



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

**THE MEDIATING EFFECT OF INNOVATION ON THE RELATIONSHIP
BETWEEN ENTREPRENEURIAL COMPETENCIES AND
BUSINESS SUCCESS IN MALAYSIA**

AZMI BIN UMAR



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

**THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMET FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY
(ENTREPRENEURSHIP)**

**FACULTY OF MANAGEMENT AND ECONOMICS
SULTAN IDRIS EDUCATION UNIVERSITY**

2019



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi



ABSTRACT

This study aims to analyse the impact of Entrepreneurial Competencies, Innovation, and Business Success among owners and managers in Small and Medium Enterprise (SMEs) to address the high rate of business failure. Quantitative approaches through the use of survey were used in this study. Data were collected using questionnaires involving 407 owners and managers of SMEs in manufacturing, services and other sectors. Respondents were chosen using Stratified Random Sampling technique. Multiple Regression Analysis indicated that 53 percent of the variation in Business Success were explained by Entrepreneurial Competencies and Innovation. The findings also showed that Entrepreneurial Competencies contributed significantly to Business Success ($\beta=0.190$, S.E=0.051) and Innovation ($\beta=0.198$, S.E=0.013). Further, Innovation contributed significantly to Business Success ($\beta=1.035$, S.E=0.226). This study also showed that Innovation served as partial mediator between Entrepreneurial Competencies and Business Success. The implication of this study suggested that entrepreneurial competencies possessed by owner and manager would increase the success of business. Furthermore, innovation creates competitiveness advantage, hence increase the business success of SMEs in Malaysia.





INOVASI SEBAGAI KESAN PERANTARA PADA HUBUNGAN ANTARA KOMPETENSI KEUSAHAWANAN DAN KEJAYAAN PERNIAGAAN DI MALAYSIA

ABSTRAK

Kajian ini bertujuan menganalisis impak Kompetensi Keusahawanan, Inovasi, dan Kejayaan Perniagaan dalam kalangan pemilik dan pengurus Perusahaan Kecil dan Sederhana (PKS) di Malaysia bagi menangani isu kegagalan perniagaan yang tinggi. Pendekatan kuantitatif dengan kaedah kajian tinjauan digunakan dalam kajian ini. Data dikumpul melalui borang soal selidik yang melibatkan 407 pemilik dan pengurus perniagaan PKS dari sektor pembuatan, sektor perkhidmatan dan sektor lain. Responden dipilih menggunakan teknik Persampelan Rawak Berstrata. Analisis Regresi Berganda menunjukkan 53 peratus variasi Kejayaan Perniagaan diterangkan oleh Kompetensi Keusahawanan dan Inovasi. Dapatan kajian juga menunjukkan Kompetensi Keusahawanan menyumbang secara signifikan kepada Kejayaan Perniagaan ($\beta=0.190$, S.E=0.051) dan Inovasi ($\beta=0.198$, S.E=0.013). Selain itu, Inovasi memberi kesan yang signifikan kepada Kejayaan Perniagaan ($\beta=1.035$, S.E=0.226). Dapatan kajian turut menunjukkan bahawa Inovasi menjadi perantara separa kepada hubungan Kompetensi Keusahawanan dan Kejayaan Perniagaan. Implikasi kajian mencadangkan bahawa kompetensi keusahawanan yang dimiliki oleh pemilik dan pengurus dijangka dapat meningkatkan kejayaan sesebuah perniagaan. Selain itu, inovasi mewujudkan kelebihan daya saing dan seterusnya meningkatkan kejayaan perniagaan PKS di Malaysia.



CONTENTS

	Page
DECLARATION OF ORIGINAL WORK	ii
DECLARATION OF THESIS	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
ABSTRAK	vi
CONTENTS	vii
LIST OF TABLES	xvi
LIST OF FIGURES	xx
LIST OF ABBREVIATIONS	xxi
LIST OF APPENDICES	xxiii

CHAPTER 1 INTRODUCTION

1.1	Introduction	1
1.2	Research Background	3
1.3	Problem Statement	11
1.4	Objectives of The Study	16
1.5	Research Questions	17
1.6	Research Hypothesis	17

1.7	The Conceptual and Theoretical Framework of Research	18
1.7.1	The Conceptual Framework of Research	18
1.7.2	The Theoretical Framework of Research	21
1.8	Significance of the Study	22
1.9	Scope of the Study	23
1.10	Operational Definition	24
1.10.1	Entrepreneurial Competencies	24
1.10.1.1	Strategic Competency	25
1.10.1.2	Commitment Competency	25
1.10.1.3	Conceptual Competency	25
1.10.1.4	Opportunity Competency	26
1.10.1.5	Organising and Leading Competency	26
1.10.1.6	Relationship Competency	26
1.10.1.7	Learning Competency	26
1.10.1.8	Personal Competency	27
1.10.1.9	Technical Competency	27
1.10.1.10	Familism Competency	27
1.10.1.11	Ethical Competency	28
1.10.1.12	Social Responsibility Competency	28
1.10.2	Innovation	28
1.10.2.1	Product Innovation	29
1.10.2.2	Process Innovation	29
1.10.3	Business Success	29
1.11	Organising of the Thesis	30
1.12	Summary	31

CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	32
2.2	Overview of Small Medium Enterprises	33
2.2.1	Definition of SMEs In Malaysia	37
2.2.2	SMEs In Malaysia	40
2.3	The Underlying Theories of the Study	46
2.3.1	Resource Based Theory	47
2.3.1.1	Entrepreneurship And Resources Based Theory	48
2.3.1.2	Entrepreneurial Competencies and Resource Based Theory	49
2.3.1.3	Innovation And Resource Based Theory	50
2.3.2	Entrepreneurial Subjectivism Theory	51
2.4	Entrepreneurial Competencies	52
2.4.1	The Competencies Approach	54
2.4.2	Study of Entrepreneurial Competencies In Malaysia	59
2.4.3	Domain of Entrepreneurial Competencies	61
2.4.3.1	Strategic Competency	61
2.4.3.2	Commitment Competency	61
2.4.3.3	Conceptual Competency	62
2.4.3.4	Opportunity Competency	63
2.4.3.5	Organising and Leading Competency	64
2.4.3.6	Relationship Competency	64
2.4.3.7	Learning Competency	65
2.4.3.8	Personal Competency	66
2.4.3.9	Technical Competency	67

2.4.3.10	Familism Competecy	67
2.4.3.11	Ethical Competency	68
2.4.3.12	Social Responsibility Competency	69
2.4.4	Entrepreneurial Competencies Cluster	69
2.4.5	Entrepreneurial Competencies and Business Success	85
2.4.6	Proposed Entrepreneurial Competencies	92
2.5	Innovation	97
2.5.1	Innovation In Malaysia	99
2.5.2	Domains of Innovation	101
2.5.2.1	Product Innovation	102
2.5.2.2	Process Innovation	102
2.6	Business Success	103
2.6.1	The Concept of Business Success In SMEs	105
2.7	Relationship between Entrepreneurial Competencies, Innovation and Business Success	110
2.7.1	Entrepreneurial Competencies and Business Success	111
2.7.2	Entrepreneurial Competencies and Innovation	112
2.7.3	Innovation and Business Success	113
2.7.4	The Mediating Effects of Innovation on The Relationship Between Entrepreneurial Competencies and Business Success	114
2.7.5	Direct Effects of Education, Training, and Work Experience on Entrepreneurial Competencies	116
2.8	Summary	117



CHAPTER 3 RESEARCH METHODOLOGY

3.1	Introduction	118
3.2	Research Design	119
3.2.1	Research Purpose	119
3.2.2	Nature and Setting of Study	119
3.2.3	Unit Analysis	120
3.3	Population and Sampling	120
3.3.1	Target Sampling	121
3.3.2	Sample Size	123
3.3.3	Sampling Technique	124
3.4	Operational Measures	124
3.4.1	Entrepreneurial Competencies	126
3.4.2	Innovation	132
3.4.3	Business Success	133
3.5	Questionnaire Design	134
3.5.1	Data Collection and Administration	134
3.5.2	Translation of Questionnaire	136
3.5.3	Questionnaire Layout	137
3.6	Pre-test, Pilot Test and Survey Refinement	138
3.7	Data Analysis	139
3.7.1	Descriptive Analysis	139
3.7.2	Factor Analysis	140
3.7.3	Reliability Analysis	141



3.7.4	Goodness-of-Fit	146
3.7.5	Multi Regression Analysis	148
3.8	Summary	149

CHAPTER 4 FINDINGS

4.1	Introduction	150
4.2	Preliminary Data Analysis	151
4.2.1	Data Coding and Editing	151
4.2.2	Data Screening	151
4.2.3	Response Rate	152
4.2.4	Response Bias Test	153
4.3	Descriptive Analysis	154
4.3.1	Profile of the respondents	154
4.3.1.1	Age of Respondents	154
4.3.1.2	Gender of Respondents	155
4.3.1.3	Race of Respondents	155
4.3.1.4	Education Attainment of Respondents	156
4.3.1.5	Start-up Age of Respondents	157
4.3.1.6	Training Received by Respondents	158
4.3.1.7	Working Experience Prior Running the Business	159
4.3.1.8	Working Experience Relevant to the Business	159
4.3.1.9	Prior Business Start-up Experience	160
4.3.1.10	Support Received From Government	161



4.3.2	Profile of the firms	161
4.3.2.1	Firm Location	162
4.3.2.2	Position of Respondents	162
4.3.2.3	Sector of Respondents Operating	163
4.3.2.4	Number of Employees	163
4.3.2.5	Number of Year's Company Establishment	164
4.3.2.6	Stage of Business Development	165
4.4	Findings For Structural for Structural Equation Modeling	165
4.4.1	Confirmatory Factor Analysis	167
4.4.2	Composite Reliability and Average Variance Extracted	173
4.4.3	Normality	176
4.5	Structural Model	182
4.5.1	The Relationship between Entrepreneurial Competencies and Business Success	186
4.5.2	The Relationship between Entrepreneurial Competencies and Innovation	187
4.5.3	The Relationship between Innovation and Business Success	188
4.6	Testing Mediation Effect	189
4.6.1	Baron and Kenny Approach	190
4.6.2	Boostrapping Application	191
4.7	Findings for Demographic Variable Using Path Analysis With Regression Analysis	194
4.7.1	The Relationship between Education and Entrepreneurial Competencies	197
4.7.2	The Relationship between Training Before Start-up and Entrepreneurial Competencies	198



4.7.3	The Relationship between After Start-up and Entrepreneurial Competencies	199
4.7.4	The Relationship between Work Experience and Entrepreneurial Competencies	200
4.8	Summary of Research Finding	201
4.9	Conclusion	202

CHAPTER 5 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1	Introduction	203
5.2	Revisited Research Questions	204
5.3	Final Research Framework	205
5.4	Discussion	207

5.4.1	The Relationship Between Entrepreneurial Competencies and Business Success	207
5.4.2	The Relationship Between Entrepreneurial Competencies and Innovation	210
5.4.3	The Relationship Between Innovation and Business Success	213
5.4.4	The Relationship Between Entrepreneurial Competencies, Innovation and Business Success	216
5.4.5	The Relationship of Education, Training Before and After Start-up and, Work Experiences on the Development of Entrepreneurial Competencies	219
5.4.6	The Summary of Research Question, Research Objective and Data Analysis	222
5.5	Theoretical and Practical Implications	224
5.5.1	Theoretical Implications	224
5.5.2	Implications for the Practise and Training	225
5.5.3	Implication for the Educators and Policy Makers	227

5.6	Limitations of the Study	229
5.7	Directions for Future Research	231
5.8	Conclusion	237

REFERENCES	239
-------------------	-----

APPENDICES	273
-------------------	-----

LIST OF TABLES

Table No.	Page
2.1	Definition of SMEs in Malaysia 38
2.2	Contribution SME to GDP by countries 41
2.3	Status of SMEs in Malaysia by Sector 43
2.4	Percentage Contribution of Different Industry Sectors to Malaysia GDP 44
2.5	SMEs Employment Growth 44
2.6	Definitions of Competencies 54
2.7	The Benefits of Entrepreneurial Competencies 57
2.8	Prior study on Entrepreneurial Competencies in Malaysia 60
2.9	Entrepreneurial Competencies Cluster 70
2.10	Entrepreneurial Competencies Proposed 93
2.11	Global Innovation Index Rangking: Malaysia vs. Selected Countries in 2015 100
2.12	Success Factor: Financial vs. Non-financial 107
2.13	Business Success and Motives of Becoming An Entrepreneurs 109
2.14	Evaluation of Firm Performance, Growth and Success 110
3.1	Profile of SMEs 121
3.2	Distribution of SMEs by State 122
3.3	Measurement of Variable 125

3.4	A Summary of Entrepreneurial Competencies to Measure	127
3.5	A Summary of Innovation to Measure	132
3.6	A Summary of Business Success to Measure	133
3.7	Correlated Item-Total Correlation and Cronbach Alpha Value	143
3.8	Criteria Used for Model Fit	147
4.1	Response and Usable Questionnaires	152
4.2	The Current Age of Respondents	154
4.3	Gender of Respondents	155
4.4	Race of Respondents	156
4.5	Education Attainment of Respondents	157
4.6	Start-up Age of Respondents	157
4.7	Training Received by Respondents Prior Business Start-up	158
4.8	Training Received by Respondents After Business Start-up	158
4.9	Working Experience Prior Running the Business	159
4.10	Working Experience Relevant to the Business	160
4.11	Prior Business Start-up Experience	160
4.12	Support Received From Government	161
4.13	Location of The Firms	162
4.14	Position of Respondents	162
4.15	Sector of SMEs	163
4.16	Number of Employees	164
4.17	Number of Years Company Establishment	164
4.18	Stage of Business Development	165
4.19	Fitness Index	166

4.20	Composite Reliability and Average Variance Extracted	173
4.21	Discriminant Validity Entrepreneurial Competencies, Innovation, and Business Success	175
4.22	The summary of Fitness Indexes	176
4.23	Assessment of Normality	177
4.24	Regression Weight of Entrepreneurial Competencies, Innovation, and Business Success	185
4.25	Regression Weight of Entrepreneurial Competencies on Business Success	186
4.26	Regression Weight of Entrepreneurial Competencies on Innovation	187
4.27	Regression Weight of Entrepreneurial Competencies on Business Success	188
4.28	Standardized Direct Effects	191
4.29	Standardized Direct Effects - Two Tailed Significance (BC)	192
4.30	Standardized Indirect Effects	192
4.31	Standardized Indirect Effects - Two Tailed Significance (BC)	192
4.32	The Result of Direct and Indirect Effect (Entrepreneurial Competencies, Innovation and Business Success)	193
4.33	Assessment of Normality	196
4.34	Regression Weights of Demographic Variable on Entrepreneurial Competencies	196
4.35	Regression Weights of Education on Entrepreneurial Competencies	197
4.36	Regression Weights of Training Before Start Up on Entrepreneurial Competencies	198
4.37	Regression Weights of Training After Start-up on Entrepreneurial Competencies	199



4.38	Regression Weights of Work Experience on Entrepreneurial Competencies	200
4.39	Summary of Result of the Model Testing Using SEM-AMOS	201
5.1	The Summary of Research Question, Objective and Data Analysis	223





LIST OF FIGURES

No. Figures	Page
1.1 Proposed Conceptual Framework of Research	20
1.2 Theoretical Framework of Research	21
2.1 New SME Development Model of Malaysia	46
2.2 Murad & Rula Business Success Model	87
2.3 Man Entrepreneurial Competency Model	88
2.4 The Entrepreneurial Competency Model	89
2.5 Sanchez Model	90
2.6 Entrepreneurial Competencies and Competitive Advantage Model	91
2.7 Business Success Model	91
4.1 Initial model for Entrepreneurial Competencies	168
4.2 Final Model for Entrepreneurial Competencies	170
4.3 Pooled CFA	172
4.4 Structural Model - Standardised	183
4.5 Structural Model - Unstandardised	184
4.6 Mediation Model	190
4.7 Path Analysis	195
5.1 Final Framework of Research	206





LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structure
APEC	Asia Pacific Co-operation
ASEAN	Association of Southeast Asian Nations
CFA	Confirmatory Factor Analysis
CSR	Corporate Social Responsibility
EFA	Exploratory Factor Analysis
EST	Entrepreneurial Subjectivism Theory
GDP	Gross Domestic Product
GLC	Government Link Companies
ICT	Information Communication Technology
IPR	Intellectual Property Rights
MAGIC	Malaysian Global Innovation and Creativity Centre
MCE	Malaysian Certificate of Education
MITI	Ministry of International Trade and Industry
MNC	Multi-National Companies
MSMEs	Micros, Small and Medium Enterprises
NSDC	National SME Development Council
OECD	Economic Cooperation and Development
PEMANDU	Performance Management and Delivery Unit
PMR	<i>Penilaian Menengah Rendah</i>
R&D	Research and Development





RBT	Resource-Based Theory
ROI	Return on Investment
SEM	Structural Equation Model
SRP	<i>Sijil Rendah Pelajaran</i>
SMEs	Small and Medium Enterprises
SME Corp.	SME Corporation Malaysia
SPM	<i>Sijil Pelajaran Malaysia</i>
STPM	<i>Sijil Tinggi Persekolahan Malaysia</i>
SPSS	Statistical Package For Social Science
SQAVE	Square Root Average Variance Extracted
UNDP	United Nations Development Programme
WIPO	World Intellectual Property Organisation





LIST OF APPENDICES

	Page
A Comprehensive Taxonomy: Entrepreneurial Competencies, Innovation and Business Success	273
B Taxonomy of Innovation Studies as a Mediator	278
C A Coding Summary of All Variables	281
D Letter of Verification for Conducting Research	285
E Cover Letter and Research Questionnaires for Respondents in English and Malay Language	286
F List of Research Publications	300
G List of Conference Proceedings	301





CHAPTER 1

INTRODUCTION



1.1 Introduction

Recent developments in research on entrepreneurship have been increased attention given to Small and Medium Enterprises or SMEs, largely due to the realisation that SMEs play a significant role in a country's economy. The collective impact of SMEs on the economy of both developed and developing countries is considerable. In developing country like Malaysia, SMEs are seen as a mechanism to improve the distribution of income, to stimulate economic growth, and to reshape an economic structure which has been highly depending on the activities of large firms (Mohsin, Halim, Ahmad, & Farhana, 2017; Murjan, 2012). This is seconded by the Prime





Minister of Malaysia claimed that SMEs are the backbone of Malaysian economy (SME Annual Report, 2017).

Given that increasing the chances of success among SMEs would have huge implications for the growth and socio-economic wellbeing of a country (Asia-Pacific Economic Cooperation [APEC], 2004), understanding predictors of success in SMEs is critical. The creation of more successful SMEs could potentially create new jobs, increase trade and income, and consequently GDP of the country. Unfortunately, the literature on SMEs shows lack of consistency with regard to the key factors that determine SMEs success (O'Regan & Ghobadian, 2004). Contrasting views exist, with some scholars attributing success to the influence of the individual (i.e., the entrepreneur) and others highlighting the importance of external/environmental factors (such as the state of the economy, government policy, financial support, and supportiveness of the infrastructure). However, Talik, Wiecheteck, and Laguna (2012) claimed that the business success of each business heavily depends on the person who managed it.

A central thesis of this study is that entrepreneurial competencies, which are defined as “underlying characteristics such as generic and specific knowledge, motives, traits, self-image, social roles, and skills which results in venture birth, survival, and/or growth” (Bird, 1995), may be the key to improving business success. The principal aim of the present study is, therefore, to examine the impact of entrepreneurial competencies on business success in SMEs operating in Malaysia. Al-Mamun, Muniady, Ibrahim, and Che Nawi (2018) suggested the level of





entrepreneurial competencies must be maximised to increase the economy sustainability.

Researchers are in general agreement about the numerous difficulties experienced by SMEs. In particular, SMEs have greater failure rates than larger firms and facing difficulties for surviving by Alfaadheel (2010). Murjan (2012) suggested that innovation is one of the keys for SMEs to survive and differentiate themselves from a rival. Several researchers have found innovation to have a significant relationship with business success (Szymanski & Henard, 2000; Li & Atuahene-Gima, 2001). Philipp Koellinger (2008) suggested that some entrepreneurs more innovative than others were related to their entrepreneurial competencies. Ndesaulwa and Kikula (2016), and, Mahina and Usman (2016) claimed that innovation has an impact on SMEs. Thus, this study also examines the innovation affected SMEs' business success.

1.2 Research Background

SMEs are very important to the world economies (Tehseen, Sajilan, Ramayah, & Gadar, 2015; Wiklund, Patzelt, & Shepherd, 2009). Throughout the world, the role of SMEs is becoming increasingly prominent (Bayarcelik, Tasel, & Apak, 2014; Veskaisri, Chan, & Pollard, 2007; Alsulamy, 2005). It plays a crucial role in the economic growth of most nations regardless status of countries (Wong, Ho, & Autio, 2005; Mahmood & Hanafi, 2013). A vibrant SMEs sector is one of the principal





driving forces in the development of the market, hence is not surprising that since the 1980s the birth and growth of new firms has been seen as a major source of economic growth (Gray, Saunders, & Goregaokar, 2013). This is supported by many researchers claimed that SMEs are an important agent to develop a country (Khan & Khalique, 2014; Alfaadhel, 2011; Oke, Burke, & Myers, 2007).

SMEs can be established for most of the activities of business, and they are considered as a backbone of country's economy (Khalique, Isa, Shaari, Abdul, and Ageel, 2011; Radam, Abu, & Abdullah, 2008; Amini, 2004). A report published by APEC (2010) suggested in every country in the APEC's members, SMEs account for over 90% of all enterprises. For economies of most nations of the world, the demand of the SMEs is increasing and has become their recognised feature (Thurasamy, Mohamad, Omar, & Marimuthu, 2009).

SMEs represents 99% of overall active firm globally, and SMEs created around 60% to 70% of total employment (Robu, 2013). According to OECD (2017), SMEs represents more than 95% of enterprises and ensure around 70% of the jobs. For example, in the United States of America, SMEs represent an overwhelming majority of all business and account for almost one-half of the gross national product, which SMEs contributed 53% (Mahmood & Hanafi, 2013). Shaver and Scott (1991) highlighted five main roles of SMEs such as: (1) SMEs provided job opportunities; (2) SMEs closed to customers due to flexibilities and distances; (3) SMEs performed sub-contracting functions; (4) SMEs acted as import substitute roles; and (5) SMEs acted as "balancing" in wealth distribution and power in society.

