



UNIVERSITY  
OF TASMANIA

# Articulating the role of marketing and product innovation capability in export venture performance using ambidexterity and complementarity theory

by

Wanee Trongpanich

School of Management, Faculty of Business

Submitted in fulfilment of the requirements for the Doctor of Philosophy

University of Tasmania

May, 2013

# Statement of Originality

---

This thesis contains no material which has been accepted for a degree or diploma by the University or any other institution, except by way of background information and duly acknowledged in the thesis, and to the best of the my knowledge and belief no material previously published or written by another person except where due acknowledgement is made in the text of the thesis, nor does the thesis contain any material that infringes copyright.

Signed: Wannee TR

Wannee Trongpanich

May, 2013

# Authority of Access Statement

---

This thesis may be made available for loan. Copying of any part of this thesis is prohibited for two years from the date this statement was signed; after that time limited copying and communication is permitted in accordance with the Copyright Act 1968.

Signed: Wannee TR

Wannee Trongpanich

May, 2013

# Statement of Ethical Conduct

---

The research associated with this thesis abides by the National Statement on Ethical Conduct in Human Research and the rulings of safety and Ethics of the Human Research Ethics Committee of the University of Tasmania.

Signed: Wannee TR

Wannee Trongpanich

May, 2013

# Acknowledgement

---

I would like to sincere gratitude to all those people who made this thesis possible and an unforgettable experience for me.

Foremost, I would like to express my heartfelt gratitude to Professor Aron O'Cass, my supervisor, who offered his professional academic advice and systematic guidance at all stages of this thesis. His continuous encouragement, patience, enthusiasm, time, and energy helped me in all the time of research and writing of this thesis.

I would like to express my very sincere gratitude to Dr. Liem Viet Ngo, my co-supervisor, for the support to make this thesis possible. His profound knowledge and useful comments and guideline helped me in writing of this thesis.

I acknowledge my gratitude to Associate Professor Martin Grimmer and Dr. Jamie Carlson for the support to make this thesis possible. I also greatly appreciate to Assistant Professor Ladawan Juajamsai for survey translation assistance. Great appreciation is expressed to Dr. Phyra Sok and Dr. Nima Heirati for their assistance. Special acknowledgement is also given to my fellow PhD candidatures, Hormoz Ahmadi, Mony Sok, Vida Siahtiri, Wai Jin (Thomas) Lee, Yasamin Rahmani, and Sumeet Sharma for their assistance and companionships.

I am indebted to Rajamangala University of Technology Isan (RMUTI) for the University Staff Development Scholarship given to me to undertake my PhD program at the University of Tasmania.

Last, but definitely not least, I would like to thank my family during the completion of the thesis. I dedicate this thesis to my parents, Vittaya and Manee, for their unconditional love, constant support, encouragement, and confidence in me. Finally, special thank to my lovely sisters, Yanee and Wanee, and my relatives for their support both spiritually and materially.

# Table of Contents

---

<i>Statement of Originality</i>	ii
<i>Authority of Access Statement</i>	iii
<i>Statement of Ethical Conduct</i>	iv
<i>Acknowledgements</i>	v
<i>Table of Contents</i>	vi
<i>Table of Tables</i>	x
<i>Table of Figures</i>	xii
<i>Abstract</i>	xiii

## **Chapter One: Introduction**

---

<b>1.1</b>	<b>Background to the literature</b>	<b>1</b>
<b>1.2</b>	<b>Research objectives of the study</b>	<b>3</b>
<b>1.3</b>	<b>Definitions of constructs and terms</b>	<b>6</b>
<b>1.4</b>	<b>Justification and significance of the study</b>	<b>8</b>
<b>1.5</b>	<b>Research methodology and research methods</b>	<b>10</b>
<b>1.6</b>	<b>Limitations of the study</b>	<b>11</b>
<b>1.7</b>	<b>Outline of the study</b>	<b>11</b>
<b>1.8</b>	<b>Conclusion</b>	<b>12</b>

## **Chapter Two: Literature Review**

---

<b>2.1</b>	<b>Introduction</b>	<b>14</b>
<b>2.2</b>	<b>Dynamic capability: The theoretical foundation</b>	<b>14</b>
<b>2.3</b>	<b>Exploring the concept of ambidexterity</b>	<b>18</b>
<b>2.4</b>	<b>Exploring the concept of complementarity</b>	<b>21</b>
2.4.1	Marketing capability and exporting	23
2.4.2	Product innovation capability and exporting	25
<b>2.5</b>	<b>Exploring the concept of process innovation capability</b>	<b>27</b>
2.5.1	Technological innovation capability	28

2.5.2	Management innovation capability	29
<b>2.6</b>	<b>Analysis and review of exporting research</b>	<b>29</b>
<b>2.7</b>	<b>Conclusion</b>	<b>33</b>

### **Chapter Three: Theoretical Framework**

<b>3.1</b>	<b>Introduction</b>	<b>36</b>
<b>3.2</b>	<b>Model development stage</b>	<b>36</b>
<b>3.3</b>	<b>Model development stage 1: Primary model</b>	<b>39</b>
3.3.1	Role of ambidextrous capability in firm performance	40
3.3.2	Marketing capability in the context of ambidexterity	40
3.3.2.1	Exploitative marketing capability and export venture performance	41
3.3.2.2	Exploratory marketing capability and export venture performance	42
3.3.3	Product innovation capability in the context of ambidexterity	43
3.3.3.1	Exploitative product innovation capability and export venture performance	44
3.3.3.2	Exploratory product innovation capability and export venture performance	45
3.3.4	Role of complementary capability in firm performance	46
3.3.4.1	Complementary capability of within-functional ambidexterity and export venture performance	47
3.3.4.2	Complementary capability of cross-functional ambidexterity and export venture performance	49
<b>3.4</b>	<b>Model development stage 2: Contingency model</b>	<b>50</b>
3.4.1	Moderating effect of technological innovation capability	51
3.4.2	Moderating effect of management innovation capability	53
<b>3.5</b>	<b>Conclusion</b>	<b>55</b>

### **Chapter Four: Methodology**

<b>4.1</b>	<b>Introduction</b>	<b>56</b>
<b>4.2</b>	<b>Research Model</b>	<b>56</b>
<b>4.3</b>	<b>Research Process</b>	<b>57</b>
4.3.1	Stage one: Determining the research design	59

4.3.2	Stage two: Selecting the data collection method	60
4.3.3	Stage three: Developing the measure of constructs	63
4.3.3.1	Defining constructs: Step 1	64
4.3.3.2	Generating items: Step 2	65
4.3.3.3	Format and scale poles: Step 3	71
4.3.3.4	Expert-judged assessment of face validity: Step 4	72
4.3.3.5	Pre-testing: Step 5	74
4.3.4	Stage four: Developing final questionnaire	75
4.3.5	Stage five: Designing the sampling plan	77
4.3.5.1	Determining the population	77
4.3.5.2	Determining the sampling frame	78
4.3.5.3	Determining the sampling method	79
4.3.5.4	Determining the sample size	80
4.3.6	Stage six: Adopting the method of analysis	82
4.3.7	Stage seven: Administering data collection process	83
<b>4.4</b>	<b>Conclusion</b>	<b>85</b>

## **Chapter Five: Data Analysis and Findings**

<b>5.1</b>	<b>Introduction</b>	<b>86</b>
<b>5.2</b>	<b>Preliminary data analysis</b>	<b>86</b>
5.2.1	Profiles of the sample	87
5.2.2	Descriptive statistics results	91
<b>5.3</b>	<b>Analysis of outer and inner models using partial least squares</b>	<b>95</b>
<b>5.4</b>	<b>Outer-measurement model results</b>	<b>96</b>
5.4.1	Exploitative marketing capability	97
5.4.2	Exploratory marketing capability	98
5.4.3	Exploitative product innovation capability	99
5.4.4	Exploratory product innovation capability	100
5.4.5	Technological innovation capability	101
5.4.6	Management innovation capability	101
5.4.7	Export venture performance	102



5.4.8	Convergent and discriminant validity	103
<b>5.5</b>	<b>Inner-structural model results</b>	104
5.5.1	Hypothesis testing: Hypothesis 1 to 8	105
5.5.2	Hypothesis testing: Hypothesis 9 to 12	108
<b>5.6</b>	<b>Summary of hypotheses results</b>	113
<b>5.7</b>	<b>Conclusion</b>	114

## **Chapter Six: Discussions and Conclusions**

---

<b>6.1</b>	<b>Introduction</b>	116
<b>6.2</b>	<b>Discussions on research questions and hypotheses</b>	116
6.2.1	Discussion of the results related to research question one	120
6.2.2	Discussion of the results for research question two	121
6.2.3	Discussion of the results related to research question three	122
6.2.4	Discussion of the results related to research question four	123
6.2.5	Discussion of the results related to research question five	126
<b>6.3</b>	<b>Theoretical contributions</b>	128
<b>6.4</b>	<b>Managerial implications</b>	132
<b>6.5</b>	<b>Limitations and directions for future research</b>	134
<b>6.6</b>	<b>Conclusions</b>	136

## **Appendices**

Information Sheet	140
Questionnaire A	142
Questionnaire B	145

<b>References</b>	150
-------------------	-----

# Table of Tables

---

1.1	Construct definition and terms	7
2.1	Key definitions of dynamic capability	16
2.2	Review of empirical research on dynamic capability	17
2.3	Review of empirical research on ambidextrous capability	20
2.4	Review of empirical research on complementary capability	22
2.5	Review of marketing capability in export area	24
2.6	Review of product innovation capability in export area	27
2.7	Key definitions of export performance	31
4.1	Characteristics of different types of research approach	59
4.2	Types of survey method	62
4.3	Definition of constructs	65
4.4	Scale poles of constructs	72
4.5	Refined items in the item refinement phase and additional constructs	74
4.6	Example of questions organised in survey for the study	76
4.7	Sampling frame of the study	79
4.8	Review of data collection by drop-and-collect method from journals containing marketing capability articles in export from 1993 to 2012	82
5.1	Profiles of the sample	93
5.2	Descriptive statistics results	94
5.3	Result of outer-measurement model exploitative marketing capability	98
5.4	Result of outer-measurement model exploratory marketing capability	99
5.5	Result of outer-measurement model exploitative product innovation capability	100
5.6	Result of outer-measurement model exploratory product innovation capability	100
5.7	Result of outer-measurement model technological innovation capability	101

5.8	Result of outer-measurement model management innovation capability	102
5.9	Result of outer-measurement model export venture performance	102
5.10	Evidence of convergent and discriminant validity for constructs	104
5.11	The inner-structural model of primary model	106
5.12	Results of hierarchical regression test for moderating effect of technological innovation capability	111
5.13	Results of hierarchical regression test for moderating effect of management innovation capability	112
5.14	Summary of hypotheses results	11

# Table of Figures

---

3.1	The theoretical framework of the study	38
3.2	Primary model: Stage one (Hypothesis 1 to 8)	39
3.3	Contingency model: Stage two (Hypothesis 9 to 12)	51
4.1	Stages in the research process	58
4.2	Measurement development procedure	64
4.3	Example of instructions for the study	75
4.4	The process of sampling method of the study	80
4.5	Example of invitation telephone script	84
4.6	Example of information sheet for nominated informants of the study	85
6.1	Theoretical model of the study	123

# Abstract

---

Exporting is one of the oldest forms of economic activity. It is the most common way for many firms, especially those in developing economies to enter international markets. Exporting is an important element of international trade and is an attractive foreign market entry strategy and expansion approach for firms (Hultman, Robson & Katsikeas, 2009). At the firm level, exporting is argued to make better utilisation of production capacity, facilitate company growth and improve the firm's financial position (De Loecker, 2007). With increasing the internationalisation of business, exporting firms have been forced to reconsider how to compete as rivalries increasingly extend across multiple markets. When compared to other foreign market entry modes, exporting involves fewer resources, lower risks, and less cost. Export involvement can assist firms in improving their competitive edge and realising financial objectives.

Dynamic capabilities appear to be the key to achieving success in export markets (Morgan, Kaleka & Katsikeas, 2004). To achieve superior performance, a single dynamic capability may not be sufficient for exporting firms (Berthon, Hulbert & Pitt, 1999). The role of complementary capabilities is considered critical for exporting firms. In this sense it is now generally accepted by many scholars, that marketing capability and product innovation capability are two critical capabilities that act as key drivers of export performance (e.g. Berthon et al., 1999; Gatignon & Xuereb, 1997; Noble, Sinha and Kumar, 2002; Song, Droge, Hanvanich & Calantone, 2005). While marketing capability enable exporting firms to link with customers by predicting changes in customer preferences and creating and managing durable relationships with customers and channel members (Day, 1994), product innovation capability enable exporting firms to promote innovative thinking and facilitate successful development, evolution, and execution of product innovations (Siguaw, Simpson & Enz, 2006). As such, both capabilities cannot be considered separately as each offers the other a high degree of complementarity.

This study investigates drivers of export venture performance focusing on two drivers that have direct effects; marketing and product innovation capability and two drivers that have contingency effects; technological innovation and management innovation capability. The investigation couches these capabilities within the domain of complementarity and ambidexterity theory. Specifically, this study attempts to address the significance of complementarity and ambidexterity of these two capabilities in the export domain of a developing economy, Thailand. In picking up on the role of marketing and product innovation capabilities within the context of complementarity and ambidexterity, this study also investigates the role of technological innovation capability and management innovation capability as moderators of the relationship between the firm's capacity to deploy ambidextrous capabilities and also achieve complementarity between capabilities and export venture performance.

The findings provide several important theoretical and practical implications to exporting firms and scholars. The findings show that marketing capability and product innovation capability are drivers of export success when they achieve complementarity and the firm can engage in these activities in an ambidextrous manner. The findings show that complementarity within the firm's functional areas (i.e., exploitative marketing capability and exploratory marketing capability) and complementarity between the firm's cross functional areas (i.e., exploitative marketing capability and exploitative product innovation capability) can drive firms to achieve stronger or enhanced export performance. In addition, technological innovation capability and management innovation capability plays a crucial role to facilitate complementarity of these activities in an ambidextrous manner in driving export performance.

In conclusion, this study responds to the call for greater attention on the role of marketing capability and product innovation capability using ambidexterity and complementarity theory to explain the firm's export performance. Overall, this study articulates the role of these capabilities as the drivers of Thai export ventures performance outcomes.

# Chapter One

## Introduction

---

### **1.1 Background to the literature**

Exporting is an important element of international trade and is an attractive foreign market entry strategy and expansion approach for firms (Hultman, Robson & Katsikeas, 2009). At the firm level, exporting is argued to make better utilisation of production capacity, facilitate company growth and improve the firm's financial position (De Loecker, 2007). With increasing internationalisation of business, exporting firms have been forced to reconsider how to compete as rivalries increasingly extend across multiple markets. It has been argued that firms successful in their export market are those that perceive changes in competition in the international environment, and are able to develop capabilities that enable them to respond accordingly (Hamel & Prahalad, 1994). Thus, the ability to adapt through the deployment of specific capabilities to a foreign market becomes essential for firms to achieve superior export performance and export growth.

To take positional advantage from export opportunities, exporting firms need to deploy their capabilities efficiently in responding to changes in the external environment. On this basis, exporting firms need to be flexible in adapting and responding to such changes in order to compete successfully in international markets (Leonidou, Katsikeas, Palihawadana & Spyropoulou, 2007). In this context, dynamic capabilities are of paramount importance for continuous changes in markets and competition. For this reason, upgrading of existing capability sets and building new capabilities so that exporting firms are able to adapt to a foreign market to achieve superior export performance are essential. Export success is seen as resting on distinctive processes or ways of coordinating and combining them which are shaped by the firm's specific capabilities (Teece, Pisano & Shuen, 1997). Therefore, dynamic capabilities appear to be the key to achieving success in export markets (Morgan, Kaleka & Katsikeas, 2004).

To achieve superior performance, a single dynamic capability may not be sufficient for exporting firms (Berthon, Hulbert & Pitt, 1999). The possession of complementary capabilities is considered critical for exporting firms. In this sense, it is now generally accepted by many scholars that marketing capability and product innovation capability are two critical capabilities that act as key drivers of export performance (e.g. Berthon et al., 1999; Gatignon & Xuereb, 1997; Noble, Sinha and Kumar, 2002; Song, Droge, Hanvanich & Calantone, 2005). While marketing capability enables firms to link with customers by predicting changes in customer preferences and creating and managing durable relationships with customers and channel members (Day, 1994), product innovation capability enables firms to promote innovative thinking and facilitates successful development, evolution, and execution of product innovations (Siguaw, Simpson & Enz, 2006). As such, both capabilities cannot be considered separately as each offers the other a high degree of complementarity (Dougherty, 1992).

As outlined by Drucker (1974) and Han, Kim & Srivastava (1998), marketing and product innovation are two key functions which act as a means of connecting the firm to the customer. Scholars also argue that the complementarity between certain capabilities provides firms with significant advantages and performance improvements (Morgan, Slotegraaf & Vorhies, 2009; Song et al., 2005). For this reason, the contention is raised that to achieve superiority in export performance, firms need to consider focus on both marketing capability and product innovation capability in complementarity aspect. In export markets, firms not only have more opportunities, but face a greater risk that their current core capability becomes rapidly obsolete as well. This constrains a firm's ability to exploit promising opportunities. Thus, exporting firms require a balance that engages in sufficient exploitation to ensure their current viability and devotes enough energy to exploration to ensure their future viability simultaneously (Levinthal & March, 1993). As such, the firms' ability to optimise distinct capability that are required for exploration and exploitation, now called ambidexterity is argued to lead to long-term success in foreign markets.

Further, it is now generally accepted by scholars that the notion of ambidexterity calls attention to firms pursuing both exploitation of current opportunities and exploration for new opportunities at the same time to enhance long-term export



performance (e.g., Gibson & Birkinshaw, 2004; He & Wong, 2004; Jansen, Van den Bosch & Volberda, 2005; Menguc & Auh, 2008; O'Reilly & Tushman, 2008). This activity appears essential because in a dynamic environment export market, a firm requires a balance of sufficient exploitation to ensure its current viabilities and exploration to ensure its future viability at the same time (Levinthal & March, 1993).

Drawing on the literature on complementarity and ambidexterity may help better articulate the roles marketing capability and product innovation capability in export performance. This may help scholars understand why some firms outperform than others in exporting. This point is significant because firms may achieve superiority in complementary marketing and product innovation capabilities and achieve ambidexterity in exploration – exploitation which has the potential to drive export performance when deployed together. As such, this study challenges firms to create dynamic capabilities through achieving both complementarity and ambidexterity to enhance performance in their export domain.

## **1.2 Research objectives of the study**

This study identifies several research gaps within the current literature focusing on dynamic capability, complementary capabilities and ambidexterity related to marketing and product innovation capability in the export domain. To address the research questions, a review of literature on dynamic capabilities and their performance implications is providing a detailed understanding of the dynamic capability in relation to drivers of business success are examined in Chapter Two. Although dynamic capability appear to be the critical to achieving success in performance (e.g., Teece, Pisano & Shuen, 1997; Eisenhardt & Martin, 2000; Zollo & Winter, 2002), there is still a lack of attention in export area. Thus, this research gap from the literature on the review shows that the neglect on this important issue has left unexplored how firms may achieve export outcome through dynamic capability.

This study examines complementarity between two critical capabilities (marketing capability and product innovation capability) using the lens of ambidexterity (exploitation and exploration) in the export domain. Thus, this study provides a contribution to exporting focusing on two critical ambidextrous capabilities (exploitation-exploration marketing capability and exploitation-exploration product innovation capability) as key drivers of export performance. First, marketing

capability and product innovation capability are two critical capabilities which are generally accepted as a key driver of firm performance (e.g., Berthon, Hulbert & Pitt, 1999; Noble, Sinha & Kumar, 2002; Song et al., 2005). This point is important given that firms require a strong focus on both marketing capability and product innovation capability. They need to maximise the complementarity between them in terms of managing the degree of ambidexterity (i.e., marketing capability exploitation and marketing capability exploration) in order to facilitate and promote existing and new capability and vice versa. Second, marketing capability and product innovation capability also need to pursue ambidexterity in relation to exploration and exploitation of these capabilities to achieve superiority in export performance. However, there have been very few, if any, studies examining the complementarity between these capabilities in export domain. This study argues that the neglect on this critical issue has left unexplored how firms may achieve beneficial outcomes through complementary within functional ambidexterity (exploitation and exploration) in export domain. Thus, this study provides new contribution of two critical ambidextrous capabilities (exploitation-exploration marketing capability and exploitation-exploration product innovation capability) as key drivers of export performance.

The focus here is on the effect of the complementarity within-functional area and the complementary across the functional areas of marketing and product innovation. Specifically, this study argues that the relationship between exploitation and exploration of marketing capability and product innovation capability is related positively to export venture performance. This study also argues that the relationship between exploitation of marketing capability and product innovation capability and exploration of marketing capability and product innovation capability related to export venture performance.

Further, this study argues the role of technological innovation and management innovation capabilities in an ambidextrous manner. While technological innovation capability is directly related to the primary work activities of the firms and mainly produces changes in its operating systems, management innovation capability is indirectly related to the firm's basic work activities and mainly affects its management systems. These capabilities facilitate the complementarity between marketing and product innovation which drive export performance.

Hence, the main purpose of this study is to advance the export literature by explicating the role of complementary capabilities and ambidexterity related to export performance. The additional objective of this study is also to incorporate the role of technological innovation and management innovation capabilities as critical contingency factors. The factors enhance the relationships between capability complementarity and the pursuit of ambidexterity in marketing and product innovation, and export venture performance.

Based on this theoretical argument, this study seeks to answer five specific research questions:

RQ 1 (a): To what extent do exploitative marketing capability and exploratory marketing capability influence export venture performance?

RQ 1 (b): To what extent do exploitative product innovation capability and exploratory product innovation capability influence export venture performance?

RQ 2 (a): To what extent does the complementarity between the exploitative marketing capability and exploratory marketing capability enhances export venture performance?

RQ 2 (b): To what extent does the complementarity between the exploitative product innovation capability and exploratory product innovation capability enhances export venture performance?

RQ 3 (a): To what extent does the complementarity between the exploitative marketing capability and exploitative product innovation capability enhances export venture performance?

RQ 3 (b): To what extent does the complementarity between the exploratory marketing capability and exploratory product innovation capability enhances export venture performance?

RQ 4 (a): To what extent does technological innovation capability enhances the relationship between *exploitation - exploration of marketing capability complementarity* and export venture performance?

RQ 4 (b): To what extent does technological innovation capability enhances the relationship between *exploitation - exploration of product innovation capability complementarity* and export venture performance?

RQ 4 (c): To what extent does technological innovation capability enhances the relationship between *exploitation marketing - product innovation capability complementarity* and export venture performance?

RQ 4 (d): To what extent does technological innovation capability enhances the relationship between *exploration marketing - product innovation capability complementarity* and export venture performance?

RQ 5 (a): To what extent does management innovation capability enhances the relationship between *exploitation - exploration of marketing capabilities complementarity* and export venture performance?

RQ 5 (b): To what extent does management innovation capability enhances the relationship between *exploitation - exploration of product innovation capabilities complementarity* and export venture performance?

RQ 5 (c): To what extent does management innovation capability enhances the relationship between *exploitation marketing - product innovation capabilities complementarity* and export venture performance?

RQ 5 (d): To what extent does management innovation capability enhances the relationship *between exploration marketing - product innovation capabilities complementarity* and export venture performance?

The above research questions were articulated on the basis of a review of literature in Chapter Two on dynamic capabilities and their export performance implications that provided a detailed understanding of the dynamic capability in relation to drivers of export business success. The foundation of theory and guidelines in explanation of these capabilities as the driver's of export venture performance outcome offers a starting point for the development of the theoretical framework in Chapter Three.

### 1.3 Definitions of constructs and terms

The definitions of key constructs are provided in Table 1.1. This is crucial given the divergence in terms applied in the literature.

**Table 1.1: Construct definition and terms**

Construct	Definition
Dynamic capability	The firm's ability to create, extend or modify existing capabilities into new ones that better match the changing environment (Teece, Pisano & Shuen, 1997; Pavlou & El Sawy, 2011).
Complementary capability	The firm's ability to combine two or more capabilities effectively than single one (Song et al., 2005).
Ambidextrous capability	The firm's ability to engage in both exploitative activities (i.e. efficiency, increasing productivity, control certainty, and variance reduction) and exploratory activities (i.e. search, discovery, autonomy, innovation, and embracing variation) simultaneously (March, 1991).
Process innovation capability	The firm's abilities for undertaking through firm processes that enable firms to coordinate activities and make use of the resources to increase efficiency and effectiveness of the internal firm (Damanpour, 2010).
Exploitative marketing capability	The refinement (i.e., improvement) of existing routines associated with current marketing activities, including current market segments, positioning, distribution, and other marketing mix activities (Vorhies, Bush & Orr, 2011; Danneels, 2008).
Exploratory marketing capability	The generation of new routines associated with new marketing activities, including current market segments, positioning, distribution, and other marketing mix activities (Vorhies, Bush & Orr, 2011; Danneels, 2008).
Exploitative product innovation capability	The refinement (i.e., extend, reinforce) of existing routines (or processes) associated with product development activities (Lisboa, Skarmeas & Lages, 2011; Subramaniam & Youndt, 2005).
Exploitative product innovation capability	The generation of new routines (or processes) associated with product development activities (Lisboa, Skarmeas & Lages, 2011; Subramaniam & Youndt, 2005).

**Table 1.1: Construct definition and terms (Continued)**

<b>Construct</b>	<b>Definition</b>
Management innovation capability	A bundle of interrelated routines to apply new management practices, processes, structures, or techniques that indirectly relate to basic work activity of the firm and its management systems (Damanpour, Walker & Avellaneda, 2009; Birkinshaw, Hamel & Mol, 2008).
Technological innovation capability	A bundle of interrelated routines to apply new technology (i.e., information technology) that directly relate to the primary work activity of the firm to improve efficiency and effectiveness of the firm operating systems (Damanpour, Walker & Avellaneda, 2009; Damanpour & Gopalakrishnan, 2001).
Export venture performance	The degree that the firm has achieved its goals for market share, sales volume, sales growth, and customer satisfaction for a product-market (Atuahene-Gima, 2005; Langerak et al., 2004; Baker & Sinkula, 2005).

Source: Developed for this study

#### **1.4 Justification and significance of the study**

This research attempts to contribute to the export literature in several ways. First, this study addresses the dynamic capability, ambidexterity, and complementarity theory research which are synthesised to provide a theoretical setting to further examine the mechanisms through which marketing capability and product innovation capability contribute to the export performance. Thus, this study provides the first attempt to identify the extent to which complementarity between marketing capability and product innovation capability matters to export venture performance and how ambidexterity in these capabilities plays a role in such performance. Consequently, the findings of this study are significant in that they may provide a better understanding of export within the setting of dynamic capabilities, ambidexterity, and complementarity in capabilities. The theoretical and empirical efforts of this study may lead to the development and support of the role marketing capability plays in complementing product innovation capability's influence on export venture performance.

Second, both marketing capability and product innovation capability are generally accepted by scholars as key drivers of export performance (e.g. Blesa & Ripolles, 2008; Cavusgil & Zou, 1994; Hultman, Robson & Katsikeas, 2009; Morgan, Zou,

Vorhies & Katsikeas, 2003; Morgan, Kaleka & Katsikeas, 2004; Zou, Fang & Zhao, 2003); however, previous research has not examined their complementarity. In other disciplines such as strategic management and marketing, prior research indicated that the complementarity between firm capabilities contributes to superior firm performance (Berthon, 2004; Menguc & Auh 2006; Song et al., 2005; Ngo & O'Cass, 2012). However, there is a lack of empirical research on the complementary of marketing capability and product innovation capability in the export domain. Thus, this research is justified because it addresses the role of complementary capability in enhancing firms' export performance. As such, this study addresses the complementary of marketing capability and product innovation capability in enhancing firm performance in export domain. In this sense, the findings of this study are significant in that they offer important insights into how marketing capability complements with product innovation capability influence on export venture performance.

Third, the notion of ambidexterity is generally accepted as a firm engaging in both exploitation of current capabilities and exploration for new capabilities simultaneously in the market and has been identified by some as enhancing firms' long-term performance (Gibson & Birkinshaw, 2004; He & Wong, 2004). However, there is a lack of empirical research which focuses on how marketing capability and product innovation capability fit within the setting of ambidexterity in the export domain. As such, this research is justified because it addresses the significance of the role of ambidextrous capability between marketing capability and product innovation capability in increasing firms' export performance. For this reason, the findings of this study are significant in that they illustrate a better understanding of how exploitation and exploration of marketing capability and product innovation capability's impact on export venture performance.

Finally, although some scholars have stressed the role of technological innovation capability and management innovation capability in increasing internal efficiency and effectiveness of firms' activities (Birkinshaw, Hamel & Mol, 2008; Damanpour, Walker & Avellaneda, 2009; Song et al., 2005), few have examined these issues within the complementarity of marketing and product innovation in export domain. Thus, this research is justified as it seeks to investigate the moderating role of technological innovation capability and management innovation capability in

enhancing the relationship between complementarity and ambidexterity in relation to export performance outcome. As such, this study addresses the importance of technological innovation and management innovation capability as firm's internal activities in facilitating the complementarity between marketing and product innovation efficiently and effectively. Hence, the findings of this study are significant in that they provide a better understanding of the roles played by technological innovation and management innovation capability in relation to marketing capability and product innovation capability complementarity.

### **1.5 Research methodology and research methods**

This research is based on the development and administration of a survey of exporting firms to obtain data to test the hypotheses in the Export Venture Performance (EVP) Model. A quantitative research approach is adopted by applying a descriptive research and self-administrated survey data collection technique is employed. The development of measures of constructs is divided into two stages. Initial stage focuses on item generation which related to defining constructs and domain, content validity, format and scale poles, and draft survey. Final stage stresses on item refinement which involved with expert-judges of face validity, decision rules for removing and keeping items, pre-test, and final survey.

The sample is drawn from Thai export firms listed in the Thailand Exporter's Directory, the Department of Export Promotion (DEP) of Thailand. As sampling frame from Thailand's exporters directory gathered by DEP does not provide details related to firm size, a multi-industry sample excluding service firms is mainly used to increase observed variance and to strengthen the generalisability of research findings (Morgan, Kaleka & Katsikeas, 2004). The survey data is collected from managers of single business units which export products from Thailand. In this study, senior executives are employed as the key informants (Campbell, 1955) as they have the ability to provide the specific knowledge about the phenomena being studied (Heide & Weiss, 1995). A drop-and-collect technique is used for this research because data collection was undertaken in a developing economy where interpersonal interactions are widely recommended for information exchange (e.g., Brown, 1987; O'Cass & Pecotich, 2005). A range of data analysis techniques are used to establish the psychometric properties of the data, and examining the



hypotheses. Such techniques include descriptive statistics, reliability, convergent validity, discriminant validity, and structural equation modelling (SEM) analysis of hypotheses using partial least squares (PLS-SEM).

### **1.6 Limitations of the study**

The limitations of the study are provided to clarify the boundaries within which the study has been conducted. The extents to which the results can be generalised are placed within the limitations and should raise caution on the part of the reader. First, data collected from respondents pertained specifically to manufacturing firms. Therefore, application of the findings to service firms is not recommend. Second, the level of decision making examined within this research concerned at the corporate decision. Thus, generalisation of the findings to individual consumers concerning should not be attempted in managerial decision level. Finally, the study is restricted in regional area. The sample was generated from export firms operating in Thailand as a selected study of developing economies located in the Asia. Hence, the finding appears to be generalizable to developing economies specifically located in the East of Asia with similar characteristics and profiles to Thailand. Even so, the application of the findings of the study to other developing economies should be attempted at this stage with care.

### **1.7 Outline of the study**

The outline of the study is adopted from the structure and guidelines for presenting a doctoral thesis by Perry (1998). This study is organised into six chapters. Chapter one is the introduction chapter and serves as an overview of the study. Particularly, it presents the background of the study by identifying the topic of interest. It also provides the research objectives of the study, introduces definitions of constructs and terms, offers justification and significance of the study, outlines the research methodology and research methods, and delivers the delimitation of scope.

Chapter two builds a theoretical foundation for building the topic of interest by reviewing the relevant exporting literature, in particular, investigating critical notion of dynamic capability (e.g., Eisenhardt & Martin, 2000; Teece, 2007; Zollo & Winter, 2002). The key issues arising from the exporting literature are addressed potential gaps in export venture performance. This leads to explore concept of complementary

capability, ambidextrous capability. Then, the concept of technological innovation capability and management innovation capability is discussed in terms of its contingency part of export venture performance that enable firms to coordinate activities and make use of the resources within the firms (Day, 1994).

Chapter three draws from theoretical foundation outlined in chapter two in order to develop an export venture performance model. It addresses the essential constructs mention above which including the primary part of the model development with connecting to the contingency part of the model development. Then, hypothesis development is proposed in order to test the theory behind them.

Chapter four outlines the research design of the study. It serves as a detailed blueprint that guides the research design stage, research tactics, and implementation stage. In the research design stage, it draws on the research approach and data collection method. For the research tactics, it explains development of measures of constructs, and design of sampling plan. In the implementation stage, it presents cost and timing estimates, translation issues, and ethics conduct in human research.

Chapter five covers the data analysis and findings of the study. It initially proposes data analysis strategy, presents preliminary data analysis, analyses the statistic technique to test the hypotheses of the study. It also includes the summary of results from hypothesis testing.

Chapter six discusses in details finding on the study. In particular, the theoretical and managerial implications are drawn from the discussion. The limitations and directions for future research are acknowledged and the chapter closes with concluding comments.

## **1.8 Conclusion**

This chapter provided an overview of the study starting with the background of the research that addressed general research question related to the factors determining the export success. Specific research questions and an illustration of the determinants of export success were discussed. Then, the illustration of key constructs and terms directly related to the model was explained. The justification and significance of the research were discussed along with the potential contribution

to both theory and practice that may result from this study. An outline of the research methodology and research methods was described as constituting of a blueprint for conducting the research. Finally, this chapter covered the outline of the study and the delimitations of this study were acknowledged. Chapter two presents an overview of the literature directly related to this study, including dynamic capability, complementary capabilities, ambidexterity, technological innovation capability and management innovation capability.

# Chapter Two

## Literature Review

---

### **2.1 Introduction**

This chapter reviewed the literature related to dynamic capability, ambidexterity and complementarity theories in order to provide a detailed understanding of this literature in relation to drivers of export business success. In particular, two specific capabilities; marketing capability and product innovation capability are highlighted in the complementary literature and ambidexterity literature. An extensive review and analysis of the literature helped identified research gaps and provide a solid background for theory development. Following the examination of complementarity and ambidexterity, an investigation of the concept of process innovation pertaining to management innovation capability and technological innovation capability is provided to ensure a comprehensive theoretical framework to be developed. This chapter concludes by providing an analysis and review of exporting research. Drawing on the review of the literature, limitations were discussed and offered a starting point for the development of the theoretical framework of drivers of export business success in Chapter Three.

### **2.2 Dynamic capability: The theoretical foundation**

Over the last decade, scholars within the strategy field have suggested that a firm can achieve positional advantage through distinctive or core capabilities (e.g., Grant, 1991; Prahalad & Hammel, 1990). According to Stalk, Evans and Shulman (1992), the essence of strategy is the dynamics of firm behaviour, and in this sense Henderson and Cockburn (1994) argue capabilities are the firm's abilities to deploy its resources and capabilities to develop new ones. Therefore, firms are required to not only possess distinctive capabilities, but also to continuously invest, upgrade and leverage them in order to achieve long-term success (Collis & Montgomery, 2008). This notion reflects the abilities of a firm to learn, adapt, change and renew

distinctive capabilities over time (Teece, Pisano & Shuen, 1997) and is seen as the possession of dynamic capability.

A review of different definitions of dynamic capability highlight that there are key attributes that critical to the conceptualisation of the dynamic capability construct as shown in Table 2.1. First, dynamic capability is concerned with firm internal processes, routines, abilities or learned patterns that act systematically on the firm's resources (e.g., Teece, Pisano & Shuen, 1997). For example, terms in definitions such as "coordinate", "combine," and "integrate" are used to describe the process of capabilities development (Eisenhardt & Martin 2000; Pavlou & El Sawy, 2011; Barreto, 2010). This aspect reflects in a general sense that dynamic capability role is to change the firm's resources and capability base (Ambrosini & Bowman, 2009). As such, dynamic capability is path dependent (Zollo & Winter, 2002), embedded in the firm (Eisenhardt & Martin, 2000), and are built rather than bought in the market (Makadok, 2001). Therefore, dynamic capability is developed within the firm and allows the firm to obtain new knowledge and apply it to renew resources (Cepeda & Vera, 2007; Easterby-Smith & Prieto, 2008).

Second, dynamic capability is intentional efforts and is not an ad hoc problem-solving event or a spontaneous reaction (Winter, 2003; Helfat et al., 2007). Dynamic capability emphasises the dynamism of the capability itself, not the environment (Zahra, Sapienza & Davidsson, 2006). This aspect reflects that dynamic capability is higher-order capabilities aimed at changing functional capabilities that have become inadequate in response to environmental challenges (Zollo & Winter, 2002; Winter, 2003). As such, dynamic capability is concerned with the strategic change and is future oriented as they are deployed in order to achieve strategic goals (Zahra, Sapienza & Davidsson, 2006). Thus, dynamic capability is deployed to alter "static" capabilities required to compete today (Ambrosini & Bowman, 2009).

Dynamic capability theory focuses on the capacity to extend, modify, or create ordinary capability to be valuable (Winter, 2003) and alter firm resource base through acquiring, shedding, integrating and recombining resources to generate new value creating strategies (Eisenhardt & Martin, 2000). Dynamic capability differs from ordinary capability in that ordinary capability denotes the firm ability to execute day-to-day activities (Zahra, Sapienza & Davidsson, 2006). As such, ordinary capability

denotes the firm's ability to "make a daily living" (Winter, 2003), while dynamic capability governs the change of ordinary capability by reconfiguring existing ordinary capability into new ones that better match the changing environment (Pavlou & El Sawy, 2011). In this way, dynamic capability plays an important role in changing the firm's resources base (Ambrosini & Bowman, 2009) to achieve a superior marketplace position (Day & Wensley, 1988). Therefore, dynamic capability theory provides a cornerstone for obtaining superior marketplace position (Helfat & Winter, 2011).

**Table 2.1: Key definitions of dynamic capability**

<b>Author</b>	<b>Definition</b>
Teece, Pisano and Shuen (1997)	The firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.
Eisenhardt and Martin (2000)	The firm's processes that use resources – specifically the processes to integrate, reconfigure, gain and release resources – to match or even create market change; dynamic capabilities are the organisational and strategic routines by which firms achieve new resources configurations as market emerge, collide, split, evolve and die.
Zollo and Winter (2002)	A dynamic capability is a learned and stable pattern of collective activity through which the organisation systematically generates and modifies its operating routines in pursuit of improved effectiveness.
Winter (2003)	The abilities that operate to extend, modify or create ordinary (substantive) capabilities.
Zahra , Sapienza and Davidsson (2006)	The abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker (s).
Helfat et al. (2007)	The capacity of an organisation to purposefully create, extend or modify its resource base.
Barreto (2010)	A dynamic capability is the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base.
Pavlou and El Sawy (2011)	Those capabilities that help units extend, modify, and reconfigure their existing operational capabilities into new ones that better match the changing environment.

Table 2.2 provides the review of empirical research on dynamic capability from previous studies that has been published in leading management journals such as Academy of Management Journal, Academy of Management Review, Administrative

Science Quarterly, Journal of Business Venturing, Journal of Management, Journal of International Business Studies, Journal of Management Studies, Management Science, Organization Science, Organization Studies, Strategic Management Journal, Journal of the Academy of Marketing Science, Journal of International Marketing, and Marketing Intelligence & Planning since 1992. Based on these journals, articles that have examined dynamic capability have been selected based on area of study and industry sector.

**Table 2.2: Review of empirical research on dynamic capability**

<b>Area of study</b>	<b>Industry sector</b>	<b>Study</b>	<b>No. of studies</b>
Domestic	High technology based	Ahuja and Lampert (2001); Autio et al. (2000); Brady and Davies (2004); Brown and Eisenhardt (1997); Danneels (2008); Doving and Gooderham (2008); Deeds, DeCarolus and Coombs (1999); Eisenhardt and Tabrizi (1995); Galunic and Eisenhardt (2001); Helfat (1997); Karim (2006); Katila and Ahuja (2002); Kazanjian and Rao (1999); Keil (2004); Kor and Mahoney (2005); King and Tucci (2002); Madhok and Osegowitsch (2000); Majumdar (1999); Majumdar (2000); Moorman and Miner (1998); Mota and de Castro (2004); Noda and Collis (2001); Rosenbloom (2000); Zahra et al. (2000); Rothaermel and Hess (2007); Van de Ven and Polley (1992)	22
	Services	Alvarez and Merino (2003); Griffith and Harvey (2001); Marcus and Anderson (2006); McGrath (1995); Pablo, Reay, Dewald and Casebeer (2007); Rindova and Kotha (2001); Zuniga-Vincente and Vicente-Lorente (2006);	7
	Other individual industries	Bosch et al. (1999); Gilbert (2006); Lampel and Shamsie (2003); Lampel and Shamsie (2003); Salvato (2003)	5
	Multiple industries	Kale and Singh (2007); Olson and Hult (2006); Salvato (2003); Slater, Spanos and Lioukas (2001)	4
International	Joint ventures	Song, Droge, Hanvanich and Calantone (2005)	1
	Acquisition	Meyer and Lieb-Doczy (2003)	1
	Exporting	Prasertsakul (2013)	1
	Others	Kamakura, Ramón-Jerónimo and Gravel (2012)	1

Having considered the areas of study, most studies have focused on firms domestic domains. The exception to this has been work that has focused on joint ventures conducted by Song et al. (2005) and acquisitions conducted by Meyer and Lieb-Doczy (2003). Further, empirical work on dynamic capability has mostly encompassed high technology industries such as, biomedical, robotics, electronics, energy, chemical, and telecommunication. Dynamic capability has also been examined in services, for example, financial, grocery chains, healthcare, online services, focusing on single and multiple industry studies. Indeed, the concept of dynamic capability is intrinsically linked to market dynamism (Eisenhardt & Martin, 2000). However, the review shows that previous studies have mainly examined dynamic capability on firm performance in domestic domain. There is no attention on dynamic capability in export context. Thus, the limitations of the literature on the review show that dynamic capability require insights into export domain. In export market, the notion of dynamic capability should be examined in order to fill the gap of theory contribution in export context. Findings could provide support for the central role that dynamic capability theory ascribes to export success. Therefore, investigation of dynamic capability in export domain will highlight contribution for the theory and extend the research study.

### **2.3 Exploring the concept of ambidexterity**

Dynamic capability has been related to ambidextrous capability according to some scholars (e.g., Schreyögg & Kliesch-Eberl, 2007; Siggelkow & Levinthal 2003; Westerman, McFarlan & Lansiti, 2006; O'Reilly & Tushman, 2008). In general, ambidexterity refers to a firm's ability to engage in both exploitative activities (i.e. efficiency, increasing productivity, control certainty, and variance reduction) and exploratory activities (i.e. search, discovery, autonomy, innovation, and embracing variation) simultaneously (March, 1991). By pursuing both the exploitation of existing capabilities and the exploration of new capabilities, firms enable to enhance their performance and competitiveness (O'Reilly & Tushman, 2004). While exploitation represents abilities to refine existing capabilities to improve operational efficiency, exploration pertains mainly to abilities to refine and extend existing capabilities (March, 1991). Ambidextrous capability enables a firm to adapt over time because they involve the ability to simultaneously explore and exploit. This view has



coalesced around dynamic capability, that is, the ability of a firm to reconfigure assets and existing capabilities, which explains long-term competitive advantage (Eisenhardt & Martin, 2000; Teece, Pisano & Shuen, 1997). For this reason, ambidexterity acts as a dynamic capability (O'Reilly & Tushman, 2008). Thus, achieving ambidextrous capability is at the centre of a firm's dynamic capability (Raisch & Birkinshaw, 2008).

Although the extant literature shows consensus among definitions of ambidexterity that relates to the simultaneous pursuit of exploration and exploitation, these studies have conceptually distinguished between the balanced and combined aspects of ambidexterity (e.g., Cao, Gedajlovic & Zhang, 2009; Lubatkin, Simsek, Ling & Veiga 2006; Gibson & Birkinshaw, 2004). First, the balance form of ambidexterity focuses on the idea that a closer match in the relative magnitude of exploitative and exploratory activities contributes to firm performance (e.g., He & Wong, 2004). The balance view of ambidexterity can be operationalised as the absolute difference between explorative and exploratory activities (Levinthal & March, 1993). The concept is based on the view that both activities share the same resources (e.g., Gupta, Smith & Shalley, 2006; Brown & Eisenhardt, 1997; Burgelman & Grove, 2007). Hence, when a firm overemphasises exploration to the exclusion of exploitation, it likely increases its risk of failing to appropriate returns from its search and experimentation activities (Jansen, van den Bosch & Volberda, 2006). Conversely, when firm overemphasises exploitation to the exclusion of exploration, it likely increases its risk of obsolescence (Christensen & Overdorf, 2000; Leonard-Barton, 1992). As a result, striking a closer balance between exploitation and exploration enable firms to better manage risk of obsolesce and risk of failure to appropriate returns from new activities.

Second, the combined form of ambidexterity is premised on the idea that complementary between exploitative and exploratory activities contributes to firm performance (e.g., Burgelman & Grove, 2007). The concept is based on the view that ambidexterity can take place in complementary domains that do not necessarily complete for the same resources (Gupta, Smith & Shalley, 2006). In this sense, a high degree of exploitative effort can improve a firm's effectiveness in exploring new knowledge and in developing resources that support new products and markets

(e.g., improving the scale economies of existing core business). The proficiency of a firm's exploratory processes can also enhance its ability to engage in successful exploitation (e.g., development of commercially successful new products). For example, successful exploration in one product can also improve the economics of existing exploitative endeavours (e.g., enhancing brand image). As a result, firm knowledge and resources can be effectively leveraged across both types of exploitative and exploratory activities because they complement each other and lead to enhanced firm performance.

**Table 2.3: Review of empirical research on ambidextrous capability**

<b>Type of Firms</b>	<b>Form of ambidexterity</b>	<b>Study</b>	<b>No. of studies</b>
Domestic	Balanced	Arnold, Fang and Palmatier (2010); Atuahene-Gima and Murray (2007); Auh and Menguc (2005); Benner and Tushman (2003); Danneels (2002); Lou (2002); Kyriakopoulos, Kyriakos and Moorman (2004); Jansen, van den Bosch and Volberda (2005); Jansen, van den Bosch and Volberda (2006); Hughes et al. (2010); Li and Lin (2008); Mueller, Rosenbusch and Andreas Bausch (2013); Vorhies, Orr and Bush (2010); Vorhies et al. (2011); Yalcinkaya, Calantone and Griffith (2007)	15
	Combined	Atuahene-Gima and Murray (2007); Jansen et al. (2012); Lubatkin et al. (2006); Sarkees, Hulland and Prescott (2010)	4
	Both	Cao, Gedajlovic and Zhang (2009); He and Wong (2004)	2
Export	Balanced	Hughes et al. (2010); Hortinha, Lages and Lages (2011); Vorhies, Orr and Bush (2010)	3
	Combined	Lisboa, Skarmeas and Lages (2011)	1

As shown in Table 2.3, the review of empirical research on ambidextrous capability classified by form of ambidexterity (i.e., balanced and combined) and firm operating (i.e., domestic firms, exporting firms). The review shows that, the majority of the studies have focused on domestic area and balanced dimension of ambidexterity. Based on the review of relevant literature, few studies have examined the role of ambidextrous capability in the export domain (using both balanced and combined dimension of ambidexterity). In export markets, firms not only have more

opportunities, but they also face a greater risk that their current core competences become rapidly obsolete as well. The notion of ambidexterity calls attention to the need for renewal of firm competences in changing environments which urge firms to renew and reconfigure firm capabilities over time (O'Reilly & Tushman 2008). Thus, firms must not only meet the salient and latent needs and wants of today's customers, but they must also innovate to ensure the creation of new customers and the means of satisfying their future needs and wants concurrently (Berthon, Hulbert & Pitt, 1999; Manguc & Auh, 2008). With the exception of Lisboa, Skarmeas and Larges (2011), research into combined ambidexterity in the export domain has been largely ignored. This is especially so in relation to the idea that complementarity within-functional areas in the form of ambidexterity and cross-functional areas in the form of ambidexterity contributes to firm performance. In addressing the research gap, the need for researchers to better understand function of combined ambidexterity, especially in export context, has been recognised and called for. Findings could provide support for the role of ambidexterity, especially those relating to combined ambidexterity in export domain. Thus, support for combined ambidexterity will provide evidence of the differential form of ambidexterity on firm performance, thus ensuring better resource allocation decisions for exporting firms.

## **2.4 Exploring the concept of complementarity**

Complementarity theory is based on the notion that when doing more of one activity increases the returns from doing more of another activity (Milgrom & Roberts, 1995). In this context, coordinated integration in functional level is necessity for improving performance (Day, 1994). In particular, the combination of idiosyncratic capabilities enable firms enhancing their performance in that it reconfigures capabilities, reduces resource deficiencies, and generated new applications from those resources (Teece, Pisano & Shuen, 1997). The complementarity of marketing and product innovation is imperative for achieving firm success (Tushman, 1997; Ngo & O'Cass, 2012). Specifically, firms need to excel at two things: the ability to come up with innovations constantly, and the ability to commercialise these innovations into the kinds of products that capture consumer needs and preferences in markets (Dutta, Narasimhan & Rajiv, 1999). As such, when firms exploit marketing capability, they can leverage their product innovation capability to enter new markets, serve market

better, or provide greater value than competitors (Hult & Ketchen, 2001). Thus, complementary capability between marketing and product innovation are keys to the attainment of firm goals and achieve firm's performance (Day, 1994; Gatignon & Xuereb, 1997; Siguaw, Simpson & Enz, 2006).

**Table 2.4: Review of empirical research on complementary capability**

<b>Types of firm</b>	<b>Complementary focus</b>	<b>Study</b>	<b>No. of studies</b>
Domestic	Marketing and product innovation	Atuahene-Gima and Wei (2011); Baker and Sinkula (2007); Brettel et al (2011); Calantone and Rubera (2011); De Luca, Verona and Vicari (2010); Dutta, Narasimhan and Rajiv (1999); Harmancioglu, Droge and Calantone (2009); Hult and Ketchen (2001); Kotabe, Srinivasan and Aulakh (2002); Kransnikov and Jayachandran (2008); Menguc and Auh (2006); Moorman and Slotegraaf (1999); O'Cass and Ngo (2011); O'Cass and Ngo (2007); O'Cass and Sok (2012); Ramaswami, Srivastava and Bhargava (2009); Slotegraaf and Moorman (2003); (Song et al. (2005); Swink and Song (2007)	19
Export	Marketing and product innovation	Li (1999)	1

Table 2.4 highlights the empirical research on complementary capability between marketing and innovation classified by firm type. The review shows that most of the studies have been examined complementarity of marketing and innovation in domestic domain. With the exception of Li (1999), the complementarity of marketing and innovation was conducted in export domain. In addressing the research gap, the value of complementarity between marketing and innovation must not be viewed in isolation, and there may be a need for firms to combine the two capabilities to achieve synergistic outcome (Atuahene-Gima & Ko, 2001; Hult & Ketchen, 2001; Jaworski, Kohli & Sahay, 2000). Thus, finding role of complementary capability between marketing and innovation in export domain could provide support for researchers to better understand function of complementarity in export context. .

### **2.4.1 Marketing capability and exporting**

Efforts to understand the nature of marketing capability has been increasing in recent years. Marketing capability generally is an important source of positional advantage and is likely to be particularly valuable to firms (Jaworski & Kohli, 1993; Narver & Slater, 1990; Slater & Narver, 1994). As such, this section reviews the concept of marketing capability and their linking to firm performance. Marketing capability has been defined as the integrative processes designed to apply the collective knowledge, skills, and resources of the firm to the market-related needs of the business, enabling the business to add value to its goods and services and meet competitive demands (Day, 1994). Marketing capability is seen as processes supportive of the firm's strategic objectives (Day, 1994) and is developed in response to the strategic actions taken by the firm and the day to day business activities used to implement the firm's strategies (Grant, 1991). When the firm's marketing employees continually apply their knowledge and skills to solving the firm's marketing problems, marketing capability is developed (Vorhies, Morgan & Autry, 2009; Vorhies & Morgan, 2005; Vorhies, Harker & Rao, 1999). Certain types of marketing capability can be recognised in all firms, corresponding to the core processes for creating economic value (Day, 1994). However, it is impossible to list all possible firm marketing capability because they generally vary among businesses due to the nature of the business environment (Day, 1994).

The literature highlights two classifications of marketing capability: specialised marketing capability and architectural marketing capability (e.g., Morgan, Vorhies, & Mason, 2009; Day, 1994). First, specialised marketing capability is firm ability usually associated with the marketing functions, and concern individual marketing mix elements (e.g., Day 1994; Vorhies & Morgan, 2003). Firms apply specialised marketing capability to transform resources into marketing mix actions (Vorhies & Morgan, 2005). This capability reflects task-specific marketing activities such as product development, pricing, distribution, and marketing communications (Vorhies, Morgan & Autry, 2009). Second, architectural marketing capability involves the processes of marketing planning and marketing implementation (e.g., Morgan, Vorhies, & Mason, 2009; Morgan et al., 2003). This capability reflects marketing strategy by which firms plan appropriate combinations of available marketing mix

elements to deploy into their marketplaces, and execute these planned marketing deployments, transforming them into realised value offering for target markets (Day, 1994; Vorhies & Morgan, 2003). Firms apply architectural marketing capability to orchestrate marketing mix capability and their resource inputs involving market information management and marketing strategy development, and transform intended marketing strategy into realised resource deployments (Vorhies & Morgan, 2005). As such, firms orchestrate marketing mix actions and execute marketing planning and conceive marketing strategy to optimise the match between the firm's marketing mix elements and their customers (Morgan et al., 2003). In this way, these two components of marketing capability enable the effective and efficient accomplishment of marketing tasks and achieve firm success.

**Table 2.5: Review of marketing capability in export area**

Area of study	Study	No. of studies
Marketing capability in export	Akyol and Akehurst (2003); Albaum and Tse (2001); Boso, Cadogan and Story (2012); Cadogan, Cui and Li (2003); Cadogan, Cui, Morgan and Story (2006); Cadogan, Diamantopoulos and de Mortanges (1999); Cavusgil and Zou (1994); Gertner, Gertner and Guthery (2007); Hart and Tzokas (1999); Hultman, Katsikeas and Robson (2011); Hultman, Robson and Katsikeas (2009); Julian and O'Cass (2002) ; Kaleka (2002); Kaleka (2011a); Kaleka (2011b); Lages, Jap and Griffith (2008); Leonidou, Palihawadana and Theodosiou (2011); Li, Nicholls and Roslow (1999); Ling-yee and Ogunmokun (2001); Morgan et al. (2003); Morgan, Katsikeas and Vorhies (2012); Murray, Gao and Kotabe (2011); Seringhaus (1993); Sousa and Bradley (2008); Timmor and Zif (2005); Zou, Fang and Zhao (2003)	26
Ambidexterity marketing capability in export	Lisboa, Skarmas and Lages (2011)	1

The review of literature has verified the presence of a link between marketing capability and firm performance (e.g., Ellis, 2006; Eng & Spickett-Jones, 2009; Hooley et al., 2000; Hooley, Greenley, Cadogan & Fahy 2005; Morgan, Vorhies & Mason 2009). Marketing capability also plays an important role in export success. As

shown in Table 2.5, the review of empirical research on marketing capability is classified by export domain and the form of ambidexterity (i.e., exploitative marketing capability and exploratory marketing capability). The criteria for the selection of articles was based on empirical research focusing on exporting and marketing capability and ambidexterity in relation to marketing capability published in leading management journals since 1992. The review shows that most of the reviewed studies focused on marketing capability in export. With the exception of Lisboa, Skarmeas and Lages (2011), research into marketing capability in export domain has largely ignored the ambidexterity context such as exploitative and exploratory capabilities. Given this research gap, findings the role of ambidexterity in marketing capability could help researchers to better understand the role of ambidexterity, especially in export context. Ambidexterity in marketing capability may enable firms to exploit and explore new opportunities in export markets (Cadogan, Kuivalainen & Sundqvist, 2009; Lu, Zhou, Bruton & Li, 2010). Thus, examining the application of exploitative marketing capability and exploratory marketing capability in export activity and associated export performance will make a contribution to the extant literature.

#### **2.4.2 Product innovation capability and exporting**

Meeus and Edquist (2006) described product innovation as new or better products (or product varieties) being produced and sold. The authors distinguished product innovation into 1) product or new material goods, as well as 2) service or new intangible services. As measurement criteria of manufacturing and service firms are different, product innovation in this study emphasises mainly new material goods. Firms drive markets through product innovation and result in the differentiation of the firm's performance for its customers (Damanpour & Gopalakrishnan, 2001). To be successful in product innovation, a firm requires the capacity to achieve new and innovative forms of competitive advantage given path dependencies and market position (Leonard-Barton, 1992). Thus, it reflects a firm's ability to create and deliver new goods or services to existing or new customers, or offers of existing goods or services to new customers and referred to as product innovation capability (Day, 1994).

Product innovation capability reflects firms' interrelated processes for performing innovation activities related to offerings, production process, management and market (Han, Kim & Srivastava, 1998; Hurley & Hult, 1998; Weerawardena & O'Cass, 2004). As competing on the basis of innovation is the key to growth in marketplace (Chandrashekar, Mehta, Chandrashekar & Grewal, 1999; Marinova, 2004), innovativeness focusing on product design or product development enables firms to leverage its positional advantage via creating new value (i.e., new or better product offering) to their markets (Kotabe, Srinivasan & Aulakh, 2002). Therefore, product innovation capability enables a firm creating new customers by creating and delivering new or improved products (Day, 1994; Damanpour & Gopalakrishnan, 2001).

In export markets where 1) the nature of future competition and markets are difficult to determine, 2) the rate of technological change is rapid, and 3) time-to-market and timing are critical, exporting firms require dynamic capability to renew its competences and innovative responses to meet with the rapidly changing environments (Teece, Pisano & Shuen, 1997). Thus, product innovation capability is considered to be dynamic because of its ability associated with product development activities to satisfy customers' current needs and create new offerings that target latent needs (O'Cass & Ngo, 2011). Table 2.6 presents the categorisation of empirical research on product innovation capability classified by export domain and the form of ambidexterity (i.e., exploitative product innovation capability and exploratory product innovation capability). The criteria for the selection of articles selection was based on empirical research focusing on exporting and product innovation and ambidexterity in relation to product innovation published in leading management journals since 1992.

The review shows that most studies have been conducted on product innovation capability in domestic domain. Noticeably, research into product innovation capability in the export domain has largely ignored the ambidexterity context. There has been little attention in this area into exploitative and exploratory capabilities with the exception of Lisboa, Skarmeas and Lages (2011), Hughes et al. (2010) and Hortinha, Lages and Lages (2011). The findings of Lisboa, Skarmeas and Lages (2011) corroborate the links between product innovation capability in the context of ambidexterity and export performance. However, the authors did not examine the



effect of exploitative and exploratory capabilities on export performance. They suggest the link between exploitative capability and current export performance and product development exploratory capability and future export performance.

While Lisboa, Skarmeas and Lages (2011) ignore the effect of both exploitative and exploratory product innovation capability on firms' current export performance, Hortinha, Lages and Lages (2011) study the effect of both exploitative and exploratory product innovation capability as mediator not the main effect on export performance. Further, Hughes et al (2010) examine the effect of product innovation capability on export performance in the context of organizational ambidexterity. However, the authors focus on the balanced form of ambidexterity which highlights how the closer alignment in the relative magnitude of exploitative and exploratory activities contributes to export performance.

Thus, the limitations of the literature on the review show that ambidexterity in product innovation capability require insights into export context in order to fill the gap of theory contribution. Findings could provide support of the role of ambidexterity in product innovation capability ascribes to export success. Therefore, investigation of product innovation capability in export domain will highlight contribution for the theory and extend the research study.

**Table 2.6: Review of product innovation capability in export area**

<b>Area of study</b>	<b>Study</b>	<b>No. of study</b>
Product innovation capability in export	Atuahene-Gima (1995); Bernard and Jensen (1999); Cassiman and Golovko (2011); Dow (2006); Filatotchev, Liu, Buck and Wright (2009); Flor and Oltra (2005); Golovko and Valentini (2011); Guan and Ma (2003); Ito and Pucik (1993); Lages, Silva and Styles (2009); Morgan, Vorhies and Schlegelmilch (2006)	11
Ambidexterity product innovation capability in export	Lisboa, Skarmeas and Lages (2011); Hughes et al. (2010); Hortinha, Lages and Lages (2011);	3

## **2.5 Exploring the concept of process innovation capability**

Process innovation capability contributes to firm competitiveness and growth in different ways for internal firm activities (Damanpour, 2010). While product innovation capability and marketing capability have an external focus by serving customers' demand for new products or executives' desire to capture markets, process innovation capability has an internal focus and is oriented toward increasing the efficiency and effectiveness of internally (Damanpour, 2010). At the firm level, process innovation capability enables a firm to reduce delivery lead-time or decrease operational costs (Knight, 1967; Martinez-Ros, 2000). It represents the development and use of new ideas or behaviours where a new idea could pertain to production process, firm structure or administrative system (Bessant, Lamming, Noke & Phillips, 2005; Knight, 1967).

Process innovation capability has been categorised into 1) technological innovation capability, and 2) management (or administrative) innovation capability (Damanpour, 1991; Meeus & Edquist, 2006). This taxonomy reflects a distinction between social structure and technology in firms (Daft, 1978; Damanpour, 1991; Kimberly & Evanisko, 1981). The notion of process innovation (e.g. technological innovation capability or management innovation capability) reflects complex bundles of skills and accumulated knowledge, exercised to coordinate activities and make use of the resources (Day, 1994). Furthermore, both technological innovation capability and management innovation capability are regarded as firm-level traits (Benner & Tushman 2002; Song et al., 2005). Technological innovation capability reflects behavioural processes that are directly related to the primary work activities of the firm and mainly produce changes in its operating systems whereas management innovation capability is indirectly related to the firm's basic work activity and mainly affects its management systems (Damanpour, Walker & Avellaneda, 2009). Therefore, process innovation modifies the firm's operating processes and systems which enable responses to changing environments.

### **2.5.1 Technological innovation capability**

Technological innovation capability is defined as the ability to introduce new elements into a firm's production system or service operation for producing its

products or rendering its services to the customers (Damanpour, Walker & Avellaneda, 2009; Song et al., 2005). As technological innovation capability pertains to production process technology within the firm, it is more directly related to the primary work activities of the firm than management innovation, which is more directly related to its management (Damanpour, 1991; Kimberly & Evanisko, 1981). Indeed, technological innovation capability involves firms' abilities in producing and marketing goods or services through technology systems (Martinez-Ros, 2000). Thus, technological innovation capability is oriented toward the efficiency or effectiveness of production and may result in a decrease in the cost of production as it changes the way the firm produces and delivers those offerings (Bessant, et al., 2005). Although the role of technological innovation capability in increasing firm performance has been frequently highlighted in the literature (e.g., Song & Song, 2010; Damanpour & Aravind, 2011), much less research has focused on export context. In addressing the research gap, the finding role of technological innovation capability in export domain could provide support for researchers to better understand function of technological innovation capability in export context.

### **2.5.2 Management innovation capability**

Management innovation can be defined as a difference in the form, quality, or state over time of the management activities in a firm (Birkinshaw, Hamel & Mol, 2008). Further, management innovation pertains to changes in the firm's structure and process, administrative systems, knowledge used in performing the work of management, and managerial skills that enable a firm to function and succeed by using its resources effectively (Damanpour, Walker & Avellaneda, 2009). When considered via an institutional perspective, management innovation provides progressive changes in management ideology and/or practices (Birkinshaw, Hamel & Mol, 2008). Thus, management innovation capability mainly affects formal management systems and is indirectly related to the firm's basic work activity such as marketing and managerial activities (Damanpour, Walker & Avellaneda, 2009). Further, it involves firm structural and administrative processes directly related to the basic activities of a firm (Damanpour, 1991). Therefore, management innovation capability reflects complex bundles of skills and accumulated knowledge, exercised through firm processes that enable firms to coordinate activities and make use of the

resources (Benner & Tushman 2002; Day, 1994). Although management innovation capability argued to enable firms to function and succeed by managing their resources effectively, significant gaps remain in responding to the critics in export domain. The review shows that no studies have examined management innovation capability in export performance. Thus, findings could provide support for export success as an outcome of management innovation capability in export operations.

## **2.6 Analysis and review of exporting research**

The increasing importance of exporting has generated a considerable scholarly interest, with all top international business and marketing journals publishing work on this topic in recent years (e.g., Cassiman & Golovko, 2010; Kaleka, 2011; Lages, Silva & Styles, 2009; Murry, Gao & Katobe, 2011). However, an analysis of the literature shows that most of the existing research on export performance suffers various conceptual, methodological and practical limitations that could effectively guide researchers and practitioners. During late phases of exporting research (mid-1990s to the present), the dominant topic of research effort on exporting has been export performance (Leonidou, Katsikeas, & Coudounaris, 2010). This is due to the fact that export performance is the end result of the firm's marketing efforts and other firm activities in foreign markets, contributing an indication of firm overall success or failure, and determining further continuation of or withdrawal from exporting (Leonidou & Katsikeas, 2010). An interesting aspect of export performance is the identification of factors that are conducive to superior export performance, as well as the way in which performance has been operationalised (Lages & Lages, 2004). To understand why some firms are more successful than others, the importance of a sound measure of export performance needs to be the starting point of the study. Therefore, export performance is initially identified in the review of the extant literature to address the research gaps and to underpin theoretical development of the study to be undertaken in Chapter Three.

From a research perspective, export performance is often a dependent variable of primary interest, reflecting a desire to understand why some firms are more successful than others (Diamantopoulos & Kakkos, 2007). However, most of the authors did not define the construct, but rather use operational definitions with multiple measures of export performance and their definitions could only be inferred

from their content. Table 2.7 provides a representative sample of export performance definitions from the literature. Originally, Madsen (1987) suggested conceptual definitions of export performance into three dimensions of sales, profits, and change. As shown in Table 2.7, conceptual definitions of export performance tended to follow the use of multiple economic and noneconomic measures of export performance. The operational definitions of export performance tend to focus on measuring performance at a specific export product-market level, rather than an overall firm level (Oliveira, Cadogan & Souchon, 2012) as the number of studies using the export venture as the unit of analysis increased (Leonidou & Katsikeas, 2010; Sousa, Martinez-Lopez & Coelho, 2008). Usually, a firm initiates an export venture with an economic and/or strategic objective in mind. Such objectives can be, for example, profits, sales, and/or costs which are economic objectives, while market expansion, competitive responses, gaining an initial foothold in foreign market, or increasing the awareness of the product are strategic objectives. Therefore, the use of venture level export performance measures is demanded for export performance assessment (Boso, Cadogan & Story, 2012; Oliveira, Cadogan & Souchon, 2012).

**Table 2.7: Key definitions of export performance**

<b>Study</b>	<b>Definition</b>
Shoham (1998)	A composite outcome of a firm's international sales, which includes three subdimensions: export sales, export profitability, and export growth (p.62).
Cavusgil and Zou (1994)	The extent to which a firm's objectives, both economic and strategic, with respect to exporting a product into a foreign market, are achieved through planning and execution of export marketing strategy (p.4).
Toften and Olsen (2003)	The outcome of a firm's activities in export markets (p.101).
Lages, Jap and Griffith (2008)	The extent to which a firm's objectives, both strategic and financial, with respect to exporting a product to a market, are achieved via the execution of the firm's export marketing strategy (p.306).

Export performance involves firm inputs and outputs that are variously viewed and evaluated and its conceptualisation and assessment depend on the theoretical framing and empirical setting of the study (Leonidou, Katsikeas & Coudounaris, 2010). According to the review of exporting research articles conducted by Leonidou and Katsikeas (2010), the adoption of a theoretical basis to provide an explicit theoretical basis has been increasing and reaching 71% during the period 2000-

2007. The theoretical basis to build research hypotheses derived from the general marketing and/or management literatures (e.g., transaction cost analysis, resource-based view, agency theory, social exchange theory, and network theory) (Leonidou & Katsikeas, 2010).

In terms of the theoretical bases that have been adopted, structure-conduct-performance (SCP) theory and resource-based view theory held a dominant position in explaining the determinants of export performance (Morgan, Kaleka & Katsikeas, 2004; Sousa, Martinez-Lopez & Coelho, 2008; Tan & Sousa, 2011). Specifically, the structure-conduct-performance (SCP) theory was used to explain external determinants of export performance (Morgan, Kaleka & Katsikeas, 2004). The SCP theory addresses the environmental influence of industry conditions (structure) upon a firm's performance (Porter, 1980). Drawing from the SCP theory, firm performance is primarily determined by the structural characteristics of the firm's markets and the firm's ability to achieve and sustain positional advantages through the efficiency and effective execution of planned competitive strategy (Porter, 1990). Therefore, the source of a firm's positional advantage in the developing of a firm strategy (conduct) aligned with market and industry conditions (structure) (Porter, 1990) and the degree of fit between a firm's strategy and its environmental influences is considered the mechanism by which firms respond successfully to the external environment and achieving positional advantage and superior performance (Katsikeas, Samiee & Theodosiou, 2006; Zou & Cavusgil, 2002; Zou & Stan, 1998). Thus, a firms' strategic response to the interplay of internal and external factors is considered in export study (Yeoh & Jeong, 1995).

In contrast to structure-conduct-performance (SCP) theory, the resource-based view (RBV) theory was used to explain internal determinants of export performance (Morgan, Kaleka & Katsikeas, 2004; Sousa, Martinez-Lopez & Coelho, 2008). RBV theory represents the counterpart to the SCP theory in that firm resources and capabilities exert a greater impact on firm performance than the external market and industry structure (Barney, 1991; Wernerfelt, 1984). The main driver of positional advantage is inside the firm coming from resources and capabilities that the firm controls that is superior in use, hard to imitate, difficult to substitute for, and more valuable (Barney, 1991; Prahalad & Hamel, 1990). The RBV theory posits that

superior performance results from acquiring and exploiting the distinct resources and capabilities of the firm, and how superior performance of firm can be attained relative to their rivalry in the similar market (Dhanaraj & Beamish, 2003).

In connecting RBV theory to dynamic market environments more closely, the notion of dynamic capability is used to address changing environments through deploying a resource base by acquiring, creating, shedding, integrating, and recombining existing resources to generate new value creating strategies (Teece, Pisano & Shuen, 1997; Winter, 2003). Thus, dynamic capability allows firms continually to gain a positional advantage through adapting, upgrading or restructuring resources and capabilities towards environment change significantly (Leonard-Barton, 1992; Ambrosini & Bowman, 2009). Consequently, firm's export performance should be based on firm level activities (Zou & Stan, 1998). The existing exporting research on export performance tends to focus on the issue of export positional advantage. Further, direction of using theory in exporting research focuses on determining a firm's capabilities that play a critical role in the achievement of positional advantage in export venture, and its subsequent impact on export performance (Leonidou, Katsikeas & Coudounaris, 2010; Julian & O'Cass, 2002). Thus, dynamic capability appears to be strong determinants of the choice in determining exporting theory in the context of firm level.

An interesting aspect of export performance research is the identification of factors that are conducive to superior export performance, and the way upon which export performance has been operationalised (Diamantopoulos & Kakkos, 2007; Lages & Lages, 2004; Morgan, Kaleka & Katsikeas, 2004). Although identifying the factors influences export success is main dominant topic in exporting research, much of the exporting research has often been described as atheoretic, lacking solid theories and conceptual frameworks that cannot effectively guide researchers (Leonidou, Katsikeas & Coudounaris, 2010; Katsikeas, Leonidou & Morgan, 2000). Currently, exporting research provides a basis for the development of mid-level theories (Leonidou, Katsikeas & Coudounaris, 2010; Tan & Sousa, 2011). Some more contemporary avenues of research into exporting mainly focus on various types of resources and capabilities that play an important role in the achievement of a positional advantage in export ventures, which in turn affects export performance (Leonidou, Katsikeas & Coudounaris, 2010). As such, it is essential that future

studies require more theoretical framing and empirical setting of the study to conceptualise and assess export success at the level at which the theory is developed (Oliveira, Cadogan & Souchon, 2012).

There is a suggestion from the strategy literature that dynamic capability plays an important role in the achievement of a positional advantage in export performance (Zou, Fang & Zhao, 2003). The deployment of dynamic capability should lead to the achievement of positional advantage in the market in which the firm has chosen to operate, and this in turn should enhance performance (Teece, Pisano & Shuen 1997). Underlying dynamic capability theory explanations of export performance could provide greater theoretical insights into the relationship between export performance and its antecedents, which in turn, contributed to exporting research.

## **2.7 Conclusion**

This chapter presented a review and analysis of the literature in export area. The aim of this chapter is to provide a theoretical foundation for further examination of the key drivers of export success. The theoretical direction related to dynamic capability, ambidexterity, and complementarity in relation to drivers of export business success was provided to identify research gaps from the existing literature. These reviews presented an analytical classification of the literature based on domestic and export domain. Particularly, two major specific capabilities (marketing capability and product innovation capability) were reviewed in export domain. This chapter concluded by investigation of the concept of process innovation (management innovation capability and technological innovation capability) following by analysis and review of exporting research to ensure a comprehensive theoretical framework to be developed. Considering on the review of literature and limitations to be discussed, this chapter offers a starting point for the development of the theoretical framework of drives of export business success in Chapter Three.



# Chapter Three

## Theoretical Framework

---

### 3.1 Introduction

The literature review undertaken in Chapter Two provided the underpinning for the theoretical development in this chapter. To address the research gaps identified in the literature review in Chapter Two, Chapter Three presents a two-stage approach to developing the theoretical model and hypotheses.

This chapter is divided into two primary stages in relation to theoretical model development. In the first stage, a primary model is developed theorising that exploitative and exploratory in marketing capability and product innovation capability are key drivers of a firm's export performance. This model is developed using the concepts of ambidextrous capability (March, 1991) and complementary capability (Moorman & Slotegraaf, 1999; Song et al., 2005). In this stage, two specific capabilities, marketing and product innovation are hypothesised to enhance the firm positional advantage, resulting in export success.

The second stage incorporates contingency theory and brings into focus specific contingency factors into the model. The contingency factors utilised to enhance the explanatory power of the model focus on process innovation capability which is proposed to strengthen the relationships between ambidextrous capability, complementary capability, and firm positional advantage. In this stage, two specific capabilities, management and technological innovation are proposed to enhance efficiency and effectiveness of a firm's positional advantage and export success.

### 3.2 Model development stage

This study aims to investigate export venture performance outcomes from ambidextrous capability and complementary capability. Linked to the dynamic capability theory, the model development process encompasses 1) the primary

model built on ambidexterity theory and complementarity theory, and 2) contingency factors as shown in Figure 3.1.

The primary model is developed from ambidexterity theory. Drawing upon to the concept of ambidexterity, the argument is that firms can simultaneously focus on both exploitative capability (i.e., existing activities) and exploratory capability (i.e., new activities). Ambidextrous capability refers to a firm's ability to perform both exploitative activities (i.e. efficiency, increasing productivity, control certainty, and variance reduction) and exploratory activities (i.e. search, discovery, autonomy, innovation and embracing variation) simultaneously (March, 1991). Firms focus on exploitative capability to achieve short-term success and focus on exploratory capability to achieve long-term outcomes (Atuahene-Gima, 2005; March, 1991).

Managing firms for the simultaneous pursuit of exploitation and exploration is a dynamic task which links to the dynamic capability theory (Siggelkow & Levinthal, 2003; Westerman, McFarlan & Iansiti, 2006). Dynamic capability theory involves the ability of a firm to reconfigure assets and existing capability to achieve long-term competitive advantage (Eisenhardt & Martin, 2000; March, 1991; Teece, Pisano & Shuen, 1997). This view is relevant to the notion of ambidexterity in that exploitation and exploration are dynamic processes (Schreyögg & Kliesch-Eberl, 2007). In terms of ambidextrous capability, the interaction of exploitation and exploration is seen as a dynamic capability (Schreyögg & Kliesch-Eberl, 2007). In a dynamic environment, a firm requires abilities that engage in sufficient exploitation to ensure its current success, and at the same time, a firm requires the ability to undertake exploration to ensure its future success (Levinthal & March, 1993). In this sense, firms are more likely to become ambidextrous under specific conditions (such as unstable, changing and competitive markets) (Jansen, Van den Bosch & Volberda, 2005). Therefore, the first stage of the primary model is embedded within ambidexterity theory.

The second theory used in the development of the primary model is complementarity theory that is closely linked to ambidexterity theory. Within the application of combined ambidexterity, exploitative capability and exploratory capability may take place in complementary domains (i.e., within functional and cross functional ambidexterity) (Gupta, Smith & Shalley, 2006). Therefore, stage one is developed by using complementary capability (Dutta, Narasimhan & Rajiv, 1999; Moorman &

Slotegraaf, 1999; Song et al., 2005). Complementary capability refers to the firm's ability to effectively combine capability to achieve superior performance (Song et al., 2005). Within the dynamic capability perspective, firms are required to work effectively across their boundaries both interfunctional and interfirm; therefore, firms that seek to achieve inimitable advantage require higher levels of coordination than those that exist in competitor firms in an effort to improve performance (Allred, Fawcett, Wallin & Magnan, 2011). For this reason, firms that can offer valuable insights into the source of enduring differences in firm performance through effectively combining their capability can enhance their competitive advantage (Henderson & Cockburn, 1994; Hult & Ketchen, 2001).

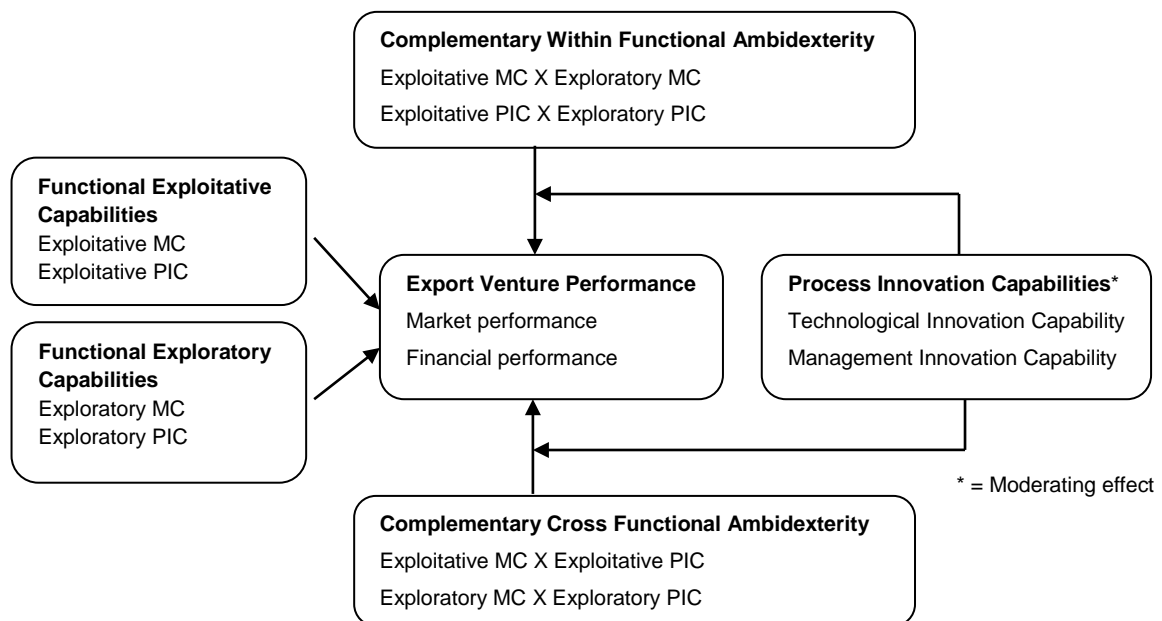
Combining ambidexterity theory and complementary theory in the primary model, the choice was made to focus on marketing capability and product development capability. The literature review provided in Chapter Two indicated performance implication of marketing and product innovation (e.g., Atuahene-Gima, 2005; Yalcinkaya, Calantone & Griffith, 2007; Vorhies, Orr & Bush, 2011). Further, previous research has documented the role of ambidextrous capability in firm success (e.g., Atuahene-Gima, 2005; Uotila, Maula, Keil & Zahra, 2009). However, prior research in exploitative capability and exploratory capability has been conducted mostly in a domestic market context. There is a lack of empirical evidence indicating the effects of exploitative capability and exploratory capability in the context of exporting and export performance.

Exporting activities are critical to the survival, growth, and success of firms (e.g., Morgan, Kaleka & Katsikeas, 2004). In this study, export venture performance (EVP) represents the degree that the firm has achieved its goals for market share, sales volume, sales growth, and customer satisfaction for its product-market in timely manner (Atuahene-Gima, 2005; Langerak, Hultink & Robben, 2004; Baker & Sinkula, 2005). Investigating export venture performance outcomes in the context of ambidextrous capability may be beneficial in that domestic and export firms may differ in their rationale, objectives, operation processes, and marketing mix activities due to the difference in market environments (i.e., home versus host). Thus, the integration between marketing capability and product innovation capability should lead to better performance as these two specific capabilities are the most important

determinant of a firm's performance (Dutta, Narasimhan & Rajiv, 1999). Noticeably, both capabilities are generally accepted by scholars as having a strong positive relationship with firm performance (e.g., Gatigonon & Xuereb, 1997; Noble, Sinha & Kumar, 2002).

In addition, the literature shows that complementarity between marketing and product innovation enhances the firms' positional advantage. However, the literature review provided in the Chapter Two reveals that no previous empirical research focuses on complementary capability in the context of ambidexterity, especially in relation to exporting. Therefore, this study addresses the research gap in the literature by examining export venture performance outcomes of complementary capability (marketing and product innovation) and ambidextrous capability (exploitative and exploratory).

**Figure 3.1: The theoretical framework of the study**



In stage two of the theoretical model, the contingency factors are developed to enhance the explanatory power of the model. The model focuses on two factors, process innovation capability (technological innovation and management innovation) which were proposed as strengthening the firms' internal processes. The moderating effect of technological innovation capability and management innovation capability is argued to enhance the interaction outcomes of 1) ambidextrous capability

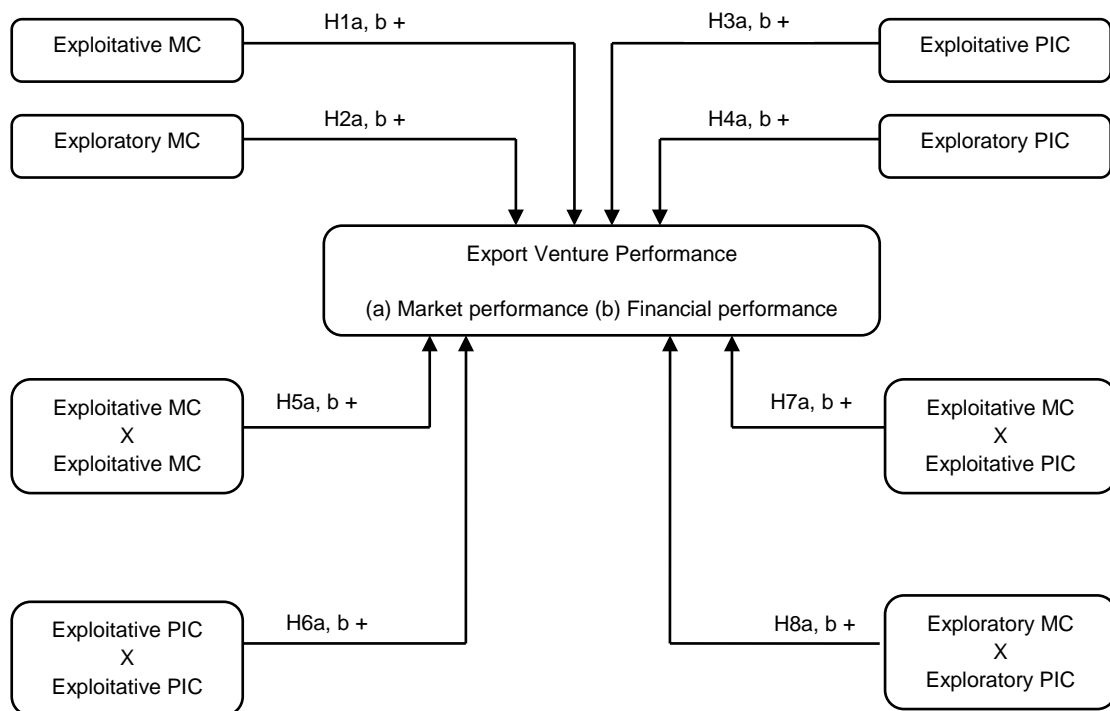
(exploitative and exploratory) and 2) effects of complementary capability (marketing and product innovation), which results in export success.

To this end, the starting point of the model development is embedded in the behaviors of firms in seeking positional advantages that enable them to achieve superior performance in their export markets. The model is built on two relevant theories with two key specific capabilities (marketing and product innovation) and two moderators (management innovation and technological innovation). The theoretical grounding is discussed in the next section.

### 3.3 Model development stage 1: Primary model

The primary model comprises of two parts as shown in Figure 3.2. The first part of primary model pertains to the extent that the implementation of exploitative capability and exploratory capability of marketing and product innovation influence a firm's export venture performance. Sections 3.3.1 to 3.3.3 outline the theory development leading to hypotheses 1 to 4.

**Figure 3.2: Primary model: Stage one (Hypothesis 1 to 8)**



The second part of the primary model pertains to the extent that the implementation of complementary capability (within-functional area and cross-functional area) influences a firm's export performance. The role of complementary capability through 1) within-functional area (i.e., exploitative marketing capability vs. exploratory marketing capability), and 2) cross-functional area (i.e., exploitative marketing capability vs. exploitative product innovation capability) in export performance is discussed in section 3.3.4 leading to the hypotheses 5 to 8.

### **3.3.1 Role of ambidextrous capability in firm performance**

Ambidexterity is the simultaneous pursuit of exploitation and exploration of firm activities. Exploitation represents the capability to refine existing competencies to improve operational efficiency (March, 1991). In contrast, exploration represents discovering new skills and capability (March, 1991). Ambidexterity calls attention to the need for renewal of firm competences in changing environments which urge firms to renew and reconfigure organisational capability over time (O'Reilly & Tushman, 2008). To maintain growth and survive, firms must not only meet the salient and latent needs of existing customers but also must innovate to ensure the creation of new customers and the means of satisfying their future needs and wants simultaneously (Berthon, Hulbert & Pitt, 1999; Manguc & Auh, 2008). Therefore, firm performance is enhanced through ambidextrous capability (Gibson & Birkinshaw, 2004; He & Wong, 2004).

### **3.3.2 Marketing capability in the context of ambidexterity**

This study focuses on two specific capabilities, namely marketing and product innovation as they play an important role in firm success (e.g., Atuahene-Gima, 2005; Yalcinkaya, Calantone & Griffith, 2007; Vorhies, Orr & Bush, 2011). Marketing capability are related to deployment of resources associated with the marketing function (Danneels, 2007). There are two interrelated routines in marketing capability. The first concerns marketing mix-based routines (i.e., product, pricing, channel management and marketing communication) (Vorhies & Morgan, 2005). The second concerns marketing strategy development and execution (i.e., marketing planning, marketing implementation) (Morgan, Zou, Vorhies, Katsikeas, 2003).

Marketing capability addresses value creation for customers by attempting to determine what value is perceived, experienced and understood by customers and provides one distinct means by which value for customers is created (Srivastava, Fahey & Christensen, 2001). A firm with distinctive marketing capability is more likely to create superior customer value and achieve a positional advantage (Day, 1994; Narver & Slater, 1990) that, as a result, fosters customer loyalty and perceived product quality (Kirca, Jayachandra & Bearden, 2005). For example, marketing capability enable firms to develop new product offerings to meet customers' needs, create customers' value perceptions through communication, and use pricing tactics to quickly respond to changes and gain higher revenues.

Previous studies provided evidence that marketing capability play a crucial role in firm performance (e.g., Han, Kim & Srivastava, 1998; Hooley, Fahy, Cox, Beracs, Fonfara & Snoj, 1999; Hooley et al., 2005; Hult, Ketchen & Slater, 2005). Moreover, the significant relationship between marketing capability and firm performance in export markets has been shown in an extensive body of work (e.g., Murray, Gao & Kotabe, 2011; Cadogan, Kuivalainen & Sundqvist, 2009; O'Cass & Julian, 2003; Cadogan, Sundqvist, Salminen & Puumalainen, 2002; Albaum & Tse, 2001; Cavusgil & Zou, 1994). Although the effect of marketing capability on export performance has been investigated, with results showing it enhances export performance (e.g., Zou, Fang & Zhao, 2003), an analysis of exploitative and exploratory marketing capability on performance outcomes in the context of export literature is limited. As such, the application of exploitative and exploratory marketing capability is required for examining in export activity and associated export performance.

### **3.3.2.1 Exploitative marketing capability and export venture performance**

Exploitative marketing capability (ExiMC) represent the refinement (i.e., improvement) of existing routines associated with current marketing mix-based activities, current marketing strategy development and execution, including current market segments, pricing, channel management, marketing communication, marketing planning and implementation, and other marketing activities (Vorhies, Orr & Bush, 2011; Danneels, 2008). Exploitation operates on a firm's existing learning curve by strengthening its current routines (March, 1991), core competences (Prahalad & Hamel, 1990), and capabilities (Collins & Montgomery, 1995; Leonard-

Barton, 1992). The notion of exploitation in marketing capability primarily involves improving and refining current skills and procedures associated with existing marketing capability, including current market segments, positioning, distribution, and other marketing activities (Kyriakopoulos & Moorman, 2004). In this respect, exploitative marketing capability represents the extent to which the firm challenges and alters existing ideas about targeting, segmentation, product positioning, product differentiation, product distribution, product design, product quality, pricing and promotion (Menguc & Auh, 2008). Therefore, exploitative marketing capability enables firms to satisfy current customers, exploits existing products and distribution channels, and advertising existing brands (Day, 1994). For example, firms can effectively serve their customers through existing marketing capability (Danneels, 2002). Accordingly, exploitative marketing capability can drive firms' export venture performance by focusing on existing marketing activities to satisfy current customers in export market. For this reason, exploitative marketing capability results in enhancing export venture performance. Therefore, it is hypothesised that:

*Hypothesis 1: Exploitative marketing capability is positively related to export venture performance in (a) market performance and (b) financial performance.*

### **3.3.2.2 Exploratory marketing capability and export venture performance**

Exploratory marketing capability (ExrMC) represents the generation of new routines associated with new marketing mix-based activities, new marketing strategy development and execution, including new market segments, pricing, channel management, communication, planning and implementation, and other marketing activities (Vorhies, Orr & Bush, 2011; Danneels, 2008). The notion of exploration in marketing capability challenges prior approaches to interface with new markets, such as new segmentation, new positioning, new products, new channels, and new marketing planning and implementation (Kyriakopoulos & Moorman, 2004). By focusing on fundamental changes, exploratory marketing capability enables firms to address the needs of emerging customers and offer substantial new benefits to customers.



Exploratory marketing capability focuses on more than being able to meet customers' current expressed needs. They assist firms to create new value by discovering, understanding, and satisfying latent needs of customers (Rundh, 2007; Narver, Slater & MacLachlan, 2004). They allow firms to offer value to customers in a new way (Vorhies, Orr & Bush, 2011; Kim & Atuahene-Gima, 2010; Narver, Slater & MacLachlan, 2004). For example, firms can establish new market segmentation approaches (i.e., segmenting by customer type, structuring market) for the product. Consequently, firms avoid missing market opportunities by challenging existing ideas with innovation (Vorhies, Orr & Bush, 2011; Menguc & Auh, 2008). Thus, the degree of exploratory marketing is determined by aggregating activities to discover future needs, and with cannibalising sales of existing products (Jaworski, Kohli, & Sahay, 2000). By taking calculated risks to proactively introduce new and innovative marketing activities, firms can also enhance export success (Boso, Cadogan & Story, 2012). Exploratory marketing capability drives firms' export venture performance. Thus,

*Hypothesis 2: Exploratory marketing capability is positively related to export venture performance in (a) market performance and (b) financial performance.*

### **3.3.3 Product innovation capability in the context of ambidexterity**

This study also focuses on product innovation capability as it is argued to be crucial to achieve superior performance (e.g., Sok & O'Cass, 2011; Lau, Tang & Yam, 2010; Zheng, Liu & George, 2010) and complementarity capability between marketing and innovation is viewed as the potential to drive superior firm performance once deployed together (e.g., Boso, Cadogan & Story, 2012; O'Cass & Ngo, 2011). In this study, innovation is primarily related to the product that a firm presents when entering a foreign market. In export markets where the product offer can be viewed as new, a firm can compete based on its product innovation (Timmer & Zif, 2005). Thus, product innovation is related to identifying and using opportunities to create new product, services, or work practices (Van de Ven, 1986). As such, product innovation capability is related to the firm's ability to generate innovations for a product to satisfy customers' current and future needs (Subramaniam & Youndt, 2005). The processes of product innovation usually occur in research and development departments and in the close collaboration with the sales and

marketing staff, who are more aware of the market and customer needs (Calantone & Rubera, 2012), and the technical staff, who specialise in the functional and design aspects of the manufactured products (Lages, Silva & Styles, 2009). When firms encourage employees to question firm norms and challenge existing assumptions and orthodoxy, innovation occurs (Lages, Silva & Styles, 2009). In this sense, product innovation capability is related to deployment of resources that associated with the product development functions such as developing new products, extending product ranges, improving existing product quality (Hurley & Hult, 1998; Weerawardenaa & O'Cass, 2004).

Product innovation capability enables firms to create differentiation and improve profitability (Varadarajan & Jayachandran, 1999; Capon, Farley & Hoening, 1990). The relationship between product innovation and export performance has also been shown in previous studies. For example, Morgan, Kaleka, and Katsikeas (2004) found that product design enables exporting firms to offer distinct products, and therefore enhances their export performance. Consequently, the ability to introduce new products has become an important element of competition in export market (Guan & Ma, 2003). Although the effect of product innovation capability results in enhanced export performance (e.g., Lages, Silva & Styles, 2009; Morgan, Vorhies & Schlegelmilch, 2006), an analysis of product innovation capability in ambidexterity context on export performance outcomes is limited. As such, the application of exploitative and exploratory product innovation capability is required for examining in export activity and associated export performance.

### **3.3.3.1 Exploitative product innovation capability and export venture performance**

Exploitative product innovation capability (ExiPIC) represents the refinement (i.e., extend, reinforce) of existing routines (or processes) associated with product development (Lisboa, Skarmeas & Lages, 2011; Subramaniam & Youndt, 2005). Within the context of ambidexterity, exploitation in the area of product innovation relates to incremental innovations which involve small changes in product and little deviation from the current product-market experiences of the firm (Atuahene-Gima, 2005; Benner & Tushman 2003; Danneels, 2002). Typically, exploitative product innovation denotes innovation activities aimed at satisfying the needs of existing

customers through improving the existing product-market position within the area of product improvements and line extensions (Atuahene-Gima, 2005; He & Wong, 2004).

Exploitative innovations refine existing products and reinforce the potential of established product designs and technologies (Ettlie, 1983). Thus, exploitative product innovative capability is related to the firm's ability to generate innovations that refine and reinforce existing products (Subramaniam & Youndt, 2005). As such, firms become knowledgeable of their customers and capable of meeting their customers' needs efficiently when relying on exploitative product innovation capability (O'Reilly & Tushman, 2008). In export markets, exploitative product innovation capability allow exporting firms to dilute the costs associated with innovation (Rogers, 2004; Kafouros, Buckley, Sharp & Wang, 2008), and adapt export products to the needs of international markets (Wu, Sinkovics, Cavausgil & Roath, 2007). Accordingly, exploitative product innovation capability enhances export performance. Thus,

*Hypothesis 3: Exploitative product innovation capability is positively related to export venture performance in (a) market performance and (b) financial performance.*

### **3.3.3.2 Exploratory product innovation capability and export venture performance**

Exploratory product innovation capability (ExrPIC) represents the generation of new routines (or processes) associated with product development (Lisboa, Skarmeas & Lages, 2011; Subramaniam & Youndt, 2005). Typically, exploration in product innovation creates discontinuous changes, and involves a competence-destroying advance in innovation in which major improvements are made (Christensen, 1997; O'Reilly & Tushman, 2008). Further, exploration relates to radical innovations which typically involve fundamental changes in product development for the firm (Atuahene-Gima, 2005; Benner & Tushman 2003; Danneels, 2002). As such, exploratory product innovation capability typically require firms to undertake activities different from what the existing activities done.

Typically, exploratory product innovation denotes innovation activities aimed at entering new product-market domains through generating the new product-market position within the area of new product development (Atuahene-Gima, 2005; He & Wong 2004). They are major transformations of new products that often make the prevailing product designs and technologies obsolete (Chandy & Tellis, 2000) and force firms to ask a new set of questions, to draw on new technical and commercial skills, and to employ new problem-solving approaches (Henderson & Clark, 1990). Exploratory product innovation enables firms to generate innovations through pursuing product development activities (Subramaniam & Youndt, 2005) that might be the only way to establish new markets during long-term competitive rivalry (Jansen, Van Den Bosch & Volberda, 2006; Levinthal & March 1993). When firms seek to move into export markets through product innovations, it also has the capacity to provide a mechanism for charging customers a higher price or reap higher margins through exploratory product innovation (O'Reilly & Tushman, 2008). As such, exploratory product innovation capability enables firms to enhance their performance by satisfying customer needs more effectively than existing product offerings in export market (Yalcinkaya, Calantone & Griffith, 2007). Thus,

*Hypothesis 4: Exploratory product innovation capability is positively related to export venture performance in (a) market performance and (b) financial performance.*

### **3.3.4 The role of complementary capability in firm performance**

The second theory underpinning model outlined in Figure 3.2 is complementarity theory. This links with combinations of ambidextrous capability (i.e., exploitative and exploratory). Complementarity theory explains the super additive value of resource configurations in that a set of resources and capabilities are considered complementary when more of any one of them enhances the returns to the others (Milgrom & Roberts, 1990). It has been identified that complementary capability within the marketing and product innovation improve firm performance (e.g., Moorman & Slotegraaf, 1999; Song et al., 2005, Ngo & O'Cass, 2012). As such, complementarity is argued to enable firms to achieve better results through combining capability that complement each other, and therefore enhance firm performance (Song et al., 2005). This theory can also be applied to the concept of

ambidexterity in that exploration and exploitation may take place in complementary areas (hereafter referred to as complementary ambidexterity) that do not necessarily compete for similar resources (Gupta, Smith & Shalley, 2006; Birkinshaw & Gibson, 2004).

Complementary ambidexterity may occur based on two domains: within-functional area (i.e., with a team, unit, department etc) and cross-functional area (between teams, units, departments etc) which has the potential to drive superior firm performance once deployed together (Li, Vanhaverbeke & Schoenmakers, 2008). First, complementary within-functional area is viewed as the match between exploitative capability and exploratory capability within the same area (i.e., exploitative marketing capability vs exploratory marketing capability). Second, complementary cross-functional area is viewed as the match between two exploitative capabilities cross the different areas (i.e., exploitative marketing capability vs. exploitative product innovation capability). Previous studies provided evidence that complementary capability between exploration and exploration on firm performance have been examined, with results showing it enhances firm performance (e.g., Sarkees, Hulland & Prescott, 2010; Cao, Gedajlovic & Zhang, 2009). In addition, complementary capability between marketing and product innovation enable firms enhancing their performance (e.g., O'Cass & Ngo, 2011; Atuahene-Gima & Wei, 2011); O'Cass & Sok, 2012). However, an analysis of complementary capability both within-functional and cross functional areas in export context is limited. As such, the application of complementary capability (within-functional area and cross-functional area) is required for examining in export activity and associated export performance.

#### **3.3.4.1 Complementary capability of within-functional ambidexterity and export venture performance**

Firms not only have more opportunities, but they also face a greater risk that their current core competences become rapidly obsolete. This constrains a firm's capability to exploit promising opportunities. As such, the benefits of both exploration and exploitation can be deployed through their interaction which positively impacts on performance (Katila & Ahuja, 2002). The need to exploit existing capability and the quest for new ones is a key strategic challenge for creating positional advantage

(Hamel & Prahalad, 1994). Firms do not only turn to exploitation, but also undertake exploration as a problem-solving solution (Greve, 2007). Thus, exploitative and exploratory capabilities complement one another in the ways that exploitation allows firms to generate their competitive advantage in the short-term period while exploration allows firms to explore innovation for the long-term period (O'Reilly & Tushman, 2008). As such, complementary within functional areas (i.e., exploitative marketing capability vs exploratory marketing capability) do not only contribute to firm performance in isolation, but also their full potential rests on their complementary nature.

With respect to complementary within marketing functional area, exploitative marketing capability could facilitate and promote exploratory marketing capability by providing marketing proficiency in existing market knowledge base and vice versa. For example, marketing proficiency enables firms better equip it to recognise and assimilate new external knowledge and resources in the market. On the other hand, creative marketing strategies (i.e., new pricing models, customer driven supply networks) could provide unique customer value, and also could promote customers' brand preferences and interests in existing marketing activities. Therefore, firms can enhance their export venture performance and achieve better results through complementary capability of exploitation and exploration. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 5: The interaction between exploitative marketing capability and exploratory marketing capability is positively related to export venture performance in (a) market performance and (b) financial performance.*

Regarding complementarity within product innovation functional area, exploitative product innovation capability could facilitate and promote exploratory product innovation capability in product development and vice versa. For example, a deeper understanding in improving product development effort could improve a firm's effectiveness in exploring new knowledge in discovery in new product. On the other hand, successful exploration of a product development could improve the economics of existing exploitative endeavours. In this sense, firms can enhance their export venture performance and achieve better results through complementary capability of

exploitation and exploration. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 6: The exploitative product innovation capability and exploratory product innovation capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance.*

### **3.3.4.2 Complementary capability of cross-functional ambidexterity and export venture performance**

Firms that learn and adapt to shifting environmental contexts are the winners in the global market place (O'Reilly & Tushman, 2008); therefore, it is necessary for firms to couple with management capability to effectively coordinate and deploy internal and external competencies to demonstrate timely responsiveness and rapid flexible product innovation (Teece, Pisano & Shuen, 1997). According to this argument, firms are required to excel at two things: the ability to come up with innovations constantly, and the ability to commercialise these innovations into products that capture consumer needs and preferences (Dutta, Narasimhan & Rajiv, 1999; Moorman & Slotegraaf, 1999).

Marketing combined with continual innovation is the key to survival in a turbulent business environment (Hamel & Prahalad, 1991). In turn, firms without the capability to innovate may invest time and resources in studying markets but are unable to translate this knowledge into practice (Hult, Hurley & Knight, 2004). In this sense, firms with strong product innovation capability are the ones with the most to gain from a strong marketing capability in enhancing performance benefits (Kotabe, Srinivasan & Aulakh, 2002). While product innovation capability enables firms to develop new products to offer to markets, marketing capability enables firms to capture value of the products that firms offering (Berthon, Hulbert & Pitt, 1999).

In aspect of exploitation of complementary cross functional area (marketing and product innovation), firms could serve their existing markets better by offering new product improvement (i.e., packaging design) and vice versa. On the contrary, firms could develop better product to match customer requirement by using existing marketing research. For this reason, firms can enhance their export venture performance and achieve better results through complementary capability of

marketing and product innovation. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 7: The exploitative marketing capability and exploitative product innovation capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance.*

In aspect of exploration of complementary cross-functional capability (marketing and product innovation), firms could develop new product that providing new value which required for new marketing activities (i.e., new distribution channel) to enter markets and vice versa. New marketing activities (i.e., new segment market) could urge firms to develop new product that serve new target market. Hence, firms can enhance their export venture performance and achieve better results through complementary capability of marketing and product innovation. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 8: The exploratory marketing capability and exploratory product innovation capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance.*

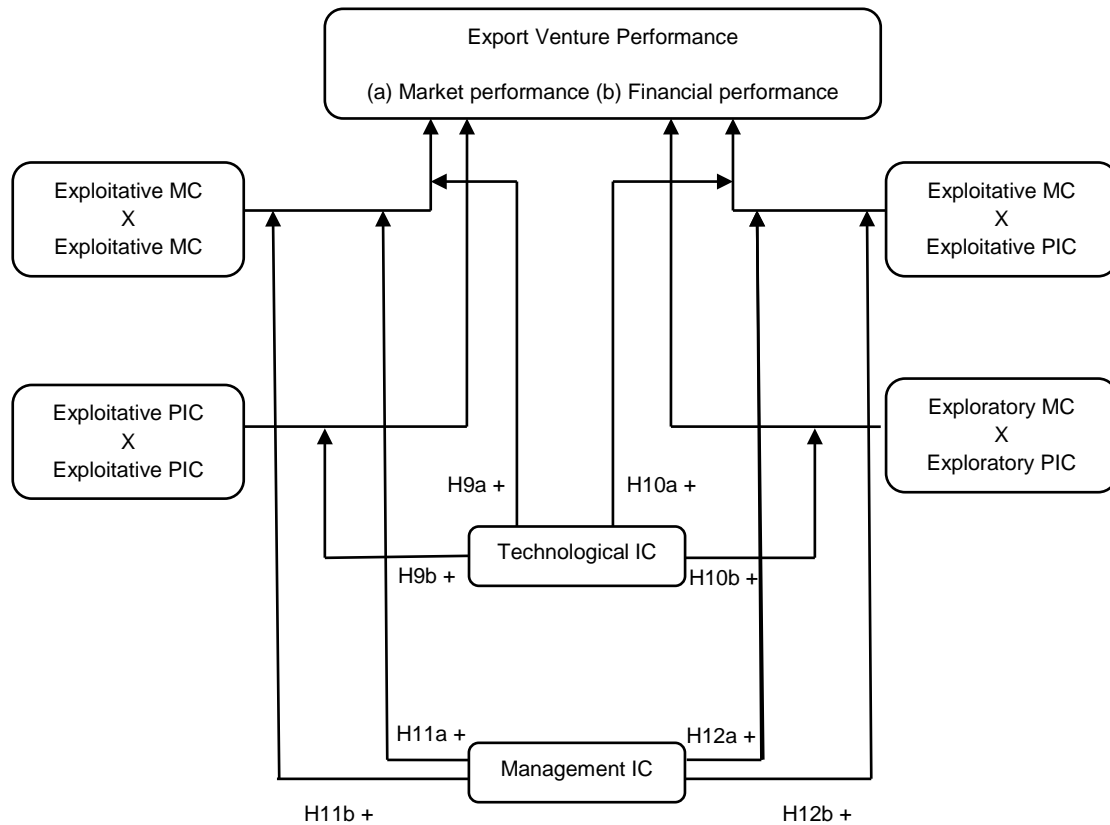
### **3.4 Model development stage 2: Contingency model**

Although the interaction of marketing capability and product innovation capability in ambidexterity context enhances firm performance outcomes, it only enables firms to increase their efficiency and effectiveness outside the firms. Without internal firm activities, it is hard to increase efficiency and effectiveness within the firms (Paap & Katz, 2004). Therefore, the contingency part of the model development contributes to firm's competitiveness and growth from internal focus (Damanpour, 2010). Further, coordination and control mechanisms are used to link departmental units together as part of the formal firm arrangements in firm behaviors (Nadler & Tushman, 1980). Definitely, firm's performance gets done through people, individually or collectively, on their own or in collaboration with technology and management system (Nadler & Tushman, 1980). As such, the coordinated integration of the firm's resources in creating superior value for customers and the resulting synergistic effects of such coordination are obviously closely tied to marketing capability (Day, 1994; Kohli & Jaworki, 1990). Therefore, process



innovation capability will help firms perform marketing capability as an internal driven and unique approach to offer value creation for customers.

**Figure 3.3: Contingency model: Stage two (Hypothesis 9 to 12)**



Process innovation capability (technological innovation capability and management innovation capability) are considered as potential contingency (i.e., moderators) of the relationship between product innovation capability and marketing capability and export venture performance. By processing a high level of process innovation capability, a firm develops stronger product innovation capability and marketing capability to create better export venture performance. As shown in Figure 3.3, the contingency model is developed from specific contingency factors (technological innovation and management innovation) to enhance the explanatory power of the model. The detail will be discussed in section 3.4.1 to 3.4.2.

### 3.4.1 Moderating effect of technological innovation capability

Technological innovation capability (TIC) represents a bundle of interrelated routines to apply new technology (i.e., information technology systems) that directly relate to

the primary work activity of the firm to improve efficiency and effectiveness of the firm operating systems (Damanpour, Walker & Avellaneda, 2009; Damanpour & Gopalakrishnan, 2001). Technological innovation capability mainly produces changes in firm operating systems (Damanpour, Walker & Avellaneda, 2009). As technological innovation capability pertains to products, services and production process technology, they are directly related to the primary work activities of the firm which reflect behavior process (Damanpour, 1991). Further, technological innovation capability has an internal focus which is mainly related to techniques of producing and marketing products (Martinez-Ros, 2000). Thus, they are oriented toward the efficiency or effectiveness of production and result in a decrease in the cost of production (Damanpour, 2010). Firms can change ways they produce and deliver value offerings to market and achieve better results through applying new technology (Bessant, Lamming & Phillips, 2005). For example, new information technology systems facilitate firms to better bridge designing and prototype a new product with marketing processes (i.e., market knowledge creation) for new product development projects. In this sense, firms can enhance the contribution of complementary within-functional area (i.e., exploitative marketing capability vs. exploitative marketing capability) and export venture performance through technological innovation capability. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 9a: Technological innovation capability moderates positively the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance.*

*Hypothesis 9b: Technological innovation capability moderates positively the relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance.*

Moreover, technological innovation capability facilitates the complementarity of product innovation capability and marketing capability, and result in enhancing performance outcome. When product innovation is introduced first to respond to a market need, technological innovation follows to support and facilitate the implementation of the product innovation and to enhance their contributions

(Damanpour & Gopalakrishnan, 2001). For example, firms would launch product innovations to differentiate themselves from the competitors in export market to gain or maintain their competitiveness, and exploit technological innovation capability for additional improvements in the operation and delivery of the products. For this reason, firms can enhance the contribution of complementary cross-functional area (i.e., exploitative marketing capability vs. exploitative product innovation capability) and export venture performance through technological innovation capability. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 10a: Technological innovation capability moderates positively the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance.*

*Hypothesis 10b: Technological innovation capability moderates positively the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance.*

### **3.4.2 Moderating effect of management innovation capability**

Management innovation capability (MIC) represents a bundle of interrelated routines to apply new management practices, processes, structures, or techniques that indirectly relate to basic work activity of the firm and its management systems (Damanpour, Walker & Avellaneda, 2009; Birkinshaw, Hamel & Mol, 2008). In general, management innovation capability relates to the task of generating and converting ideas which requires high levels of inter-functional coordination and integration within firms (Adams, Bessant & Phelps, 2006). Firms deploy management innovation capability through using its resources effectively to succeed in changing its performance of work (Damanpour, Walker & Avellaneda, 2009). For example, firms can enhance their management practices and achieve better results through implementing new management approaches (e.g., via quality management, re-engineering). Therefore, management innovation capability plays an important role in improving efficiency and reliability of operations of firms. In this sense, firms

can enhance the contribution of complementary within-functional area (i.e., exploitative marketing capability vs. exploratory marketing capability) and export venture performance through management innovation capability. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 11a: Management innovation capability moderates the positive relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance.*

*Hypothesis 11b: Management innovation capability moderates the positive relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance.*

Furthermore, management innovation capability can create enduring success when they meet one or more of three conditions: 1) the innovation is based on a novel principle that challenges management orthodoxy, 2) it is systemic, encompassing a range of processes and methods, and 3) it is part of an ongoing program of invention, where progress compounds over time (Hamel, 2006). Based on these notions, management innovation capability can deliver a potent advantage to firms and produce a great shift in industry leadership. When the complementarity between marketing capability and product innovation capability occurs, management innovation capability are proposed to enhance this complementarity to export market offerings as well. For example, firms can understand and balance the demands of outside constituencies through customer-pleasing innovation and designed to drive operational efficiency. For this reason, firms can enhance the contribution of complementary cross-functional area (i.e., exploitative marketing capability vs. exploitative product innovation capability) and export venture performance through management innovation capability. According to these arguments, it can be hypothesised as showed in the proposal model. Thus,

*Hypothesis 12a: Management innovation capability moderates the positive relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance.*

*Hypothesis 12b: Management innovation capability moderates the positive relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance.*

### **3.5 Conclusion**

This chapter aimed at developing a theoretical framework from the review of literature. Based on theory of ambidexterity and complementarity, model was developed on the basis of the research gaps indentified from previous literature. The model was divided into two stages in relation to theoretical model development. The first stage is related a primary model explaining two specific capabilities (marketing and product innovation) as key drivers of a firm's export performance. Concept of ambidextrous and complementary capability is applied for development of the primary model. The second stage is related to a contingency model bringing to enhance the explanatory power of the model. In this stage, the process innovation capability (technological innovation and management innovation) are proposed to enhance the firm positional advantage, and results in export success. The model depicts relationship between key specific capabilities and export performance and has explained on theoretical argument in order to propose the hypotheses. Theoretical framework developed in Chapter Three provides a guideline for research design which will be discussed in Chapter Four.

# Chapter Four

## Methodology

---

### 4.1 Introduction

Chapter Three provides the systematic development of the theoretical framework derived from the literature review undertaken in Chapter Two. To validate the theoretical framework, this chapter develops the research design following the processes and procedures outlined by Churchill (1999), Tull and Hawkins (1993), and Aaker, Kumar, Day & Leone (2010). The research design is the framework or plan for collecting and analysing the data and has been developed from consideration of the literature, the research objectives and the hypotheses. In particular, the research design consists of seven stages, which are detailed in Sections 4.3.1 to 4.3.7. Overall, this chapter discusses the development of measurement instrument and data gathering methods employed to undertake the empirical assessment of the hypothesised model.

### 4.2 Research model

The aim of applied research is to provide solutions to problems that occur in practice (Jonker & Pennink, 2010). In social science research, there are two basic research methodologies namely quantitative methodology (positivism) and qualitative methodology (naturalism) that are used to address applied research problems. Quantitative methodology is grounded on the positivist philosophy which is concerned with the testing of theories and with accumulating a body of knowledge (Bryman, 1988). Such theories are open to testing by the research community using a set of procedures and rules which guide research strategies. The positivist view is regarded as being the most suitable method for building and testing hypotheses (Perry, Riege & Brown, 1999). The essence of quantitative methodology is to use a theory to frame and thus understand the problem at hand. This approach is based on the notion that action produces concepts that are useful as theory is translated into

conceptual models and elaborated predominantly by means of hypotheses (Jonker & Pennink, 2010).

On the other hand, qualitative methodology is based on naturalism (i.e., phenomenology) and is founded on the view that research should be a cultural description which does not impose researchers own arbitrary and simplistic categories on a complex reality (Hammersley & Atkinson, 1983). This approach gains meaning and understanding from situations and actions, through interpretation and explanation of behaviour, rather than through seeking understanding of cause and effect (Payne, Dingwall, Payne & Carter, 1981). The essence of qualitative methodology is to identify the characteristics and structure of phenomena and events examined in their natural context (Jonker & Pennink, 2010).

While quantitative methodology requires data that are characterised by numbers which represent phenomena by assigning numbers in an ordered and meaningful way, qualitative methodology requires data that are textual, visual, or oral and the focus is on stories, visual portrayals, meaningful characterisations, interpretations, and other expressive descriptions (Zikmund & Babin, 2010). Quantitative data is mostly gathered through surveys and experiments; in contrast, qualitative data is collected in the form of interviews, focus groups, observational studies, and projective techniques (Mooi & Sarstedt, 2011).

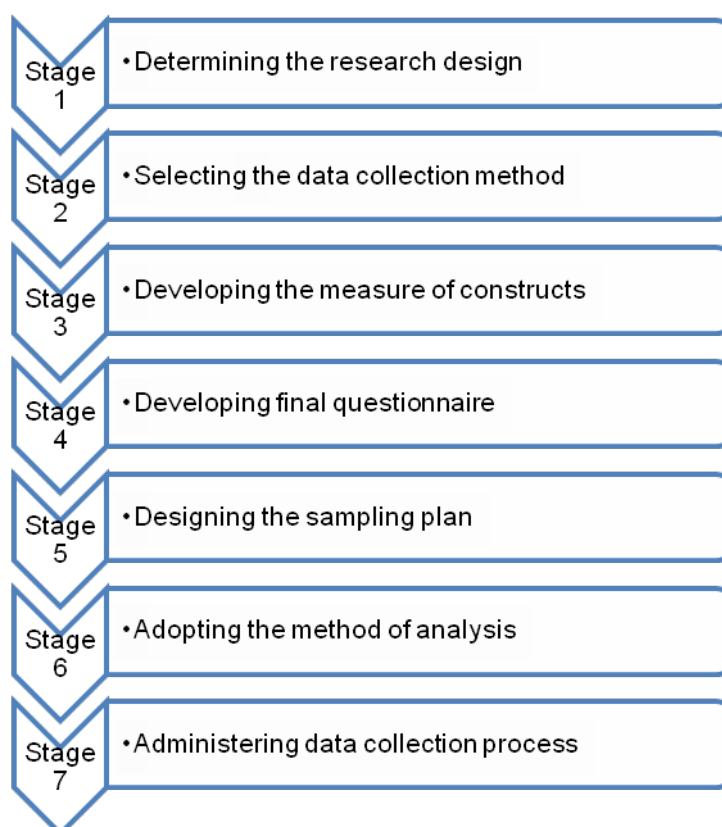
This study seeks to examine the relationship between specific firm capabilities and export venture performance as outlined in Chapter Three. In this study, the conceptual framework was grounded on a number of hypotheses. Therefore, the nature of this study indicates the use of quantitative methodology to address the research objectives, and test the hypotheses.

### **4.3 Research process**

The research process is an outline for the study which includes several stages and provides a systematic approach to making all decisions related to the research project to obtain the data to test the theory (Mooi & Sarstedt, 2011; Hair, Bush & Ortinau, 2006). The research processes adopted for the study were considered an appropriate guide to design this study and were developed using the work of Churchill (1999), Tull and Hawkins (1993) and Aaker et al. (2010). The research

process covers seven stages; namely 1) determining the research design, 2) selecting the data collection method, 3) developing the research instrument, 4) developing final questionnaire, 5) designing the sampling plan, 6) adopting the method of analysis, and 7) administering data collection process as presented in Figure 4.1.

**Figure 4.1: Stages in the research process**



Source: Adapted from Churchill (1999), Tull and Hawkins (1993), and Aaker et al. (2010)

The first stage relates to determining the most appropriate research design focusing on whether to undertake exploratory, descriptive or casual research. In the second stage, selecting the data collection method requires a decision to be made on how the data should be collected and administered (e.g., observation, experimentation or survey). In the third stage, developing the research instrument involves with generating items, refining items, translating, and ethics conduct in human research issues. The fourth stage involves developing final questionnaire. The fifth stage involves determining of the population, sampling frame, sampling method, and sample size for research. In the sixth stage, the method of analysis involves the selecting of analytical method appropriate for hypotheses testing. The final stage



discusses the administration of data collection process including explanation of the field work, research budget and time allocation. Each stage of the research design process is discussed in detail in the subsequent sections.

#### 4.3.1 Stage one: Determining the research design

The research design is a master plan of the methods and procedures that should be used to collect and analyse the data (Hair, Bush & Ortinau, 2006; Mooi & Sarstedt, 2011; Zikmund & Babin, 2010). Determining the most appropriate research design is a function of the research objectives and the specific information requirements (Hair, Bush & Ortinau, 2006). The research design details the procedures necessary for obtaining the information needed (Malhotra & Birks, 2007). Typically, research objectives can be met by adopting one of three types of research: exploratory, descriptive, and casual as presented in Table 4.1.

**Table 4.1: Characteristics of different types of research approach**

Characteristics	Exploratory research	Descriptive research	Causal research
Amount of uncertainty characterising decision situation	Highly ambiguous	Partially defined	Clearly defined
Key research statement	Research question	Research question	Research hypothesis
When conducted?	Early stage of decision making	Later stages of decision making	Later stages of decision making
Usual research approach	Unstructured	Structured	Highly structured
Nature of results	Discovery oriented, productive, but still speculative. Often in need of further research.	Can be confirmatory although more research is sometimes still needed. Results can be managerially actionable.	Confirmatory oriented. Fairly conclusive with managerially actionable results often obtained.

Source: Zikmund and Babin (2010)

First, *exploratory research* concentrates on collecting either secondary or primary data and using specific data analysis procedures to interpret them (Hair, Bush & Ortinau, 2006). It is appropriate when there is no specific problem to investigate and not intended to provide conclusive information from which a particular course of action can be determined (Hair, Bush & Ortinau, 2006; Kolb, 2008). Exploratory research is designed to let participants provide their own answers (Kolb, 2008);

therefore, it is highly flexible, unstructured, and often qualitative, for the researcher begins without firm preconceptions as to what will be found (Aaker et al., 2010).

Second, *descriptive research* uses a set of scientific methods and procedures to collect primary data and create data structures that describe the existing characteristics of a defined target population (Hair, Bush & Ortinau, 2006). It is characterised by the prior formulation of specific research questions and hypotheses and is used to obtain specific details when statistical data are needed (Kolb, 2008; Malhotra & Birks, 2007). Descriptive research is appropriate when the research objectives include determination of the degree to which decision variables are related to actual market phenomena (Hair, Bush & Ortinau, 2006).

Third, *causal research* is designed to collect primary data and create data structures and information that will allow the researcher to model cause-and-effect relationships between two or more variables (Hair, Bush & Ortinau, 2006). Research questions that require casual research have a cause and effect (Kolb, 2008; Malhotra & Birks, 2007). It is appropriate when the research objectives include the need to understand the reasons why certain market phenomena happen as they do (Hair, Bush & Ortinau, 2006).

In considering the research objectives and theoretical framework developed earlier in this study, this study seeks to determine the effects of variables and is essentially causal in nature, with the proposed model implying prediction as described by the EVP Model (refer to Chapter Three). Thus, casual research was adopted as the most appropriate to address the objectives of this study.

#### **4.3.2 Stage two: Selecting the data collection method**

Selecting the data collection method is the next step after having determined the research type. Data collection methods involve deciding whether to use existing (secondary) data or to gather primary data (Mooi & Sarstedt, 2011). Primary data are data that a researcher has collected for a specific purpose, while secondary data have already been collected by another researcher for another purpose (Mooi & Sarstedt, 2011). The nature of this study indicates the use of primary data to address the research objectives, and the theoretical framework which are specific issues to this study.

A variety of methods of data collection are available for use including survey, experiment, interview, focus group, observation, and projective technique. When compared to observation and experimentation, surveys are the most commonly used method of primary data collection in marketing research (Baker, 2001; Aaker et al., 2010). Surveys are a means of collecting primary data based on communication with a sample of individuals (Zikmund & Babin, 2010). It is a research procedure used for collecting large amounts of raw data using question-and-answer formats involving the characteristics, actions, or opinions of a large group of people (Hair, Bush & Ortinau, 2006; Pinsonneault & Kraemer, 1993). Surveys are written instruments that ask a series of predetermined questions (Kolb, 2008) and can be designed to capture a wide variety of information on diverse topics and subjects (Aaker et al., 2010). Further, surveys are the major means of collecting quantitative primary data (Mooi & Sarstedt, 2011).

Typically, survey methods can be classified as person-administrated, telephone-administrated, and self-administered based on the respondents to be contacted and on the means of contacting them (Aaker et al., 2010; Hair, Bush & Ortinau, 2006). As shown in Table 4.2, there are three types of survey methods. First, person-administered survey method is a form of direct communication in which an interviewer asks respondents questions face-to-face (Zikmund & Babin, 2010). Person-administered surveys are distinguished by the presence of a trained interviewer who asks questions and records the subject's answers in predetermined formats (Hair, Bush & Ortinau, 2006). This method can achieve high response rates since the engagement with the respondents is maximised and it can support surveys that have a large number of items (Mooi & Sarstedt, 2011). Second, telephone-administrated survey method is question-and-answer exchanges by personal interviews that are conducted via telephone technology (Hair, Bush & Ortinau, 2006). This method has become the dominant method for obtaining information from large samples, as the cost and non-response problems of personal interviews have become more acute (Aaker et al., 2010). Third, self-administered survey method is a data collection technique in which the respondent reads the survey questions and records their own answers without the presence of a trained interviewer formats (Hair, Bush & Ortinau, 2006). This method includes mail panel, drop-and-collect, mail, fax, e-mail, and Internet survey. Advantages of this method are low cost per

survey and have been identified as having less interviewer bias (Aaker et al., 2010; Kolb, 2008).

**Table 4.2: Types of survey method**

<b>Types of survey method</b>	<b>Description</b>
<b>Person-administered</b>	
In-home interview	An interview takes place in the respondent's home or, in special situations, within the respondent's work environment (in-office).
Executive interview	A business executive is interviewed in person.
Mall-intercept interview	Shopping patrons are stopped and asked for feedback during their visit to a shopping mall.
Purchase-intercept interview	The respondent is stopped and asked for feedback at the point of purchase.
<b>Telephone-administered</b>	
Telephone interview	An interview takes place over the telephone. Interviews may be conducted from a central telephone location or the interviewer's home.
Computer-assisted telephone interview (CATI)	A computer is used to conduct a telephone interview; respondents give answers by pushing buttons on their phone.
<b>Self-administered</b>	
Mail panel survey	Surveys are mailed to a representative sample of individuals who have agreed in advance to participate.
Drop-and-collect survey	Questionnaires are left with the respondent to be completed at a later time. The survey may be picked up by the researcher or returned via mail.
Mail survey	Questionnaires are distributed to and returned from respondents via the postal service.
Fax survey	Surveys are distributed to and returned from respondents via fax machines.
e-mail survey	Surveys are distributed to and returned from respondents via electronic mail.
Internet survey	The Internet is used to ask questions and record response from respondents.

Source: Adapted from Hair, Bush and Ortinau (2006)

When compared to person-administered and telephone-administered survey method, self-administered survey method is having less interviewer bias because no interviewer to probe for the response (Hair, Bush & Ortinau, 2006). Further, the emergence of telecommunication technology has allowed delivery systems for self-administered survey to expand. According to the review of research methodologies in Chapter Two, self-administered survey method was frequently used in export performance literature. Thus, having considered the nature of this study, the self-administered survey method was selected as an appropriated method.

Response rate is an indicator of sample quality (Baruch & Holtom, 2008). When compared to other techniques (mail panel, mail, fax, e-mail, and Internet survey), the drop-and-collect technique has been argued to improve the response rate (Ibeh, Brock & Zhou, 2004). Particularly when the data collection is undertaken in developing countries where interpersonal interactions are widely recommended for information exchange, the drop-and-collect technique is recommended (Ibeh, Brock & Zhou, 2004; Hofstede, 1980; Ibeh & Brock, 2004; O'Cass & Ngo, 2011).

The drop-and-collect technique involves delivering self-administered questionnaires to the respondents and personally recovering them later from the respondent (Walker, 1976). In the drop-and-collect technique, the researcher or a representative of the researcher hand-delivers and collects the surveys back from respondents (Hair, Bush & Ortinau, 2006). This technique has been argued to improve response rates, particularly when data collection is undertaken in developing countries where interpersonal interactions are widely recommended for information exchange (Hofstede, 1980; Ibeh & Brock, 2004; Ngo & O'Cass, 2012). The drop-and-collect technique is well suited to studies because the high rate of response it normally achieves (Brown, 1987). Further, supporting the selection of this technique is the fact that it has been widely used by other marketing researchers in similar types of studies (e.g., Balabanis & Diamantopoulos, 2004; Brown, 1987; Lin & Germain, 1998; O'Cass & Pecotich, 2005). Therefore, a drop-and-collect technique was chosen.

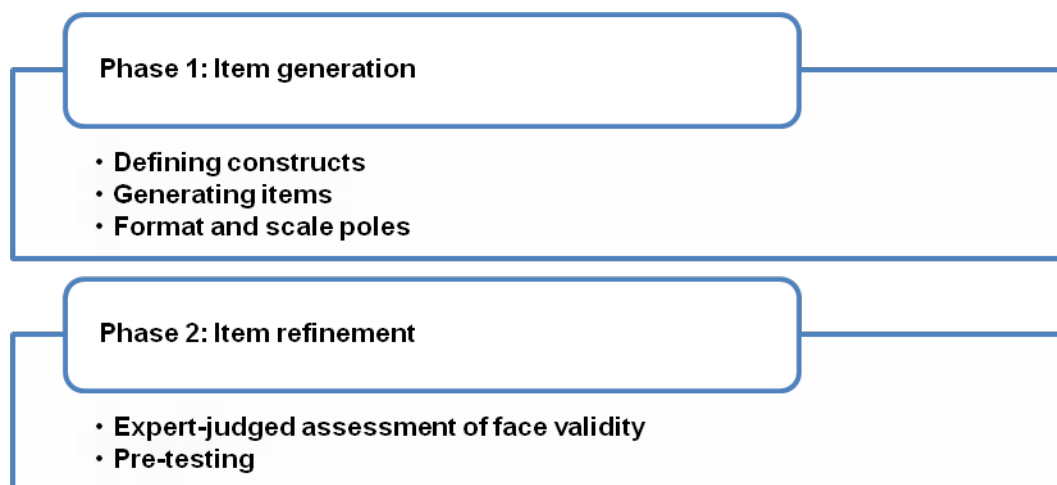
#### **4.3.3 Stage three: Developing the measure of constructs**

After the data collection method has been chosen, developing the measures of constructs is the next step in the research process. The development of the measure of constructs is aimed at translating the research objectives into information requirements and then into questions that can be answered by respondents (Aaker et al., 2010). Thus, development of measures of constructs is the procedures used to generate and refine items. The measurement development procedure consisted of two phases: item generation and item refinement.

First, item generation involved with gathering of initial items from the literature for the measurement of each construct and selecting of scaling and formatting options. This

phase comprised three steps including 1) defining constructs, 2) generating items, and 3) format and scale poles choices. Second, the item refinement involved refinement, deletion and addition of items and adjustments being made to formatting. This phase comprised two steps including 4) expert-judges assessment of face validity, and 5) pre-testing. Figure 4.2 presents the measurement development procedure that was used to design the questionnaire and which is discussed in detail in section 4.3.3.1 to 4.3.3.6.

**Figure 4.2: Measurement development procedure**



#### **4.3.3.1 Defining constructs: Step 1**

The first step of the measurement development procedure was defining the constructs of the study. A construct is a term used to refer to a concept measured with multiple variables (Zikmund & Babin, 2010). As discussed in Chapter Three, definitions of the seven constructs (exploitative marketing capability, exploratory marketing capability, exploitative product innovation capability, exploitative product innovation capability, management innovation capability, technological innovation capability, and export venture performance) were developed based on the extensive review of literature as in Chapter Two. Details of the conceptualisation of seven constructs were discussed in Chapter Three. Table 4.3 presents the conceptual definitions of these constructs and provides the foundation of item generation in the next step.

**Table 4.3: Definition of constructs**

<b>Construct</b>	<b>Definition</b>
Exploitative marketing capability	The refinement (i.e., improvement) of existing routines associated with current marketing activities, including current market segments, positioning, distribution, and other marketing mix activities (Vorhies, Orr & Bush, 2011; Danneels, 2008).
Exploratory marketing capability	The generation of new routines associated with new marketing activities, including current market segments, positioning, distribution, and other marketing mix activities (Vorhies, Orr & Bush, 2011; Danneels, 2008).
Exploitative product innovation capability	The refinement (i.e., extend, reinforce) of existing routines (or processes) associated with product development activities (Lisboa, Skarmeas & Lages, 2011; Subramaniam & Youndt, 2005).
Exploitative product innovation capability	The generation of new routines (or processes) associated with product development activities (Lisboa, Skarmeas & Lages, 2011; Subramaniam & Youndt, 2005).
Management innovation capability	A bundle of interrelated routines to apply new management practices, processes, structures, or techniques that indirectly relate to basic work activity of the firm and its management systems (Damanpour, Walker & Avellaneda, 2009; Birkinshaw, Hamel & Mol, 2008).
Technological innovation capability	A bundle of interrelated routines to apply new technology (i.e., information technology) that directly relate to the primary work activity of the firm to improve efficiency and effectiveness of the firm operating systems (Damanpour, Walker & Avellaneda, 2009; Damanpour & Gopalakrishnan, 2001).
Export venture performance	The degree that the firm has achieved its goals for market share, sales volume, sales growth, and customer satisfaction for a product-market (Atuahene-Gima, 2005; Langerak et al., 2004; Baker & Sinkula, 2005).

#### 4.3.3.2 Generating items: Step 2

The second step of the measurement development procedure was generating items for the focal constructs of the study. To generate items for each measure of the constructs, the literature review is a primary source as it provides details of how the construct has been defined previously and how many dimensions or components it has (Churchill, 1999). Generating items focuses on developing measures to capture the domain of the focal construct(s) as specified. In this sense, the content of each item should reflect primarily the construct. Therefore, the original items from the literature were examined to assess the degree they reflected the constructs. The rest

of this section discusses the item generation process for measuring seven constructs.

### ***Measuring exploitative marketing capability and exploratory marketing capability***

Exploitative marketing capability and exploratory marketing capability are considered as elements in the ambidextrous capabilities at the firm level. As shown in Table 4.3, exploitative marketing capability is defined as the refinement (i.e., improvement) of existing routines associated with current marketing activities, including current market segments, positioning, distribution, and other marketing mix activities (Vorhies, Orr & Bush, 2011; Danneels, 2008). Exploratory marketing capability represents the generation of new routines associated with new marketing activities, including current market segments, positioning, distribution, and other marketing mix activities (Vorhies, Orr & Bush, 2011; Danneels, 2008). According to the literature review undertaken for Chapter Two (Section 2.5), marketing capability is classified into specialised marketing activities (marketing mix-based activities) and architectural marketing activities (planning and implementing activities) (e.g., Vorhies, Orr & Bush, 2011, Morgan, Vorhies & Mason, 2009). In the context of ambidexterity, marketing capability is focused on specialised marketing activities (e.g., Kyriakopoulos & Moorman, 2004; Lisboa, Skarmeas & Lages, 2011).

Based on the definitions of exploitative marketing capability and exploratory marketing capability, no research was found that has measured exploitative marketing capability and exploratory marketing capability that fit well with the conceptualisation adopted in this study. Thus, to measure exploitative marketing capability and exploratory marketing capability, each construct was measured via 11-item scale based on the work of Danneels and Kleinschmidt (2001); Dutta, Zbaracki and Bergen (2003); Danneels (2008); Morgan, Slotegraaf and Vorhies (2009); Morgan et al. (2003); and Morgan, Slotegraaf and Vorhies (2009). Examples of the generated items for exploitative marketing capability appear below:



*For this product, in this export market, our firm:*

- *...improved the efficiency/effectiveness of our current (i.e., well established, historical) pricing systems and processes for the product.*
- *... improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing research procedures for the product.*
- *... improved the efficiency/effectiveness of our current (i.e., well established, historical) market segmentation for the product.*

Examples of the generated items for exploratory marketing capability appear below:

*For this product, in this export market, our firm:*

- *...established new pricing systems and procedures (i.e., pricing approaches, pricing strategy, etc.) for the product.*
- *...established new marketing research procedures (i.e., new market research, information gathering techniques, approaches or methods) for the product.*
- *...established new market segmentation approaches (i.e., segmenting by customer type, structuring market or positioning the product in its own segment criteria) for the product.*

### ***Measuring exploitative product innovation capability and exploratory product innovation capability***

Exploitative product innovation capability and exploratory product innovation capability are considered as ambidextrous capabilities at the firm level. According to the definition of the construct shown in Table 4.3, exploitative product innovation capability is defined as the refinement (i.e., extend, reinforce) of existing routines (or processes) associated with current product development activities (Lisboa, Skarmeeas & Lages, 2011; Subramaniam & Youndt, 2005). Exploratory product innovation capability represents the generation of new routines (or processes) associated with new product development activities (Lisboa, Skarmeeas & Lages, 2011; Subramaniam & Youndt, 2005). According to the literature review undertaken in Chapter Two (Section 2.6), product innovation capability in ambidexterity context reflected the level of research and development (R&D) (i.e., incremental or radical

activities) to create new products to markets (e.g., Atuahene-Gima, 1995; Eisenhardt & Martin, 2000).

Based on the definitions of exploitative product innovation capability and exploratory product innovation capability, no studies were found that has measured exploitative product innovation capability and exploratory product innovation capability that fit well the conceptualisation adopted in this study. Thus, to measure exploitative product innovation capability and exploratory product innovation capability, each construct was measured via 6-item scale based on the work of Atuahene-Gima (2005), Menguc and Auh (2008), and DeSarbo, Benedetto, Song and Sinha (2005). Examples of the items generated to measure exploratory product innovation capability appear below:

*For this product, in this export market, our firm:*

- *... improved the efficiency/effectiveness of our current product development skills and processes for the product.*
- *... improved the efficiency/effectiveness of our current skills for staff who undertake R&D (i.e., staffing R&D, training and development of R&D and engineering personnel) for the product.*
- *... improved the efficiency/effectiveness of our current R&D approaches for the product development.*

Examples of the items generated to measure exploratory product innovation capability appear below:

*For this product, in this export market, our firm:*

- *... established new product development skills and processes for the product.*
- *... established new skills for staff within the R&D (i.e., staffing R&D, training and development of R&D, and engineering personnel) for the product.*
- *... established new R&D product development approaches for the product.*

### ***Measuring management innovation capability***

Management innovation capability is considered as capability at the firm level. As shown in Table 4.3, management innovation capability is defined as a bundle of interrelated routines to apply new management practices, processes, structures, or techniques that indirectly relate to the basic work activity of the firm and its management systems (Damanpour, Walker & Avellaneda, 2009; Birkinshaw, Hamel & Mol, 2008). Based on the literature review in Chapter Two (Section 2.7.1), management innovation capability is indirectly related to the firm's basic work activities and mainly affects its management systems (Damanpour, Walker & Avellaneda, 2009). As such, it focuses on changing the firm's structures and administrative systems, the knowledge used in performing the work of management, and managerial. Based on the definition of management innovation capability in this study, six initial items were generated for the construct based on the work of Mol and Birkinshaw (2009) and Damanpour, Walker and Avellaneda (2009). Examples of the generated items for management innovation capability appear below:

*For this product, in this export market, our firm:*

- *...developed and implemented new management practices (e.g., acquiring and applying new knowledge).*
- *...developed and implemented new approaches to product planning and budgeting (e.g., coordinating activities for new product development project).*
- *...developed and implemented new approaches to management improvement (e.g., via quality management, re-engineering).*

### ***Measuring technological innovation capability***

Technological innovation capability is considered as capability at the firm level. As shown in Table 4.3, technological innovation capability is defined as a bundle of interrelated routines to apply new technology (i.e., information technology) that directly relate to the primary work activity of the firm to improve efficiency and effectiveness of the firm operating systems (Damanpour, Walker & Avellaneda, 2009; Damanpour & Gopalakrishnan, 2001). Based on the literature review undertaken in Chapter Two (Section 2.7.2), technological innovation capability reflects processes that are directly related to the primary work activities and mainly

produces changes in the firm's operating systems (Damanpour, Walker & Avellaneda, 2009). Based on the definition of technological innovation capability in this study, six initial items were generated for the construct based on the work of Damanpour, Walker and Avellaneda (2009) and DeSarbo et al. (2005). Examples of the generated items for technological innovation capability appear below:

*For this product, in this export market, our firm:*

- *...used new information technology systems for new product development projects.*
- *...used new information technology systems for facilitating the creation of knowledge about technology.*
- *...used new information technology systems for facilitating market knowledge creation.*

### ***Measuring export venture performance***

As shown in Table 4.3, export venture performance is defined as the degree that the firm has achieved its goals for market share, sales volume, sales growth, and customer satisfaction for a product-market (Atuahene-Gima, 2005; Langerak, Hultink & Robben, 2004; Baker & Sinkula, 2005). To measure export venture performance, seven initial items were generated for the construct based on the work of Kim and Atuahene-Gima (2010), Menguc and Auh (2008), Langerak, Griffin and Hultink (2010), DeSarbo et al. (2005), and Blindenbach-Driessen, Van Dalen and Van Den Ende (2010). Examples of the items generated to measure export venture performance appear below:

*For this product, in this export market, our firm:*

- *Market share objectives were met.*
- *Profit margin objectives were met.*
- *Return on sales objectives were met.*

#### **4.3.3.3 Format and scale poles: Step 3**

The third step of the measurement development procedure was selecting the scale type and response format including the number of scale poles and scale pole wording. The use of scaling techniques is a key issue to measuring latent variables (Crespi, 1961; Zikmund & Babin, 2010). The selection of a scaling technique depends upon the information requirements of the study, respondent's characteristics and the proposed means of administration (Tull & Hawkins, 1993). There are various types of scaling techniques such as semantic differential, Staple, Likert, Thurstone differential, and direct rating scales. Of these, the semantic differential scale and the Likert scale are argued to be the most popular and most reliable scale poles (Albaum, 1997; Neuman, 2006; Sarantakos, 2005). Further, both scales are widely used in the marketing literature (Albaum, 1997; Aaker et al., 2010; Mooi & Sarstedt, 2011; Zikmund & Babin, 2010).

The semantic differential scale is versatile and useful in a wide variety of business situations (Hair, Bush & Ortinau, 2006). As the semantic differential scale measures the respondent's reaction to construct in terms of ratings on bipolar scales, contrasting adjectives at each end (Neuman, 2006), a numerical score can be assigned to each position on a semantic differential scale (Zikmund & Babin, 2010). Further, the semantic differential scale measures directionality and intensity (Hair, Bush & Ortinau, 2006). Thus, respondents are asked to rate it on a number along the scale, for example, for a seven-point semantic differential the scores could be 1, 2, 3, 4, 5, 6, 7 or -3, -2, -1, 0, +1, +2, +3 (Neuman, 2006).

When research is aimed at obtaining a respondent's position or opinion on a given issue, Likert Scales can be used (Alreck & Settle, 1995) through measuring a respondent's intensity of agreement or disagreement with a given statement that represents an opinion (Burns & Bush 2006; Alreck & Settle 1995). Further, Likert scales are applied with a number of different response formats to measure direction and intensity of attitude. Among the most popular are the agreement (strong agree to strongly disagree), degree or extent (not at all to very much), frequency (never to always), and similarity (like me to not like me) (Clark & Watson, 1995).

Having considered these points, the Likert scale was adopted for the measurement items for all the constructs of the study because of its ability to effectively extract

information from a sample (Thomas, 1999), its ease of construction and administration (Foddy, 1993). Table 4.4 shows the scale poles used in the study. The Likert scale was designed to allow respondents to rate how strongly they agree or disagree with carefully constructed statements, ranging from very positive to very negative attitudes toward some object (Zikmund & Babin, 2010). A seven point response format was employed for all scales because the appropriate number of response categories should be an odd number so that respondents can adopt a neutral position, and be no less than three, no more than nine (Aaker et al., 2010; Hair, Bush & Ortinau, 2006). In addition, seven point Likert scales have been widely used in the marketing literature (e.g., Jaworski & Kohli, 1993; Weerawardena, O'Cass & Julian, 2005; Vorhies & Morgan, 2005).

**Table 4.4: Scale poles of constructs**

<b>Constructs:</b> Exploitative marketing capability, Exploratory marketing capability, Exploitative product innovation capability, Exploitative product innovation capability, Management innovation capability, Technological innovation capability, Export venture performance						
<b>Strongly Disagree</b>						<b>Strongly Agree</b>
1	2	3	4	5	6	7

#### 4.3.3.4 Expert-judges assessment of face validity: Step 4

Having completed the item generation in phase one, the next phase was item refinement including step 4 to step 6 as shown in Figure 4.2. The fourth step of the measurement development procedure was assessment of the measures via expert judges for face validity. Content validity refers to the degree to which a measure's items represent a proper sample of the theoretical domain of a construct, while face validity reflects the extent to which a measure reflects what it is intended to measure (Nunnally & Bernstein, 1994). Items must reflect what they are intended to measure (i.e., face validity) and represent a proper sample of the domain of a construct (i.e., content validity) in order for a measure to have construct validity (Hardesty & Bearden, 2004). This step involved assessment of the survey instrument by evaluation and refinement of items based expert judges feedback. In this step, the expert judges were used to determine whether an item should be retained or removed (Hardesty & Bearden, 2004). Three expert judges within the marketing

field, who were active researchers, were chosen as the expert judges to assess the measures. The invitations were sent to them via email asking them to assess the item pool. The conceptual definitions of the constructs with corresponding items, draft questionnaire, and a set of instructions for judging were provided to the expert judges. The expert judges were asked to rate each item as either “not representative”, “somewhat representative”, or “very representative” to the construct definition (Ngo & O’Cass, 2009). According to Hardesty and Bearden (2004), there are three methods of using decision rules for keeping or removing items: sum-score, complete, and not-representative. Based on the sum-score rule, an item is retained when at least 80% of expert judges rate it as either “somewhat representative”, or “very representative” (Netemeyer, Burton & Lichtenstein, 1995). Based on the complete rule, an item is retained when at least 50% of expert judges rate it as either “somewhat representative”, or “very representative” (Obermiller & Spangenberg, 1998). Based on the not-representative rule, an item is removed if one judge rates it a “not representative” (Netemeyer, Burton & Lichtenstein, 1995).

When the researcher received the feedback from expert judges, the decision about which items to remove and/or keep was taken. According to Ngo and O’Cass (2009), the decision rules for removing and/or keeping items were based on three-stage procedure. The procedure was developed by synthesis of the sum-score and complete rules (O’Cass & Ngo, 2011). First, the sum-score for an item across three judges was calculated. The expert judges rating an item as either “not representative”, “somewhat representative”, or “very representative” was scored as 1, 2 and 3 points respectively. As a result, an item may receive a sum-score ranging from three to nine.

The choice to remove and/or keep items was based on the three decision rules. At the first decision rule, items with sum-score below six were removed. Then, items with one score were removed according to the second decision rule. Subsequently, items with two scores of three and one score of two were kept based on the third decision rule. Following the three stages of decision rule, 17 items were removed from initial items pool developed to measure the seven constructs. This process resulted in a refined pool of items for the seven constructs, namely exploitative marketing capability with 8 items, exploratory marketing capability with 8 items, exploitative product innovation capability with 3 items, exploratory product innovation

capability with 3 items, management innovation capability with 4 items, technological innovation capability with 4 items, and export venture performance with 6 items. In total, 36 items were retained in the refined items pool for the questionnaire.

In addition, a number of items pertaining to demographic characteristics of the firm and respondent's knowledge and confidence were added in the refined item pool of seven constructs. The demographic characteristics of the firm were added including industry sector, market type, ownership type, export market region, market focus, firm size, firm age, and respondent position. An additional measure of respondent's knowledge and confidence was included based on the work of Morgan et al. (2003), Joshi and Sharma (2004) and Jap (1999). In sum, 46 items were included in the final questionnaire as shown in Table 4.5.

**Table 4.5: Refined items in the item refinement phase and additional constructs**

<b>Key Constructs</b>	<b>Number of Items</b>
Exploitative marketing capability	8
Exploratory marketing capability	8
Exploitative product innovation capability	3
Exploitative product innovation capability	3
Management innovation capability	4
Technological innovation capability	4
Export venture performance	6
Demographic characteristics	8
Respondent's knowledge and confidence	2
<b>Total</b>	<b>46</b>

#### **4.3.3.5 Pre-testing: Step 5**

The fifth step of the measurement development procedure was pre-testing before launching the full-scale questionnaire. In this step, in-depth interviews were undertaken with three senior marketing managers who familiar with the exporting activities of the firms following the procedure suggested by Presser et al. (2004) and DeSarbo et al. (2005). Senior marketing managers were asked to complete and discuss with the researcher for the items and scales of the questionnaire. They were asked to interpret the items and explain their responses as the way they did on each item. They also were asked to think whether it was possible to interpret each item with other meanings. According to their comments, the questionnaire was clear and



understandable. Thus, the results of pre-test draft questionnaire demonstrate that the questionnaire was without serious flaws.

#### 4.3.4 Stage four: Developing final questionnaire

Designing the sampling plan is the fourth stage in the research process as shown in Figure 4.1. After pre-test draft questionnaire was completed without revisions, the final questionnaire was constructed containing 36 items measuring the seven constructs, 8 items measuring the demographic characteristics, and 2 items measuring the respondent's knowledge and confidence. The measurement items and scales were developed for a paper-based questionnaire and according to Brace (2008), the success of a paper-based self-completion survey depends to a significant extent on the appearance of the questionnaire and the ease with which respondents follow and complete it. To make the survey attractive, the study adopted the Total Design Method (TDM) concept to maximise return rates surveys (Dillman, 2007). Further, the theory underlying the TDM is social exchange, which suggests the likelihood that individuals will respond to a survey questionnaire is a function of how much effort is required to respond, and what they feel they are likely to get in exchange for completing the questionnaire (Dillman, 2007). The basic elements and procedures of the TDM are aimed at minimizing the burden on the respondent, personalising all communication with the respondent, providing information about the survey (Dillman, 2007). Further, it is identified that the survey questionnaires should be printed on good quality paper and printed on one side only. Finally, a general font size of 10 points and larger font sizes, highlight, and underline were used for key instructions (Dillman, 2007; Tull & Hawkins, 1993) was adopted. An example of instruction for the study is presented in Figure 4.3.

**Figure 4.3: Example of instructions for the study**

The following statements relate to **your firm's marketing activities for the above named product/brand in the identified export market**. Please circle the number in each statement that best reflects your views.

Further, use of space is used in order to divide the questions into sections with a clear heading to each section (Churchill & Iacobucci, 2005). Therefore, the survey has a title clearly displayed on the front page of the questionnaire including with

highlighted questions in every odd question sequence in that the respondents can follow the questionnaire sequence easily (Tull & Hawkins, 1993). An example of questions is presented in Table 4.6.

**Table 4.6: Example of questions organised in survey for the study**

<b>For this product, in this export market, our firm:</b>	
ExrMC1	...established <b>new</b> marketing research procedures (i.e., new market research; information gathering techniques; approaches or methods) for the product.
ExrMC2	...established <b>new</b> test marketing procedures (processes, methods) for the product.
ExrMC 3	...established <b>new</b> product launch procedures (processes, methods etc.) for the product.
ExrMC 4	...established <b>new</b> pricing systems and procedures (i.e., pricing approaches, pricing strategy, etc.) for the product.

As noted in section 4.3.3.5., this study employed a multiple informant design to ensure that the responses were provided from knowledgeable key informants based on the arguments of De Luca and Atuahene-Gima (2007). As such, this study required two respondents from each firm to answer two separated questionnaires (Questionnaire A and B) as shown in appendix I. First, Questionnaire A was designed for the respondents who implement/manage management system and information technology system (i.e., chief executives or senior managers) were suitable for answering constructs of management innovation capability, and technological innovation capability. In total, 8 items measuring the constructs were included in Questionnaire A. Second, Questionnaire B was designed for the respondents who were responsible for marketing the export product (i.e., senior marketing manager, senior product manager, or senior sales manager). They were considered suitable to respond to the measures of exploitative marketing capability, exploratory marketing capability, exploitative product innovation capability, exploratory product innovation capability, and export venture performance. In total, 28 items measuring the constructs were included in Questionnaire B.

As the data collection was to take place in Thailand, the English questionnaire survey was translated into Thai. The study used a back-translation approach to check validity of the translation by certified translators (Keskin, 2006; Luo, 2002). In back-translation or called double translation, there are at least two bilingual individuals who participate independently in the translation process (McGorry, 2000). Thus, the translation process is effective because the instrument goes through a

number of filters produced independently by researchers. Further, the translation procedure is based on what is considered best practice in the published literature (e.g., Atuahene-Gima, 2005; Keskin, 2006; Zhou, Li, Zhou, and Su, 2008) and has been described as one of the most adequate translation process (Marín & Marín, 1991).

In the first step, the survey version in English was translated by the first translator into Thai. This step was done by an independent translator. Next, a second independent translator translated the instrument from Thai back to English. In this step, the researcher requested the academic officer of the Language Centre of a Thai University, who was familiar with both English and Thai languages, and has extensive experience in translation work to be the second independent translator. The second independent translator was asked to compare both versions and checks with the translators for inconsistencies. The certified translation from the second independent translator was issued to certify the survey instrument from the original language to the target language. As a result, a true, accurate, and complete translation of the original English documents was confirmed by the second independent translator.

#### **4.3.5 Stage five: Designing the sampling plan**

Designing the sampling plan is the fifth stage in the research process as shown in Figure 4.1. According to the research design framework of Aaker et al (2010), after the measures of the constructs were developed, designing sampling plan was the next step in research tactics stage. The sampling plan describes how a sample of the total population relevant to the research question is to be selected (Aaker et al., 2010). The sampling process comprises four steps including 1) determining the population 2) determining the sampling frame, 3) determining the sample method, and 4) selecting sampling size. These issues are discussed in the next section.

##### **4.3.5.1 Determining the population**

The first step of designing the sampling plan is identifying the target population. The target population consists of the complete group of elements that are identified for investigation according to the objectives of the research project (Hair, Bush & Orlinuau, 2006). In this study, the target population was Thai exporting firms that

have launched and sold one new product in at least one export market in the previous two years (prior to data collection) under the firms' own brand name. Thus, data were collected from such exporting firms where two respondents from each firm were required to answer two separated questionnaires (Questionnaire A and B). Key informants who answer Questionnaire A within each firm were identified as whose managerial position ensures they have detailed market knowledge and are responsible for the management of the specific product in the firms' export markets (i.e., chief executives or senior managers). Key informants who answer Questionnaire B within each firm were identified as whose were responsible for marketing the export product (i.e., senior marketing manager, senior product manager, or senior sales manager).

Being considered as decision makers, identified senior managers as specifying position in each questionnaire were considered suitable to respond to the questions provided as they have the ability to provide the specific knowledge about the phenomena being studied (Heide & Weiss, 1995). Drawing from similar research about strategy and management, senior managers have been used as key informants (e.g., McKee, Varadarajan, & Pride, 1989; Deshpande, Farley & Webster, 1993; Jaworski & Kohli, 1993; Pelham, 1997; Noble, Sinha & Kumar, 2002; O'Cass & Julian, 2003; Weerawardena, O'Cass & Julian, 2006). Thus, data provided by senior managers are argued to be reliable and accurate when studying issues such as those which are the focus of this research (Zahra & Covin, 1993).

#### **4.3.5.2 Determining the sampling frame**

The sampling frame of the study was drawn from the Thailand Exporter's Directory which was available from the website of the Department of Export Promotion. According to the sampling frame of this study, the database of export firms used to establish the sample for this study was constituted 23 industries. For the purposes of this study, the sampling frame was rearranged into the 18 sections of the Thai standard industrial classification of all economic activities (TSIC) which has been derived from International Standard Industrial Classification of All Economic Activities (ISIC), United Nations. The Thai export firms in the database include Public Limited Companies, Limited Companies, limited Partnership and Ordinary Partnership. The summary of sampling frame of the study is present in Table 4.7.

**Table 4.7: Sampling frame of the study**

<b>No.</b>	<b>Categories</b>	<b>Target population (firms)</b>
1	Crop and animal production	504
2	Manufacture of food products	2,871
3	Manufacture of textiles	292
4	Manufacture of apparel	1,853
5	Manufacture of leather and related products	793
6	Manufacture of wood and products of wood and cork	850
7	Printing and reproduction of recorded media	569
8	Manufacture of coke and refined petroleum products	76
9	Manufacture of chemicals and chemical products	376
10	Manufacture of basic pharmaceutical products and pharmaceutical preparations	1,228
11	Manufacture of rubber and plastics products	10
12	Manufacture of computer, electronic and optical products	30
13	Manufacture of electrical equipment	867
14	Manufacture of machinery and equipment	694
15	Manufacture of motor vehicles, trailers and semi-trailers	548
16	Manufacture of other transport equipment	11
17	Manufacture of furniture	752
18	Other manufacturing	3,167
<b>Total</b>		<b>15,491</b>

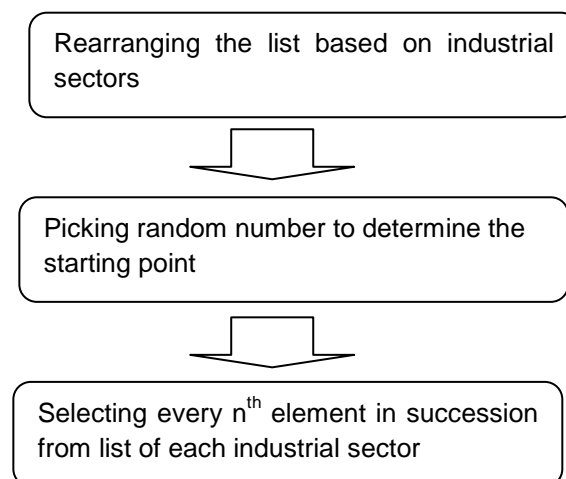
#### 4.3.5.3 Determining the sampling method

The target population obtained from the Thai Department of Export Promotion probability sampling was used to sample. In probability sampling, a sample in each population element has a known and nonzero chance of being included in the sample (Churchill, 1999). Therefore, this technique allows the researcher to judge the reliability and validity of raw data collected (Hair, Bush & Orlinuau, 2006). By obtaining the sampling frame from the Thailand Exporter's Directory, a systematic random sampling technique was employed for this study. Systematic random sampling is a probability sampling technique that requires the defined target population to be ordered in some way, and for this study it was in the form of industry sector (Hair, Bush & Orlinuau, 2006). This sampling technique has been used in similar studies in the strategic marketing literature (e.g. Atuahene-Gima, 2005; Vorhies & Morgan, 2005).

The process of sampling in this study is presented in Figure 4.4. First, the sampling frame was rearranged by the list based on industrial sectors. Following the views of Malhotra (2006) and applying them to this study, to increase the representativeness of the sample, the firms in the database were rearranged based on industry sectors

before utilising systematic random sampling as shown in Table 4.7. Manufacturing firms formed the initial sampling frame and were rearranged into 18 industrial sectors. Next, the sample was drawn by selecting a random starting point and then picking every  $i^{\text{th}}$  element in succession from the sampling frame (Maholtra, 2004). For example, if the random starting point is 10, the sample consists of elements 20, 30, 40, and so on. If the resulting sample size does not generate sufficient responses, the procedure would be repeated, this time starting from a different point in the sampling frame and selecting a suitable number of new firms (Dibb, Farhangmehr & Simkin, 2001). Then, every  $n^{\text{th}}$  element in succession from the list of each industrial sector was selected. Hence, every 10<sup>th</sup> firm was randomly selected from the sampling frame based on systematic random sampling.

**Figure 4.4: The process of sampling method of the study**



#### 4.3.5.4 Determining the sample size

The sample size can be determined either by using statistical techniques or on the basis of a judgment method (Aaker et al., 2010). The basis for using judgment methods is when the researcher knows from experience what sample size to adopt or when there are some constraints that dictate the sample size (Aaker et al., 2010) or using criterion outlined in the literature (Ibeh, Brock & Zhou, 2004). In this study, the researcher judgment was selected to determines sample size (i.e., selection of the appropriate item, characteristics affect most studies, subgroups) (Proctor, 2005; Zikmund & Babin, 2010).

The estimated sample size is dependent on specific issues including 1) the proposed data analysis technique, 2) the probable response rate, 3) the budget, and 4) the sample size similar to previous studies (Aaker, et al., 2010; Hair, Bush & Ortinau, 2006; Proctor, 2005; Zikmund & Babin, 2010). These issues are related and form the basis of the sample size sought and desired number of useable responses needed.

Based on the key issues mentioned, this research utilised Structural Equation Modeling (SEM) as the data analysis technique. As sample size plays a critical role in the estimation and interpretation of SEM results (Hair, Anderson, Tatham & Black, 1998), a commonly used judgment for sample size for SEM found in the literature was approximately 200 to 300 respondents (Bollen, 1989; Boomsma, 1982; Hulland, Todiño & Lecraw, 1996; Hair et al., 1998). In this research, it was expected to collect a minimum of 200 to a maximum of 300 usable questionnaires for robust data analyses (e.g., Akgun, Keskin & Byrne, 2010; De Luca, Verona & Vicari, 2010; Brettel, Heinemann, Engelen & Neubauer, 2011).

Next, taking into consideration the data collection for this research using drop and collect technique, a response rate of 40 to 90 percent is often found (Brown 1987; Kinnear & Taylor 1991; Lin & Germain 1998; Balabanis & Diamantopoulos 2004; Ngo & O'Cass, 2009; O'Cass & Sok, 2012). As such, a response rate of 50 percent was estimated in this study by utilising drop-and-collect technique.

Lastly, the research budget is considered as a critical issue in determining the sample size. According to the budget regulation of the School of Management, UTAS, the maximum budget was allocated for data collection is \$AUD 5,000. In addition, the drop-and-collect technique is labour intensive and requires research assistance so as to support the procedure of drop-off and re-collection of the surveys; properly trained field assistants personally delivered and later collected the questionnaires (Ibeh & Brock, 2004). Having considered research budget, two research assistants were employed for the purpose of assisting in collecting data of the study. They were responsible for delivering and collecting the survey with a minimum compensation. The budget for hiring research assistants was a nominal monetary amount to cover food and transportation per day. Thus, the research budget was considered in estimating sample size as it has effect to the number of surveys been collected.

Furthermore, selecting the sample size objectives was determined by also considering sample sizes in previous studies. Considering the data collection method from journals containing marketing capability articles in export from 1993 to 2012 as shown in Table 4.8, sample sizes fall between 111 to 491, with an average 307.

**Table 4.8: Review of data collection by drop-and-collect method from journals containing marketing capability articles in export from 1993 to 2012**

Authors	Journals	Country of study	Sample	Industrial sector	Unit of analysis	Sample size	Response rate
Ling-ye and Ogunmokun (2001)	International Business Review	China	Exporting manufacturers	Multiple industry	Export venture	111	39.6
Murray, Gao, Kotabe and Zhou (2007)	Journal of International Marketing	China	Exporting manufacturers	Multiple industry	Export venture	491	n.a.
Recela, Chaikittisilpa and Thoumrungroje (2007)	International Marketing Review	Thailand	Exporting manufacturers	Multiple industry	Strategic business units	279	n.a.
Murray, Gao and Kotabe (2010)	Journal of the Academy of Marketing Science	China	Exporting manufacturers	Multiple industry	Export venture	491	37
Boso, Cadogan and Story (2012)	International Small Business Journal	Ghana	Exporting manufacturers	Multiple industry	Corporate	164	49.4

Having considered on the key issues above, a sample of 300 firms was expected to be drawn from the sampling frame of 1,500 firms listed in the Thailand Exporter's Directory. Regarding to the response rate ranging between 40 to 90 percent is often considered achievable in drop-and-collect technique, 300 questionnaires were expected to be delivered to achieve a usable sample size of approximately 200 to 300 firms. Thus, the estimated sample size for this research is large enough for robust data analysis, theory testing.

#### **4.3.6 Stage six: Adopting the method of analysis**

The selection of the analytical method appropriate for hypotheses testing is the sixth stage in the research process. To test the hypotheses, structural equation modelling (SEM) was used for this study. Structural equation modelling is a multivariate technique that enables the researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs as well as between several latent constructs (Hair, Black, Babin, Anderson, & Tatham, 2006). This analytical technique is a family of statistical models that seek to explain the relationships among multiple variables and combines



aspects of both types of multivariate techniques: factor analysis and multiple regression analysis. The technique expresses the relationships among independent and dependent variables, even when a dependent variable becomes an independent variable in other relationships because the equations depict all of the relationships involved in the analysis (Hair et al., 2006). By using this technique, the measurement errors associated with single measures can be assessed and controlled by implementing multiple indicators (Meyers, Gamst & Guarino, 2005). Thus, the limitation of measurement errors associated with single measures is overcome and unbiased estimates of the relationships between the latent constructs are possible (Meyers, Gamst & Guarino, 2005).

#### **4.3.7 Stage seven: Administering data collection process**

Administering the data collection instrument is the final stage in the research process. This stage involves explanation of the field work. Firms listed in the Thailand Exporter's Directory were randomly selected for initial telephone contact. The selected participants were initially contacted by telephone and were provided with an explanation for why they were being contacted, and how their contact details were obtained. They were then offered an invitation to participate in the study. The eligible firms which meet the selection criteria of the study were asked for an appointment. All contacted participants were explained to them that their participation was voluntary and that they can withdraw at any time without having to give a reason. To ensure they meet the selection criteria, verification was sought on firm industry sector. The key criterion for selection was that a firm must have launched and sold one new product in at least one export market in the previous two years (2009 to 2010) with its own brand name. The eligible firms were invited to participate in the study and an appointment was made if they agree to drop off an information sheet and the questionnaires. The example of invitation telephone script is shown in Figure 4.5.

**Figure 4.5: Example of invitation telephone script**

<p style="text-align: center;"><b>SCRIPT</b></p> <ul style="list-style-type: none"><li>• Hello, how are you today?</li><li>• My name is Wannee Trongpanich. I am currently doing a PhD at the University of Tasmania, Australia. I am conducting research about how firms develop and market new products for export. This study attempts to better understand new product development in Thai firms.</li><li>• I obtained your contact details from the “Thailand Exporter’s Directory” provided by Department of Export Promotion, Thailand.</li><li>• I am calling you today to invite you to participate in my research.</li><li>• The approximate time you will need to devote to this research is between 20 to 25 minutes to complete a questionnaire.</li><li>• Would you be willing to consider participating in the research? Yes/no (if NO thank you for your time), if YES then I need to check some information about your firm first:</li></ul>
---

According to the information provided by the first key informant, each nominated manager (senior marketing manager, senior product manager, or senior sales manager) was contacted by telephone and provided with a short description of the reason they had received the survey and their participation encouraged. Each nominated manager was provided with an explanation for the purpose of the research, how their contact details were obtained and they were invited to participate in the study that is similar to the initial contacts procedure. If participation was agreed to participate, an appointment was made by the researcher or research assistants in order to personally drop off the questionnaire. They were informed that to have the survey collected, they can phone the number provided to make an appointment with the researcher or research assistants to collect both surveys back. If completion of the surveys was not carried out then and there, an appointment was made at a suitable date and time to collect the completed survey.

The survey data were collected at the operation level from each export firm. As such, respondents were key senior managers whose position gives them responsibility for a product in an export market. The respondents were asked to provide answers based on their own understanding and knowledge of specific information of each context questionnaire. They were asked to provide answers based on their firm’s strategies and business operation for the product launched and sold in export

market. Example of the information sheet for the nominated informants of the study is showed in Figure 4.6.

The researchers and trained field workers personally dropped off the survey questionnaires. If the respondent is willing to complete the questionnaire by this time, they can stay at the respondent's premises and wait until the self-administrated questionnaire had been completed. Otherwise, they arranged a return time for collecting the completed questionnaire. Before collecting the questionnaire, pre-notification was given to the respondent about the visit, 1-3 days before the pick-up date.

**Figure 4.6: Example of information sheet for nominated informants of the study**

<p style="text-align: center;"><b>New Product Development and Marketing Study in Export Market</b></p> <p>We realise you are very busy, but ask for about 30-45 minutes of your time. Please do not rush, as your experience and knowledge are very important and your accurate responses ensure your time is well served. Your responses are completely anonymous and confidential. We guarantee your responses cannot be identified.</p> <p>You have been identified by your senior manager (who sent you this survey) as the manager most responsible (i.e., knowledgeable) for the product mentioned below in the export market mentioned below.</p>
--

#### **4.4 Conclusion**

This chapter presented the research design developed to test the theoretical framework outlined in Chapter Three. Quantitative methodology was selected for the research as the most appropriate to achieve the research objectives. The research processes were presented and outlined in seven stages including 1) the research design, 2) the data collection method, 3) the research instrument development, 4) the final questionnaire development, 5) the sampling plan, 6) the method of analysis, and 7) the data collection process. Each stage was discussed in detail. The detailed discussion of the research design, measurement tools, provides the underpinning of the data analysis and presentation of the results in Chapter Five.

# Chapter Five

## Data Analysis and Findings

---

### 5.1 Introduction

The research design developed in Chapter Four provided an empirical platform for data collection. This chapter presents the results of the preliminary analysis of measures and hypothesis testing. Particularly, this chapter focuses on using appropriate statistical methods to examine the data and the model as indicated in proposed hypotheses. This chapter starts with the preliminary data analysis to provide the sample profile and descriptive statistics of all items. Then, a brief section on Partial Least Square is provided explaining the appropriateness of using variance-based structural equation modeling (SEM) in this study. Next, the results of the outer-measurement and inner-structural models are discussed. Finally, the results of the hypotheses testing are presented.

### 5.2 Preliminary data analysis

The field work to collect the data was conducted in Thailand by administering questionnaires via drop-and-collect technique. The survey packages (including an information sheet and questionnaires A and B) were distributed and of the 300 surveys distributed, a total of 164 usable survey packages were returned, producing an effective response rate of 58 per cent. This response rate is satisfactory in the context of drop-and-collect technique which generally achieves response rates between 40 to 90 percent (e.g., Balabanis & Diamantopoulos, 2004; Brown, 1987; Ibeh & Brock, 2004; Ngo & O'Cass, 2009; O'Cass & Sok, 2012).

After the data were collected and entered into SPSS, preliminary data analysis was undertaken. The preliminary data analysis consisted of 1) reporting the profile of the sample, and 2) investigating the descriptive statistics of the measures of the constructs (Anderson, Sweeney & Williams, 2010). First, the profiles of the sample

are reported on the basis of characteristics of firms and of respondents. Second, data were inspected using measures of central tendency (i.e., mean) and dispersion (i.e., standard deviation - SD, skewness, and kurtosis). The details are discussed in section 5.2.1 and section 5.2.2 respectively.

### **5.2.1 Profiles of the sample**

The profile of the sample is reported in two categories: firms and respondents as presented in Table 5.1. Based on the characteristics of firms, the profile of the sample are reported using eight demographic items: (1) industry sector, (2) market type, (3) ownership type, (4) export market region, (5) market focus, (6) firm size, (7) firm age, and (8) number of new products launched from 2008 to 2010. The profile of the sample is also reported using four demographic categories based on respondent characteristics: (1) position, (2) educational level, (3) knowledge of issues covered in questionnaires, and (4) confidence in responding to statements in questionnaires.

The entire firms surveyed came from manufacturing sector only as this study focused on the export product. The profile of sample showed that the firms surveyed came from a wide variety of industries. Specifically, the fashion sector accounted for 27.4% of the sample, textile 26.2%, furniture 10.4%, agricultural 9.8%, electronics 7.3%, machinery 4.9%, pharmaceutical 3%, automotive 3%, food 2.4%, rubber and plastics 2.4%, and others 1.8%. With respect to market type, business to business firms (B2B) accounted for 96.3% of the sample, and business to customer firms (B2C) 3.7%. In terms of ownership type, wholly Thai owned firms accounted for 98.8%, and foreign owned firms 1.2%. With regard to export market region that the focal product was exported to, Asia accounted for 48.2% of the sample, America 26.2%, Europe 22.6%, Australia 1.8%, and Middle East 1.2%.

Based on the criterion from the Ministry of Industry of Thailand, manufacturing firms with total employees less than 50 are considered small; manufacturing firms with total employee between 50 and 200 are considered medium sized firms; and manufacturing firms with total employees more than 200 are considered large. According to this criterion, the firm size of the sample was categorised by the number of employees. Specifically, medium sized firms accounted for 75.6% of the sample, and large firms 24.4%. In terms of firm age, firms operating between 10 to

20 years accounted for 68.3% of the sample, operating more than 20 years 19.5%, and less than 10 years 12.2%. In terms of the product type that senior managers had to respond to, fashion accessories (i.e., bag, footwear, leather products) accounted for 27.4% of the sample, textile (i.e., silk products, fabric-cotton, denim) 26.2%, furniture products (i.e., wooden, leather, rubber furniture) 10.4%, grain (i.e., rice) 9.8%, electrical products and parts (i.e., computer accessories, switch, electrical safety products) 7.3%, machinery (i.e., hydraulic spare parts) 4.9%, medical supplies (i.e., rubber glove) 3%, auto parts and accessories 3%, processed foods (i.e., canned, chilled, frozen, dried) 2.4%, plastic (i.e., film-PVC) 2.4%, and others (i.e., decorative items) 1.8%.

As discussed in Chapter Four (Section 4.3.4), two separate respondents from each firm completed questionnaires A and B. As such, the profiles of the sample are reported via four demographic items: (1) position held in the firm, (2) educational level, and (3) knowledge of respondents about the topics being studied, and (4) confidence in answering the questionnaire. In terms of respondents' for questionnaire A, managing directors accounted for 63.4% of the sample, marketing director 27.4%, exporting director 3%, and other positions (i.e., executive director) 6.1%. Considering respondents' questionnaire B, senior exporting manager accounted for 68.3% of the sample, senior marketing manager 18.3%, senior product manager 10.4%, and other positions (i.e., senior R&D manager) 3%. In terms of respondents' educational level in questionnaire A, postgraduates accounted for 90.9% of the sample, undergraduates 6.1%, and others (i.e., PhD, DBA) 3%. In terms of respondents' educational level in questionnaire B, 66.5 per cent were postgraduates accounted for 66.5% of the sample, undergraduates 32.9%, and others (i.e., PhD, DBA) 0.6%.

**Table 5.1: Profiles of the sample**

<b>Firm Characteristics</b>	<b>Category</b>	<b>Observed Frequency</b>	<b>Percentage</b>
<b>Industry Sector</b>	Agricultural	16	9.8%
	Food	4	2.4%
	Textiles	43	26.2%
	Fashion	45	27.4%
	Furniture	17	10.4%
	Media	2	1.2%
	Pharmaceutical	5	3.0%
	Rubber and plastics	4	2.4%
	Electronics	12	7.3%
	Machinery	8	4.9%
	Automotive	5	3.0%
	Others	3	1.8%
<b>Market Type</b>	Business to Business	158	96.3%
	Business to Customers	6	3.7%
<b>Ownership Type</b>	Thai owned	162	98.8
	Foreign owned	2	1.2
<b>Export Market Region</b>	Asia	79	48.2
	America	43	26.2
	Europe	37	22.6
	Australia	3	1.8
	Middle East	2	1.2
<b>Product Type</b>	Grain	16	9.8%
	Processed foods	4	2.4%
	Textiles	43	26.2%
	Fashion accessories	45	27.4%
	Furniture	17	10.4%
	Printing	2	1.2%
	Medical supplies	5	3.0%
	Plastics	4	2.4%
	Electrical products and parts	12	7.3%
	Machinery	8	4.9%
	Auto parts and accessories	5	3.0%
	Others	3	1.8%
<b>Firm Size</b>	Medium (50-200 employees)	124	75.6
	Large (>200 employees)	40	24.4
<b>Firm Age</b>	Less than 10 years	20	12.2
	10 to 20 years	112	68.3
	More than 20 years	32	19.5

**Table 5.1: Profiles of the sample (continued)**

Firm Characteristics	Category	Observed Frequency	Percentage		
Respondent Position					
Questionnaire A	Managing Director	104	63.4%		
	Marketing Director	45	27.4%		
	Exporting Director	5	3.0%		
	Others (e.g., Executive Director)	10	6.1%		
Respondent Position					
Questionnaire B	Senior Exporting Manager	112	68.3%		
	Senior Marketing Manager	30	18.3%		
	Senior Product Manager	17	10.4%		
	Others (e.g., Senior R&D Manager)	5	3.0%		
Respondent Education Level					
Questionnaire A	Undergraduate	10	6.1%		
	Postgraduate	149	90.9%		
	Others (i.e., PhD, DBA)	5	3.0%		
Respondent Education Level					
Questionnaire B	Undergraduate	54	32.9%		
	Postgraduate	109	66.5%		
	Others (i.e., PhD, DBA)	1	0.6%		
Respondent Knowledge		Mean	SD	Skewness	Kurtosis
	Questionnaire A	5.94	.671	-.052	-.427
	Questionnaire B	5.49	.675	-.204	.021
Respondent Confidence					
	Questionnaire A	5.87	1.03	-.240	-.332
	Questionnaire B	5.64	.774	-.559	.838

The respondent's knowledge of the area being studied and confidence in answering the questions were assessed in the questionnaires using self-report items to verify their knowledge and confidence (Kumar, Stem & Anderson, 1993; Jap, 1999; Morgan et al., 2003; Joshi & Sharma, 2004; Sok & O'Cass, 2011). In term of respondent's knowledge, the respondent from questionnaire A showed a mean score of knowledge of 5.94, while the respondents from questionnaire B showed a mean score of knowledge of 5.49. The scores in questionnaire A, also showed standard deviations of 0.67, skewness of -0.05 and kurtosis of -0.43, while the scores of questionnaire B showed standard deviations of 1.03, skewness of -0.24 and kurtosis of -0.33.

In terms of respondent's confidence, the respondents from questionnaire A showed a mean score of confidence of 5.87, while the respondents from questionnaire B showed a mean score of 5.64. The scores confidence in questionnaire A also



showed standard deviations of 0.68, skewness of -0.2 and kurtosis of 0.2, while the scores in questionnaire B showed a standard deviation of 0.77, skewness of -0.56 and kurtosis of 0.84. Overall, the results indicated that the respondent's knowledge and confidence demonstrated normality as evidenced by scores on skewness and kurtosis within an acceptable range of -2.00 and 2.00 (DeVellis, 1991).

### **5.2.2 Descriptive statistics results**

After the profiles of the sample were examined, the descriptive statistics of the measures of the constructs were computed. The data were inspected using measures of central tendency (i.e., mean) and dispersion (i.e., standard deviation, skewness, and kurtosis). Both skewness and kurtosis were examined to investigate normality of items. The skewness score was used to assess the degree of symmetry of a probability distribution, while kurtosis score was used to assess the thinness of tails of a probability distribution (Park, 2008). Acceptable scores of skewness and kurtosis demonstrating whether the distribution of each item departed from a normal distribution range is  $\pm 2$  (DeVellis, 1991).

As mentioned in Chapter Four (Section 4.3.3.4), seven constructs were measured in this study. The descriptive statistics are presented for each item of each construct. Table 5.2 presents the descriptive statistics (mean, standard deviation, skewness, and kurtosis) of items related to exploitative marketing capability (EXIMC1 to EXIMC8), exploratory marketing capability (EXRMC1 to EXRMC8), exploratory product innovation capability (EXIPIC1 to EXIPIC3), exploratory product innovation capability (EXRPIC1 to EXRPIC3), management innovation capability (MGTC1 to MGT4), technological innovation capability (TECH1 to TECH4), and export venture performance (MP1 to MP3 and FP1 to FP3).

*Exploitative marketing capability and exploratory marketing capability* were measured using 8 items for each construct. The results of the descriptive statistics of all items pertaining to exploitative marketing capability (EXIMC1 to EXIMC8) and exploratory marketing capability (EXRMC1 to EXRMC8) show that the mean scores ranged from 4.95 to 5.82 and standard deviations ranged from 1.34 to 1.57. Table 5.2 also shows the scores on skewness ranged between -0.23 and -0.93 and kurtosis between -0.10 and -1.02.

*Exploitative product innovation capability and exploratory product innovation capability* were measured using 3 items for each construct. The results of the descriptive statistics of exploitative product innovation capability (EXIPIC1 to EXIPIC3) and exploratory product innovation capability (EXRPIC1 to EXRPIC3) show that the mean scores ranged from 5.18 to 5.68 and standard deviations ranged from 1.24 to 1.57. Table 5.2 also presented the scores on skewness between -0.32 and -0.99 and kurtosis between 0.08 and -1.19 of the 6 items.

*Management innovation capability and technological innovation capability* were measured using 4 items for each construct. The results of the descriptive statistics of management innovation capability (MGTC1 to MGT4) and technological innovation capability (TECH1 to TECH4) show that the mean scores ranged from 5.18 to 5.68 and standard deviations ranged from 1.24 to 1.57. Table 5.2 also presented the scores on skewness between -0.23 and -0.93 and kurtosis between 0.08 and -1.19 of the 8 items.

*Export venture performance* was measured using 3 items for each construct (market performance and financial performance). The results of the descriptive statistics of market performance (MP1 to MP3) and financial performance (FP1 to FP3) show that the mean scores ranged from 5.36 to 6.55 and standard deviations ranged from 0.95 to 1.21. Table 5.2 also presented the scores on skewness between -0.60 and -2.92 and kurtosis between -0.46 and 9.61 of the 6 items.

In conclusion, Table 5.2 provides the descriptive statistic results of all items of the focal constructs. Overall, the results indicate that all items demonstrated normality as evidenced by scores on skewness and kurtosis within the acceptable range of -2.00 and 2.00 (DeVellis, 1991).

**Table 5.2: Descriptive statistics results**

Key Constructs		Mean	SD	Skewness	Kurtosis
<b>Exploitative marketing capability</b>					
<b>Marketing mix-based work routines</b>					
EXIMC1	...improved the efficiency/effectiveness of our current (i.e., well established, historical) pricing systems and processes for the product.	5.70	1.37	-0.83	-0.29
EXIMC2	...improved the efficiency/effectiveness of our current (i.e., well established, historical) distribution channels for the product.	5.37	1.46	-0.44	-0.93
EXIMC3	...improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing communications (e.g., advertising program, public relations system, promotion program and sales promotion program) processes for the product.	5.51	1.52	-0.73	-0.44
<b>Marketing planning</b>					
EXIMC4	...improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing research procedures for the product.	5.68	1.36	-0.68	-0.84
EXIMC5	...improved the efficiency/effectiveness of our current (i.e., well established, historical) selling systems (i.e., procedures or methods) for the product.	5.45	1.45	-0.81	-0.19
EXIMC6	...improved the efficiency/effectiveness of our current (i.e., well established, historical) customer relationships management (i.e., management of customer relations, relationship building) for the product.	5.68	1.36	-0.68	-0.84
<b>Marketing implementation</b>					
EXIMC7	...improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing strategy (e.g., allocation of resources, monitored performance and planning).	4.95	1.50	-0.23	-1.02
EXIMC8	...improved the efficiency/effectiveness of our current (i.e., well established, historical) market segmentation approaches for the product.	5.70	1.44	-0.93	0.10
<b>Exploratory marketing capability</b>					
<b>Marketing mix-based work routines</b>					
EXRMC1	...established new pricing systems and procedures (i.e., pricing approaches, pricing strategy, etc.) for the product.	5.82	1.29	-0.91	-0.03
EXRMC2	...established new distribution channel procedures for the product.	5.30	1.57	-0.56	-0.73
EXRMC3	...established new marketing communication processes (e.g., advertising program, public relations system, promotion program and sales promotion program) for the product.	5.68	1.46	-0.89	-0.30
<b>Marketing planning</b>					
EXRMC4	...established new marketing research procedures (i.e., new market research; information gathering techniques; approaches or methods) for the product.	5.26	1.54	-0.64	-0.34
EXRMC5	...established new selling system(s) (i.e., approaches, procedures or methods) for the product.	5.37	1.34	-0.68	-0.20
EXRMC6	...established new customer relationships management methods (i.e., management of customer relations, relationship building) for the product.	5.29	1.36	-0.40	-0.82
<b>Marketing implementation</b>					
EXRMC7	...established new marketing strategies (e.g., allocated appropriate resources, monitored the performance and planning) for the product.	5.15	1.45	-0.59	-0.10
EXRMC8	...established new market segmentation approaches (i.e., segmenting by customer type, structuring market or positioning the product in its own segment criteria) for the product.	5.35	1.44	-0.63	-0.56

**Table 5.2: Descriptive statistics results (Continued)**

<b>Constructs</b>		<b>Mean</b>	<b>SD</b>	<b>Skewness</b>	<b>Kurtosis</b>
<b>Exploitative product innovation capability</b>					
EXIPIC1	... improved the efficiency/effectiveness of our current product development skills and processes for the product.	5.29	1.57	-0.36	-1.19
EXIPIC2	... improved the efficiency/effectiveness of our current skills for staff who undertake R&D (i.e., staffing R&D, training and development of R&D and engineering personnel) for the product.	5.68	1.34	-0.79	-0.33
EXIPIC3	... improved the efficiency/effectiveness of our current R&D approaches for the product development.	5.56	1.56	-0.99	0.08
<b>Exploratory product innovation capability</b>					
EXRPIC1	... established new product development skills and processes for the product.	5.27	1.40	-0.70	-0.16
EXRPIC2	... established new skills for staff within the R&D (i.e., staffing R&D, training and development of R&D, and engineering personnel) for the product.	5.23	1.42	-0.51	-0.61
EXRPIC3	... established new R&D product development approaches for the product.	5.36	1.37	-0.60	-0.25
<b>Management innovation capability</b>					
MGT1	...developed and implemented new management practices (e.g., acquiring and applying new knowledge).	5.69	1.29	-1.03	1.08
MGT2	...developed and implemented new approaches to product planning and budgeting (e.g., coordinating activities for new product development project).	5.20	1.44	-0.40	-0.83
MGT3	...developed and implemented new approaches to management improvement (e.g., via quality management, re-engineering).	5.57	1.43	-0.82	-0.33
MGT4	...developed and implemented new approaches to management processes (e.g. new job description, establishing new teams).	5.88	1.32	-1.19	0.60
<b>Technological innovation capability</b>					
TECH1	...used new information technology systems for new product development projects.	6.04	1.15	-1.62	3.36
TECH2	...used new information technology systems for facilitating the creation of knowledge about technology.	5.40	1.24	-0.48	-0.37
TECH3	...used new information technology systems for facilitating market knowledge creation.	5.23	1.41	-0.47	-0.62
TECH4	...used new information technology systems for external communication (e.g., suppliers, customers, channel members, etc.).	5.48	1.32	-0.66	-0.44
<b>Export venture performance</b>					
<b>Market performance</b>					
MP1	Market share objectives were met.	6.45	0.65	-1.16	1.98
MP2	Major customer retention objectives were met.	6.12	0.77	-0.61	0.05
MP3	Customer satisfaction objectives were met.	6.27	0.74	-0.84	0.48
<b>Financial performance</b>					
FP1	Profit margin objectives were met.	5.71	0.86	-0.21	-0.66
FP2	Return on sales objectives were met.	6.43	0.90	-1.48	1.10
FP3	ROI/IRR goals were met.	5.91	0.98	-0.39	-0.96

### **5.3 Analysis of outer and inner models using partial least squares**

To examine the measurement models and test the proposed hypotheses Partial Least Squares (PLS) was used. PLS is a multivariate technique for estimating path models involving latent constructs indirectly observed by multiple indicators (Fornell and Cha, 1994; Wold & Wold, 1981). As noted in Chapter Three, the theoretical framework presented in Figure 3.1 was developed to investigate export venture performance implications of marketing capability and product innovation capability based on ambidexterity theory and complementary theory. Using the seven constructs, twelve hypotheses were proposed in the export venture performance model to address the research gaps identified in the review of exporting literature.

PLS is suitable for the investigation of the relationships outlined in the theoretical framework as it is a predictive model. It is also suitable for the following reasons. PLS allows the investigation of measures and theory at the same time (i.e., the outer and inner models). Hence, the theory is defined by two sets of linear relationships namely the outer-measurement model and inner-structural model (Fornell & Cha, 1994; Lohmoeller, 1989). First, the outer-measurement model specifies the relationships between observed indicators and their respective constructs (Chin, 1998). Second, the inner-structural model specifies the relationships between latent constructs (Falk & Miler, 1992; Hulland, 1999) which focus specifically on the hypotheses outlined in Chapter Three. In this study, PLS was used to assess the adequacy of outer-measurement models and the predictive power of the inner-structural model. This involved the predictive relevance of individual paths and the predictive relevance of the inner-structural mode (Chin, Marcolin & Newsted, 2003; Hair , Ringle & Sarstedt, 2011). In particular, inner model relationships between the latent constructs and the evaluation of these relationships was undertaken on the basis of multiple indices, characterised by their quality, sufficiency to explain the data, congruence between analytical and theoretical expectations, and precision (Lohmoeller, 1989; O'Cass, 2001).

PLS has been extensively applied in marketing research with the recognition of its distinctive methodological features (Hair et al., 2012; Henseler, Ringle & Sinkovics, 2009). Further, PLS is more suitable for theory development research (Barclay, Higgins & Thompson, 1995) and exhibits a well-established method for estimating

complex models (Fornell & Cha, 1994). Finally, PLS does not require restrictive assumptions about the population or scale of measurement (Chin, 1998; Fornell & Bookstein, 1982; Tenenhaus, Vinzi, Chaltelin & Lauro, 2005).

Further, as noted in Section 5.2.2, a number of the measurement items also demonstrated non-normality of data in the study. Given the number of constructs and items and effects among constructs within complementary and moderating effect, this theoretical framework is considered as complex. As such, this study and the data met the requirements to use PLS. The results of examining outer-measurement and inner-structural model were detailed in Section 5.4 and 5.5, running by SmartPLS software program.

#### **5.4 Outer-measurement model results**

Evaluation of a complex model involves multiple indices which are characterised by aspects such as their quality, sufficiency to explain the data congruence with systematic expectations and precision (Lohmoller, 1981). As such, a systematic examination of a number of indices for predictive relevance of the model is required (Fornell & Cha, 1994). As discussed in Chapter Four (Section 4.3.4), 28 items were developed to measure seven constructs of the study. The item indicators were expressed as a function of their respective construct, and thus categorised as a reflective model (Hulland, 1999; Tsang, 2002). The constructs articulated reflective outer-measurement models including exploitative marketing capability, exploratory marketing capability, exploratory product innovation capability, exploratory product innovation capability, management innovation capability, technological innovation capability, and export venture performance.

As discussed in Chapter Three, exploitative marketing capability and exploratory marketing capability were hypothesised as a second order-first order construct, in which manifested indicators were formulated in the reflective manner. Specifically, the measurement model of exploitative marketing capability and exploratory marketing capability posits three first-order latent factors, marketing mix-based work routines, marketing implementation, and marketing planning, with reflective indicators. These first-order latent factors are reflective indicators of exploitative marketing capability and exploratory marketing capability, the underlying second-

order construct. Given the theoretical formulation of exploitative marketing capability and exploratory marketing capability being hypothesised as the Type I second-order factor model as outlined by Jarvis, MacKenzie and Podsakoff (2003), the measurement model test was conducted using SmartPLS and bootstrapping was selected for estimating the precision of the reflective outer-measurement model for exploitative marketing capability and exploratory marketing capability.

The adequacy and significance of reflective outer-measurement models and the predictive relevance of individual paths and the structural model were assessed by examining individual indicator loadings, bootstrap critical ratios (t-values), composite reliability (CR), average variance extracted (AVE), convergent validity, and discriminant validity (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001; Hair, Ringle, & Sarstedt, 2011). To assess the significance of reflective outer-measurement model, the bootstrapping method of sampling with replacement was used to estimate the precision of the model. In this study, the bootstrap critical t-values were computed on the basis of 500 bootstrapping runs (Hair, Ringle, & Sarstedt, 2011). The results of assessment of the reflective outer-measurement models are discussed in detail in section 5.4.1 to 5.4.8.

#### **5.4.1 Exploitative marketing capability**

The assessment of outer-measurement model of exploitative marketing capability is shown in Table 5.3. The loadings for all items were greater than the recommended cut-off value ( $>0.5$ ), ranging from 0.60 to 0.95 (Nunnally & Bernstein, 1994). The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin et al., 2003; Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for exploitative marketing capability (CR = 0.80, AVE = 0.58) were greater than the recommended cut-off benchmark of 0.70 and 0.50 respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).

**Table 5.3: Result of outer-measurement model exploitative marketing capability**

<b>Construct Items</b>		<b>Loadings</b>	<b>t-Value</b>
<b>Exploitative marketing capability (CR = .80, AVE = .58 )</b>			
<i>For this product, in this export market, our firm:</i>			
<b>Marketing mix-based work routines (CR = .80, AVE = .57)</b>			
EXIMC1	...improved the efficiency/effectiveness of our current (i.e., well established, historical) pricing systems and processes for the product.	0.78	16.94
EXIMC2	...improved the efficiency/effectiveness of our current (i.e., well established, historical) distribution channels for the product.	0.63	8.51
EXIMC3	...improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing communications (e.g., advertising program, public relations system, promotion program and sales promotion program) processes for the product.	0.84	26.01
<b>Marketing implementation (CR = .79, AVE = .66)</b>			
EXIMC4	...improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing research procedures for the product.	0.95	74.76
EXIMC5	...improved the efficiency/effectiveness of our current (i.e., well established, historical) selling systems (i.e., procedures or methods) for the product.	0.60	7.07
EXIMC6	...improved the efficiency/effectiveness of our current (i.e., well established, historical) customer relationships management (i.e., management of customer relations, relationship building) for the product.	0.95	74.76
<b>Marketing planning (CR = .89, AVE = .73)</b>			
EXIMC7	...improved the efficiency/effectiveness of our current (i.e., well established, historical) marketing strategy (e.g., allocation of resources, monitored performance and planning).	0.84	20.37
EXIMC8	...improved the efficiency/effectiveness of our current (i.e., well established, historical) market segmentation approaches for the product.	0.78	7.86

#### 5.4.2 Exploratory marketing capability

The assessment of the outer-measurement model of exploratory marketing capability is shown in Table 5.4. The loadings for all items were greater than the recommend cut-off value ( $>0.5$ ), ranging from 0.71 to 0.86 (Nunnally & Bernstein, 1994). The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin, Marcolin, & Newsted, 2003; Hair Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for exploratory marketing capability (CR = 0.79, AVE = 0.56) were greater than the recommended benchmark of 0.70 and 0.50, respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).



**Table 5.4: Result of outer-measurement model exploratory marketing capability**

<b>Construct Items</b>		<b>Loadings</b>	<b>t-Value</b>
<b>Exploratory marketing capability (CR = .79, AVE = .56)</b>			
<i>For this product, in this export market, our firm:</i>			
<b>Marketing mix-based work routines (CR = .81, AVE = .58)</b>			
EXRMC1	...established new pricing systems and procedures (i.e., pricing approaches, pricing strategy, etc.) for the product.	0.78	18.41
EXRMC2	...established new distribution channel procedures for the product.	0.73	11.16
EXRMC3	...established new marketing communication processes (e.g., advertising program, public relations system, promotion program and sales promotion program) for the product.	0.78	14.46
<b>Marketing implementation (CR = .84, AVE = .72)</b>			
EXRMC4	...established new marketing research procedures (i.e., new market research; information gathering techniques; approaches or methods) for the product.	0.77	15.12
EXRMC5	...established new selling system(s) (i.e., approaches, procedures or methods) for the product.	0.75	11.16
EXRMC6	...established new customer relationships management methods (i.e., management of customer relations, relationship building) for the product.	0.71	9.92
<b>Marketing planning (CR = .79, AVE = .55)</b>			
EXRMC7	...established new marketing strategies (e.g., allocated appropriate resources, monitored the performance and planning) for the product.	0.86	28.62
EXRMC8	...established new market segmentation approaches (i.e., segmenting by customer type, structuring market or positioning the product in its own segment criteria) for the product.	0.84	20.27

### 5.4.3 Exploitative product innovation capability

The assessment of the outer-measurement model of exploitative product innovation capability was presented in Table 5.5. The construct was measured using three reflective items, namely EXIPIC1, EXIPIC2, and EXIPIC3 capability. The loadings for all items were greater than the recommended cut-off value ( $>0.5$ ), ranging from 0.73 to 0.83. The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin, Marcolin, & Newsted, 2003; Hair Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for exploitative product innovation capability (CR = 0.86, AVE = 0.79) were greater than the recommended benchmark of 0.70 and 0.50 respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).

**Table 5.5: Result of outer-measurement model exploitative product innovation capability**

Construct Items		Loadings	t-Value
<b>Exploitative product innovation capability (CR=.86, AVE = .79)</b>			
<i>For this product, in this export market, our firm:</i>			
EXIPIC1	... improved the efficiency/effectiveness of our current product development skills and processes for the product.	0.83	27.27
EXIPIC2	... improved the efficiency/effectiveness of our current skills for staff who undertake R&D (i.e., staffing R&D, training and development of R&D and engineering personnel) for the product.	0.73	11.42
EXIPIC3	... improved the efficiency/effectiveness of our current R&D approaches for the product development.	0.74	12.50

#### 5.4.4 Exploratory product innovation capability

The assessment of the outer-measurement model of exploitative and exploratory product innovation capability was presented in Table 5.6. The construct was measured using three reflective items, namely EXRPIC1, EXRPIC2, and EXRPIC3 for exploratory product innovation capability. The loadings for all items were greater than the recommended cut-off value ( $>0.5$ ), ranging from 0.67 to 0.82. The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin, Marcolin, & Newsted, 2003; Hair Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for exploratory product innovation capability (CR = 0.91, AVE = 0.84) were greater than the recommended benchmark of 0.70 and 0.50 respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).

**Table 5.6: Result of outer-measurement model exploratory product innovation capability**

Construct Items		Loadings	t-Value
<b>Exploratory product innovation capability (CR=.91, AVE = .84)</b>			
<i>For this product, in this export market, our firm:</i>			
EXRPIC1	... established new product development skills and processes for the product.	0.67	9.41
EXRPIC2	... established new skills for staff within the R&D (i.e., staffing R&D, training and development of R&D, and engineering personnel) for the product.	0.80	23.57
EXRPIC3	... established new R&D product development approaches for the product.	0.82	23.29

### 5.4.5 Technological innovation capability

The assessment of the outer-measurement model of technological innovation capability was showed in Table 5.7. The construct was measured using four reflective items, namely TECH1, TECH2, TECH3, and TECH4. The loadings for all items were greater than the recommended cut-off value ( $>0.5$ ), ranging from 0.73 to 0.76. The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin, Marcolin, & Newsted, 2003; Hair Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for technological innovation capability (CR = 0.84, AVE = 0.56) were greater than the recommended benchmark of 0.70 and 0.50 respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).

**Table 5.7: Result of outer-measurement model technological innovation capability**

Construct Items		Loadings	t-Value
<b>Technological innovation capability (CR=.84, AVE = .56)</b>			
<i>For this product, in this export market, our firm:</i>			
TECH1	...used new information technology systems for new product development projects.	0.76	14.35
TECH2	...used new information technology systems for facilitating the creation of knowledge about technology.	0.74	12.47
TECH3	...used new information technology systems for facilitating market knowledge creation.	0.78	17.49
TECH4	...used new information technology systems for external communication (e.g., suppliers, customers, channel members, etc.).	0.73	10.83

### 5.4.6 Management innovation capability

The assessment of the outer-measurement model of management innovation capability was showed in Table 5.8. The construct was measured using four reflective items, namely MGT1, MGT2, MGT3, and MGT4. The loadings for all items were greater than the recommended cut-off value ( $>0.5$ ), ranging from 0.56 to 0.84. The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin, Marcolin, & Newsted, 2003; Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for management innovation capability (CR = 0.81, AVE = 0.52) were greater than the recommended benchmark of 0.70 and 0.50 respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).

**Table 5.8: Result of outer-measurement model management innovation capability**

Construct Items		Loadings	t-Value
<b>Management innovation capability (CR=.81, AVE = .52)</b>			
<i>For this product, in this export market, our firm:</i>			
MGT1	...developed and implemented new management practices (e.g., acquiring and applying new knowledge).	0.84	22.18
MGT2	...developed and implemented new approaches to product planning and budgeting (e.g., coordinating activities for new product development project).	0.76	17.26
MGT3	...developed and implemented new approaches to management improvement (e.g., via quality management, re-engineering).	0.70	8.91
MGT4	...developed and implemented new approaches to management processes (e.g. new job description, establishing new teams).	0.56	4.89

#### 5.4.7 Export venture performance

The assessment of the outer-measurement model of export venture performance constructs was showed in Table 5.9. Each construct was measured using three reflective items, namely MP1, MP2, and MP3 for market performance, and FP1, FP2, and FP3 for financial performance. The loadings for all items were greater than the recommended cut-off value ( $>0.5$ ), ranging from 0.71 to 0.92. The bootstrapped t-values for all items were acceptable ( $>\pm 1.96$ ) (Chin, Marcolin, & Newsted, 2003; Hair Hair, Ringle, & Sarstedt, 2011). The composite reliabilities (CR) and average variance extracted (AVE) for both market performance (CR = 0.89, AVE = 0.73) and financial performance (CR = 0.82, AVE = 0.61) were greater than the recommended benchmark of 0.70 and 0.50 respectively (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001).

**Table 5.9: Result of outer-measurement model export venture performance**

Construct Items		Loadings	t-Value
<b>Export venture performance (CR=.89, AVE = .79)</b>			
<i>For this product, in this export market:</i>			
<b>Market performance (CR = .89, AVE = .73)</b>			
MP1	Market share objectives were met.	0.78	8.51
MP2	Major customer retention objectives were met.	0.86	17.41
MP3	Customer satisfaction objectives were met.	0.92	44.68
<b>Financial performance (CR = .82, AVE = .61)</b>			
FP1	Profit margin objectives were met.	0.71	8.55
FP2	Return on sales objectives were met.	0.77	12.71
FP3	ROI/IRR goals were met.	0.86	29.78

#### **5.4.8 Convergent and discriminant validity**

As mentioned in Section 5.4.1, this study adopted reflective outer-measurement models as its modeling strategy. The seven constructs were examined through two criteria: convergent validity and discriminant validity of the outer-measurement models. Convergent validity refers to the extent to which each item is associated with its respective construct (Hulland, 1999; Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2011). To assess convergent validity of the key constructs, composite reliability (CR) and average variance extracted (AVE) were examined as two criteria for convergent validity. If the composite reliability of each construct is above the cut-off value of 0.70 (Nunally, 1978), and the AVE of each construct is above the 0.50 cut-off value (Fornell & Lacker, 1981; Henseler, Ringle, & Sinkovics, 2009; Hair, Ringle, & Sarstedt, 2011), convergent validity is satisfactory (Chin, 1998; Hulland, 1999). The result of the assessment of convergent validity of the constructs in this study was shown in Table 5.6. For the first criteria, all composite reliability values of each construct, ranging from 0.79 to 0.91, were above the 0.70 cut-off values. Therefore, the composite reliability of all constructs was acceptable. For the second criteria, the average variance extracted (AVE) values for all constructs, ranging from 0.52 to 0.84, were above the 0.50 cut-off values. This means that more than 50 percent of the variance in the observed indicators was due to the respective construct. Based on the two criteria for assessment, convergent validity of the constructs in this study was satisfactory.

Discriminant validity refers to the extent to which measures of a given construct differ from measures of other constructs in the same model (Hulland, 1999). Two methods of assessing the discriminant validity were used in this study. First, discriminant validity was assessed by following Fornell and Larcker's (1981) criterion. In this approach if the square roots of the average variance extracted (AVE) values are consistently greater than all corresponding correlations, discriminant validity exists (Fornell & Larcker, 1981). Second, assessment of discriminant validity was undertaken by having computed the composite measures (Gaski & Nevin, 1985; O'Cass, 2002; O'Cass & Ngo, 2007). When the correlation between two composite constructs is not higher than their respective reliability estimates, discriminant validity

is evident. Thus, construct correlations were examined and compared to the reliabilities calculated via composite reliabilities (CR).

As shown in Table 5.10, each construct in the model shares more variance with its corresponding measures than it shares with other constructs in the model. In addition, the comparison of individual correlations between constructs revealed that no individual correlation (ranging from 0.05 to 0.68) was higher than respective composite reliabilities (ranging from 0.79 to 0.91) (O'Cass & Ngo, 2007). The result indicated that the correlation between two constructs was not higher than their respective composite reliabilities. Accordingly, within the study all constructs show satisfactory discriminant validity.

**Table 5.10: Evidence of convergent and discriminant validity for constructs**

<b>Constructs</b>	<b>CR</b>	<b>AVE</b>	<b>EXI MC</b>	<b>EXR MC</b>	<b>EXI PIC</b>	<b>EXR PIC</b>	<b>MGT</b>	<b>TECH</b>	<b>MP</b>	<b>FP</b>
Exploitative Marketing Capability	<b>0.80</b>	<b>0.58</b>	<b>0.76</b>							
Exploratory Marketing Capability	<b>0.79</b>	<b>0.56</b>	0.51	<b>0.75</b>						
Exploitative Product Innovation Capability	<b>0.86</b>	<b>0.76</b>	0.52	0.66	<b>0.87</b>					
Exploratory Product Innovation Capability	<b>0.91</b>	<b>0.84</b>	0.23	0.12	0.15	<b>0.92</b>				
Management Innovation Capability	<b>0.81</b>	<b>0.52</b>	0.18	0.14	0.15	0.68	<b>0.72</b>			
Technological Innovation Capability	<b>0.84</b>	<b>0.56</b>	0.41	0.55	0.51	0.08	0.05	<b>0.75</b>		
Market Export Venture Performance	<b>0.89</b>	<b>0.79</b>	0.39	0.34	0.48	0.10	0.04	0.52	<b>0.89</b>	
Financial Export Venture Performance	<b>0.82</b>	<b>0.61</b>	0.38	0.46	0.49	0.04	0.08	0.50	0.59	<b>0.78</b>

## 5.5 Inner-structural model results

Once the outer-measurement models provided evidence of reliability and validity, it is appropriate to examine inner-structural model estimates. As discussed in Section 5.4, the adequacy and significance of outer-measurement models were supported. The second step is the assessment of the inner-structural model. The inner-structural model presents the relationship between the constructs. The assessment of inner-structural model involves the predictive relevance of individual path (relationship) and the predictive relevance of the structural model (Cassel, Hackl, & Westlund, 1999; Hair, Ringle, & Sarstedt, 2011). The strength and significance of

individual path were measured to provide evidence for testing the proposed hypotheses. To measure the path strength, the path weight (beta coefficient) was calculated (Henseler, Ringle & Sinkovics, 2009; Reinartz, Haenlein & Henseler, 2009). To measure the path significance, the ratio between estimates and standard errors (t-value) was computed through the basis of a sampling with replacement (i.e., bootstrapping) (Chin, Marcolin & Newsted, 2003; Hair, Ringle, & Sarstedt, 2011). T-values should be greater than 1.96. Finally, the R squared ( $R^2$ ) values were used to assess the percentage of variance in the predicted construct explained by predictor constructs connected to it directly as they reflect the respective amounts of variance explained by the full model (Hair, Ringle, & Sarstedt, 2011). The appropriate criteria of individual R squared values for predicted variables are greater than .10 (Falk & Miller, 1992; Ngo & O'Cass, 2012).

#### **5.5.1 Hypothesis testing: Hypothesis 1 to 8**

As discussed in Chapter Three (Section 3.2), the theoretical framework of the study was hypothesised and divided into two parts: primary model and contingency model. The primary model included eight hypotheses that related to the main effects of predictor variables and predicted variables. Hypotheses 1 to 4 were related to the relationship between marketing capability and product innovation capability in ambidexterity and export venture performance. Hypotheses 5 and 6 were related to the relationship between interaction of marketing capability and product innovation capability within functional ambidexterity and export venture performance. Hypotheses 7 and 8 were related to the relationship between interaction of marketing capability and product innovation capability in cross functional ambidexterity and export venture performance. Table 5.11 shows the results of the inner-structural model. Further, this study included firm size, firm age and industry sector as a control variable to ensure that two critical capabilities (marketing and product innovation in ambidexterity and complementarity context) and export venture performance were not confounded with the control variables. Firm size is indicated by the logarithm of the number of employees.

**Table 5.11: The inner-structural model of primary model**

No.	Predictor variable	Predicted variable			Predicted variable		
		Market Performance			Financial Performance		
		R <sup>2</sup>	Beta	t-value	R <sup>2</sup>	Beta	t-value
H1	Exploitative MC	.15	.39	5.43*	.15	.39	5.38*
H2	Exploratory MC	.12	.35	4.69*	.24	.49	7.16*
H3	Exploitative PIC	.20	.45	6.37*	.34	.58	9.11*
H4	Exploratory PIC	.01	.09	1.09*	.04	.07	0.85*
H5	Exploitative MC X Exploratory MC	.16	.40	5.51*	.24	.49	7.14*
H6	Exploitative PIC X Exploratory PIC	.14	.38	5.18*	.19	.44	6.20*
H7	Exploitative MC X Exploitative PIC	.20	.45	6.36*	.28	.53	7.99*
H8	Exploratory MC X Exploratory PIC	.07	.27	3.54*	.11	.33	4.47*

Note: \*Indicates meets or exceeds minimum acceptable levels

Hypothesis 1 stated that exploitative marketing capability is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that *exploitative marketing capability* had a positive effect on market performance (beta = .39, t-value = 2.31) and had a positive effect on financial performance (beta = .39, t-value = 5.38). Regarding the R squared (R<sup>2</sup>) values, *exploitative marketing capability* explained 15 percent of variance of market performance, and 15 percent of variance of financial performance, which is above the benchmark of 0.10.

Hypothesis 2 stated that exploratory marketing capability is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that exploratory marketing capability had a positive effect on market performance (beta = .35, t-value = 4.69) and had a positive effect on financial performance (beta = .49, t-value = 7.16). Regarding R squared (R<sup>2</sup>) values, exploratory marketing capability can explain 12 percent of variance of market performance, and 24 percent of variance of financial performance, which is above the benchmark of 0.10.

Hypothesis 3 stated that exploitative product innovation capability is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that exploitative product innovation capability had a positive effect on market performance (beta = .45, t-value = 6.37) and had a positive



effect on financial performance ( $\beta = .58$ ,  $t\text{-value} = 9.11$ ). Regarding the R squared ( $R^2$ ) values, exploratory marketing capability explains 20 percent of variance of market performance, and 34 percent of variance of financial performance, which is above the benchmark of 0.10.

Hypothesis 4 stated that exploratory product innovation capability is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that exploratory product innovation capability did not have a significant effect on market performance ( $\beta = .09$ ,  $t\text{-value} = 1.09$ ) and did not have a significant effect on financial performance ( $\beta = .07$ ,  $t\text{-value} = 0.85$ ). Therefore, the R squared ( $R^2$ ) values of exploratory product innovation capability for variance of market performance and financial was not provided.

Hypothesis 5 stated that exploitative marketing capability and exploratory marketing capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that the exploitative marketing capability and exploratory marketing capability complementarity had a positive effect on market performance ( $\beta = .40$ ,  $t\text{-value} = 5.51$ ) and had a positive effect on financial performance ( $\beta = .49$ ,  $t\text{-value} = 7.14$ ). Regarding the R squared ( $R^2$ ) values, interaction effect of (exploitative marketing capability and exploratory marketing capability) explains 16 percent of variance of market performance, and 24 percent of variance of financial performance, which is above the benchmark of 0.10.

Hypothesis 6 stated that exploitative product innovation capability and exploratory product innovation capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that exploitative product innovation capability and exploratory product innovation capability complementarity had a positive effect on market performance ( $\beta = .38$ ,  $t\text{-value} = 5.18$ ) and had a positive effect on financial performance ( $\beta = .44$ ,  $t\text{-value} = 6.20$ ). Regarding the R squared ( $R^2$ ) values, the exploitative product innovation capability and exploratory product innovation capability complementarity explains 14 percent of variance of market performance, and 19 percent of variance of financial performance, which is above the benchmark of 0.10.

Hypothesis 7 stated that exploitative marketing capability and exploitative product innovation capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that exploitative marketing capability and exploitative product innovation capability complementarity had a positive effect on market performance ( $\beta = .45$ ,  $t\text{-value} = 6.36$ ) and had a positive effect on financial performance ( $\beta = .53$ ,  $t\text{-value} = 7.99$ ). Regarding the R squared ( $R^2$ ) values, the exploitative marketing capability and exploitative product innovation capability complementarity explains 20 percent of variance of market performance, and 28 percent of variance of financial performance, which is above the benchmark of 0.10.

Hypothesis 8 stated that exploratory marketing capability and exploratory product innovation capability complementarity is positively related to export venture performance in (a) market performance and (b) financial performance. The findings show that the exploratory marketing capability and exploratory product innovation capability complementarity had a positive effect on market performance ( $\beta = .27$ ,  $t\text{-value} = 3.54$ ) and had a positive effect on financial performance ( $\beta = .33$ ,  $t\text{-value} = 4.47$ ). Regarding the R squared ( $R^2$ ) values, the exploratory marketing capability and exploratory product innovation capability complementarity explains 7 percent of variance of market performance, and 11 percent of variance of financial performance, which is above the benchmark of 0.10.

### **5.5.2 Hypothesis testing: Hypothesis 9 to 12**

The theoretical framework of the study also proposed the moderation effects of technological innovation capability and management innovation capability in contingency part of the model as discussed in Chapter Three (Section 3.2). The contingency model included 4 hypotheses that related to the moderation effect of predictor variables and predicted variables. In hypotheses 9, the study theorised that technological innovation capability moderates the relationship between complementary within-functional area (i.e., exploitative marketing capability vs. exploratory marketing capability), and export venture performance. In hypotheses 10, the study theorised that technological innovation capability moderates the relationship between complementary cross functional area (i.e., exploitative marketing capability vs. exploitative product innovation capability), and export

venture performance. In hypotheses 11, the study theorised that management innovation capability moderates the relationship between complementary within-functional area (i.e., exploitative marketing capability vs. exploratory marketing capability), and export venture performance. In hypotheses 12, the study theorised that management innovation capability moderates the relationship between complementary cross functional area (i.e., exploitative marketing capability vs. exploitative product innovation capability), and export venture performance.

This study used multiple hierarchical regression to test the hypothesised moderating effects (Cohen, Cohen, West & Aiken, 2003; Sørensen, 2011) in SPSS Statistics. Hierarchical regression analysis method helps partition out the total variance explained by each of the entering variables (Sørensen, 2011). The measures of predictor variable and moderator variable were mean-centred to minimise the potential threat of multicollinearity when calculating the interaction term (Madson & Perreault, 1991). In the hierarchical analysis processes, the predictor variable and moderator variable were entered in regression Step 1 and the interaction variable was entered in regression in regression Step 2. The contribution of the interaction variable, in terms of the possible significant increase in variance explained ( $R^2$  change), between the two models, was assessed by calculating the partial F-statistics. If the size of the  $R^2$  changes for step 2 when the moderator term was entered, the change is an indicator of the size of the moderator effect. A significant partial F-statistics concludes that the hypothesised moderating variable is, in fact, a moderator. The Table 5.12 and Table 5.13 present the results from hypothesis testing.

Hypothesis 9a stated that technological innovation capability moderates the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance. In Table 5.12, the findings show that the  $R^2$  change is 0.01 when the interaction variable is added to the predictor and moderator variables. This change is significant ( $F = 2.25$ ,  $F\text{-value} = 4.39$ ). Thus, technological innovation capability moderates the effects of the exploitative marketing capability and exploratory marketing capability complementarity on the export venture performance. Hypothesis 9b stated that technological innovation capability moderates the relationship between the exploitative product innovation capability and exploratory product innovation

capability complementarity, and export venture performance. In Table 5.12, the findings show that the  $R^2$  change is 0.14 when the interaction variable is added to the predictor and moderator variables. This change is significant ( $F = 25.36$ ,  $F\text{-value} = 3.99$ ). Thus, technological innovation capability moderates the effects of the exploitative product innovation capability and exploratory product innovation capability complementarity on the export venture performance. Hypothesis 10a stated that technological innovation capability moderates the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance. In Table 5.12, the findings show that the  $R^2$  change is 0.01 when the interaction variable is added to the predictor and moderator variables. This change is significant ( $F = 1.83$ ,  $F\text{-value} = 3.94$ ). Thus, technological innovation capability moderates the effects of the exploitative marketing capability and exploitative product innovation capability complementarity on the export venture performance.

Hypothesis 10b stated that technological innovation capability moderates the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance. In Table 5.12, the findings show that the  $R^2$  change is 0.12 when the interaction variable is added to the predictor and moderator variables. This change is significant ( $F = 22.32$ ,  $F\text{-value} = 4.07$ ). Thus, technological innovation capability moderates the effects of the exploratory marketing capability and exploratory product innovation capability complementarity on the export venture performance.

**Table 5.12: Results of hierarchical regression test for moderating effect of technological innovation capability**

Predictor variables	Model 1	Model 2	Model 3	Model 4
<i>Main effect</i>				
Exploitative MC X Exploratory MC	.29 (3.48*)			
Exploitative PIC X Exploratory PIC		.23 (2.83*)		
Exploitative MC X Exploitative PIC			.19 (2.66*)	
Exploratory MC X Exploratory PIC				.30 (3.29*)
Technological innovation capability (TECH)	.82 (4.53*)	.18 (5.06*)	.16 (4.95*)	.17 (4.29*)
<i>Interaction effect</i>				
TECH X (Exploitative MC X Exploratory MC)	.23 (4.38*)			
TECH X (Exploitative PIC X Exploratory PIC)		.21 (3.99*)		
TECH X (Exploitative MC X Exploitative PIC)			.18 (3.94*)	
TECH X (Exploratory MC X Exploratory PIC)				.24 (4.07*)
R <sup>2</sup>	.13	.14	.17	.14
R <sup>2</sup> change	.01	.13	.01	.12
F	2.25	25.36	1.83	22.32
F-value	4.39	3.99	3.94	4.07
Note: *Indicates meets or exceeds minimum acceptable levels				

Hypothesis 11a stated that management innovation capability moderates the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance. In Table 5.13, the findings show that the R<sup>2</sup> change is 0.06 when the interaction variable is added to the predictor and moderator variables. This change is significant (F = 13.29, F-value = 4.01). Thus, management innovation capability moderates the effects of the exploitative marketing capability and exploratory marketing capability complementarity on the export venture performance.

Hypothesis 11b stated that management innovation capability moderates the relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance. In Table 5.13, the findings show that the R<sup>2</sup> change is 0.06 when the interaction variable is added to the predictor and moderator variables. This change is significant (F = 4.69, F-value = 4.51). Thus, management innovation capability moderates the effects of the exploitative product innovation capability and exploratory product innovation capability complementarity on the export venture performance.

Hypothesis 12a stated that management innovation capability moderates the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance. In Table 5.13, the findings show that the  $R^2$  change is 0.04 when the interaction variable is added to the predictor and moderator variables. This change is significant ( $F = 7.54$ ,  $F\text{-value} = 4.72$ ). Thus, management innovation capability moderates the effects of the exploitative marketing capability and exploitative product innovation capability complementarity on the export venture performance.

Hypothesis 12b stated that management innovation capability moderates the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance. In Table 5.13, the findings show that the  $R^2$  change is 0.06 when the interaction variable is added to the predictor and moderator variables. This change is significant ( $F = 10.50$ ,  $F\text{-value} = 3.68$ ). Thus, management innovation capability moderates the effects of the exploratory marketing capability and exploratory product innovation capability complementarity on the export venture performance.

**Table 5.13: Results of hierarchical regression test for moderating effect of management innovation capability**

Predictor variables	Model 1	Model 2	Model 3	Model 4
<i>Main effect</i>				
Exploitative MC X Exploratory MC	.18 (3.65*)			
Exploitative PIC X Exploratory PIC		.12 (4.94*)		
Exploitative MC X Exploitative PIC			.17 (2.55*)	
Exploratory MC X Exploratory PIC				.13 (2.61*)
Management innovation capability (MGT)	.17 (2.74*)	.06 (2.71*)	.42 (2.57*)	.08 (2.10*)
<i>Interaction effect</i>				
MGT X (Exploitative MC X Exploratory MC)	.29 (5.19*)			
MGT X (Exploitative PIC X Exploratory PIC)		.16 (2.17*)		
MGT X (Exploitative MC X Exploitative PIC)			.14 (2.75*)	
MGT X (Exploratory MC X Exploratory PIC)				.24 (3.24*)
$R^2$	.22	.06	.20	.09
$R^2$ change	.06	.02	.04	.06
F	13.29	4.69	7.54	10.50
F-value	4.01	4.51	4.72	3.68
Note: *Indicates meets or exceeds minimum acceptable levels				

## 5.6 Summary of hypotheses results

The result findings as presented in Section 5.5.1 indicated that all hypotheses in the primary model (Hypothesis 1 to Hypothesis 8) were supported, except for hypothesis 4a and Hypothesis 4b. Further, the result shown in Section 5.5.2 indicates that all hypotheses in the contingency model (Hypothesis 9 to Hypothesis 12) were supported. Table 5.14 presents summary of hypotheses results of primary and contingency model.

**Table 5.14: Summary of hypotheses results**

No.	Hypothesis	Result
H1a	Exploitative marketing capability is positively related to export venture performance in market performance.	Supported
H1b	Exploitative marketing capability is positively related to export venture performance in financial performance.	Supported
H2a	Exploratory marketing capability is positively related to export venture performance in market performance.	Supported
H2b	Exploratory marketing capability is positively related to export venture performance in financial performance.	Supported
H3a	Exploitative product innovation capability is positively related to export venture performance in market performance.	Supported
H3b	Exploitative product innovation capability is positively related to export venture performance in financial performance.	Supported
H4a	Exploratory product innovation capability is positively related to export venture performance in market performance.	Unsupported
H4b	Exploratory product innovation capability is positively related to export venture performance in financial performance.	Unsupported
H5a	The exploitative marketing capability and exploratory marketing capability complementarity is positively related to market performance.	Supported
H5b	The exploitative marketing capability and exploratory marketing capability complementarity is positively related to financial performance.	Supported
H6a	The exploitative product innovation capability and exploratory product innovation capability complementarity is positively related to market performance.	Supported
H6b	The exploitative product innovation capability and exploratory product innovation capability complementarity is positively related to financial performance.	Supported
H7a	The exploitative marketing capability and exploitative product innovation capability complementarity is positively related to export venture performance in market performance.	Supported
H7b	The exploitative marketing capability and exploitative product innovation capability complementarity is positively related to export venture performance in financial performance.	Supported

**Table 5.14: Summary of hypotheses results (Continued)**

No.	Hypothesis	Result
H8a	The exploratory marketing capability and exploratory product innovation capability complementarity is positively related to export venture performance in market performance.	Supported
H8b	The exploratory marketing capability and exploratory product innovation capability complementarity is positively related to export venture performance in financial performance.	Supported
H9a	Technological innovation capability moderates positively the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance.	Supported
H9b	Technological innovation capability moderates positively the relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance.	Supported
H10a	Technological innovation capability moderates positively the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance.	Supported
H10b	Technological innovation capability moderates positively the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance.	Supported
H11a	Management innovation capability moderates positively the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance.	Supported
H11b	Management innovation capability moderates positively the relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance.	Supported
H12a	Management innovation capability moderates positively the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance.	Supported
H12b	Management innovation capability moderates positively the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance.	Supported

## 5.7 Conclusion

This chapter presented the results from the examination of the collected data and the assessment of the precision and significance of the hypotheses proposed in Chapter Three. The data were obtained from 164 survey packages (including questionnaire A and B) from a cross-industry sample of exporting firms in Thailand via drop-and-collect technique. The profiles of the sample showed the basis of characteristics of firms and of respondents of the data. Then, the results of the preliminary analysis were reported showing descriptive statistics (i.e., mean, standard deviation, skewness, and kurtosis). Overall, all items demonstrated the normal distribution as evidenced by scores on skewness and kurtosis within the acceptable range of -2.00 and 2.00.



In addition, this chapter provided the results from the data analysis using partial least squares to investigate the proposed model. The adequacy, validity, and predictive relevance of the measurement models of the focal constructs were provided. The assessment of outer-measurement models revealed that all measurement items have acceptable loading, composite reliability, and bootstrapped t-value. In term of convergent validity, the results indicated that convergent validity of all constructs in this study was satisfactory as evidenced by the composite reliability (CR) value of all constructs was above the cut-off value of 0.70 and the average variance extracted (AVE) of all constructs was above the cut-off value of 0.50. In term of discriminant validity, the results showed that discriminant validity of all constructs in this study was satisfactory as evidenced by the correlation between two constructs was not higher than their respective composite reliability (CR). This chapter concluded by summarising the results of hypothesis testing which supported all the proposed hypotheses, with the exception of hypothesis 4. Based on the findings presented, this chapter provided fundamental findings for discussion and implication in Chapter Six.

# Chapter Six

## Discussions and Conclusions

---

### **6.1 Introduction**

The data analysis and findings presented in Chapter Five provide the foundation for the discussion and conclusions in this chapter. This chapter starts with a review of the research questions and hypotheses followed by discussions of the results and findings. The results are examined with respect to the theoretical model presented in Chapter Three and the Research Questions outlined in Chapter One. The implications for theory and practice are provided to highlight the important role of ambidextrous and complementary capabilities as key drivers of a firm's export performance. This chapter concludes with limitations and directions for future research.

### **6.2 Discussions of research questions and hypotheses**

The main purpose of this study is to advance the export literature by untangling the role of the export firms' capabilities in achieving export performance. To articulate the role of specific capabilities, attention was given to identifying the benefits of managing key capabilities ambidextrously and achieving complementarity between them in relation to export venture performance. More specifically, this study shows that complementarity and ambidexterity between marketing and product innovation capabilities contribute to export venture performance. While the significance of these two capabilities has been recognised in the export literature, limited attention has been given to them within the context of complementarity and ambidexterity and export performance. Further, this study also focused on the contingency (i.e., moderating) roles of technological innovation capability and management innovation capability in the relationships between marketing capability and product innovation capability complementarity and export venture performance. These constructs and

questions about their export performance implications were documented in four research questions in Chapter One (Section 1.3) and are also outlined below.

Research question 1 (a): To what extent do exploitative marketing capability and exploratory marketing capability influence export venture performance?

Research question 1 (b): To what extent do exploitative product innovation capability and exploratory product innovation capability influence export venture performance?

Research question 2 (a): To what extent does the complementarity between the exploitative marketing capability and exploratory marketing capability enhances export venture performance?

Research question 2 (b): To what extent does the complementarity between the exploitative product innovation capability and exploratory product innovation capability enhances export venture performance?

Research question 3 (a): To what extent does the complementarity between the exploitative marketing capability and exploitative product innovation capability enhances export venture performance?

Research question 3 (b): To what extent does the complementarity between the exploratory marketing capability and exploratory product innovation capability enhances export venture performance?

Research question 4 (a): To what extent does technological innovation capability enhances the relationship between exploitation - exploration of marketing capability complementarity and export venture performance?

Research question 4 (b): To what extent does technological innovation capability enhances the relationship between exploitation - exploration of product innovation capability complementarity and export venture performance?

Research question 4 (c): To what extent does technological innovation capability enhances the relationship between exploitation marketing - product innovation capability complementarity and export venture performance?

Research question 4 (d): To what extent does technological innovation capability enhances the relationship between exploration marketing - product innovation capability complementarity and export venture performance?

Research question 5 (a): To what extent does management innovation capability enhances the relationship between *exploitation - exploration of marketing capability complementarity* and export venture performance?

Research question 5 (b): To what extent does management innovation capability enhances the relationship between *exploitation - exploration of product innovation capability complementarity* and export venture performance?

Research question 5 (c): To what extent does management innovation capability enhances the relationship between *exploitation marketing - product innovation capabilities complementarity* and export venture performance?

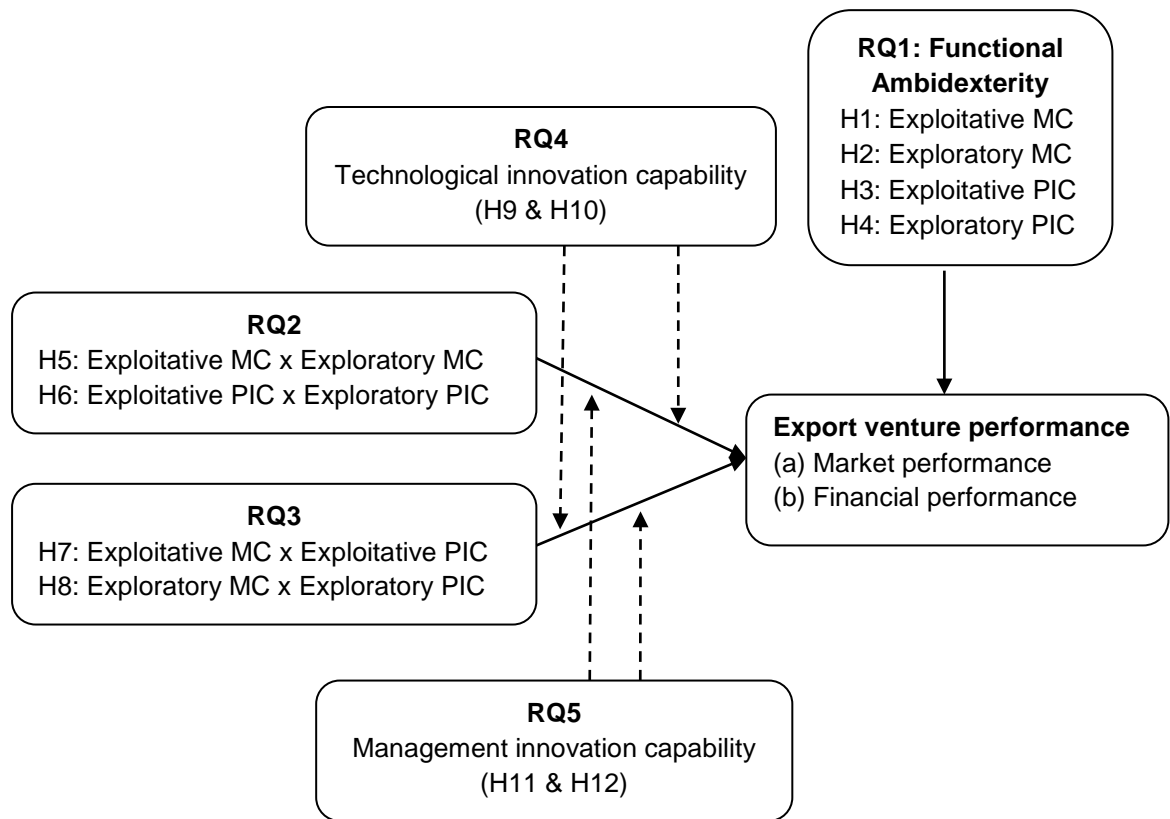
Research question 5 (d): To what extent does management innovation capability enhances the relationship *between exploration marketing - product innovation capabilities complementarity* and export venture performance?

These research questions are grounded in an extensive review of the literature in relation to dynamic capability theory, ambidexterity theory and complementarity theory presented in Chapter Two. In Chapter Three, two models (primary and contingency) were developed and integrated into a theoretical framework that addresses the research questions (see Figure 6.1). The primary model pertains to the extent to which marketing capability and product innovation capability when managed ambidexterously and complementarily influence export venture performance. To address research question 1, the model focused on the implementation of marketing and product innovation capability within the context of exploitation and exploration to enhance export performance. Specifically, four hypotheses (hypotheses 1 to 4) were developed in the first stage to examine the relationship between individual functional ambidexterity (exploitative and exploratory

marketing capability and product innovation capability) and export venture performance (see Figure 6.1). Hypotheses 1 to 4 documented the effects of 1) marketing capability exploitation, 2) marketing capability exploration, 3) product innovation capability exploitation, and 4) product innovation capability exploration, on export venture performance. To address research questions 2 and 3, the model focused on the extent to which complementarity between marketing and product innovation capabilities enhance export venture performance. Thus, the primary model was developed to address research questions 1, 2 and 3 and specifically related to hypotheses 1 to 6.

The contingency model pertains to the extent that the firm's technological innovation capability and management innovation capability moderates the relationship between marketing and product innovation capability within the context of ambidexterity and complementarity, and export venture performance. The contingency model addresses research questions 4 and 5. To address research question 4, the model focused on the role of technological innovation capability as a moderator of the relationship between marketing capability and product innovation capability within the context of ambidexterity and complementarity, and export venture performance. To address research question 5, the model focused on the role of management innovation capability as a moderator of the relationship between marketing capability and product innovation capability within the context of ambidexterity and complementarity, export venture performance. Thus, the contingency model was developed to address research question 4 and 5 and related specifically to hypotheses 9 to 12.

**Figure 6.1: Theoretical model of the study**



### 6.2.1 Discussion of the results related to research question one

Research question 1 examines the direct effects of four key functional capabilities (exploitation and exploration of both marketing capability and product innovation capability) on export venture performance. As mentioned in Section 6.2, hypotheses 1 to 4 were developed to examine individual relationship between 1) exploitative marketing capability, 2) exploratory marketing capability, 3) exploitative product innovation capability, and 4) exploratory product innovation capability and export venture performance. Accordingly, hypotheses 1 and 2 predicted that exploitative marketing capability and exploratory marketing capability are positively related to export market performance and also financial performance. Hypotheses 3 and 4 predicted that exploitative product innovation capability and exploratory product innovation capability are positively related to export market performance and also financial performance. As shown in Table 5.14 in Chapter Five, the empirical findings support the relationship between 1) exploitative marketing capability, 2) exploratory marketing capability and 3) exploitative product innovation capability, and export

venture performance. However, exploratory product capability was found not to influence firm financial and market performance in export markets. According to Lisboa, Skarmeas and Lages (2011), exploratory product capability focuses on R&D activities which mostly concerns long-run process. As such, exploratory product capability enables firms to enhance future export performance not current export performance.

This finding shows that exploitative marketing capability and exploratory marketing capability individually enable firms to deploy two important forms of marketing proficiency, and thus significantly enhance their export venture performance. The findings confirm the argument made in Chapter Three that exporting firms can effectively serve their markets by refining existing marketing activities and/or deploying new marketing practices which enhance export market performance and also financial performance. This finding is in line with other scholars who have looked at the relationship between marketing capability and firm performance (e.g., Boso, Cadogan & Story, 2012; Lisboa, Skarmeas & Lages, 2011; Murray, Gao & Kotabe, 2010).

Further, the findings also confirm that exporting firms can effectively serve their current markets better by deploying product improvement activities, which enhance export market performance and also financial performance. This finding is consistent with that of prior research examining the relationship between product innovation capability and firm performance (e.g., Ngo & O'Cass, 2012; O'Cass & Ngo, 2011; Yalcinkaya, Calantone & Griffith, 2007; Atuahene-Gima & Murray, 2007; Kyriakulos, Kyriakos & Moorman, 2004). Therefore, marketing capability within the context of ambidexterity and exploitative product innovation capability individually can drive export market performance and also export venture financial performance.

### **6.2.2 Discussion of the results related to research question two**

Research question 2 examines the extent to which the complementarities among marketing and product innovation capabilities enhance export venture performance. Accordingly, hypotheses 5a and 5b predicted that exploitative marketing capability and exploratory marketing capability complementarity is positively related to export market performance and also financial performance. As shown in Table 5.11 in Chapter Five, the empirical findings support H5a and H5b. This finding shows that

complementarity among exploitative and exploratory marketing routines enables firms to exchange marketing proficiency, thus significantly influence export venture performance. This finding is in line with that of other scholars who have looked at the relationship between marketing capability and firm performance (e.g., Murray, Gao & Kotabe, 2010; Morgan, Vorhies & Mason, 2009; Kyriakopoulos & Moorman, 2004). Thus, the results confirm the argument made in Chapter Three that exporting firms that are able to enhance their proficiency in exploitative and exploratory marketing activities on their complementary nature outperform others in achieving superiority in export performance. Hence, marketing capability within the context of ambidexterity can drive export market performance and also financial performance.

Hypotheses 6a and 6b predicted that the exploitative product innovation capability and exploratory product innovation capability complementarity is positively related to export market performance and also financial performance respectively. As shown in Table 5.11 in Chapter Five, the empirical findings support H6a and H6b. The finding shows that complementarity among exploitative and exploratory product development routines enables firms to enhance proficiency in product development activities, and significantly influence export venture performance. This finding is consistent with that of prior research examining the relationship between product innovation capability and firm performance (e.g., Ngo & O'Cass, 2012; O'Cass & Ngo, 2011; Yalcinkaya, Calantone & Griffith, 2007; Atuahene-Gima & Murray, 2007; Kyriakulos, Kyriakos & Moorman, 2004). Thus, the results confirm the argument made in Chapter Three that exporting firms that enhance their proficiency in product development activities on their complementary nature are more likely to achieve export venture performance. For this reason, ambidextrous product innovation capability can drive export market performance and also financial performance by performing exploitation and exploration of product innovation capability at the same time.

### **6.2.3 Discussion of the results related to research question three**

Research question 3 focused on the complementarity between marketing capability and product innovation capability. The argument being that if firms can deploy or manage these capabilities to achieve complementarity they will achieve stronger export performance. Accordingly, hypotheses 7a and 7b predicted that exploitative



marketing capability and exploitative product innovation capability complementarity is positively related to export market performance and also financial performance. As shown in Table 5.11 in Chapter Five, empirical findings support H7a and H7a. The finding shows that complementary among exploitative marketing and exploitative product development routines enables firms to exchange proficiency in marketing knowledge base and product development knowledge base on their complementary nature, which therefore leads to export success. The findings confirm the argument made in Chapter Three that exporting firms can effectively serve their markets by deploying product improvement and refining marketing activities together, which enhance export market performance and also financial performance.

Hypotheses 8a and 8b predicted that the exploratory marketing capability and exploratory product innovation capability complementarity is positively related to export market performance and also financial performance. As discussed in Section 3.3.4.1, complementary within these activities appear to facilitate and promote exploratory marketing routines and exploratory product development routines in mutual relationship, which these activities enable firms to exchange proficiency in marketing knowledge base and product development knowledge base on their complementary nature, which therefore leads to export venture performance. As shown in Table 5.11 in Chapter Five, the relationships between the exploratory marketing capability and exploratory product innovation capability complementarity and export venture performance is supported. Thus, the results confirm that exporting firms can effectively serve their current markets better by deploying new product development activities and new marketing activities together, which enhance export market performance and also financial performance.

#### **6.2.4 Discussion of the results related to research question four**

Research question 4 focused on the moderating role of technological innovation capability. This question addresses whether firms that deploy or manage technology innovation to enhance their capability, ambidexterity and complementarity relationships and achieve stronger export performance. The focus of research question 4 was on the implementation role of technological innovation capability as moderating effect on the relationship between ambidexterity and complementarity in marketing and product innovations, and export venture performance. As such, four

hypotheses (hypotheses 9a, 9b, 10a, and 10b) were developed to provide insights into this question and the relationship outline within them.

Hypotheses 9a and 9b, predicted that technological innovation capability moderates the relationship between the marketing capability and product innovation capability within the context of ambidexterity, and export venture performance. As discussed in Section 3.4.1, implementation of technological innovation capability in marketing capability and product innovation capability within the context of ambidexterity appear to facilitate firms to better bridge these activities, which leads to export venture performance.

Hypothesis 9a focused on the moderating role of technological innovation capability in relation to the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the moderating effect of technological innovation capability in relation to the relationships between the exploitative marketing capability and exploitative marketing capability complementarity and export venture performance is supported. Thus, the results confirm the argument made in Chapter Three that technological innovation capability moderates the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance.

As indicated in hypothesis 9b, the technological innovation capability mediates the positive relationship between the exploratory product innovation capability and exploratory product innovation capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the complementarity of marketing capability and moderating effect of technological innovation capability in relation to the relationships between the exploitative product innovation capability and exploitative product innovation capability complementarity and export venture performance is supported by the results of this study. Thus, the results confirm the argument made in Chapter Three that technological innovation capability moderates the relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance.

Hypotheses 10a and 10b, predicted that technological innovation capability moderates the relationship between marketing capability and product innovation capability within the context of complementarity, and export venture performance. As discussed in Section 3.4.1, implementation of technological innovation capability in marketing capability and product innovation capability within the context of complementarity appear to facilitate firms to better bridge these activities, which leads to export venture performance. Hypotheses 10a and 10b were developed to provide insights into the moderating effect of technological innovation capability on complementarity relationships. Hypothesis 10a focused on the moderating role of technological innovation capability in relation to the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the moderating effect of technological innovation capability in relation to the relationships between the exploitative marketing capability and exploitative product innovation capability complementarity and export venture performance is supported by the results of this study. Thus, the results confirms the argument made in Chapter Three that technological innovation capability moderates the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance.

Hypotheses 10b focused on the moderating role of technological innovation capability in relation to the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the moderating effect of technological innovation capability in relation to the relationships between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance is supported by the results of this study. Thus, the results confirms the argument made in Chapter Three that technological innovation capability moderates the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance.

In conclusion, as discussed in Section 3.4.1, technological innovation capability acts as an intervening mechanism in enhancing the integration of 1) marketing capability exploitation and exploration, 2) product innovation capability exploitation and

exploration which provide positive effect to the export outcomes, 3) exploitation of marketing capability and product innovation capability, and 4) exploration of marketing capability and product innovation capability, which provide positive effect to the export outcomes.

### **6.2.5 Discussion of the results related to research question five**

Research question 5 focused on the moderating role of management innovation capability. This question focused of whether firms that deploy or manage management innovation enhance capability ambidexterity and complementarity relationships and achieve stronger export performance. The focus of research question 5 was on the implementation role of management innovation capability as moderating effect on the relationship between ambidexterity and complementarity in marketing and product innovations, and export venture performance. As such, four hypotheses (hypotheses 11a, 11b, 12a, and 12b) were developed to provide insights into this question and the relationship outline within them.

Hypotheses 11a and 11b, predicted that management innovation capability moderates the relationship between the marketing capability and product innovation capability within the context of ambidexterity, and export venture performance. As discussed in Section 3.4.2, implementation of management innovation capability in marketing capability and product innovation capability within the context of ambidexterity appear to facilitate firms to better bridge these activities, which leads to export venture performance.

Hypothesis 11a focused on the moderating role of management innovation capability in relation to the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the moderating effect of management innovation capability in relation to the relationships between the exploitative marketing capability and exploitative marketing capability complementarity and export venture performance is supported. Thus, the results confirm the argument made in Chapter Three that management innovation capability moderates the relationship between the exploitative marketing capability and exploratory marketing capability complementarity, and export venture performance.

Hypothesis 11b focused on the moderating role of management innovation capability in relation to the relationship between the exploratory product innovation capability and exploratory product innovation capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the moderating effect of management innovation capability in relation to the relationships between the exploitative product innovation capability and exploitative product innovation capability complementarity and export venture performance is supported by the results of this study. Thus, the results confirm the argument made in Chapter Three that management innovation capability moderates the relationship between the exploitative product innovation capability and exploratory product innovation capability complementarity, and export venture performance.

Hypotheses 12a and 12b, predicted that management innovation capability moderates the relationship between marketing capability and product innovation capability within the context of complementarity, and export venture performance. As discussed in Section 3.4.2, implementation of management innovation capability in marketing capability and product innovation capability within the context of complementarity appear to facilitate firms to better bridge these activities, which leads to export venture performance. Hypotheses 12a and 12b were developed to provide insights into the moderating effect of management innovation capability on complementarity relationships. Hypothesis 12a focused on the moderating role of management innovation capability in relation to the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance. As shown in Table 5.12 in Chapter Five, the moderating effect of management innovation capability in relation to the relationships between the exploitative marketing capability and exploitative product innovation capability complementarity and export venture performance is supported by the results of this study. Thus, the results confirm the argument made in Chapter Three that management innovation capability moderates the relationship between the exploitative marketing capability and exploitative product innovation capability complementarity, and export venture performance.

Hypotheses 12b focused on the moderating role of management innovation capability in relation to the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture

performance. As shown in Table 5.12 in Chapter Five, the moderating effect of management innovation capability in relation to the relationships between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance is supported by the results of this study. Thus, the results confirm the argument made in Chapter Three that management innovation capability moderates the relationship between the exploratory marketing capability and exploratory product innovation capability complementarity, and export venture performance.

In conclusion, as discussed in Section 3.4.2 in Chapter Three, management innovation capability acts as an intervening mechanism in enhancing the integration of 1) marketing capability exploitation and exploration, 2) product innovation capability exploitation and exploration which provide positive effect to the export outcomes, 3) exploitation of marketing capability and product innovation capability, and 4) exploration of marketing capability and product innovation capability, which provide positive effect to the export outcomes.

### **6.3 Theoretical contributions**

Export performance is one of the most highly studied issues in the marketing literature. Firm capabilities are highlighted by many scholars as a means of gaining an advantage to achieve superior export performance (e.g., Hughes et al., 2010; Hortinha, Lages & Lages, 2011; Vorhies, Orr & Bush, 2010). In more recent times organisational ambidexterity and capability complementarity have risen to prominence as mechanism for explaining firm performance differentials. Ambidexterity theory is premised on the notion that by pursuing both the exploitation of existing capabilities and the exploration of new capabilities, firms can enhance their competitiveness and performance (e.g., Cao, Gedajlovic & Zhang, 2009; He & Wong, 2004; Atuahene-Gima & Murray, 2007; Jansen et al., 2012; Lubatkin et al., 2006; Sarkees, Hulland & Prescott, 2010). Complementarity theory explains the super additive values of capabilities when more of any one of capabilities enhances the returns to other capabilities (Milgrom & Roberts, 1995). For this reason, marketing capability and product innovation capability have received attention in complementarity in their contribution to firm's success (e.g., Atuahene-Gima & Wei, 2011; O'Cass & Ngo, 2011; O'Cass & Sok, 2012). However, little in the exporting

literature focuses on the role of ambidextrous capability and complementary capability in export venture performance, particularly in developing economies. As such, the purpose of this study is to advance the extant literature by examining the ambidexterity and complementarity roles of marketing capability and product innovation capability in achieving export business success. Drawing upon dynamic capability view, this study offers a new perspective regarding empirical investigations on ambidexterity and complementarity in the export domain. In particular, this study provides several important theoretical implications to the export literature, particularly those in developing economies.

First, despite a significant amount of research on the dynamic capability and firm performance, the extant literature has not been attempted to examine the role of dynamic capability in export context. Previous studies have focused on dynamic capabilities in different industry sectors (i.e., high technology industries, services, and multiple industries) (e.g., Danneels, 2008; Zahra et al., 2000; Rothaermel & Hess, 2007; Kale & Singh, 2007; Olson & Hult, 2006); however, most studies have focused on firms operating in domestic domains and in developed economies. While dynamic capability is perceived as a key firm success factor, the contribution of dynamic capability in exporting literature still remains unclear. As such, this study sought to focus on the role of dynamic capability and its impact on export performance. This study provides support for the central role that dynamic capability theory ascribes to export venture performance and highlights the importance of ambidexterity and complementary capabilities in export markets. These findings are similar to that of Morgan, Kaleka and Katsikeas (2004), in that capabilities appear to determine export venture positional advantages and performance in export markets. Specifically, this study shows that ambidexterity and complementary capabilities are perceived as a vital role of firm export success.

Second, this study contributes to the current literature which has paid less attention to marketing capability and product innovation capability in the context of ambidexterity in the export domain. Significantly, while previous research on ambidexterity has mainly emphasised in the context of developed countries and largely has focused on domestic firms, this study is among the first to examine ambidexterity and attempt to extend the understanding of the role of exploitative and exploratory capability in the areas of marketing and product innovation in improving

export venture performance. The results show that the complementarities between exploitative and exploratory capabilities pertaining to marketing and product innovation are drivers of export venture performance. Given these findings, the results appear to support the literature which generally argues that an essential level of complementary between marketing capability and product innovation capability is necessary for export venture performance (e.g., Moorman & Slotegraaf, 1999; Song, Hanvanich & Calantone, 2005; O'Cass & Ngo, 2011; O'Cass & Sok, 2012). The congruence from these literatures shows that the complementary between marketing capability and product innovation capability enhances the efficiency and effectiveness of an export venture performance. This will assist to address the present unresolved managerial concern focusing on how some firms are better than others at utilising their ambidextrous capability to drive export performance. Therefore, this study advances the extant literature by showing that exploitative and exploratory capability in marketing and product innovation can indeed benefit from pursuing these seemingly contradictory activities in export domain.

Third, this study contributes to the complementarity literature by highlighting the role of cross-function capability complementarity (i.e. marketing and product innovation) in improving export venture performance. While marketing capability and product innovation capability complementarity have received greater attention more recently, most work in this area is outside the export domain. The study extends the understanding of the complementary capability by showing the significant role of complementarity between marketing and product innovation in export context. Specifically, this study advances complementarity theory by suggesting two domains of complementary cross-functional area (i.e., marketing and product innovation capabilities) in export domain which generally shows that a requisite level of ambidexterity between exploitation and exploration capability is necessary for export venture performance (e.g., Hughes et al., 2010; Hortinha, Lages & Lages, 2011; Vorhies, Orr & Bush, 2010). The consensus from this literature shows that ambidexterity between exploitation capability and exploration capability increases the efficiency and effectiveness of an export venture performance.

Finally, turning to the moderation effect of technological innovation capability and management innovation capability, this study extends the understanding of these two process innovation activities in enhancing the ambidexterity and complementary



of marketing capability and product innovation capabilities as drivers of export business success. This study addresses the role of technological innovation capability and management innovation capability in increasing efficiency and effectiveness within the firm. Thus, firms enable to coordinate and control their collaboration within the firms through technology and management system. In this sense, technological innovation capability and management innovation capability play an important role in complementary ambidexterity as a firm internal driven to achieve export venture performance (Damanpour, Walker & Avellaneda, 2009; Birkinshaw, Hamel & Mol, 2008; Song et al., 2005; Bessant et al., 2005). This study offers a new perspective considering the moderation role of technological innovation capability and management innovation capability on the relationship between the complementary of exploitation and exploration of the marketing capability and product innovation capability, and export performance outcomes. Specifically, this study provides a deeper insight for the role of process innovation activities (technological innovation capability and management innovation capability) in supporting marketing and product innovation capabilities in both exploitation and exploration effectively.

Therefore, this study is among the first attempts to address the understanding of the extent that firms enable to exploit technological innovation capability and management innovation capability in enhancing their complementary activities (marketing capability and product innovation capability) more effectively, which contributes to their export venture performance. As such, the findings of this study echo the conceptualisation of process innovation activities (technological innovation capability and management innovation capability) in enhancing the ambidexterity and complementary of marketing capability and product innovation capability as drivers of export business success. Further, the findings of this study extend the theoretical contention of Damanpour, Walker and Avellaneda (2009), Birkinshaw, Hamel and Mol (2008), Song et al. (2005), Bessant et al. (2005) and others by showing that export firms in developing economies can enhance their complementary activities (marketing and product innovation), more effectively by ensuring they also have supporting process innovation activities (technological innovation capability and management innovation capability) in place.

## **6.4 Managerial implications**

This study provides a number of managerial implications related to marketing and new product development managers operating in export markets, especially in developing economies which share similar characteristics to Thailand such as Vietnam and Malaysia. First, firms are advised to realise the important role of ambidexterity in marketing capability and export venture performance. This study provides evidence that the exploitative and exploratory marketing capability complementarity can provide a basis for explaining the areas of influence that enable firms to achieve export performance objective. Firms can meet customers' current expressed needs in export market to enhance their export venture performance by focusing on improving and refining their current skills and procedures associated with existing marketing mix-based activities, marketing strategy development and execution (i.e., current market segments, pricing, channel management, marketing communication, marketing planning and implementation, and other marketing activities). In a similar way, firms that are able to create new value to satisfy customers' needs can achieve superior export venture performance by focusing on generating new skills associated with new marketing strategy development and execution (i.e., new segmentation, new positioning, new products, new channels and new marketing planning and implementation). In this way, implementing both exploitative marketing capability and exploratory marketing capability has a significant impact on enhancing export performance. As such, managers are advised to deploy the benefits of both exploitative marketing capability (i.e., improving the efficiency/effectiveness of current marketing communications processes) and exploratory marketing capability (i.e., establishing new distribution channel procedures) which positively impacts on export venture performance without making decision in selecting exploitative or exploratory capabilities in marketing. The evidence from this study suggests that in order to leverage export performance outcomes, an effort of complementing exploitation and exploration in marketing capability is required for firms in export market.

Having considered the role of ambidexterity in product innovation capability and export venture performance, the findings provide evidence that exploitative and exploratory product innovation capability complementarity can provide a basis for explaining the areas of influence that enable firms to achieve export performance

objective. This study suggests that these activities enhance export venture performance in a mutual relationship. Firms are able to explore new knowledge in new product discovery by having a deeper understanding in improving product development effort. In a similar way, firm enable to improve the economics of existing exploitative effort through successful exploration of a product development. As such, the adoption of distinct capability (exploitative and exploratory) in product development calls for a clear understanding of their effects. Therefore, managers are advised to deploy both exploitative product innovation capability and exploratory product innovation capability which positively impacts export venture performance.

In addition, this study suggests that implementing both marketing capability and product innovation capability complementarity has a significant impact on export venture performance. As such, firms can deploy the benefits of both exploitative capability and exploratory capability in marketing and product innovations which positively influence export venture performance. For example, firms could serve their existing markets better by offering new product improvement (i.e., packaging design) and develop better product to match customer requirement by using existing marketing research to achieve better results through complementary capability of marketing and product innovation. In addition, firms could develop new products that provide new value required for new marketing activities (i.e., new distribution channel) to enter markets or seek to segment new market to develop new products that serve new target market. In a similar way, frequent product development forces marketing to develop greater technical competencies through emphasising on them during the new product launch. For this reason, firms enable to meet their customers' needs in export market efficiently through extending product ranges, improving existing product quality which results in enhancing their export venture performance. As a result, firms can deploy the benefits of complementary capability in marketing and product innovation, which positively influence export venture performance without making decision in focusing on single activity. This indicates that managers are advised to focus on marketing and product innovation activities in the way that complement one another, which contribute to enhancing export venture performance.

Another practical implication of the study is that it inspires firms to pay attention to applying new technology (i.e., information technology systems) and new

management approaches (i.e., quality management, re-engineering) to improve efficiency and effectiveness of the firm operating systems. These activities function as internal drivers that enable firms to perform marketing capability and product innovation capability complementarity better in export market. This indicates that technological innovation capability and management innovation capability play a crucial role in the relationship between ambidexterity and complementarity in marketing and product innovation, and export venture performance. As a result, managers are advised to address these activities as they are necessary for complementary processes, which contribute to superior export venture performance of firms. For example, when firms launch new product to respond to a market need in export market, technology related systems (i.e., operation and delivery of the products enable firms to support and facilitate the implementation of the product innovation and to enhance their contributions.

Finally, this study offers implications for policy makers or government agencies in assisting export firms to pay greater attention to the role of marketing and R&D activities. For example, policy makers or government agencies may provide training and policy to reinforce or/and improve such activities of export firms to enhance their export venture performance.

## **6.5 Limitations and directions for future research**

This study provides several contributions to the export literature and managerial practices in exporting firms; however, the study has specific limitations which should be considered in light for future research. First, this study focuses on the four specific constructs (marketing capability, product innovation capability, technological innovation capability and management innovation capability) at functional level of the firms. These two key constructs of this study (marketing capability and product innovation capability) are considered as the mean of strategy implementation. Thus, further research may consider the role of market orientation as the corporate level strategy in implementing the export performance indicators in this study (i.e., complementary capability between exploitative capability and exploratory capability in marketing and product innovation).

Second, this study applies a cross-sectional research design to investigate the role of firm capability differences in export venture performance. As such, it could be

argued that firm resource differences might explain the effect of exploitative capability and exploratory capability in marketing and product innovation. Therefore, further research in exporting may take the role of firms' resources into consideration. Likewise, there may be industries where explorative capability is a more common strategy, such as high technology based industry (i.e., biomedical, electronics, and telecommunication). In these industries, the content of explorative and exploratory capability may be different and the complementarity of marketing capability and product innovation capability may also be different.

Third, this study is limited in using subjective and objective measures of export venture performance (i.e., financial and non-financial measurement) to test the proposed theory. As such, given the narrow perspective adapted to measure, future research may consider a more comprehensive measurement approach that tap a wider array of performance measurement within the firms that capture all the possible components of what exploitative capability and exploratory capability in marketing and product innovation might be. Moreover, further research may focus on how exploitative capability and exploratory capability in marketing and product innovation affect export performance in long run (i.e., five years). For example, exploratory capability in marketing and product innovation is likely to impact firm efficiency in long-term cost as it involves experimenting with and inventing new approaches. In this sense, longitudinal or time-series research designs that will provide additional causal evidence and make it easier to control for the effect of unobservable may assist researcher in evaluating role of exploratory capability in export venture performance more accurately.

Fourth, this study pays attention to following methodological guidelines in locating appropriate informants to ensure that key informant knowledge ability by following methodological guidelines in locating appropriate informants to ensure that key informant knowledge ability. However, the potential still exists for key informant bias in obtaining data. Thus, further research may utilise multi-informant primary data collection (i.e., importers) or secondary data-based research designs to ensure better understanding of the outcomes of export success.

Finally, this study utilised Structural Equation Modeling (SEM) as the data analysis technique which sample size plays a critical role in the estimation and interpretation

of SEM results (Hair, Anderson, Tatham & Black, 1998; Rönkkö & Evermann, 2013). As mentioned in section 4.3.5.4, a commonly used judgment for sample size for SEM was approximately 200 to 300 respondents. However, the sample size of the study is 164 which is classified as a small sample size. Therefore, further research may collect data from a larger number of firms to avoid problems associated with the effect of sampling error amplification and an inappropriate use of the t-test for parameter significance (Rönkkö & Evermann, 2013).

## **6.6 Conclusions**

The purpose of this study is to investigate export venture performance outcomes from ambidextrous capability and complementary capability in marketing and product innovations. In addition, the moderating role of technological innovation capability and management innovation capability on the relationship between ambidextrous capability and complementary capability and export venture performance is also highlighted. This chapter discussed the research questions and hypotheses and the findings in relation to the theoretical model. Then, theoretical and managerial implications of the study were provided to address the importance of ambidextrous capability and complementary capability theory in the functional areas of marketing and product innovations. This study also indicates the role of technological innovation capability as well as management innovation capability in enhancing ambidextrous capability and complementary capability deployment. Overall, this study responds to the call for greater attention on the role of marketing and product innovation capabilities as key drivers of a firm's export performance. Importantly, this study couched its underlying theory of the influence of marketing and product innovation within the context of capability ambidexterity and complementary capability theory.

# Appendices

## Information Sheet

---

ATTN to: \_\_\_\_\_

You are invited to participate in a study focusing on issues associated with the development and marketing of new products. This study is part of a PhD being conducted by Wannee Trongpanich and supervised by Professor Aron O'Cass and Associate Professor Martin Grimmer of the School of Management at the University of Tasmania. By completing and returning the survey, you will be helping me to complete the research component of my PhD thesis.

Further, the results of this study have the possibility to assist those firms which participate and to improve their strategic and operational effectiveness and business development practices. A summary of the results of the study will be offered to the participants. By obtaining a report that will be made available to you if you participate you may benefit from this research by gaining in knowledge, insight and understanding of the antecedences of new product success.

You have been considered as eligible to participate in this study because your firm has developed and launched a new product in an export market in the last two years (2009-2010). By accepting to receive the survey package (including this information sheet and survey) and completing the survey, your consent to participate in this study will be assumed to have been given. If you decide to participate in this study, you will be asked to do the following things:

1. Read and complete the attached survey identified as **Survey A**. This survey will be collected from you at a later date and time (within the next week) convenient to you. An appointment will be made with you to collect the survey.
2. In **Survey A**, you will be asked to choose one new product that your firm has launched and sells in at least one export market in the previous two years (2009-2010) (please see question **A1** in **Survey A**).
3. In relation to the export market, you will be asked to identify the brand name and export market-country name for this product, and the most senior managerial position responsible for the product in the export market (please see question **A2** in **Survey A**).
4. Please ensure that you seek agreement from the managers in the nominated positions to participate as a condition of this study's consent agreement.

It is important that you understand that your involvement in this study is voluntary. While we would be pleased to have you participate, we respect your right to decline. There will be no consequences to you if you decide not to participate. If you decide to discontinue participation at any time, you may do

so without providing any explanation. In this study, it will not be possible to identify participants as no individuals' names need to be written on the surveys. There are no specific risks anticipated with participation in this study.

All returned surveys will be stored in a locked filing cabinet in the locked office of Professor Aron O'Cass, Chief Investigator, in the Commerce and Economics building on the Sandy Bay campus of the University of Tasmania. The surveys will subsequently be destroyed (shredded) after a period of five years. No firm names will ever be published and no firm names will be stored as part of this study. Further, your firm will be contacted to see if you would like to receive a summary of the study. You are welcome to contact us at any time to discuss any issues relating to the research.

**Now if you agree to participate please follow the instructions below.**

1. NOW, read and complete the attached survey identified as **Survey A**.
2. NOW, nominate a senior manager (e.g. senior marketing manager, senior product manager, or senior sales manager) whose position is the most responsible and who has the most knowledge regarding your firm's activities related to the development and marketing of the selected product in question **A2** (for the specific export market) in **Survey A**.
3. NOW, go to **Survey B**, and write the same information that you wrote when answering question **A2** at B1 and B2. NOW, please send **Survey B** to the selected manager you wrote in **Survey A** at question A3 and **Survey B** at B2. An appointment will be made to collect this survey from the assigned manager for **Survey B**.

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study please contact to the Executive Officer of the HREC (Tasmania) Network on +61 3 6226 7479 or email [human.ethics@utas.edu.au](mailto:human.ethics@utas.edu.au). The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote reference number H11666.

**Thank you for taking the time to participate in this study.**

**This information sheet is for you to keep.**

**Professor Aron O'Cass**  
Professor in Marketing  
Management, Faculty of Business  
The University of Tasmania  
Tel: +61 3 6226 7432  
[Aron.OCass@utas.edu.au](mailto:Aron.OCass@utas.edu.au)

**Associate Professor  
Martin Grimmer**  
School of Management  
The University of Tasmania  
Tel: +61 3 6226 2824  
[Martin.grimmer@utas.edu.au](mailto:Martin.grimmer@utas.edu.au)

**Wannee Trongpanich**  
Candidate for PhD  
School of Management,  
The University of Tasmania,  
Tel: +61 3 6226 7119  
[wanneet@utas.edu.au](mailto:wanneet@utas.edu.au)

**IMPORTANT NOTE**

By completion and submission of the survey package including the information sheet and the survey, you will be assumed that your consent to participate in this study.





## Faculty of Business School of Management

# Questionnaire A

### New Product Development and Marketing Study

---

We realise you are very busy, but ask for about 20-25 minutes of your time. Please do not rush, as your experience and knowledge are very important and your accurate responses ensure your time is well served. Your responses are completely anonymous and confidential. We guarantee your responses cannot be identified.

Read and complete the attached survey identified as **Survey A**. This survey will be collected from you at a later date and time convenient to you within the next week.

The following statements refer to specific information about your firm. Please fill in your answers below.

A1 – Please identify one product that your firm has launched within the last two years (2009-2010) that is sold in both the Thai domestic market and at least one export market.

Product name: \_\_\_\_\_

Now think about this product and identify the most important/largest export market it is sold in.

A2 – In this export market, what is the brand name of this product?

Brand Name: \_\_\_\_\_

Export Market-Country Name: \_\_\_\_\_

What is the most Senior Managerial position responsible for this product/brand in this export market (please provide the position title and not the name of the person): \_\_\_\_\_

**NOW go to survey B and complete questions B1 and B2 and send the survey to the nominated manager.**

**NOW complete the remainder of your survey, Survey A**

The following statements refer to general information about your firm. Please circle and/or write in your answers below.

A3 – Our firm predominantly serves

[ 1 ] Other Firms [ 2 ] End Consumers or [ 3 ] Both Equally

A4 – Our firm is totally Thai owned [ 1 ] Yes or [ 2 ] No

A5 – How many full-time employees does your firm have \_\_\_\_\_.

A6 – How long has your business been operating for \_\_\_\_\_ years.

Please circle the appropriate number below.

		Not At All				Very Much So		
GQ1	I am knowledgeable about my firms' business operations, strategies, characteristic, business processes, performance, and business environment (competitors, regulations, and the like).	1	2	3	4	5	6	7

## Firm Operational Activities

The following statements relate to activities your firm may have undertaken for this product in the firm market over the period 2008 to 2010 (past 3 years). Please circle the number in each statement that best reflects your views.

For this product, in this export market, our firm:		Strongly Disagree				Strongly Agree		
MGT1	...developed and implemented new <b>management practices</b> (e.g., acquiring and applying new knowledge).	1	2	3	4	5	6	7
TECH1	...used new information technology systems for <b>new product development projects</b> .	1	2	3	4	5	6	7
MGT2	...developed and implemented <b>new approaches to product planning and budgeting</b> (e.g., coordinating activities for new product development project).	1	2	3	4	5	6	7
TECH2	...used new information technology systems for <b>facilitating the creation of knowledge about technology</b> .	1	2	3	4	5	6	7
MGT3	...developed and implemented <b>new approaches to management improvement</b> (e.g., via quality management, re-engineering).	1	2	3	4	5	6	7
TECH3	...used new information technology systems for <b>facilitating market knowledge creation</b> .	1	2	3	4	5	6	7
MGT4	...developed and implemented <b>new approaches to management processes</b> (e.g. new job description, establishing new teams).	1	2	3	4	5	6	7
TECH4	...used new information technology systems for <b>external communication</b> (e.g., suppliers, customers, channel members, etc.).	1	2	3	4	5	6	7

## General Questions

---

Please complete the following by circling the appropriate response or writing in the answer required.

GQ2 – My designated title is: \_\_\_\_\_

GQ3 – My education background is:

[ 1 ] High School [ 2 ] Undergraduate degree [ 3 ] Graduate degree [ 4 ] Others \_\_\_\_\_

Please circle the appropriate number below.

		Not At All				Very Much So		
GQ4	I am confident I had the necessary knowledge to complete the statements asked throughout the questionnaire.	1	2	3	4	5	6	7

**THANK YOU FOR YOUR PARTICIPATION**



## Faculty of Business School of Management

# Questionnaire B

### New Product Development and Marketing Study in Export Market

---

We realise you are very busy, but ask for about 20-25 minutes of your time. Please do not rush, as your experience and knowledge are very important and your accurate responses ensure your time is well served. Your responses are completely anonymous and confidential. We guarantee your responses cannot be identified.

You have been identified by your senior manager (who sent you this survey) as the manager most responsible (i.e., knowledgeable) for the product mentioned below in the export market mentioned below.

Read and complete the attached survey identified as **Survey B**. This survey will be collected from you at a later date and time convenient to you within the next week.

CEO OR SENIOR MANAGER TO COMPLETE QUESTIONS B1 AND B2

B1 – Please write the name of the product that you wrote for question **A1** in your **SURVEY A** below.

Product name: \_\_\_\_\_

B2 – Please write the name of the brand you wrote at question **A2** and the export market you wrote at **A2** in your **SURVEY A** below

Brand Name: \_\_\_\_\_ Export Market Country Name: \_\_\_\_\_

What is the most Senior Managerial position responsible for this product/brand in this export market (please provide the position title and not the name of the person): \_\_\_\_\_

**Please circle the appropriate number below.**

		Not At All				Very Much So		
GQ1	I am knowledgeable about my firms' business operations, strategies, characteristic, business processes, performance, and business environment (competitors, regulations, and the like).	1	2	3	4	5	6	7

## Firm Marketing Activities

The following statements relate to *your firm's marketing activities for the above named product/brand in the identified export market relative to the established objective for this product since its launch.* Please circle the number in each statement that best reflects your views.

For this product, in this export market, our firm:		Strongly Disagree							Strongly Agree
EXIMC1	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>pricing systems and processes</b> for the product.	1	2	3	4	5	6	7	
EXRMC1	...established new pricing systems and procedures (i.e., pricing approaches, pricing strategy, etc.) for the product.	1	2	3	4	5	6	7	
EXIMC2	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>distribution channels</b> for the product.	1	2	3	4	5	6	7	
EXRMC 2	...established new distribution channel procedures for the product.	1	2	3	4	5	6	7	
EXIMC3	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>marketing communications processes</b> (e.g., advertising program, public relations system, promotion program and sales promotion program) for the product.	1	2	3	4	5	6	7	
EXRMC 3	...established new marketing communication processes (e.g., advertising program, public relations system, promotion program and sales promotion program) for the product.	1	2	3	4	5	6	7	
EXIMC4	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>marketing research procedures</b> for the product.	1	2	3	4	5	6	7	
EXRMC4	...established new marketing research procedures (i.e., new market research; information gathering techniques; approaches or methods) for the product.	1	2	3	4	5	6	7	
EXIMC5	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>selling systems</b> (i.e., procedures or methods) for the product.	1	2	3	4	5	6	7	

For this product, in this export market, our firm:		Strongly Disagree					Strongly Agree	
EXRMC 5	...established new selling system(s) (i.e., approaches, procedures or methods) for the product.	1	2	3	4	5	6	7
EXIMC6	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>customer relationships management</b> (i.e., management of customer relations, relationship building) for the product.	1	2	3	4	5	6	7
EXRMC6	...established new customer relationships management methods (i.e., management of customer relations, relationship building) for the product.	1	2	3	4	5	6	7
EXIMC7	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>marketing strategy</b> (e.g., allocation of resources, monitored performance and planning).	1	2	3	4	5	6	7
EXRMC7	...established new marketing strategies (e.g., allocated appropriate resources, monitored the performance and planning) for the product.	1	2	3	4	5	6	7
EXIMC8	...improved the efficiency/effectiveness of our current (i.e., well established, historical) <b>market segmentation approaches</b> for the product.	1	2	3	4	5	6	7
EXRMC8	...established new <b>market segmentation approaches</b> (i.e., segmenting by customer type, structuring market or positioning the product in its own segment criteria) for the product.	1	2	3	4	5	6	7

## Firm Product Development Activities

The following statements relate to *your firm's activities for the above named product/brand in the identified export market relative to the established objective for this product since its launch.* Please circle the number in each statement that best reflects your views.

For this product, in this export market, our firm:		Strongly Disagree							Strongly Agree
EXIPIC1	... improved the efficiency/effectiveness of our current <b>product development skills and processes</b> for the product.	1	2	3	4	5	6	7	
EXRPIC1	...establishing entirely new <b>product development skills and processes</b> for our products.	1	2	3	4	5	6	7	
EXIPIC2	... improved the efficiency/effectiveness of our current <b>skills for staff who undertake R&amp;D</b> (i.e., staffing R&D, training and development of R&D and engineering personnel) for the product.	1	2	3	4	5	6	7	
EXRPIC2	...establishing entirely new <b>skills for staff who undertake R&amp;D</b> (i.e., staffing R&D, training and development of R&D and engineering personnel) for our products.	1	2	3	4	5	6	7	
EXIPIC3	... improved the efficiency/effectiveness of our current <b>R&amp;D approaches</b> for the product development.	1	2	3	4	5	6	7	
EXRPIC3	...establishing entirely new <b>R&amp;D product development approaches</b> for our products.	1	2	3	4	5	6	7	

## Export Venture Performance

The following statements relate to this product achieving certain outcomes during the previous 2 years (2009-2010) in this export market. Please circle the number in each statement that best reflects your views.

For this product, in this export market:		Strongly Disagree					Strongly Agree	
MP1	Market share objectives were met.	1	2	3	4	5	6	7
MP2	Major customer retention objectives were met.	1	2	3	4	5	6	7
MP3	Customer satisfaction objectives were met.	1	2	3	4	5	6	7
FP1	Profit margin objectives were met.	1	2	3	4	5	6	7
FP2	Return on sales objectives were met.	1	2	3	4	5	6	7
FP3	ROI/IRR goals were met.	1	2	3	4	5	6	7

## General Questions

Please complete the following by circling the appropriate response or writing in the answer required.

GQ2 – My designated title is: \_\_\_\_\_

GQ3 – My education background is:

[ 1 ] High School [ 2 ] Undergraduate degree [ 3 ] Graduate degree [ 4 ] Others \_\_\_\_\_

Please circle the appropriate number below.

		Not At All					Very Much So	
GQ4	I am confident I had the necessary knowledge to complete the statements asked throughout the questionnaire.	1	2	3	4	5	6	7

**THANK YOU FOR YOUR PARTICIPATION**



# References

---

- Aaby, N-E. & Slater, S. F. 1989. Management influences on export performance: a review of the empirical literature 1978-1988. ***International Marketing Review***, 6 (4): 7-26.
- Aaker, D. A., Kumar, V., Day, G. S. & Leone, R. 2010. ***Marketing research***, NJ: John Wiley.
- Adams, R., Bessant, J. & Phelps, R. 2006. Innovation management measurement: a review. ***International Journal of Management Reviews***, 8(1): 21-47.
- Akgun, A. E., Keskin, H. & Byrne, J. C. 2010. Procedural justice climate in new product development teams: antecedents and consequences. ***Journal of Product Innovation Management***, 27(7): 1096-1111.
- Albaum, G. 1997. The Lidert scale revisited: an alternate version. ***Journal of the Market Research Society***, 39(2): 331-348.
- Albaum, G. & Tse, D. K. 2001. Adaptation of international marketing strategy components, competitive advantage, and firm performance: a study of Hong Kong exporters. ***Journal of International Marketing***, 9(4): 59-81.
- Allred, C. R., Fawcett, S. E., Wallin, C. & Magnan, G. M. 2011. A dynamic collaboration capability as a source of competitive advantage. ***Decision Sciences***, 42(1): 129-161.
- Alreck, P.L. & Settle, R. B. 1995. ***The survey research handbook: Guidelines and strategies for conducting a survey***, New York: McGraw-Hill.
- Ambrosini, V. & Bowman, C. 2009. What are dynamic capabilities and are they a useful construct in strategic management? ***International Journal of Management Reviews***, 11(1): 29-49.
- Anderson, D. R., Sweeney, D. J. & Williams, T. A. 2010. ***Essentials of statistics for business & economics***. Mason: Cengage Learning.
- Atuahene-Gima, K. 1995. An exploratory analysis of the impact of market orientation on new product performance. ***Journal of Product Innovation Management***, 12(4): 275-293.
- Atuahene-Gima, K. 2005. Resolving the capability-rigidity paradox in new product innovation. ***Journal of Marketing***, 69(4): 61-83.

- Atuahene-Gima, K. & Ko, A. 2001. An empirical investigation of the effect of market orientation and entrepreneurship orientation alignment on product innovation. **Organization Science**, 12(1/2): 54-74.
- Atuahene-Gima, K. & Wei, Y. 2011. The vital role of problem-solving competence in new product success. **Journal of Product Innovation Management**, 28: 81–98.
- Baker, M. J. 2001. Selecting a research methodology. **Marketing Review**, 1(3): 373-397.
- Baker, W. E. & Sinkula, J. M. 2005. Market orientation and the new product paradox. **Journal of Product Innovation Management**, 22(6): 483-502.
- Balabanis, G. & Diamantopoulos, A. 2004 Domestic country bias, country-of-origin effects, and consumer ethnocentrism: a multidimensional unfolding approach. **Journal of the Academy of Marketing Science**, 32(1): 80-95.
- Barreto, I. 2010. Dynamic capabilities: a review of past research and an agenda for the future. **Journal of Management**, 36(1): 256-280.
- Barney, J. 1991. Firm Resources and Sustained Competitive Advantage. **Journal of Management**, 17(1): 99-120.
- Baruch, Y. & Holtom, B. C. 2008. Survey response rate levels and trends in organizational research. **Human Relations**, 61(8): 1139-1160.
- Benner, M. J. & Tushman, M. L. 2002. Process management and technological innovation: a longitudinal study of the photography and paint industries. **Administrative Science Quarterly**, 47(4): 676-706.
- Benner, M. J. & Tushman, M. L. 2003. Exploitation, exploration, and process management: the productivity dilemma revisited. **The Academy of Management Review**, 28(2): 238-256.
- Berthon, P., Hulbert, J. M. & Pitt, L. 2004. Innovation or customer orientation? an empirical investigation. **European Journal of Marketing**, 38 (9/10): 1065-1090.
- Berthon, P., Hulbert, J. M. & Pitt, L. F. 1999. To serve or create? strategic orientations toward customers and innovation. **California Management Review**, 42 (1): 37-58.
- Bessant, J., Lamming, R., Noke, H. & Philips, W. 2005. Managing innovation beyond the steady state. **Technovation**, 25(12): 1366–1376.
- Birkinshaw, J. & Gibson, C. B. 2004. Building an ambidextrous organisation. **MIT Sloan Management Review**, 45(4): 47-55.

- Birkinshaw, J., Hamel, G. & Mol, M. J. 2008. Management innovation. ***Academy of Management Review***, 33 (4): 825-845.
- Blesa, A. & Ripolles, M. 2008. The influence of marketing capabilities on economic international performance. ***International Marketing Review***, 25 (6): 651-673.
- Blindenbach-Driessen, F., Van Dalen, J. & Van Den Ende, J. 2010. Subjective performance assessment of innovation projects. ***Journal of Product Innovation Management***, 27(4): 572–592.
- Bollen, K. A. 1989. ***Structural equations with latent variables***, New York: Wiley.
- Boomsma, A. 1982. ***The Robustness of LISREL Against small sample sizes in factor analysis models***. In Systems under indirect observation: Causality, structure, prediction, Jöreskog, K. G. & Wold, H. O. A. New York: Elsevier Science Publishers.
- Boso, N., Cadogan, J. W. & Story, V. M. 2012. Complementary effect of entrepreneurial and market orientations on export new product success under differing levels of competitive intensity and financial capital. ***International Business Review***, 21(4): 667–681.
- Brace, I. 2008. ***Questionnaire design: How to plan, structure and write survey material for effective market research***, London: Kogan Page.
- Brettel, M., Heinemann, F., Engelen, A. & Neubauer, S. 2011. Cross-functional integration of R&D, marketing, and manufacturing in radical and incremental product innovations and its effects on project effectiveness and efficiency. ***Journal of Product Innovation Management***, 28(2): 251–269.
- Brown, S. 1987. Drop and collect surveys: a neglected research technique? ***Marketing Intelligence and Planning***, 5 (1): 19-23.
- Brown, S. L., Eisenhardt, K. M. 1997. The art of continuous change: linking complexity theory and time-paced evolution in relentlessly shifting organizations. ***Administrative Science Quarterly***. 42(1): 1-34.
- Bryman, A. 1988. ***Quantity and quality in social research***, London: Unwin Hyman.
- Burgelman, R. A., Grove, A. S. 2007. Let chaos reign, then reign in chaos repeatedly: managing strategic dynamics for corporate longevity. ***Strategic Management Journal***, 28: 965–979.
- Burns, A. C. & Bush, R. F. 2006. ***Marketing research***, Upper Saddle Reiver, NJ: Prentice Hall.
- Cadogan, J. W., Kuivalainen, O. & Sundqvist, S. 2009. Export market-oriented behaviour and export performance: quadratic and moderating effects under differing degrees of market dynamism and internationalization. ***Journal of International Marketing***, 17(4): 71-89.

- Cadogan, J. W., Sundqvist, S., Salminen, R. T. & Puumalainen, K. 2002. Market-oriented behaviour comparing service with product exporters. ***European Journal of Marketing***, 36(9): 1076-1102.
- Calantone, R. & Rubera, G. 2012. When should RD&E and marketing collaborate? the moderating role of exploration–exploitation and environmental uncertainty. ***Journal of Product Innovation Management***, 29(1): 144-157.
- Campbell, E. 1995. The informant in quantitative research. ***American Journal of Sociology***, 60 (1): 339-342.
- Cao, Q., Gedajlovic, E. & Zhang, H. 2009. Unpacking organizational ambidexterity: dimensions, contingencies, and synergistic effects. ***Organization Science***, 20(4): 781-796.
- Capon, N., Farley, J.U. & Hoenig, S. 1990. Determinants of financial performance: a meta-analysis. ***Management Science***, 36(10): 1143-1159.
- Cassel, C., Hackl, P., & Westlund, A. H. 1999. Robustness of partial least-squares method for estimating latent variable quality structures. ***Journal of Applied Statistics***, 26(4): 435-446.
- Cassiman, B., Golovko, E. & Martínez-Ros, E. 2010. Innovation, exports and productivity. ***International Journal of Industrial Organization***, 28(4): 372-376.
- Cavusgil, S. T. & Zou, S. 1994. Marketing strategy-performance relationship: an investigation of the empirical link in export market ventures. ***Journal of Marketing***, 58 (1): 1-21.
- Cepeda, G. & Vera, D. 2007. Dynamic capabilities and operational capabilities: a knowledge management perspective. ***Journal of Business Research***, 60(5): 426–437.
- Chandy, R. K. & Tellis, G. J. 2000. The incumbent's curse? incumbency, size, and radical product innovation. ***Journal of Marketing***, 64(3): 1-17.
- Chandrashekar, M., Mehta, R., Chandrashekar, R. & Grewal, R. 1999. Market motives, distinctive capabilities, and domestic inertia: A hybrid model of innovation generation. ***Journal of Marketing Research***, 36(1): 95-112.
- Chin, W. W. 1998. Commentary: issues and opinion on structural equation modeling. ***MIS Quarterly***, 22(1): vii-xvi.
- Chin, W. W., Marcolin, B. L. & Newsted, P. R. 2003. A partial least squares latent variable modeling approach for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/adoption Study, ***Information Systems Research***, 14(2): 189-217.

- Christensen, C. 1997. ***The innovator's dilemma***, Boston: Harvard Business School Press.
- Christensen, C. M. & Overdorf, M. 2000. Meeting the challenge of disruptive change. ***Harvard Business Review***, 78(2): 66-76.
- Churchill, G. A. 1999. ***Marketing research: Methodological foundations***, Fort Worth: Dryden Press.
- Churchill, G. A. & Iacobucci, D. 2005. ***Marketing research: Methodological foundations***, Mason, Ohio: Thomson/South-Western
- Clark, L. A. & Watson, D. 1995. Constructing validity: basic issues in objective scale development. ***Psychological Assessment***, 7(3): 309-319.
- Collis, D. J. & Montgomery, C. A. 2008. Competing on resource. ***Harvard Business Review***, 86(8): 118-128.
- Cohen, J., Cohen, P., West, S. G. S., & Aiken, L. 2003. ***Applied multiple regression/correlation analysis for the behavioral sciences***, Hillsdale, NJ: Lawrence Erlbaum Associates.
- Crespi, I. 1961. Use of a scaling technique in surveys. ***Journal of Marketing***, 25(5): 69-72.
- Daft, R. L. 1978. A dual-core model of organizational innovation. ***Academy of Management Journal***, 21(2): 193-210.
- Damanpour, F. & Gopalakrishnan, S. 2001. The dynamics of the adoption of product and process innovations in organizations. ***Journal of Management Studies***, 38(1): 45-65.
- Damanpour, F. 1991. Organizational innovation: a meta-analysis of effects of determinants and moderators. ***Academy of Management Journal***, 34(3): 555-590.
- Damanpour, F. 2010. An integration of research findings of effects of firm size and market competition on product and process innovations. ***British Journal of Management***, 21(4): 996–1010.
- Damanpour, F. & Aravind, D. 2011. Managerial innovation: conceptions, processes, and antecedents. ***Management and Organization Review***, 8 (2): 423-454.
- Damanpour, F., Walker, R. M. & Avellaneda, C. N. 2009. Combinative effects of innovation types and organizational performance: a longitudinal study of service organizations. ***Journal of Management Studies***, 46 (4): 650-675.
- Danneels, E. 2002. The dynamics of product innovation and firm competences. ***Strategic Management Journal***, 23(12): 1095-1121.

- Danneels, E. 2007. The process of technological competence leveraging. ***Strategic Management Journal***, 28(5): 511-533.
- Danneels, E. 2008. Organizational antecedents of second-order competences. ***Strategic Management Journal***, 29(5): 519-543.
- Danneels, E. & Kleinschmidt, E. J. 2001. Product innovativeness from the firm's perspective: its dimensions and their relation with project selection and performance. ***Journal of Product Innovation Management***, 18(6): 357-373.
- Day, G. S. 1994. The capabilities of market-driven organizations. ***The Journal of Marketing***, 58 (4): 37-52.
- Day, G. S. & Wensley, R. 1988. Assessing advantage: a framework for diagnosing competitive superiority. ***Journal of Marketing***, 52(2): 1-20.
- De Loecker, J. 2007. Do exports generate higher productivity?: evidence from Slovenia. ***Journal of International Economics***, 73 (1): 69-98.
- De Luca, L. M. & Atuahene-Gima, K. 2007. Market knowledge dimensions and cross-functional collaboration: examining the different routes to product innovation performance. ***Journal of Marketing***, 71(1): 95-112.
- De Luca, L. M., Verona, G. & Vicari, S. 2010. Market orientation and R&D effectiveness in high-technology firms: an empirical investigation in the biotechnology industry. ***Journal of Product Innovation Management***, 27(3): 299-320.
- DeSarbo, W., Benedetto, A. D., Song, M. & Sinha, I. J. 2005. extending the miles and snow strategic framework: strategic types, capabilities, environmental uncertainty, and firm performance. ***Strategic Management Journal***, 26(1): 47-74
- Deshpandé, R., Farley, J. U. & Webster, F. E. 1993. Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis. ***Journal of Marketing***, 57(1): 23-37.
- DeVellis, R. F. 1991. ***Scale development: Theory and applications***, Newbury Park, Calif.: Sage.
- Dhanaraj, C. & Beamish, P. W. 2003. A resource-based approach to the study of export performance. ***Journal of Small Business Management***, 41(3): 242-261.
- Diamantopoulos, A. & Kakkos, N. 2007. Managerial assessments of export performance: conceptual framework and empirical illustration, ***Journal of International Marketing***, 15(3): 1-31.

- Diamantopoulos, A., & Winklhofer, H. M. 2001. Index construction with formative indicators: an alternative to scale development. ***Journal of Marketing Research***, 38(2): 269–277.
- Dibb, S., Farhangmehr, M., & Simkin, L., 2001. The marketing planning experience: a UK and Portuguese comparison. ***Marketing Intelligence & Planning***, 19(6): 409-417.
- Dillman, D. A. 2007. ***Mail and Internet surveys: The tailored design method***, Hoboken, N.J.: Wiley.
- Dougherty, D. 1992. A practice-centered model of organizational renewal through product innovation. ***Strategic Management Journal***, 13 (Special Issue): 77-92.
- Drucker F. P. 1974. ***Management Tasks, Responsibilities, Practices***, New York: Harper & Row Publishers.
- Dutta, S., Narasimhan, O. & Rajiv, S. 1999. Success in high-technology markets: is marketing capability critical? ***Marketing Science***, 18(4): 547-568.
- Dutta, S., Zbaracki, M. J. & Bergen, M. 2003. Pricing process as a capability: a resource-based perspective. ***Strategic Management Journal***, 24(7): 615–630.
- Easterby-Smith, M. & Prieto, I. M. 2008. Dynamic capabilities and knowledge management: an integrative role for learning? ***British Journal of Management***, 19(3): 235-249.
- Eisenhardt, K. M. & Martin, J. A. 2000. Dynamic capabilities: what are they? ***Strategic Management Journal***, 21(10): 1105-1121.
- Ellis, P. D. 2006. Market Orientation and Performance: A meta-analysis and cross-national comparisons. ***Journal of Management Studies***, 43 (5): 1089-1107.
- Eng, T-Y. & Spickett-Jones, J. G. 2009. An investigation of marketing capabilities and upgrading performance of manufacturers in mainland China and Hong Kong. ***Journal of World Business***, 44(4): 463-475.
- Ettlie, J. E. 1983. Organizational policy and innovation among suppliers to the food processing sector. ***Academic Management Journal***, 26(1): 27-44.
- Falk, R. F. & Miller, N. B. 1992. ***A primer for soft modeling***, Akron, Ohio: University of Akron Press.
- Foddy, W. H. 1993. ***Constructing questions for interviews and questionnaires: Theory and practice in social research***, Cambridge, UK: Cambridge University Press.

- Fornell, C. G., & Bookstein, F. L. 1982. Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. ***Journal of Marketing Research***, 19(4): 440–452.
- Fornell, C., & Cha, J. 1994. Partial least squares. In Bagozzi, R. P. (ed.). ***Advanced methods of marketing research***, Oxford: Blackwell.
- Fornell, C. G., & Larcker, D. F. 1981. Evaluating structural equation models with unobservable variables and measurement error. ***Journal of Marketing Research***, 18(1): 39–50.
- Gaski, J. F., & Nevin, J. R. 1985. The differential effects of exercised and unexercised power sources in a marketing channel. ***Journal of marketing research***, 22(2): 130-142.
- Gatignon, H. & Xuereb, J. M. 1997. Strategic orientation of the firm and new product performance. ***Journal of Marketing Research***, 34(1): 77-90.
- Gibson, C. B. & Birkinshaw, J. 2004. The antecedents, consequences, and mediating role of organizational ambidexterity. ***The Academy of Management Journal***, 47(2): 209-226.
- Grant, R. M. 1991. The resource-based theory of competitive advantage: implications for strategy formulation. ***California Management Review***, 33(3): 114-135.
- Greve, H. R. 2007. Exploration and exploitation in product innovation. ***Industrial and Corporate Change***, 16(5): 945-975.
- Griffith, D.A., Cavusgil, S. T. & Xu, S. 2008. Emerging themes in international business research. ***Journal of International Business Studies***, 39 (7): 1220-1235.
- Guan, J. & Ma, N. 2003. Innovative capability and export performance of Chinese firms. ***Technovation***, 23(9): 737-747.
- Gupta, A. K., Smith, K. G. & Shalley, C. E. 2006. The interplay between exploration and exploitation. ***Academy of Management Journal***, 49(4): 693-706.
- Hardesty, D. M. & Bearden, W. O. 2004. The use of expert judges in scale development implications for improving face validity of measures of unobservable constructs. ***Journal of Business Research***, 57(2): 98-107.
- Hair, J. F., Anderson, R. E., Tatham, R. L. & Black, W. C. 1998. ***Multivariate data analysis***, Upper Saddle River, N.J.: Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. 2006. ***Multivariate Data Analysis***, Upper Saddle River: Pearson Prentice Hall.



- Hair, J. F., Bush, R. P. & Ortinau, D. J. 2006. ***Marketing research: Within a changing information environment***, Boston, Mass.: McGraw-Hill/Irwin.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. 2011. PLS-SEM: indeed a silver bullet. ***Journal of Marketing Theory and Practice***, 19(2): 139–151.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. 2012. An assessment of the use of partial least squares structural equation modeling in marketing research. ***Journal of the Academy of Marketing Science***, 40(3): 414-433.
- Hamel, G. & Prahalad, C. K. 1994. Competing for the future. ***Harvard Business Review***, 72 (4): 122-128.
- Hamel, G. & Prahalad, C. K. 1991. Corporate imagination and expeditionary marketing. ***Harvard Business Review***, 69(4): 30-45.
- Hamel, G. 2006. The why, what, and how of management innovation. ***Harvard Business Review***, 84(2): 72-84.
- Hammersley, M. & Atkinson, P. 1983. ***Ethnography: Principles in practice***. New York: Routledge.
- Han, J. K., Kim, N. & Srivastava, R. K. 1998. Market orientation and organizational performance: is innovation a missing link? ***Journal of Marketing***, 62(4): 30-45.
- He, Z. L. & Wong, P. K. 2004. Exploration vs. exploitation: an empirical test of the ambidexterity hypothesis. ***Organization Science***, 15(4): 481-494.
- Heide, J. B. & Weiss, A. M. 1995. Vendor consideration and switching behaviour for buyers in high-technology markets. ***Journal of Marketing***, 59 (7): 30-43.
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J. & Winter, S. G. 2007. ***Dynamic capabilities: understanding strategic change in organizations***, MA: Wiley-Blackwell.
- Helfat, C. E. & Winter, S. G. 2011. Untangling dynamic and operational capabilities: strategy for the (n)ever-changing world. ***Strategic Management Journal***, 1250(6): 1243-1250.
- Henderson, R. M. & Clark, K. B. 1990. Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms. ***Administrative Science Quarterly***, 35(1): 9-30.
- Henderson, R. M. & Cockburn, I. 1994. Measuring competence? exploring firm effects in pharmaceutical research. ***Strategic Management Journal***, 15 63–84.

- Henseler, J., Ringle, C. M., & Sinkovics, R. R. 2009. The use of partial least squares path modeling in international marketing. ***Advances in international marketing***, 20(1): 277-319.
- Hofstede, G. 1980. ***Culture's consequences: international differences in work-related values***, Beverly Hills, CA: Sage Publication.
- Hooley, G., Fahy, J., Cox, T., Beracs, J., Fonfara, K. & Snoj, B. 1999. Marketing capabilities and firm performance: a hierarchical model. ***Journal of Market-Focused Management***, 4(3): 259-278.
- Hooley, G., Greenley, G. E., Cadogan, J. W. & Fahy, J. 2005. The performance impact of marketing resources. ***Journal of Business Research***, 58(1): 18-27.
- Hulland, J. 1999. Use of partial least squares (PLS) in strategic management research: a review of four recent studies. ***Strategic Management Journal***, 20(2): 195-204.
- Hulland, J., Todiño, H. S. & Lecraw, D. J. 1996. Country-of-origin effects on sellers' price premiums in competitive Philippine markets. ***Journal of International Marketing***, 4(1): 57-79.
- Hult, G. T. M. & Ketchen, D. J. 2001. Does market orientation matter?: a test of the relationship between positional advantage and performance. ***Strategic Management Journal***, 22(9): 899-906.
- Hult, G. T. M., Ketchen, D. J. & Slater, S. F. 2005. Market orientation and performance: an integration of disparate approaches. ***Strategic Management Journal***, 26(12): 1173-1181.
- Hultman, M., Robson, M. J. & Katsikeas, C. S. 2009. Export product strategy fit and performance: an empirical investigation. ***Journal of International Marketing***, 17 (4): 1-23.
- Hurley, R. F. & Hult, G. T. M. 1998. Innovation, market orientation, and organizational learning: an integration and empirical examination. ***Journal of Marketing***, 62(3): 42-54.
- Li, T. 1999. The impact of the marketing-R&D interface on new product export performance: a contingency analysis. ***Journal of International Marketing***, 7(1): 10-33.
- Ibeh, K. & Brock, J. K-U. 2004. Conducting survey research among organizational populations in developing countries: can the drop and collect technique make a difference? ***International Journal of Market Research***, 46(3): 375-383.
- Ibeh, K., Brock, J. K-U. & Zhou, Y. J. 2004. The drop and collect survey among industrial populations: theory and empirical evidence. ***Industrial Marketing Management***, 33 (2): 155-165.

- Jansen, J. J. P., Van Den Bosch, F. A. J. & Volberda, H. W. 2005. Exploratory innovation, exploitative innovation, and ambidexterity: the impact of environmental and organizational antecedents. ***Schmalenbach Business Review***, 57 (4): 351-363.
- Jansen, J. J. P., Van Den Bosch, F. A. J. & Volberda, H. W. 2006. Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators. ***Management Science***, 52(11): iv-iv.
- Jap, S. D. 1999. Pie-Expansion Efforts: Collaboration processes in buyer-supplier relationships. ***Journal of Marketing Research***, 36(4): 461-475.
- Jaworski, B. J. & Kohli, A. K. 1993. Market orientation: antecedents and consequences. *Journal of Marketing*, 57(3): 53-70.
- Jaworski, B., Kohli, A. & Sahay, A. 2000. Market-driven versus driving markets. ***Journal of the Academy of Marketing Science***, 28(1): 45-54.
- Jonker, J. & Pennink, B. 2010. ***The essence of research methodology: A concise guide for master and PhD students in management science***, Heidelberg: Springer Verlag.
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. 2003. A critical review of construct indicators and measurement model misspecification in marketing and consumer research. ***Journal of consumer research***, 30(2): 199-218.
- Joshi, A. W. & Sharma, S. 2004. Customer knowledge development: antecedents and impact on new product performance. ***Journal of Marketing***, 68(4): 47-59.
- Julian, C. C. & O'Cass, A. 2002. Drivers and outcomes of export marketing performance in a developing country context. ***Journal of Asia Pacific Marketing***, 1(2): 1-21.
- Kafouros, M. I., Buckley, P.J., Sharp, J. A. & Wang, C. 2008. The role of internationalization in explaining innovation performance. ***Technovation*** 28: 63–74.
- Kaleka, A. 2011. When exporting manufacturers compete on the basis of service: resources and marketing capabilities driving service advantage and performance. ***Journal of International Marketing***, 19(1): 40-58.
- Kamakura, W. A., Ramón-Jerónimo, M. A. & Vecino Gravel, J. D. 2012. A dynamic perspective to the internationalization of small-medium enterprises. ***Journal of the Academy of Marketing Science***, 40 (2): 236-251.
- Katila, R. & Ahuja, G. 2002. Something old, something new: a longitudinal study of search behavior and new product introduction. ***Academy of Management Journal***, 45(6): 1183-1194.

- Katsikeas, C. S., Leonidou, C. L. & Morgan, N. A. 2000. Firm-level export performance assessment: Review, evaluation, and development. ***Journal of the Academy of Marketing Science***, 28 (4): 493-511.
- Katsikeas, C. S., Samiee, S. & Theodosiou, M. 2006. Strategy fit and performance consequences of international marketing standardization. ***Strategic Management Journal***, 27(9): 867-890.
- Keskin, H. 2006. Market orientation, learning orientation, and innovation capabilities in SMEs: an extended model. ***European Journal of Innovation Management***, 9(4): 396-417.
- Kim, N. & Atuahene-Gima, K. 2010. Using exploratory and exploitative market learning for new product development. ***Journal of Product Innovation Management***, 27: 519–536.
- Kimberly, J. R. & Evanisko, M. J. 1981. Organizational innovation: the influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. ***The Academy of Management Journal***, 24(4): 689-713.
- Kinnear, T. C. & Taylor, J. R. 1991. ***Marketing research: An applied approach***, McGraw-Hill, New York, NY.
- Kirca, A. H., Jayachandra, S. Y. & Bearden, W. 2005. Market orientation: a meta-analytic review and assessment of antecedents and its impact on performance. ***Journal of Marketing***, 69(2): 24-41.
- Knight, K. E. 1967. A descriptive model of the intra-firm innovation process. ***The Journal of Business***, 40(4): 478-496.
- Kohli, A. K. & Jaworski, B. J. 1990. Market orientation: the construct, research propositions, and managerial implications. ***Journal of Marketing***, 54(2): 1-18.
- Kolb, B. M. 2008. ***Marketing research: A practical approach***, Los Angeles: SAGE.
- Kotabe, M., Srinivasan, S.S. & Aulakh, P.S. 2002. Multinationality and firm performance: the moderating role of R&D and marketing capabilities. ***Journal of International Business Studies***, 33(1): 79-97.
- Krasnikov, A. & Jayachandran, S. 2008. The relative impact of marketing, research-and-development, and operations capabilities on firm performance. *Journal of Marketing*: Vol. 72, No. 4, pp. 1-11.
- Kumar, N., Stern, L. W. & Anderson, J. C. 1993. Conducting interorganizational research using key informants. ***Academy of Management Journal***, 36(6): 1633-1651.

- Kyriakopoulos, K. & Moorman, C. 2004. Tradeoffs in marketing exploitation and exploration strategies: the overlooked role of market orientation. ***International Journal of Research in Marketing***, 21(3): 219-240.
- Lages, L. F., Jap, S. D. & Griffith, D. A. 2007. The role of past performance in export ventures: a short-term reactive approach. ***Journal of International Business Studies***, 39(2): 304-325.
- Lages, L. F. & Lages, C. R. 2004. The STEP scale: a measure of short-term export performance improvement. ***Journal of International Marketing***, 12(1): 36-56.
- Lages, L. F., Silva, G. & Styles, C. 2009. Relationship capabilities, quality, and innovation as determinants of export performance. ***Journal of International Marketing***, 17(4):47-70.
- Langerak, F., Hultink, E. J. & Robben, H. S. J. 2004. The impact of market orientation, product advantage, and launch proficiency on new product performance and organizational performance. ***Journal of Product Innovation Management***, 21(2): 79-94.
- Langerak, F., Griffin, A. & Hultink, E. J. 2010. Balancing development costs and sales to optimize the development time of product line additions. ***Journal of Product Innovation Management***, 27(3): 336–348.
- Lau, A. K. W., Tang, E. & Yam, R. C. M. 2010. Effects of supplier and customer integration on product innovation and performance: empirical evidence in Hong Kong manufacturers. ***Journal of Product Innovation Management***, 27(5): 761–777.
- Leonard-Barton, D. 1992. Core capabilities and core rigidities: a paradox in managing new product development. ***Strategic Management Journal***, 13(S1): 111-125.
- Leonidou, L. C. & Katsikeas, C. S. 1996. The export development process: an integrative review of empirical models. ***Journal of International Business Studies***, 27 (3): 517–51.
- Leonidou, L. C. & Katsikeas, C. S. 2010. Integrative assessment of exporting research articles in business journals during the period 1960–2007. ***Journal of Business Research***, 63(8): 879-887.
- Leonidou, L.C., Katsikeas, C.S. & Coudounaris, D.N. 2010. Five decades of business research into exporting: a bibliographic analysis. ***Journal of International Management***, 16(1): 78–91.
- Leonidou, L. C., Katsikeas, C. S., Paliawadana, D. & Spyropoulou, S. 2007. An analytical review of the factors stimulating smaller firms to export: implications for policy-makers. ***International Marketing Review***, 24(6): 735–770.

- Levinthal, D. A. & March, J. G. 1993. The myopia of learning. ***Strategic Management Journal***, 14 (Special Issue): 95-112.
- Li, Y., Vanhaverbeke, W. & Schoenmakers, W. 2008. Exploration and exploitation in innovation: reframing the interpretation. ***Creativity and Innovation Management***, 17(2): 107-126.
- Lin, X. & Germain, R. 1998. Sustaining satisfactory joint venture relationships: the role of conflict resolution strategy. ***Journal of International Business Studies***, 29(1): 179-196.
- Lisboa, A., Skarmeas, D. & Lages, C. 2011. Innovative capabilities: their drivers and effects on current and future performance. ***Journal of Business Research***, 64(11): 1157–1161.
- Lohmoeller, J. B. 1989. ***Latent variable path modeling with partial least squares***, New York: Springer-Verlag.
- Lu, Y., Zhou, L., Bruton, G. & Li, W. 2010. Capabilities as a mediator linking resources and the international performance of entrepreneurial firms in an emerging economy. ***Journal of International Business Studies***, 41(3): 419-436.
- Luo, Y. 2002. Capability exploitation and building in a foreign market: implications for multinational enterprises. ***Organization Science***, 13(1): 48-63.
- Madsen, T. K. 1989. Successful export marketing management: some empirical evidence. ***International Marketing Review***, 6(44): 41-57.
- Makadok, R. 2001. Toward a synthesis of the resource-based and dynamic-capability views of rent creation. ***Strategic Management Journal***, 22(5): 387-401.
- Malhotra, N. K. 2006. ***Review of marketing research Vol. 2***, Armonk, N.Y.: M.E. Sharpe.
- Malhotra, N. K. & Birks, D. F. 2007. ***Marketing research: An applied approach***, Harlow: Prentice Hall/Financial Times.
- March, J. G. 1991. Exploration and exploitation in organizational learning. ***Organization Science***, 2(1): 71-87.
- Marín, G. & Marín, B. V. 1991. ***Research with Hispanic populations***, Newbury Park: Sage Publications.
- Marinova, D. 2004. Actualizing innovation effort: the impact of market knowledge diffusion in a dynamic system of competition. ***Journal of Marketing***, 68(3): 1-20.

- Martinez-Ros, E. 2000. Explaining the decisions to carry out product and process innovations: the Spanish case. ***Journal of High Technology Management Research***, 10(2): 223-242.
- Mason, C. H. & Perreault, W. D. 1991. Collinearity, power, and interpretation of multiple regression analysis. ***Journal of Marketing Research***, 28(3): 268-280.
- McGorry, S. Y. 2000. Measurement in a cross-cultural environment: survey translation issues. ***Qualitative Market Research: An International Journal***, 3(2): 74 – 81.
- McKee, D. O., Varadarajan, P. R. & Pride, W. M. 1989. Strategic adaptability and firm performance: a market-contingent perspective. ***Journal of Marketing***, 53(3): 21-35.
- Meeus, M. T. H. & Edquist, C. 2006. Introduction to part I: product and process innovation. In Hage, J. & Meeus, M. (Eds), ***Innovation, Science, and Institutional Change***. Oxford: Oxford University Press, 23–37.
- Menguc, B. & Auh, S. 2008. The asymmetric moderating role of market orientation on the ambidexterity-firm performance relationship for prospectors and defenders. ***Industrial Marketing Management***, 37 (4): 455-470.
- Menguc, B. & Auh, S. 2006. Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness. ***Journal of the Academy of Marketing Science***, 34 (1): 63-73.
- Meyer, K. & Lieb-Dóczy, E. 2003. Post-acquisition restructuring as evolutionary process. ***Journal of Management Studies***, 40(2): 459-482.
- Meyers, L. S., Gamst, G., & Guarino, A. J. 2005. ***Applied multivariate research: Design and interpretation***. Thousand Oaks: Sage Publications.
- Milgrom, P. & Roberts, J. 1990. The economics of modern manufacturing: technology, strategy, and organization. ***The American Economic Review***, 80(3): 511-528.
- Milgrom, P. & Roberts, J. 1995. Complementarities and fit strategy, structure, and organizational change in manufacturing. ***Journal of Accounting and Economics***, 19(2-3): 179-208.
- Mol, M. J. & Birkinshaw, J. 2009. The sources of management innovation: when firms introduce new management practices. ***Journal of Business Research***, 62(12): 1269–1280.
- Mooi, E. A. & Sarstedt, M. 2011. ***A concise guide to market research: The process, data, and methods using IBM SPSS statistics***, Heidelberg: Springer, Cop.

- Moorman, C. & Slotegraaf, R. J. 1999. The contingency value of complementary capabilities in product development. **Journal of Marketing Research**, 36(2): 239-257.
- Morgan, N. A., Zou, S, Vorhies, D. W. & Katsikeas, C. S. 2003. Experiential and informational knowledge, architectural marketing capabilities, and the adaptive performance of export ventures. **Decision Sciences**, 34(2): 287–321.
- Morgan, N. A., Kaleka, A. & Katsikeas, C. S. 2004. Antecedents of export venture performance: a theoretical model and empirical assessment. **The Journal of Marketing**, 68 (1): 90-108.
- Morgan, N. A., Katsikeas, C. S. & Vorhies, D. W. 2012. Export marketing strategy implementation, export marketing capabilities, and export venture performance. **Journal of the Academy of Marketing Science**, 40 (2): 271-289.
- Morgan, N. A., Slotegraaf, R. J. & Vorhies, D. W. 2009. Linking marketing capabilities with profit growth. **International Journal of Research in Marketing**, 26 (4): 284-293.
- Morgan, N. A., Zou, S., Vorhies, D. W. & Katsikeas, C. S. 2003. Experiential and informational knowledge, architectural marketing capabilities, and the adaptive performance of export ventures: a cross-national study. **Decision Sciences**, 34(2): 287–321.
- Morgan, N. A., Vorhies, D. W. & Mason, C. H. 2009. Market orientation, marketing capabilities, and firm performance. *Strategic Management Journal*, 30(8): 909–920.
- Morgan, N. A., Vorhies, D. W. & Schlegelmilch, B. B. 2006. Resource–performance relationships in industrial export ventures: the role of resource inimitability and substitutability. **Industrial Marketing Management**, 35(5): 621–633.
- Morgan, N. A., Slotegraaf, R. J. & Vorhies, D. W. 2009. Linking marketing capabilities with profit growth. **International Journal of Research in Marketing**, 26(4):284-293.
- Mueller, V., Rosenbusch, N. & Bausch, A. 2013. Success patterns of exploratory and exploitative innovation: a meta-analysis of the influence of institutional factors. **Journal of Management**, 39 (6): 1606-1636.
- Murray, J. Y., Gao, G.Y. & Kotabe, M. 2011. Market orientation and performance of export ventures: the process through marketing capabilities and competitive advantages. **Journal of the Academy of Marketing Science**, 39(2): 252-269.



- Nadler, D. A. & Tushman, M. L. 1980. A model for diagnosing organizational behavior. ***Organizational Dynamics***, 9(2): 35-51.
- Narver, J. C. & Slater, S. F. 1990. The effect of a market orientation on business profitability. ***Journal of Marketing***, 54(4): 20-35.
- Narver, J. C., Slater, S. F. & MacLachlan, D. L. 2004. Responsive and proactive market orientation and new-product success. ***Journal of Product Innovation Management***, 21(5): 334-347.
- Netemeyer, R. G., Burton, S. & Lichtenstein, D. R. 1995. Trait aspects of vanity: measurement and relevance to consumer behavior. ***Journal of Consumer Research***, 21(4): 612-626.
- Neuman, W. L. 2006. ***Social research methods: qualitative and quantitative approaches***, Boston: Pearson/AandB
- Ngo, L. V. & O'Cass, A. 2009. Creating value offerings via operant resource-based capabilities. ***Industrial Marketing Management***, 38(1): 45-59.
- Ngo, L. V. & O'Cass, A. 2012. In search of innovation and customer-related performance superiority: the role of market orientation, marketing capability, and innovation capability interactions. ***Journal of Product Innovation Management***, 29(5): 861-877.
- Noble, C. H., Sinha, R. K. & Kumar, A. 2002. Market orientation and alternative strategic orientations: a longitudinal assessment of performance implications. ***The Journal of Marketing***, 66 (4): 25-39.
- Nunnally, J. C. & Bernstein, I. H. 1994. ***Psychometric theory***, New York: McGraw-Hill.
- Obermiller, C. & Spangenberg, E. R. 1998. Development of a scale to measure consumer skepticism toward advertising. ***Journal of Consumer Psychology***, 7(2): 159-186.
- O'Cass, A. 2001. Political marketing: an investigation of the political marketing concept and political market orientation in Australian politics. ***European Journal of Marketing***, 35(9/10): 1003-1025.
- O'Cass, A. 2002. Political advertising believability and information source value during elections. ***Journal of Advertising***, 31(1): 63-74.
- O'Cass, A. & Julian, C. 2003. Examining firm and environmental influences on export marketing mix strategy and export performance of Australian exporters. ***European Journal of Marketing***, 37(3): 366-384.
- O'Cass, A. & Pecotich, A. 2005. The dynamics of voter behaviour and influence processes in electoral markets: A consumer behaviour perspective. ***Journal of Business Research***, 58(4): 406-413.

- O'Cass, A., & Ngo, L. V. 2007. Market orientation versus innovative culture: two routes to superior brand performance. *European Journal of Marketing*, 41(7/8): 868-887.
- O'Cass, A. & Ngo, L. V. 2011. Winning through innovation and marketing: Lessons from Australia and Vietnam. *Industrial Marketing Management*, 40(8): 1319-1329.
- O'Cass, A. & Sok, P. 2012. Examining the role of within functional area resource–capability complementarity in achieving customer and product-based performance outcomes. *Journal of Strategic Marketing*, 20(4): 345-363.
- Oliveira, J. S., Cadogan, J. W. & Souchon, A. 2012. Level of analysis in export performance research. *International Marketing Review*, 29(1): 114-127.
- O'Reilly, C. A. & Tushman, M. L. 2004. The ambidextrous organization. *Harvard Business Review*, 82(4): 74-81.
- O'Reilly, C. A. & Tushman, M. L. 2008. Ambidexterity as a dynamic capability: resolving the innovator's dilemma. *Research in Organizational Behavior*, 28: 185-206.
- Paap, J. & Katz, R. 2004. Anticipating disruptive innovation. *Research Technology Management*, 47(5): 13-22.
- Park, H. M. 2008. *Univariate analysis and normality test using SAS, STATA and SPSS*. Working Paper. The University Information Technology Services (UITS), Statistical and Mathematical Computing, Indiana University.
- Pavlou, P. A. & El Sawy, O. A. 2011. Understanding the elusive black box of dynamic capabilities. *Decision Sciences*, 42(1): 239–273.
- Payne, G., Dingwall, R., Payne, J. & Carter, M. 1981. *Sociology and social research*, London: Routledge & Kegan Paul.
- Pelham, A. M. 1997. Mediating influences on the relationship between market orientation and profitability in small industrial firms. *Journal of Marketing Theory and Practice*, 5(3): 55-76.
- Perry, C. 1998. A structured approach to presenting theses: notes for students and their supervisor. *Australasian Marketing Journal*, 6 (1): 63-86.
- Perry, C., Riege, A. & Brown, L. 1999. Realism's role among scientific paradigms in marketing research. *Irish Marketing Review*, 12(2): 16-23.
- Pinsonneault, A. & Kraemer, K. 1993. Survey research in management information systems: an assesement. *Journal of Management Information System*, 10(2): 75-105.

- Prasertsakul, D. 2013. The role of dynamic capabilities in export performance of firms from emerging economies. *International Business Research*, 6 (8):102-112.
- Proctor, T. 2005. *Essentials of marketing research*, New York: Financial Times/Prentice Hall.
- Porter, M. E. 1980. *Competitive strategy*. New York: Free Press.
- Porter, M. E. 1990. *The competitive advantage of nations*. New York: Free Press.
- Prahalad, C. K. & Hamel, G. 1990. The core competence of the corporation. *Harvard Business Review*, 68(3): 79-91.
- Presser, S., Couper, M. P., Lessler, J. T., Martin, E., Martin, J., Rothgeb, J. M. & Singer, E. 2004. Methods for testing and evaluating survey questions. *Public Opinion Quarterly*, 68(1): 109-130.
- Raisch, S. & Birkinshaw, J. 2008. Organizational ambidexterity: antecedents, outcomes, and moderators. *Journal of Management*, 34(3): 375-409.
- Reinartz, W., Haenlein, M., & Henseler, J. 2009. An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*, 26(4): 332-344.
- Rogers, M. 2004. Networks, firm size and innovation. *Small Business Economics* 22: 141–53.
- Rönkkö, M. & Evermann, J. 2013. A critical examination of common beliefs about partial least squares path modeling. *Organizational Research Methods*, 16 (3): 425-448.
- Rundh, B. 2007. International marketing behaviour amongst exporting firms. *European Journal of Marketing*, 41(1): 181-198.
- Sarantakos, S. 2005. *Social research*, New York: Palgrave Macmillan.
- Sarkees, M., Hulland, J. & Prescott, J. 2010. Ambidextrous organizations and firm performance: the role of marketing function implementation. *Journal of Strategic Marketing*, 18(2), 165-184.
- Schreyögg, G. & Kliesch-Eberl, M. 2007. How dynamic can organizational capabilities be? towards a dual-process model of capability dynamization. *Strategic Management Journal*, 28(9): 913-933.
- Shoham, A. 1998. Export performance: a conceptualization and empirical assessment. *Journal of International Marketing*, 6(3): 59-81.

- Siggelkow, N. & Levinthal, D. A. 2003. Temporarily divide to conquer: centralized, decentralized, and reintegrated organizational approaches to exploration and adaptation, **Organization Science**, 14(6): 650-669.
- Siguaw, J. A., Simpson, P. M. & Enz, C.A. 2006. Conceptualizing innovation orientation: a framework for study and integration of innovation research. **Journal of Product Innovation Management**, 23 (6): 556-574.
- Slater, S. F. & Narver, J. C. 1994. Does competitive environment moderate the market orientation-performance relationship? **The Journal of Marketing**, 58(1): 46-55.
- Sok, P. & O'Cass, A. 2011. Achieving superior innovation-based performance outcomes in SMEs through innovation resource–capability complementarity. **Industrial Marketing Management**, 40(8): 1285-1293.
- Song, M., Droge, C., Hanvanich, S. & Calantone, R. 2005. Marketing and technology resource complementarity: an analysis of their interaction effect in two environmental contexts. **Strategic Management Journal**, 26 (3): 259-276.
- Sørensen, H. E. 2011. Resource specialization, customer orientation, and firm performance: an empirical investigation of valuable resources. **Journal of Strategic Marketing**, 19(4): 395-412.
- Sousa, C. M. P., Martinez-Lopez, F. J. & Coelho, F. 2008. The determinants of export performance: a review of the research in the literature between 1998 and 2005. **International Journal of Management Reviews**, 10 (4): 343-374.
- Srivastava, R. K., Fahey, L. & Christensen, H. K. 2001. The resource-based view and marketing: the role of market-based assets in gaining competitive advantage. **Journal of Management**, 27(6): 777-802.
- Stalk, G., Evans, P. & Shulman, L. E. 1992. Competing on capabilities: the new rules of corporate strategy. **Harvard Business Review**, 70(2): 57-69.
- Subramaniam, M. & Youndt, M. A. 2005. The influence of intellectual capital on the types of innovative capabilities. **Academy of Management Journal**, 48, 3, 450–463.
- Tan, Q. & Sousa, C. M. P. 2011. Research on export pricing: still moving toward maturity. **Journal of International Marketing**, 19(3): 1-35.
- Teece D. J., Pisano, G. & Shuen, A. 1997. Dynamic capabilities and strategic management. **Strategic Management Journal**, 18(7): 509–535.
- Teece, D. J. 2007. Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. **Strategic Management Journal**, 28 (13): 1319-1350.

- Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. 2005. PLS path modeling. ***Computational Statistics & Data Analysis***, 48(1): 159-205.
- Thomas, P. 1999. ***Fashions in management research: An empirical analysis***, Brookfield, Vt.: Ashgate Pub.
- Timmor, Y. & Zif, J. 2005. A typology of marketing strategies for export. ***Journal of Global Marketing***, 18(3-4): 37-78.
- Toften, K. & Olsen, S. O. 2003. Export market information use, organizational knowledge, and firm performance: a conceptual framework. ***International Marketing Review***, 20(1): 95 – 110.
- Tsang, T. 2002. ***Statistical mechanics***, Princeton, N.J.: Rinton Press.
- Tull, D. S. & Hawkins, D. I. 1993. ***Marketing research: Measurement and method: A text with cases***, New York: Maxwell Macmillan International.
- Tushman, M. L. 1997. Winning through innovation. ***Strategy & Leadership***, 25(4): 14-19.
- Van de Ven, A. H. 1986. Central problems in the management of innovation. ***Management Science***, 32(5): 590-607.
- Varadarajan, P. R. & Jayachandran, S. 1999. Marketing strategy: an assessment of the state of the field and outlook. ***Journal of the Academy of Marketing Science***, 27(2): 120-143.
- Vorhies, D. W., Harker, M. & Rao, C. P. 1999. The capabilities and performance advantages of market-driven. ***European Journal of Marketing***, 33(11): 1171-1202.
- Vorhies, D. W. & Morgan, N. A. 2003. A configuration theory assessment of marketing organization fit with business strategy and its relationship with marketing performance. ***Journal of Marketing***, 67(1): 100-115.
- Vorhies, D. W. & Morgan, N. A. 2005. Benchmarking marketing capabilities for sustainable competitive advantage. ***Journal of Marketing***, 69(1): 80-94.
- Vorhies, D. W., Morgan, R. E. & Autry, C. W. 2009. Product-market strategy and the marketing capabilities of the firm: impact on market effectiveness and cash flow performance. ***Strategic Management Journal***, 30(12): 1310–1334.
- Vorhies, D. W., Orr, L. M. & Bush, V. D. 2011. Improving customer-focused marketing capabilities and firm financial performance via marketing exploration and exploitation. ***Journal of the Academy of Marketing Science***, 39(5): 736-756.
- Walker, R. L. 1976. Social survey techniques: a note on the 'drop and collect' method. ***Area***, 8(4): 284-288.

- Wernerfelt B. 1984. A resource-based view of the firm. ***Strategic Management Journal***, 5(2): 171–180.
- Weerawardena, J. & O'Cass, A. 2004. Exploring the characteristics of the market-driven firms and antecedents to sustained competitive advantage. ***Industrial Marketing Management***, 33(5): 419-428.
- Weerawardena, J., O'Cass, A. & Julian, C. 2006. Does industry matter? examining the role of industry structure and organizational learning in innovation and brand performance. ***Journal of Business Research***, 59(1): 37-45.
- Westerman, G., McFarlan, F.W., Iansiti, M. 2006. Organization design and effectiveness over the innovation life cycle. ***Organization Science***, 17(2) 230–238.
- Winter, S. G. 2003. Understanding dynamic capabilities. ***Strategic Management Journal***, 24(10): 991-995.
- Wold, H. & Wold, H. 1981. ***The fix-point approach to interdependent systems***, Amsterdam: North-Holland Publishing Company.
- Wu, F., Sinkovics, R. R., Cavusgil, S. T. & Roath, A. S. 2007. Overcoming export manufacturers' dilemma in international expansion. ***Journal of International Business Studies***, 38: 283–302.
- Yalcinkaya, G. & Calantone, R. J. & Griffith, D. A. 2007. An examination of exploration and exploitation capabilities: implications for product innovation and market performance. ***Journal of International Marketing***: Vol. 15, No. 4, pp. 63-93.
- Zahra, S. A. & Covin, J. G. 1993. Business strategy, technology policy and firm performance. ***Strategic Management Journal***, 14 (6): 451–478.
- Zahra, S., Sapienza, H. J. & Davidsson, P. 2006. Entrepreneurship and dynamic capabilities: a review, model and research agenda. ***Journal of Management Studies***, 43(4): 917-955.
- Zheng, Y., Liu, J & George, G. 2010. The dynamic impact of innovative capability and inter-firm network on firm valuation: a longitudinal study of biotechnology start-ups. ***Journal of Business Venturing***, 25(6): 593-609.
- Zhou, K. Z., Li, J. J., Zhou, N. & Su, C. 2008. Market orientation, job satisfaction, product quality, and firm performance: evidence from China. ***Strategic Management Journal***, 29 (9): 985–1000.
- Zikmund, W. G & Babin, B. J. 2010. ***Essentials of marketing research***, Mason, Ohio: South-Western/CENGAGE Learning.
- Zollo, M. & Winter, S. G. 2002. Deliberate learning and the evolution of dynamic capabilities. ***Organization Science***, 13 (3): 339-351.

- Zou, S. & Cavusgil, S. T. 2002. The GMS: a broad conceptualization of global marketing strategy and its effect on firm performance. ***Journal of Marketing***, 66(4): 40-56.
- Zou, S., Fang, E. & Zhao, S. 2003. The effect of export marketing capabilities on export performance: an investigation of Chinese exporters. ***Journal of International Marketing***, 11(4): 32-55.
- Zou, S. & Stan, S. 1998. The determinants of export performance: a review of the empirical literature between 1987-1997. ***International Marketing Review***, 15 (5): 333–56.