4	6.023 5.400 6.051 5.669	1.039 1.159 1.391 1.281	4.457	.78
Perc. Environmental Uncertainty - Comp. Intensity *1 -Many promotions wars occur in our industry -Anything that one competitor in our industry can offer, others can match readily -One hears of new competitive moves in our industry almost every day -The current business environment is threatening the survival of our organisation -Competitors' product quality or novelty is threatening our organisation	5	4.520 4.674 4.320 4.348 4.309	1.281 1.318 1.326 1.489 1.392	4.434	.86
Perc. Environmental Uncertainty - Market Turbulence -Sometimes our customers are very price sensitive -We are witnessing demand for our products and services from customers who never bought them before -New customers tend to have product-related needs that are different from those of our existing customers -Our customers tend to look for new products and services all the time	4	4.686 4.480 4.109 4.251	1.359 1.254 1.279 1.384	4.381	.85
Organisational Structure - Formalisation -Employees in our organisation are allowed to make their own decisions without checking with anybody else -My usual experience with our organisation involves doing things 'by the rule book' -Many activities in our organisation are not covered by formal procedures	3	4.520 4.806 4.554	1.538 1.368 1.603	4.627	.91
Organisational Structure - Decentralisation *2 -Even small matters in our organisation must be referred to someone higher up for a final answer	3	5.183	1.099	5.482	.78

-Any major decisions that employees make must have the approval of top managers		5.954	1.082		
-Employees who want to make their own decisions would be quickly discouraged		5.309	1.107		
Organisational Performance - Financial	4			4.714	.87
-Return on investment		4.611	1.128		
-Sales margin		4.914	1.087		
-Capacity utilisation		4.537	1.272		
-Market share		4.794	1.190		
Organisational Performance – Non-Financial	3			5.202	.92
-Customer satisfaction		5.274	1.472		
-Product/service quality		5.320	1.486		
-Development of new products/services		5.011	1.516		
Organisational Strategy - Defender/Prospector	1	2.714	1.674	NE	NE
Organisational Size	1	2.914	1.902	NE	NE
<p>Note: *1 Item 5 of this construct was removed as it had a disturbing effect on this construct and other constructs. NE: Organisational Strategy (Defender/Prospector) and Organisational Size were measured each by one item. Therefore, the factor mean and Cronbachs Alpha, as displayed in this Table could not be estimated. *2 To achieve the scores for decentralisation, the scores for the parameters shown above were reversed.</p>					

6.4 Validity of Variables: Factor Analyses

To ensure appropriate demarcation of factors (Field, 2005), the researcher conducted factor analysis. Before undertaking the factor analysis, correlation analysis was conducted to prepare data for factor analysis (Lee & Scott, 2004). In doing this, the researcher checked if there was any significant inter-correlation between the items for all the constructs. If a correlation is statistically significant, it is indicative of an actual relationship rather than one due entirely to chance (Hair et al., 1992).

Apart from one case, the results did not capture any significant cross construct correlation of items, and this evidence is also supported by the inter-construct correlation evidence presented in Table 6.14. The correlation analysis, supported with the descriptive statistics of variables in the framework, is explained in Section 6.4.1, while the factor analysis results are presented in Section 6.5. The descriptive results are presented in Section 6.4.2.

6.4.1 Correlation Analyses

To determine if factor analysis is appropriate in this study, the researcher first carried out a correlation analysis of all constructs in the conceptualised framework (Hair et al., 1992), to check if the constructs inter-correlated and if the variables for each construct correlated well enough to represent the individual constructs. The item correlation for each construct justify that these items are harmonious for measuring the constructs (Field, 2005). The Pearson Correlation coefficients for the constructs indicate that:

1. The constructs do not share significant correlation between them (See Table 6.14), that is these factors are unique (Lee & Scott, 2004),
2. Item 5 of the Perceived Environmental Uncertainty (**COMPINT**) construct is removed. The inter-correlation examination of all items in the instrument showed that

item 5 of Perceived Environment Uncertainty (competitive intensity) had a disturbing effect not only on the other items for the construct but also on other conceptualised constructs. The key disturbing effects of this variable (Tough price competition is threatening our organisation) are shown in Table 6.3 below,

Table 6.3: Disturbing Effect of PEU-COMPINT (item 5) on other items and constructs

Items	Organisational Performance -Financial	Organisational Technology	Organisational Structure (Decentralisation)
Item 1	.370	.390	
Item 2	.469	.399	.435
Item 3	.376		.488
Item 4		.415	

3. Some item inter-correlation existed amongst the five elements of SMAU, but all were less than the .800 margin (Field, 2005) (See Table 6.12 - SMAU Factors intercorrelation) and this, as conceptualised in this study, is expected. They are all components of the higher-order construct SMAU.

6.4.2 Descriptive Findings for all Variables in the Conceptualised Framework

In this section, the descriptive analysis results for all items in the conceptualised framework are presented, depicting how the respondents scored the variables for each construct. Doing this is important, to highlight the level of importance that the respondents attach to the variables, and also enable better understanding of the correlation between the individual variables for each construct. The descriptive statistics are displayed in Sections 6.4.2.1 (Perceived Environmental Uncertainty), 6.4.2.2 (Organisational Strategy), 6.4.2.3 (Organisational Size), 6.4.2.4 (Organisational Technology), 6.4.2.5 (Organisational Structure), 6.4.2.6 (Organisational Performance) and 6.4.2.7 (Strategic Management Accounting Technique Usage).

6.4.2.1 The Descriptive Findings for Perceived Environmental Uncertainty (PEU)

In the conceptualisation for this study, Perceived Environmental Uncertainty is a main construct and captures two dimensions, namely perceived market turbulence (PMT) and perceived competitive intensity (PCI). PEU is measured by 10 items as depicted in Table 6.4. Items 1 to 6 reflect competitive intensity, while items 7 to 10 reflect market turbulence.

For the **Competitive Intensity** element of Perceived Environmental Uncertainty (items 1 to 6), the respondents perceive the 4 measures typify Competitive Intensity in their organisations. Majority of the respondents believe that item 1 (many promotion wars occur in our industry) is common feature of competitive intensity, scoring this item at 5 (38.9%), 6 (14.9%) and 7 (4.0%). Similarly, a majority of the respondents scored items 2 (anything that one competitor in our industry can offer others can match readily) and 3 (one hears of new competitive moves in our industry almost every day) highly at {5 (32.0%), 6 (21.7%) and 7 (5.7%)} for the former and {5 (30.9%), 6 (10.9%) and 7 (5.1%)} for the latter.

As Table 6.4 shows too, the descriptive evidence for items 4 (the current business environment is threatening the survival of our organisation) and 6 (competitors' product quality or novelty is threatening our organisation) are very similar to the other items in the measurement instrument for competitive intensity. 50.3% of the respondents agree that item 4 is a feature of their competitive intensity, while 53.7% agree for item 6. Interestingly, between 24.6% and 31.4% of the respondents scored each of these items at 4 (undecided).

For the **Market Turbulence** element, while 10.3% and 22.9% respondents slightly disagree and are undecided respectively, majority of the respondents (60%) believe that item 7 (sometimes our customers are very price sensitive) is a core feature of their market turbulence. The respondents scored items 8 and 10 very similar to item 7. 54.3% respondents agree that item 8 (we are witnessing demand for our products and services from customers who never

bought them before) is a feature of their market turbulence while 50.8% agree for item 10 (our customers tend to look for new products and services all the time). Finally, item 9 (new customers tend to have product-related needs that are different from those of our existing customers), which reflects market turbulence, is scored more heavily at 3 (11.4%), 4 (33.1%) and 5 (32.6).

Table 6.4: Measures of Perceived Environmental Uncertainty (PEU)* (n=175)

Perceived Environmental Uncertainty Variables**	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Undecided 4	Slightly Agree 5	Agree 6	Strongly Agree 7
PEU1	2.3%	6.9%	8.0%	25.1%	38.9%	14.9%	4.0%
PEU2	2.3%	4.6%	9.1%	24.6%	32.0%	21.7%	5.7%
PEU3	1.7%	9.1%	12.6%	29.7%	30.9%	10.9%	5.1%
PEU4	8.0%	5.7%	4.6%	31.4%	30.3%	15.4%	4.6%
PEU5							
PEU6	6.3%	6.9%	7.4%	25.7%	39.4%	11.4%	2.9%
PEU7	2.3%	4.6%	10.3%	22.9%	33.7%	17.7%	8.6%
PEU8	2.9%	4.0%	10.9%	28.0%	37.7%	12.0%	4.6%
PEU9	3.4%	10.3%	11.4%	33.1%	32.6%	6.9%	2.3%
PEU10	5.7%	7.4%	10.9%	25.1%	35.4%	13.7%	1.7%

* Respondents were asked to mark on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree) their perception of the Environmental Uncertainty in their Organisations.

** Perceived Environmental Uncertainty (item 5 - (Tough price competition is threatening our organisation) was removed from the variables for further analysis, as explained in Section 6.4.1, due to its disturbing influence on other items and factors.

6.4.2.2 The Descriptive Findings for Organisational Strategy (OS)

As defined in Section 3.5, organisational strategy reflects the extent to which organisation respond to a changing environment and align the environment with their companies. For this focus, this study explores the extent to which the explored organisations reflect prospector or defender type strategies. Strategy is therefore measured as a continuum (defender – prospector) and Table 6.5 below shows how the respondents ranked their companies in the Defender - Prospector continuum. Statistically, the majority of the explored companies are defender type companies. 26.9% are High Defender type Companies while 33.7% and 9.7% are Medium Defender type Companies and Average Defender type Companies respectively.

17.7% of the respondents ranked their companies as Prospector type companies, while 12% were neutral.

Organisational Strategy Variables	Defender 1	2	3	4	5	6	Prospector 7
OS1	26.9%	33.7%	9.7%	12.0%	9.1%	5.7%	2.9%

* Respondents were asked to mark on a scale of 1 (Defender) to 7 (Prospector) the extent to which the description reflect the strategic nature of their organisations. ** Likert Scale explained - 1 = High Defender type of Company, 2 = Medium Defender type Company, 3 = Average Defender type Company, 4 = Neutral, 5 = Average Prospector type Company, 6 = Medium Prospector type Company, and 7 = High Prospector type Company

6.4.2.3 The Descriptive Findings for Organisational Size (OSZ)

In this study, the organisational size was measured by the total revenue of the explored organisations. Therefore, respondents were asked to indicate the total revenue level of their organisations for the last financial year. The responses were categorised into a 7-point scale, and the evidence obtained is as displayed in Table 6.6 below. From the evidence in Table 6.6, majority (60.6%) of the explored companies had total revenue not exceeding 10M US Dollar, while 8% of the explored companies had total revenues in the categories of between 11M and 20M, between 21M and 30M and more than 50M respectively. Moreover, 9.7% and 5.7% of the explored companies had total revenue in the categories of between 31M and 40M and between 41M and 50M respectively. Overall, it can be concluded that there is a fair representation of categorised organisational sizes in the Palestinian economy.

Organisational Size Variable	1 Less than 1M	2 Btw 1M & 10M	3 Btw 11M & 20M	4 Btw 21M & 30M	5 Btw 31M & 40M	6 Btw 41M & 50M	7 More than 50M
Total Revenue**	24.6%	36.0%	8.0%	8.0%	9.7%	5.7%	8.0%

* Respondents were asked to indicate the total revenue of their organisations for last financial year.

** US Dollar is the reference here.

6.4.2.4 The Descriptive Findings for Organisational Technology (OT)

Organisational Technology reflects the extent to which the explored companies value the importance of, and invest in technology devices to enhance their accounting practices. As Table 6.7 shows, four (4) items were used to measure this construct. Statistically, the majority of the explored companies feel their companies' value and invest in such technological devices. For the majority of the respondents (84.3%), item 1 (Technology is a core element of the operating system) is a core feature of their organisations. A similar trend is evident for the other items of this construct, with majority of respondents indicating that item 2 (our production/services techniques are technology based) (87.7%), item 3 (the accounting information system is computer based) (96.6%), and item 4 (we invest in software packages to aid our accounting and other operational systems) (85.2%) are core features of their organisations.

Organisational Technology Variables**	Not at all 1	2	3	4	5	6	To a very great Extent 7
OT1	0.6%	1.1%	0.6%	3.4%	18.9%	38.3%	37.1%
OT2	1.1%	2.9%	0.0%	10.3%	38.3%	31.4%	16.0%
OT3	0.6%	0.0%	0.6%	2.3%	26.9%	28.6%	41.1%
OT4	1.7%	2.9%	3.4%	6/9%	22.9%	28.6%	33.7%

* Respondents were asked to mark on a scale of 1 (not at all) to 7 (to a great extent) the extent to which the four items reflect the technological environment of their organisations.** Likert scale further explained - 2 = to a very limited extent, 3 = to a limited extent, 4 = to a moderate extent, 5 = to a considerable extent, 6 = to a great extent, and 7 = to a very great extent.

6.4.2.5 The Descriptive Findings for Organisational Structure (OSTR)

Organisational structure (OSTR), which reflects the organisational structure of the explored organisations, is a two dimension construct. As shown in Table 6.8 below, organisational structure is measured by six items. The items 1 to 3 measure the extent of Formalisation (**OSTR-FORM**) while items 4 to 6 measure the extent of Decentralisation (**OSTR-DCENT**)

in the explored organisations. Table 6.8 shows how the respondents scored the items for the organisational structure construct.

For the **OSTR-FORM construct**, most respondents scored items 1, 2 and 3 heavily at 4, 5 and 6. 60.6% of the respondents believe that item 1 (Employees in our organisation are allowed to make their own decisions without checking with anybody else) is a core feature of their organisation, while 64% respondents indicate item 2 (My usual experience with our organisation involves doing things 'by the rule book') as important feature of organisational structure in their organisations. Similarly too, the majority (64.6%) of the respondents believe that item 3 (Many activities in our organisation are not covered by formal procedures) is a core feature of the formalisation structure in their organisation. A reasonable number of respondents (between 15.4% to 20.0%) also scored items 1 to 3 at point 4 (undecided).

Like the OSTR-FORM, the items for **OSTR-DCENT** are heavily scored at 4, 5, 6, and 7. Item 4 (Even small matters in our organisation must be referred to someone higher up for a final answer) is scored at 5 and 6 by 41.1% and 32.0% respondents respectively. For item 5 (Any major decisions that employees make must have the approval of top managers). However, 40.6% and 34.9% respondents scored it at rank 6 and 7 respectively. Item 6 (Employees who want to make their own decisions would be quickly discouraged is scored highly at 4 (14.3%), 5 (37.7%), and 6 (29.7%).

Organisational Structure Variables	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Undecided 4	Slightly Agree 5	Agree 6	Strongly Agree 7
OSTR1	6.3%	6.3%	9.7%	17.1%	34.3%	20.0%	6.3%
OSTR2	2.3%	4.6%	9.1%	20.0%	29.1%	28.0%	6.9%
OSTR3	8.0%	7.4%	4.6%	15.4%	36.6%	21.7%	6.3%
OSTR4	0.6%	2.3%	4.6%	11.4%	41.1%	32.0%	8.0%
OSTR5	0.0%	0.6%	4.6%	4.0%	15.4%	40.6%	34.9%
OSTR6	0.0%	2.9%	1.7%	14.3%	37.7%	29.7%	13.7%

* Respondents were asked to mark on a scale of 1 (Strongly Disagree) to (Strongly Agree) their perception of the Organisational Structure in their organisations.

6.4.2.6 The Descriptive Findings for Organisational Performance (OP)

The Organisational Performance construct (**OP**) is measured by seven items (see Table 6.9 below) that capture the extent of organisational performance in the explored organisations.

The OP construct contains both financial and non-financial performance elements, that is two performance constructs are conceptualised in this study. The first performance construct is the financial element (**OP-FP**) is measured by items 1 to 4, while the non-financial element of performance (**OP-NFP**) is measured by items 5 to 7), as in Table 6.9 below.

The descriptive statistics for **Organisational Performance-Financial** indicate that the respondents scored items 1, 3 and 4 highly, evidence that suggests that the respondents perceive these items as core Performance (Financial) features in their organisations. Most respondents ranked item 1 (Return on investment) at 4(30.9%) and at 5(40%), and item 3 (Capacity utilisation) at 4 (25.7%), 5 (37.7%) and 6 (16.6%). Also scored highly were items 2 (Sales margin) at 5 (46.9%) and 6 (20.6), and item 4 (Market share) at 4 (25.7%), 5 (37.1%) and 6 (20.0%). Overall, based on the evidenced statistics, the respondents believe that their organisations performed better than their competitors using the 4-metrics.

For the **Non-Financial Performance** elements, the respondents score the measurement items highly too, an indication that these non-financial elements are weighed heavily in the operations of the organisations. The three items for the **Organisational Performance Non-Financial construct** were scored heavily at points 4, 5, 6 and 7. 74.3% (for item 5), 65.1% (for item 6) and 71.3% (for item 7) believe that their organisations performed better than their competitors.

Organisational Performance Variables	Extremely poor 1	Well Bel. Average 2	Below Average 3	Average 4	Above Average 5	Well . Ab. Average 6	Extremely good 7
OP1	1.7%	4.0%	5.1%	30.9%	40%	15.4%	2.9%
OP2	0.0%	3.4%	6.9%	16.6%	46.9%	20.6%	5.7%
OP3	2.9%	5.1%	8.6%	25.7%	37.7%	16.6%	3.4%
OP4	1.1%	3.4%	6.3%	25.7%	37.1%	20.0%	6.3%
OP5	1.1%	4.0%	9.1%	11.4%	24.0%	26.9%	23.4%
OP6	2.3 %	2.9%	8.0%	12.0%	20.0%	32.0%	22.9%
OP7	2.3%	8.0%	5.7%	12.6%	26.3%	32.0%	13.1%

* Respondents were asked to mark on a scale of 1 (Below Average) to 7 (Above Average) their perception of their Organisation's performance relative to their competitors.

6.4.2.7 The Descriptive Findings for Strategic Management Accounting Techniques Usage (SMAU)

The distribution of responses for the measures of Strategic Management Accounting Technique Usage is reported in Table 6.10. All the measures of the SMAU were scored at all levels of the scale. The most highly scored were point 5 (25.7%) - SMAU1-Attribute Costing, point 4 (29.1%) - SMAU2-Life Cycle Costing, point 5 (31.4%) - SMAU3-Quality Costing, point 5 (27.4%) - SMAU4-Target Costing, and point 5 (30.9%) - SMAU5-Value Chain Costing).

An inspection of the descriptive statistics for the measure of **SMAU –Planning, Control and Performance Measurement** indicates that SMAU6 was scored highest at 5 (33.7%) and SMAU7 at 5 (37.7%). The next highest scores for these items are point 6 (18.3%) and point 4 (21.1%). For the **Strategic Decision Making elements of SMAU**, SMAU8 (Strategic Cost Management) is scored highly at points 4 (26.3%), 5 (31.4%) and 6 (22.3%) and SMAU9 (Strategic Pricing) at points 5 (30.3%) and 6 (25.7%). SMAU10 (Brand Valuation) is scored highly at points 4 (25.7%) and 5 (34.9%).

The descriptive results for the **Competitor Accounting element of SMAU** shows that SMAU11 (Competitor Cost Assessment) was scored highly at 4 (21.7%), 5 (35.4%) and 6

(18.3%), SMAU12 (Competitive Position Monitoring) at 5 and 6 (28.0%), and SMAU13 (Competitor Performance Appraisal) at 5 (27.4%) and 6 (25.7%). For the **Customer Accounting element of SMAU**, the descriptive statistics for SMAU14 (Customer Profitability Analysis), SMAU15 (Life Customer Profitability Analysis), SMAU16 (Value of Customers as Assets) show that the respondents scored these items reasonably at all points on the scale, evidence which suggests that these SMA tools may not be commonly used in the explored organisations. As a matter of fact, a reasonable percentage of respondents (48.5% for SMAU14, 51.0% for SMAU15, and 55.4% for SMAU16) disagree that these tools are features of their SMAU practices.

Table 6.10: Measures of Strategic Management Accounting Techniques Usage (SMAU)* (n=175)

SMAU Variables**	1	2	3	4	5	6	7
SMAU1-Costing1	6.9%	9.1%	15.4%	22.9%	25.7%	13.7%	6.3%
SMAU2-Costing2	4.6%	7.4%	11.4%	29.1%	26.9%	12.6%	8.0%
SMAU3-Costing3	1.7%	7.4%	10.9%	17.1%	31.4%	22.3%	9.1%
SMAU4-Costing4	2.3%	3.4%	12.0%	17.7%	27.4%	24.0%	13.1%
SMAU5-Costing5	2.3%	7.4%	13.7%	23.4%	30.9%	15.4%	6.9%
SMAU6-PlanContr1	5.7%	6.9%	8.0%	16.0%	33.7%	18.3%	11.4%
SMAU7-PlanContr2	8.0%	8.6%	7.4%	21.1%	37.7%	11.4%	5.7%
SMAU8-StratDecMkg1	4.0%	3.4%	6.9%	26.3%	31.4%	22.3%	5.7%
SMAU9-StratDecMkg2	2.3%	3.4%	8.0%	17.1%	30.3%	25.7%	13.1%
SMAU10-StratDecMkg3	4.6%	8.6%	8.0%	25.7%	34.9%	11.4%	6.9%
SMAU11-CompAcctg1	4.0%	8.6%	6.3%	21.7%	35.4%	18.3%	5.7%
SMAU12-CompAcctg2	6.9%	7.4%	7.4%	12.0%	28.0%	28.0%	10.3%
SMAU13-CompAcctg3	5.1%	12.6%	4.6%	17.7%	27.4%	25.7%	6.9%
SMAU14-CustAcctg1	17.7%	17.1%	13.7%	16.0%	15.4%	12.0%	8.0%
SMAU15-CustAcctg2	16.0%	17.1%	18.9%	18.9%	8.6%	13.1%	7.4%
SMAU16-CustAcctg3	13.7%	20.6%	21.1%	1.7%	14.3%	8.0%	4.6%

* Respondents were asked to mark on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree) their perception of the Strategic Management Accounting Techniques Usage in their Organisations.

** Strategic Management Accounting Techniques Usage (items 1 to 5 reflect Costing Element, items 6 to 7 reflect Planning, Control and Performance Measurement Element, items 8 to 10 reflect Strategic Decision Making Element, items 11 to 13 reflect Competitor Accounting Element, and items 14 to 16 reflect Customer Accounting Element.

6.5 Factor Analyses

To achieve a clear demarcation of the factors for this study, the conceptualised constructs were examined in a two way approach. In the first approach, the strategic management accounting techniques were examined to identify if the measurement items load into the conceptualised themes of strategic management accounting techniques. In the second approach, the other contingency constructs were examined together to identify the core factors, towards further analysis. The factor analysis for the strategic management accounting techniques constructs are explained in Section and subsections of 6.5.1, while the factor analysis for the contingency constructs are explained in Section and subsections of 6.5.2.

6.5.1 Factor Analysis of the Strategic Management Accounting Techniques Usage

In this Section, the factor analysis results for the Strategic Management Accounting Usage factors are presented, displaying the factor loadings for each item and the percentage of variance explained by each factor. The Strategic Management Accounting constructs were factor analysed separately from the other constructs in the contingency framework.

Before the factor analysis was run, a correlation examination of the variables was conducted to ensure that the variables fit well within their individual conceptualised constructs, and also for the purpose of being used as dimensional elements of the main construct SMAU (Field, 2005). The variables correlate well and the inter-construct-correlation is shown in Table 6.12. Using Principal Component Analysis (PCA), as specified in Chapter 5, a higher-order and lower-order analysis was done on the SMAU constructs. Both approach achieved satisfactory validity evidence as Table 6.11 shows below.

Factors	%age Var. expl.*1	Eige-value	KMO *2	Bart. Spher. Sig.*3	Principal Component Analysis Factor Loadings				
					F1	F2	F3	F4	F5
SMAU-Costing (F1) Attribute Costing Life-Cycle Costing Quality Costing Target Costing Value chain Costing	72.6%	3.631	.88	.000	. .868 .860 .824 .842 .866				
SMAU-PlanContPerf (F2) Benchmarking Integrated Performance Measurement (balanced Scorecard)	86.89%	1.738	.50	.000		.932 .932			
SMAU-StrategicDec.Making (F3) Strategic Costing (Strategic Cost Management) Strategic Pricing Brand Valuation	77.29%	2.319	.72	.000			.902 .866 .869		
SMAU-CompetitorAccting (F4) Competitor Cost Assessment Competitive Position Monitoring Competitor Performance Appraisal	84.96%	2.549	.74	.000				.897 .943 .924	
SMAU-CustomerAccounting (F5) Customer Profitability Analysis Life Customer Profitability Analysis Value of Customer as Assets	86.84%	2.605	.72	.000					.927 .960 .908
SMAU Summation *4	52.93%	26.46	.79	.000	.789	.838	.668	.689	.633
Note: * = All SMAU factors were analysed separately. *1 = percentage of variance explained by factor. *2 = (KMO) Kaiser-Meyer-Olkin Measure of Sampling Adequacy. *3 = Bartlett's Test of Sphericity. *4 (SMAU Summation) is the analysis of SMAU F1, F2, F3, F4 and F5.									

This study conceptualised 5-elements of Strategic Management Accounting Techniques Usage, as shown in the Table above. By that conceptualisation, a degree of intercorrelation between the 5-elements is necessary (Field, 2005). To ensure methodological appropriateness, the intercorrelation statistics for the 5-elements were examined. The Table below shows that the 5-elements are well intercorrelated and below the .8 benchmark (Field, 2005).

Table 6.12: Inter-Item Correlation Matrix for the SMAU Factors

	F-Score SMAUCost ing	F-Score SMAUPlan ContrPer	F-Score SMAUStrat DecMaking	F-Score SMAUCom petitorAcctg	F-Score SMAUCusto merAcctg
F-Score SMAUCosting	1.000	.644	.426	.386	.331
F-Score SMAUPlanContrPer	.644	1.000	.431	.456	.426
F-Score SMAUStratDecMaking	.426	.431	1.000	.335	.269
F-Score SMAUCompetitorAcctg	.386	.456	.335	1.000	.354
F-Score SMAUCustomerAcctg	.331	.426	.269	.354	1.000

The **SMAU-Summation** statistics show that all the factors loaded well on the higher-order factor SMAU-Summation. **52.93% variance** was explained by this factor, a result which is satisfactory for a single factor extraction (Field, 2005). SMAU-Summation factor also achieved satisfactory Eigenvalue (**26.46**), KMO (**.79**) and Bartlett's Sphericity significance (**.000**). The factor results, as shown in Table 6.11 above, are based on separate analysis of each of the five elements of the SMAU construct.

SMAU-Costing (F1) has an explained variance of 72.6%, Eigenvalue of 3.631, KMO-value of .88, and a Bartlett's Sphericity significance of .000. All the items of this construct loaded well between .824 and .868.

At 86.89% explained variance, 1.738 Eigenvalue, .50 Kaiser-Meyer Olkin (KMO) value and .000 Bartlett's Sphericity value, **SMAU-Planning, Control and Performance Measurement factor** achieved satisfactory statistics. As Table 6.11 shows, both items for this factor load reasonably well at .932.

F3 - SMAU-Strategic Decision Making has explained variance of 77.29% and Eigenvalue of 2.319. The KMO of .72 and Bartlett's Sphericity significance of .000 also support the satisfactory results for this factor. The three items used to measure this factor load reasonably well on this factor at .902, .866 and .869 respectively.

The fourth element of the **SMAU Construct** reflects **Competitor Accounting** (F4). **F4** has explained variance of 84.96%, Eigenvalue of 2.549, KMO of .74 and Bartlett's Sphericity significance of .000. Three items load onto this factor at .897, .943 and .924 respectively.

The final element of SMAU reflects Customer Accounting (F5). **Customer Accounting** has explained variance of 86.84% and Eigenvalue of 2.605. The KMO of .72 and Bartlett's Sphericity significance of .000 also the validity of this factor. The three items for this factor load at .927, .960 and .908 onto the factor and also justify the validity of the Customer Accounting factor.

As Table 6.12 shows there is a reasonable association between F1 to F5, evidence which justifies the appropriateness of using F1 to F5 as lower-order factors of SMAU.

Next, the validity results for the other contingency variables are explained (Section 6.5.2).

6.5.2 Factor Analysis of the other Contingency Variables in the Framework

In this Section, the factor analysis results for the non-SMAU factors are presented, displaying the factor loadings for each item and the percentage of variance explained by each factor. As reported in Section 6.4.1, supported by the evidence in Table 6.3, item 5 of the Perceived Environmental Uncertainty (competitive intensity) construct had disturbing effects on several items and other constructs. Therefore, this item was excluded before the factor analysis was conducted. To ensure that the factors are distinct, the other constructs in the contingency framework were factor analysed jointly. Thus, factor analysis was programmed to extract 7 factors. There were two categorically scaled factors in this study, namely Organisational Strategy and Organisational Size, and these were not included in the joint factor analysis. Table 6.13 summarises the factor analysis results for the seven (7) factors, and the core statistics are highlighted next.

The summary of the factor analysis results (See Table 6.13) shows 72.69% explained variance, .77 KMO and .000 Bartlett's Sphericity significance. This explained variance therefore meets the 70% benchmark for multi-variable factor analysis (Field, 2005). **F1** reflects **Organisational Performance (Non-Financial)**. This factor has explained variance of 16.58% and Eigenvalue of 4.310. The measurement items (customer satisfaction, product/service quality and development of new products/services) load well onto this factor at .907, .926 and .921 respectively. The **Financial dimension of Organisational Performance (F4)** has explained variance of 9.81% and Eigenvalue of 2.551. Four items were used to measure this construct and these load well onto the factor at .818, .870, .853 and .841 respectively.

For **F2 (Perceived Environment Uncertainty - Competitive Intensity)** the explained variance is 15.18% and Eigenvalue of 3.947. Five items used to measure this factor load well on this factor at .847, .789, .664, .856, and .851. The second element of **Perceived Environmental Uncertainty – Market Turbulence (F5)** had explained variance of 8.79% and Eigenvalue of 2.286. Four items were used to measure Market Turbulence and each loaded at .857, .803, .818 and .844 respectively. The overall statistical evidence for this factor satisfies relevant benchmarks.

Organisational Structure – Decentralisation was captured as **F6** in the factor analysis, while **Formalisation**, the second element of Organisational Structure was **F3**. As shown in Table 6.13, the former has explained variance of 6.09% and Eigenvalue of 1.584. The items for this factor loaded at .833, .880 and .776 respectively on the factor. On the other hand, **F3** has explained variance of 11.04% while the Eigenvalue is 2.870. Also three items were used to measure this factor, and these loaded at .921, .895 and .835 respectively on the factor.

Finally, **F7**, which reflects **Organisational Technology**, has explained variance of 5.20% and Eigenvalue of 1.352. All four items for measuring this factor loaded reasonably well on to this factor at .819, .778, .692, and .661 respectively.

To confirm if the factors (F1 to F7) were distinct, a cross factor examination was conducted.

The results confirm that the extracted factors are distinct (See Table 6.14).

Factors	%age Var. expl.*1	Eige- value	KMO *2	Bart. Spher Sig.*3	Principal Component Analysis Factor Loadings								
					F1	F2	F3	F4	F5	F6	F7		
Organisational Performance – Non-Financial (F1) -Customer satisfaction -Product/service quality -Development of new products/services	16.58%	4.310			.								
					.907								
					.926								
					.921								
Perceived Environmental Uncertainty - Competitive Intensity (F2)*4 -Many promotions wars occur in our industry -Anything that one competitor in our industry can offer, others can match readily -One hears of new competitive moves in our industry almost every day -The current business environment is threatening the survival of our organisation -Competitors' product quality or novelty is threatening our organisation	15.18%	3.947				.847							
						.789							
						.664							
						.856							
						.851							
Organisational Structure - Formalisation (F3) -Employees in our organisation are allowed to make their own decisions without checking with anybody else -My usual experience with our organisation involves	11.04%	2.870											
								.921					

doing things 'by the rule book' -Many activities in our organisation are not covered by formal procedures							.895					
							.935					
Organisational Performance - Financial (F4) -Return on investment -Sales margin -Capacity utilisation -Market share	9.81%	2.551						.818				
								.870				
								.853				
								.841				
Perceived Environmental Uncertainty - Market Turbulence (F5) -Sometimes our customers are very price sensitive -We are witnessing demand for our products and services from customers who never bought them before -New customers tend to have product-related needs that are different from those of our existing customers -Our customers tend to look for new products and services all the time	8.79%	2.286							.857			
									.803			
									.818			
									.844			
Organisational Structure - Decentralisation (F6) -Even small matters in our organisation must be referred to someone higher up for a final answer -Any major decisions that employees make must have the approval of top managers -Employees who want to make their own decisions would be quickly discouraged	6.09%	1.584								.833		
										.880		
										.776		

Organisational Technology (F7)	5.20%	1.352											
-Technology is a core element of the operating system of this organisation													.819
-Our production/services techniques are technology based													.778
-The accounting information system is computer based													.692
-We invest in software packages to aid our accounting and other operational system													.661
Summation of Principal Component Analysis for Factors F1 to F7													
	72.69%		.77	.000									
Note: * = A multi-construct principal component analysis produced 7 factors (F1 - F7), the inter-component correlation matrix (See Table below) show that F1 to F7 are distinct. *1 = percentage of variance explained by factor. *2 = (KMO) Kaiser-Meyer-Olkin Measure of Sampling Adequacy. *3 = Bartlett's Test of Sphericity. *4 = Item 5 of this construct was removed as it had a disturbing effect on this construct and other constructs.													

The component correlation matrix (See Table below) shows that the contingency factors shown in the Table above are distinct.

Table 6.14: Component Correlation Matrix

Components	1	2	3	4	5	6	7
1	1.000	.096	-.105	.044	-.201	-.043	.317
2	.096	1.000	-.013	-.125	-.142	.158	-.042
3	-.105	-.013	1.000	.010	.035	.151	.107
4	.044	-.125	.010	1.000	-.070	-.141	.128
5	-.201	-.142	.035	-.070	1.000	-.132	-.112
6	-.043	.158	.151	-.141	-.132	1.000	-.058
7	.317	-.042	.107	.128	-.112	-.058	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalisation.

6.6 Conclusion to the Chapter

As stated in Section 6.1, the purpose of this chapter was to justify the reliability and validity of the variables in this study. As a prelude to doing that, the normality of data distribution, for the purpose of multivariate regression analysis, was justified in Section 6.2.

After that, the reliability statistics for all variables in the framework were presented and explained. Three core statistics were highlighted in this connection, namely Cronbachs alpha, factor mean value and standard deviation value for all items in each construct. Also, the item mean values were presented. First, the reliability results for the Strategic Management Accounting Techniques Usage (SMAU) were presented, and thereafter the results for the other constructs in the contingency framework were presented.

The third core Section of this Chapter concerns validity of the instrument for this study. This Section commenced with an explanation of how item correlation examination amongst all conceptualised constructs was conducted to ensure that no cross-correlation existed. After that, the descriptive findings for all constructs were presented, showing clearly how the respondents scored the various measurement items on the defined scales. In the final section of explaining the validity of the measurement instrument for this study, the principal analysis results were presented and explained. First, the principal component analysis approach was explained. The statistical results for the SMAU factors were presented and explained first, and then followed by the other factors in the conceptualised framework. The core validity indices presented included variance explained, Eigenvalue, KMO value, Bartlett's Sphericity significance and the loadings of each item on the respective factors.

Having confirmed the reliability and validity of the instrument for this study, the next Chapter (7) details out the statistical results of subsequent analysis, namely the regression analysis

conducted to test the defined hypotheses for this study. In Chapter 7 too, the discussion of the findings will be undertaken.

7. Regression Analyses, Statistical Assessment of Hypotheses and Discussion of Findings

7.1 Introduction to the Chapter

Chapter six (6) has confirmed the reliability and validity of the instrument for this study. Chapter seven (7) therefore has two main objectives. First, it presents and explains the regression analysis results for testing the hypotheses for this study. The second main objective of this Chapter is to discuss the findings from this study.

The regression analysis (first main objective) and the discussion of findings (second main objective) are based on the overall sample results. As a reminder, five main industrial sectors were explored in this study. Therefore, before attending to the above mentioned main objectives, Section 7.2 presents some comparative results of the variables for this study, based on the sectors explored. After that, Sections 7.3 presents the regression analysis results, while Section 7.4 presents the discussion of findings from this study. Section 7.5 presents the conclusion to this chapter.

7.2 Sectoral Analysis

Prior research on Strategic Management Accounting Usage (e.g., Cadez, 2006) underlined that statistical differences exist for variables across groups. According to further literature (Hair et al., 1998), F-test assesses the hypothesis of equal means but does not address the question of which means are different. Therefore, to test the cross-industry differences and ascertain statistical significance, this study follows Cadez (2006) and uses the analysis of variance (ANOVA) procedure. The results are presented in subsections 7.2.1 (Strategic Management Accounting Techniques Usage – SMAU variables) and 7.2.2 (other contingency variables in the framework), while subsection 7.2.3 explains the methodological approach followed to investigate and explain the results for a number of factors that showed similarities across the groups (sectors) explored. In presenting the ANOVA results, Tables 7.1 and 7.2

display the sum of Squares, and Mean Squares for ‘Between Groups’ and ‘Within Groups’. Also, the F-value, and Significance level are reported for each factor. The comparative analysis is based on the samples for each sector, namely investment sector (n = 2), industry sector (n = 102), banking and financial services sector (n = 29), insurance sector (n = 5) and service sector (n = 37).

7.2.1 The Cross-Industry Comparative Evidence: Strategic Management Accounting Usage (SMAU)

The analysis of variance (ANOVA) results (See Table 7.1) shows that there is a significant difference between mean values between the groups (sectors.) for SMAU (Total), SMAU Planning, Control and Performance Measurement, SMAU Strategic Decision Making, SMAU Competitor Accounting, and SMAU Customer Accounting.

Table 7.1: ANOVA Scores of Variables within Industry Groups for SMAU

		Sum of Squares	Mean Square	F	Sig.
SMAUCosting	Between Groups	5.773	1.443	1.458	.217
	Within Groups	168.227	.990		
SMAUPlanContrPer	Between Groups	18.064	4.516	4.923	.001
	Within Groups	155.936	.917		
SMAUStratDecMaking	Between Groups	9.224	2.306	2.379	.054
	Within Groups	164.776	.969		
SMAUCompetitorAccounting	Between Groups	22.178	5.544	6.208	.000
	Within Groups	151.822	.893		
SMAUCustomerAccounting	Between Groups	17.260	4.315	4.680	.001
	Within Groups	156.740	.922		
SMAUTotal	Between Groups	15.220	3.805	4.074	.004
	Within Groups	158.780	.934		

At the significance level of (.217) and F-value of 1.458, there is no significant difference between the groups (sectors) for the SMAU Costing variable.

7.2.2 The Cross-Industry Comparative Evidence: Other Contingency Variables

For the other contingency variables, the ANOVA statistics show that there were both significant and insignificant differences between the groups (sectors). As Table 7.2 below shows, there are significant differences between the groups for Organisational Performance Non-Financial (**ORGPENONF**) (sig. = .000), Organisational Performance Financial (**ORGPENFFIN**) (sig. = .005), Perceived Environmental Uncertainty-Market Turbulence (**PEUMKTTURB**) (sig. = .000), and Organisational Technology (**ORGTECH**) (sig. = .000). On the other hand, there were no significant differences between the groups for Perceived Environmental Uncertainty -Competitive Intensity (**PEUCOMPINT**) (sig. = .688), Organisational Structure-Formalisation (**ORGSTRFORM**) (sig. = .286), and Organisational Structure-Decentralisation (**ORGSTRDCENT**) (sig. = .853).

Table 7.2: ANOVA Scores of Variables within Industry Groups for other Contingency Variables

		Sum of Squares	Mean Square	F	Sig.
ORGPENONF	Between Groups	24.631	6.158	7.008	.000
	Within Groups	149.369	.879		
PEUCOMPINT	Between Groups	2.284	.571	.565	.688
	Within Groups	171.716	1.010		
ORGSTRFORM	Between Groups	5.029	1.257	1.265	.286
	Within Groups	168.971	.994		
ORGPENFFIN	Between Groups	14.523	3.631	3.870	.005
	Within Groups	159.477	.938		
PEUMKTTURB	Between Groups	26.312	6.578	7.572	.000
	Within Groups	147.688	.869		
ORGSTRDCENT	Between Groups	1.366	.342	.336	.853
	Within Groups	172.634	1.015		
ORGTECH	Between Groups	25.930	6.483	7.443	.000
	Within Groups	148.070	.871		

7.2.3 Evaluating the Similarities between the Sectors

Sections 7.2.1 and 7.2.2 and their respective Tables evidence significant differences but also close similarities between the statistics for the sectors. This evidence of similarities is a contrast to the researcher's expectation. To identify the reasons for the similarities across the sectors, a 15-minutes interview with 4 respondents (2 from industry sector, and 1 each from service sector, and banking and financial service sector), randomly selected from the survey respondents, was conducted.

In the interviews, the researcher first summarised the findings of the study to the interviewees, pinpointing the key findings concerning the factors that influence the usage of SMAU, and Organisations Performance (Financial and Nonfinancial). Following that, the researcher communicated the findings of the variables for each sector to the respondents to confirm that the results reflect their perception. After confirming this, the researcher tried to understand from the respondents what they think might be the reason why other sectors might perceive these variables the same way. Specifically, attention was drawn to the fact that there were no significant differences between the groups (sectors) for the SMAU-Costing, Perceived Environmental Uncertainty-Competitive Intensity, Organisational Structure-Formalisation and Organisational Structure-Decentralisation variables.

From the evidence gathered from the interviews, the interviewees were surprised that the responses for the four (4) variables were similar across the sectors. Three of the interviewees (2 from industry sector, and 1 from service sector) suggested that national culture and influence of Islamic norms might be influencing the operational dynamics in the explored sectors. It seems therefore right to conclude that these two factors might play a moderating/mediating role on how the contingency dynamics play out in the explored geographical context (See Section 7.4.1) for more clarifications.

7.3 The Regression Results from this Study

In Chapter four (4), Table 4.1 outlined the twelve (12) hypotheses for this study. To examine conceptualised relationships, regression analyses were undertaken. As reminded in Section 6.3.1, Figure 4.1 reflects three core dependent constructs, namely ‘Strategic Management Accounting Techniques Usage (SMAU)’, ‘Organisational Structure (OSTR)’ and ‘Organisational Performance (OP)’. Therefore, the regression (linear) analyses were conducted to estimate the association between conceptualised constructs and these dependent variables.

The linear regression analyses were undertaken to check the estimates, confidence intervals, model fit, R^2 change, colinearity diagnostics, and case wise diagnostics (outliers). The regression statistics for the three dependent variable models are presented in Sections 7.3.1 Strategic Management Accounting Techniques Usage (SMAU), 7.3.2 Organisational Performance (OP) and 7.3.3 Organisational Structure (OSTR).

To ensure the appropriateness of the linear regression coefficients, several diagnostic tests were conducted. The influence diagnostics show that the coefficient estimates reported in Figures 7.1 (Strategic Management Accounting Techniques Usage), 7.2 (Organisational Performance-Financial), 7.3 (Organisational Performance-non-Financial) and 7.4 (Organisational Structure-Formalisation and Decentralisation) were not affected by outliers (Cook, 1979; 1984). Based on the residual plots, the conclusions of normality and linearity are appropriate (Draper & Smith, 1981; Field, 2005).

According to methodological tradition, all predictors in a model must be examined to ensure that there is no multicollinearity threat. Field (2005) notes: “There should be no perfect linear relationship between two or more of the predictors; i.e. the predictor variables should not correlate too highly” (p.170). When there is a perfect collinearity (inter-correlation coefficient

of 1) between predictors, then there is no chance to obtain unique estimates of regression coefficients (Field, 2005).

Therefore, this study followed Field (2005) and several multicollinearity checks were conducted. As a first step, the correlation matrix was examined to find out the relationships between predictors. No substantial correlations (R above .8 or .9) existed between the predictors (Field, p 185) in this study (See Tables 6.12 and 6.14). Even for the SMAU construct which contains five (5) first-order constructs (where expectedly close association existed between these constructs), the highest correlation was .644 (between SMAU-Planning, Control and Performance Measurement and SMAU-Costing). Based on these facts, it is right to conclude that there is neither multicollinearity threat nor a threat of the validity of the multiple regression analysis.

Also, to check for multicollinearity, sensitivity analysis was conducted to investigate the significance of influence of the inter-construct-correlation in the multi-variable regression analysis. According to Belsley et al. (1980), there exists a multicollinearity threat if an estimated coefficient with a condition index higher than 20 contributes strongly to the variances of two or more variables. This is not the case in this study: as Tables 7.3 (Dependent variable – SMAU), and 7.4 (Dependent variable – Organisational Performance OP) show, the condition index achieved for all independent variables in the multivariate regression analysis was far less than the aforementioned benchmark.

The third and final step taken to ensure that the regression results are free from multicollinearity threat included: (a) examination of the Variance inflation factor (VIF) to identify possible strong linear relationship between predictors, the results (See Table 7.10 and 7.11) showed that no relationship had a value close to **10** (Myers, 1990), thus that was no

multicollinearity threat; also, (b) the tolerance statistics (1/VIF) measure above .2 (Menard, 1995), evidence that further supports non-collinearity.

Finally, the inter-construct correlation evidence support the collinearity diagnostics reported in Tables 7.3 and 7.4. The inter-construct correlation results for all dependent variables, namely SMAU (Table 7.5), ORGPERFNONFIN (Table 7.6) and ORGPERFFIN (Table 7.7) are uniform.

Table 7.3: Collinearity Diagnostics For Dependent Variable (SMAU)

Dimension	Eigen-value	Cond. Index	Variance Proportion of the Estimate accounted for by the variable				
			PEUCOMPINT	ORGSTRFOR M	PEUMKTTUR B	ORGSTRDCE NT	ORGTEC H
1	1.304	1.000	.21	.05	.20	.27	.01
2	1.120	1.079	.11	.33	.00	.00	.42
3	1.054	1.112	.00	.25	.29	.14	.22
4	1.000	1.142	.00	.00	.00	.00	.00
5	.821	1.260	.67	.02	.23	.17	.07
6	.701	1.364	.00	.35	.29	.43	.29

Table 7.4: Collinearity Diagnostics For Dependent Variable (OP)

Dimensi on	Eigen- value	Cond. Index	Variance Proportion of the Estimate accounted for by the variable				
			PEUCOMPIN T	ORGSTRFORM	PEUMKTTUR B	ORGSTRDCEN T	SMAU Total
1	1.509	1.000	.00	.01	.20	.02	.16
2	1.259	1.095	.28	.05	.02	.30	.06
3	1.069	1.188	.15	.61	.07	.05	.01
4	1.000	1.228	.00	.00	.00	.00	.00
5	.778	1.392	.42	.22	.01	.45	.10
6	.747	1.421	.00	.04	.01	.10	.63
7	.638	1.537	.14	.08	.69	.08	.05

Table 7.5: Inter-Constructs Correlation For Dependent Variable (SMAU)

Constructs	SMAUTotal	PEUCOMPINT	ORGSTRFORM	PEUMKTTURB	ORGSTRDCENT	ORGTECH
SMAUTotal	1.000					
PEUCOMPINT	-.082	1.000				
ORGSTRFORM	.032	-.013	1.000			
PEUMKTTURB	-.214	-.142	.035	1.000		
ORGSTRDCENT	-.027	.158	.151	-.132	1.000	
ORGTECH	.365	-.042	.107	-.112	-.058	1.000

SMAU=strategic management accounting techniques usage. **PEUCOMPINT**=perceived environmental uncertainty-competitive intensity. **ORGSTRFORM**=organisational structure-formalisation. **PEUMKTTURB**=perceived environmental uncertainty-market turbulence. **ORGSTRDCENT**=organisational structure-decentralisation. **ORGTECH**= organisational Technology.

Table 7.6: Inter-Construct Correlation For Dependent Variable (ORGPFRNONFIN)

Constructs	ORGPFRNONF	PEUCOMPINT	ORGSTRFORM	PEUMKTTURB	ORGSTRDCEN T	SMAUTotal
ORGPFRNONF	1.000					
PEUCOMPINT	.096	1.000				
ORGSTRFORM	-.105	-.013	1.000			
PEUMKTTURB	-.201	-.142	.035	1.000		
ORGSTRDCENT	-.043	.158	.151	-.132	1.000	
SMAUTotal	.538	-.082	.032	-.214	-.027	1.000

ORGPFRNONF=organisational performance-non-financial. **PEUCOMPINT**=perceived environmental uncertainty-competitive intensity. **ORGSTRFORM**=organisational structure-formalisation. **PEUMKTTURB**=perceived environmental uncertainty-market turbulence. **ORGSTRDCENT**=organisational structure-decentralisation. **SMAU**=strategic management accounting techniques usage.

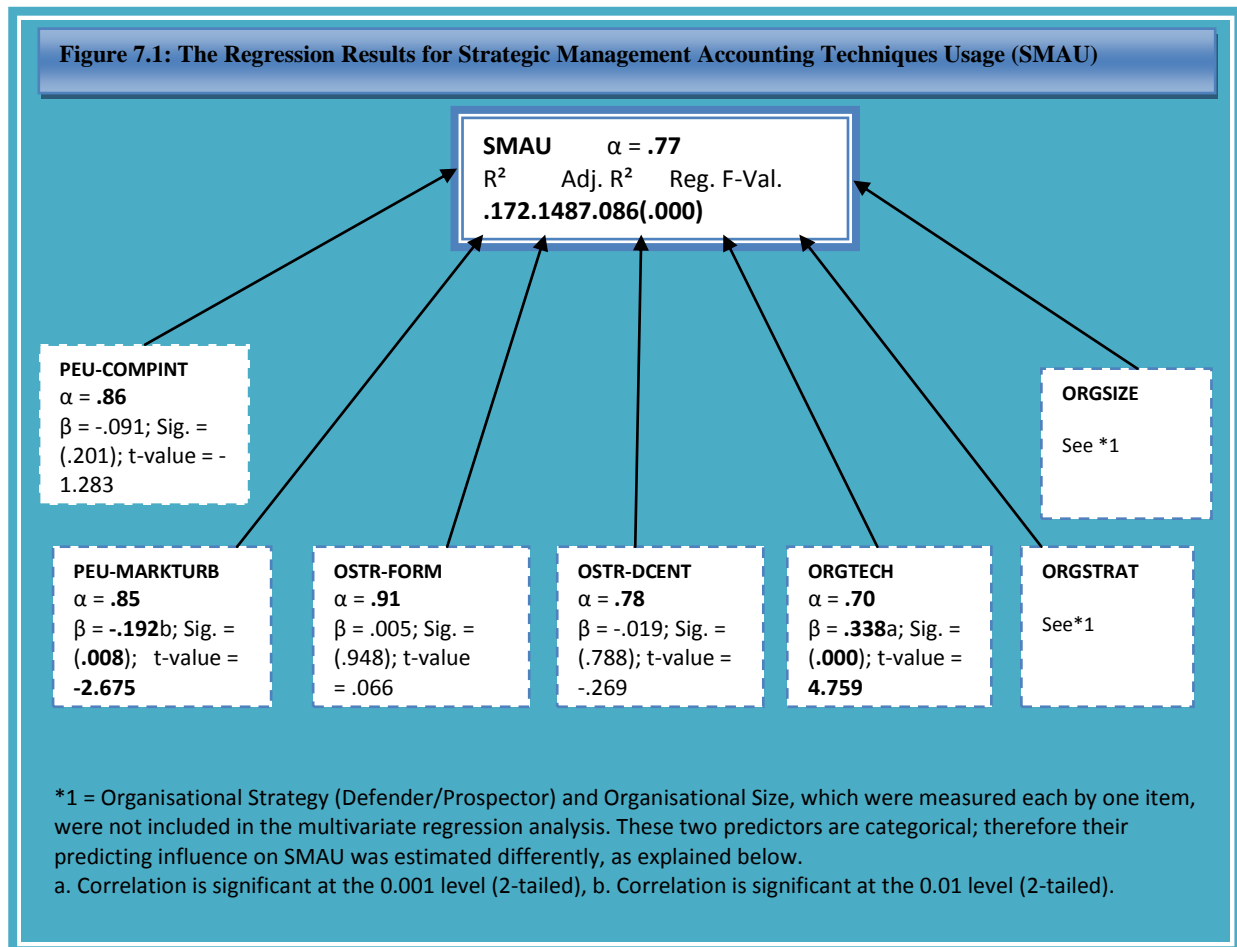
Table 7.7: Inter-Construct Correlation For Dependent Variable (ORGPFRFFIN)

Constructs	ORGPFRFFI N	PEUCOMPINT	ORGSTRFORM	PEUMKTTURB	ORGSTRDCEN T	SMAUTotal
ORGPFRFFIN	1.000					
PEUCOMPINT	-.125	1.000				
ORGSTRFORM	.010	-.013	1.000			
PEUMKTTURB	-.070	-.142	.035	1.000		
ORGSTRDCENT	-.141	.158	.151	-.132	1.000	
SMAUTotal	.029	-.082	.032	-.214	-.027	1.000

ORGPFRFFIN=organisational performance-financial. **PEUCOMPINT**=perceived environmental uncertainty-competitive intensity. **ORGSTRFORM**=organisational structure-formalisation. **PEUMKTTURB**=perceived environmental uncertainty-market turbulence. **ORGSTRDCENT**=organisational structure-decentralisation. **SMAU**=strategic management accounting techniques usage.

7.3.1 Regression Analysis Results: Dependent Variable – Strategic Management Accounting Techniques Usage (SMAU)

The regression results are summarised in Figures 7.1 (SMAU) below. The results show the R^2 , Adjusted R^2 , and Regression F-Value. Also, the regression coefficient (β), significance level (.000), and t- statistics (t-value) for all independent factors are presented below.



As evident in Figure 7.1 above, two significant predictors of Strategic Management Accounting Technique Usage in the explored companies were captured. While the statistical results suggest that Perceived Environmental Uncertainty (PEU) has a negative influence on the usage of these techniques, only the market turbulence (MARKTURB) dimension is significant at ($\beta = -.192$; Sig. = **.008**; t-value = **-2.675**). Also, Organisational Technology (ORGTECH) has a positive influence on the usage of SMAU. At ($\beta = .338$; Sig. = **.000**; t-value = **4.759**), this study suggests that high technological development associate favours the

usage of strategic management accounting tools. Though not significant, the statistics for Organisational Structure-Decentralisation (**OSTR-DCENT**) suggests that decentralisation might have a negative influence on the usage of **SMAU**.

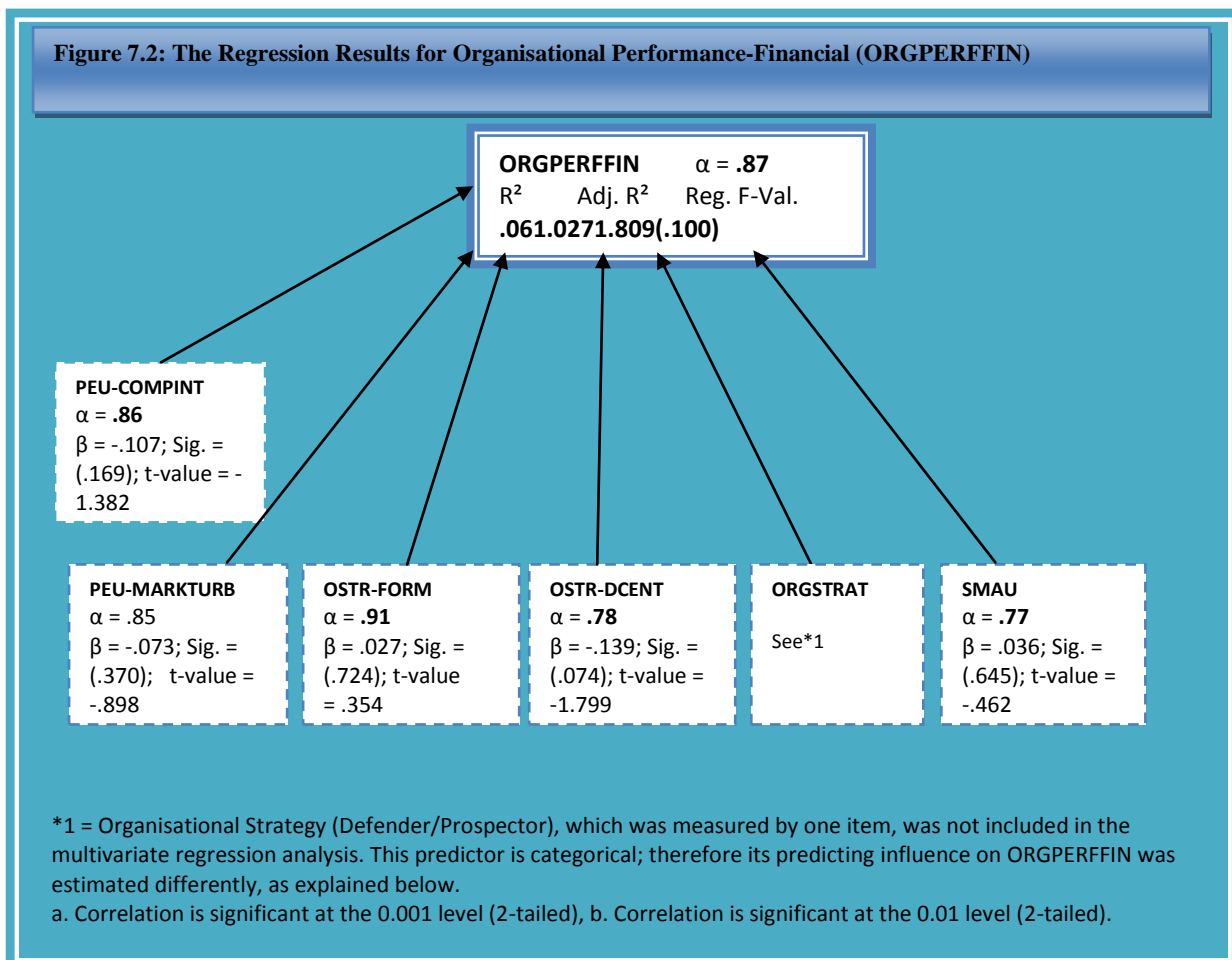
The results of the examination of the influence of these independent factors on the five first-order constructs of **SMAU** are summarised in Table 7.9. The results show that Organisational Technology (**ORGTECH**) is a highly predicting factor of the usage of the individual **SMAU** models. **ORGTECH** has a highly positive association to the five **SMAU** factors. On the other hand, Market Turbulence (**MARKTTURB**) has a significant negative influence on three **SMAU** dimensions (**SMAU**-Costing, **SMAU**-Planning, Control and Performance Measurement, and **SMAU**-Strategic Decision Making) but not on **SMAU**-Competitor Accounting and **SMAU**-Customer Accounting. Competitive Intensity (**COMPINT**) has a significant negative association to only **SMAU**-Planning, Control and Performance Measurement, and **SMAU**-Strategic Decision Making.

The influence of the two categorical factors organisational size (**ORGSIZE**) and organisational strategy (**ORGSTRAT**) on strategic management accounting usage (**SMAU**_{total}) was also examined. The results show significant coefficients for both **ORGSIZE** and **ORGSTRAT**.

Empirically, this study suggests that larger organisations tend to use more strategic management accounting techniques than smaller ones. Also, the evidence from this study suggests that organisations that favour prospector type strategies would have more need for strategic management accounting techniques than defender type organisations.

7.3.2 Regression Analysis Results: Dependent Variable – Organisational Performance (OP)

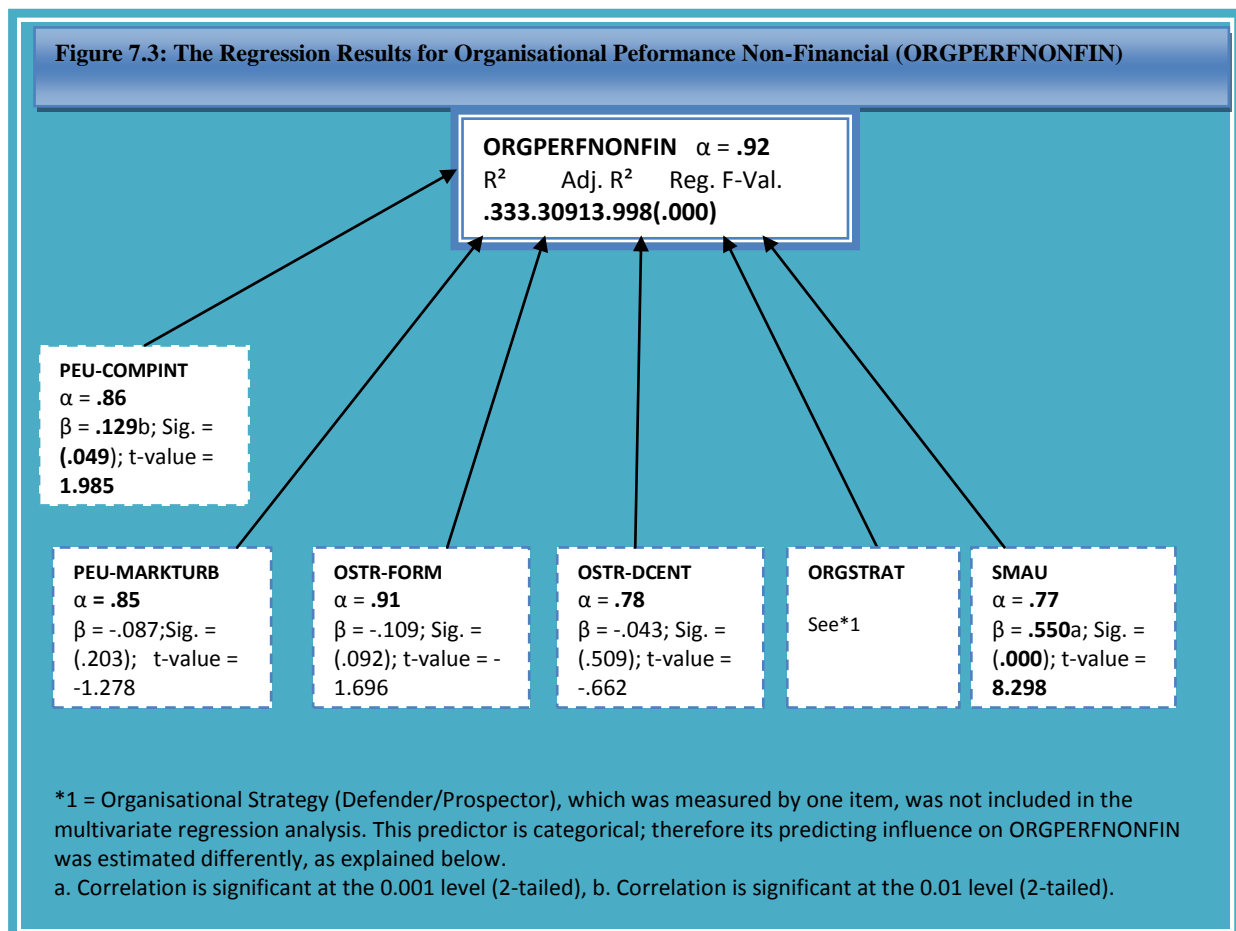
As reminded in Section 6.3.1.3, two dimensions of organisational performance were examined in this study. Therefore, regression analyses were undertaken for **Organisational Performance (Financial)** and **Organisational Performance (Non-Financial)**. The regression results are summarised in Figures 7.2 (for the former) and 7.3 (for the latter). The results show the R^2 , Adjusted R^2 , and Regression F-Value. Also, the regression coefficient (β), significance level (.000), and t- statistics (t-value) for all independent factors are presented.



Statistically, no significant predictor of organisational performance-financial (**ORGPFFIN**) was found in the data for the study. One marginally insignificant predictor was captured in the data: a marginally insignificant association was also found for

organisational structure-decentralisation (**OSTR-DCENT**) at ($\beta = -.139$; Sig. = $.074$; t-value = -1.799). There is however need to be very cautious in interpreting these statistical results, considering the very low regression statistics of $R^2 = .061$, adjusted $R^2 = .027$ and regression F-value = 1.809 ($.100$).

The results for the categorical factor show that organisational strategy (**ORGSTRAT**), that is whether a company is a defender or prospector type, does not shape the financial element of organisational performance. So, this study did not find any evidence to suggest that prospector type companies will perform better financially than defender type companies or vice versa. The regression results for the organisational performance (non-financial) are summarised in Figure 7.3 below.



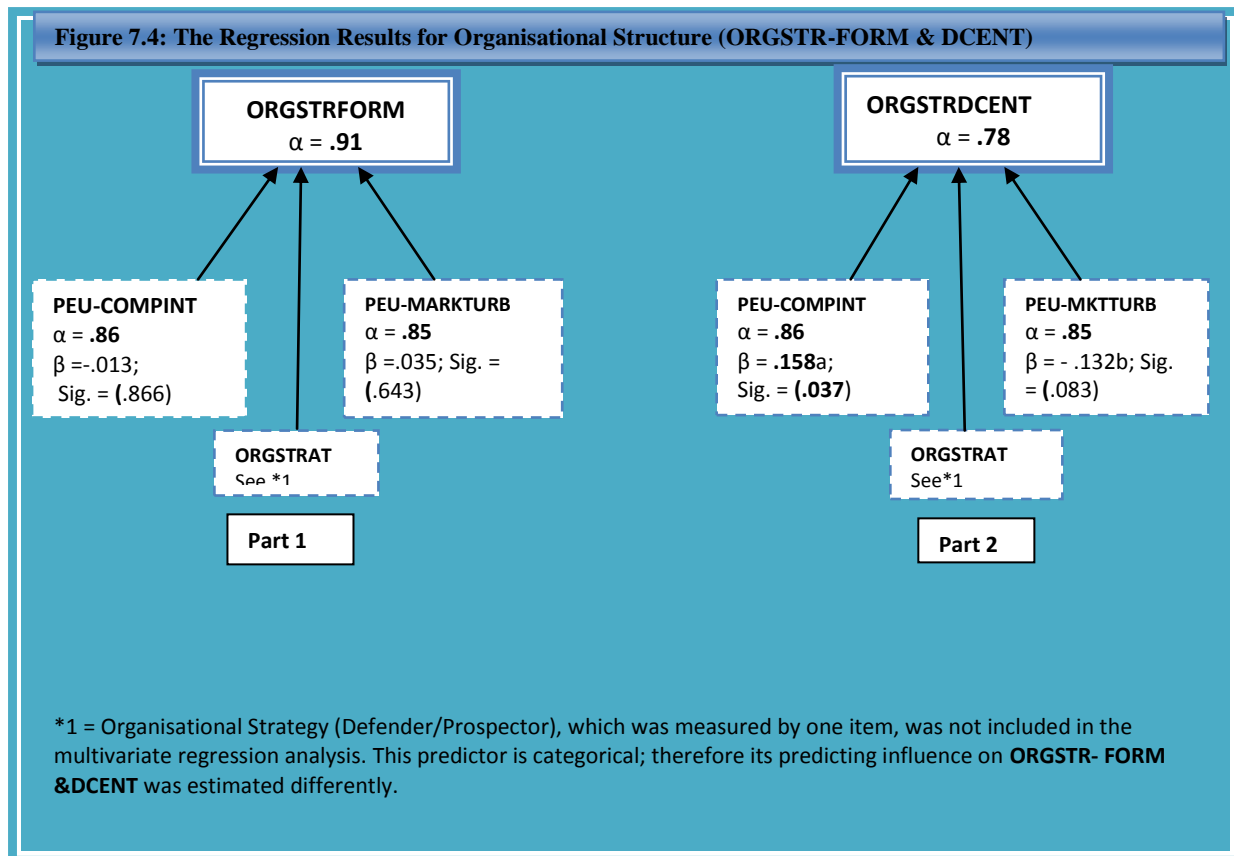
The regression analysis summary evidence strong statistical estimates ($R^2 = .333$, adjusted $R^2 = .309$, and Regression F-value of **13.998 (.000)**) for this model. From the regression analysis, two significant coefficients were found. Perceived environmental uncertainty-competitive intensity (**COMPINT**) has a positive influence on organisational performance-non-financial (**ORGPFRNONFIN**) at ($\beta = .129$; Sig. = **.049**; t-value = **1.985**).

Also, **SMAU** has a positive association to organisational performance-non-financial (**ORGPFRNONFIN**) at ($\beta = .550$; Sig. = **.000**; t-value = **8.298**). At ($\beta = -.109$; Sig. = **.092**; t-value = **-1.696**), organisational structure-formalisation (**OSTR-FORM**) has a marginally insignificant negative influence on organisational performance-non-financial (**ORGPFRNONFIN**).

The examination of the descriptive evidence for organisational strategy (**ORGSTRAT**) in connection with organisational performance-non-financial (**ORGPFRNONFIN**) indicates that prospector type companies would achieve higher levels of organisational performance-non-financial (**ORGPFRNONFIN**) than defender type companies.

7.3.3 Regression Analysis Results: Dependent Variable – Organisational Structure (OSTR)

The conceptualised relationships in relation to the dependent variable (**Organisational Structure**) are summarised in Figure 7.4. That Figure contains two parts reflecting the two dimensions of Organisational Structure, as conceptualised in this study. A correlation analysis was used to identify the relationship between the **Perceived Environmental Uncertainty (PEU)** predictors and the **Organisational Structure** dependent variables. In checking this relationship between the independent and dependent variables emphasis was placed on identifying the correlation coefficient (R), and significance level (.000).



The results of the 2-tailed correlation analysis conducted to examine Figure 7.4 are summarised in Table 7.8. As that Table shows, the correlation influence of the two dimensions of perceived environmental uncertainty varies. Perceived environmental uncertainty-competitive intensity (**PEUCOMPINT**) does not have a significant influence on organisational structure-formalisation (**ORGSTR-FORM**); neither does perceived environmental uncertainty-market turbulence (**PEUMARKTURB**) have a significant influence on organisational structure-formalisation (**ORGSTR-FORM**). On the other hand, Perceived environmental uncertainty-competitive intensity (**PEUCOMPINT**) has a highly significant correlation to organisational structure-decentralisation (**ORGSTR-DCENT**), and perceived environmental uncertainty-market turbulence (**PEUMARKTURB**) has a marginally insignificant correlation to organisational structure-decentralisation (**ORGSTR-DCENT**).

Table 7.8: Bivariate Correlation of PEU (PEU-COMPINT & PEU-MARTURB) and ORGSTR (ORGSTR-FORM & ORGSTR-DCENT) (n = 175)

PEU Variables	Correlation Stats for ORGSTR-FORM			Correlation Stats for ORGSTR-DCENT		
	<i>Pearson Correlation</i>	<i>Sig. (2-tailed)</i>	<i>Sum of Sqrs. & Crossprdts</i>	<i>Pearson Correlation</i>	<i>Sig. (2-tailed)</i>	<i>Sum of Sqrs. & Crossprdts</i>
PEUCOMPINT	-.013	.866	-24.674	.158a	.037	27.455
PEUMARKTURB	.035	.643	6.138	-.132	.083	-22.896

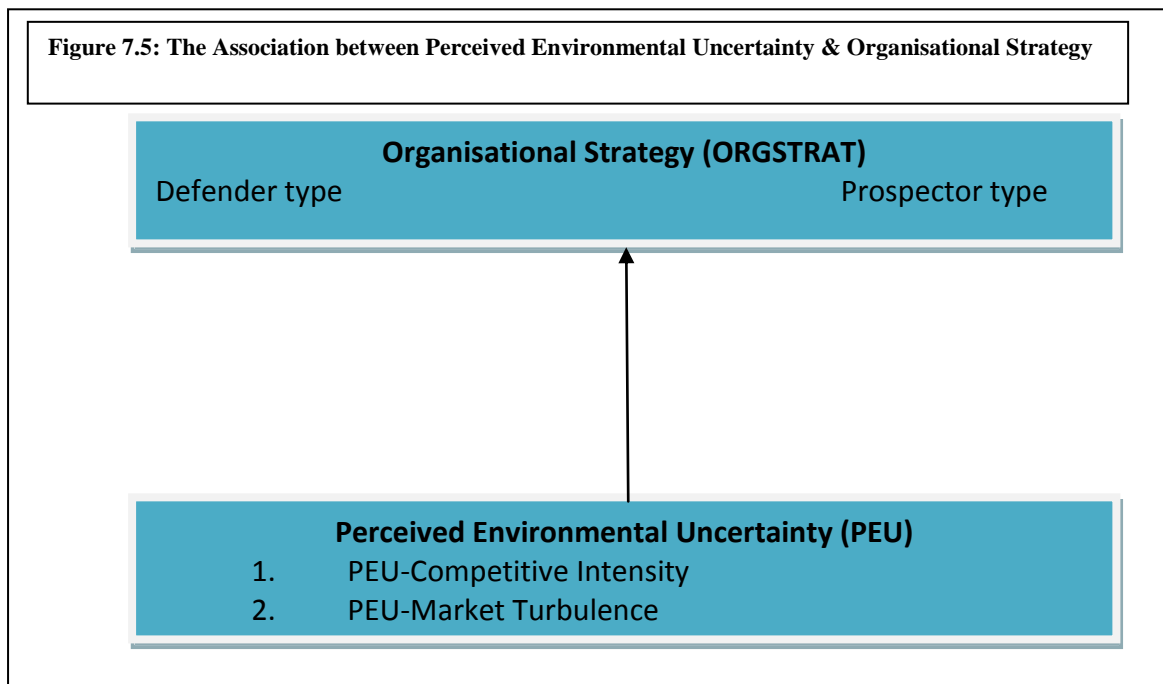
a. Correlation is significant at the 0.05 level (2-tailed). b. Correlation is marginally insignificant at the 0.05 level (2-tailed).

PEUCOMPINT=perceived environmental uncertainty-competitive intensity. **ORGSTRFORM**=organisational structure-formalisation. **PEUMKTURB**=perceived environmental uncertainty-market turbulence. **ORGSTRDCENT**=organisational structure-decentralisation.

To determine the correlation coefficient and significance level for both organisational structure-formalisation (**ORGSTRFORM**) and organisational structure-decentralisation (**ORGSTRDCENT**), the data for both organisational structures were examined in tandem with the data for organisational strategy (**ORGSTRAT**). From the emerging evidence, prospector type companies tend to be less centralised in their decision making process, and are less formalistic in their organisational patterns. On the other hand, defender type companies favour centralised decision making and formalised organisational patterns.

7.3.4 The Relationship between Perceived Environmental Uncertainty (PEU) and Organisational Strategy (OS)

Figure 7.5 conceptualised that the degree of perceived environmental uncertainty will influence the extent to which organisations might be either defender or prospector in their strategic approaches.



From the data for this study, organisations that indicated that their perceived competitive intensity (**COMPINT**) and market turbulence (**MARKTURB**) were high showed features of prospector type strategy. On the other hand, in organisations where perceived competitive intensity (**COMPINT**) and market turbulence (**MARKTURB**) were perceived to be low, such organisations reflected features of defender type strategy. From the evidence therefore, it seems right to conclude that when the perceived environmental uncertainty is high, organisations would follow the prospector strategy type.

In Sections 7.1 to 7.3 the findings from this study have been summarised. Next, the findings from this study are discussed in Section 7.4.

7.4 Discussion of Findings

In this section, the findings from this study are discussed. While the previous sections in this chapter have shown overall results obtained from all multivariate regression and bivariate correlation analyses, the discussion of results is focused towards explaining the results for the conceptualised hypothetical relationships. Towards this target, the regression results for the core dependent variables are summarised in Tables 7.9 (SMAU) and 7.10 (OP), while Table 7.11 summarises the results from the hypotheses testing, and pinpoints which hypotheses are supported and which are not supported.

In discussing the findings from this study, three core steps are taken: first, the findings are flagged; second the results are explained to pinpoint similarities or contrasts with previous research; and third the theoretical explanation of the findings is undertaken. The discussion of the findings from this study will be organised along hypothetical definitions for this study, as mentioned earlier.

Prior to doing that however, one finding of this study (culture and Islamic rules) will be discussed, as this finding might have a moderating/mediating influence on a number of other findings. For this reasons, the discussion is undertaken in the following order:

Culture and Islamic influence on Contingency Dynamics (Section 7.4.1), the association between Perceived Environmental Uncertainty and Organisational/Business Strategy (Section 7.4.2), the association between Perceived Environmental Uncertainty and Organisational Structure (Section 7.4.3), the association between Perceived Environmental Uncertainty and Organisational Performance (Section 7.4.4), the association between Perceived Environmental Uncertainty and Strategic Management Accounting Usage (Section 7.4.5), the association between Organisational Technology and Strategic Management Accounting Usage (Section

7.4.6), the association between Organisational Size and Strategic Management Accounting Usage (Section 7.4.7).

Moreover, the association between Organisational Structure and Strategic Management Accounting Usage (Section 7.4.8), the association between Organisational Structure and Organisational Performance (Section 7.4.9), the association between Organisational/Business Strategy and Strategic Management Accounting Usage (Section 7.4.10), the association between Organisational/Business Strategy and Organisational Structure (Section 7.4.11), the association between Organisational/Business Strategy and Organisational Performance (Section 7.4.12), and the association between Strategic Management Accounting Usage and Organisational Performance (Section 7.4.13

Variables	SMAUCOSTING		SMAUPlanCont		SMAUSTRADM		SMAUCOMPAC		SMAUCUSTAC		SMAU (Total)		Collinearity Stats		
	Std. B	Sig.	Std. B	Sig.	Std. B	Sig.	Std. B	Sig.	Std. B	Sig.	Std. B	Sig.	Tolerance	VIF	
PEUCOMPINT	.042	(.555)	-.153	(.039)	-.182	(.012)	.073	(.346)	-.121	(.114)	-.091	(.201)		.957	1.045
ORGSTRFORM	.053	(.462)	-.027	(.710)	.092	.197	-.025	.745	-.080	(.293)	.005	(.948)		.958	1.044
PEUMKTTURB	-.184	(.011)	-.160	(.032)	-.226	(.002)	-.019	.809	-.100	(.191)	-.192	(.008)		.948	1.055
ORGSTRDCENT	-.054	(.460)	-.024	(.743)	-.004	(.958)	.085	.274	-.071	(.359)	-.019	(.788)		.932	1.073
ORGTECH	.331	(.000)	.263	(.000)	.281	(.000)	.179	(.020)	.160	(.036)	.338	(.000)		.965	1.037
R ²	.167		.125		.183		.045		.065		.172				
Adjusted R ²	.142		.099		.159		.017		.037		.148				
Regression F-Value & Sig.	6.759		(.000)		4.839		(.000)		7.561		(.000)				

SMAU=strategic management accounting techniques usage (costing; planning, control and performance measurement; strategic decision making; competitor accounting and customer accounting). **PEUCOMPINT**=perceived environmental uncertainty-competitive intensity. **ORGSTRFORM**=organisational structure-formalisation. **PEUMKTTURB**=perceived environmental uncertainty-market turbulence. **ORGSTRDCENT**=organisational structure-decentralisation. **ORGTECH**= organisational Technology.

Table 7.10: Multivariable Regression: Coefficients & Significance Level: Organisational Performance (Financial & Non-Financial) (N = 175)						
Variables	ORGPFRF (FINANCIAL)		ORGPFRF (NON-FINANCIAL)		Collinearity Stats	
	Std. B	Sig.	Std. B	Sig.	Tolerance	VIF
SMAU (TOTAL)	-.036	(.645)	.550	.000	.903	1.108
PEUCOMPINT	-.107	(.169)	.129	(.049)	.941	1.063
ORGSTRFORM	.027	(.724)	-.109	(.092)	.969	1.032
PEUMKTTURB	-.073	(.370)	-.087	(.203)	.856	1.168
ORGSTRDCENT	-.139	(.074)	-.043	(.509)	.936	1.069
R²	.061		.333			
Adjusted R²	.027		.309			
Regression F-Value & Sig.	1.809	(.100)	13.998	(.000)		

Hyp. NR	Description of Hypotheses	Supported/ Not Supported
H1	<i>Perceived environmental uncertainty would be greater in prospector-strategy than defender-strategy among Palestinian Companies</i>	<i>Supported</i>
H2	<i>Perceived higher environmental uncertainty leads to a more decentralised structure in Palestinian Companies</i>	<i>Partially Supported</i> Yes for PEUCOMPINT , No for PEUMARKTURB
H3	<i>Perceived higher environmental uncertainty would lead to increased use of non-financial performance by Palestinian Companies</i>	<i>Partially Supported</i> Yes for PEUCOMPINT , No for PEUMARKTURB
H4	<i>The perceived higher environmental uncertainty will lead to higher SMA-techniques usage in Palestinian Companies</i>	<i>Not Supported</i> Rather higher levels of PEUMARKTURB lead to lower usage of SMAU&MAU
H5	<i>Perceived higher level of information and communication technology would lead to higher SMA usage in Palestinian Companies</i>	<i>Supported</i> For SMAU&MAU
H6	<i>SMA Usage will be greater in larger than in smaller Palestinian Companies</i>	<i>Supported</i>
H7	<i>The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of SMA-techniques usage in Palestinian Companies</i>	<i>Not Supported</i>
H8	<i>The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of performance in Palestinian Companies</i>	<i>Not Supported</i>
H9	<i>SMA Techniques would be more widely adopted in prospector than defender Palestinian Companies</i>	<i>Supported</i>
H10	<i>Prospector -strategy would lead to more decentralised structure than defender-strategy among Palestinian Companies</i>	<i>Supported</i>
H11	<i>Prospector strategy will lead to higher performance than defender strategy in Palestinian Companies</i>	<i>Partially Supported</i> No for ORGPERRFIN , Yes for ORGPERRNONFIN
H12	<i>Greater SMA usage is positively associated with performance in Palestinian Companies.</i>	<i>Partially Supported</i> No for ORGPERRFIN , Yes for ORGPERRNONFIN

7.4.1 Culture and Islamic Influence on Contingency Dynamics

One core insight that emerged from this study relates to the role of national culture, shaped by Islamic influence and guidelines, on the way that the contingency dynamics shape out in the explored geographical context.

As explained in Sections 7.2.1 and 7.2.2, there were some items where there were no significant differences in the group (sector) responses; evidence that was further explored using the interview tool. Based on the interview results, it seems right to suggest that national culture and Islamic Sharia regulations might moderate/mediate the extent of influence of the contingency factors in explored Palestinian companies, a conclusion that connects to the notion suggested by Hopper et al. (2009).

In that paper, based on a desk study of existing literature, Hopper et al (2009) argue that there is an interplay of MASs and cultural, economic and political context. This insight concerning influence of national culture lends support to the evidence in Kattan et al (2007) study of Palestinian and less developed countries (LDC) firms that suggest that, among others, cultural factors shape the contingency about management accounting design and implementation.

On the dual point of culture and regulation, the insights from this present study find support in Hopper (2000) and Waweru et al (2004): Hopper (2000) underlines the importance of cultural factors and regulations in understanding the contingency perspective on management accounting in LDC firms, while Waweru et al (2004) found that reform policy (regulation) influences management accounting practices in four participating South African organisations.

Secondly, when the statistical results for **ORGP**ERFIN and **ORGP**ERFNONF are compared (See for example, Figures 7.2 and 7.3) there is the indication that explored companies give

more attention to non-financial organisational performance, a finding that reflects similarity with the evidence in Köseoglu's (2013) study of Turkish companies.

Strategic decision making process literature (Elbanna, 2003) suggests that the influence of Arab culture and Islamic guidelines made organisations to be very conscious of non-financial dimensions of organisational performance. Further on the non-financial performance evidence, it seems customer satisfaction is a major non-financial performance feature of Arab nations (See also Köseoglu, 2013). Based on the evidence, it seems logical to conclude that Palestinian companies are displaying the same organisational performance behaviour, due to the influence of national culture and Islamic guidelines.

7.4.2 The association between Perceived Environmental Uncertainty and Organisational/Business Strategy

The first hypothesis of this study is specified below:

H1: Perceived environmental uncertainty would be greater in prospector-strategy than defender-strategy among Palestinian Companies

According to strategic decision making literature (e.g., Hitt & Tyler, 1991; Rajagopalan et al., 1993; Brouthers et al., 2000), managers must analyse the external and internal environments of their organisations, to enable them identify the external opportunities and threats and internal strengths and weaknesses. Within this foundation, the external control perspective (e.g., Romanelli & Tushman, 1986, cited in Hitt & Tyler, 1991, p.327) argues that strategic decisions are largely constrained by external environment.

According to decision complexity viewpoint (e.g., Covin & Slevin, 1991; Gartner et al., 1992), in highly uncertain environments, organisations tend to show more openness to risk-taking, a behaviour that fits a prospector strategy of organisations.

The findings from this study of Palestinian companies provide support for the aforementioned contingency foundations (e.g., Romanelli & Tushman, 1986; Covin & Slevin, 1991; Gartner et al., 1992): the comparative evidence showed that for companies that reflected prospector strategy features, their perceived environmental uncertainty was higher than that of the defender strategy type.

Moreover, this study provides support for Tuan Mat (2010) which finds that environmental uncertainty (competitive intensity) has a positive association to the strategic orientation of an organisation. Explained in line with the organic and mechanistic typologies of organisational structure (Burns & Stalker, 1961), this study also supports Gibbons & O'Connor (2005) who found that organic structured firms tend to follow a strategic process that is incremental and emergent, strategic process elements that characterise prospector type of strategy.

For the prospector strategy type of companies, there were evidence of dynamic competition, need to respond swiftly to market needs, and a wide range of environmental and market information, evidence that lends support to the notion that organisations would align their strategic orientation to the environment uncertainty as a way of keeping competitive (Tuan Mat, 2010).

Analysing the external environment of organisations, Porter (1980) noted that while a firm's relevant environment includes both social and economic forces, the major aspect of the environment is the industry(ies) in which a firm competes (cited in Hitt & Tyler, 1991, p. 330). Porter (1980) underlined further that the industry structure strongly influences the competitive rules in the industry and therefore firm's strategies. The measurement instrument for perceived environmental uncertainty in this study included mainly industry structure features, evidence that supports the literature that pinpoints these measures as core measures of environmental uncertainty in organisations (e.g., Porter, 1980; Rajagopalan et al., 1993; Hitt & Tyler, 1991; Brouthers et al., 2000; Tuan Mat, 2010).

Further strategic management research (cited in Brouthers et al., 2000, p.865) suggests that different levels of strategic aggressiveness are necessary: (1) at different levels of environmental turbulence; (2) to match different entrepreneurial styles; and (3) to address differing organisational structures (e.g., Naman & Slevin, 1993; Slevin & Covin, 1997).

These scholars suggest that higher levels of turbulence, entrepreneurial style and organisational structure will prompt higher levels of strategic aggressiveness from managers.

Explaining the findings from this study in these contexts, the findings from this study that higher environmental uncertainty leads to prospector strategy approach supports these studies.

Furthermore, taking into consideration the measurement instrument for perceived environmental uncertainty in this study, this study supports the three dimensional

contextualisation of what Naman & Slevin (1993) call 'Entrepreneurial style', which includes "the willingness to take business risks, the willingness to be proactive when competing with other firms and the willingness to innovate" (p.143). Finally, this study supports the notion that organisations would align their strategic focus to environmental uncertainty changes in order to remain competitive (Tuan Mat, 2010).

7.4.3 The association between Perceived Environmental Uncertainty and Organisational Structure

According to strategic literature, the extent to which an organisation achieves strategic effectiveness will depend upon the amount of fit between structural and environmental variables (e.g., Shenhar, 2001; Heiens & Pleshko, 2011). In other words, the nature of the external environment (i.e., whether certain or uncertain) will influence the organisational structure adopted by the firm. Consistent with that logic, this study expected some association between perceived environmental uncertainty and organisational structure. Concerning the association between perceived environmental uncertainty and organisational structure, this study hypothesised as below:

H2: Perceived higher environmental uncertainty leads to a more decentralised structure in Palestinian Companies

The findings from this present study suggest a partial support for **H2**. The regression coefficients (See Table 7.8) suggest that higher competitive intensity (**COMPINT**) contributes to higher decentralised organisational systems, but higher market turbulence (**MARKTURB**) does not account for higher decentralised organisational systems. A closer look at the statistical results for **MARKTURB** shows that the regression coefficient is only marginally insignificant at ($P = .08$), statistical evidence that might suggest that **MARKTURB** might actually be a predictor of decentralised organisational systems.

The empirical findings from this study provide support and contrasts to existing literature.

Jusoh (2010) suggests that perceived environmental uncertainty (PEU) has a negative significant influence on the use of internal processes measures. Jusoh (2010) identified three types of internal process measures, one of which she described as 'efficiency-related type of information', a description that fits the conceptual positioning of decentralisation in this study as a tool for efficient use of information. This present study contrasts with Jusoh (2010) who found that perceived environment uncertainty has a negative association to internal process measures.

Furthermore, this present study contrasts with Tuan Mat (2010) who found no significant association between environmental uncertainty (competitive intensity) and organisational structure. In other words, this study adds support to Waweru (2008) who found a strong positive relationship between intensity of competition and organisational structure.

Even for the **MARKTURB** dimension of perceived environmental uncertainty, which produced a marginally insignificant statistical evidence, possibly because of the low response achieved, this study tends to support the notion that in turbulent and dynamic environments organic structure are more suitable (Pugh et al., 1969; Child, 1972). This finding is in agreement with Hwang (2005) who argued that market turbulence did not influence formalisation.

Explaining the findings, this study indicates that when there is intense competition, organisations would have to embrace appropriate strategies of responding to the prevailing competition in order to survive in the marketplace. For that target, organisations favour a decentralised organisational system, as this would allow for swift decision making and implementation. This finding supports the evidence in Hwang (2005).

Given the evidence that explored companies assign much importance to non-financial performance (which reflects customer satisfaction, product/service quality, and development of new product/services), this approach of decentralised organisational system is also rational, as companies ensure that they keep pace with the level of competition and thereby achieve their non-financial performance targets.

For the financial performance target, which is also important to the organisations, the decentralised organisational system would enable the organisations to quickly and effectively process information and respond appropriately to the competitive developments in the industry, and thereby ensure that they meet their financial targets. This insight concerning impact on financial performance adds support to past literature (e.g., Jusoh, 2010) which suggests that perceived environmental uncertainty (PEU) is significantly associated with the use of financial measures.

Overall, by this decentralised approach organisations are also able to take advantage of opportunities. Furthermore, on the combined evidence for competitive intensity (**COMPINT**) and market turbulence (**MARKTURB**) (minimally insignificant), it seems appropriate to conclude that the state of the external environment of an organisation will exert considerable influence on the organisational structure that the organisation adopts, a conclusion that is in agreement with the traditional view of external environment of organisations (Pugh et al., 1969).

7.4.4 The association between Perceived Environmental Uncertainty and Organisational Performance

Contingency perspective on organisational performance suggests that the degree of environmental uncertainty that an organisation experiences will influence its performance (e.g. Chong & Chong, 1997; Ittner et al., 2003). In this study it was hypothesised that:

H3: Perceived higher environmental uncertainty would lead to increased use of non-financial performance by Palestinian Companies

According to performance literature, organisations that combine both financial and non-financial performance indicators would respond more appropriately to the dynamics of the business environment than those that focus only on financial performance indicators (Ittner et al., 2003; Hall, 2011). Further related literature (e.g., Chenhall & Morris, 1986; McManus, 2012) adds that managers need information that is related to the external environment, a future orientation approach that is highly served by non-financial performance information, they argued.

In this study, **H3** hypothesised thus (*Perceived higher environmental uncertainty would lead to increased use of non-financial performance by Palestinian Companies*). In discussing the results concerning the hypothesised association between the variables, it is important to pinpoint that explored companies accorded more importance to non-financial performance (with mean values ranging from 5.011 to 5.320) than financial performance (with mean values ranging from 4.537 to 4.914) (See Table 6.2). The statistical results from regression analyses (See Table 7.10) reflect a partial support. While **H3** is supported for the competitive intensity (**COMPINT**) dimension of perceived environmental uncertainty, it is not supported for the market turbulence (**MARKTURB**) dimension. To the contrary, statistical evidence in Table 7.10 indicates that although not significant in this study, increased market turbulence might lead to decreased non-financial performance.

From the statistical regression evidence, this study suggests that the increased emphasis on non-financial performance is driven by increasing competitive intensity. This finding supports the view in Jusoh (2010, p.1981) who underlines "the importance of perceived environmental uncertainty as a proxy for variables external to the organisation in explaining variations in the choice of and extent of performance measures" (see also Gordon & Narayanan, 1984; Chenhall & Morris, 1986). Thus, explored organisations are giving more attention to non-financial performance as a way of responding to competitive pressure.

As Table 6.2 shows, non-financial performance was measured by three variables (customer satisfaction, product/service quality and development of new products/services). Empirically, it means the explored companies are paying more attention to the three variables than the financial variables (return on investment, sales margin, capacity utilisation and market share) in their drive to address competitive pressure. Based on this non-financial performance evidence, this study supports the foundation that organisations which operate in conditions of high environmental uncertainty tend to be more market oriented (Lonial & Raju, 2001).

The insights from this study provide further support (and contrasts) to existing literature. The evidence of explored companies giving more attention to non-financial performance provides support to the existing literature (e.g., Ittner & Larcker, 1998; Govindarajan & Gupta, 1985; Kaplan & Norton, 1992, 1996; Jusoh, 2010). An additional support to these scholars is the evidence that customer satisfaction, product/service quality and development of new products/services are core indicators of non-financial performance.

Furthermore, this study supports the notion that when organisations prioritise non-financial performance, managers can better recognise changes in the business environment and effectively deal with them (e.g., Kaplan & Norton, 1996). Furthermore, combining the statistical evidence (factor and item means, and regression results), this study supports the

increasing notion that managers would better recognise changes in the environment and adopt effective adapting strategies if they give more attention to non-financial performance measurement tools (e.g., Kaplan & Norton, 1996; McManus, 2012).

Another support of this study to literature but on the point of financial performance, relates to Jusoh (2010) which argues that perceived environmental uncertainty is significantly associated with the use of financial performance. Further on the financial performance contexts, though not significant in this present study, the negative coefficients for both **COMPINT** and **MARKTURB** dimensions of organisational performance lend support to past studies that suggest a negative relationship of perceived environmental uncertainty to financial measure usage (e.g., Jusoh, 2010) which indicates that reliance on accounting performance measures is low under high environmental uncertainty and vice versa. Thus, as Govindarajan (1984) explained, organisations that face lower environmental uncertainty rely heavily on financial data for their performance evaluation.

Finally, the finding in this present study that market turbulence (**MARKTURB**) would not lead to increased focus on non-financial performance supports the evidence Köseoglu's (2013) study of Turkish hospitality industry.

7.4.5 The association between Perceived Environmental Uncertainty and Strategic Management Accounting Usage

It was proposed in this study that:

H4: *The perceived higher environmental uncertainty will lead to higher SMA-techniques usage in Palestinian Companies*

Strategic management literature (Brothers & Roozen, 1999) identified environmental analysis as one of several “strategic functions” that can be aided by information provided by strategic accounting system. Aligning to the evidence in that argument, this study expected H4 (the perceived higher environmental uncertainty will lead to higher SMA-techniques usage in Palestinian companies).

Based on the statistical results from this study, **H4** is not supported. Therefore, this study concludes that higher environmental uncertainties do not lead to higher usage of strategic management accounting techniques in Palestinian companies. To the contrary, statistical results suggest that higher levels of market turbulence (**MARKTURB**) would lead to lower usage of **SMAU** ($\beta = -.192b$; Sig. = **(.008)**; t-value = **-2.675**) & **MAU** ($\beta = -.269a$; Sig. = **(.000)**; t-value = **-3.652**).

The results from this study provide support as well as contrast to literature. This present study contrasts Mia (1993) who, in a review of literature, suggests that the level of **MAS** information would be significantly influenced by the perceived environmental uncertainty.

Further contrast of this present study is found in several other studies (e.g. Hoque & Hopper, 1997; Mia & Chenhall, 1994; Chong & Chong, 1997), who like Mia (1993), did not distinguish the dimensions of environmental uncertainty.

On the point of support to literature, given the analogy and empirical evidence in Hoque (2004) concerning the association between environmental uncertainty and organisational performance and potential indirect influence of SMA techniques, it seems right to conclude

that this present study's findings that environmental uncertainty does not influence **SMAU** connects to Hoque (2004). Furthermore, the empirical evidence for the competitive intensity (**COMPINT**) dimension of perceived environmental uncertainty tallies with evidence in Tuan Mat (2010) that reported non-significant results for the association between competitive intensity and management accounting practices (**MAP**).

Also, the evidence of significant negative association of perceived environmental uncertainty-market turbulence (**PEUMARKTURB**), **SMAU** supports the literature that managerial decision making may often fall short of purely rational model (e.g., Haley & Stumpf, 1989, cited in Busenitz & Barney, 1997, p.13).

To better explain the results of this study and in relation to the body of literature, the association of the perceived environmental uncertainty to the dimensions of **SMAU** were examined. Two positive associations were found. The data for this study suggests that in organisations with high perceived environmental uncertainty, high competitive intensity(**COMPINT**) leads to high Competitor Accounting Techniques Usage and high Customer Accounting Techniques Usage. Also, the results show that in organisations with high market turbulence (**MARKTURB**), the usage of Competitor Accounting Techniques was high, evidence that high perceived market turbulence associates with high competitor accounting usage. These dimensional evidences support recent literature in several ways: (1) organisations are paying due attention to these (customer and competitor) tools as core tools “for providing information for decision making involving the two main external factors which influence the strategic success of the firm” (Cinquini & Tenucci, 2010, p.243), and (2) the mean value for competitor cost assessment, which is above the mid-point of the scale, supports the notion that competitor information plays a major role in company decisions (Cinquini & Tenucci, 2010).

Combining the above two dimensional evidences, this study supports the notion of a strong orientation towards the need for competitor information. In this regard, this study does not only support Cinquini & Tenucci (2010) which studied Italian companies, but also other studies, for example, Guilding et al (2000) which explored UK, USA and New Zealand companies, Cravens & Guilding (2001) which explored USA companies, and Cadez & Guilding (2007) which explored Slovenian and Australian companies. These studies underline the importance of competitor position monitoring and performance appraisal.

Finally, both COMPINT and MARKTURB associate negatively to SMAU-Total. Significance is found only for SMAU -Costing and SMAU-Planning, Control and Performance Measurement (for COMPINT) and SMAU-Costing, SMAU- Planning, Control and Performance Measurement and SMAU-Decision Making (for MARKTURB).

Based on the overall evidence (**SMAU-Total + SMAU-Dimensions**), this study supports organisational scholars' view that managerial decision making often falls short of the purely rational model (e.g., Haley & Stumpf, 1989; Payne et al., 1992; Busenitz & Barney, 1997).

According to this view, under conditions of environmental uncertainty and complexity, more comprehensive and cautious decision making is not possible; therefore "biases and heuristics may provide an effective way to approximate the appropriate decisions" (Busenitz & Barney, 1997, p.10). In such conditions of environmental uncertainty and complexity, several factors prevent purely rational decision making, including (1) high cost of such decision making efforts (Simon, 1979), (2) information processing limits of decision makers (Abelson & Levy, 1985), (3) differences in decision making procedures adopted by managers (Shafer, 1986), and (4) differences in the values of decision makers (Payne et al., 1992).

7.4.6 The association between Organisational Technology and Strategic Management Accounting Usage

In the literature on contingency view of strategic management accounting techniques usage, there is evidence that the degree of organisational technology influences the extent of strategic management accounting usage (e.g. Haldma & Laats, 2002; Pondeville et al., 2013). To contribute to knowledge on this context, this study draws from evidence in existing literature and hypothesised that:

H5: Perceived higher level of information and communication technology would lead to higher SMA usage in Palestinian Companies

Empirically, **H5** is supported, and this study argues that higher levels of information and communication technology would lead to higher SMA usage.

The empirical evidence of a positive association between information and communication technology (**ICT**) and strategic management accounting usage (**SMAU**) in this present study provides support but also contrasts with the existing literature. On the point of support, evidence from this present study reinforces a contingency theory research of Estonian companies. In that study of management accounting systems (MAS), Haldma & Lääts (2002) found some evidence that changes in cost and management accounting practices are associated with changes in the technology level of explored companies.

When the results from this study were compared against the studies conducted by Hyvönen (and colleagues), both supportive and contrasting evidence were found. This study supports Hyvönen et al (2003) which explored profitability management systems (PMS) at the division headquarters and in one production site in Alfa , one of the world's largest paper producers which is listed in the New York Stock Exchange(NYSE). Also, this study supports Hyvönen's (2008) study of management accounting systems (MAS) in six Finnish companies.

Thus, both studies suggest that information technology (and manufacturing technology (Hyvönen, 2008) positively associate to PMS and MAS respectively. In fact, explaining her

findings, Hyvönen (2008) notes: "information provides a necessary platform for firms to develop their management accounting systems and strategy" (p.30), while Haldma & Lääts (2002) comment that as the level of technology progresses, accounting system tends to be more complex and complicated.

In their study of environmental management context, Pondeville et al (2013) hypothesised that environmental information system, which collects, processes and stores information for decision making, coordination and control (Laudon & Laudon, 2002), will be positively associated with the development of a (formal and informal) environmental management control system (EMCS). The results in Pondeville et al (2013) support the hypothesis, which is, there is a strong positive link between the level of environmental information system and the degree of environmental management control system, results that lend support to the findings in this present study which combine information and communication technology elements in its measurement. Finally, the evidence from this study finds support in Waweru et al (2004) who argue that the degree of technological advancement has a positive impact on the extent of change in management accounting practices.

Thus, this study contributes to the view that there are important links between information technology and MAS/MCS/PMS/MAPs/SMAU, a notion that is further supported by other MAS literature (e.g., Chapman & Chua, 2000; Ittner & Larcker, 2001; Chenhall, 2003) and also insights on the influence of advanced manufacturing technology (AMT) on management accounting practices (MAPs) (Tuan Mat, 2010).

However, On the other hand, as indicated earlier, the empirical evidence from this study provides a contrast to the study of Hyvönen et al (2003) who suggest that this notion of positive association between information technology and SMAU (PMS in their study) may not hold in all circumstance. This line of logic is also shared by researchers on management

accounting control (MAC) (e.g. Waweru, 2008; Hyvönen, 2007). They suggest a significant negative relationship between the level of technology and MAC; that is high reliance on technology may hinder MAC.

The inspection of the statistical evidence for all four variables used to measure the degree of information and communication technology showed that for all companies with high **SMAU** (between 4 and 7) each of the variables were scored at either of ranks 5, 6 and 7, results that suggest that this factor has a high positive association to the degree of **SMAU**. A closer examination of the variables showed that OT3 (the accounting information system is computer based) with almost 70% of the score (rank 6 and 7) reflecting **SMAU** levels of 5, 6 or 7.

To identify if any differences existed for each of the measurement variables based on the dimensions of **SMAU**, the statistics for companies with high **SMAU** (dimensions) (≥ 4) were examined. The statistical results showed a high level for each of the four variables for the **SMA**-Planning, Control and Performance Measurement, Strategic Decision Making, Customer Accounting and Competitor Accounting dimensions, thus warranting the conclusion that higher levels of information and communication technology (ICT) will lead to higher usage of these **SMAU** dimensions in explored Palestinian companies. From this evidence, explored Palestinian companies give much attention to ICT as a way of ensuring appropriate strategic decision making, customer orientation, competitive balance and costing, planning and control.

On the overall evidence (**SMAU**- Total and dimensional), it seems right to conclude that information technology will positively influence the degree of **SMAU**, evidence which adds to financial services industry study (Shanmugam & Guru, 2003) that technology is a core part of the operational activities of organisations. It is however also suggested that the magnitude

of influence might be influenced by the degree of organisational activity (Hyvönen et al., 2003) and the contextualisation of information and communication technology.

7.4.7 The association between Organisational Size and Strategic Management Accounting Usage

In the contingency literature, one factor that has been explored in relation to strategic management accounting usage is organisational size. Researchers suggest that the extent of strategic management accounting usage would depend on the organisation's size (e.g., Merchant, 1985; Gilding, 1999; Libby & Waterhouse, 1996). In this study, H6 was proposed:

H6: SMA Usage will be greater in larger than in smaller Palestinian Companies

Literature on the association of organisational size and strategic decision making suggests that "individuals who start their own organisations are somehow different from those that work in large organisations" (Busenitz & Barney, 1997, p.10). Further literature in this context describes entrepreneurs as risk-takers (Begley & Boyd, 1987; McGrath et al., 1992) while managers in large organisations are described as risk-averse (Amihud & Lev, 1981). Decision complexity literature points two reasons for this risk behaviour difference: (1) decisions made by entrepreneurs are made in a more uncertain environment than decisions made by managers in large organisations, and (2) the decision-making context facing entrepreneurs are usually more complex than that facing managers in large organisations (Covin & Slevin, 1991; Gartner et al., 1992).

Based on the above logic, it seems right to assume that organisations would be more risk-takers in highly uncertain environments. Strategic management accounting aids strategic decision making, and it is expected that strategic management accounting usage will be higher in highly uncertain environments.

Therefore, this study hypothesised as defined earlier: Strategic Management Accounting

Usage will be higher in larger than in smaller Palestinian companies (Gilding, 1999; Libby

& Waterhouse, 1996), a hypothetical argument that found support in this study, as summarised in Section 7.3.1. Thus, this study suggests that for Palestinian companies that fall within the population for this study, higher usage of SMA is positively influenced by the size of the organisation.

Explaining the findings from this study in relation to relevant studies in the domain of contingency perspective of strategic management accounting, this insight offers support to a number of studies, for example, Cadez & Guilding (2008) and Waweru (2008) who found that SMA and MAC (respectively) usage is positively associated with organisational size. Also, the evidence from this study supports Cinquini & Tenucci (2010) who suggest that company size is positively related to both SMA performance orientation and positioning variable of SMA usage. Furthermore, this study supports the evidence in the multinational organisational context study conducted by Pierce & O'Dea (1998) who explained their finding thus; multinational and large organisations have greater awareness of the substantial benefits of these techniques.

On the other hand, the findings from this present study contrasts the evidence in the study of Ezzamel (1990) which found no support for a positive association between organisational size measured by the number of employees with budget characteristics. Further contrast to this present study is found in Gosselin (1997) who argue that organisational size does not influence the adoption of activity management tool. Finally, this present study also contrasts the evidence in Hoque et al (2001) that suggests that business unit size (measured by sales revenue) is not an important predictor of the balanced scorecard usage.

As a reminder, this study also examined this relationship along the various SMAU dimensions. Section 7.3.1 reported a significant positive association between ORGSIZE and SMAU. The examination of the association based on the dimensions showed that ORGSIZE has a positive

and significant association to the Strategic Decision Making, Customer Accounting and Competitor Accounting dimensions of SMAU. These findings suggest that the larger the ORGSIZE, the higher the level of the SMAU- STRATDECMAKING, CUSTACCTG, and COMPACCTG. These findings lend support to the notion that as companies grow bigger; they tend to give increasing attention to strategic success of the firm and with key focus on customer and competitor information, in their strategic orientation (Cinquini & Tenicci, 2010) in several ways.

On the overall evidence for this hypothetical relationship, this study argues that larger organisations would have a higher need and use for strategic management accounting techniques, a finding that is logical, as organisational dynamics increase as organisation grow larger (e.g., Guilding, 1999). To effectively manage these increasing dynamics and adapt well to the environment, the need for effective processing of strategic information increases, a development that calls for increased use of strategic management accounting tools. The importance of the usage of SMA to enable larger organisations to meet their increasing challenges is underlined by the highly significant positive evidence found for SMAU (Total) but also importantly by the evidence for the Strategic Decision Making, Customer Accounting, and Competitor Accounting dimensions of SMA.

7.4.8 The association between Organisational Structure and Strategic Management Accounting Usage

According to management accounting literature, today's organisations need management accounting tools to enable them strategically adapt to rapidly changing organisational environment (e.g., Shields & McEwen, 1996; Foster & Swenson, 1997; Libby & Waterhouse, 1996; Baines & Langfield-Smith, 2003; Cavalluzo & Ittner, 2004; Abernethy & Bouwnes, 2005; Emsley et al., 2006). These streams of scholars argue that with the appropriate strategic management accounting tools, organisations can generate accurate and quality information

that allows decision makers to identify critical signals as to what is most important in their daily operational activities.

Organisational structure is one primary factor in establishing the overall control system within an organisation (Tuan Mat, 2010, p.38), and two core variables of organisational structure that have been identified in organisational theory are formalisation and centralisation. Believing that structural change is a means to helping organisations evolve (Tuan Mat, 2010).

This study combined relevant insight on these contexts (e.g. Cadez & Guilding, 2008; Hwang, 2005) concerning organisational structure and SMAU, and hypothesised that:

H7: The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of SMAU-techniques usage in Palestinian Companies

The statistical evidence from this study indicates that **H7** is not supported, meaning that if organisational structure is less formalised and or more decentralised, this will not necessarily influence the level of **SMAU**.

The study conducted by Abdel-Kader & Luther (2008) found that a decentralised organisational structure will lead to a sophisticated management accounting system (MAS), empirical evidence that does not find support in this study. The empirical evidence in this present study concerning the decentralisation factor is surprising, given previous evidence that firms confronted with high environmental uncertainty (as in this case, with high market turbulence influence on **SMAU**) would require a decentralised organisational structure and also a more sophisticated MAS (Abdel-Kader & Luther, 2008), as such a decentralised approach would aid quick and effective strategic decision making, a managerial decision making advantage that is further enhanced by sophisticated reports from MAS (Chong & Chong, 1997). A possible explanation of the outcome for this variable in this study might be that the dual culture and Islamic regulation features of the Palestinian economy are having a moderating/mediating effect on this relationship.

A further contrast of the findings from this study is found in the studies of Matejka & De Waegenare (2000) and Chenhall (2008). Matejka & De Waegenare (2000) note that centralised organisations are less likely to implement changes in their accounting systems than decentralised ones, while Chenhall (2008) comments that accounting systems are consistent with horizontal (or decentralised) organisations. Both groups of scholars are supported by evidence from management accounting practices (MAPs) in Estonian manufacturing companies which argues that MAPs are influenced by changes in the organisational structure. Further contrast is provided by Waweru's (2008) empirical evidence that there is a strong positive relationship between organisational structure (decentralisation) and management accounting control (MAC). The advantage of this decentralised structure is that it enables organisations identify strategic priorities that are customer-oriented and aid the target of developing process efficiency and continuous improvement (Chenhall, 2008).

An interesting contrast to this present study is found in the study of Verbeeten (2010) who found that decentralisation has a negative association with changes in the decision-influencing components of management accounting control systems (MACS).

On the other hand, Gordon & Narayanan (1984) show a close support for this present study. That study concludes that organisational structure was not significantly related to management accounting systems (MAS). Rather, they suggest that MAS and organisational structure are both functions of environmental uncertainty, a conclusion that found support in the study conducted by Moores & Mula (1993).

Examining the findings from this study relative to Hwang's (2005) investigation of the influence of formalisation and centralisation on respondents' satisfaction with store's performance in Korean context, interesting insights emerged. While the empirical insights in Hwang (2005) contrast the empirical evidence from this present study, it supports the logic

and conceptualised hypothesis for this present study. Thus, Hwang (2005) argues that less formalisation and more decentralisation would positively impact on respondents' satisfaction with store's performance.

As evident in Table 7.9, the statistical results for the dimensions of **SMAU** did not show any significance, neither for formalisation nor for decentralisation. Thus, a conclusion that organisational structure has no significant influence on **SMAU** in Palestine seems appropriate (See Gordon & Narayanan, 1984; Moores & Mula, 1993); a conclusion that contrasts with the view in Tuan Mat's (2010) investigation of management accounting practices (MAPs).

In line with team operations and process of empowerment literature, it seems Palestinian organisations follow the notion that it is not ideal to delegate responsibilities, as such empowerment places authority and responsibility at lower levels in the organisation. In addition to the decentralisation effect, this may harm organisational structure (formalisation) (Tuan Mat, 2010) and change employer and employee expectations, as well as increase access to relevant information (Scott & Tiessen, 1999), particularly management accounting information (Tuan Mat, 2010, p.40).

7.4.9 The association between Organisational Structure and Organisational Performance

To enhance their performance, organisations must embrace appropriate organisational structure (Hwang, 2005; Chenhall, 2008; Tuan Mat, 2010). In this bid to enhance the understanding of how organisational structure would influence a firm's ability to profitably satisfy the customer, increased research attention is being given to this issue. This study hypothesised that:

H8: *The perceived organisational structure (less formalisation, more decentralisation) would lead to a higher level of performance in Palestinian Companies*

Based on the statistical evidence from this study, **H8** is not supported, meaning that (less formalisation and more decentralisation) would not lead to a higher level of performance in Palestinian companies. The statistical results show two levels of marginally insignificant coefficients. At ($\beta = -.139$; Sig. = .074; t-value = 1.799), the t-statistics for decentralisation is marginally below the 1.9 benchmark. This result in itself suggests that more decentralisation may lead to lower levels of organisational performance (financial) of Palestinian companies. Also, at ($\beta = -.109$; Sig. = .092; t-value = 1.696), the t-statistics for formalisation is marginally below the benchmark of 1.9.

On the statistical evidence, this present study contrasts with a number of previous studies concerning the association between organisational structure and organisational performance. First, this present study contrasts with research on new business venture (Sandberg, 1986). Further contrast is found in Negandhi & Reimann (1972) who argue that decentralisation is positively related to effectiveness of Indian manufacturing companies, and also Tuan Mat (2010) who found that organisational structure positively influences organisational performance of Malaysian companies.

In the study of Korean retailing industry, Hwang (2005) examined respondents' satisfaction with store performance relative to (1) other stores in the industry and (2) key competitors. While that study hypothesised that formalisation and centralisation will negatively affect satisfaction with store performance relative (1) and (2), the empirical results suggest the contrary. The evidence for decentralisation in this present study can be interpreted as a support for Hwang (2005) concerning centralisation's influence on performance.

Statistically, marginal insignificance was achieved for both decentralisation and formalisation, though negative direction for formalisation (which also supports the direction of influence hypothesised in this study) and decentralisation. Based on these statistical results, it seems

very likely that (1) higher levels of decentralisation might lead to lower levels of organisational performance (financial), and (2) higher levels of formalisation might lead to lower levels of organisational performance (non-financial). Point (1) therefore contrasts the study of Tse (1991) which found that higher decentralisation would lead to higher financial performance. On the other hand, point (2) supports Wally & Baum (1994) who suggest inverse correlation between formalisation and performance, but contrasts Tse (1991) which suggests the opposite.

In addition to the above point that reminds of the marginal level of the statistical insignificance of coefficients achieved in this present study, it is also reminded, as pinpointed in Section 7.4.11, which discusses the association between business/organisational strategy (prospector) and decentralisation, that the statistics for prospector strategy type of companies when examined together with the relevant financial performance statistics, showed that the prospector strategy combined with a fair level of decentralisation may contribute to enhancing financial performance. This insight seems to suggest that decentralisation might indirectly enhance organisational performance, through the strategy (prospector) factor.

The above conclusion of a likelihood indirect influence of decentralisation on organisational performance connects to contingency insights concerning market orientation adoption (e.g. Jaworski & Kohli, 1990; Harris, 2000; Pelham & Wilson, 1996). The explanation for this indirect influence is that when organisations decentralise, they respond quickly and make decisions that aid the strategic focus of the organisation in responding to changes in the marketplace.

7.4.10 The association between Organisational/Business Strategy and Strategic Management Accounting Usage

According to contingency studies investigating the use of managerial accounting systems (e.g., Govindarajan & Gupta, 1985; Cadez & Guilding, 2008; Cinquinin & tenucci, 2010; Pondeville et al., 2013), a firm's strategy influences its nature and extent of (strategic) management accounting usage. Following evidence in existing literature (See Section 4.3.3.1), another hypothesis for this study stipulates that:

H9: SMA Techniques would be more widely adopted in prospector than defender Palestinian Companies

In a strategic management perspective, Brouthers & Roozen (1999) identified “strategic functions” that can be aided by information provided by a strategic accounting system. These “strategic functions”, they noted, include, amongst others, environmental analysis and “strategic alternative selection” (cited in Cinquini & Tenucci, 2010, p.230). It would seem logical therefore to expect that strategic accounting system of an organisation would be influenced by these strategic functions (e.g. Pondeville et al., 2013). On that logic, this study hypothesised that strategic management accounting usage would be influenced by the strategy (prospector or defender) of an organisation. Specifically, **H9** expects **SMA** Techniques would be more widely adopted in prospector than defender Palestinian companies.

The examination of the data for organisational strategy, which is a categorical variable, to identify the correlation to **SMAU** (Total), showed that prospector type companies had a higher usage of strategic management accounting techniques than defender type companies.

For prospector type companies, the mean value for **SMAU** (total) was 4.641. With this evidence, **H9** (SMA Techniques would be more widely adopted in prospector than defender Palestinian companies) is supported, evidence that lends support to the study of Cadez & Guilding (2008) that suggests that SMA usage is positively associated with adopting a prospector strategy. Explained in line with innovation and learning literature, the findings

from this present study connects to the view that the use of innovation and learning measures and balanced scorecard measures would be positively influenced by prospector strategy type of behaviour (e.g., Jusoh, 2010). Further, this present study supports the logic in Jusoh (2010) that business strategy sets the need for type of information. Therefore, since prospector strategy is more flexible, firms that follow this strategy would prefer to use a broader range of information.

Explaining the findings from this study in line with environmental management control systems evidence, this study finds support in Pondeville et al. (2013) which suggests that a firm's strategic posture has a positive link to its management control systems usage, a finding which as they explained, stems from the fact that corporate environmental proactivity would drive the development of environmental management control system (EMCS).

To identify whether there were any differences for the **SMAU** dimensions, the statistics for each individual dimension was examined. The results showed that prospector type companies gave much attention to four SMAU dimensions and with mean values above 4.600, namely SMAU-Planning, Control and Performance Measurement (4.601), SMAU-Strategic Decision Making (4.712), SMAU-Competitor Accounting (4.689) and SMAU-Customer Accounting (4.734), statistical evidences that are much higher than the results for 'defender' type companies. These findings support some findings in Cinquini & Tenucci (2010). Further support of Cinquini & Tenucci (2010) is presented in this present study: 'defender' type companies give more attention to the Costing dimension of SMAU. For 'defender' type companies the factor means were 4.759 (SMAU-Costing) and 4.467 (SMAU-Planning, Control and Performance Measurement).

Overall, the findings for the association between organisational strategy and SMAU (total and dimensional) largely support previous research that suggests that 'prospector' type companies tend to need more market information than 'defender' type companies (Shortel & Zajack, 1990;

Smith et al., 1989; Cinquini & Tenucci, 2010). It must however be noted that SMAU-Planning, Control and Performance Measurement seems to be highly used by both 'prospector' (at factor mean of 4.601) and 'defender' (at factor mean of 4.759) type Palestinian companies.

On this evidence this study not only supports, but also contrasts past research (e.g., Guilding, 1999; Cinquini & Tenucci (2010): not only 'defender' type companies but also 'prospector' type companies make greater usage of SMAU-Costing techniques, evidence that suggests that both type of companies value the need for efficiency and cost control.

Moreover, the findings from this present study concerning the association organisational strategy and SMA-techniques-Usage lend support to the view of a "loose coupling" between SMA-technique typology and organisational strategy (Cinquini & Tenucci, 2010, p.250; Gosselin, 1997; Langfield-Smith, 2007). This present study thus supports the view expressed in the aforementioned studies which suggests that the same SMA-technique can support different strategic approaches. On the statistical evidence from this present study, it seems right to agree with Cinquini & Tenucci (2010) that different strategies may not clearly imply different orientations in the adoption of SMA tools, therefore, they argue that more significant determinants must be ascertained by exploring other variables.

Finally, based on the statistical evidence, this present study suggests that companies would use aspects of different strategic typologies in different measures (Langfield-Smith, 2007) due to the variability of external environment and company strategy (Cinquini & Tenucci, 2010).

7.4.11 The association between Organisational/Business Strategy and Organisational Structure

Previous studies have explored the relationship between organisational strategy and organisational structure (e.g., Covin & Slevin, 1989; Gibbons & O'Connor, 2005). This study followed research precedence (e.g., Miller, 1987; Opute, 2009) and conceptualised organisational structure to include formalisation and decentralisation. According to further relevant literature (Burns & Stalker, 1961) that classifies organisational structure as either mechanistic or organic, organisations that embrace organic structure tend to encourage flexibility and decentralised decision making, and such tendencies also influence the strategic orientation of firms (Glaister et al., 2008). Combining these organisational strategy and organisational structure notions, this study hypothesised that:

H10: *Prospector -strategy would lead to more decentralised structure than defender-strategy among Palestinian Companies*

According to Mintzberg (1979), organisational effectiveness results when there is a match between organisation's strategy and its structure. The statistical findings for the association between prospector/defender strategy and decentralised organisational structure were summarised in section 7.3.3.

Empirically, this study found that firms that follow the prospector type of strategy exhibit characteristics of decentralisation than defender type of companies. For prospector strategy type of companies, the mean value for decentralisation was 5.231, while that for defender strategy type of companies was 3.187. Thus, **H10** is supported, and this study argues that prospector-strategy would lead to more decentralised structure than defender-strategy.

Waweru (2008) found no significant positive relationship between strategy (low cost) and decentralisation. The findings in this present study connect logically to why (low cost) strategy would be positively associated to centralisation and not decentralisation.

Furthermore, the insight from this present study supports the studies of Hwang (2005) and Kohli & Jaworski (1990) which argued that there is a positive relationship between organisational strategy and organisational structure. It must however be borne in mind that these scholars explored the association between market orientation strategy and organisational structure. Further on this market orientation strategy context, this present study contrasts Selnes et al (1996) who argued that neither centralisation nor formalisation is significantly related to market orientation in Scandinavian companies.

Empirically, the finding in this present study makes sense: prospector companies are faced with constant change in their product/service range, dynamic competition, wide range of environmental and market information and enormous amount of pressure to respond to market needs, in order to remain competitive in the market, unlike the case for defender type companies. Therefore, prospector type companies value the need to act swiftly, process information quickly and respond to changing market circumstances, an organisational approach that requires a smooth and swift decision making process that is served by a decentralised structure.

Considering the empirical evidence from this study about the influence of national culture and Islamic Sharia regulation (See Section 7.4.1) and perceived environmental uncertainty (See Section 7.4.4) on ensuring non-financial performance, which has a critical importance to the explored organisations, this empirical evidence of a positive association between prospector strategy and decentralisation seems logical.

When the decentralisation statistics for prospector strategy type of companies were examined together with the relevant financial performance statistics, the results suggested that the prospector strategy driven decentralisation contributed to enhancing financial performance.

7.4.12 The association between Organisational/Business Strategy and Organisational Performance

According to existing literature (e.g., Dent, 1990; Govindarajan & Shank, 1992; Hope & Hope, 1995), companies with different operating environments will differ in their strategic initiative, and may therefore require different management information systems, in order to enhance organisational performance. Based on this notion, it seems logical to assume that the type of organisational strategy that a firm follows will influence its organisational performance (Chong & Chong, 1997; Kwock, 1999; Davila, 2000; Köseoglu et al., 2013). As explained in Section 4.3.3.3, this study hypothesised that:

H11: Prospector strategy will lead to higher performance than defender strategy in Palestinian Companies

The statistical evidence for organisational performance (See Section 7.3.2) suggests that in Palestinian companies' prospector strategy will lead to higher organisational performance but only for the non-financial dimension of performance. Explaining this finding, it means that in their effort to maintain their prospector strategy target, explored companies give much emphasis to the non-financial performance dimensions.

Thus, while ensuring that they achieve good levels of market share, return on investment, capacity utilisation and sales margin, they perceive the non-financial performance of customer satisfaction, product/service quality and development of new products/services are central to the target of recognising and responding well to the changes in the business environment (Kaplan & Norton, 1996).

Explained further in line with relevant literature, the emphasis of non-financial criteria over financial criteria is more prominent in prospector firms than in defender firms because it is very important for prospector firms to know what the customer wants and for the firm to produce and market new products/services (Ittner et al., 1997; Hoque, 2004), a rationale that

is congruent with the logic that firms must identify relevant performance metrics that are consistent with the strategy that is being followed (Hoque, 2004).

Empirically, the evidence of significant positive association between prospector strategy and non-financial performance reinforces existing literature. It supports the Ittner et al (1997) findings that greater weight was placed on non-financial performance measures in firms following an 'innovation oriented' 'prospector' strategy than in firms following a 'defender' strategy.

Furthermore, based on that statistical evidence, this study also supports the view that the use of non-financial measures is a core antecedent of organisational performance (Hoque, 2004).

Furthermore, this evidence contributes to the view that organisations, due to their circumstances might prioritise non-financial than financial performance to enable them achieve the interest of higher customer service (Köseoglu, 2013).

Having said that, the evidence from this present study concerning H11 (*Prospector strategy will lead to higher performance than defender strategy in Palestinian Companies*) contrasts with Köseoglu (2013) who did not find a significant difference between the results for defender and prospector strategy type companies.

Finally, and furthermore comparative to Hoque (2004) who examined both direct and indirect effects of strategic priorities on organisational performance, this present study provides support and contradiction. On the point of direct effect, this study found a significant effect of strategic priority on organisational performance (prospector strategy will lead to higher performance than defender strategy). This direct effect evidence is a contrast to Hoque (2004). For the indirect effect, though not measured in this study, on the evidence of the inspection of the statistics for both financial and non-financial performance dimension, it seems right to conclude that this present study supports Hoque's (2004) findings of a significant indirect

effect of strategic priority on overall organisational performance acting through the use of non-financial performance.

7.4.13 The association between Strategic Management Accounting Usage and Organisational Performance

The literature indicates that there is an association between management accounting practices and organisational performance (e.g. Chenhall & Langfield-Smith, 1998; Ittner & Larcker, 1995; Perera et al., 1997). This contingency perspective of management accounting suggests that if organisations effectively align their MAS to their organisational and environmental circumstances, they are likely to perform better (Chenhall, 2003, cited in Tuan Mat, 2010). In this study of SMAU in Palestinian firms, the final hypothesis is that:

H12: Greater SMA usage is positively associated with performance in Palestinian Companies

Strategic management literature (Brouthers & Roozen, 1999) identified “strategic functions” than would benefit from strategic accounting information (See Section 7.4.10). In order to optimize its strategic role, such information should be both internal and external; future oriented and be mostly non-financial. The evidence from this study indicates that explored companies give more attention to non-financial than financial performance metrics, an evidence that supports the importance underlined by Routhers & Roozen (1999). Statistically (See Table 7.10), strategic management accounting usage (SMAU) has a significant positive association to organisational performance (**ORGPERF-Non-Financial**). On this evidence, **H12** is supported and this study argues that greater SMA usage will lead to increased non-financial performance.

The first major support for the findings in this present study is found in Perera et al (1997) who found a positive association between the various forms of management accounting practices (MAPs) and the use of non-financial measures. In a more recent research, Laitinen

(2006) supports Perera et al (1997) and suggests that large changes in MAS may be associated with good performance.

Believing the theoretical foundation that organisations that implement new MAS would improve their decision making and firm performance, Tuan Mat (2010) expected a positive association between management accounting practices (MAP) and organisational performance, a proposition that was supported by empirical data for that study. Thus, this present study also supports Tuan Mat (2010). This positive association is also reported in Cadez & Guilding's (2008) examination of how SMA usage affects organisational performance, and in the study of the relationship between **MAS** and organisational performance (e.g. Govindarajan & Gupta, 1985; Simons, 1987; Kaplan & Norton, 1996).

Another support for this study is found in Baines & Langfield-Smith (2003) who reported that a greater reliance on non-financial accounting information enhanced organisational performance; and Chenhall & Langfield-Smith (1998) who found that greater use of advanced management accounting practices (AMAP) enables high organisational performance.

It must be noted that Baines & Langfield-Smith (2003) qualifies the relationship of MAS to performance as indirect, and suggests that other organisational factors feed into this influence, a view that find support in further research (e.g. Haldma & Lääts, 2002; Hoque, 2004; Hyvönen, 2007; Mia & Clarke, 1999), who maintain that organisational performance outcomes depend on the extent of fit between the use of organisational systems and situational factors. A similar view is shared by Govindarajan & Gupta (1985) and Kaplan & Norton (1996) who argue that the positive association of **MAS** to performance is indirectly influenced by the organisational strategy.

Thus, the explored companies are designing the management accounting and control systems to support their goal of developing customer satisfaction (e.g., Ittner et al., 1997; Simons,

1990) and coping with product/service quality needs. This empirical evidence supports the view in Hoque (2005) that, unlike the traditional performance measures (financial), non-financial performance measures may be a more satisfactory reflection of firm performance in today's ever changing business environment (see also, Hoque et al., 2001).

Furthermore, the evidence from this present study that greater SMA usage will lead to increased non-financial performance tallies with the findings in Baines & Langfield-Smith (2003) that suggests a significant association of organisational performance with increased reliance on non-financial management accounting information, a logic which connects with further logic that firms are embracing more non-financial performance measures as this enables them cope well with environmental changes and enables them determine and evaluate progress towards firms goals, and affirm achievement of performance (Kaplan & Norton, 1996).

An inspection of the statistics for the dimensions of SMAU showed that except for SMAU-Costing, all other SMAU dimensions showed statistical results that support the conclusion that the greater the SMA usage the greater the organisational performance (non-financial in this case). This dimensional evidence lends support to Perera et al (1997) who suggest a positive association between all forms of MAPs and the use of non-financial measures.

It is therefore concluded here that the explored Palestinian companies are making effective use of the SMA techniques to improve their performance. Taking into consideration the empirical evidence from a number of other contingency factors, it can be argued that the achieved performance outcome is explained by the fact that the explored organisations are fitting their SMA usage and levels with their environmental and organisational circumstances.

7.5 Conclusion to the Chapter

Figure 7.6 (in page 239) summarises the empirical conclusions from this study that examined a contingency model of strategic management accounting usage (SMAU) and performance (dimensions, magnitude and antecedents) in the Palestinian context. As evident in that Figure (7.6), SMAU is significantly influenced by business (organisational) strategy, company (organisational) size, and organisational technology. How much influence these factors have on SMAU (and dimensions) depends on the features of these factors, as explained in the relevant sections of chapter 7.

Also, Figure 7.6 presents the empirical evidence of factors that explain variance in the nature and level of organisational performance. Figure 7.6 shows that whether and how much of influence perceived environmental uncertainty, strategic management accounting usage (SMAU) and business (organisational) strategy would individually have on the dimensions of organisational performance will depend on the feature of these three factors. As empirically too, as was the case for SMAU, organisational structure is not a significant antecedent of organisational performance.

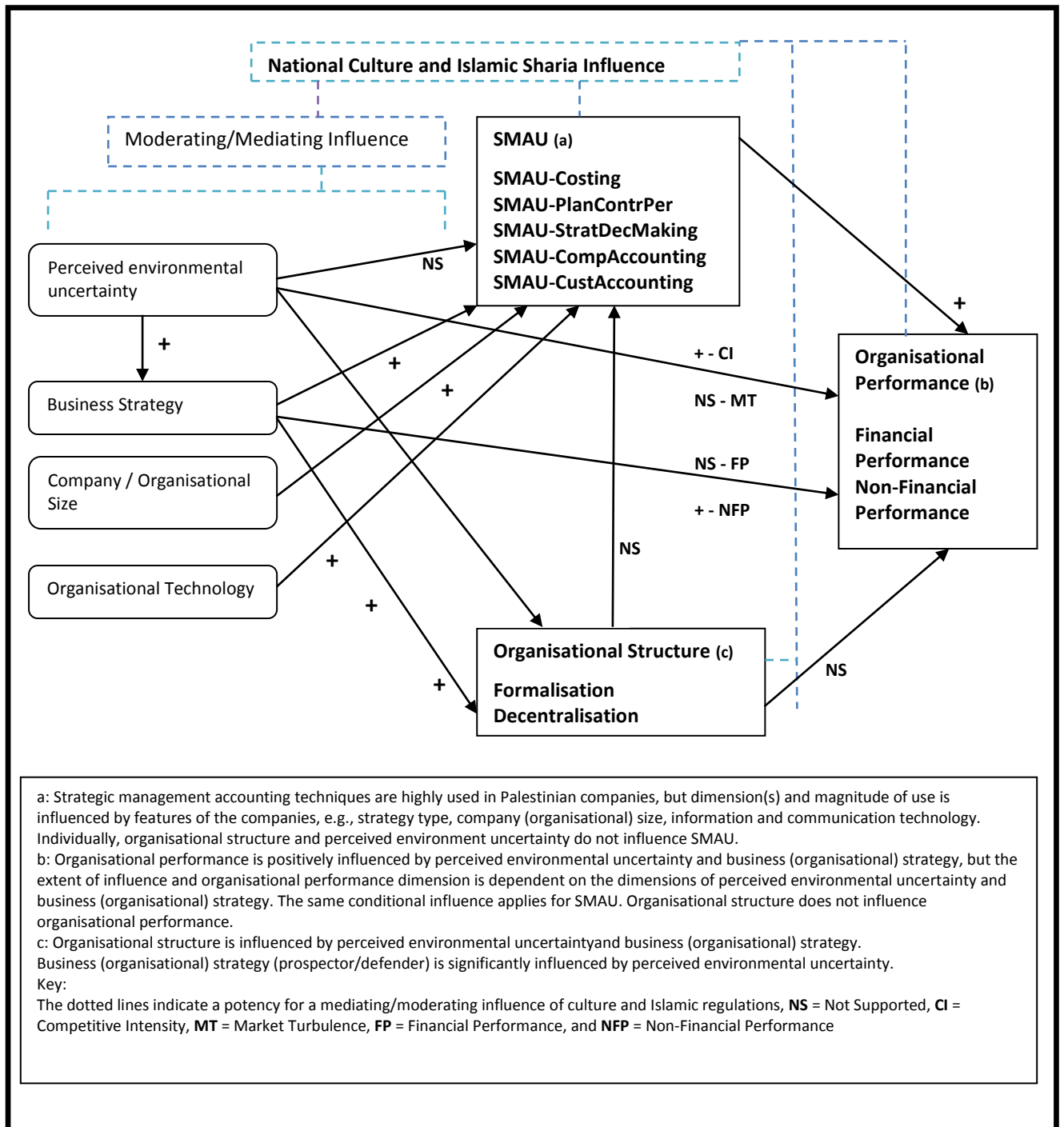
Further on the point of organisational structure, but as a dependent variable, Figure 7.6 pinpoints perceived environmental uncertainty and business (organisational) strategy as core predicting factors of the nature and extent of organisational structure in the explored companies.

Finally, Figure 7.6 shows that perceived environmental uncertainty significantly influences the type of strategy that an organisation follows.

In discussing these findings, the supports and contradictions to existing literature were pinpointed, towards showing how the empirical evidence from this study fits into the stream of literature.

Further, in this regards, chapter 8 presents the main conclusions from this study, as well as underline the theoretical and managerial implications of this study. To conclude, the limitations of this study are pinpointed, and thereafter, the directions for future research are outlined.

Figure 7.6: Graphical Presentation of Contingency Perspective of SMA Usage (and Organisational Performance) in Palestinian Companies



8. The study Conclusions, Contributions, Limitations and Future Research Directions

8.1 Introduction

In Chapter 7 the findings from this study were discussed, underlining the arguments that emerged from this study, and also pinpointing similarities and contradictions to the body of literature. In this Chapter (Eight) the main conclusions from this study are pinpointed. In doing this, this Chapter is presented as follows:

1. The Study Conclusions,
2. The Contributions of the Study,
3. The limitations of the Study, and
4. The Directions for Future Research.

8.2 The Study Conclusions

In pinpointing the conclusions from this study, the research questions for this study (See Section 1.4, p. 5), which are summarised below, are used as a guide. It is also helpful to consider the ‘conceptual framework to the research’ in conjunction with the research questions to assist understanding of the relationships between the questions (See Figure 4.1, chapter 4, p. 80).

1. What SMA-techniques do Palestinian Companies use and how do these influence their organisational performance?
2. What influence do the contingency factors have on the choice of these SMA-techniques?
3. What contingency factors influence the organisational performance of Palestinian Companies?
4. What influence does organisational strategy have on organisational structure and organisational performance?
5. What influence does perceived environmental uncertainty have on organisational structure, organisational performance and organisation strategy?
6. What influence does organisational structure have on SMA techniques and organisational performance?

Research Question 1

The Use of SMA Techniques and Influence on Organisational Performance

Based on the statistical evidence that emerged from the data for this study, the explored companies strongly use strategic management accounting techniques (16 SMA techniques are measured in this study. See Table 5.8, p. 137). The majority of the respondents underline this point in their responses (See Table 6.10, p. 171) for the five conceptualised dimensions (costing, planning, control and performance measurement, strategic decision making, competitor accounting and customer accounting). It therefore seems right to conclude further that the Palestinian companies are valuing the importance of these SMA techniques as tools for strategic orientation. The explored companies show a high usage of SMA techniques for all variables except for the SMAU-Customer Accounting variables (See Table 6.10, p. 171). Thus, this study underlines the importance of using these SMA tools for enhancing strategic orientation.

Research Question 2

Contingency Factors and Influence on the Choice of SMA Techniques

This study explored five contingency factors which are Perceived Environmental Uncertainty (market turbulence and competitive intensity), Organisational Strategy (prospector and defender), Technology, Organisational Size and Organisational Structure (formalisation and decentralisation).

This study concludes that the degree of environmental uncertainty that a company faces influences the nature and extent of strategic management accounting techniques. This is particularly the case for environmental uncertainty of market turbulence characteristics. This study suggests that market turbulence has a significant negative influence on three SMAU dimensions (SMAU-Costing, SMAU-Planning, Control and Performance Measurement, and SMAU-Strategic Decision Making). On the other hand, this study concludes that higher levels

of Competitive Intensity would associate negatively to SMAU-Planning, Control and Performance Measurement, and SMAU-Strategic Decision Making.

This study also concludes that organisational technology is positively associated to SMAU.

Thus, organisations that show high levels of information and communication technology show high need for the use of the strategic management accounting techniques. This is true for the SMAU-total model as well as the individual dimensions of SMAU.

This study concludes that organisational size and organisational strategy influence the use of strategic management accounting techniques. This means that larger Palestinian companies will have greater need for higher and dimensional usage of strategic management accounting techniques. Similarly, Palestinian companies that pursue prospector type strategies have more need for SMAU than defender type companies.

Research Question 3

Contingency Factors that Influence the Organisational Performance of Palestinian Companies

This study explored two dimensions of organisational performance (financial and non-financial performance). While financial and non-financial performance are considered in the performance orientation of the explored organisations, non-financial performance seems to weigh more heavily in their performance orientation. On this performance point, this study concludes that non-financial performance is strongly positively influenced by all levels of SMA techniques and by competitive intensity dimension of perceived environmental uncertainty. This means that in the explored Palestinian companies higher levels of SMAU and competitive intensity would lead to higher emphasis on non-financial performance.

Furthermore, based on the marginally insignificant coefficient, it seems too that decentralised decision making system might negatively influence financial performance (See Figure 7.2, p. 194).

Research Question 4

The Influence of Organisational Strategy on Organisational Structure and Organisational Performance

This study concludes that prospector type companies are typically proactive and tend to be less centralised in their decision making process, and are less formalistic in their organisational patterns. The reverse is the case for defender type companies where companies with such characteristics favour centralised decision making and formalised organisational patterns.

Furthermore, this study concludes that organisational strategy influences the nature and level of organisational performance. From the data for this study, prospector strategy will lead to higher non-financial performance.

Research Question 5

The Influence of Perceived Environmental Uncertainty on Organisational Structure, Organisational Performance and Organisational Strategy

This study concludes that perceived environmental uncertainty-competitive intensity is positively associate to organisational structure-decentralisation, which means that when there is high competitive intensity, explored Palestinian companies tend to use decentralised decision making strategies to respond to the environmental challenges. On the other hand, it seems, by the marginally insignificant statistical evidence, that perceived environmental uncertainty-market turbulence might negatively influence organisational structure-decentralisation.

Concerning organisational performance, this study concludes that when perceived environmental uncertainty (Competitive intensity) is high, explored Palestinian companies give much attention to non-financial performance. Moreover, this study concludes that the level of perceived environmental uncertainty influences the strategic priority (defender/prospector). In other words, whether explored Palestinian companies pursue

prospector or defender type strategies depends on their environmental circumstances. Specifically, this study concludes that explored Palestinian companies with high perceived competitive intensity and market turbulence showed features of prospector type strategy, while organisations where perceived competitive intensity and market turbulence were low, reflected features of defender type strategy. Thus, where the perceived environmental uncertainty is high, organisations would follow the prospector strategy type.

Research Question 6

The Influence of Organisation Structure on SMA Techniques and Organisational Performance

Statistically, no significant association was found between both dimensions of organisational structure (formalisation and decentralisation) and SMA usage on the one hand, as well as between both dimensions of organisational structure and organisational performance (both financial and non-financial). Having said this, a closer examination of the statistical evidence for organisational structure - formalisations shows marginally insignificant coefficient for organisational performance (non-financial), evidence that might tend to suggest that formalisation might negatively associate to non-financial performance (See Figure 7.3, p. 195). All evidence put together, no conclusions can be drawn about the influence of organisational structure on SMAU and on organisational performance.

8.3 The Contributions of the Study

The insights from this study contribute to knowledge in several ways, and these are discussed under theoretical contribution (Section 8.3.1) and managerial contributions (Section 8.3.2).

8.3.1 The Theoretical Contributions

This study makes several contributions to theoretical foundations relating to the contingency perspective of the organisation concerning strategic dynamics in organisations.

8.3.1.1 Strategic Decision Making Literature

This study of the contingency perspective of strategic management accounting usage provides insights that enhance the understanding of the effects of context. First, this study contributes to the theoretical foundation about the important role strategic management accounting plays in the strategic decision making process of organisations.

This study supports other studies that have underlined the importance of providing strategic management accounting information (especially information relating to Strategic Decision Making, Competitor Accounting and Customer Accounting) towards good strategic decision making (e.g. Cadez & Guilding, 2008; Cinquini & Tenucci, 2010).

Further in this connection of the importance of these three dimensions of SMAU, this study also contributes to the literature about the importance of these strategic management accounting information in the 'Prospector Strategy' drive of organisations (e.g., Cadez & Guilding, 2008; Guilding, 1999; Cinquini & Tenucci, 2010).

On the other hand, the evidence for 'defender' type companies shows that such companies give more attention to the Costing dimension of SMAU than 'prospector' type companies. These combined evidences for 'prospector' and 'defender' type companies from this study contribute to the view that 'prospectors' may need more market information than 'defenders' (Shortel & Zajack, 1990; Smith et al., 1989; Cinquinin & Tenucci, 2010).

8.3.1.2 Contingency Factors of Strategic Management Accounting Usage Literature

This study makes several contributions to the literature on the contingency factors of strategic management accounting usage. First, this study contributes to the rational/non-rationality view concerning decision making under conditions of environmental uncertainty and complexity. In this connection, this study supports and extends studies that suggest that under conditions of environmental uncertainty and complexity, managers may often not

follow a rational model in their decision making (e.g., Haley & Stumpf, 1989; Payne et al., 1992; Busenitz & Barney, 1997). Rather, in such circumstances, managerial decision making may be influenced by several factors (See Section 7.4.5).

This study also contributes to literature concerning the influence of perceived environmental uncertainty on organisational dynamics. In this context, this study does not only enhance the understanding of how both competitive intensity and market turbulence would shape the organisational dynamics, but also contributes to the understanding of the contingencies that might have substantial role. For example, in the study of Malaysian companies, Jusoh (2010) comments thus: "the overall conclusion to be drawn from this empirical evidence is that perceived environmental uncertainty exhibits a limited influence on the use of multiple performance measures. Again, this means that information that is broad scope and external to the firms are not that important to the firms given the low uncertainty of the Malaysian environment. It can also be concluded that business strategy sets the need for types of information in terms of performance measures" (p.1982).

This present study argues that perceived environmental uncertainty does have a strong influence on the use of multiple performance; however, the degree of emphasis attached to the performance being influenced by several other factors like organisational/business strategy.

By this evidence too, business strategy may not be the major driver of the information needed, rather the external force (environmental uncertainty) is the major determinant of information need, and as a matter of fact, perceived environmental uncertainty influences the strategic orientation. Finally, perceived environmental uncertainty (competitive intensity) positively influences the use of decentralised organisational system, an approach which is critical towards ensuring quick processing of information so that organisations can adapt adequately to environmental changes and meet performance targets.

This study also contributes to the growing knowledge on the influence of organisational technology on SMAU. In this connection, this study indicates that information and communication technology has a strong positive association to the degree of SMAU. Also, this study concludes that company (organisational) size influences the extent of SMAU, and especially on how companies drive for strategic success and ensure customer and competitor orientation.

Another area where this study contributes to the contingency perspective of strategic management accounting literature concerns how organisations can manage the organisational structure factors (formalisation and decentralisation). In this regard, this study contributes to the notion that while these organisational structure factors might shape SMA usage and dimensions, (and organisational performance - see performance literature below); maximum fit to SMA usage and dimensions would be best achieved, if considered along with other contingency factors that might exert indirect influence (Hwang, 2005; Moores & Mula, 1993; Kohli & Jaworski, 1990).

8.3.1.3 Performance Literature

This study contributes to the literature on performance and performance measurement in organisations in several ways. First, it contributes concerning the importance of firms not only looking at financial performance but also non-financial performance (e.g., Bisbe & Malagueno, 2012; Gimbert et al., 2010; Ittner, et al., 2003; Hall, 2011).

Empirically, this study suggests that the emphasis placed on the use of the financial and non-financial dimensions of performance would depend on the contingencies in the explored context (industrial and national). For example, this study argues that while higher environmental uncertainty might lead to increased focus on non-financial performance, the increased use is explained more by increased competitive intensity than market turbulence.

Further contribution to literature is the evidence that in Islamic context, national culture and Islamic Sharia regulations may be a driving force for increased emphasis on non-financial performance features, a situation where the customers and general public welfare takes the priority. The findings from this study contribute to the literature on indirect association between antecedents (e.g. SMA Usage and decentralisation and/or formalisation) on organisational performance (e.g. Hoque, 2004; Baines & Langfield-Smith, 2003) and the increasing notion that organisational performance outcomes depend on the extent of fit between the use of organisational systems and situational factors (e.g. Haldma & Lääts, 2002; Hoque, 2004; Hyvönen, 2007; Govindarajan & Gupta, 1985; Mia & Clarke, 1999; Kaplan & Norton, 1996).

Furthermore, this study contributes to the increasing evidence that organisations are increasingly paying more attention to non-financial performance than financial performance (e.g., Ittner & Larcker, 1998; Ittner et al., 1997; Govindarajan & Gupta, 1985; Kaplan & Norton, 1992, 1996). In this connection, this study supports the notion that when organisations prioritise non-financial performance, managers can better recognise changes in the business environment and effectively deal with them (e.g., Kaplan & Norton, 1996).

8.3.2 The Managerial Contributions

This study offers several contributions to practitioners in the explored theoretical, geographical and industrial contexts.

The primary aim of business entities is to profitably satisfy their customers. Therefore, the managerial contribution of this study is commenced by pinpointing the organisational performance outcome and the contingency insights that contributed to the outcome.

Managers are reminded of the importance of including both financial and non-financial indicators in their organisational performance evaluation. In this connection too, managers are also reminded that whether a higher importance should be attached to the financial or non-financial performance will depend on the contingency dynamics (internal and external) of the company (e.g. organisational strategy, organisational structure, strategic management accounting techniques in use, and the nature and degree of environmental uncertainty), prevailing national culture and Islamic Sharia influence.

Attention is drawn to the fact that competitive intensity dimension of environmental uncertainty, organisational strategy and strategic management accounting usage have strong positive association with non-financial performance. It seems too that formalisation might exert a negative influence on non-financial performance. Attention is also drawn to the fact that decentralisation might exert a negative influence on financial performance.

Concerning the importance of using strategic management accounting techniques, managers' attention is drawn to a number of issues. First, as mentioned earlier, strategic management accounting usage is a core factor of organisational performance. In this regard, managers are reminded that the influence of strategic management accounting usage (and dimensions) may vary between the financial and non-financial dimensions of organisational performance, and that the nature and degree of this influence are dependent on a number of contingency factors. For example, four (excluding SMAU-Costing) dimensions of SMAU have a significant positive influence of non-financial performance.

On the point of contingency factors, organisational technology (information and communication technology) and organisational size have strong positive relationship to strategic management accounting usage; the market turbulence dimension of environmental

uncertainty has a strong negative influence. The influence of these factors across the dimensions of strategic management accounting also varies.

Finally, managers are reminded that, in addition to the role that (1) strategic management accounting usage and (2) other contingency factors play individually in determining the nature and level of organisational performance, and (3) the nature of contingency factors that influence the extent and dimension of strategic management accounting usage that are necessary, it is important to note that some degree of inter-connection might exist between the individual contingency factors.

Therefore, in order to maximise their strategic decision making effectiveness and organisational performance, managers must ensure that necessary steps are taken to achieve a good fit between the relevant contingency factors. For example, it seems that the organisational strategy that a firm follows may influence the association between organisational structure and organisational performance. Furthermore, different organisational strategies may not clearly imply different orientations in the adoption of strategic management accounting tools. This dual evidence supports the view that the level of environmental uncertainty might influence the degree of association between organisational strategy and strategic management accounting usage.

8.4 The Study Limitations

This study contributes in several ways to enhance the understanding of the contingency perspective of strategic management accounting. However, this study has a number of features that limit the generalisability of the findings; therefore care must be taken in the interpretation and transportation of the findings from this study into other contexts.

The first limitation of this study concerns the context in which the study is conducted. This study explored only Palestinian companies. National culture shapes the behaviour of people

and also organisational dynamics (Hofstede, 1980; Xie et al., 2003), therefore caution is advised in the adoption of the findings from this study, as they may not fit well into other geographical contexts that do not share similar cultural background with Palestine.

Moreover, although several industries were covered in this study, care must be taken in applying the results to other contexts that might not fit the industrial description covered in this study.

Although not explored in depth, another limitation is that culture and Islamic regulations may shape the contingency dynamics in the Palestinian context, and the influence of these factors both on the extent and nature of strategic management accounting usage and organisational performance. It must be reminded that the conclusions in this study concerning this influence of culture and Islamic regulation are derived mainly from limited interview evidence.

Further on the point of the factors that influence the extent and dimensions of strategic management accounting usage as well as the extent and dimension of organisational performance, this study pinpointed a number of significant factors. Also, some suggestions of indirect association were made based on comparative evidence. Caution is advised in transporting these suggestions to other contexts.

Attention is drawn to the sample size limitation of this study. The data for this study was based on 175 responses, which is below 200 (Hair et al., 1998. 2003), a fact that may have affected the significance levels of explored relationships. A further limitation of this study regarding responses is that responses were obtained only from one individual in each of the explored companies, so there is a common method bias threat. Finally, it must be reminded that this study relied on the translation between English and Arabic, and there is the danger

that information may have been lost / misinterpreted in the translation process. Therefore, care must be taken in interpreting the findings.

Finally, while a comprehensive approach was adopted in this exploration of the contingency perspective of strategic management accounting usage in Palestinian companies, it must be acknowledged that a number of other factors have not been included in the conceptual framework for this study (e.g. culture, market orientation, accountant's participation, indirect association, etc.).

8.5 The Directions for Future Research

One major contribution of this present study is that it has enhanced the literature on the fact that companies are giving much attention to SMA-techniques as a step towards organising their strategic orientation. In this connection, while this study contributes to the understanding of how the various SMA-techniques may be used to fit the needs of the diverse strategic typologies, it also adds to the view about difficulty in explaining the dynamics concerning the association between the strategic typologies and SMA-techniques usage (Cinquini & Tenucci, 2010). Further studies in this aspect will enable the understanding of this relationship. Efforts that embrace myriad of strategic typologies would contribute to improving the "loose" picture.

An area which is not explored in depth in this study was the influence of national culture and Islamic regulations on the contingency dynamic in the Palestinian context. To enhance knowledge in this area, further studies using a robust qualitative or quantitative, or a combination of both, is necessary. Such studies should aim to highlight the direct, as well as the moderating/mediating influence of these two factors in the usage of strategic management accounting and performance orientation of organisations.

Further on the methodological approach, using qualitative approaches such a interviews, case studies, and also of longitudinal nature, to explore a comprehensive model will also help to

enhance knowledge development in this area, especially in understanding the relationships between the constructs than would be explained by a survey approach (Hyvönen, 2008) and importantly in a comparative form (developed and less developed country contexts).

While this study has contributed to the understanding of the influence of company (organisational) size on strategic management accounting usage, it draws attention to the fact that scholars increasingly mention that more research is needed towards enhancing the understanding of this influence of size on SMAU (e.g. Cinquinni & Tenucci, 2010; Guilding, 1999; Guilding & McManus, 2002).

Also, further studies should aim to enhance our knowledge concerning indirect association of the contingency variables for strategic management accounting usage and organisational performance. One core direction in this connection is to explain how industrial and national contexts may influence such indirect relationships. Finally, on this point, but also for the purpose of enhancing the framework explored in this study, researchers should aim to: 1) use data based on ≥ 200 responses; and 2) employ more robust analytical tools like Structural Equation Modelling (SEM) to examine the conceptualised relationships. Doing that will help clarify the nature and significance level of direct and indirect relationships.

Finally, although different industries were explored in this study, the results have not been presented in a way that industrial differences can be identified, due mainly to response limitations. This is a critical direction for knowledge development. Therefore, in addition to pinpointing the industrial differences across nations, further studies should also highlight industrial differences in a national context and how the contingency factors and influence are shaped by industrial dynamics.

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Appendices

Appendix 1: English Version of the Questionnaire

GENERAL INSTRUCTIONS

- 1. The purpose of this study is to explore Strategic Management Accounting (SMA) practices of Palestinian companies, and how these practices influence financial and non-financial performance of the companies.**
- 2. Please ensure you read and answer all questions. If you are not sure about any of the questions, please estimate the information to the best of your ability. It is important that all questions are answered and none are left out.**
- 3. Questions are grouped into two main parts. Part one, deals with general demographics about your organisation and respondents. Part two which is subdivided into sections, deals with strategic management accounting practices.**
- 4. The Code of Conduct for Social Science Research applies to this research, therefore, all responses will be kept strictly confidential and neither the company nor the respondent will be identifiable.**
- 5. In the last page of this questionnaire a glossary of terms has been presented to enable you to understand the terms and their contexts within the study.**
- 6. I would like to remind you that participation in this study is optional and you are free to withdraw at any time.**

Part One: This part will ask you to provide specific information about your organisation and yourself.

<p>A. Your organisation is classified as:</p> <p>Investment sector <input type="checkbox"/> Industry sector <input type="checkbox"/> Banking and financial services sector <input type="checkbox"/> Insurance sector <input type="checkbox"/> Service sector <input type="checkbox"/></p>
<p>B. What is the approximate balance sheet value of your organisation’s total asset? (US Dollar).....</p>
<p>C. What is the total revenue of your organisation for the last financial year? (US Dollar).....</p>
<p>D. What is the approximate number of employees in your organisation?</p>
<p>E. How many years has your organisation been operating?</p> <p>Less than 5 years <input type="checkbox"/> between 5 – 10 years <input type="checkbox"/> between 11 – 15 years <input type="checkbox"/> between 16 – 20 years <input type="checkbox"/> between 21 – 25 years <input type="checkbox"/> More than 25 years <input type="checkbox"/></p>
<p>F. What is your current job title?</p>
<p>G. How long (years) have you been in this position?</p>
<p>H. How long (years) have you worked for this company?</p>
<p>I. How many years of total working experience do you have in your field?</p>
<p>J. Which of the following reflects the highest qualification you obtained?</p> <p>High School level <input type="checkbox"/> Bachelor Degree <input type="checkbox"/> Postgraduate Degree Master <input type="checkbox"/> Postgraduate PhD <input type="checkbox"/> Professional qualifications <input type="checkbox"/> (please specify)..... None <input type="checkbox"/> Other <input type="checkbox"/> (please specify).....</p>
<p>K. What is your gender? Male <input type="checkbox"/> Female <input type="checkbox"/></p>
<p>L. What is your age?</p>
<p>M. Are you willing to have an interview? No <input type="checkbox"/> Yes <input type="checkbox"/> Contact email, please.....</p>

Part Two: Operational Activities

Section A. Strategic Management Accounting Techniques

According to the definitions provided in the glossary at the end of the questionnaire, to what extent does your organisation use the following accounting techniques? Using the scale ranging from “1” [not at all] to “7” [to a great extent] tick the most appropriate box.

	1	2	3	4	5	6	7
1. Attribute costing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Life-cycle costing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Quality costing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Target costing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Value-chain costing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Benchmarking.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Integrated performance measurement (balanced scorecard).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Strategic costing (strategic cost management).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Strategic pricing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Brand valuation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Competitor cost assessment.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Competitive position monitoring.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Competitor performance appraisal.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Customer profitability analysis.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Lifetime customer profitability analysis.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Valuation of customers as assets.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section B: Business Strategy

Below is a description of two imaginary organisations A and B. Please, read the characteristics and assess which one describes your organisation best. Then place your organisation on the scale provided by circling one of the 7 numbers, whereby a (1) is a perfect representation of organisation A, and a (7) represents organisation B.

1	2	3	4	5	6	7
---	---	---	---	---	---	---

<p>My Organisation A</p> <p>Stable products and services</p> <p>Constant competition</p> <p>Ignore any changes that are not affected by current operations</p> <p>Keep doing the best job in its existing arena</p> <p>Focus on efficiency/Cost control</p>
--

<p>My Organisation B</p> <p>Diversity of products and services</p> <p>Dynamic competition</p> <p>Respond to market need</p> <p>Wide range of environmental and market information</p>
--

Section C: Technology

Please, indicate on the scale below ranging from “1” [not at all] to “7” [to a great extent] the extent to which below features describe technological environment of your organisation. Please, tick the most appropriate box.

	1	2	3	4	5	6	7
1. Technology is a core element of the operating system of this organisation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Our production/services techniques are technology based.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The accounting information system is computer based.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. We invest in software packages to aid our accounting and other operational system.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section D: Organisational Environment

Please, indicate on the scale below ranging from “1” [Strongly Disagree] to “7” [Strongly Agree] the extent to which below features describe the environment of your organisation. Please, tick the most appropriate box.

	1	2	3	4	5	6	7
1. Many promotion wars occur in our industry.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Anything that one competitor in our industry can offer, others can match readily.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. One hears of new competitive moves in our industry almost every day.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The current business environment is threatening the survival of our organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Tough price competition is threatening our organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Competitors’ product quality or novelty is threatening our organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Sometimes our customers are very price sensitive.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. We are witnessing demand for our products and services from customers who never bought them before.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. New customers tend to have product-related needs that are different from those of our existing customers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Our customers tend to look for new products and services all the time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section E: Organisational Structure

Please, indicate on the scale below ranging from “1” [Strongly Disagree] to “7” [Strongly Agree] the extent to which below features describe the structure of your organisation.

	1	2	3	4	5	6	7
1. Employees in our organisation are allowed to make their own decisions without checking with anybody else.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. My usual experience with our organisation involves doing things “by the rule book”.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Many activities in our organisation are not covered by formal procedures.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Even small matters in our organisation must be referred to someone higher up for a final answer.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Any major decisions that employees make must have the approval of top managers.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Employees who want to make their own decisions would be quickly discouraged.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section F: Organisational Performance

Please, indicate on the scale below ranging from “1” [below average] to “7” [above average] your organisation’s performance relative to your competitors on each of the following criteria. Please, tick the most appropriate box. To the best of your knowledge (it is not expected for your answer to be entirely accurate).

	1	2	3	4	5	6	7
1. Return on investment.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Sales margin.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Capacity utilisation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Market share.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Customer satisfaction.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Product/service quality.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Development of new products/services.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you very much for your time and engagement in completing the questionnaire!

Appendix 2: Arabic Version of the Questionnaire

تعليمات عامة

- 1- هدف هذه الدراسة هو البحث في مدى ممارسة المحاسبة الادارية لدى المؤسسات الفلسطينية، و كيف تؤثر هذه الممارسات على الأداء المالي و غير المالي للمؤسسة.
- 2- الرجاء التأكد من قراءة الأسئلة كاملة ثم الإجابة عليها. في حال عدم التأكد من فهم أحد الأسئلة يرجى تقريب المعلومة لأقصى حد ممكن، و التأكد من الإجابة عن جميع الأسئلة.
- 3- الاسئلة مقسمة الى مجموعتين: الجزء الأول يتعلق بالطبيعة الديموغرافية للشركة و المشارك، و الجزء الثاني (مقسم الى مقاطع)، و يتعلق بممارسة المحاسبة الادارية.
- 4- قواعد السلوك في العلوم الاجتماعية تنطبق على هذه الدراسة، بذلك يمكنك التأكد ان المعلومات الواردة في الاستبيان ستستخدم للأبحاث الأكاديمية فقط و ستبقى سرية للغاية.
- 5- في الصفحة الاخيرة من الاستبيان، مجموعة من المصطلحات موجودة لتساعدك على فهم المصطلحات الموجودة في الاستبيان.
- 6- للتذكير، المشاركة في تعبئة الاستبيان هو اختياري و يمكنك الانسحاب بأي وقت من هذه الدراسة.

الجزء الاول: هذا الجزء يتضمن مجموعة من الاسئلة على الشركة التي تعمل بها وعلى نفسك

أ. تحت أي قطاع تصنف مؤسستك:		
قطاع الاستثمار <input type="checkbox"/>	قطاع الصناعة <input type="checkbox"/>	قطاع البنوك والخدمات المالية <input type="checkbox"/>
قطاع التأمين <input type="checkbox"/>	قطاع الخدمات <input type="checkbox"/>	
ب. كم تقريبا القيمة الاجمالية للأصول في الشركة التي تعمل بها؟ (دولار أمريكي)		
ت. ما هو اجمالي الإيرادات لدى المؤسسة التي تعمل بها للسنة المالية الماضية؟ (دولار أمريكي)		
ث. ما هو المجموع التقريبي للعاملين الحاليين الذي يعملون لدى المؤسسة؟		
ج. كم سنة تعمل المؤسسة منذ تأسيسها؟		
أقل من 5 سنوات <input type="checkbox"/>	بين 5 – 10 سنوات <input type="checkbox"/>	بين 11 – 15 سنة <input type="checkbox"/>
بين 16 – 20 سنة <input type="checkbox"/>	بين 21 – 25 سنة <input type="checkbox"/>	أكثر من 25 سنة <input type="checkbox"/>
ح. ما هو موقعك الوظيفي الحالي لدى المؤسسة؟		
خ. كم فترة وأنت تعمل في هذا الموقع الوظيفي؟		
د. كم فترة وأنت تعمل في هذه الشركة؟		
ذ. كم اجمالي فترة خبرتك في هذا المجال؟		
ر. ما هي اعلى درجة شهادة حصلت عليها؟		
مستوى التوجيهي <input type="checkbox"/>	درجة البكالوريوس <input type="checkbox"/>	درجة الماجستير <input type="checkbox"/>
		درجة الدكتوراة <input type="checkbox"/>
مؤهلات او شهادات مهنية <input type="checkbox"/> (أذكرها).....		
لاشيء <input type="checkbox"/> أخرى <input type="checkbox"/> (أذكرها).....		
ز. ما هو جنسك؟		
ذكر <input type="checkbox"/>	انثى <input type="checkbox"/>	
س. ما هو عمرك؟		
ش. هل لديك الرغبة في عمل مقابلة معنا؟ نعم <input type="checkbox"/> لا <input type="checkbox"/>		
البريد الالكتروني:		

الجزء الثاني: الأنشطة التنفيذية

أ) تقنيات استراتيجية المحاسبة الادارية

وفقا الى المصطلحات الموجودة في الصفحة الاخيرة من الاستبيان، الى أي حد تلتزم المؤسسة التي تديرها بالأمور التالية؟
على مقياس "1" [لا على الاطلاق] الى "7" [الى حد كبير]. ضع علامة في المربع الأنسب.

1	2	3	4	5	6	7	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. نظام التكاليف بالمساهمة.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. تكاليف دورة حياة المنتج.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. تكاليف الجودة.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. التكاليف المستهدفة.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. تحليل/تكلفة سلسلة القيمة.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. مفهوم المقارنة بالافضل (الاداء المقارن).....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. القياس المتوازن للاداء.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. التكاليف الاستراتيجية (ادارة التكاليف الاستراتيجية).....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. التسعير الاستراتيجي.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. تقييم العلامة التجارية.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. تقييم تكلفة المنافس.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. متابعة الموقف التنافسي.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. تقييم الاداء التنافسي بناء على القوائم المالية المنشورة.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14. تحليل ربحية المستهلك.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. تحليل فترة حياة ربحية المستهلك.....
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. تقييم العملاء كأصول/موجودات.....

(ب) استراتيجية العمل

التالي هو وصف لمؤسستين افتراضيتين (أ و ب). الرجاء قراءة خواص كل منها و تقدير ايهما الأقرب لتمثيل مؤسستك. ضع دائرة حول الرقم (الدرجة) الأنسب لتمثيل مؤسستك حيث (1) تمثل المؤسسة أ بشكل كامل، و (7) تمثل المؤسسة ب بشكل كامل.

1	2	3	4	5	6	7
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المؤسسة أ
خدمات و منتجات ثابتة
منافسة مستمرة
تتجاهل أي تغيرات غير متأثرة بالعمليات الراهنة
دائما تقدم الأفضل في المجال
تركز على الكفاءة رقابة التكاليف

المؤسسة ب
خدمات و منتجات متنوعة
منافسة ديناميكية
الاستجابة لاحتياجات السوق
نطاق واسع من المعلومات البيئية و السوقية

(ت) التكنولوجيا و تطبيقاتها

في المقياس التالي ، ضع علامة على احد الأرقام من "1" [لا على الاطلاق] الى "7" [الى حد كبير]، بما يمثل البيئة التكنولوجية للمؤسسة. ضع علامة في المربع الأنسب.

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. التكنولوجيا عنصر أساسي في نظام التشغيل لهذه المؤسسة.....
2. منتجاتنا و خدماتنا تعتمد على التكنولوجيا بشكل كبير.....
3. النظام المحاسبي للشركة يعتمد على البرامج المحاسبية الالكترونية.....
4. نستثمر في حزم برمجية لدعم أنظمة المحاسبة و أنظمة تشغيل أخرى.....

(ث) بيئة العمل

في المقياس التالي، ضع علامة على أحد الأرقام، من "1" [لا أوافق بشدة] الى "7" [أوافق بشدة] بما يمثل بيئة العمل لدى مؤسستك. ضع علامة في المربع الأنسب.

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. حصول العديد من المشاكل حول الترقية في مجالنا.....
2. أي شيء يعرضه المنافس في مجالنا، يستطيع الآخرون تطبيقه مباشرة.....
3. ظهور العديد من الحركات التنافسية في مجالنا كل يوم.....
4. بيئة العمل الحالية تهدد بقاء شركتنا.....
5. حدة المنافسة في الأسعار تهدد بقاء شركتنا.....
6. جودة منتجات المنافسين تهدد بقاء شركتنا.....
7. احيانا يكون زبائننا معينين لحد كبير في السعر.....
8. يوجد طلب على منتجاتنا و خدماتنا من زبائن لم يشتروها من قبل.....
9. زبائننا الجدد لديهم احتياجات متعلقة بالمنتج تختلف عن تلك لدى الزبائن الأصليين.....
10. يميل زبائننا للبحث على منتجات و خدمات جديدة طوال الوقت.....

ج) الهيكل التنظيمي

ضع علامة على الرقم المناسب، من "1" [لا أوافق بشدة] الى "7" [أوافق بشدة] بما يمثل مؤسستك. ضع علامة في المربع الأنسب.

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. يسمح للموظفون اتخاذ القرارات دون الرجوع إلى أي شخص آخر.....
2. خبرتي الاعتيادية في هذه الشركة تتطلب عمل المهام حسب "كتاب القوانين".....
3. العديد من النشاطات في شركتنا لا تنفذ بإجراءات رسمية.....
4. حتى الأمور الصغيرة في شركتنا يجب مراجعتها مع شخص أعلى رتبة للحصول على اجابة نهائية.....
5. كل القرارات الهامة التي يتخذها الموظفون يجب ان يتم الموافقة عليها من مدير أعلى.....
6. الموظفون الذين يودون اتخاذ قراراتهم الخاصة يحبطون بسرعة.....

ح) الأداء التنظيمي

ضع علامة على الرقم المناسب، من "1" [أقل من المتوسط] الى "7" [فوق المتوسط] بما يمثل مؤسستك بالنسبة لمنافسيك .
ضع علامة في المربع الأنسب.

(من غير المتوقع لإجابتك أن تكون دقيقة تماما).

1	2	3	4	5	6	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. معدل العائد على الاستثمار.....
2. هامش المبيعات.....
3. الاستفادة من الطاقة الاستيعابية.....
4. الحصة السوقية.....
5. رضا العملاء.....
6. جودة المنتج و الخدمة.....
7. تطوير منتجات وخدمات جديدة.....

شكرا جزيلا لوقتكم في تعبئة هذا الاستبيان

Appendix 3: Covering Letter of the Survey Questionnaire in English



Strategic Management Accounting (SMA) and Performance in Palestinian Companies

The Chief Accountant/Chief Controller/Chief Financial Officer...

.....
.....
.....

Date:

Dear Mr/Mrs/Ms/Dr/Prof.

I am a PhD candidate in the Norwich Business School at the University of East Anglia, United Kingdom. I would like to invite you to take part in my research. I am exploring Strategic Management Accounting (SMA) practices of Palestinian companies, and how these practices influence financial and non-financial organisational performance and I would really value your input.

I am sending this invitation to the Chief Accountant, Chief Controller or Chief Financial Officer in participating organisations. In particular, this invitation was sent to the most suitable person among of the three named above to fill the questionnaire.

This questionnaire should take you approximately 20 minutes to complete. I would be very grateful if you could take the time to complete the questionnaire and return it to me within four weeks of receiving it.

Once I have analysed the data from the completed questionnaires, I would like to share the results with you. I will send you an executive report of the aggregated and fully anonymised results and recommendations, including responses from top Palestinian companies. You can be assured that any information you provide is intended for academic research only and will be kept strictly confidential.

Your opinion is valuable to this research. The success of this study depends greatly on your participation in answering all the questions in the questionnaire. If you have any question, please feel free to contact me or my supervisor Dr Pinar Uslu. Our contacts details are provided below.

Thank you for taking the time to read this letter. I would like to express my gratitude in advance for your valuable time and cooperation.

Sincerely,

Jafar Ojra (PhD candidate)
Email: J.Ojra@uea.ac.uk
Phone: +972 595 895 811

Dr Pinar Guven Uslu
Email: P.Guven@uea.ac.uk
Phone: +44 1603 591 179

Appendix 4: Covering Letter of the Survey Questionnaire in Arabic



استراتيجية المحاسبة الادارية في المؤسسات (الشركات) الفلسطينية

مدير المحاسبة/مدير الرقابة/المدير المالي

.....
.....
.....

التاريخ:

عزيزي السيد/ الاستاذ/ الدكتور:
عزيزتي السيدة/ الاستاذة/ الدكتورة:

انا طالب دكتوراة في تخصص المحاسبة من جامعة ايست انجليا في بريطانيا. ادعوكم للمشاركة في الدراسة التي اقوم بها و التي تبحث في موضوع مدى ممارسة المحاسبة الادارية لدى المؤسسات، و كيف تؤثر هذه الممارسات على الأداء المالي و غير المالي للمؤسسة. اقدر لكم مشاركتكم كثيرا.

هذه الدعوة موجهة الى مدير المحاسبة، مدير الرقابة أو المدير المالي في المؤسسات المشاركة. بالتحديد، هذه الدعوة موجهة الى اكثر شخص كفؤ من بين الثلاثة المسماة اعلاه لتعبئة الاستبيان.

تعبئة الاستبيان سوف يأخذ من وقتك تقريبا 20 دقيقة. من فضلك، احصل على الوقت الكافي لتعبئته وأرجو بعد ذلك اذا كان بالاستطاع اعادته خلال اربعة اسابيع من استلامه.

بعد ان اقوم بتحليل البيانات و المعلومات من الاستبيانات المشاركة، سأشارككم النتائج التي توصلت اليها و ابعث لكم تقرير تنفيذي عن النتائج و التوصيات المضمنة بدون ذكر للمصادر، بما في ذلك ردود افضل المؤسسات الفلسطينية. يمكنك التأكد على ان كل المعلومات الواردة في الاستبيان سوف تستخدم للابحاث الاكاديمية فقط وسوف تكون سرية للغاية.

رأيكم يسعى بالكامل في تحقيق هدف هذه الدراسة و نجاحها يعتمد على مشاركتكم في الاجابة عن جميع الأسئلة . لأي استفسار بيانات التواصل مدرجة في أسفل الصفحة. يمكنك التواصل معي مباشرة او مع المشرف الاكاديمي.

أشركم لتعاونكم بقراءة هذه الرسالة ولوقتكم الثمين لتعبئة الاستبيان والمساهمة في تطور اقتصادنا و مجتمعنا الفلسطيني.

المخلص،

د.بينار أوصلو
البريد الالكتروني: p.guven@uea.ac.uk
رقم الهاتف: +44 1603 591 179

جعفر عجرة (طالب دكتوراة)
البريد الالكتروني: j.ojra@uea.ac.uk
رقم الهاتف المحمول: +972 595 895 811

Appendix 5: Glossary of terms which provided to respondents

Attribute costing

The costing of specific product attributes that appeal to customers. Attributes that may be costed include: operating performance variables; reliability, warranty arrangements; assurance of supply; and after sales service.

Benchmarking

The comparison of internal processes to an ideal standard

Brand valuation

The financial valuation of a brand through the assessment of brand strength factors such as: leadership, stability, market, internationality, trend, support, and protection combined with historical brand profits.

Competitor cost assessment

The provision of regularly scheduled updated estimates of a competitor's unit cost.

Competitive position monitoring

The analysis of competitor positions within the industry by assessing and monitoring trends in competitor sales, market share, volume, unit costs, and return on sales. This information can provide a basis for the assessment of a competitor's market strategy.

Competitor performance appraisal

The numerical analysis of a competitor's published statements as a part of an assessment of a competitor's key sources of competitive advantage.

Customer profitability analysis

This involves calculating profit earned from a specific customer. The profit calculation is based on costs and sales that can be traced to a particular customer. This technique is sometimes referred to as "customer account profitability".

Integrated performance measurement (Balanced Scorecard)

A measurement system which focuses typically on acquiring performance knowledge based on customer requirements and may encompass nonfinancial measures. This measure involves departments monitoring those factors which are critical to securing customer satisfaction.

Life cycle costing

The appraisal of costs based on the length of stages of a product or service's life. These stages may include design, introduction, growth, maturity, decline and eventually abandonment.

Lifetime customer profitability analysis

This involves extending the time horizon for customer profitability analysis to include future years. The practice focuses on all anticipated future revenue streams and costs involved in servicing a particular customer.

Quality costing

Quality costs are those costs associated with the creation, identification, repair and prevention of defects. These can be classified into three categories: prevention, appraisal, and internal and external failure costs. Cost of quality reports are produced for the purpose of directing management attention to prioritize quality problems.

Strategic costing (strategic cost management)

The use of cost data based on strategic and marketing information to develop and identify superior strategies that will produce a sustainable competitive advantage.

Strategic pricing

The analysis of strategic factors in the pricing decision process. These factors may include: competitor price reaction, elasticity, market growth, economies of scale, and experience.

Target costing

A method used during product and process design that involves estimating a cost calculated by subtracting a desired profit margin from an estimated (or market-based) price to arrive at a desired production, engineering, or marketing cost. The product is then designed to meet that cost.

Valuation of customers as assets

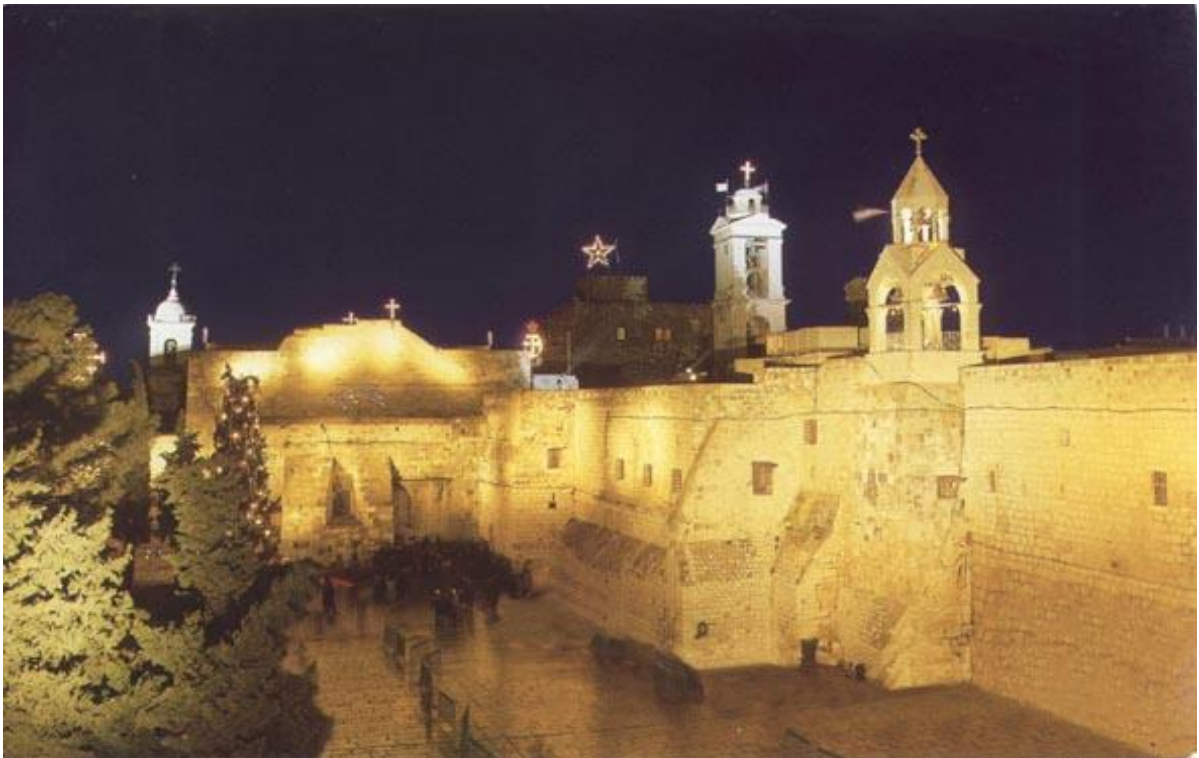
The technique refers to the calculation of the value of customers to the company. For example, this could be undertaken by computing the present value of all future profit streams attributable to a particular customer.

Value chain costing

An activity-based approach where costs are allocated to activities required to design, procure, produce, market, distribute, and service a product or service.

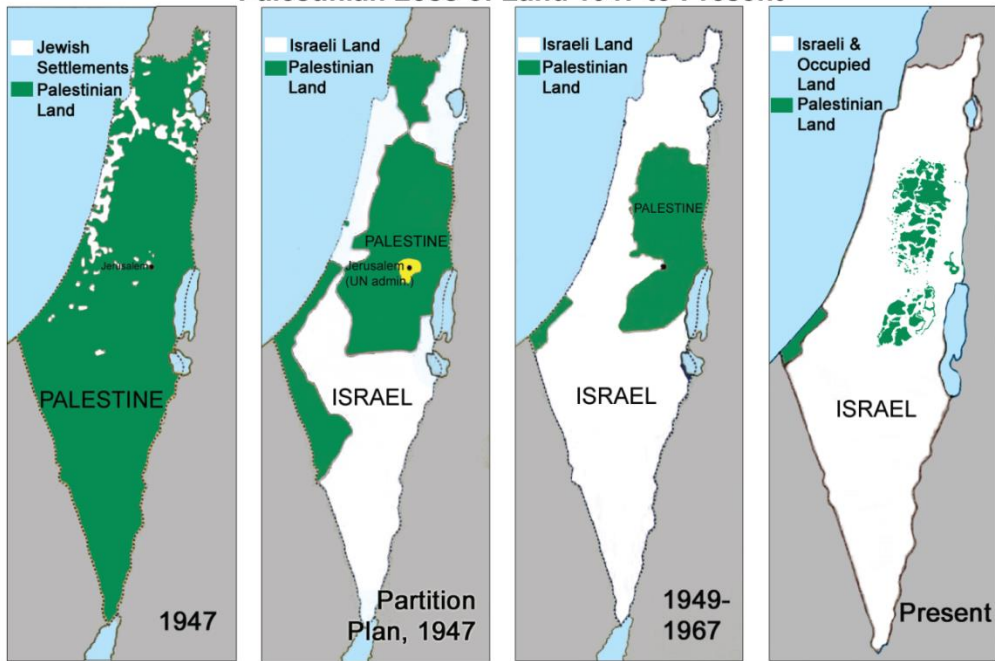


Dome of the Rock, Jerusalem, Palestine



The Nativity Church, Bethlehem, Palestine

Palestinian Loss of Land 1947 to Present



1947-2014



The Separation Wall/The Apartheid Wall which was built by Israel on the Palestinian Territories