

**COMPETITIVE ADVANTAGE OF MALAYSIAN
SMALL MEDIUM ENTERPRISES: IMPACT OF
SUPPLY CHAIN MANAGEMENT PRACTICES,
ENVIRONMENTAL UNCERTAINTY AND
SUPPLY CHAIN FLEXIBILITY**

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Fulfilment of the Requirement for the
Degree Of Doctor of Philosophy

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ABSTRACT

Today's businesses are compelled to develop flexible capabilities to enable it to effectively respond to greater volatility and complexity of the fast changing environments. The current study proposes that a firm that adopts supply chain management practices would achieve competitive advantage and this is because of the influence of flexibility in the supply chain which in turn is driven by environmental uncertainties. The research framework consists of four constructs namely environmental uncertainty, supply chain management practice, supply chain flexibility and competitive advantage. The relationship between these constructs shall be investigated within the same framework in the context of SMEs in Malaysia, thus, filling the gap in supply chain literature in Malaysia by providing a new framework for research.


The data collection method used is a self-administered survey questionnaire and the instruments of measures had been adopted from previous researches. Data collected from the pilot study was used to conduct exploratory factor analysis to assess the dimensionality of items in view of the new research environment and business condition. Subsequently, a field study using an online self-administered survey questionnaire yielded 250 usable responses from the SME industry. Structural equation modelling was used to analyze the data results as it produces better results in terms of fitness and more accurate and efficient in estimating multiple items of the latent constructs.

The results support the hypothesized relationships presented in the theoretical framework, that is, the independent path which examine the effect of the exogenous constructs and endogenous constructs as well as the mediating path which examine the role of supply chain flexibility as the mediator in the relationship of supply chain management practices and competitive advantage.

Some of the gaps in literature that this study was able to fill include expanding on existing models by integrating the four constructs in one theoretical framework and tested the theory in the SME sector. Testing mediation using the triangle approach in this study is novel because it has not been seen to be used for empirical supply chain management studies locally before. One of the most important contribution of this study is employing the resampling method of bootstrapping to test the mediation effect of supply chain flexibility, thus managed to achieve full mediation which had not been demonstrated in previous studies before.

APPROVAL PAGE

I certify that I have supervised / read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, as a thesis for the fulfilment of the requirements for the degree of Doctor of Philosophy.




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DECLARATION PAGE

I hereby declare that the thesis submitted in fulfilment of the PhD degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the materials has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

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TABLE OF CONTENTS

ABSTRACT	ii
APPROVAL PAGE	iv
DECLARATION PAGE	v
ACKNOWLEDGEMENT	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xv
LIST OF FIGURES	xix
CHAPTER 1: INTRODUCTION	1
1.1 Introduction	1
1.2 Background of the Study	4
1.3 Statements of Problem	9
1.4 Research Questions	15
1.5 Research Objectives	16
1.6 Scope of Research	17
1.7 Significance of the Study	19
1.7.1 Theoretical Perspective	25
1.7.2 Industrial Perspective	26
CHAPTER 2: OVERVIEW OF SMEs	28
2.1 Introduction	28
2.2 Overview of SMEs Worldwide	29
2.2.1 The Economic Contributions of SMEs	31
2.2.2 The Importance of SMEs in Asia	34
2.2.3 Major Challenges of SMEs' Development	38
2.3 The Economic Development of Malaysia	41
2.4 The Development of SMEs in Malaysia	41
2.4.1 Government Economic Initiatives	41

2.4.1.1	New Economic Policy (NEP)	42
2.4.1.2	National Development Policy (NDP)	45
2.4.1.3	National Vision Policy (NVP)	47
2.4.1.4	Industrial Master Plan	48
2.4.1.5	New Economic Model (NEM)	50
2.4.1.6	The SME Master Plan	52
2.5	Classifications of SMEs in Malaysia	54
2.5.1	Profiles of SMEs and Economic Sectors	56
2.6	Contribution of SMEs	57
2.6.1	The Malaysian SMEs' Performance	59
2.7	Challenges Faced by SMEs	60
2.8	Problems of SCM for SMEs	64
2.9	SMEs Success Factors	69
CHAPTER 3: LITERATURE REVIEW		74
3.1	Introduction	74
3.2	Competitive Advantage (CA)	74
3.2.1	Defining Competitive Advantage	74
3.2.2	Supply Chain Management Impact on Competitive Advantage	75
3.2.3	Supply Chain Flexibility Impact on Competitive Advantage	77
3.2.4	Previous Studies of Competitive Advantage	78
3.3	Supply Chain Management Practices (SCMP)	81
3.3.1	Defining Supply Chain Management Practices	81
3.3.2	Supply Chain Management Practices Impact on Supply Chain Flexibility	85
3.3.3	Previous Studies of Supply Chain Management Practices	86
3.3.4	Supply Chain Management Practices Dimensions	90
3.4	Environmental Uncertainty (EU)	93
3.4.1	Defining Environmental Uncertainty	93
3.4.2	Environmental Uncertainty Impact on Supply Chain Flexibility	95
3.4.3	Previous Studies on Environmental Uncertainty	97

3.4.4 Environmental Uncertainty Dimensions	97
3.5 Supply Chain Flexibility (SCF)	104
3.5.1 Defining Supply Chain Flexibility	104
3.5.2 Previous Studies on Supply Chain Flexibility	108
3.5.3 Supply Chain Flexibility Impact on Competitive Advantage	112
3.5.4 Supply Chain Flexibility Dimensions	113
3.6 Theory Underpinning	114
3.6.1 Industrial Organization (IO)	114
3.6.2 Resource Based View (RBV)	116
3.6.3 Dynamic Capabilities	118
3.7 Conceptual Framework	120
3.8 Research Hypotheses	128
3.8.1 Environmental Uncertainty and Supply Chain Flexibility	128
3.8.2 Supply Chain Management Practices and Supply Chain Flexibility	129
3.8.3 Supply Chain Flexibility and Competitive Advantage	130
3.8.4 Supply Chain Management Practices and Competitive Advantage	131
3.8.5 Mediating Effect of Supply Chain Flexibility	132
CHAPTER 4: RESEARCH METHODOLOGY	136
4.1 Introduction	136
4.2 Research Process	137
4.3 Population and Sampling	140
4.4 Data Collection Method	144
4.5 Survey Instrument	147
4.5.1 Competitive Advantage (CA) Construct Measurement Items	149
4.5.2 Supply Chain Management Practices (SCMP) Construct Measurement Items	150
4.5.3 Environmental Uncertainty (EU) Construct Measurement Items	152
4.5.4 Supply Chain Flexibility (SCF) Construct Measurement Items	153
4.6 Pre-Test	155
4.7 Pilot Study	157

4.8	Data Analysis Procedure	158
4.8.1	Exploratory Factor Analysis (EFA) for Instrument Validation	159
4.8.2	Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM)	160
4.8.3	Assessment of Normality of the Data	165
4.8.4	Test of the Mediation	165
CHAPTER 5: DATA ANALYSIS AND RESULTS		168
5.1	Introduction	168
5.2	Exploratory Factor Analysis of Constructs Examined in the Study	168
5.2.1	EFA for Environmental Uncertainty (EU) Construct	169
5.2.2	EFA for Supply Chain Management Practices (SCMP) Construct	174
5.2.3	EFA for Supply Chain Flexibility (SCF) Construct	180
5.2.4	EFA for Competitive Advantage (CA) Construct	186
5.3	Descriptive Analysis	192
5.3.1	Respondent Profiles	192
5.3.1.1	Response Rate	192
5.3.1.2	Respondents and Organizations Profiles	194
5.4	Missing Data	197
5.5	Assessment of Outliers	199
5.6	Response Bias	199
5.7	Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM)	201
5.7.1	The CFA for Supply Chain Management Practice (SCMP) Construct	205
5.7.1.1	The Assessment For Construct Validity	205
5.7.1.2	The Assessment for Convergent Validity and Composite Reliability	206
5.7.2	The CFA for Environmental Uncertainty (EU) Construct	208
5.7.2.1	The Assessment for Construct Validity	208
5.7.2.2	The Assessment For Convergent Validity And Composite Reliability	209

5.7.3 The CFA for Supply Chain Flexibility (SCF) Construct	211
5.7.3.1 The Assessment For Construct Validity	211
5.7.3.2 The Assessment For Convergent Validity And Composite Reliability	212
5.7.4 The CFA for Competitive Advantage (CA) Construct	214
5.7.4.1 The Assessment for Construct Validity	214
5.7.4.2 The Assessment For Convergent Validity And Composite Reliability	215
5.7.5 The Pooled Measurement Model for all Constructs	216
5.7.5.1 Assessing the Unidimensionality of the Constructs	219
5.7.5.2 The Assessment for Validity and Reliability	220
5.7.5.3 The Assessment Of Discriminant Validity Among Constructs	222
5.7.5.4 The Assessment Of Normality For All Constructs	223
5.8 Modelling the Structural Model and Executing SEM	225
5.9 Hypothesis Testing	230
5.9.1 Hypothesis 1	232
5.9.2 Hypothesis 2	233
5.9.3 Hypothesis 3	234
5.9.4 Hypothesis 4	235
5.9.5 Mediation Testing	236
5.9.6 Mediation Test: Confirming the Results through Bootstrapping	239
CHAPTER 6: DISCUSSION AND CONCLUSION	241
6.1 Introduction	241
6.2 Summary of the Results	241
6.2.1 The Effect of Environmental Uncertainty (EU) on Supply Chain Flexibility (SCF)	242
6.2.1.1 The Effect of EU On SCF and the Implication on Malaysian SMEs	244
6.2.2 The Effect of Supply Chain Management Practice (SCMP) on Supply Chain Flexibility (SCF)	246

6.2.2.1	The Effect of SCMP On SCF and the Implication on Malaysian SMEs	248
6.2.3	The Effect of Supply Chain Flexibility (SCF) on Competitive Advantage (CA)	249
6.2.3.1	The Effect of SCF On CA and the Implication on Malaysian SMEs	252
6.2.4	The Effect of Supply Chain Management Practice (SCMP) on Competitive Advantage (CA)	253
6.2.4.1	The Effect of SCMP On CA and the Implication on Malaysian SMEs	255
6.2.5	The Mediating Effect of Supply Chain Flexibility in The Relationship Between Supply Chain Management Practice and Competitive Advantage	256
6.2.5.1	The Effect of SCF as a Mediation between SCMP and CA, and the Implication on Malaysian SMEs	259
6.3	Research Implication	262
6.3.1	Theoretical Implication	262
6.3.2	Practical Implication	265
6.4	Contribution of Study	270
6.5	Limitation and Future Study	274
6.6	Conclusion	278
	REFERENCES	281
	APPENDICES	302
	Appendix A	303
	Appendix B	311
	Appendix C	320
	Appendix D	321
	Appendix E	332
	Appendix F	334

Appendix G	336
Appendix H	338
Appendix I	341

LIST OF TABLES

Table 1.1: Sample of Studies in Supply Chain Environment in Malaysia	25
Table 3.1: Previous Studies and Dimensions of Competitive Advantage	79
Table 3.2: Definitions and List of Sub Constructs for Competitive Advantage	80
Table 3.3: Previous Studies and Dimensions of Supply Chain Management Practices	87
Table 3.4: Definitions and List of Sub Constructs For Supply Chain Management Practices	90
Table 3.5: Previous Studies and Dimensions of Environmental Uncertainty	98
Table 3.6: Definitions And List Of Sub Constructs For Environmental Uncertainty	99
Table 3.7: Previous Studies and Dimensions of Supply Chain Flexibility	109
Table 3.8: Definitions And List Of Sub Constructs For Supply Chain Flexibility	113
Table 4.1: Sources of Survey Instrument and Scoring Description	148
Table 4.2: A Brief Description Of Measurement Items For Competitive Advantage	150
Table 4.3: A Brief Description Of Measurement Items For Supply Chain Management Practices	151
Table 4.4: A Brief Description Of Measurement Items For Environmental Uncertainty	152

Table 4.5: A Brief Description Of Measurement Items For Supply Chain	
Flexibility	154
Table 4.6: Three Categories of Model Fit, Level of Acceptance and Literature	
Support	162
Table 5.1: The Descriptive Statistics For Items Measuring EU	169
Table 5.2: The KMO and Bartlett's Test for EU construct	171
Table 5.3: The Number Of Components And Total Variance Explained For EU	
Construct	172
Table 5.4: The Four Components Of EU And Their Respective Items	172
Table 5.5: The Reliability Analysis For Every Component Measuring EU	174
Table 5.6: The Descriptive Statistics For Items Measuring SCMP	175
Table 5.7: The KMO and Bartlett's Test for SCMP Construct	177
Table 5.8: The Number Of Components And Total Variance Explained For	
SCMP Construct	177
Table 5.9: The Three Components Of SCMP And Their Respective Items	178
Table 5.10: The Reliability Analysis For Every Component Measuring	
SCMP	179
Table 5.11: The Descriptive Statistics For Items Measuring SCF	180
Table 5.12: The KMO and Bartlett's Test for SCF Construct	183
Table 5.13: The Number Of Components And Total Variance Explained For	
SCF Construct	183
Table 5.14: The Three Components Of SCF And Their Respective Items	184
Table 5.15: The Reliability Analysis For Every Component Measuring SCF	185

Table 5.16: The Descriptive Statistics For Items Measuring CA	186
Table 5.17: The KMO and Bartlett's Test for CA Construct	188
Table 5.18: The Number Of Components And Total Variance Explained For CA Construct	189
Table 5.19: The Five Components Of CA And Their Respective Items	190
Table 5.20: The Reliability Analysis For Every Component Measuring CA	191
Table 5.21: Response Rate of the Questionnaires	193
Table 5.22: Respondent Profiles	196
Table 5.23: The Three Categories Of Model Fit And Their Level Of Acceptance	204
Table 5.24: The Report For Convergent Validity (AVE) and Composite Reliability (CR) for SCMP	206
Table 5.25: The Report for Convergent Validity (AVE) and Composite Reliability (CR) for EU	209
Table 5.26: The report for Convergent Validity (AVE) and Composite Reliability (CR) for SCF	212
Table 5.27: The report for Convergent Validity (AVE) and Composite Reliability (CR) for CA	215
Table 5.28: The Fitness Indexes Indicate The Fitness Of The Construct To The Data From The Field	220
Table 5.29: The CR And AVE For The Main Constructs	221
Table 5.30: The Discriminant Validity Index Summary	222
Table 5.31: The Assessment Of Normality All The Components	224

Table 5.32: The Regression Path Coefficients and Its Significance	231
Table 5.33: The Hypothesis Statement for Every Path and Its Findings	236
Table 5.34: Testing Hypotheses for the Mediator SCF	237
Table 5.35: The Results Of Bootstrapping Procedure In Testing The Mediator SCF	240
Table 6.1: Summary of Research Objectives, Research Questions, Hypotheses and Findings	261

LIST OF FIGURES

Figure 2.1: SMEs Development Cycle	34
Figure 2.2: SMEs Contribution to Gross Domestic Product	35
Figure 2.3: SMEs Contribution to Employment	37
Figure 3.1: Proposed Conceptual Framework	121
Figure 4.1: Research Process Flowchart	137
Figure 4.2: The Procedure For Testing Mediation In A Complex Model	166
Figure 5.1: The Scree Plot For EU Construct	170
Figure 5.2: The Scree Plot For SCMP Construct	176
Figure 5.3: The Scree Plot For SCF Construct	182
Figure 5.4: The Scree Plot For CA Construct	187
Figure 5.5: The Framework Consists Of Four Latent Constructs	203
Figure 5.6: The CFA Procedure For SCMP Construct	205
Figure 5.7: The CFA Procedure For EU Construct	208
Figure 5.8: The CFA procedure for SCF construct	211
Figure 5.9: The CFA procedure for CA construct	214
Figure 5.10: The Simplified Measurement Model for Pooled-CFA	217
Figure 5.11: The Result for Pooled CFA for Simplified Measurement Model	219
Figure 5.12: The Structural Model Showing The Path Of Interest To Be Tested In The Study	226
Figure 5.13: The Standardized Path Coefficients Between The Constructs In The Model	227

Figure 5.14: The Regression Path Coefficients Between The Constructs In The
Model 229

Figure 5.15: The Procedure For Testing Mediation In A Complex Model 238

CHAPTER 1: INTRODUCTION

1.1 Introduction

It can be seen that globalization happening around the world has been made more challenging by environmental uncertainties, businesses have realized that competing at firm level is just not enough to gain sustainable competitive advantage and increase firm performance. In fact Lummus, Duclos and Vokurka (2003), in their seminal study on supply chain flexibility, affirmed that businesses competing with each other has to move beyond the level of the firm management towards the level of supply chain management for the purpose of achieving the desired level of competitiveness. Moving back before the onslaught of globalization, this scenario is seemingly different where firm performance is dependent on the effective management of the day to day running of the company, managing labour costs, ensuring good quality of products and services, effective sales and the marketing of products and services and providing good after sales service. Thirty or forty years ago, when Malaysia experienced stability politically, economically and socially, it is safe for firms to focus their competition predominately on pricing, product mix and providing customer service. For example, in purchasing activities, negotiations seldom move beyond price bargaining, merchandising placements, trade offers and volume ordering. Moving forward to thirty or forty years later where the pace of technology advancement is both fast and furious, the changes in the world and the business environment are both rapid and unpredictable, Malaysian

firms can no longer afford to conduct business just the way it was by focusing on lowering prices or providing trade offers to compete. Now they must rise to the occasion and confront these all-encompassing changes that have been made more challenging by uncertainties with new and much more holistic organizational strategies the stretch from the supply level to the delivery to the end users.

Findings from global supply chains surveys such as the Global Supply Chain Trends Survey 2010 - 2012 (Geissbauer & D'heur, 2010) and IBM's Global Chief Supply Chain Officer (2009) survey revealed that supply chain volatility and environmental uncertainty have risen to a level where it is called the new normal. These surveys also revealed that striving for a flexible supply chain is among the top supply chain trends. Seen as the antidote in addressing uncertainties, flexibility is what companies with top supply chains are striving hard to achieve in order to be able to response swiftly to changing market conditions, costs and external disruptions affecting companies' operations, all of which could adversely impact revenues. The significance of being flexible was very much felt during the past two years, from middle 2014 to 2016, where the fluctuations of the Malaysian ringgit caused havoc in many supplies and purchases contracts, especially those with the long duration terms.

However, it has been noted that SMEs in Malaysia, and Asia in general, are traditional, small, outdated, complacent and continues to operate in lower level of the value chain, competing on costs/prices in a fast changing environment thus resulting in a low survival rate of less than 10 per cent businesses making it through the 10 year mark (Goh, 2002; Khoo, 2010). Given that statistic, local businesses, notably the

SMEs, need to develop effectiveness in operating the supply chain particularly given their significant role in the economy and must intensify steps to increase productivity and competitiveness in the face of intense competition, both at the global and regional levels.

On that note, the present research is about studying the firm's competitiveness from the aspects of supply chain management. The central objective of the study is that implementing supply chain management practices is to create a major source of competitiveness which is measured by achieving competitive advantage. In that regard, it is clear that being competitive is the major concern, and this study examine the factors contributing to achieving competitive advantage. The factors being studied are supply chain management practices, environmental uncertainty and supply chain flexibility. Hence, this research is about developing and testing a model that will confirm the relationship of the four constructs in the context of SMEs in Malaysia underpinned by industrial operations, resource-based view and dynamic capability theories.

The list of firms are obtained from the 14th Edition/2015 of the SME Malaysia Business Directory which was endorsed by the Malaysia Ministry of International Trade and Industry (MITI) and the Small and Medium Enterprises Association (SAMENTA). Based on the Economic Census 2011, the percentage of firms in particular small and medium enterprises over total establishments in the country is 97.31 per cent (SME Malaysia, 2015).

1.2 Background of the Study

Businesses in their endeavor to manage the changing demands, supply volatility, technological and competitors' unpredictability would recognize the significance and impact that flexibility within the supply chain has on achieving high level of firm effectiveness and thus higher competitiveness that ultimately lead to improving the overall business performance. Hence, businesses that implement strategies to better manage the supply chain to be gain higher flexibility and responsiveness, shall have an edge coping with the challenges and difficulties, particularly under conditions of environmental uncertainty, over those that are less flexible. Indeed, the focus on achieving flexibility at the supply chain level has emerged as a significant business operations strategy to cope with the changes and challenges of environmental uncertainty, to improve performance and gain competitive advantage.

Acknowledging that the new normal is flexibility, the National Economic Advisory Council Malaysia (NEAC) recognizes the importance of making Malaysia nimble and flexible in order to withstand a rapidly changing external environment, recession in developed economies and competition from emerging economies as well as globally. Ali, Jaafar and Mohamad (2008) reported that by improving local businesses competitive advantage, Malaysia has the opportunity to create an additional value which translates to approximately 12 per cent of gross domestic product growth. Local businesses in Malaysia are predominantly made up of small medium enterprises (SMEs) and covering many sectors. According to the publication SME Malaysia (2015), Malaysia's gross domestic product is supported by these categories of small