The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.
THE RELATIONSHIP BETWEEN PERCEIVED EFFECTIVE ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURIAL INTENTION: THE ROLE OF PERCEPTION OF UNIVERSITY SUPPORT, PERCEIVED CREATIVITY DISPOSITION AND ENTREPRENEURIAL PASSION

ABDULLAHI NASIRU

DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
November 2015
THE RELATIONSHIP BETWEEN PERCEIVED EFFECTIVE
ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURIAL
INTENTION: THE ROLE OF PERCEPTION OF UNIVERSITY SUPPORT,
PERCEIVED CREATIVITY DISPOSITION AND ENTREPRENEURIAL
PASSION

By

ABDULLAHI NASIRU

Thesis Submitted to
School of Business Management,
Universiti Utara Malaysia,
in Fulfilment of the Requirement for the Degree of Doctor of Philosophy
PERMISSION TO USE

In presenting this thesis in fulfillment of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of School of Business Management where I did my thesis. It is understood that any copying or publication or use of this thesis or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of School of Business Management
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman
ABSTRACT

Entrepreneurship has led to the ever increasing and continuous growing field of entrepreneurship education. However, there are growing concerns about the effectiveness of the programme in forming entrepreneurial intention and the ultimate advancement of enterprising behaviour. Hence, this study investigated the relationship between perceived effective entrepreneurship education and entrepreneurial intention, while considering the role of perception of university support, perceived creativity disposition, entrepreneurial passion for inventing, and entrepreneurial passion for founding a business venture. To validate the model, data from 595 university students were analysed using the Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings showed that all the hypothesised direct relationships were supported except for the relationship between perceived effective entrepreneurship education and entrepreneurial intention. Similarly, the hypothesised mediating relationships were supported. In addition, only two hypothesized moderating relationships were supported, but not the moderating effect of perception of university support on perceived effective entrepreneurship education and entrepreneurial passion for founding. Based on the findings, this study contributes theoretically by extending the use of both the theory of planned behaviour and Shapero’s entrepreneurial event model framework to increase the understanding of the relationship between entrepreneurship education and entrepreneurial intention. Methodologically, this study contributes by employing the hierarchical modelling using PLS-SEM to explain the relationships developed. In practical terms, the findings provide the stakeholders responsible for entrepreneurship development a better picture of the formation of entrepreneurial intentions, as well as the impact of potential venture initiators’ beliefs and perceptions on their intention to commence a business. Overall, it enables the government and the policy-makers to direct thoughts and resources on young adults who are likely to form entrepreneurial intentions, and consequently, create business ventures.

Keywords: entrepreneurship education, university support, creativity disposition, entrepreneurial passion, entrepreneurial intention
ABSTRAK


Kata kunci: pendidikan keusahawanan, sokongan universiti, kreativiti peribadi, semangat keusahawanan, niat keusahawanan
ACKNOWLEDGEMENT

All praises are due to Allaah the lord of Al-Alamin (Mankind), by whose grace and mercy gave me the opportunity to embark on a PhD programme and provided me with the strength to complete the process. May Allaah’s mercy and blessings descend on His messenger and our Prophet Muhammad (Sallallaahu Alaihi wa sallam), his household, companions and those that follow them righteously till the day of Judgement.

I would like to appreciate and be grateful to my country (Nigeria) and my university (Ahmadu Bello University, Zaria) for the scholarship and study leave granted me to undertake my PhD programme in Malaysia.

My sincere gratitude goes to my humble and able supervisors Dr. Ooi Yeng Keat and Dr. Muhammad Awais Bhatti for their painstaking and excellent supervision of my PhD dissertation. I have learnt a lot by working with you. I am indeed thankful for your enduring patience with me. Many thanks also to my reviewers for their valuable contribution in making this work better.

My Mother! Ma sha Allaah! My heartfelt appreciation goes for your kindness and prayers through my life. May Allaah reward you with the best of rewards.

I am indeed overwhelm and thankful to my loving wife, Hajara Baba Maiturare for her caring, patience, help and prayers to my success. May you be among the women of Jannah. I am also thankful to my children for their prayers and patience. May Allaah bless and protect you and may you be successful in this world and hereafter.

Finally, I am indebted to my relatives, friends and well-wishers through the PhD journey. I have received lots of encouragements and prayers from you, may the Almighty Allaah grant you enormous reward.
# TABLE OF CONTENTS

TITILE PAGE ............................................................. i
CERTIFICATION OF THESIS WORK ................................. ii
PERMISSION TO USE ................................................... iii
ABSTRACT ................................................................ iv
ABSTRAK .................................................................. v
ACKNOWLEDGEMENT ..................................................... vi
TABLE OF CONTENTS .................................................. vii
LIST OF TABLES .......................................................... x
LIST OF FIGURES ........................................................ xi
LIST OF APPENDICES .................................................... xii
LIST OF ABBREVIATIONS ............................................... xiii

CHAPTER ONE: INTRODUCTION ...................................... 1
1.1 Background of the Study .......................................... 1
1.2 Problem Statement ................................................ 5
1.3 Research Questions ................................................ 13
1.4 Research Objectives .............................................. 14
1.5 Scope of the Study .................................................. 15
1.6 Significance of the Study ....................................... 16
1.7 Organisation of the Thesis ...................................... 20

CHAPTER TWO: LITERATURE REVIEW ......................... 21
2.1 Introduction .......................................................... 21
2.2 Concept of Entrepreneurship .................................... 21
2.3 Concept of Entrepreneurial Intentions ....................... 27
2.4 Entrepreneurship Education and Entrepreneurial Intentions .... 33
2.5 Entrepreneurship Education and Creativity ............... 48
2.6 Entrepreneurship Education and Entrepreneurial Passion .... 65
2.7 Creativity and Entrepreneurial Intention .................... 73
2.8 Entrepreneurial Passion and Entrepreneurial Intentions .... 79
2.9 University Support and Entrepreneurial Intention ......... 92
2.10 Summary ............................................................. 103

CHAPTER THREE: METHODOLOGY .............................. 110
3.1 Introduction .......................................................... 110
3.2 Underpinning Theory ............................................ 110
3.3 Theoretical Framework .......................................... 118
3.4 Development of Hypotheses .................................... 119
    3.4.1 Entrepreneurship Education and Entrepreneurial Intentions .... 120
    3.4.2 Entrepreneurship Education and Creativity .................. 125
    3.4.3 Entrepreneurship Education and Entrepreneurial Passion .... 129
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4.4 Creativity and Entrepreneurial Intention</td>
<td>131</td>
</tr>
<tr>
<td>3.4.5 Entrepreneurial Passion and Entrepreneurial Intentions</td>
<td>134</td>
</tr>
<tr>
<td>3.4.6 Perceived Creativity Disposition as a Mediator</td>
<td>138</td>
</tr>
<tr>
<td>3.4.7 Entrepreneurial Passion as a Mediator</td>
<td>141</td>
</tr>
<tr>
<td>3.4.8 Perceived University Support as a Moderator</td>
<td>144</td>
</tr>
<tr>
<td>3.5 Research Design</td>
<td>148</td>
</tr>
<tr>
<td>3.6 Instrumentation and Measurement of Variables</td>
<td>149</td>
</tr>
<tr>
<td>3.6.1 Effective Entrepreneurship Education</td>
<td>150</td>
</tr>
<tr>
<td>3.6.2 Perceived Creativity Disposition</td>
<td>151</td>
</tr>
<tr>
<td>3.6.3 Entrepreneurial Passion</td>
<td>152</td>
</tr>
<tr>
<td>3.6.4 Perception of University Support</td>
<td>153</td>
</tr>
<tr>
<td>3.6.5 Entrepreneurial Intention</td>
<td>154</td>
</tr>
<tr>
<td>3.7 Population of the Study</td>
<td>155</td>
</tr>
<tr>
<td>3.8 Sample Size Determination</td>
<td>157</td>
</tr>
<tr>
<td>3.9 Sampling Technique</td>
<td>158</td>
</tr>
<tr>
<td>3.10 Pilot Study</td>
<td>162</td>
</tr>
<tr>
<td>3.11 Data Collection Procedures</td>
<td>165</td>
</tr>
<tr>
<td>3.12 Data Analysis Technique</td>
<td>165</td>
</tr>
<tr>
<td>3.13 Summary</td>
<td>167</td>
</tr>
</tbody>
</table>

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS 169

4.1 Introduction 169
4.2 Response Rate 170
4.3 Non-Response Bias 171
4.4 Data Screening and Data Preparation 172
4.4.1 Analysis of Missing Values 173
4.4.2 Analysis of Outliers 175
4.4.3 Test of Normality 176
4.4.4 Test of Multicollinearity 178
4.5 Sample Characteristics 180
4.6 Descriptive Statistics of the Study Variables 181
4.7 Common Method Variance 182
4.8 Assessment of Measurement Model (PLS-SEM) 185
4.8.1 Introduction 185
4.8.2 Reliability and Validity Assessments 187
4.8.3 Results of Reliability and Validity Assessments 190
4.8.4 Assessing Second Order Formative Measurement Model 196
4.9 Assessment of Structural Model (PLS-SEM) 198
4.9.1 Introduction 198
4.9.2 Results from Assessment of Structural Model 198
4.9.3 Results of Hypotheses Testing 203
4.9.4 Test of Mediating Effects 206
4.9.5 Test of Moderating Effects 210
4.9.6 Summary of Hypotheses 214
4.9.7 Power Analysis 215
4.10 Summary 217
CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.1 Overview 218
5.2 Research Objectives 219
5.3 Summary of Findings 220
5.4 Contribution of the Study 234
   5.4.1 Contribution to Theory 235
   5.4.2 Contribution to Methodology 237
   5.4.3 Contribution to Practice 240
5.5 Limitation and Future Research Direction 243
5.6 Conclusion 246

REFERENCES 249
LIST OF TABLES

Table 3.1 Summary of Hypotheses 119
Table 3.2 Summary of measures of variables adopted 155
Table 3.3 Population summary 157
Table 3.4 Proportionate Stratified Sampling 159
Table 3.5 Proportionate Stratified Sampling (ABU) 160
Table 3.6 Proportionate Stratified Sampling (BUK) 161
Table 3.7 Proportionate Stratified Sampling (UDUS) 161
Table 3.8 Internal consistency, convergent validity, and average variance extracted (AVE) for the first-order constructs 164
Table 4.1 Response Rate for the Questionnaires 171
Table 4.2 Missing Data by Variable 174
Table 4.3 Correlations Matrix of the exogenous latent variables 179
Table 4.4 Tolerance and VIF Values of the latent constructs 180
Table 4.5 Sample Characteristics 181
Table 4.6 Descriptive Statistics 182
Table 4.7 Systematic Evaluation of PLS-SEM Results 187
Table 4.8 Determining Reliability and Validity 189
Table 4.9 Item loading, internal consistency, and average variance extracted for the first-order constructs 192
Table 4.10 Square Root of AVE and correlations of latent variables for the first-order constructs 193
Table 4.11 Measurement items loading and cross-loading for the first-order constructs 195
Table 4.12 Formative indicators’ weights, significance, and test of multicollinearity 197
Table 4.13 Measures and Threshold Values for Assessment of Inner Model 198
Table 4.14 Results of Path Coefficients 199
Table 4.15 Coefficients of Determination (R2) 200
Table 4.16 f2 Effect Size 202
Table 4.17 Predictive Relevance (Q2) Values 203
Table 4.18 Results of Hypotheses Testing 205
Table 4.19 Competing Models Analysis 209
Table 4.20 Tests of the Multiple Mediator Model 210
Table 4.21 Summary of Hypotheses Testing 214
Table 4.22 G*Power Analysis 216
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Theoretical Framework</td>
<td>109</td>
</tr>
<tr>
<td>4.1</td>
<td>Histogram and Normal Probability Plots</td>
<td>164</td>
</tr>
<tr>
<td>4.2</td>
<td>Validated Structural Model</td>
<td>185</td>
</tr>
<tr>
<td>4.3</td>
<td>Interaction Effect of perceived effective entrepreneurship education and perception of University support on perceived creativity disposition</td>
<td>196</td>
</tr>
<tr>
<td>4.4</td>
<td>Interaction Effect of perceived effective entrepreneurship education and perception of University support on entrepreneurial passion for inventing</td>
<td>197</td>
</tr>
</tbody>
</table>
## LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>Academic Research Questionnaire</td>
<td>308</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Replacement of Missing Value</td>
<td>315</td>
</tr>
<tr>
<td>Appendix C</td>
<td>Overview of the Measurement Model</td>
<td>318</td>
</tr>
<tr>
<td>Appendix D</td>
<td>Path Coefficients (Mean, Stdev., T-values) of the Research Model</td>
<td>319</td>
</tr>
<tr>
<td>Appendix E</td>
<td>Mediation Analysis with Bootstrapping Output from PLS</td>
<td>320</td>
</tr>
<tr>
<td>Appendix F</td>
<td>Blindfolding Output from PLS</td>
<td>321</td>
</tr>
<tr>
<td>Appendix G</td>
<td>Harman’s Single-Factor Test</td>
<td>322</td>
</tr>
<tr>
<td>Appendix H</td>
<td>Power Analysis (Using the Program G*Power 3.1.9.2)</td>
<td>324</td>
</tr>
</tbody>
</table>
### LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUC</td>
<td>National Universities Commission</td>
</tr>
<tr>
<td>ABU</td>
<td>Ahmadu Bello University</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of variance</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>BT-PPP</td>
<td>Business Team Projects Partnership Programme</td>
</tr>
<tr>
<td>BUK</td>
<td>Bayero University Kano</td>
</tr>
<tr>
<td>CB-SEM</td>
<td>Covariance Based Structural Equation Modelling</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>CMV</td>
<td>Common Method Variance</td>
</tr>
<tr>
<td>CPS</td>
<td>Creative Problem Solving</td>
</tr>
<tr>
<td>EEPs</td>
<td>Entrepreneurship Education Programmes</td>
</tr>
<tr>
<td>EI</td>
<td>Entrepreneurial Intention</td>
</tr>
<tr>
<td>EPF</td>
<td>Entrepreneurial Passion for Founding</td>
</tr>
<tr>
<td>EPI</td>
<td>Entrepreneurial Passion for Inventing</td>
</tr>
<tr>
<td>$f^2$</td>
<td>Effect Size</td>
</tr>
<tr>
<td>GEM</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td>HEIs</td>
<td>Higher Education Institutions</td>
</tr>
<tr>
<td>HP</td>
<td>Harmonious Passion</td>
</tr>
<tr>
<td>ICF</td>
<td>Identity Centrality for Founding</td>
</tr>
<tr>
<td>ICI</td>
<td>Identity Centrality for Inventing</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td>IDA</td>
<td>Industrial Development Authority</td>
</tr>
<tr>
<td>IPFF</td>
<td>Intense Positive Feeling for Founding</td>
</tr>
<tr>
<td>IPFI</td>
<td>Intense Positive Feeling for Inventing</td>
</tr>
<tr>
<td>IPL</td>
<td>Polytechnic Institute of Leiria</td>
</tr>
<tr>
<td>IRIB</td>
<td>Islamic Republic of Iran Broadcasting</td>
</tr>
<tr>
<td>ITEEM</td>
<td>Institut Technologique Européen d'Entrepreneuriat et de Management</td>
</tr>
<tr>
<td>MBA</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>MIT</td>
<td>Massachusetts Institute of Technology</td>
</tr>
<tr>
<td>NBS</td>
<td>National Bureau of Statistics</td>
</tr>
<tr>
<td>NPIC</td>
<td>National Pingtung Institute of Commerce</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OP</td>
<td>Obsessive Passion</td>
</tr>
<tr>
<td>OTT</td>
<td>Over-Inclusive Thinking Training</td>
</tr>
<tr>
<td>PCD</td>
<td>Perceived Creativity Disposition</td>
</tr>
<tr>
<td>PEEE</td>
<td>Perceived Effective Entrepreneurship Education</td>
</tr>
<tr>
<td>PLS</td>
<td>Partial Least Squares</td>
</tr>
<tr>
<td>PLS-SEM</td>
<td>Partial Least Squares Structural Equation Modelling</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Q²</td>
<td>Predictive Relevance</td>
</tr>
<tr>
<td>R²</td>
<td>Coefficient of Determination</td>
</tr>
<tr>
<td>SEE</td>
<td>Shapero’s Entrepreneurial Event</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>TPB</td>
<td>Theory of Planned Behaviour</td>
</tr>
<tr>
<td>UDUS</td>
<td>Usman Danfodio University Sokoto</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UTHM</td>
<td>Universiti Tun Hussein Onn Malaysia</td>
</tr>
<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
</tr>
<tr>
<td>YAA</td>
<td>Young Achievement Australia</td>
</tr>
</tbody>
</table>
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Entrepreneurship has become a worldwide programme because of its significant contributions to the economy of countries through job creation and generating high employment, innovativeness and creativity, social development and economic growth (Timmons, 1999; Shane & Venkataraman, 2000; Thurik, 2001; Carree & Thurik, 2003; Acs & Audretsch, 2005; Audretsch & Rowley, Baregheh, & Sambrook, 2011, Prakash, Jain, & Chauhan, 2015). Developed countries, such as USA, Japan, and Germany have all enjoyed economic growth due to the presence entrepreneurs (Prakash, Jain, & Chauhan, 2015). Entrepreneurship has a simple meaning of starting a business to a more complex definition involving independence, creativity, innovativeness, initiative, and risk-taking (Bruyat & Julien, 2001). Opportunity identification is, thus, the beginning of entrepreneurship and the procedure is obviously intentional (Wang, Lu, & Millington, 2011).

Moreover, the aspect of entrepreneurial intentions (EI) is necessary to comprehend the entrepreneurial process since it precedes entrepreneurial behaviour (Krueger & Carsrud, 1993; Arendt & Brettel, 2010; Gámez-González, Rondan-Cataluña, Diez-de Castro, & Navarro-Garcia, 2010; Lin, Lin, & Lin, 2010; Zhang & Duan, 2010). Intention is also the
The contents of the thesis is for internal user only
REFERENCES


Ariff, A. H. M., Bidin, Z., Sharif, Z., & Ahmad, A. (2010). Predicting entrepreneurship intention among Malay University Accounting students in Malaysia. UNIFAR e-journal, 6(1).


Taiwan *Education Management, Education Theory and Education Application* (pp. 511-517). Berlin Heidelberg: Springer.


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/adopti on study. *Information systems research, 14*(2), 189-217.


Moriguchi, S. N., de Oliveira Filho, J. B., & Menck, A. C. M. An Innovative Approach to Teach Entrepreneurship: A Case Study.


Motaharrad, H., Arasteh, H. R., & Jafari, P. The effect of in-service entrepreneurship training on mass media managers’ entrepreneurship: A case study of IRIB.


Reitan, B. (1997). *Where do we learn that entrepreneurship is feasible, desirable, and/or profitable.* Paper presented at the ICSB World Conference, San Francisco, CA.


& K. J. Shaver (Eds.), *Frontiers of entrepreneurship research* (pp. 73–87). Wellesley, MA Babson College Press.


