

Graduate School of Business

**Sustainable Growth of Informal Social Microenterprises (ISMs)
in a Developing Country: A Multidimensional Assessment**

Eijaz Ahmed Khan

**This thesis is presented for the degree of
Doctor of Philosophy
of
Curtin University**

July 2014

DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

(Eijaz Ahmed Khan)

Date: July 2014

DEDICATION

Dedicated to my loving family

My late dad: Zulfiqar Ahmed Khan

My mom: Samrun Nesa

My bro: Iftekhar Ahmed Khan, Izhar Ahmed Khan, and Monir Ahmed Khan

My sis: Nazma Khatun, Azmat Ara, and Salma Khatun

ACKNOWLEDGMENTS

In the name of Allah, the Most Gracious and the Most Merciful...

I would like to take this opportunity to express my gratitude and thank my supervisor, Professor Mohammed Quaddus for his guidance and support during the entire research process. Without his guidance it would not have been possible for me to complete the research on time. The extraordinary thing which I felt about Professor Mohammed Quaddus was the systematic manner in which he guided me through the research. He makes the task look so simple. He helped me in believing that I would be able to complete the research. I would like to thank him for all the support, both moral and academic which he provided me throughout this process.

I am deeply grateful to Dr Anna Lee Rowe for being a co-supervisor of this research and providing me an academic comments and suggestions. Especially, she bridged my research with sustainability issues.

I would like to extend my profound gratitude to the Curtin International Postgraduate Research Scholarship (CIPRS) for giving me a financial support for a doctoral study at Curtin Graduate School of Business, Curtin University, Australia.

I would like to extend my special thanks to Curtin Business School, Graduate School of Business and the staffs for their provision of knowledge, support and facilities. I also would like to express my deep appreciation to my fellow members at fourth level of Curtin Graduate School of Business. Without their steady encouragement, this process would not have been materialized.

I extend my thanks to the participants of the field study as the research would not have been possible without their valuable input. Sincere thanks for their unforgettable helps enabled me to get access to relevant information.

Last but not least, I am especially indebted to my parents who always provide love and moral support through every step of my life. I also wish to thanks to my brothers and sisters for their loving supports and encouragement during the study.

I thank you all.

ABSTRACT

The sustainable growth of informal social microenterprises (ISMs) is seen as an important element of overall economic policy, especially for promoting self-employment, reducing poverty and enhancing overall growth in a developing country. Despite increased attention from scholars, practitioners and policy makers, the sustainable growth of ISMs and its challenges have been continuously reported and are frequently growing. This problem is in part related to the failure of the existing frameworks which are inconsistent, overlapping and contradictory and do not adequately address the relevant issues. Although many studies have been conducted, the investigation of the antecedent factors of sustainable growth of ISMs is still relatively unexplored. Consequently, there is a huge gap between theory and practice in understanding antecedents' factors and outcomes of ISMs. Therefore, the current research addresses this shortcoming by exploring and empirically examining the antecedents that influence the sustainable growth of ISMs particularly in the context of a developing country like Bangladesh.

Considering the tea-stall micro-business in Bangladesh as a case example of ISMs, the research particularly focused on the dimensions and subdimensions of antecedents and outcomes that may have impact on ISMs' entrepreneurial activities and growth. The research investigated the relationship between antecedents and the sustainable performance of ISMs as well as between antecedents and the entrepreneurial orientation of ISMs. Another important aim of this study was to determine the moderating effects of firm life cycle stages on the immediate antecedents and outcomes of ISMs. As a result, a multidimensional hierarchical model that consisted of various dimensions and subdimensions of ISMs was established.

This research used a combination of the theoretical foundations of resource-based theory and firm life-cycle theory to examine the antecedents and outcomes of ISMs. The research adopted the positivist paradigm and a two-phase sequential mixed method consisting of qualitative and quantitative approaches was employed. A tentative research model was firstly developed based on the extensive literature review. A qualitative field study was then carried out to fine tune the initial research model. Findings from the qualitative method were also used to develop measures and instruments for the next phase which used the quantitative method. A survey was

carried out with a sample of micro-firm owners of tea-stall firms and was analysed by partial least squares (PLS)-based structural equation modelling (SEM).

The major findings of this research have confirmed the influence of personality traits, human capital and marketing capabilities as the major determinants of the entrepreneurial orientation of the ISMs. Furthermore, results have demonstrated the role of social capital, marketing capabilities and business environment as the antecedents of ISMs' sustainable development. Findings also verified the moderating effect of the firm life cycle on the immediate antecedents and outcomes of ISMs. Overall, results have confirmed the multidimensional construct and the complexity of such a hierarchical model.

This current research has both theoretical and practical implications. By encompassing the combined explanatory power of each component, the ISMs' sustainable growth model has advanced resource-based theory in ISMs' research while presenting a parsimonious structure. This study has also extended the life-cycle theory of the firm in the ISMs' domain. Taking into account the moderating effects of firm life-cycle stages on the ISMs' immediate antecedents and outcomes, the study developed and empirically tested a better conceptual model for understanding the sustainable growth of ISMs.

As for practical implications, it has been borne out in this study that neither resources such as human capital and financial capital nor capabilities such as entrepreneurial orientation and personality traits have a significant influence on microenterprise success. This is a sign of failure for a developing country like Bangladesh with more than half of its employment composed of microenterprise operators. This study calls for policy makers to revisit the current intervention strategies to evaluate whether these interventions have worked. Most important for policy makers is the recognition of the life-cycle stage of micro-firms during policy implementation. The study suggests that an indiscriminate approach to microenterprise support is less effective. Finally, it is important to note that success is complex to understand and that policy makers should be specific about the goals they want to achieve before interventions of any kind.

LIST OF PRESENTATIONS AND PUBLICATIONS

Parts of this thesis have been presented and published in the following conferences and publications:

1. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). "Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries- Qualitative and Quantitative Evidence" in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
2. Khan, E.A. (2013). "Investigating the Dimensions of Financial Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in a Developing Country", *Curtin Business School Doctoral Colloquium*, Curtin University, Perth, Australia.
3. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). "The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation" in *Proceedings of the 26th Annual SEANZ Conference*, Sydney, Australia.
4. Khan, E.A. (2013). "Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Field Study and Survey Experiment", *Emerging Research Initiatives and Development in Business: CGSB Research Forum. Curtin Graduate School of Business*, Curtin University, Perth, Australia.
5. Khan, E.A., Rowe, A.L. and Quaddus, M. (2013). "The Relationship of Personality Traits of Informal Micro-enterprise Entrepreneurs, Role of Business Environment, and Firm Sustainable Performance - Qualitative Evidence from Bangladesh" in *Proceedings of the Business and Economics Society International Conference*, Perth, Australia.
6. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). "Personality Traits, Entrepreneurial Orientation, Business Environment, and Micro-Firm Sustainable Performance: A Multidimensional Assessment" in *Proceedings of the International Studying Leadership Conference*, Perth, Australia.
7. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). "Marketing Capabilities and Sustainable Performance of Informal Social Micro-enterprises (ISMEs) in Developing Countries" in *Proceedings of the 2nd Annual Conference on Global Economics, Business, and Finance (GEBF)*, Hong Kong.
8. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). "Sustainable Growth of Informal Social Micro-enterprises (ISMEs): A Multidimensional Model" in *Proceedings of the 7th Biennial Conference of Hong Kong Economic Association (HKEA)*, Hong Kong.
9. Khan, E.A., Rowe, A.L. and Quaddus, M. (2012). "Exploring Sustainable Growth of Social Micro-enterprises in an Emerging Economy" in *Proceedings of the 15th EMAN Conference on Environmental and Sustainability Management Accounting in collaboration with the CSEAR International Congress on Social and Environmental Accounting Research*, Helsinki, Finland.
10. Khan, E.A. (2011). "Managing Resources in the Stages of Micro Enterprise Life Cycle: A Conceptual View", *Emerging Research Initiatives and Development in Business: CGSB Research Forum. Curtin Graduate School of Business*, Curtin University, Perth, Australia.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	1
1.1 OVERVIEW	1
1.2 PROBLEM STATEMENT	2
1.3 RESEARCH FOCUS	7
1.4 RESEARCH QUESTIONS AND OBJECTIVES	9
1.5 RESEARCH SIGNIFICANCE	9
1.6 THESIS ORGANIZATION	10
1.7 SUMMARY	13
CHAPTER 2: INFORMAL SOCIAL MICROENTERPRISES IN DEVELOPING COUNTRIES	14
2.1 INTRODUCTION	14
2.2 THE CONCEPT OF THE INFORMAL SECTOR	14
2.3 CHARACTERISTICS OF INFORMAL MICROENTERPRISES	16
2.4 INFORMAL SOCIAL MICROENTERPRISES	20
2.5 TYPES OF ISMs	21
2.6 ADVANTAGES AND DISADVANTAGES OF ISMs	22
2.7 ISMs IN DEVELOPING COUNTRIES	24
2.8 ISMs IN BANGLADESH	28
2.9 THE STUDY RATIONAL	31
2.10 SUMMARY	32
CHAPTER 3: LITERATURE REVIEW AND CONCEPTUAL MODEL	33
3.1 INTRODUCTION	33
3.2 LITERATURE SEARCH	34
3.3 REVIEW OF FIRM GROWTH THEORIES	35
3.3.1 Findings and Gaps	38
3.4 THE RESOURCE-BASED VIEW	38
3.4.1 Entrepreneurial Orientation	40
3.4.2 Human Capital	43
3.4.3 Social Capital	46
3.4.4 Financial Capital	48
3.4.5 Business Environment	49
3.4.6 Sustainable Performance	50
3.4.7 Findings and Gaps	55
3.5 DIMENSIONALITY OF ANTECEDENTS AND OUTCOMES	55
3.5.1 Findings and Gaps	60
3.6 THE FIRM LIFE-CYCLE THEORY	61
3.6.1 Application of the Firm Life Cycle Theory	62
3.6.2 Findings and Gaps	63
3.7 CONCEPTUAL FRAMEWORK	64
3.8 INITIAL RESEARCH MODEL	66
3.9 SUMMARY	69
CHAPTER 4: RESEARCH METHODOLOGY	70
4.1 INTRODUCTION	70
4.2 RESEARCH PARADIGM	71
4.3 RESEARCH NOVELTY	73
4.4 METHODOLOGICAL FITNESS	74
4.5 RESEARCH METHOD	76
4.6 RESEARCH PROCESS	77
4.7 QUALITATIVE FIELD STUDY	79

4.7.1	Sample Selection	80
4.7.2	Data Collection	80
4.7.3	Data Analysis	81
4.8	QUANTITATIVE STUDY METHOD	82
4.8.1	Questionnaire Development	82
4.8.2	Pre-testing the Questionnaire	83
4.8.3	Sampling	83
4.8.4	Data Collection	84
4.8.5	Data Analysis	84
4.8.6	Estimating the Hierarchical Model	85
4.8.6.1	Repeated-indicator Approach	85
4.8.6.2	Two-stage Approach	86
4.8.7	Partial Least Squares (PLS) Procedures	86
4.8.7.1	Assessment of Measurement Model	87
4.8.7.2	Assessment of Structural Model	90
4.9	SUMMARY	92
CHAPTER 5: FIELD STUDY AND THE COMPREHENSIVE RESEARCH MODEL		93
5.1	INTRODUCTION	93
5.2	OPERATIONAL OVERVIEW OF THE FIELD STUDY	94
5.2.1	Sample Selection	94
5.2.2	Interview Questionnaire Development	95
5.2.3	Data Collection	96
5.2.4	Data Analysis	97
5.3	FINDINGS (1 st Stage: Inductive Analysis)	99
5.3.1	Dimensions, Subdimensions and Variables	99
5.3.1.1	Entrepreneurial Orientation	99
5.3.1.2	Human Capital	101
5.3.1.3	Social Capital	103
5.3.1.4	Financial Capital	104
5.3.1.5	Business Environment	105
5.3.1.6	Sustainable Performance	106
5.3.1.7	Firm Life Cycle	108
5.4	FINDINGS OF OTHER RELEVANT FACTORS (1 st Stage: Inductive Analysis)	110
5.4.1	Dimensions, Subdimensions and Variables	111
5.4.1.1	Personality Traits	111
5.4.1.2	Marketing Capabilities	112
5.4.2	Relationships among Dimensions	114
5.5	FINDINGS (2 nd Stage: Deductive Analysis)	116
5.6	JUSTIFICATION OF THE FINDINGS	119
5.7	THE COMPREHENSIVE RESEARCH MODEL	121
5.8	SUMMARY	122
CHAPTER 6: HYPOTHESES AND INSTRUMENT DEVELOPMENT		123
6.1	INTRODUCTION	123
6.2	HYPOTHESES DEVELOPMENT	123
6.2.1	Personality Traits	124
6.2.2	Entrepreneurial Orientation	125
6.2.3	Human Capital	126
6.2.4	Social Capital	128
6.2.5	Financial Capital	129
6.2.6	Marketing Capabilities	131
6.2.7	Business Environment	133
6.2.8	Firm Life Cycle	134
6.3	HYPOTHESES AT A GLANCE	135
6.4	INTRUMENT DEVELOPMENT	137

6.4.1	Instrument Development Process	138
6.4.2	Scale Development	138
6.4.3	Reflective and Formative Measurements	140
6.5	QUESTIONNAIRE DEVELOPMENT	141
6.5.1	Questionnaire Section 1: Background Information	141
6.5.2	Questionnaire Section 2 to 9: Antecedents and Outcomes	142
6.5.2.1	Questionnaire Section 2: Personality Traits	142
6.5.2.2	Questionnaire Section 3: Entrepreneurial Orientation	143
6.5.2.3	Questionnaire Section 4: Human Capital	144
6.5.2.4	Questionnaire Section 5: Social Capital	144
6.5.2.5	Questionnaire Section 6: Financial Capital	144
6.5.2.6	Questionnaire Section 7: Marketing Capabilities	145
6.5.2.7	Questionnaire Section 8: Business Environment	145
6.5.2.8	Questionnaire Section 9: Outcomes	146
6.5.3	Questionnaire Section 10: Microenterprises Life Cycle	146
6.6	COMMON METHOD BIAS ASSESSMENT	151
6.7	PRE-TESTING OF THE RESEARCH INSTRUMENTS	151
6.8	SUMMARY	153
CHAPTER 7: SURVEY AND QUANTITATIVE DATA ANALYSIS		154
7.1	INTRODUCTION	154
7.2	SURVEY OVERVIEW	155
7.2.1	Sample Selection and Data Collection	155
7.2.2	Response Rate	155
7.2.3	Data Screening	156
7.2.4	Pilot Test	156
7.3	DESCRIPTIVE PRESENTATION OF THE SAMPLE	156
7.4	DATA ANALYSIS PART-1: (Main model antecedents and outcomes)	160
7.4.1	First-order Measurement Model	160
7.4.2	Second-order Measurement Model	171
7.4.3	Structural Model (Main model)	181
7.5	DATA ANALYSIS PART-2: (Life cycle model antecedents and outcomes)	184
7.5.1	Second-order Measurement Model	199
7.5.2	Structural Model (Life-cycle model)	201
7.6	SUMMARY	210
CHAPTER 8: RESULTS AND DISCUSSIONS		211
8.1	INTRODUCTION	211
8.2	DISCUSSION OF CONSTRUCTS' DIMENSIONALITY	211
8.2.1	Personality Traits	212
8.2.2	Entrepreneurial Orientation	213
8.2.3	Human Capital	213
8.2.4	Social Capital	214
8.2.5	Financial Capital	214
8.2.6	Marketing Capabilities	215
8.2.7	Business Environment	215
8.2.8	Sustainable Performance	216
8.3	DISCUSSION OF HYPOTHESES	216
8.3.1	Personality Traits to Sustainable Performance (H1a)	217
8.3.2	Personality Traits to Entrepreneurial Orientation (H1b)	218
8.3.3	Entrepreneurial Orientation and Sustainable Performance (H2)	219
8.3.4	Human Capital to Sustainable Performance (H3a)	219
8.3.5	Human Capital to Entrepreneurial Orientation (H3b)	220
8.3.6	Social Capital to Sustainable Performance (H4a)	221
8.3.7	Social Capital to Entrepreneurial Orientation	222
8.3.8	Financial Capital to Sustainable Performance (H5a)	223

8.3.9	Financial Capital to Entrepreneurial Orientation (H5b)	223
8.3.10	Marketing Capabilities to Sustainable Performance (H6a)	224
8.3.11	Marketing Capabilities to Entrepreneurial Orientation (H6b)	225
8.3.12	Business Environment to Sustainable Performance (H7a)	226
8.3.13	Business Environment to Entrepreneurial Orientation (H7b)	227
8.3.14	Firm Life-Cycle*Antecedents and Outcomes (H8)	228
8.4	SUMMARY	229
CHAPTER 9: CONCLUSIONS AND FUTURE DIRECTIONS		230
9.1	INTRODUCTION	230
9.2	RESEARCH SUMMARY	230
9.3	RESEARCH CONTRIBUTIONS	232
9.3.1	Theoretical Contributions	232
9.3.2	Practical Contributions	233
9.4	RESEARCH LIMITATIONS	234
9.5	FUTURE DIRECTIONS	235
REFERENCES		236

LIST OF TABLES

Table 1.1 Structure of the thesis	11
Table 2.1: Types of ISMs in the developed and the developing world	22
Table 2.2: Advantages and disadvantages of ISMs	23
Table 2.3 98 developing countries according to size of informal economy	25-26
Table 2.4: Share of informal employment in total non-agricultural employment	27
Table 2.5 GDP share of formal and informal sector	29
Table 2.6 Employment by nature of employment, sex and urban/rural	29
Table 2.7 Employment by industry and nature of employment	30
Table 4.1: Paradigms matrix: subjectivist-objectivist and radical-regulation	71
Table 4.2: Inquiry paradigms – comparison of authors	72
Table 4.3: Interpretivist vs. positivist paradigm	72
Table 4.4: Theory vs. method vs. context	74
Table 4.5: The two-step approach of PLS analysis	87
Table 5.1 Participants' profile	95
Table 5.2 Dimension, subdimensions and variables supported by field study	109-110
Table 5.3 Dimension, sub dimensions and variables supported by field study	113-114
Table 5.4: Linkages among the dimensions-explored from the qualitative analysis	114
Table 5.5: Justification of dimensions, subdimensions and links for the comprehensive model	120
Table 6.1: Summary of hypotheses statements	136
Table 6.2: Decision rules for formative or reflective measurements	140
Table 6.3: Background information items	142
Table 6.4: Measurement of items related to antecedents and outcomes	147-150
Table 7.1: Survey respondents by gender	157
Table 7.2: Survey respondents by marital status	157
Table 7.3: Survey respondents by age	157
Table 7.4: Survey respondents by education	158
Table 7.5: Survey respondents by family size	158
Table 7.6: Survey respondents by family member involvement	158
Table 7.7: Survey respondents by waged worker	159
Table 7.8: Survey respondents by location	159
Table 7.9: Survey respondents by firm age	159
Table 7.10: Survey respondents by monthly average sales	160
Table 7.11: Psychometric properties for first-order constructs: Main model (repeated-indicator approach)	164-167
Table 7.12: Psychometric properties for first-order constructs: AVE square root (repeated-indicator approach)	168
Table 7.13: Psychometric properties for first-order constructs: Cross loadings (repeated-indicator approach)	169-170
Table 7.14: Psychometric properties for second-order constructs: Main model (repeated-indicator approach)	173-176
Table 7.15: Psychometric properties for second-order construct: Main model (two-stage approach)	177-180
Table 7.16: Evaluation of the research hypotheses (Direct effect)	181
Table 7.17: Evaluation of the total effect	183
Table 7.18: Power analysis (1- β)	184
Table 7.19: Survey respondents by life-cycle stage (Micro-firm owner)	185
Table 7.20: Survey respondents by life-cycle stage (Surveyor)	185
Table 7.21: Psychometric properties for first-order constructs: Firm life-cycle model (repeated-indicator approach)	187-188
Table 7.22a: Psychometric properties for first-order constructs: AVE square root for start stage (repeated-indicator approach)	189
Table 7.22b: Psychometric properties for first-order constructs: AVE square root for growth stage (repeated-indicator approach)	189

Table 7.22c: Psychometric properties for first-order constructs: AVE square root for mature stage (repeated-indicator approach)	190
Table 7.22d: Psychometric properties for first-order constructs: AVE square root for decline stage (repeated- indicator approach)	190
Table 7.23a: Psychometric properties for first-order constructs: Cross loadings for start stage (repeated-indicator approach)	191-192
Table 7.23b: Psychometric properties for first-order constructs: Cross loadings growth stage (repeated-indicator approach)	193-194
Table 7.23c: Psychometric properties for first-order constructs: Cross loadings for mature stage (repeated-indicator approach)	195-196
Table 7.23d: Psychometric properties for first-order constructs: Cross loadings for decline stage (repeated-indicator approach)	197-198
Table 7.24: Psychometric properties for second-order construct: Firm life-cycle stage (two-stage approach)	200
Table 7.25: Evaluation of the research hypotheses (Direct effect)	204
Table 7.26: Evaluation of the total effect	204
Table 7.27: Evaluation of the R ² and Q ²	205
Table 7.28a: Power analysis (1-β) start stage	206
Table 7.28b: Power analysis (1-β) growth stage	206
Table 7.28c: Power analysis (1-β) mature stage	207
Table 7.28d: Power analysis (1-β) decline stage	207
Table 7.29: Results of pooled error term t-tests by subgroup	209

LIST OF FIGURES

Figure 3.1: The preliminary research model	68
Figure 4.1: The sequential research process	77
Figure 5.1: Stage 1 - Analysis of individual scripts	98
Figure 5.2: Stage 2 - Cross examination of all transcripts	99
Figure 5.3: The comprehensive research model	121
Figure 6.1: The hypothesized research model	137
Figure 7.1: The main model antecedents and outcomes	163
Figure 7.2: The main effects model	182
Figure 7.3: Power analysis (1- β)	184
Figure 7.4a: Start stage model	203
Figure 7.4b: Growth stage model	203
Figure 7.4c: Mature stage model	203
Figure 7.4d: Decline stage model	203
Figure 7.5a: Power analysis (1- β) start stage	206
Figure 7.5b: Power analysis (1- β) growth stage	206
Figure 7.5c: Power analysis (1- β) mature stage	207
Figure 7.5d: Power analysis (1- β) decline stage	207

LIST OF APPENDICES

APPENDIX A: COMPARISON OF FIRM GROWTH THEORIES	257
APPENDIX B: PREVIOUS STUDIES USING THEORIES, ANTECEDENTS AND OUTCOMES	258-260
APPENDIX C: PREVIOUS STUDIES USING DIMENSIONS, SUB DIMENSIONS AND VARIABLES	264-268
APPENDIX D: PREVIOUS STUDIES USING LINKS AMONG THE DIMENSIONS	269
APPENDIX E: FIELD STUDY QUESTIONNAIRE	270
APPENDIX F: FIELD STUDY QUESTIONNAIRE	271
APPENDIX G: SUMMARY OF FIELD STUDY DATA	272-283
APPENDIX H: SURVEY QUESTIONNAIRE	284-288

CHAPTER 1

INTRODUCTION¹

“Much of the criticism of economic globalization has centered on factory labor abuses. But the majority of the world’s poor are not employed in factories; they are self-employed – as peasant farmers, rural peddlers, urban hawkers, and small producers, usually involved in agriculture and small trade in the world’s vast informal economy ...”

—David Bornstein

1.1 OVERVIEW

Informal microenterprises or informal social microenterprises (ISMs)²—very tiny businesses—are commonly featured in most developing countries. They are seen as income-generating-activities for up to half of the population and as sources of economic growth. In other words, they are the channel for employment and alleviating poverty. This sector, often also termed as the ‘informal sector’ or the ‘informal economy’, is characterized by a single self-employed person, a family or, at the most, a few employees operating a business within the society outside of government controls and regulations (e.g., Miller and Clarke 1990; Agafonoff 1995; Losby et al. 2002).

The study of ISMs’ income-generating-activities became a consideration in the 1970s and in the 1980s more attention was paid to this area as an international development activity. Continuing into the 1990s, developing countries were focusing their needs for inspiring economic development through ISMs. Nowadays, they have been noticed as the engine for employment and poverty reduction, especially for developing countries (Gulyani and Talukdar 2010; Imai and Azam 2012). To date, many theoretical frameworks have been presented within numerous scholarly journals which have focused on considerable agreement and disagreement over the conceptual view of the

¹ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Sustainable Growth of Informal Social Micro-enterprises (ISMEs): A Multidimensional Model” in *Proceedings of the 7th Biennial Conference of Hong Kong Economic Association (HKEA)*, Hong Kong.
- b. Khan, E.A., Rowe, A.L. and Quaddus, M. (2012). “Exploring Sustainable Growth of Social Micro-enterprises in an Emerging Economy” in *Proceedings of the 15th EMAN Conference on Environmental and Sustainability Management Accounting in collaboration with the CSEAR International Congress on Social and Environmental Accounting Research*, Helsinki, Finland

² In this study, the term ‘informal microenterprise’ is used for ‘informal social microenterprise (ISM)’. The rationale behind this name is discussed in Chapter 2.

activities of ISMs (e.g., Gërxhani 2004; Krasniqi and Topxhiu 2012). Sociologists have examined the structure of the informal activities whereas anthropologists have demonstrated the experience of the participants (e.g., Gutmann 1977; Feige 1979; Simon and Witte 1980; Schoepfle, Perez-Lopez, and Griego 1992; Daniels 1999; Jütting, Parlevliet, and Xenogiani 2008). However, both fields have perceived ISMs as a source of income opportunities and community survival. On the other hand, economists have been more concerned about taxation and regulations (e.g., Levitan and Feldman 1991; Pahl 1988; Schneider, Buehn, and Montenegro 2010; Schneider and Enste 2000; Feld and Schneider 2010). Referring to the views of sociologists and anthropologists, this research has considered ISMs' activities as a way of income generation and survival for underprivileged people in developing countries.

Despite increased attention from scholars, practitioners and policy makers, sustainable growth or performance³ of ISMs' activities and their challenges are being reported infrequently. Some sketchy literature is however available (Mead and Liedholm 1998; Johnson 2000; Nicholls 2006). Jiao (2011) asserted that this problem is in part related to the failure of the existing frameworks which are inconsistent, overlapping and contradictory, and do not adequately address the relevant issue of the sustainable growth of ISMs in developing countries. Although many studies have been conducted, the investigation of the antecedent factors of sustainable performance of ISMs is still relatively unexplored (Jiao 2011). Consequently, there is a huge gap between theory and practice in understanding ISMs' antecedent factors and outcomes. Therefore, the current research addresses this shortcoming by exploring and empirically examining the antecedents that influence the sustainable growth of ISMs particularly in the context of a developing country. As a result, a multidimensional model that consists of various factors of ISMs can be established.

1.2 PROBLEM STATEMENT

Context: The ISMs and their challenges and opportunities have become a global phenomenon that impacts on society through their employment of innovative approaches to solve social problems (Haugh et al. 2009). Most of the developed nations have successfully absorbed their surplus labour due to rapid industrial development. On the other hand, in developing countries, existing industrial and agriculture sectors are not creating enough jobs for workers. As a result, policy makers in developing countries are confronted with issues such as ensuring job security, poverty reduction

³The terms 'sustainable growth' or 'sustainable performance' are used interchangeably in this study.

and economic growth. To ensure jobs for underprivileged people, resources, skills and knowledge are required in order to set development strategies. However, these resources are scarce in developing countries. A question that follows is: what is the fate of those underprivileged people? As a consequence, underprivileged people are forced to participate in ISMs' activities such as street vending, shoe shining, making local drinks, daily labour, etc. (van Dijk 2008; Haile 2005). However, over time, many of them become successful and join the formal economy. According to Staley and Morse (1965, 318), ISMs can become "... economically viable enterprises which can stand on their own feet without perpetual subsidy and can make a positive contribution to the growth of real income and therefore to better living standards". The most important question at this point is why some ISMs grow successfully when others remain stuck in the informal sector. Therefore, this study is devoted to finding answers to this important question using a multidimensional model of informal micro-firms' antecedents and performance.

Practices: Addressing the problem of underprivileged people in developing countries and considering ISMs as an engine of employment and growth is not easy. Firstly, the attitudes towards ISMs' activities are mixed. This problem was stated by Harding and Jenkins (1989) as, "there are probably few people who do not, at some level, have mixed feelings about informal economy". Many studies about ISMs' activities have attempted to resolve these mixed feelings (e.g., Gërxfhani 2004). Miller (1987) pointed out four approaches for ISMs' activities: drive-out, pay-up, improve and expand. The drive-out approach focuses on getting rid of informal activities which, in reality, is not possible in developing countries. The pay-up approach requires much more rigid policing which seems to be very difficult for developing countries with their limited resources. The improve approach is more poverty reduction-oriented, for example, allowance schemes or extending social insurance. However, the sustainability of this approach is doubtful, from low-income countries' points of view. The expand approach centres government efforts on aiding informal economies to help them grow which seems to be a more sound policy which also seems to have convinced many developing countries. Secondly, the diversity of the ISMs' sector has posed challenges for successful policy implementation. The ISMs take place in the informal sector and their activities are largely varied and complex in terms of size, degree of informality and heterogeneity of businesses therefore requiring specific policy strategies (Campin 2010). Considering the reality of and pressure from this sector, developing countries have responded to the challenges in a uniform manner. For example, in Bangladesh, microenterprise

development is viewed as a key policy strategy to embrace the ISMs, and packages, that is, micro-credit programme, and vocational and technical education have been initiated (Mahjabeen 2008; Alam and Miyagi 2004). Non-government organizations (NGOs) and international donor agencies also support these packages and strategies thinking that they have positive multiple impacts such as secure and well-paying jobs, less inequality and rapid economic growth in these countries. Thirdly, considering the importance of ISMs, making them grow requires an understanding of the functions and dynamics that impact on the ISMs' sustainable performance which all require an understanding of the specific country's context. The policy makers have neglected the very diverse nature of the ISMs as well as the factors and dynamics in the course of policy implementation. Therefore, the current research suggests that effective and efficient implementation of policies and strategies requires comprehensive knowledge of the characteristics of ISMs, determinants of ISMs' success and attendant dynamics from a country-specific point of view.

Theories: Looking back to the theories, the firm growth or success discussion was started following Gibrat's (1931) 'Law of Proportionate Effect'. This law highlights that firm progress is entirely random and that there is no systematic influence of firm attributes that influences growth. However, evidence has shown that there is a systematic association between growth and firm attributes (e.g., Jovanovic 1982; Mead and Liedholm 1998). Earlier, the evolutionary model which originated from Darwin's (1859) study described the collaboration of a number of internal or external factors that pushed firms into growth over a period of time. Many scholars have accepted this theory because it deals with a more reasonable endogenous explanation of firm performance. This approach was criticized because the "exclusive blind variation of biological evolution leaves no room for human motivation and conscious human decisions" (Penrose 1952). Firm life-cycle theory is also a dominant approach in the small business field. This theory explains how a firm adjusts internally to retain its growth, rather than explaining what causes a firm to grow (Bessant, Phelps, and Adams 2005). The resource-based theory came out of the prominent work of Penrose (1995). The spirit of the resource-based view is that micro-firm development depends on capabilities and resources available over the period (Orser, Hogarth-Scott, and Riding 2000). However, the applicability of the resource-based theory in the context of micro-firms is still being questioned (Kraaijenbrink, Spender, and Groen 2010). The overall survey of theories clearly indicates that there is no theoretical model that can reliably and validly explain firm growth. According to Dobbs and Hamilton (2007, 316) "...

knowledge remains fragmented and still lacks a body of integrative theory". Aldrich and Baker (2000) also argued that small business research has made inadequate advancement towards a disciplinary position.

Literature: Subsequent studies on ISMs' success factors have been largely anecdotal and fragmented. Entrepreneurial concepts have been dedicated to understanding firm performance largely from the entrepreneurial orientation viewpoint. This emphasizes the dynamic capabilities and functions of the firm, rather than explaining the psychological characteristics of entrepreneurs (e.g., Pearce et al. 2010; Zainol and Wan Daud 2011). On the other hand, some studies have centred on human capital profiles of small firms in relation to entrepreneurial firm success. This view advocates that human capital raises firms' capabilities in penetrating business opportunities (e.g., Watson, Stewart Jr, and BarNir 2003; Unger et al. 2011; Crook et al. 2011). Other studies, however, have emphasized social capital as an important factor for firm success especially in developing countries (e.g., Pearson, Carr, and Shaw 2008; Sorenson et al. 2009). Social capital deals with numerous social relationships and networks that also facilitate the discovery and exploitation of opportunities. Traditionally, financial capital has been the main perspective used by many studies in assessing the ability to achieve firm success (e.g., Aga and Reilly 2011; Poncet, Steingress, and Vandenbussche 2010). The financial capital perspective mainly points to discussing the problems associated with micro-firms' acquisition of finance. Apart from these factors, some other studies have addressed the business environment's effect on firm performance (e.g., Rosenbusch, Rauch, and Bausch 2013). This view embraces the perspective that small firm success is highly linked to environment forces, particularly with regard to the acquisition of resources and information (Eisenhardt and Schoonhoven 1990). In terms of the firm life cycle, some studies have just started to explain the characteristics of small firm life-cycle stages (e.g., Headd and Kirchhoff 2009; Sharma and Salvato 2011).

Subsequent studies on ISMs' antecedents and outcomes' dimensionality are also largely anecdotal and fragmented. The dimensionalities of entrepreneurial orientation, social capital and business environment have been advanced to some extent. To date, the entrepreneurial orientation dimension has been identified from the view of five subdimensions, that is, innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy with this being supported by many scholars (e.g., Hart 1992; Burgelman 1984; MacMillan and Day 1988; Venkatraman 1989; Runyan, Droge, and Swinney 2008; Rauch et al. 2009). Likewise, the most prominent subdimensions of

social capital are characterized in terms of being structural, cognitive and relational (Nahapiet and Ghoshal 1998; Pearson, Carr, and Shaw 2008). Business environment subdimensions such as turbulence, hostility and munificence appear to have been clarified by small business scholar communities (e.g., Rosenbusch, Rauch, and Bausch 2013). On the other hand, dimensionalities of human capital and financial capital, as well as firm performance, remain fuzzy and inconsistent. A recent study by Nyberg et al. (2012) summarised human capital in three core dimensions: type (knowledge, skills and abilities); context (leadership context, global context and organizational activity); and antecedents (human resource management, turnover and other antecedents). As mentioned earlier, traditionally, financial capital has always received much attention in small business; however, no coherent dimension has been developed. Finally, the firm performance dimension is not intensive as most of the research has been centred on the economic objective dimension and ignores subjective dimensions such as social and natural environmental performance.

Methodologies: There is also a paucity of methodological issues in ISMs' research which appears to be a formidable challenge for this ISMs' paradigm. Short, Moss, and Lumpkin (2009, 161-194) conducted content analysis on 152 articles published from 1991 to 2008 and suggested that "... the next two decades should be characterized by unity in construct definition and by examining the social entrepreneurship construct through a variety of established theoretical lenses with clear boundary conditions". Furthermore, they also affirmed that "the limited empirical work in social entrepreneurship draws largely from case studies and grounded theory approaches". This view was supported by Covin and Miller (2013, 25) as they stated that "most of the literature on [social entrepreneurship] – the vast majority of it in fact – is based on quantitative studies or conceptual contributions". This clearly indicates that the current research is mainly limited to a large number of case studies; hence there is a clear absence of solid empirical evidence. Short, Moss, and Lumpkin (2009, 161-194) suggested that "future research should move past reliance on case studies to incorporate specific hypotheses tests and embrace multivariate ...". On the other hand, Covin and Miller (2013, 25) suggested that "it may be useful to undertake qualitative studies of entrepreneurs at different levels of society". Molloy et al. (2011) stated that a lack of mixed-method approaches remains. Observing these contradictory views, the current research has adopted mixed research design approaches.

Research Gaps: The current study has explored several gaps in ISMs' field research. Firstly, there is a gap between theory and practice. In practice, there is a tendency by policy makers to ignore the diverse factors and dynamics of ISMs. In theory, there is a scarcity of comprehensive models that explicitly explain micro-firm behaviour and growth. In addition, there is also a propensity to discuss ISMs as a whole, but the nature of ISMs' antecedents and outcomes should be explicitly specified and studied with sufficient details. Furthermore, rigorous evaluation of essential dimensions and subdimensions still remains scarce, especially for ISMs. Finally, in terms of research methods, the study of ISMs still embraces a case study approach and, to some extent, quantitative study.

1.3 RESEARCH FOCUS

As mentioned earlier, despite the importance of ISMs in the context of developing countries, there are limitations and gaps in practice, theory building, subsequent studies and methodologies. Therefore, the current research has been conducted to enrich the understanding and knowledge base. More specifically, the research has aimed to explore and investigate in a multidimensional manner the antecedent factors that have an influence on ISMs' sustainable performance in a developing country context. This study argues that success is a complicated process and that a combination of both internal and external forces together would better explain the growth of ISMs. This study also suggests that the antecedents and success of ISMs differ in terms of stages of the firm life cycle. As a result, a comprehensive multidimensional model can be established that explains the antecedents for ISMs in their success. In addition, studies may also benefit from seeing the significant role that the stage of the firm life cycle plays in this model (Kreiser and Davis 2010).

As noted previously, according to the theories, there is no single model that can pervasively clarify micro-firm growth. However, the current research has embraced resource-based theory for several reasons. Firstly, resource-based theory focuses on a much wider range of resources and capabilities that can explain micro-firm performance (Brush and Chaganti 1999). Hunt and Derozier (2004) stated that the resource-based view was an important theoretical base in small business and entrepreneurial studies. This notion has also been evident from empirical works (Wiklund and Shepherd 2003). Secondly, the extension of the resource-based view by several scholars has also opened up research opportunities. In the context of developing countries, Jarvenpaa and Leidner (1998) viewed this theory as three

extended paradigms, namely, the dynamic capabilities framework, institutional influences and network analysis. This resource-based view also connects with external factors, namely, the business environment. Teece, Pisano, and Shuen (1997, 516) described “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments”. Moreover, the resource-based theory view has also been extended in the notion of the natural resource-based view (Hart 1995). In addition to resource-based theory, this current research has also focused on firm life-cycle theory as it was interested in explaining the various factors that stimulate the progression of the firm. The firm life cycle is related to factors such as social capital (Pirolo and Presutti 2010), proactiveness (Su, Xie, and Li 2011), risk taking (Autio and Mustakallio 2003), etc. The literature has also suggested that little is known about how an internal or external factor evolves in small firms throughout the different stages of their life cycles (Zahra, Hayton, and Salvato 2004).

In the literature, the studies on ISMs’ antecedents and outcomes are anecdotal and fragmented. However, these subsequent studies have discussed several influential antecedent factors of ISMs’ success, namely, entrepreneurial orientation, human capital, social capital, financial capital and the business environment. These antecedent factors can be highlighted in terms of dynamic capabilities, resources and external forces. The entrepreneurial orientation refers to the factors that are derived from the dynamic capability and function of the enterprise. Human capital, social capital and financial capital are the resources that are essential for the small firm in exploring and exploiting opportunities. External forces refer to the business environment that creates a favourable or unfavourable situation for small firm growth. Keeping this view of dynamic capabilities, resources and external forces, the current research grasps all factors in explaining firm performance in an integrative model. In the exposition of the dimensionality of factors and subfactors, the subsequent studies have remained silent. Apart from some dimensions, namely, entrepreneurial orientation, social capital and business environment, other dimensions such as human capital and financial capital still remain obscure. In addition, the dimensionality of firm performance is centred only on economic success rather than on social and natural environmental performance. Therefore, the current research has focused on constructing a comprehensive hierarchical model by building some constructs and subconstructs. The current research has also investigated the small firm life cycle because a valid life-cycle model would be valuable to those utilising resources to achieve firm growth.

1.4 RESEARCH QUESTIONS AND OBJECTIVES

Based on the previous discussion in Sections 1.2–1.3, this study has analysed a number of theoretical concepts to empirically explore the dimensions and subdimensions for ISMs in the context of developing countries. This research, therefore, has attempted to investigate the following research questions (RQs):

RQ1: What are the antecedent dimensions and subdimensions of ISMs? And how do these dimensions and subdimensions relate to each other?

RQ2: How do life-cycle stages moderate the antecedent and outcomes' dimensions and subdimensions of ISMs?

Based on the above research questions, the following research objectives (ROs) were developed:

RO1: To identify the antecedent dimensions and subdimensions of ISMs.

RO2: To identify the outcomes' dimensions and subdimensions of ISMs.

RO3: To develop a hierarchical model of ISMs by integrating the dimensions and subdimensions from RO1 and RO2.

RO4: To examine the influence of the antecedent dimensions and subdimensions on ISMs' sustainable outcomes.

RO5: To identify the differences of the antecedent and outcomes' dimensions and subdimensions based on the moderating effect of firm life-cycle stages.

1.5 RESEARCH SIGNIFICANCE

This study next discusses its contributions in terms of theory and practice.

Theoretical Contributions: This study extends the existing resource-based theory in the context of ISMs by capturing and developing five primary antecedent dimensions (i.e., entrepreneurial orientation, human capital, social capital, financial capital and business environment) under 15 subdimensions (i.e., innovativeness, risk taking, proactiveness, competitive aggressiveness, autonomy, demographic, psychographic, structural, cognitive, relational, source of finance, capital structure, turbulence, hostility and munificence). In addition, it adds novelty to the theory by introducing one main outcome dimension (sustainable performance) under three subdimensions (i.e., economic, social and natural). Furthermore, it contributes to theory by modelling the association between antecedent and outcomes' dimensions. Moreover, this study explains the differences of the antecedent and outcomes' dimensions and

subdimensions based on the moderating effect of firm life-cycle stages (i.e., start, growth, mature and decline). This view certainly contributes a new horizon for examining ISMs' sustainable performance. Thus, the researcher believes that the suggested theoretical concept in the study makes an important contribution to knowledge as most of its dimensions and subdimensions and their relationships have not been the subject of prior theorizing in the context of ISMs' sustainable performance.

Practical Contributions: Considering the importance of ISMs in terms of income generation for up to half the population and as sources of economic growth in developing countries, policy makers and relevant agencies may consider the results of this research in order to inspire a steady growth of ISMs. Some of the important dimensions, subdimensions and indicators for the sustainable growth of the ISMs' sector explored in this study can be used by the relevant agencies. The NGOs and international donor agencies can obtain guidelines to emphasize some crucial dimensions and subdimensions which need to be addressed in ISMs' sustainable performance. Similarly, this study has presented outcome dimensions in terms of economic, social and natural environmental outcomes in the ISMs' sector which can be evaluated and used by government agencies. Finally, the ISMs' sustainable model which has been developed in this research is a unique tool which will assist government agencies to identify significant projects to achieve the sustainable development of ISMs in developing countries.

1.6 THESIS ORGANIZATION

This thesis is organized and presented in nine chapters. The chapters are intimately related and complementary to each other. Table 1.1 illustrates the organization of this thesis in accordance with the chapters. The brief outline of each chapter is as follows:

Chapter 1 Introduction: This current chapter describes the importance of the research and the gaps in the existing literature. The discussion determines the focus and locus of the research with the research questions then presented. The research objectives further elaborate the research questions to concentrate on very specific areas. This chapter also presents the overall organization of the current thesis.

Chapter 2 Informal Social Microenterprises in Developing Countries: Chapter 2 discusses the concept and nature of ISMs and their role in developing countries. As such, the chapter provides an overview of the informal sector, ISMs' characteristics,

advantages and disadvantages of ISMs and contribution of ISMs in developing countries. This chapter also includes the rationale of the study.

Table 1.1 Structure of the thesis

Structure	Description	Output
Chapter 1	Introduction of the Thesis - Establish the research problem	Determines the research questions and objectives
Chapter 2	ISMs in Developing Countries - ISMs' characteristics - ISMs in Bangladesh	Provides the research subject and rationale of the study
Chapter 3	Literature Review and Conceptual Model - Theoretical background and the existing gaps - Conceptual framework	Discusses the relevant literature and proposes initial research models
Chapter 4	Research Methodology - Details of the methodology	Presents the methodology adopted for this research
Chapter 5	Field Study and Comprehensive Research Model - Details of the field study - Analysis of the field study	Proposes the comprehensive research model
Chapter 6	Hypotheses and Instrument Development - Details of the hypotheses of the comprehensive research model	Provides the hypotheses of the research model
Chapter 7	Survey and Quantitative Data Analysis - Details of the survey method - Analysis of the survey data using PLS	Presents the data and data analysis of the survey
Chapter 8	Results and Discussions - Discussion of the findings	Provides the interpretations of the research findings
Chapter 9	Conclusions and Future Directions - Overview of the research and future directions	Wraps up the thesis and proposes future work

Chapter 3 Literature Review and Conceptual Model: Chapter 3 explores different growth theories and synthesizes the gaps and findings in order to develop an ISMs' sustainable performance model. Firstly, this chapter reviews firm growth theories to establish suitable theories for the current research. Secondly, the chapter introduces resource-based theory and firm life-cycle theory and their relevance to the ISMs' context. Based on these theories, the chapter presents an extensive literature review focusing on the ISMs' antecedents and associated factors. This chapter also critically analyses the dimensions, relevance and research gaps. Finally, based on the literature review, an initial research model for ISMs' sustainable performance is developed.

Chapter 4 Research Methodology: Chapter 4 presents the methodological underpinning of this research. This chapter primarily focuses upon determining the appropriate research approach employed to undertake this research and discusses the

methodology adopted for this research. The rationale and the justification of the adopted method are discussed in this chapter. Then, the research processes for a qualitative field study and a quantitative survey are discussed. For each research phase, the sample selection, data collection and data analysis process are detailed.

Chapter 5 Field Study and the Comprehensive Research Model: Chapter 5 describes the operationalization of the qualitative field study. The findings of the data analysis are tabulated into tables and examined. Dimensions, subdimensions and links are categorized, and individual conceptual models are drawn for each sample. Subsequently, the individual models are methodically cross-examined and salient dimensions, subdimensions and links are identified. The ensuing section incorporates the pertinent findings into the initial research model to form a comprehensive and enhanced final research model.

Chapter 6 Hypotheses and Instrument Development: Chapter 6 outlines the development of the research hypotheses. Each hypothesis is systematically formulated based on support from the extensive literature review and field study findings. The formulation of the survey instrument is discussed. The relevant dimensions and subdimensions are identified, and individual items are developed, adapted or adopted from existing questionnaires.

Chapter 7 Survey and Quantitative Data Analysis: Chapter 7 presents the findings obtained from analysing the data from the survey conducted to examine the research models of the current study. The partial least squares (PLS) path modelling or component-based structural equation modelling (SEM) technique was used to analyse the survey data and produce the findings. Results of testing both the model's explanatory power and hypotheses are detailed.

Chapter 8 Results and Discussions: Chapter 8 interprets and discusses the results of hypotheses testing. The implications for each of the accepted hypotheses are complemented with practical propositions. In addition, the rejected hypotheses are examined and plausible explanations given.

Chapter 9 Conclusions and Future Directions: The final chapter presents the summary of the research and its significant contribution to theory and practice. This chapter acknowledges the limitations of the current research and hence proposes recommendations for future research outlining the possible directions.

1.7 SUMMARY

This chapter has aimed to provide the related issues and topics in order to clarify and highlight the importance of this research. Based on the existing literature, the chapter has addressed the major gap in research in the area of ISMs. The description of the research focus followed with this also providing the research theme. Next, the chapter presented the research questions, objectives and the significance of the research. Finally, this chapter has described the overview of the structure of this thesis in order to provide a clear picture of the research.

CHAPTER 2

INFORMAL SOCIAL MICROENTERPRISES IN DEVELOPING COUNTRIES⁴

“The development of small and micro enterprises affects the people’s well-being and social stability”.

—Wu Yijian

2.1 INTRODUCTION

The rapid growth of microenterprises, especially the informal social microenterprises (ISMs), in developing countries represents an important potential for job creation and combating poverty. These ISMs take place under the informal sector and contribute to the overall national economy. The term is invoked to refer to tea-stall owners in Bangladesh, street food vendors in Thailand and rickshaw pullers in India. The academic literature and policy reports have discussed many features of the informal sector, but this chapter of this study is not intended to be a complete review to find the gap. Rather, it has a limited purpose, namely, an overview of a few major issues: the concept of the informal sector; the nature and characteristics of the ISMs; types of ISMs; and advantages and disadvantages of ISMs. Sections 2.2–2.6 address these issues. The final three sections discuss the ISMs’ contributions in developing countries and in Bangladesh and establish the rationale of this research.

2.2 THE CONCEPT OF THE INFORMAL SECTOR

The concepts of ‘informality’ within the society and economy have been put forward as a historical process. Numerous views have come up throughout the period and resulted in theoretical and practical arguments to warrant the key grounds for and importance of the informal sector (Krasniqi and Topxhiu 2012). The concept of the informal sector, also known as the ‘informal economy’, was initially studied by sociologists and

⁴ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Sustainable Growth of Informal Social Micro enterprises (ISMEs): A Multidimensional Model” in *Proceedings of the 7th Biennial Conference of Hong Kong Economic Association (HKEA)*, Hong Kong.
- b. Khan, E.A., Rowe, A.L. and Quaddus, M. (2012). “Exploring Sustainable Growth of Social Micro enterprises in an Emerging Economy” in *Proceedings of the 15th EMAN Conference on Environmental and Sustainability Management Accounting in collaboration with the CSEAR International Congress on Social and Environmental Accounting Research*, Helsinki, Finland

anthropologists and, after that, followed the attention of economists (Gërkhani 2004). It began from the study titled “Informal income opportunities and urban employment in Ghana” by Hart (1973). In his study, Hart pointed out two ways of earning: formal – by wage employment and informal – by self-employment. He also described income-generating activities as a form of entrepreneurship. However, in terms of an academic notion, it was recognized in 1972 by the International Labour Organization (ILO) which addressed two sectors: formal and informal. Furthermore, Ferman and Ferman (1973) and Gutmann (1977) focused on the ‘informal sector’ as the ‘irregular economy’ and the ‘subterranean economy’ respectively. In their study, Ferman and Ferman (1973) distinguished economic activities by viewing them as regular and irregular. They explained that participants of the ‘irregular economy’ ignore taxation and licensing; however, they agreed that it is a ‘survival mechanism’ for the underprivileged people in the society. Likewise, Gutmann (1977) centred on the rules, regulations, restrictions and taxation of underground activities. In the 1980s, the study of the ‘informal sector’ was somewhat neglected. In that decade, Simon and Witte (1980) and Feige (1990) addressed informal economic activities by using the term ‘underground economy’. Some other authors have labelled it as the ‘black market’ (Smithies 1984) or the ‘shadow economy’ (Frey, Weck, and Pommerehne 1982; Cassel and Cichy 1985). However, in the late 1990s, the ‘informal sector’ started being considered as the economy of the poor and attracted attention in the research agenda. For example, a study by Chen, Sebstad, and O'Connell (1999) pointed to informal activities as being the ‘invisible workforce’ by providing some examples such as home-based work, entrepreneurs employing other workers, and self-employed and seasonal casual workers. After the 1990s, considerable attention re-emerged and came up with more profound meanings. For instance, by considering the study of Fluitman and Oudin (1991), Palmer (2004, 1-2) described “[i]nformal sector activities are typically carried out in small units, microenterprises, established, owned and operated by one or a few individuals with little capital; the activities are usually labour-intensive and result in low-quality but relatively cheap goods and services; microenterprises tend to have limited access to infrastructure and markets for inputs and outputs”. A literature analysis of the informal economy by Losby et al. (2002, 1) indicated that the informal economy was “a series of activities that, by occurring outside the arena of the normal, regulated economy, escape official record keeping”. Furthermore, Maloney (2004) stated that individuals were involved in informal activities to maximize their utility rather than their earnings. A study of informal employment by Günther and Launov

(2012) focused on combating informal employment for employee protection or tax collection purposes.

Over the last four decades, there has been considerable disagreement over the conceptual view of informal activities (Losby et al. 2002). This dispute has occurred due to the different academic fields. Sociologists have examined the structure of informal activities, whereas anthropologists demonstrated the experience of the participants (Gutmann 1977; Feige 1979; Simon and Witte 1980; Schoepfle, Perez-Lopez, and Griego 1992). However, both fields perceived it as a source of income opportunities and survival for poor communities. On the other hand, economists were more concerned about taxation and the size of the informal economy (Levitan and Feldman 1991; Pahl 1988). Referring to the views of sociologists and anthropologists, this research has considered informal economic activity as a foundation of income generation and survival for underprivileged people in developing countries. The next section of this chapter describes the characteristics of informal economic activities in terms of informal microenterprises.

2.3 CHARACTERISTICS OF INFORMAL MICROENTERPRISES

The term 'informal sector' is frequently used to refer to informal microenterprises (Bagachwa, Bryceson, and Jamal 1997; Livingstone 1991). This microenterprise activity takes place in the informal sector, and its meaning is largely varied and complex. The meaning depends on the author's definition and the practices (Blayney and Otero 1985), the culture of the nation (Sharma, Miller, and Reeder 1990) and the economic progress of the country or region (Schreiner and Woller 2003). The scale of a business needs to be defined only for the specific purpose of removing vague and misleading ideas (Harper 1984). Therefore, this study has adopted a working definition which, although not definitive, will be reasonably precise so as to guide the scope of this study, and will serve as a consistent basis for analysis. This study has focused on several points to determine a working definition. Firstly, informal microenterprises are addressed based on informal sector economic activities rather than on formal micro-businesses such as architects, doctors or law firms. This point is necessary to address since these informal economic activities are functioning within the society but outside of bureaucratic regulations and with less government controls (Miller and Clarke 1990). Secondly, informal microenterprises are distinguished from informal employment (Losby et al. 2002). Because the term 'informal sector' usually refers to either enterprises or employment or both of them; the two may overlap. Thirdly, the

informal microenterprise concept is isolated from the concepts of small and medium enterprises (SMEs), and obviously from that of the large corporation, because the characteristics and features of SMEs do not exactly match informal microenterprises. Fourthly, informal microenterprises are seen as entrepreneurial activities as informal microenterprises are operated by a person or a tiny group who take an initiative and risk to survive in their society. Fifthly, informal microenterprises are incorporated with family business characteristics for the reason that family members are frequently involved with the operation of informal microenterprises. Finally, informal microenterprises are separated from developed countries' perspectives because the context of developed countries' informal microenterprises differs from that of the developing countries' context. By considering the above criteria, this study has adopted the following profound definition of informal microenterprises which was introduced by the ILO (1993, 2:29):

“Very small-scale units producing and distributing goods and services, consisting largely of independent self-employed producers in urban and rural areas of developing countries, some of whom also employ family labour and/or a few hired workers or apprentices; which operate with very little capital or none at all; which utilise a low level of productivity; and which generally provide very low and irregular incomes and highly unstable employment to those who work in it. They are informal in the sense that they are for the most part unregistered and unrecorded in official statistics; they tend to have little or no access to organized markets, to credit institutions, or to many public services and amenities; they are not recognized, supported or regulated by the government; they are often compelled by circumstances to operate outside of the framework of the law and, even where they are registered and respect certain aspects of the law, they are almost invariably beyond the scale of social protection, labour legislation and protective measures at the workplace”.

The ILO definition covers several significant characteristics of informal microenterprises, that is, small-scale operation, family-based operation, entrepreneurship, human resources, social networks, financial resources and an unregulated environment.

Small-scale operation: this is the most basic nature of informal microenterprises which differentiates them from large, small and medium enterprises. Most activities categorized as informal microenterprises are very small. The production of informal microenterprises varies in quality and can be quite dissimilar from time to time. Administration linked to planning and record-keeping is handled on a regular basis but not in a systematic way (Asian Development Bank 2011). However, this small-scale operation variable varies widely from country to country, and even among different types of economic activities within a country (Blayney and Otero 1985; Sethuraman

1997). In addition, variations exist within countries depending on whether the firm is rural or urban-based and on the type of activities in which it is engaged – manufacturing, commerce or services.

Family-based operation: this is another unique characteristic of informal microenterprises. They are part of unincorporated household enterprises which are distinguished from organizations and quasi-organizations on the basis of their legal organization and type of accounts (Asian Development Bank 2011). In most cases, these firms represent one of several productive activities for the family unit. The informal microenterprise arises partly in response to family or community needs rather than for monetary gain (Gaughan and Ferman 1987). The workers in most microenterprises include voluntary family labour. Each family shifts labour depending on its circumstances and on the existing income-generating capacity of a given enterprise. This free exchange of labour among diversified activities has contradictory effects. On the one hand, it contributes to the survivability of the family and, on the other hand, it restricts the family's ability to concentrate its resources on one enterprise and to expand it. However, the level of voluntary participation by families varies among countries and types of enterprise (Ashe 1985).

Entrepreneurship: this is a central element of informal microenterprises (Mead and Liedholm 1998). The majority of informal microenterprises consist of self-employed persons in a form of entrepreneurship who perceive the firm as an economic activity and a major source of earnings (Kilby and D'Zmura 1985; Moser 1984). Others open informal microenterprises for personal fulfilment and family obligation (Campbell, Spencer, and Amonker 1993). Many microentrepreneurs in developing countries prefer informal micro-business because it provides more autonomy, flexibility and freedom compared to a formal business (Gërxhani 2004). In general, the socio-economic status of informal microentrepreneurs in developing countries is low; however, informal microenterprise entrepreneurial activities serve as a shelter for the poor (Gaughan and Ferman 1987). In other words, it is seen as providing the poorest and most marginalized – people who do not have access to formal business – with the opportunity to earn an income (Losby et al. 2002).

The ***human resources*** of informal microenterprises can be characterized by the skills, experience and level of education of owners and participants. Most informal microenterprises have human resources characterized by a low level of formal

education. The majority of informal microentrepreneurs have less experience of formal schooling. Most informal microentrepreneurs in these sectors also have an absence of formal vocational training. They use skills acquired through practice, by serving as apprentices or that are passed down in the family (Anderson 1982). In the case of women, preferred skills gained through traditional roles of domestic chores and child rearing are often applied to income-generating purposes (Dulansey and Austin 1985). Studies have shown that a very high proportion of people working in the sector are trained by the sector itself (Walther 2011).

Social networks such as close ties to neighbours, friends and family members often play a vibrant role in the existence of informal microenterprises (Breman 1980). Those informal microenterprises with adequate networks tend to achieve better performance. Gaughan and Ferman (1987, 16) noted that “depending on the type of social milieu, informal economic activities will employ different modalities of exchange, each with different motivations and different expectations of return. These modalities will reflect the nature of the personal ties between participants, defined by norms and institutions that are in essence non-economic”. Informal networks are commonly found in rural informal microenterprises (Levitan and Feldman 1991). These exchange networks are the sources of potential economic support in case people fall on hard times and are more apt to exist in areas with stronger social networks.

Financial resources are critical for informal microenterprises in terms of access to finance. Many studies have exposed that the informal sector is limited by the lack of access to formal finance sources. This has been considered as a common challenge for informal microenterprises (Evans and Jovanovic 1989). These informal micro-firms usually experience difficulties raising capital from external sources (Hamilton and Fox 1998; Stiglitz and Weiss 1981). The reasons are the high information asymmetry costs and high agency costs (Carpenter and Petersen 2002; Myers and Majluf 1984). Therefore, informal microenterprises’ finances rely heavily on local lenders or the extended family. Their sources of finance are limited to their own savings or those of their families and friends or, where available, informal sector moneylenders who usually charge rates of interest considerably higher than those charged in the formal sector (Agafonoff 1995). Limited access to finance increases the micro-firm's vulnerability, margin of risk and contributes to market restrictions.

Being *unregulated* is a frequently used criterion for defining informal microenterprise activities. It is necessary to address this point as informal microenterprise activities are functioning within the society outside of government controls and regulations (e.g., Miller and Clarke 1990; Agafonoff 1995). Agafonoff (1995, 343) stated that “[t]hey frequently operate outside the purview of government business regulation, sometimes intentionally”. Cash is most commonly exchanged between parties with no record of the transaction; therefore, the income of micro-firms is not reported for taxation (Losby et al. 2002). In addition, labour conditions, health conditions, safety hazards or the location of activities are out-of-code and often unsafe (Castells and Portes 1989).

2.4 INFORMAL SOCIAL MICROENTERPRISES

The entrepreneurship field, especially the social entrepreneurship field, views informal microenterprises’ activities as social enterprise. As early as 1996, the Roberts Foundation Homeless Economic Development Fund (RFHEDF) described social enterprise as “a revenue generating venture founded to create economic opportunities for very low income individuals, while simultaneously operating with reference to the financial bottom-line” (Emerson and Twersky 1996). NESsT uses the term ‘social enterprise’ to refer to “the myriad of entrepreneurial or ‘self-financing’ methods used by non-profit organizations to generate some of their own income in support of their mission⁵”. Both definitions portray the social and economic features of the social firm, although the RFHEDF’s definition stresses the social firm as a programme approach, whereas NESsT’s explanation focuses on it as an economic approach.

The current study considers informal economic activities as a form of informal social microenterprise (ISM), referring to the views of the above-mentioned authors and organizations. As mentioned earlier, informal microenterprise activity is emerging in a form of entrepreneurship, and this informal microentrepreneurship is characterized by exploring, evaluating and exploiting opportunities. In this notion, the individual is a ‘social microentrepreneur’ and the organization is an ‘informal social microenterprise’ because the microentrepreneur informally interacts with the society (i.e., lack of separation between business and personal expenses, lack of formal incorporation, no separation between family and business life, lack of business facilities), starts an enterprise with their ideas, collects the necessary resources in the cheapest and easiest way with the help of family members and others, and generates income and growth.

⁵ Definition provided by NESsT (www.nesst.org): in 1997, NESsT began referring to “self-financing”—what is today referred to as “social enterprise”.

Therefore, in this study, informal microenterprises are named as 'informal social microenterprises (ISMs)'.

2.5 TYPES OF ISMs

The common perception about ISMs is that they are primarily vendors and micro-traders (Mead and Liedholm 1998). But the reality is that ISMs' activities vary across industries. Miller and Kirschstein (1988, 495) addressed this by stating that a typical ISM includes "fruit/vegetable vending, dressmaking, wood and metalworking, mechanical and electrical repair, cloth making, and small food services". Losby et al. (2002, 28) also indicated that industries usually utilising ISMs' activities include "non-precision manufacturing; electronic assembly; furniture manufacturing; automotive repair; food production and processing; textiles and apparel; hospitality and tourism; and domestic services." They also asserted that ISMs are also common in the construction industry, especially in painting, carpentry, masonry and labouring trades. Mead and Liedholm (1998) argued that the majority of ISMs are engaged in commerce. In addition, manufacturing sectors are also a significant part of the ISMs' sector. Sharma, Miller, and Reeder (1990) also agreed that ISMs' income-generating activities cover both services and manufacturing, and usually addressed the consumer requirements of the poor. The authors' opinion was that ISMs represent a wide range of informal economic activities. These ISM activities' commonalities hide extensive differences from urban and rural areas and from country to country (Sharma, Miller, and Reeder 1990).

Table 2.1 lists the types of ISMs in the developing world and in the developed world (the United States). According to Schreiner and Woller (2003), most developed countries' ISMs produce services such as haircuts, retail sales, childcare, transport and office maintenance as well as a few that manufacture products such as crafts, cabinets and clothes. The consumer in the developed world usually spends a lower share of their budget on purchases from ISMs. On the other hand, in developing countries, ISMs yield both services and manufactured commodities. Most of these ISMs are survival firms. For example, street food vending sells food from the footpath. The consumer in the developing world spends a huge share of their budget on consuming from ISMs.

Table 2.1. Types of ISMs in the developed and the developing world

Developed world	Developing world
-Care for children or pets	-Plant crops and fatten livestock
-Cut hair or polish nails	-Do odd jobs, especially on farms
-Cook food and sell drinks at festivals	-Cook food and sell drinks on the street
-Sell Avon, Amway or Mary Kay	-Petty trade in food, clothes or toiletries
-Clean homes, cars or offices	-Take in laundry
-Trade and/or repair clothes or cars	-Make and/or repair clothes or cars
-Paint or repair houses	-Build or repair houses
-Cut grass or trim branches	-Collect and sell wood, charcoal or water
-Kill pests	-Carry loads or messages
-Repossess cars	-Drive a bus or truck
-Work with wood	-Work with wood or metal
-Rent video tapes	-Show movies from video tapes
-DJ for parties	-Play in a band
-Drive cabs	-Run a rickshaw
-Quilt or knit blankets	-Husk rice or shell peanuts
-Sling newspapers or brochures	-Sell newspapers or lottery tickets
-Make and sell arts and crafts	-Scavenge for things to recycle
-Make and sell fake jewellery	-Make and sell baskets or rope
-Buy and sell drugs	-Shine or repair shoes

Source: Adapted from Schreiner and Woller (2003)

2.6 ADVANTAGES AND DISADVANTAGES OF ISMs

The ISMs constitute a major part of the developing world's economy as whole. The impact of ISMs on the overall economy can be either positive or negative. As mentioned earlier, sociologists and anthropologists have perceived ISMs' activities as a source of income opportunities and community survival. On the other hand, economists were concerned about taxation and regulation. These views were criticized by Harding and Jenkins (1989), as they stated that "there are probably few people who do not, at some level, have mixed feelings about informal economy." Many studies about the ISMs' activities have attempted to resolve these mixed views (e.g., Gërxhani 2004). However, the explanation to this problem may produce many dilemmas: "would a reduction or expansion of this sector be beneficial to the economy as a whole" (Gërxhani 2004, 12)?

The early literature about ISMs' activities was subjugated by suspicion and was described by poverty. Also, these activities were reflected as a source of unuseful labour. Nevertheless, research has revealed that ISMs' activities can have possibilities for development. These two perspectives have been the centre of an old-fashioned argument about the advantages and disadvantages of ISMs' activities. Some studies have had different thoughts. In a broad sense, these thoughts are mostly clustered into economic, social and political perspectives. Table 2.2 shows the advantages and disadvantages of ISMs' activities based on the following studies: (Tanzi 1983; Harding and Jenkins 1989; Portes, Castells, and Benton 1989; Feige 2007; Renooy 1990).

Table 2.2. Advantages and disadvantages of ISMs

Advantages
<p>1. Economic</p> <ul style="list-style-type: none"> -informal sector activities may help in maintaining the competitiveness and flexibility of production; -Harding and Jenkins (1989) suggested that the informal sector activities/enterprises may bring growth if supported and encouraged; -this sector puts downward pressure on wages in the formal labour market; -it offers lower prices for goods and services; -it generates substantial personal income; -the informal sector is characterized by very low costs of labour; -the low labour costs combined with the advantage of not bearing any bureaucratic cost are thought to contribute to the higher productivity of capital in this sector; -the evidence from some transition countries indicates that the particularly large decline of the official gross domestic product (GDP) experienced by these countries (especially in the beginning) was alleviated through rapid growth of the informal sector. <p>2. Social</p> <ul style="list-style-type: none"> -informal sector activities provide families with employment, enable them to meet their basic needs, and increase their well-being (Grossman 1985); -it offers freedom and opportunities for initiative and creativity; -it is a better alternative, even though poorly paid and unprotected, than being dependent on state benefits, or starving. <p>3. Political</p> <ul style="list-style-type: none"> -the existence of the informal sector can be used as a safety valve for public dissatisfaction and social tensions; -informal sector activities are often tolerated or even encouraged as a way to promote political patronage.
Disadvantages
<p>1. Economic</p> <ul style="list-style-type: none"> -contrary to Harding and Jenkins (1989), Portes, Castells, and Benton (1989) claimed that, in spite of various advantages, no development strategy and growth were expected from the informal sector; -the informal sector causes distortions in some main economic indicators such as the unemployment rate (Gërzhani (2004), inflation rate (Feige (2007) and growth rate (Gërzhani (2004); -the operation of informal sector activities (tax evasion) causes financial losses in State revenues and, <i>ceteris paribus</i> (all other things being equal), generates budget deficits; therefore, it will cause further increases in tax rates; -its existence induces unfair competition for those involved in the national and international formal sector (Sabel (1982); -if the informal sector is quite widespread in a country, it may increase the technological gap between this country and other industrialized countries; -work in the informal sector is often characterized by low productivity and low incomes; -according to Frey (1989), the informal sector is negatively related to the provision of public goods due to falling State revenues. <p>2. Social</p> <ul style="list-style-type: none"> -participants in the informal sector are worse off than those in the formal sector regarding their working conditions and due to their exclusion from any social benefits and security; -citizens will be provided with false information due to the incorrect measurement of gross national product (GNP); -participants in the informal sector have an unfair advantage (no taxes or social security contributions) compared to participants in the formal sector. <p>3. Political</p> <ul style="list-style-type: none"> -due to the fact that informal economic activities are often not included in measuring the GNP, the available statistics will provide a misleading view of the state of the economy to policy makers; -their operation will increase corruption and political lobbying with negative consequences.

Source: Adapted from Gërzhani (2004)

To a broad extent, studies of ISMs in developing and developed countries appear to have shared common views on the positives or negatives of ISMs. Overall, studies of transition countries seem to be somewhat closer to the earlier studies but with some noteworthy differences about their negative valuation of ISMs.

2.7 ISMs IN DEVELOPING COUNTRIES⁶

The ISMs' activities have been documented as a major source of socio-economic development throughout the developing world. As mentioned earlier, in most developing economies, underprivileged people undertake much of their economic activity in the informal sector which provides them with both employment and the necessities of life. They also make a substantial contribution to the gross domestic product (GDP).

The data on the informal economy are rare. However, there is evidence that the contribution of the ISMs' sector in the overall economy is considerably higher in developing country regions. For instance, ISMs produce 25–35% of collective output in Latin America; from 13–70% in Asian countries; and around 15% in Organisation for Economic Co-operation and Development (OECD) countries (Schneider and Enste 2000). The study by Schneider, Buehn, and Montenegro (2010) has estimated that the contribution of the ISMs in terms of GDP is 38.4% in Sub-Saharan Africa; 36.5% in Europe and Central Asia; 34.7% in Latin America and the Caribbean; 27.3% in the Middle East and North Africa; 25.1% in South Asia; and 17.5% in East Asia and the Pacific. They also estimated the size of the informal activities of 98 developing countries by excluding the direct taxation variables (Table 2.3). The lowest informal activities were China, Singapore and Vietnam with an average size per country of 12.8%, 13.0% and 15.2% respectively whereas Cape Verde, Jamaica and Nepal had an average size of 35.7%, 35.7% and 36.6% of GDP respectively. The highest share of informal activities was accounted in Peru, Panama and Bolivia with a size of 58.7%, 63.5% and 66.6% of GDP respectively (see Table 2.3). Furthermore, Schneider et al. (2010) also pointed out that the usual size of the Asian informal sector was smaller than in the African and Latin American countries. Referring to the work of Charmes (2006), a study of the ILO and the World Trade Organization (WTO) by Bacchetta, Ernst, and Bustamante (2009) also reported that the input of the informal economy in terms of percentage of total GDP (excluding agriculture) was highest in Sub-Saharan Africa (37.7%). African nations were followed by Latin America (25.9%) and Asia (23.9%).

⁶ For more information, see International Labour Organization (2012b); International Labour Organization (2012a); and Diez de Medina (2011)

Table 2.3 98 developing countries according to size of informal economy

Country	Years								Country Average
	1999	2000	2001	2002	2003	2004	2005	2006	
China	13.0	13.1	13.1	13.1	12.9	12.6	12.2	12.1	12.8
Singapore	13.1	13.1	13.4	13.3	13.1	12.8	12.5	12.4	13.0
Vietnam	15.8	15.6	15.5	15.3	15.3	15.1	14.7	14.5	15.2
Mongolia	18.4	18.4	18.4	18.3	18.1	17.6	17.0	16.8	17.9
Bahrain	18.6	18.4	18.3	18.2	17.7	17.4	17.2	-	18.0
Saudi Arabia	18.6	18.4	18.7	18.6	17.9	17.5	17.1	17.2	18.0
Iran, Islamic Rep.	18.6	18.9	19.0	18.5	18.2	17.8	17.6	17.4	18.3
Oman	19.3	18.9	18.8	18.7	18.6	18.4	17.9	17.5	18.5
Jordan	19.5	19.4	19.2	19.0	19.0	18.4	17.6	17.6	18.7
Syrian Arab Republic	19.0	19.3	19.2	18.9	19.2	19.4	18.8	18.5	19.0
Chile	19.9	19.8	19.8	20.0	19.6	19.3	18.8	18.5	19.5
Indonesia	19.3	19.4	19.5	19.9	19.7	19.6	19.1	19.1	19.5
Kuwait	20.0	20.1	20.2	20.2	19.7	19.4	19.2	19.1	19.7
Israel	22.3	21.9	22.3	23.0	22.8	22.1	21.4	21.0	22.1
India	23.3	23.1	22.9	22.6	22.2	21.8	21.4	21.2	22.3
Mauritius	23.3	23.1	22.5	22.5	22.5	22.5	22.4	22.1	22.6
Argentina	25.2	25.4	26.1	25.9	25.2	24.6	24.3	24.1	25.1
United Arab Emirates	26.6	26.4	26.9	27.3	26.4	25.6	25.5	24.2	26.1
Costa Rica	25.8	26.2	26.7	27.0	26.7	26.4	25.7	25.3	26.2
Yemen, Rep.	27.7	27.4	27.5	27.4	27.2	26.9	26.3	26.1	27.1
Malta	27.6	27.1	27.9	27.6	27.9	28.1	27.6	27.5	27.7
South Africa	28.7	28.4	28.4	28.1	28.3	28.0	27.3	26.8	28.0
Cyprus	29.3	28.7	28.9	29.2	29.2	28.5	28.4	28.4	28.8
Lao PDR	30.9	30.6	30.1	30.0	29.6	29.3	28.5	28.4	29.7
Mexico	30.3	30.1	30.4	30.4	30.2	29.7	29.0	28.5	29.8
Namibia	32.0	31.4	31.2	30.5	30.2	29.5	29.2	28.4	30.3
Lesotho	31.6	31.3	31.2	30.9	31.0	30.7	30.3	29.5	30.8
Malaysia	31.4	31.1	31.8	32.0	31.9	31.5	30.9	30.5	31.4
Dominican Republic	32.2	32.1	32.2	32.1	31.9	31.7	30.9	31.3	31.8
Equatorial Guinea	33.1	32.8	32.2	32.1	31.8	31.1	31.6	31.2	32.0
Cameroon	32.9	32.8	32.9	32.7	32.5	32.0	31.5	31.4	32.3
Fiji	32.7	33.6	33.6	32.9	32.7	31.7	31.3	31.2	32.5
Algeria	34.9	34.1	34.2	34.0	33.2	32.5	31.2	31.1	33.1
Guyana	33.3	33.6	33.0	33.4	33.7	33.3	32.7	32.6	33.2
Botswana	33.8	33.4	33.6	33.3	33.0	32.9	32.9	32.9	33.2
Lebanon	33.6	34.1	34.2	34.0	33.8	33.4	33.0	32.9	33.6
Trinidad and Tobago	35.2	34.4	34.7	34.4	33.7	33.1	32.4	32.0	33.7
Ecuador	35.6	34.4	34.4	34.2	34.2	33.4	32.2	32.3	33.8
Venezuela, RB	33.6	33.6	33.7	34.7	36.1	34.5	32.7	31.8	33.8
Sudan	34.1	-	-	-	-	-	-	-	34.1
Kenya	34.3	34.3	34.3	35.2	35.5	34.9	33.5	32.3	34.3
Egypt, Arab Rep.	34.9	35.1	35.3	35.5	34.8	34.5	33.9	32.8	34.6
Togo	34.4	35.1	35.4	34.5	34.9	35.0	35.0	34.6	34.9
Mauritania	35.5	36.1	36.0	35.8	35.8	35.1	34.4	31.7	35.1
Morocco	36.2	36.4	36.0	35.7	35.1	35.1	34.7	33.5	35.4
Bangladesh	35.8	35.6	35.3	35.7	35.9	35.7	34.9	34.7	35.5
Papua New Guinea	35.1	36.1	-	-	-	-	-	-	35.6
Cape Verde	36.7	36.1	35.5	35.5	35.8	35.6	35.5	34.8	35.7
Jamaica	36.1	36.4	36.4	36.5	35.7	35.4	34.5	34.8	35.7
Nepal	36.9	36.8	36.9	36.9	36.7	36.8	36.1	36.0	36.6
Pakistan	37.3	36.8	37.5	37.5	36.9	36.2	36.5	35.8	36.8
Tunisia	38.5	38.4	38.2	38.4	37.6	36.9	35.7	35.6	37.4
Colombia	39.4	39.1	39.0	38.7	38.5	38.0	36.9	36.1	38.2
Paraguay	38.1	39.8	39.5	39.6	38.7	37.9	37.8	36.7	38.5
Suriname	39.9	39.8	39.5	39.1	38.8	37.9	37.4	36.6	38.6
Guinea	39.5	39.6	39.3	39.1	39.2	38.7	38.2	37.6	38.9
Ethiopia	40.2	40.3	39.4	39.6	40.4	38.9	37.5	36.4	39.1
Burundi	39.1	39.2	39.3	39.4	39.5	39.6	39.7	40.3	39.5
Brazil	40.6	39.8	40.0	40.1	39.8	39.3	38.9	38.5	39.6
Mozambique	41.1	40.3	40.4	39.8	39.8	39.7	38.9	38.6	39.8
Guinea-Bissau	40.3	39.6	39.7	40.1	39.9	39.8	39.9	39.6	39.9

Rwanda	40.5	40.3	40.6	39.9	40.7	40.2	39.3	39.1	40.1
Madagascar	39.6	39.6	39.7	41.9	42.1	40.5	39.4	39.4	40.3
Niger	41.7	41.9	40.9	40.3	39.7	40.7	39.7	38.6	40.4
Swaziland	43.5	41.4	41.3	40.9	40.2	40.1	39.3	38.9	40.7
Burkina Faso	41.0	41.4	41.6	41.6	40.6	40.4	40.0	39.4	40.8
Mali	42.5	42.3	41.0	41.2	41.3	41.3	41.2	40.9	41.5
Malawi	40.3	40.3	41.6	42.6	42.6	42.7	41.9	40.7	41.6
Ghana	42.0	41.9	41.7	41.8	42.6	42.1	41.5	40.3	41.8
Philippines	44.1	43.3	43.0	42.4	41.8	40.9	40.1	39.7	41.9
Uganda	44.1	43.1	43.2	43.6	43.2	43.0	42.3	41.8	43.0
Côte d'Ivoire	42.2	43.2	43.2	44.0	44.2	44.0	43.5	43.9	43.5
Sri Lanka	44.7	44.6	44.3	43.8	42.7	42.9	42.5	43.6	43.7
Belize	45.4	43.8	43.7	44.1	43.7	43.3	42.9	42.7	43.7
Gambia, The	45.4	45.1	44.5	45.7	44.2	43.1	42.9	41.9	44.1
Chad	46.3	46.2	45.7	45.5	44.5	41.1	42.1	42.5	44.2
Senegal	45.9	45.1	44.7	45.3	44.4	43.9	42.6	42.7	44.3
Nicaragua	45.9	45.2	45.0	45.0	44.6	44.3	43.6	43.5	44.7
Sierra Leone	46.3	45.6	44.9	44.2	44.1	44.2	44.3	43.6	44.7
Central African Republic	-	-	44.7	45.3	46.1	46.0	46.9	45.3	45.7
El Salvador	46.2	46.3	46.5	46.3	46.0	45.8	45.0	44.6	45.8
Angola	49.7	48.9	48.1	47.3	46.6	45.8	45.0	43.6	46.9
Gabon	47.3	48.0	48.1	47.7	46.9	47.0	46.1	46.4	47.2
Congo, Rep.	50.0	48.2	48.1	47.9	47.7	47.7	46.4	44.9	47.6
Congo, Dem. Rep.	48.0	-	-	-	-	-	-	-	48.0
Zambia	49.1	48.9	48.1	48.1	47.8	48.7	47.6	46.9	48.2
Honduras	49.7	49.6	49.8	49.6	49.2	48.7	47.5	46.9	48.9
Myanmar	51.6	52.6	51.5	50.7	49.0	49.1	47.8	-	50.3
Uruguay	50.7	51.1	51.9	52.6	52.1	49.8	48.3	47.7	50.5
Benin	51.4	50.6	50.6	51.1	51.1	50.9	49.8	49.7	50.6
Guatemala	51.5	51.5	52.7	52.2	52.1	51.8	50.5	49.9	51.5
Thailand	53.0	52.6	52.6	52.1	51.2	51.2	51.0	50.6	51.8
Haiti	54.9	55.4	56.4	56.7	56.5	55.9	55.9	56.0	56.0
Nigeria	58.0	57.9	57.8	57.6	56.3	55.1	53.8	53.0	56.2
Tanzania	59.4	58.3	57.7	57.2	56.8	56.3	54.9	54.2	56.8
Peru	60.2	59.9	60.3	59.0	58.8	57.8	57.4	56.4	58.7
Panama	64.8	64.1	64.7	65.1	64.4	63.5	61.7	60.0	63.5
Bolivia	67.0	67.1	67.7	67.7	67.8	67.1	64.7	63.4	66.6
Time Average	37.0	36.7	36.8	36.8	36.5	36.1	35.5	35.1	

Source: Adapted from Schneider, Buehn, and Montenegro (2010)

The informal economic activities account for a considerable portion of overall employment in developing nations. It is roughly estimated that the informal economy accounts for not less than 50% of non-agricultural work in many countries. In a broader picture of the informal sector in developing countries, Bacchetta, Ernst, and Bustamante (2009) referred to the informal employment database of the International Institute for Labour Studies (IILS) from which they grouped the countries by region: (i) Latin America: Argentina, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Uruguay and Venezuela; (ii) Asia: China, India, Indonesia, Pakistan, Sri Lanka and Thailand; and (iii) Africa: Botswana, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Malawi, South Africa, Tanzania, Zambia and Zimbabwe. In the year 2000, the Asian countries' informal sector employment rate was 78.2% which was considerably higher than and followed by Africa at 55.7% and Latin America at 52.2%. Furthermore, Jutting and Laiglesia (2009) reported on the proportion of informal employment in total non-

agricultural employment of some countries in North Africa, Sub-Saharan Africa, Latin America, South and Southeast Asia, West Asia and transition countries (Table 2.4). The informal employment rate was significantly higher among the Sub-Saharan African countries followed by South and Southeast Asian countries. The informal employment rate in North Africa, West Asia and Latin America was moderate. A lower rate of informal employment was reported in transition countries.

Table 2.4: Share of informal employment in total non-agricultural employment

Country	Region	1995-99	2000-07	Latest
Algeria	North Africa	42.7	41.3	41.3
Morocco	North Africa	44.8	67.1	67.1
Tunisia	North Africa	47.1	35	35
Egypt	North Africa	55.2	45.9	45.9
Chad	Sub-Saharan Africa	95.2		95.2
Guinea	Sub-Saharan Africa	86.7		86.7
Kenya	Sub-Saharan Africa	71.6		71.6
Mali	Sub-Saharan Africa	94.1	81.8	81.8
South Africa	Sub-Saharan Africa		50.6	50.6
Argentina	Latin America	53.3		53.3
Bolivia	Latin America	63.5		63.5
Brazil	Latin America	60	51.1	51.1
Chile	Latin America	35.8		35.8
Colombia	Latin America	38.4		38.4
Costa Rica	Latin America	44.3		44.3
Dominican Republic	Latin America	47.6		47.6
Ecuador	Latin America	53.5	74.9	74.9
El Salvador	Latin America	56.6		56.6
Haiti	Latin America	92.6		92.6
Honduras	Latin America	58.2		58.2
Mexico	Latin America	59.4	50.1	50.1
Panama	Latin America	37.6	49.4	49.4
Paraguay	Latin America	65.5		65.5
Peru	Latin America		67.9	67.9
Venezuela	Latin America	46.9	49.4	49.4
India	South and Southeast Asia	83.4		83.4
Indonesia	South and Southeast Asia	77.9		77.9
Pakistan	South and Southeast Asia	64.6		64.6
Philippines	South and Southeast Asia	72		72
Thailand	South and Southeast Asia	51.5		51.5
Iran	West Asia		48.8	48.8
Lebanon	West Asia		51.8	51.8
West Bank and Gaza S	West Asia		43.4	43.4
Syria	West Asia	42.9	30.7	30.7
Turkey	West Asia	30.9	33.2	33.2
Yemen	West Asia		51.1	51.1
Kyrgyzstan	Transition countries		44.4	44.4
Moldova	Transition countries		21.5	21.5
Romania	Transition countries	5.4	22	22
Russia	Transition countries		8.6	8.6

Source: Adapted from Jutting and Laiglesia (2009)

This brief review of databases indicates that, in terms of collective output and employment creation, informal sectors play a significant role in most developing economies. Therefore, there is no doubt about the contribution of ISMs in developing countries.

2.8 ISMs IN BANGLADESH⁷

As discussed in previous sections, in developing economies, the informal sector plays a main role in employment creation and collective output, and Bangladesh is no exception. Bangladesh is a developing country that ranks 146th out of 186 countries with an estimated 31.5% of the population living under the poverty line (United Nations Development Programme 2013). For more than two decades, the Government of Bangladesh has been committed to enhancing economic activities for employment generation, with the objective of poverty reduction within the shortest possible time, and this government principle has led to the emergence of numerous ISMs in Bangladesh with their number increasing gradually over the years. In Bangladesh, the informal sector is roughly estimated to contribute about 64% of the total GDP and approximately 41.53 million people work in this sector (Maligalig, Cuevas, and Rosario 2009).

In Bangladesh, ISMs cover a wide range of economic activities, for example, agriculture, forestry, fishing, retail trade, rental services, animal farming, unorganized transport, hotel and restaurant services, etc. According to the Asian Development Bank (2012), the informal sector accounted for more than 40% of the total gross value added (GVA) of Bangladesh in 2010, with the highest contributions being in agriculture, fishery, trade and in industries where capitalization was relatively lower. In the agriculture sector, about 94% of the agricultural GVA was accounted as being the output of informal agricultural enterprises. The informal sector accounted for 34% of total GVA in the manufacturing and other industry sectors, and 33% in the services sectors.

In terms of GDP (Table 2.5), informal activities in the services sector contributed the highest share at 18%, agriculture at 15% and the industry sector at 10% (Asian Development Bank 2012). Among the economic activities – where the informal sector was the major player – were agriculture and fisheries, trade, hotels and restaurants, manufacturing, real estate and other economic activities. On the other hand, the informal sector did not contribute significantly to economic activities that usually have high capitalization (e.g., construction; electricity, gas and water; mining and quarrying; and finance).

⁷ For more information, see

- a. The Informal Sector and Informal Employment in Bangladesh. Mandaluyong City, Philippines: Asian Development Bank, 2012.
- b. A Handbook on Using the Mixed Survey for Measuring Informal Employment and the Informal Sector. Mandaluyong City, Philippines: Asian Development Bank, 2011.

Table 2.5 GDP share of formal and informal sector

Industry	Formal sector (%)	Informal sector (%)
Agriculture	1.0	14.0
Fishing	2.0	1.6
Mining and quarrying	1.2	0.0
Manufacturing	11.1	6.8
Electricity, gas and water	1.1	0.0
Construction	5.6	2.7
Trade	5.0	10.0
Hotels and restaurants	0.5	0.3
Transport, storage and communication	8.0	2.7
Financial intermediation	1.8	0.1
Real estate and business activities	5.1	1.7
Public administration	2.7	0.1
Education	2.4	0.3
Health	2.2	0.1
Community and other private services	7.9	2.3
Total	57.0	43.0

Source: Adapted from Asian Development Bank (2012)

As mentioned earlier, the informal economy plays a dominant role in employment generation in Bangladesh. These ISMs usually comprise a sole owner but can have up to a maximum of 10 employees. Mintoo (2006) study in Bangladesh revealed that ISMs with only one worker contributed to a 26% share of the total number of SMEs, followed by 51% for those having 2–5 workers and 10% for those having 6–10 workers. According to an Asian Development Bank (2012) report, of the 54 million jobs in the country's labour market in 2010, about 42 million were held in informal enterprises. This was more prevalent in rural areas than in urban areas. It was also more likely for women to be working in the informal sector. Informal employment was estimated at about 88.5% of the total number of jobs in the labour market. Of the jobs held by men, 86.8% were with informal employment arrangements. In comparison, the incidence of informal employment among female-held jobs was higher at 92.6%. Informal employment was more prevalent in rural areas at 92.3% compared with 76.0% in urban areas. In general, only 11.5% of the jobs available in the labour market of Bangladesh in 2010 had formal employment arrangements (Table 2.6).

Table 2.6 Employment by nature of employment, sex and urban/rural

Population	% of Total			
	Men	Women	Urban	Rural
Formal enterprise	13.2	7.4	24.0	7.7
Informal enterprise	86.8	92.6	76.0	92.3

Source: Adapted from Asian Development Bank (2012)

The provision of formal or informal employment arrangements varied, depending on the type of economic activity. As established in the previous sections, informal employment was the most common work arrangement in the country's labour market. More than 90% of the jobs in the following economic activities had informal

arrangements: trade; transport, storage and communications; agriculture; mining and quarrying; construction; hotels and restaurants; and private households (Table 2.7). There were industries where employment arrangements appeared to be formal: examples were in public administration and defence (81.7%), financial intermediation (77.7%) and education (73.6%).

Table 2.7 Employment by industry and nature of employment

Industry	Formal %	Informal %
Agriculture, hunting and forestry, fishing	2.2	97.8
Mining and quarrying	2.3	97.7
Manufacturing	30.4	69.6
Electricity, gas and water supply	52.8	47.2
Construction	6.4	93.6
Wholesale and retail trade	7.2	92.8
Hotels and restaurants	9.6	90.4
Transport, storage and communications	6.7	93.3
Financial intermediation	77.7	22.3
Real estate, renting and business activities	59.1	40.9
Public administration and defence; compulsory social security	81.7	18.3
Education	73.6	26.4
Health and social work activities	37.5	62.5
Other community, social and personal service activities	14.8	85.2
Private households	4.8	95.2
Extraterritorial organizations and bodies	57.8	42.2

Source: Adapted from Asian Development Bank (2012)

Overall, these statistics show the diversity and importance of ISMs in Bangladesh. As there is a wide range of ISMs' activities encompassed in the informal sector, it is difficult to generalize among all microenterprises in terms of characteristics and behavioural patterns. Hence, for the purpose of this study, the tea-stall microenterprise has been chosen and it is assumed that this tea-stall social microenterprise would represent entrepreneurial activities to some extent in the informal sector of Bangladesh. Among these categories, the tea-stall is considered to be under the hotel and restaurant services' category which contributes 0.21% of the total GDP with 0.61 million people engaged within this informal category (Maligalig, Cuevas, and Rosario 2009). In addition, in another study, it was estimated that about one million tea-stall vendors spend 20 million Euros per month for making tea. Actually, tea-stalls are famous in Bangladeshi culture not only for their food-serving purpose but they are famous for and always remembered as a perfect place for hanging out. A short sketch of the tea-stall within the context of Bangladesh is next described. A regular tea-stall in Bangladesh is basically a 10 ft x 10 ft shop with almost no facilities! Most of the tea-stalls do not have electricity or a place to sit inside. However, tea-stalls seem to compensate with continuous service of their different products such as tea, cigarettes,

biscuits, cakes, chips, sweets, candy, etc. Most of the people visit tea-stalls that have a bench in front where people can drink tea and make their own fun.

The ISMs choose to operate informally for a number of reasons which mainly include: avoiding taxation and fulfilling other regulatory requirements; and also due to their lack of literacy and skills (Malik and Abed 2007). The ISMs in Bangladesh suffer from poor sustainable growth because of their limited regulations and policy, low physical infrastructure, unskilled personnel, weak networks, limited access to finance and weak institutional arrangements (Ahmed and Chowdhury 2009; Uddin 2008). However, the sustainable development of ISMs is critical in the context of Bangladesh as they form a predominant part of the informal economy and have the potential to affect Bangladeshi society in both positive and negative ways. Components ranging from human capital, social capital and financial capital to business environment factors shape the overall growth of the microenterprise and its sustainability in the long run. Thus, this study has sought to take an important step towards a complete understanding of the impact of various resources and capabilities on sustainable performance in advancing ISMs within the context of Bangladesh.

2.9 THE STUDY RATIONALE

As discussed in previous sections, ISMs, with their challenges and opportunities, have become a development agenda of developing countries. ISMs in most of the developing nations face widespread difficulties that limit their growth. They have limited access to formal credit and other financial services. Therefore, they rely on other informal sources such as friends, relatives and moneylenders. ISMs also face many non-economic barriers as well. For example, the poor human capital of most ISMs, along with their lack of social capital and entrepreneurial orientation to improve their production system, tend to reduce the efficiency of their business operations. Also, ISMs tend to have poor knowledge about business environment opportunities. Considering the challenges and opportunities, however, this subject has received less attention than other aspects of entrepreneurial activities such as the motives for entrepreneurial start-up, human capital structure of micro-ventures and social networks. Studies on human, social and financial resources' dimensions are critical to extend the knowledge on the sustainability of this emerging ISMs' paradigm. In the context of Bangladesh, Malik and Abed (2007) have confirmed that there was a lack of adequate data and research regarding the informal sector in Bangladesh. Rigorous evaluation providing essential evidence about the value of ISMs remains scarce,

especially for the developing world. Therefore, further research must now be done to inform policy makers and donors by a careful analysis of the ISMs' antecedents, and the effect of these antecedents on enterprise success.

2.10 SUMMARY

The objective of this chapter was to revisit the nature, characteristics, roles, opportunities and challenges of informal microenterprises in the context of developing countries. A review of the literature found that the informal sector had received greater attention with the objective of employment generation and poverty reduction in the developing world; however, the subject had received less attention in terms of empirically evaluating the dynamics of ISMs in this domain. Therefore, the present study has found evidence of frequent calls for research to explore the existing theories related to the sustainable performance of ISMs in order to develop a complete model for microenterprises. Thus, the next chapter reviews existing theories related to the sustainable growth of informal microenterprises from an interdisciplinary perspective in order to identify the pertinent research gaps with regards to the components and consequences of informal microenterprises.

CHAPTER 3

LITERATURE REVIEW AND CONCEPTUAL MODEL⁸

“A good, sympathetic review is always a wonderful surprise”.

—Joyce Carol Oates

3.1 INTRODUCTION

This chapter presents the literature analysis relevant to the current research. Overall, the literature review is divided into two sections, namely, the resource-based view and the firm life-cycle theory. While presenting the literature review, this chapter reveals the literature gaps which are to be addressed in the current research. This chapter suggests that there is no single model or theory which explains the ISMs' sustainable growth in a single framework. Hence, by discussing the relevant issues from the theoretical perspective, this chapter carries out the groundwork in order to develop such an integrated, if not a 'complete', model. Having already discussed the extensive analysis of existing literature and the rationale for ISMs in developing countries (Chapter 2), this chapter now presents the research concept used in this study and then proposes the preliminary research model.

⁸ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Qualitative and Quantitative Evidence” in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
- b. Khan, E.A. (2013). “Investigating the Dimensions of Financial Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in a Developing Country”, *Curtin Business School Doctoral Colloquium*, Curtin University, Perth, Australia.
- c. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation” in *Proceedings of the 26th Annual SEANZ Conference*, Sydney, Australia.
- d. Khan, E.A. (2013). “Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries – Field Study and Survey Experiment”, *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.
- e. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Sustainable Growth of Informal Social Micro-enterprises (ISMEs): A Multidimensional Model” in *Proceedings of the 7th Biennial Conference of Hong Kong Economic Association (HKEA)*, Hong Kong.
- f. Khan, E.A., Rowe, A.L. and Quaddus, M. (2012). “Exploring Sustainable Growth of Social Micro-enterprises in an Emerging Economy” in *Proceedings of the 15th EMAN Conference on Environmental and Sustainability Management Accounting in collaboration with the CSEAR International Congress on Social and Environmental Accounting Research*, Helsinki, Finland.
- g. Khan, E.A. (2011). “Managing Resources in the Stages of Micro Enterprise Life Cycle: A Conceptual View”, *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.

3.2 LITERATURE SEARCH

For the purpose of conducting the review of small business literature, the researcher investigated only the academic journals. The literature search included several phases, which were: 1) gathering research papers, 2) selecting suggested specific research themes, 3) applying omission criteria and 4) analysing the data. The first step focused on gathering a comprehensive set of small business and entrepreneurship research papers. This research retrieved publications without restrictions on publication dates from online databases including ABI-Inform, ScienceDirect, Wiley InterScience, Emerald Management Xtra and Proquest. Initially, the search phrases were: “firm growth”, “firm performance”, “firm sustainability” and “firm life cycle”. Furthermore, in order to identify publications specific to the sustainable growth of ISMs’ antecedents, the search criteria included several key words: “firm resources”, “entrepreneurial orientation”, “human capital”, “social capital”, “financial capital” and “environment”. The search yielded not less than 125 papers between 1982 and 2013 from a variety of disciplines, including entrepreneurship, management, economics, marketing, sociology, psychology and others. In the second step, the search was restricted to occurrences of any of these key words appearing in the article’s title in order to avoid locating publications where any of these phrases might have been used as casual words in the main text. To avoid any confusion and bias, the selection criteria were logical. The presence of both of these words confirmed that due to the subject of the paper, it would somewhat/somehow discuss ISMs’ sustainable growth issues. In the third step, the exclusion criteria were employed. These exclusion criteria aimed to filter out less valid data. The topics advocating for research in a broader or different field and which were not focused on ISMs were eliminated. Likewise, the research themes that simply proposed replication of the paper’s model, propositions, hypotheses or theory were culled from the database. In the final step, the data were analysed. Appendices B and C presents the major factors and variables from the analysis. From the analysis, it was found that a variety of research methodologies had been employed in scholarly small firm growth studies, including quantitative, quantitative (survey), literature analysis, conceptual, case studies, field interview, focus group, qualitative and mixed method. The content analysis revealed that most studies had concentrated on firm antecedents and performance issues. Most studies used resource-based theory and some used firm life-cycle theory. The popularity of resource-based theory was somewhat extraordinary especially among researchers dealing with intangible and tangible firm resources.

3.3 REVIEW OF FIRM GROWTH THEORIES

Does size have an influence on firm growth? Do micro- or smaller firms grow more rapidly than other firms? Overall, what energises the firm's growth? These are central questions that have been focal points of many disciplines such as economics, management, marketing, entrepreneurship and others for a long time. In spite of significant attention and immense empirical research, theoretical progress has been remarkably slow (e.g., Shepherd and Wiklund 2009). The discussion of firm growth theories was started over 50 years ago by Edith Penrose (1959) publishing the first edition of her book titled *The Theory of the Growth of the Firm*. To date, the firm growth literature debate has covered a broad range of theories. Several conceptual frameworks have tried to capture characteristics of micro- or small firm growth, such as: the stochastic approach; evolutionary theory; life-cycle model and resource-based view. In the following subsections, some firm growth theories are reviewed.

The stochastic approach is based on Gibrat's (1931) 'Law of Proportionate Effect', highlighting the linear nature of firm growth (Mansfield 1962) and that firm growth is independent of firm size (O'Farrell and Hitchens 1988; Penrose 1995). Mainly, this law predicts two effects: a firm's previous growth cannot be used to predict future growth; and the probability of a firm's growth is an industry-specific phenomenon (Becchetti and Trovato 2002; Dobbs and Hamilton 2007). Many scholars accept Gibrat's Law because it explains a wide number of factors that are input to change firm growth. However, according to Deakins, Freel, and Mason (1996), none of these causes are of major significance over time and their influence does not depend on firm size. Firm performance depends on various factors: individual characteristics, resources, strategies, geographic location and industry context but each component counts for only a little portion of the proportionate growth of firms. Of this huge range of factors, some contribute to growth, others cause decline, but together they act unsystematically on the size of firms. The empirical results have shown theoretical reasons to reject Gibrat's Law (Evans 1987; Reichstein and Dahl 2004). Hamilton, Shapiro, and Vining (2002) summarised by stating that micro- or small firms have greater capacity to innovate in a specific environment to grow faster. In supporting this notion, Moreno and Casillas (2007) presented the view that along with innovativeness, micro- or small firms are less risk averse and more proactive than mature firms. Furthermore, they argued that less rigid routines or flexibility enable micro- or small firms to explore and create more growth opportunities. This view also related to the concept of agency cost. Penrose (1959) and Hamilton, Shapiro, and Vining (2002) argued that the different

growth rate occurs due to changes in internal resources and the complexity of the firms. Likewise, Chow and Fung (1996, 491) presented the idea of 'structural inertia' that explains "how the internal organizational structure interacts with the environment". This led to the view that mature firms are slower to change because mature firms want to retain their status more cautiously.

The evolutionary theory addresses the idiosyncratic nature of firm growth. This theory originates from the evolutionary idea in biology (Darwin 1859) and was also acknowledged by Penrose (1952). Furthermore, Nelson and Winter (1982) developed and applied its conclusions at the industry level. Furthermore, Aldrich (1999) elaborated and summarised the evolutionary theory in a particular form. The evolutionary model describes the collaboration of internal and external factors that push a firm into growth. In other words, the growth of the firm is an evolutionary process which is based on the accumulation of "collective knowledge in the context of a purposive firm" (Penrose 1995, xiii). Many scholars have accepted this theory because it proposes a more reasonable explanation of firm-level financial growth such as heterogeneity and the disequilibrating nature of firms in terms of technology, learning and time (Freel 2000). However, there have been some critics. Nelson and Winter (1982, 15) described the "... relatively constant dispositions and strategic heuristics that shape the approach of the firm to the non-routine problems it faces". Furthermore, Penrose (1952) suggested that the biological analogy in socio-economic evolution limits the application of this model. Alchian (1950, 217), in his paper which Penrose clearly addressed, emphasized that "it is not argued that there is no purposive, foresighted behaviour present in reality" and proceeded to incorporate "... adaptation by individuals with some foresight and purposive motivation" into his firm growth model.

The firm life-cycle theory has several sources of origin. One of the sources is the analogy introduced by Penrose (1952). The firm life-cycle theory was developed in parallel with the evolutionary theory (Aldrich 1999) with these theories being alternative ways of viewing firm development. The evolutionary approach assumes that firms do not follow a preset path of growth. On the other hand, the life-cycle paradigm assumes that change occurs in a cycle of start, growth, maturity and decline. This life-cycle model does not focus on what causes a firm to grow. Rather, it is concerned about the internal mechanism of a micro- or small firm's growth. The applicability of the firm life-cycle theory in micro- or small business is not without

problems (Lewis and Churchill 1983; Scott and Bruce 1987). The sequential nature of the stages has not been proven beyond doubt. A measurement issue can also be raised regarding firm size and other characteristics. Employment, turnover, profit and growth can be measured in an absolute and relative way, and in correlation with different firm characteristics (Davidsson, Delmar, and Wiklund 2006). Finally, the number and main features of the stages have varied in detail from author to author and theory to theory. There has not been a consensual life-cycle model set up so far to describe the development of micro- or small firms. However, there has been empirical evidence to support the firm life-cycle theory in micro- or small business research. Empirical validation has been proven by, for example, Lewis and Churchill (1983), Hanks et al. (1993), Quinn and Cameron (1983), Scott and Bruce (1987), McMahon (2001), Lester, Parnell, and Carraher (2003) and Massey et al. (2006). Several factors influencing firm progress were confirmed by Massey et al. (2006). The existence of life-cycle stages which represent a 'dead end' in terms of firm growth was also confirmed by many scholars (e.g., McMahon 2001; Lester, Parnell, and Carraher 2003; Massey et al. 2006).

The resource-based view or theory was originally applied in the field of strategic management, but its implications have been applied in other fields of business, as the resource-based view is "one of many explanations of intra-industry performance differences" (Hoopes, Madsen, and Walker 2003, 889). According to the resource-based theory advanced by Ghoshal, Hahn, and Moran (2002), the firm comprises differential skills, complementary assets, and organizational routines and capabilities. Barney (2001) outlined three different perspectives of the resource-based view of the firm. Comparison with the structure-conduct-performance model was based on theories of competitive advantages by Porter (1980) and elaborated by Barney (2001). The resource-based view has also been positioned against evolutionary economics (Nelson and Winter 1982). In contrast, the similarities of the resource-based view and neo-classical economic theory were outlined. Like other firm growth theories, the resource-based view has several limitations. Kraaijenbrink, Spender, and Groen (2010, 351) highlighted eight drawbacks of the resource-based view, namely, "no managerial implications; implies infinite regress; applicability is too limited; sustainable competitive advantage is not achievable; it is not a theory of the firm; valuable, rare, inimitable and non-substitutable are neither necessary nor sufficient for sustainable competitive advantage; the value of a resource is too indeterminate to provide for useful theory; and the definition of resource is unworkable". However, they stated that "... the first five critiques do not really threaten the resource-based view status.

However, the last three critiques offer more serious challenges that need to be dealt with if the resource-based view is to more fully realize its potential to explain sustainable competitive advantage, especially beyond predictable, stable environments". In contrast, the spirit of the resource-based view, in its usefulness to small firms, is that micro- or small firm growth depends on the human, social and financial resources available over time to manage growth (Orser, Hogarth-Scott, and Riding 2000).

3.3.1 Findings and Gaps

Appendix A summarises and compares the relevant firm growth theories and presents a brief outline of their findings. Overall, the literature survey has clearly indicated that there is no theoretical model that can reliably and validly explain firm growth or performance. According to Dobbs and Hamilton (2007, 316) "... knowledge remains fragmented and still lacks a body of integrative theory". However, after an overview of the different angles taken by firm growth theories, the current study has reviewed the groups of possible reasons for micro- or small firm growth. Opportunities for growth at the firm level are indicated by the strategic orientation, available resources and the environment (the resource-based view), and the abilities of firms to grow can be reflected by accumulated capabilities (the firm life-cycle approach).

3.4 THE RESOURCE-BASED VIEW

The resource-based view centres on the assembly of firm capabilities and resources (Brush and Chaganti 1999). These resources and capabilities are "(tangible and intangible) assets that are tied to the firm over a substantial period of time" (Gottschalk 2007). Empirical work has also established the influence of resources and capabilities on firm growth (Wiklund and Shepherd 2003). The vast literature on resource and capability has shown that there is a much wider range of resources and capabilities that need to be taken into account for firm performance.

Several scholars have also extended the resource-based view. In the context of developing countries, Jarvenpaa and Leidner (1998) viewed this theory in three extended paradigms, namely, the dynamic capabilities framework, institutional influences and network analysis. The dynamic capabilities framework of Teece, Pisano, and Shuen (1997) was also supported by Hamel and Prahalad (1994) in terms of recognizing that it is not enough for companies to have access to resources that are needed in their processes. It is also necessary that companies are capable of

recognizing and searching for the opportunities to utilise their resources. The institutional influences' approach described by Oliver (1997) suggests that firms make resource decisions influenced by their pasts; that cognitive and cultural factors strongly influence resource decisions; and that social influences on firms can limit companies' intentions to initiate resources or engage in diversification. According to the networking theory of Eisenhardt and Schoonhoven (1996), strategic needs and social opportunities for cooperation provide a sound basis for strategic alliances which, according to the resource-based view, are important tools for firms seeking to deal with competition in the marketplace. Other researchers have expanded the resource-based view into the entrepreneurial perspective. For example, Hunt and Derozier (2004) mentioned that the resource-based view is an important theoretical base in entrepreneurial studies. Runyan, Droge, and Swinney (2008) observed that entrepreneurial orientation and small business orientation are two resource strategies. This view was supported by Miles, Covin, and Heeley (2000). Grande, Madsen, and Borch (2011) stated that entrepreneurial orientation has emerged as an important concept for evaluating entrepreneurial efforts within existing firms. This perspective is not far away from the dynamic capabilities' concept which, as Lumpkin and Dess (1996, 136) stated, "involves the intentions and actions of key players functioning in a dynamic generative process ...". The dynamic capabilities, according to Teece, Pisano, and Shuen (1997, 516), were also connected to the business environment. They described "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments". Zollo and Winter (2002) conceded that dynamic capabilities may be of more value in rapidly changing environments.

Appendices B and C present the relevant studies that have used the resource-based view and other theories. Using the concepts, variables, dimensions and subdimensions from resource-based theory, the ISMs' sustainable growth model for this research was firstly developed (see Figure 3.1). Later, firm life-cycle theory was incorporated into the preliminary research model (see Figure 3.1). Section 3.6 will discuss the relevant issues of firm life-cycle theory in the context of small business. The next sections present the theoretical/empirical background and underpinning of the research model in view of resource-based theory.

3.4.1 Entrepreneurial Orientation

The entrepreneurial orientation of a firm focuses on the dynamic capability and function of the enterprise itself rather than the personality traits of the entrepreneur. Using prior literature, Lumpkin and Dess (2001, 432) referred to entrepreneurial orientation as a “fairly consistent set of related activities or processes”. Mintzberg (1973) was the pioneer of entrepreneurial research, and he described the features of entrepreneurial orientation on the basis of strategic decision-making where the firm plays within an uncertain environment to explore new opportunities. Pearce et al. (2010, 219) stated that “[a]n entrepreneurial orientation is conceptualized as a set of distinct but related behaviours that have the qualities of innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy”.

Entrepreneurial orientation is a significant predictor for any firm, and research on this topic has existed for decades. Many studies have examined a variety of entrepreneurial factors, including innovativeness, risk taking, proactiveness (George 2011; Davis et al. 2010; Miller 1983), competitive aggressiveness and autonomy (Pearce et al. 2010; Rauch et al. 2009). Based on the literature review, these five components are viewed as important capabilities of the firm (Covin and Miller 2013). The more entrepreneurial the orientation adopted by small firm owners, the more enhanced is their firm performance (Covin and Slevin 1989; Wiklund and Shepherd 2005).

Innovativeness: this reflects a dynamic process of generating or transforming an idea and applying it to produce products, processes, structures or policies that are new to the enterprise (Damanpour and Daniel Wischnevsky 2006; Pérez-Luño, Wiklund, and Cabrera 2011). Product and market innovativeness highlights product development, market research and promotional management (Miller and Friesen 1982; Moch et al. 2011). On the other hand, process innovation contributes in backward and forward linkages and operations (Huang and Yu 2011). In addition, technological innovation is linked to the production system (Freel 2006). Furthermore, incremental to radical innovation focuses on the degree of change required to implement the innovation (Cooper 1998; Freel 2006). Moreover, administrative innovation narrates management processes such as structure, personnel and accounting systems (Laforet 2011).

Innovativeness is a vital factor of an entrepreneurial orientation: Freeman (1982) stated that ‘not to innovate is to die!’ An innovative firm creates and introduces new products/services and technologies and can generate astonishing performance. Zahra

(1996) agreed that innovativeness is important for the survivability of a firm due to the competitive landscape, and that a turbulent environment forces a firm to pursue a dynamic strategy to articulate its ideas in order to organize technical resources to attain performance. This view that high levels of innovativeness can foster enterprise success has been supported empirically (e.g., Zahra and Bogner 2000; Rosenbusch, Brinckmann, and Bausch 2011; Gunday et al. 2011). The rate at which firms are capable of developing new products/services and technologies has been associated with performance and survival (Lumpkin and Dess 2001; Kreiser and Davis 2010).

Risk taking is a brave action by 'venturing into the unknown', 'borrowing heavily' and 'committing a relatively large portion of assets' to ventures in ambiguous environments (Baird and Thomas 1985, 231-232). Miller and Friesen (1978, 923) defined 'risk taking' as "the degree to which managers are willing to make large and risky resource commitments – i.e., those which have a reasonable chance of costly failures". Risk-taking firms have a tendency to be involved in hazardous endeavours and prefer to take bold action to obtain firm goals (Kreiser and Davis 2010). The reason is that a tendency to take risks contributes to a firm's desire to deploy new ideas to deliver the service. On the other hand, over time, some firms become traditional and reluctant to take risks (Zahra 2005).

Small firms inevitably involve errors and a certain extent of risk and speculation. A constructive direction towards risk taking should help the firm to take on inevitable challenges and threats (Busenitz 1999). Empirical research has shown the link between risk taking and firm performance (e.g., Lumpkin and Dess 1996). Begley and Boyd (1988) observed a curvilinear relationship and suggested that firms demonstrating modest levels of risk taking would perform better. Similarly, Naldi et al. (2007) found that firms' risk taking is adversely linked to performance. Wiseman and Catanach (1997) established that risk taking has positive effects on performance in certain contexts, while the effect is negative in other contexts. A willingness to take on more risk means a greater chance for gains as well as losses (Grande, Madsen, and Borch 2011). Thus, firms are described by tolerance for risk that may lead to firm growth.

Proactiveness can be defined as "acting in anticipation of future problems, needs, or changes" (Webster (1991, 937). Miller and Friesen (1978, 923) established proactiveness by responding to the question, "does it *shape* the environment (high score) by introducing new products, technologies, administrative techniques, or does it

merely react”? Thus, proactiveness is an opportunity-seeking perspective described by offering new products and forecasting future requirements. Venkatraman (1989) also viewed proactiveness as dealing with the anticipation of future demands by seeking new opportunities.

A high level of proactiveness provides the firm with the ability to predict needs in the marketplace and also the capability to anticipate future change (Short et al. 2009). A positive relationship has been found between firms' high-level proactiveness and performance (Runyan, Droge, and Swinney 2008; Patzelt and Shepherd 2011). Short et al. (2009) found that family firms exhibit lower proactiveness relative to non-family firms. The literature has suggested that by exploiting irregularities in the marketplace, the pioneer firm gains a competitive edge (Lumpkin and Dess 1996). Lieberman and Montgomery (1988) argued that pioneer firms can establish significant advantages over other firms. Furthermore, the strategy literature suggests that the firm needs to be proactive in the turbulent environment (Rosenbusch, Rauch, and Bausch 2013). In fact, it is assumed that proactive firms are often externally focused (Miller 1983) and that they frequently examine business changes to introduce new offers ahead of their competitors. This action ensures that they achieve competitive performance. On the other hand, during a crisis, when a period of unanticipated shock occurs, proactiveness is unlikely to increase, and low proactiveness may benefit the firm (Dess, Pinkham, and Yang 2011).

Competitive aggressiveness is the strength of a firm's capabilities to perform better than its counterparts and is typified by powerful aggressive behaviour in response to competitive pressures (Lumpkin and Dess 2001). Entrepreneurial firms want to assert themselves and to accept rivalry for success (Morgan and Strong 2003). Firms with competitive aggressiveness behaviour conceive an unusual method of competing (Cooper, Willard, and Woo 1986), attack rivals' weak points (MacMillan and Jones 1984) and concentrate on market development (Morgan and Strong 2003). Likewise, Porter (1980) characterized the competitive aggressiveness of a firm in terms of functioning in an extraordinary way, continuously rearranging ideas and outspending the market leader.

The small business literature has supported the view that competitive aggressiveness is one of the main features of the successful firm (Lumpkin and Dess 1996; Morgan and Strong 2003). Miller and Camp (1986, 99) explored the view that the most successful

firms were usually not frightened away from turbulent defined markets “in terms of the number, sizes, and types of their customers, as well as the breadth of their product line”. Ginsberg (1985) and Khandwalla (1976) also focused on the competitively aggressive actions used by firms to chase firm performance.

Autonomy refers to self-regulating behaviour carried out by persons or groups focused on carrying out a new endeavour and seeing it through to success (Lumpkin and Dess 2001; Van Gelderen and Jansen 2006). Firm autonomy can be varied in terms of organizational size, management style (centralization or decentralization) or ownership (Lumpkin and Dess 1996). This autonomy enables the exploitation of opportunity by using advantage-seeking behaviours (Ireland, Hitt, and Sirmon 2003).

Firms with autonomous behaviour such as a high level of entrepreneurial culture and practices, and the power of the team can stimulate entrepreneurial success (Lumpkin, Cogliser, and Schneider 2009). Autonomous behaviour frequently involves freeing firm members to function outside an enterprise’s existing customs and strategies (Van Gelderen and Jansen 2006). Therefore, autonomy is vital to the processes of increasing a firm’s capabilities, exploiting opportunities and encouraging the development of ventures. Several scholars have therefore supported the view that autonomy is the driving force of an entrepreneurial firm’s performance (e.g., Lumpkin, Cogliser, and Schneider 2009; Van Gelderen and Jansen 2006)

3.4.2 Human Capital

Firm-level human resources play a vital role in firm performance. This human capital presents the collective education, experience, skills, training and abilities of people contributing to firm performance and productivity, and this role has been suggested by many researchers in the field of small business research (e.g., Cooper, Gimeno-Gascon, and Woo 1994; Nyberg et al. 2012; Crook et al. 2011; Maditinos et al. 2011). The literature has described firm-level human capital from its demographic and psychographic characteristics. For example, some literature has highlighted education or explicit knowledge, experience, skills, firm team size, age range, etc. (Gilbert, McDougall, and Audretsch 2006; Kickul et al. 2010; Unger et al. 2011; Ketkar and Sett 2010). On the other hand, some researchers have highlighted tacit knowledge, extraordinary commitment, friendly and intimate relationships, voluntary labour, etc. (Kelliher and Reinl 2009; Dess, Pinkham, and Yang 2011; Anderson and Eshima 2011;

Sirmon and Hitt 2003). Therefore, the current research has discussed the human capital dimension in terms of demographic and psychographic characteristics.

The *demographic resources* of a firm are the demographic features of the micro-firm members such as their education or explicit knowledge, experience and skills, firm team size, age range, etc. Firm-level education or explicit knowledge has been widely accepted and studied in entrepreneurship research and has been seen to have an influence on firm performance (e.g., Unger et al. 2011; Watson, Stewart Jr, and BarNir 2003). A firm with members with educational backgrounds contributes more rational capability and explicit knowledge and thereby can be more successful (Hitt et al. 2001; Chow 2006; Lee, Phan, and Yoshikawa 2008). In a literature review by Cooper (1993), it was found that 10 of 17 earlier studies reported positive associations between level of education and growth. Some other empirical studies have also established a positive link between firm-level education and performance. Mengistae (2006) asserted that the firm owner's years of schooling are related to micro-firm profitability. Similarly, Jo and Lee (1996) found that founders' general educational level is positively associated to firm survival and growth. Furthermore, education is seen as an element of human capital that may help in the accumulation of explicit knowledge that may generate skills valuable for achieving success in entrepreneurial firms (Davidsson and Honig 2003). It has also been recognized that the best results are achieved by firms having prior work experience (Shrader and Siegel 2007). In the case of the micro-firm, owners rely upon their own and family members' experiences and skills to set up and operate a business (Sharma and Salvato 2011). Firm-level workers' previous experience and skills increase the micro-firm's entrepreneurial alertness helping it to discover opportunities (Ucbasaran, Westhead, and Wright 2008). Some empirical studies have confirmed the positive impact of prior experience on firm success. For example, a study conducted by Batjargal (2005) among entrepreneurial Russian firms found that firm experience positively related to firm financial growth. Furthermore, prior experience as an entrepreneurial firm has been found to be a good predictor of future success. The number of firm members and their maturity/age levels are reflective of the firm's education, knowledge, skills and ability (Coleman 2007). Cooper, Gimeno-Gascon, and Woo (1994) have stated that the presence of firm members leads to a greater breadth and depth of expertise enhancing the growth prospects of the firm. Furthermore, they suggested that members (in number and maturity level) foster the reliability of an enterprise to potential lenders and other constituents. A study by Cooper, Gimeno-

Gascón, and Woo (1997) found that team initiatives in opening a firm had greater success than those established by single founders.

The *psychographic resources* of a firm describe the psychographic characteristics of the micro-firm members, such as, their tacit knowledge, extraordinary commitment, friendly relationships, voluntary labour, etc., and this leads to the new dimension of a microenterprise's psychographic human capital. In micro-businesses, family members are engaged in entrepreneurial activities often due to their tacit knowledge and strong commitment (Sharma and Salvato 2011). One previous study has suggested that firm tacit knowledge is important for performance in the micro-firm (Ireland, Hitt, and Sirmon 2003) and it referred to 'know-how', the often non-codified component of activity (Anderson and Eshima 2011). Cabrera-Suárez, De Saá-Pérez, and García-Almeida (2001) indicated that micro-firms' know-how can be generated by learning-by-doing as well as by research. Tokarczyk et al. (2007) argued that the tacit knowledge of a micro-firm is built up across generations and this allows it to ensure competitive advantage (Cabrera-Suárez, De Saá-Pérez, and García-Almeida 2001). Firm members' commitment has received significant research consideration in the firm behaviour literature. Meyer and Herscovitch (2001) defined commitment as a power experienced as a sketch of the mind or emotional state that forces an individual towards an act relevant to one or more targets. Donnelley (1988) recommended that strong commitment of firm members may foster the human capital of the microenterprise. At the beginning stage of the micro-firm, survivability is the crucial factor. Therefore, all members of the microenterprise put their best efforts and commitment to surviving and going forward. Zahra et al. (2008) addressed the view that micro-firm commitment is linked with effort and extra-role behaviours that thereby contribute to the realization of a firm's growth. The literature has supported the view that one reason for firm failure is poor relationships among firm members and this problem may result from not communicating expectations about the work relationship (Tokarczyk et al. 2007). Thus, friendly and intimate relationships among firm members have become an important element that leads to a firm's survivability and success. In addition, voluntary labour is a vital component for sustaining a firm and firm performance. In the case of the micro-firm, during survival and poor economic times, free labour from family members helps to grow and sustain the firm (Sirmon, Hitt, and Ireland 2007). Therefore, family members' voluntary labour contribution may be a unique resource of micro-firms that encourages microentrepreneurs to implement strategies and acquire firm goals. This pool of resources is available due to the duality

of family members' family and business relationships (Chrisman, Chua, and Zahra 2003).

3.4.3 Social Capital

Social capital also contributes to firm performance. Generally, social capital is defined as "... the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal 1998, 243). In terms of an organizational insight, Leana and Van Buren (1999, 540) contended that social capital directs "the character of social relationships within the organization, realized through members' levels of collective goal orientation and shared trust". Social capital presents a structure for recognizing the exclusive behavioural capabilities and resources of micro-firms. Social capital deals with numerous social relationships and networks that facilitate the discovery and exploitation of opportunities. The theoretical and empirical works in social capital have been diverse. For instance, Nahapiet and Ghoshal (1998) perceived social capital as an important component of intellectual capital and competitive edge. Dess and Shaw (2001) explored social capital in organizations and proposed explicit associations between social capital, turnover and firm performance. Labianca (2006) also introduced the group social capital concept. The current study has adopted three elements of social capital: structural, cognitive and relational.

The term '**structural capital**' refers to the social connections, including the network types and ties, among the participants (Nahapiet and Ghoshal 1998). In addition, structural capital also covers the compactness of social ties (Pearson, Carr, and Shaw 2008; Pirolo and Presutti 2010; Lechner, Dowling, and Welpé 2006). In the context of small business, networks exist between family members, relatives, friends, colleagues, suppliers, customers and organizations. The connectivity builds up initially from close family members providing different kinds of help and support. Furthermore, these networks may be extended across communities, reaching friends and colleagues. Moreover, a small business owner can broaden their relationships with suppliers, customers and support organizations (Ucbasaran, Westhead, and Wright 2008). It appears that micro-firms are likely to possess an abundance of internal network ties along with external network ties and, therefore, may have an advantage over other firms (Pearson, Carr, and Shaw 2008). Structural capital provides access to resources and information which may have a positive impact on firm performance. Empirical research has shown a relationship between the development and transformation of

relationship networks, and firm growth (Hoang and Antoncic 2003). It has been revealed that particular types of relationships (network content) are more vital in different economic contexts (Mosey and Wright 2007).

The term '*cognitive capital*' actually captures the essence of what Coleman (1990, 315) described as 'the public good aspect of social capital'. It describes a shared unique language and narratives that are commonly known and understood. Nahapiet and Ghoshal (1998) emphasized the point that the central building blocks of the micro-firm's execution strategy are shared codes and language, and narratives. The aim of the shared language and narratives is to build the mutual understanding that is appropriable by the collectivity of the micro-firm as a resource that is important for the firm's growth. As such, the shared language and narratives are unique in micro-firms, because they are deeply embedded in the firm's history (Pearson, Carr, and Shaw 2008) and help firm growth. Shared vision works as a bonding device that permits the shared integration of ideas (Tsai and Ghoshal 1998). The firm vision "... endows the family enterprise with meaning—it conveys a profound explanation for why continuing the business is important to the family" (Lansberg 1999, 76). The shared purposes of both the firm and family combine to build the mutual understanding that is essential for the family to attain goals.

The term '*relational capital*' refers to the resources and capabilities generated via personal contacts, including respect, trust, trustfulness and friendliness (Nahapiet and Ghoshal 1998). In other words, it centres on the degree of trust, norms, obligations and identity which exists among the people involved. Trust is important to create a collaborative atmosphere and collective actions (Leana and Van Buren 1999). It is a fact that when trust is constructed among people, they tend to be more involved in mutual activities, and further trust can be generated. This kind of trust builds an influential link to micro-firm resources and capabilities. Norms include teamwork and synergy among the participants in the microenterprise (Lansberg 1999; Sorenson et al. 2009). Norms in the micro-firm help to guide decision choice and create exclusive familial influences on the firm across generations (Sharma and Manikutty 2005). Obligations are also compulsory for mutual and group actions (Pearson, Carr, and Shaw 2008). Over time, obligations to the microenterprise create strength in network ties because microentrepreneurs cannot fire their family members (Pearson, Carr, and Shaw 2008). Thus, relational social capital expresses the extent to which an entrepreneur is actually able to obtain physical and emotional support in the firm development process. The

upper degree of relational social capital provides knowledge and information within the micro-firm's social network and ensures firm growth.

3.4.4 Financial Capital

Financial resources describe the access to funding and financial opportunities (Meyskens et al. 2010; Gilbert, McDougall, and Audretsch 2006; Arya and Lin 2007; Peneder 2010). The small firm's financial capital characteristics are separate from more traditional capital markets. High information asymmetry and uncertainty are reflected in the liabilities of smallness that typically limit a small firm's access to traditional financing sources. In contrast, small firms have the capabilities required to deal with these factors and contribute to the management of the firm. Taking into consideration the access to funding and financial opportunities, this study has discussed financial capital in terms of sources of finance and capital structure.

Sources of finance and/or access to finance are necessary in order to facilitate growth within a business (Kelliher and Reindl 2009). This is essentially concerned with the sources from which a microentrepreneur with limited funds can access finances for their enterprise (Kickul et al. 2010). Microentrepreneurs use particular arrangements for finance, and many of them typically tend to rely upon their own sources (e.g., personal savings) to fund the start-up of their enterprise before going beyond to their other sources (e.g., family and friends, banks, public sources) (Cassar 2004). Generally, a microentrepreneur collects free loans from family members and is reluctant to use debt financing: if these funds are not sufficient, they then seek person-to-person lending from relatives, friends, colleagues and neighbours. One of the main advantages of person-to-person lending for microentrepreneurs has been access to better rates than are offered by traditional banks. The paucity of administrative procedures in person-to-person lending has the additional benefit. Moreover, the microentrepreneur's search for funds extends to institutional borrowing (e.g., micro-finance) from NGOs, micro-finance banks, etc. (Dess, Pinkham, and Yang 2011). Hence, these financial access opportunities are unique in the context of micro-firms.

The *capital structure* plays a dominant role in access to financial resources. In the context of micro-firm financing, the micro-firm has unique characteristics such as small capital requirements, flexible time horizon, lower cost of capital and lower risk of capital compared to other firms (Sirmon, Hitt, and Ireland 2007). The initial capital requirement is related to the firm's establishment and formation. A number of studies

have shown that financial capital is an important resource in any firm and a lack of financial opportunities can be an obstacle to firm success. Cooper and Gimeno-Gascon (1990) reported that, six out of eight prior studies found that more capital was associated with better performance. Among other points, micro-firms rely upon informal sources of finance (e.g., family, friends, relatives or people known to them) that allow them to apply longer time horizons in their decision making (Sirmon and Hitt 2003). In addition, there has been empirical evidence that micro-firms indeed apply lower costs to their equity capital. For example, the micro-firm strongly sticks to the pecking order of financing and prefers equity financing that is internal or closely external to the firm as it is the cheapest source of capital (Romano, Tanewski, and Smyrnios 2001). Since micro-firms enjoy a longer time horizon, they are able to invest in business that seems less attractive to other firms (Sirmon, Hitt, and Ireland 2007). Consequently, these unique attributes of financial capital help to build enterprise strategies that are just as valuable and rare as those of other firms.

3.4.5 Business Environment

In addition to internal factors such as the organization's capabilities and resources, the business environment's carrying capacity or market forces are addressed from the resource-based view of the firm. Firms seem to be very much linked to the environment, mainly with regard to resources and information (Kreiser and Davis 2010). The connection between the business environment and firm success seems to be complicated. The environment may influence firm strategic orientations that, in turn, impact firm growth (Porter 1980). A comprehensive literature review by Rosenbusch, Rauch, and Bausch (2013) identified four components of a firm's business environment: munificence, hostility, dynamism and complexity. Taking into consideration the findings of this intensive literature review, the current study has discussed the business environment in terms of it being turbulent/dynamic, hostile and munificent.

A **turbulent** environment represents high instability of customers and competitors and continuous variations in the market (Dess, Pinkham, and Yang 2011; Jambulingam, Kathuria, and Doucette 2005; Miller 1983). In this business environment, customer preference changes unpredictably, and opportunities are lessened. Uncertainty can arise in several ways; for example, changes in customer needs and behaviour of competitors and suppliers (Khandwalla 1972). Small firms are likely to be more successful when managing ambiguous situations, calculating risks properly and using personal judgments and a sense of accomplishment. The difficulty in forecasting future

occasions needs a high degree of proactivity (Lumpkin and Dess 2001). Small firms operating in a highly turbulent environment are more likely to gain benefit and experience a positive impact on performance (Rosenbusch, Rauch, and Bausch 2013).

A *hostile* environment is one which has less opportunities and which is more competitive than a gentle environment. This inverse condition implies competition for reduced opportunities (Covin and Slevin 1989; Runyan, Huddleston, and Swinney 2007; Miller 1983). From a comprehensive view, this refers to legal, political and economic difficulties; low customer loyalty; and severe consequences of incorrect decisions. A hostile environment cuts profit and limits strategic options (Dess, Pinkham, and Yang 2011). Thus, a hostile environment needs strategic discipline (Porter 1980). In addition, in hostile environment, firms face difficulties in obtaining financial and human capital (Wiklund and Shepherd 2005). Thus, firms in hostile environments are expected to exhibit lower strategic options and poor performance (Rosenbusch, Rauch, and Bausch 2013).

A *munificent* environment influences the performance of firms with small firm behaviour, and it reflects the generosity, bounty and carrying capacity that prevail within the environment (Pearce et al. 2010; Kreiser and Davis 2010). A munificent environment can have a positive influence or can negatively impact on a firm's success. The micro-firm's performance is strongly influenced by governmental policies and procedures, socio-economic conditions and market-related issues (Madsen 2007; Zainol and Wan Daud 2011). Firms with a good degree of strategic orientation will actively seek to acquire resources delivered by the environment (Rosenbusch, Rauch, and Bausch 2013). As a result, they can create competitive advantages and come up with higher performance. At the same time, the presence of good opportunities in the business environment enables firms to absorb potential losses linked to a strategic orientation (Wiklund and Shepherd 2005).

3.4.6 Sustainable Performance

This field of small business is still emerging: the definition and core assumptions in terms of sustainability performance still remain obscure (Shepherd and Patzelt 2011). There is no consensus on suitable measures for sustainability performance (Cooper 1993) in small firms. The majority of conceptual and empirical studies have dealt with the economic performance of the firm rather than the social and natural environmental performance which have been largely ignored by small firm scholar communities. Hart

(1995) was the pioneer who extended the resource-based view by introducing the concept of natural environmental performance. Some researchers have considered economic performance and non-economic performance (e.g., Kickul et al. 2010; Carr et al. 2011; Irava and Moores 2010; Lumpkin and Dess 1996). Basically, they have highlighted non-economic performance with regard to mental satisfaction and how it relates to economic performance. Their studies have reflected the absence of two major components of firm performance, namely social and natural environmental. Brüderl and Preisendörfer (1998) argued that survival could be seen as the minimum criterion for firm performance. Their arguments emphasized the minimum economic and social gain of the firm. Therefore, this study has used social survival as the component of firm sustainability performance. Moreover, research into the sustainability performance of small firms is required to explore the firm activities “as a mechanism for sustaining nature and ecosystems while providing economic and non-economic gains (Shepherd and Patzelt 2011, 138)” for individuals, enterprises and society.

Economic sustainability performance refers to elements such as employment, profit, and sales which are central elements for the definition of small business (Venkataraman 2002). Small-business scholars have defined economic success from various angles. According to Penrose (1995), firm performance can be defined as the increase of firm economic size over time. Although economic performance is an important dimension of the outcomes of enterprises, it is logical to think about the economic dimension on the basis of the number of employees, and the amount of profit and sales. Bjerke (2007) stated that firm success is achieved when there is a substantial increase in sales, revenues or the number of employees. Bigsten and Gebreeyesus (2007) indicated that micro-firm economic success was measured by the change in the growth of employment. These scholars perceived a firm to be progressive if it increased in economic size in terms of the number of employees. Scholars have been more interested in using the number of employees as an indicator of economic performance rather than other indicators. They argued that relying on other economic indicators such as income, profit and sales is difficult to compute due to incomplete records. The micro- or small firms could memorize the number of employees over time more so than their sales and profit. Moreover, change in employment is also seen as a traditional indicator because the number of workers in the firm depends on its sales and profit (Parker and Torres 1994). It is therefore not suitable to use the increase in the number of workers especially for informal microenterprises, since self-employment is a focal point of informal microenterprises as owner-managers usually run these enterprises.

Use of unpaid family workers and casual workers is a common practice of informal activities. In addition, an informal microenterprise grows horizontally rather than vertically, and this tendency conceals the number of employees generated by a micro-firm. The availability of panel data is essential for measuring employment growth. In the case of microenterprises, it is very difficult to obtain panel data because microenterprises frequently switch their business location and employee entry and exit are very easy in this informal sector. The implicit assumption is that an increase in the number of employees is related to higher growth in sales and profit (McPherson 1995). The micro-firm usually needs more unpaid family workers, casual workers or wage workers long after it has realized sales and profit (Parker and Torres 1994).

Many scholars have used profit as an indicator of economic success (Chen et al. 2007; Honig 1998; Davis et al. 2010; Kreiser and Davis 2010). Profit, which also serves as a proxy for net income from the business, shows the prospects of a given venture. It measures the difference between revenue and costs. In addition to profit, some scholars have emphasized sales growth indicators as the best economic indicator (e.g., Zainol and Wan Daud 2011; Laforet 2011; Shrader and Siegel 2007). Sales/turnover provides a more objective measure of economic performance. However, the use of sales and profit as indicators of economic success is not without problems. Since microenterprises do not keep complete records, they might not calculate the true financial values. The conceptual argument of the economic success of the firm has focused mainly on quantitative financial aspects of performance rather than qualitative. Some scholars have been concerned about the quantitative use of financial indicators. The criticism is that microentrepreneurs may define economic success differently and subjectively, and that the use of economic indicators is simply driven by reductionism. Economic success for social microenterprises is linked to mental satisfaction, something that cannot be captured easily using quantitative financial indicators. Therefore, the economic sustainability of the micro-firm is better understood if considered from the personal viewpoint of the owner of the microenterprise. Thus, the current research has taken a qualitative view of economic sustainability performance, using the following factors: employment, sales growth, income stability, return on investment and profitability.

Social sustainability performance indicates that the outcomes of small firm activities cannot be considered sustainable unless they are measured by social indicators in addition to the measurement of economic outcomes. Financial and non-financial gains

are likely to differ across persons and organizations. For instance, some informal social microentrepreneurs may be happy to primarily confirm the economic sustainability of their venture, but others may be simply motivated by receiving social gains (Shepherd and Patzelt 2011). This argument is based on the fact that some microentrepreneurs define firm success as social recognition or empowerment rather than profit. Thus, the sustainability performance of informal social microenterprises (ISMs) needs to be measured so that it can be explored in view of their social viability. Social sustainability performance is difficult to measure because the concept is wide and it covers a broad range of indicators that have been explained from different aspects by many scholars in the field of sociology. The empirical literature on entrepreneurship has reported a high diversity of performance indicators: a common difference is between economic and non-economic measures (Rauch et al. 2009). For example, according to Lumpkin and Dess (1996), entrepreneurial activities may lead to a favourable outcome of one performance dimension and an unfavourable outcome for another performance dimension. They treated satisfaction as an unfavourable outcome which would be useful in incorporating the firm's aspiration levels.

The entrepreneurial firm's goals and the entrepreneur's aspiration level are derived from fulfilling positive social outcomes such as social needs, recognition, empowerment, freedom, etc. However, Lumpkin and Dess (1996) felt that the non-financial satisfaction dimension was totally silent in describing these social gains. Other studies on entrepreneurial activities have defined social gains as including life expectancy, child survival, education, justice and equality for the society (e.g.,Parris and Kates 2003). These indicators are not specific to the context of microentrepreneurship. Therefore, using social sustainability performance indicators is far removed from entrepreneurship research, especially in the microentrepreneurship field. In reality, the majority of microentrepreneurs in developing countries start small businesses to change their unemployment status to employment. This is because microentrepreneurs feel depressed during their period of unemployment and need to seek ways to revive their social identity, freedom and empowerment. Therefore, this current microentrepreneurship research has suggested several social sustainability performance indicators for ISMs. Firstly, meeting basic needs is an indicator which covers a diverse range of basic human requirements such as food, clothing, accommodation, education and health. Meeting basic needs refers to whether informal microenterprises fulfil the basic requirements of the microentrepreneur's family or help to tackle long-term poverty. This research has also included quality of life which

consists of freedom/control, social recognition and empowerment indicators for attempting to answer questions such as whether informal microenterprises improve the quality of life.

Natural environment sustainability is also essential for small firms because the natural environment is a foundation of resources for the life support of society (Daily 1997). If aspects of the natural environment are not sustained, the lives of many species, including humans, can be threatened. Therefore, the outcomes of entrepreneurial activities cannot be treated as sustainable without measures for natural environment sustainability indicators in addition to the economic and social sustainability dimensions. In comparison to economic and social sustainability, previous entrepreneurship research has largely ignored natural environment sustainability performance. However, some entrepreneurship researchers have recently started to talk about natural environment sustainability performance (e.g., Shepherd and Patzelt 2011; Patzelt and Shepherd 2011). In the context of informal social microentrepreneurship, natural environment sustainability performance is difficult to define since research has not yet been done. Still, different aspects of the natural environment sustainability performance discussion are ongoing. In the field of entrepreneurship research, Patzelt and Shepherd (2011, 637) defined natural environment sustainability as “the improvement of conditions of the natural environment—[which] is an important development goal in societies that are confronted with poor air quality and drinking water, overexploited soil and aquatic habitats, declining forests, and other diminished natural resources”. They stated that entrepreneurial opportunity-seeking activities can continue and be sustained by improving natural environmental conditions. Microentrepreneurship-perceived natural environment sustainability also relates to a firm’s use of energy and water, creation of wastes and emissions, etc. Whilst entrepreneurial activities such as ISMs perhaps tend to possess a lesser environmental footprint compared to other organizations, they still have responsibilities for managing their business in such a way that they can minimize environmental vulnerability. Therefore, the current study has embraced the concept of *Ecomicropreneurship* (environmental microentrepreneurship). The literature has tried to understand how the micro-firm’s activity can affect nature including the earth and ecologies (Michael Schaper and Schaper 2010). The micro-firm often fails to execute appropriate waste collection, use of energy and water, and treatment or disposal practices, partially because of the high costs incurred relative to income (Revell and Blackburn 2007). Furthermore, it is difficult to enforce environmental outreach

programmes and legislation as very few micro-firms could meet the high cost of enforcement when many small widely scattered firms are involved. Therefore, the natural sustainability performance of ISMs becomes challenging. The current study has attempted to explore natural environment sustainability indicators such as management of waste, hygiene factors, air and water pollution, and space management which fit into the context of informal social microentrepreneurship.

3.4.7 Findings and Gaps

The literature review has revealed that small firm success factors and variables are largely anecdotal and fragmented. The majority of studies have focused on the entrepreneurial orientation of a firm which highlights its dynamic capabilities and functions (e.g., Pearce et al. 2010; Zainol and Wan Daud 2011). Some studies have centred on human capital profiles of small firms in relation to entrepreneurial firm success. This view advocates that human capital increases firm capabilities for discovering and exploiting business opportunities (e.g., Watson, Stewart Jr, and BarNir 2003; Unger et al. 2011; Crook et al. 2011). Other studies, however, have emphasized social capital as an important factor especially for firm success in developing countries (e.g., Pearson, Carr, and Shaw 2008; Sorenson et al. 2009). Traditionally, financial capital has been the primary perspective in assessing the ability of a firm to achieve success as has been shown by many studies (e.g., Coleman 2007; Davila, Foster, and Gupta 2003). The financial capital perspective mainly highlights the problems linked with micro-firms' access to capital. Apart from these factors, other studies in the literature have addressed the impact of the business environment on firm performance (e.g., Rosenbusch, Rauch, and Bausch 2013). This view embraces the perspective that small firm success is highly linked to business environment forces, particularly with regard to the acquisition of resources. Finally, the majority of conceptual and empirical studies have dealt with the economic performance of the firm rather than its social and natural environment performance. For an informal microenterprise's entrepreneurial activities to be sustainable, it should achieve a positive outcome in each of the areas of sustainability.

3.5 DIMENSIONALITY OF ANTECEDENTS AND OUTCOMES

In order to reach the expected initial framework, it was necessary to determine the dimensionality of small firm antecedents and outcomes. The current study has therefore reviewed the literature to investigate and establish the dimensions, subdimensions and variables. The following paragraphs discuss the dimensionality of

antecedents and outcomes. The current study has considered antecedents of small firms in terms of entrepreneurial orientation, human capital, social capital, financial capital and business environment. Performance is the outcome of small firms that has been considered.

Research on the *entrepreneurial orientation* dimensionality has progressed for longer than the last two decades. The first-order latent dimensions for entrepreneurial orientation can be derived from the literature review after the amalgamation of the small business and strategy literature (Covin and Slevin 1991; Venkatraman 1989; Miller 1983). On the basis of Miller's (1983) work, three dimensions of entrepreneurial orientation, namely, innovativeness, risk taking and proactiveness have been used consistently in the literature. Lumpkin and Dess (1996) identified and recommended two more first-order dimensions of entrepreneurial orientation, namely, competitive aggressiveness and autonomy. The first-order dimensions of entrepreneurial orientation generally demonstrate high intercorrelations (Bhuian, Menguc, and Bell 2005; Richard et al. 2004; Stetz et al. 2000). Thus, most studies have pooled these dimensions into one factor (e.g., Covin, Slevin, and Schultz 1994; Wiklund and Shepherd 2003). Nevertheless, there has been argument in the literature regarding the dimensionality of entrepreneurial orientation. Some have argued that the entrepreneurial orientation dimension is best viewed as unidimensional (Covin and Slevin 1989; Knight 1997) and, subsequently, that the different dimensions of entrepreneurial orientation should link to performance. However, the current study has grasped entrepreneurial orientation as a higher-order dimension with five underlying first-order constructs: innovativeness, proactiveness, risk taking, competitive aggressiveness and autonomy. Details of these subdimensions are described in subsection 3.4.1.

The *human capital* dimensionality topic has received limited research attention. This assumption is now coming under question as anecdotal evidence and new empirical evidence have suggested that a gap may exist. An empirical study by Cooper, Gimeno-Gascon, and Woo (1994) categorized preliminary human capital under three dimensions: general background (education, gender and race); management know-how (relevant skills and contacts); and specific industry know-how (specific skills and knowledge). In the economic context, Laroche, Mérette, and Ruggeri (1999) classified human capital in five ways. Firstly, they focused on human capital as non-tradable goods in terms of skills and knowledge. Secondly, they considered that quality human

capital depends on age, the influence of peers, the institutional context and the social environment. Thirdly, they suggested that human capital has qualitative as well as quantitative aspects. Fourthly, they proposed that human capital can be either general or specific. Fifthly, they considered that an individual high level of human capital can be ensured by an environment that contains a high level of human capital. Coleman (2007) referred to education, employment or experience as helping to formulate the microentrepreneur for the challenges of business ownership. An extensive literature review by Nyberg et al. (2012) led them to summarise human capital into three core dimensions and eight subcategories. They found that each of the 92 empirical articles could be categorized into at least one of these dimensions and subcategories and that many were characterized by two or more. Therefore, this clearly indicated that human capital is a higher-order dimension. Wright, McMahan, and McWilliams (1994) emphasized that the human capital pool must have both high levels of skill and motivation to exhibit productive behaviour. Based on the literature review, the current study has attempted to establish the higher-order human capital dimension by focusing on two subdimensions, namely, demographic and psychographic (see subsection 3.4.2).

The multidimensional *social capital* concept of resources and capabilities exists more clearly in the literature compared to the concept of human capital. Putnam (1995) observed that social capital is not a unidimensional concept. Many scholars have established that social capital has more than one dimension (e.g., Coleman 1988; Koka and Prescott 2002; Nahapiet and Ghoshal 1998; Long 2011; Okafor 2011). Coleman (1988) introduced and illustrated social capital in three different forms: obligations and expectations, information channels and social norms accompanied by sanctions. Wu (2008) used three theoretically distinct but empirically-related dimensions of social capital: trust, network ties and repeated transactions. Nahapiet and Ghoshal (1998) three dimensions of social capital have been widely accepted by many researchers because of their comprehensive nature. They summarised social capital into three core dimensions and nine subcategories, namely, the structural dimension (network ties, network configuration and appropriable organization); the cognitive dimension (shared codes and language, and shared narratives); and the relational dimension (trust, norms, obligation and identification). Keeping to Nahapiet and Ghoshal (1998) three social capital dimensions, Pearson, Carr, and Shaw (2008, 960) proposed familiness as another dimension of organizational capabilities that helps to define and examine family firms. They stated that “[t]he simultaneous presence and strength of the structural, cognitive, and relational dimensions of social capital lead to

organizational processes or capabilities that are advantageous for superior firm performance". Koka and Prescott (2002) offered three different dimensions of social capital: information diversity (technology diversity, country diversity); information volume (eigenvector centrality, number of partners and number of ties); and information richness (multiplex and repeated ties). According to the literature, Nahapiet and Ghoshal (1998) dimensions of social capital are the most cited in small business literature; therefore, this study has adopted their comprehensive dimensions (see subsection 3.4.3).

Financial capital is clearly central to the assembly of resources. However, the existing literature is silent when it comes to discussing the nature of the dimensionality of financial capital. The concept of the financial capital dimension is still anecdotal and fragmented. A study by Cooper, Gimeno-Gascon, and Woo (1994) considered financial capital as a single dimension explaining that the amount of invested capital is related to the initial strategy. Henley (2005) viewed housing wealth as appearing to act as an important source of financial collateral. Aga and Reilly (2011) concentrated on access to finance as a single dimension of financial capital. Coleman (2007) also used two variables under the single dimension of financial capital, namely, the firm owner's ability to secure external capital and their willingness to seek it. Sirmon and Hitt (2003) work was more intensive because they clearly explained the financial capital of the family firm in two forms: patient financial capital and survivability capital. They described these forms as being unique as they have both positive and negative attributes. The focal point of patient financial capital is that it is invested financial capital without threat of liquidation. They highlighted its positive side in the following terms: generational outlook; not accountable to strict short-term results; effective management of capital; and allowing the pursuit of creative and innovative strategies. In contrast, they indicated that excluding non-family investors limited funding to the availability of the family's financial capital. In describing survivability capital, they blended some other factors such as free labour, loaned labour, additional equity investments or monetary loans with financial factors. Cassar (2004) investigated the financing of business start-ups in terms of the notions of capital structure and types of financing. In his study, he measured capital structure and financing by considering four variables, namely, leverage, long-term leverage, outside financing and bank financing. Akyüz et al. (2006) also explored the financing preferences and capital structure of micro-, small and medium enterprises. From the literature review, it appears that the study of the financial capital dimension has not been adequate. The current study has

attempted to introduce the financial capital dimension viewed through two subdimensions: sources of finance and capital structure (see subsection 3.4.4).

The multidimensional conceptualization of the *business environment* has been evident from the literature. There is an emerging consensus among researchers on several important business environment dimensions. While most previous studies have used a single dimension of the business environment (e.g., Khandwalla 1976), Covin and Covin (1990) used two dimensions, namely, hostility and technological sophistication which involve seven variables. They suggested that small firm managers may be well-advised to match their firms' competitiveness to the prevailing levels of technological sophistication and hostility. However, the early study by Child (1972) argued that maintenance of the firm depends upon some degree of change in external environment practices. He classified these environment practices from three points of view: environmental variability, environmental complexity and environmental illiberality. Aldrich (1979) codification of environmental dimensions is represented in a more parsimonious set as follows: munificence (capacity), dynamism (stability–instability and turbulence) and complexity (homogeneity–heterogeneity and concentration–dispersion). Dess and Beard (1984) explored the viability of these environmental dimensions. These three dimensions are conceptually similar to those proposed by other researchers (Jurkovich 1974; Pfeffer and Salancik 1978; Mintzberg 1979) and they are almost identical to the important environmental conditions identified by Child (1972): illiberality, variability and complexity. Miller (1983) established the link between strategy-structure-environment, and used the business environment dimension in view of dynamism or uncertainty, hostility, and heterogeneity or complexity. Lumpkin and Dess (1996) addressed four factors of the business environment: dynamism, munificence, complexity and industry characteristics. A comprehensive literature review by Rosenbusch, Rauch, and Bausch (2013) identified four dimensions of the business environment: dynamism, complexity, munificence and hostility. For the purpose of this study, the current research has adopted three subdimensions of the business environment, namely, turbulence, munificence and hostility (see subsection 3.4.5).

The *firm performance* dimensionality is critical to understanding small business success and failure. Development of the small firm performance dimension has suffered because of lack of reliable data (Chakravarthy 1986), and lack of information and guidance (Kunkel and Hofer 1990). The variables used to determine the performance

dimension vary widely (Murphy, Trailer, and Hill 1996; Venkatraman and Ramanujam 1986). Strategy research has discussed organizational performance in terms of multiple hierarchical dimensions under financial and operational (Venkatraman and Ramanujam 1986). Financial performance dimensions are considered necessary but not sufficient to define overall effectiveness (Chakravarthy 1986); therefore, operational performance dimensions have been explained along with financial performance (Hofer and Sandberg 1987; Kaplan 1983). The literature review on firm performance dimension by Murphy, Trailer, and Hill (1996) revealed that efficiency, growth and profit are the most commonly considered dimensions. Small business research has suggested that success or failure is a multidimensional concept and the association between antecedents and outcomes depends upon the variables used to measure success or failure (Lumpkin and Dess 1996). Lumpkin and Dess (1996) found that financial (sales growth and return on investments) and non-financial (satisfaction) performance dimensions are commonly used. However, they argued that there is a weak effect of antecedents on non-financial outcomes, and satisfaction may rise due to better financial outcomes. Along with these dimensions, they also suggested an archival financial performance dimension due to the bias of self-reported data.

The literature review revealed that the vast majority of studies had considered only an objective financial dimension or operational performance. In addition, some studies focused on archival financial performance and non-financial performance dimensions. This indicates that there are huge gaps when it comes to considering subjective performance dimensions such as social and environmental goals. However, the social field of study has recognized the importance of social and environmental performance dimensions (see Kanter and Brinkerhoff 1981). Fosler (1978) identified three different dimensions: (a) the market economy; (b) the pluralistic economy; and (c) the holistic economy. Furthermore, Kanter (1972) suggested that a survival performance dimension can be a success criterion. Adaptation to the environment appears critical to many scholars in the newly emerging organization–environment tradition. Therefore, keeping these views in mind, the current research has adopted three performance dimensions: economic, social and natural environmental (see subsection 3.4.6).

3.5.1 Findings and Gaps

The literature review of small firm antecedents and outcomes has revealed that most of the dimensions appear to be multidimensional in nature. In the case of the entrepreneurial orientation dimension, it is clearly portrayed that the higher-order

entrepreneurial orientation dimension is a reflection of the following subdimensions: innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. Similarly, the social capital dimension is visibly more vibrant as a second-order construct formed with three subdimensions: structural, cognitive and relational. In addition, the business environment higher-order factors consist of three main subfactors: turbulence, hostility and munificence which are clearly defined in the literature. On the other hand, human capital, financial capital and performance constructs need to be developed and rearranged. In the case of the human capital dimension, the research is still ongoing and existing constructs in the literature are fuzzy and fragmented. Similarly, the development of financial capital constructs in the literature is frustrating. To date, no coherent financial capital dimension has been developed. The performance dimension is not intensive as most of the research has concentrated on the financial objective dimension and has ignored subjective dimensions such as social and natural environmental performance. Drawing attention to these gaps, the current research has attempted to introduce, modify and develop some new dimensions and subdimensions. The current research has considered human capital as higher-order constructs explained by two subdimensions: demographic and psychographic. Financial capital has also been seen as a higher-order factor consisting of two subfactors: sources of finance and capital structure. Finally, the current study has also viewed the performance construct as a multidimensional concept with economic, social and natural environmental dimensions.

3.6 THE FIRM LIFE-CYCLE THEORY

Sections 3.4 and 3.5 have theoretically and empirically established the dimensions, subdimensions and variables of ISMs by using the resource-based view with reference to other relevant studies. The current section presents the relevant issues from the firm life-cycle theory in the context of small business.

The firm life-cycle theory describes the development of organizations which pass through sets of typical situations sequentially. These sets of typical situations are called development or life-cycle stages. Scholars have characterized these life-cycle stages from different angles. Firms must pass all stages of development or die, and early development stages are not significant (Lewis and Churchill 1983; Scott and Bruce 1987). Stages are sequential in nature and progress is irreversible (Quinn and Cameron 1983). Stages follow each other sequentially and there are internally coherent characteristics of the life-cycle stages. The common element of these theories is that

stages of the life cycle follow each other in a sequential order and that every firm travels the same path during its development.

Aldrich (1999) placed this theoretical background in perspective by detailing various approaches to firm development theory (see Aldrich 1999, 198). McMahon (1998) reviewed the firm life-cycle literature and developed the taxonomy of growth and non-growth businesses starting from the life-cycle model created by Hanks et al. (1993). The major difference between the model of Hanks et al. (1993) and the previous conceptualizations is the presence of branches on the development path of small business. Hanks et al. (1993) addressed these as 'disengagement stages', namely, capped growth and lifestyle enterprises. The common feature of these stages is that they stand out from the traditional life-cycle sequence. Both stages are non-growth and are not followed by other stages in the sequence. Lester, Parnell, and Carraher (2003) based their model on the work of researchers such as Penrose (1952), Quinn and Cameron (1983), and Miller and Friesen (1984). Their synthesis model contains five stages and assesses how managers perceive their organizations. Their model assumes that the life cycle is a deterministic approach: its stages are a loosely comprised set of organizational activities and structures, and managerial focus is on external problems in the early stages and internal problems in the later stages. The model was statistically supported by the research results of Lester, Parnell, and Carraher (2003). Massey et al. (2006) referred to the view that any generic model would give a sufficient explanation for the diverse nature of small firm growth. However, there is a gap which can be examined between how owner-managers experience growth and how that relates to the business life cycle. This was the objective of their investigation. The life-cycle stages approach (see Aldrich 1999, 198) is the dominant explanatory organization development model of small firm growth (Massey et al. 2006).

3.6.1 Application of the Firm Life Cycle Theory

Scholars have been interested in explaining the internal and external factors that influence the progression of the firm (e.g., Massey et al. 2006). Internal factors such as dynamic capabilities and resources' availability along with the external environment are the determinants of firm progress and success. Many small business development models are related to the work of Lewis and Churchill (1983) and Scott and Bruce (1987): some of these have only been theoretically tested (e.g., Hisrich and Peters 1998; Mount, Zinger, and Forsyth 1993) while others have been empirically verified (e.g., Mitra and Pingali 1999; Dodge and Robbins 1992).

Life-cycle theories have been applied to predict the probable way in which firms develop. They have been used to suggest managerial skills, knowledge, attitudes or efficient ways of problem solving; to provide a model for small business growth (Scott and Bruce 1987); and to identify internal (Lewis and Churchill 1983) and external (Quinn and Cameron 1983) factors responsible for success and failure of the growth of the small firm. The life-cycle phenomenon has been found meaningful by small firm owners (Massey et al. 2006), and evidence has been provided for the sequential nature of life cycles (Lester, Parnell, and Carraher 2003).

Researchers have proposed various models to explain firm life cycles. Most life-cycle models were characterized by the fact that the challenges and opportunities of the firm vary across different stages of the life cycle. With regard to resources and capabilities, changing resource needs, sophistication and complexity of systems and structures, and managerial capabilities are the most cited differences across life-cycle stages (Jawahar and McLaughlin 2001). With regard to the life-cycle stages, the majority of researchers have described four or five stages. Smith, Mitchell, and Summer (1985) proposed three stages: inception, high growth, and maturity. In the life cycle: many scholars have proposed four (Kazanjan and Drazin 1989; Quinn and Cameron 1983) or five (Penrose 1952; Miller and Friesen 1984; Scott and Bruce 1987; Hanks et al. 1993). Quinn and Cameron (1983) introduced four models: entrepreneurial, collectivity, formalization, and elaboration of structure. Hanks et al. (1993) pointed five stages: start-up, expansion, maturity, diversification, and decline. Lewis and Churchill (1983) noted six stages: existence, survival, success-disengagement, success-growth, take-off, and resource maturity. The current research has proposed four life-cycle stages of the small firm: start, growth, maturity and decline.

3.6.2 Findings and Gaps

From this review, the current study has concluded that although views differ among researchers, some form of small firm life cycle is distinguishable. After inception, the starting phase is the first stage. This is followed by growth and maturity. The last development stage involves decline. Diversity and performance are key words in this context. This pattern is—in a certain sense—similar to the classic product life-cycle approach and the general development process of firms.

3.7 CONCEPTUAL FRAMEWORK

The literature review has revealed several gaps. Section 3.3 has reported that there is no single theoretical model that can reliably and validly explain small firm performance. After considering the pros and cons of several firm growth theories and their scope and application in the context of ISMs, the current research has adopted the resource-based theory along with the firm life-cycle model. Based on the resource-based view, Section 3.4 has explained a range of capabilities, resources, business environment and firm performance dimensions, subdimensions and variables. Section 3.4 has observed that the dimensions, subdimensions and variables are still being explored and under research. In connection to Section 3.4, Section 3.5 has also stated that the dimensionality of antecedents and outcomes are fuzzy and fragmented, and need to be rearranged and developed. Section 3.6 has reviewed the firm life-cycle theory and has revealed the gap. In order to respond to these theoretical and empirical gaps, this section presents the preliminary research model (see Figure 3.1) and the theoretical rationale behind the preliminary model while exploring the dimensions, subdimensions and variables in the context of the informal social micro-firm in developing countries.

The resource-based theory assumes that there are plenty of tangible and intangible resources, capabilities and external factors that have influence on entrepreneurial activities and firm performance. Resources and capabilities are heterogeneous in nature and environment forces are favourable and unfavourable. Firm performance depends on the objective and subjective measurement of the organization. The resource-based theory explains differences in firm performance. Differences in firms' resource use cause differences in entrepreneurial activities and growth. These differences come from the variance in strategic resources and capabilities. Such resources can create and sustain entrepreneurial orientation and firm performance. Sustained entrepreneurial orientation and firm performance can only gain possession of a few of the many resources possessed by the small firm. Therefore, the characteristics of small firm capabilities and resources should be included in the ISMs' sustainable growth model. Small firm sustainable growth also depends on features of the external environment forces. Since the small firm capabilities, resources and external environment forces widely vary in nature, it is also necessary to view them in respect to specific factors. Specifying the dimensions and subdimensions of capabilities, resources and external environment forces helps to foster theoretical and empirical understanding. Therefore, in addition, the dimensions and subdimensions of

capabilities, resources and external environment forces should be included in the ISMs' sustainable growth model. Similarly, firm sustainability performance dimensions, subdimensions and variables should also be incorporated.

The firm life-cycle theory discusses the development of organizations which pass through sets of typical situations sequentially, for example, start, growth, maturity and decline. The progression of firm growth depends on the firm's dynamic capabilities, availability of resources and a favourable external environment. In other words, the firm's capabilities, use of resources and external environment forces appear in a different manner in different stages of the firm life cycle. Moreover, capabilities, resources, external environment and life cycle are the independent constructs explaining firm performance which is the dependent construct. Such a composition of constructs was also supported by the review of small firm growth compiled by (Davidsson, Achtenhagen, and Naldi 2005). Therefore, capabilities, resources and the external environment should be incorporated in terms of the life cycle to explain firm performance.

As mentioned earlier, the resource-based theory and the firm life-cycle theory are the two fundamental theories that form the foundation of the proposed model. However, these theories have their limitations in the current perspective. This model does not explain the process model of small firm growth: it only focuses on the set of antecedents that has impact on firm growth. The four stages of the small firm life cycle do not represent the sequential process; rather, they are a set of typical situations that occur sequentially. Therefore, the current model is not a process model which may limit the concept of small firm growth. In addition, the current model upholds the capabilities, resources and external environment in a heterogeneous approach without the structure of the value, rarity, inimitability and operability (VIRO) framework presented by Barney (1991). This model also ignores perhaps the main essence, the 'sustained competitive advantage' concept, of resource-based theory. This model explains only the sustainability of firm performance: therefore, the model may be criticized. However, unfortunately, there is no single model which can explain small firm capabilities, resources, environment forces, life cycle and performance in a hierarchical manner. The proposed preliminary research model is intended to fill this theoretical gap.

As mentioned earlier, this model explores how the resource-based theory and the firm life-cycle theory work within the context of the organization. In this model, the dynamic capabilities (entrepreneurial orientation), resource factors (human, social and financial) and business environment factors are simply independent to firm performance. Again, the dynamic capabilities (entrepreneurial orientation) are dependent in relation to resource factors (human, social and financial) and business environment factors. In other words, the dynamic capabilities (entrepreneurial orientation), resource factors (human, social and financial) and business environment factors have direct influence on firm performance. Similarly, resource factors (human, social and financial) and business environment factors also have direct impact on the dynamic capabilities (entrepreneurial orientation). The firm life-cycle stage (start, growth, maturity and decline) moderates all the factors as a whole. This means that the start, growth, maturity and decline stages have their own nature of dynamic capabilities, resource factors, business environment factors and firm performance.

The resource-based theory and firm life-cycle theory have been used as prominent theories to explain small firm sustainability performance. The initial model has considered the relevant dimensions and subdimensions from both theories and has integrated these factors into a single hierarchical model with a logical understanding. Other important and relevant factors from relevant theories are also considered and introduced into the research model.

3.8 INITIAL RESEARCH MODEL

Based on the research findings and gaps identified and synthesized in Sections 3.3–3.6, the current section develops an ISMs' sustainable growth model. As such, this section aims to conceptualize the dimensions and subdimensions of capabilities, resources and external forces, and to measure their overall impact on firm sustainable performance. This also conceptualizes the firm life-cycle stages in relation to multidimensional antecedents and outcomes. This study has developed a hierarchical, multidimensional and context-specific sustainable growth model for informal microenterprises in developing countries.

The matter of a sustainable growth model for informal microenterprises has been addressed by the small business growth theories (Davidsson, Delmar, and Wiklund 2006; Penrose 1959). It has already been pointed out in the previous section that this

investigation will be based on the prior findings of the firm life-cycle theory and the resource-based theory.

Basically, this hierarchical, multidimensional model consists of three parts (see Figure 3.1): antecedents, outcomes and the firm life cycle. Firstly, the model explains the antecedents in terms of firm capabilities, resources and external business environment factors. The firm dynamic capabilities highlight the entrepreneurial orientation, and resources represent the human, social and financial capital. The business environment is characterized as being both a favourable and unfavourable environment situation. The consequence is that the firm focus is on sustainable performance. This hierarchical, multidimensional model is developed as a second-order factor model: second-order factor models have been used in behavioural science over a wide variety of domains. Second-order factor models can provide a more parsimonious and interpretable model when researchers have hypothesized that higher-order factors underline their data. In this hierarchical model, entrepreneurial orientation is seen as a second-order construct reflecting five first-order constructs, namely, innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. These five first-order constructs reflect the dynamic capabilities of the firm when it is composed of an entrepreneurial orientation. Human, social and financial resources are also accounted as second-order constructs. Human capital is formed with demographic and psychographic first-order constructs. Social capital is formed with structural, cognitive and relational first-order constructs. Financial capital is set with two first-order constructs: sources of finance and capital structure. In addition, this model assumes external environmental forces as the higher-order business environment dimension which consists of three subdimensions: turbulence, hostility and munificence. Similarly, the consequence of firm performance is considered as a higher-order construct that reflects three first-order constructs, namely, economic, social and natural environmental. The conceptualization of reflective and formative constructs is based on a theoretical foundation. This model assumes that the higher-order construct, entrepreneurial orientation, comprises the subconstructs: innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy which are reflective in nature. Likewise, firm sustainability performance is a second-order construct with the first-order constructs, economic, social and natural environmental which are reflective. Human, social and financial capital and the business environment are second-order dimensions with their corresponding subdimensions which are formative. Overall, this

model measures the firm capabilities, resources, business environment and performance in line with four firm life-cycle stages: start, growth, maturity and decline.

The structure of the model consists of six dimensions corresponding to 18 subdimensions. In addition, the life-cycle construct corresponds to all of the dimensions and subdimensions. This multidimensional model predicts that entrepreneurial orientation, human capital, social capital, financial capital and the business environment are the main predictors that directly influence the level of firm performance. This multidimensional model also proposes that firm-level strategic decision making (entrepreneurial orientation) is influenced by resources (human, social and financial) and the business environment. Overall, the firm life-cycle stages (start, growth, mature and decline) describe the moderating effects of the firm life cycle on its immediate antecedents and outcomes (capabilities, resources, business environment and performance).

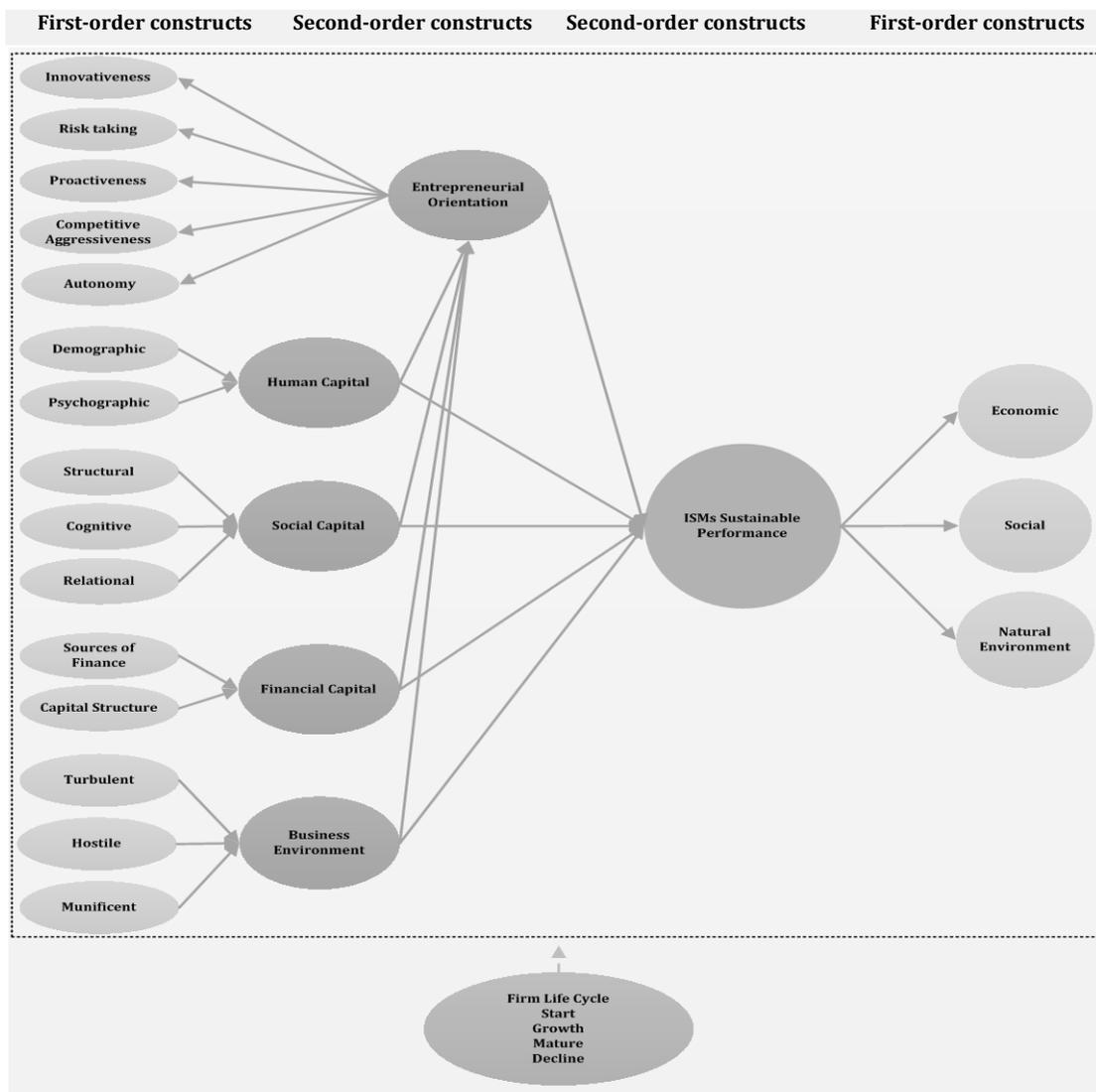


Figure 3.1: The preliminary research model

Dimensions, subdimensions and their linkages are supported by theoretical and empirical results published in referenced journal articles (see Appendix D).

3.9 SUMMARY

This chapter has presented the literature background to this current research. The relevant details of theoretical concepts have emerged from the resource-based theory and the firm life-cycle theory. The literature analysis has suggested that none of these theories and models could be applied as such to examine the sustainable growth of ISMs. Integrating the constructs across the model will be more appropriate and will assist in providing a coherent understanding of the research problem. Hence, this chapter has presented a preliminary research model, based on the existing literature, which will be further improved by integrating some other factors. The next chapter will describe the research methodology and design as well as the operationalization of the major phases of the research.

CHAPTER 4

RESEARCH METHODOLOGY⁹

“Research methods shape the language we use to describe the world, and language shapes how we think about the world”.

—Benbasat and Weber

4.1 INTRODUCTION

The previous chapter produced a conceptual preliminary model to investigate the sustainable performance of ISMs in the developing country context. This current chapter aims to provide an outline of the research approach applied within the small business and entrepreneurship field which leads to the selection of an appropriate research approach to guide the research. As Simon (1980) stated, “... [s]cience may be said to progress on its methods. The production of knowledge depends very much on the techniques for collecting, analysing, and interpreting data and on the way they are applied”. In a similar spirit, this chapter argues that the importance of exploring a research paradigm relies very much on the methods used to answer research questions and test hypotheses and on the careful application of the research design.

To understand the research topic, to validate and understand the conceptual model, and to obtain and analyse data, a combination of both qualitative and quantitative methods, which is referred to as the ‘combined method’, was applied. “The newness and dynamic nature of this area [small business], however, means that multiple research methods are needed to obtain an all-around understanding of the key issues” (Poon and Swatman 1998, 31). Earlier, Low and MacMillan (1988, 155) suggested that

⁹ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Qualitative and Quantitative Evidence” in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
- b. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation” in *Proceedings of the 26th Annual SEANZ Conference*, Sydney, Australia.
- c. Khan, E.A. (2013). “Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries – Field Study and Survey Experiment”, *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.
- d. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Marketing Capabilities and Sustainable Performance of Informal Social Micro-enterprises (ISMEs) in Developing Countries” in *Proceedings of the 2nd Annual Conference on Global Economics, Business, and Finance (GEBF)*, Hong Kong.

“diversity of approaches and methods is to be encouraged, for entrepreneurship is as varied as it is exclusive, and the range of research methods should match the complexity of the phenomenon under study”. The philosophical foundation used in this research was positivism resulting in a survey approach being employed. Explaining the details of this adopted method, this chapter starts with the discussion of the research paradigm, followed by the research novelty and its methodological fitness which address the rationale and the justification of the mixed method used in the current research. The definition and research design of the mixed method are then discussed followed by discussion on the research process that has been adopted. The final section offers a summary of the chapter.

4.2 RESEARCH PARADIGM

According to Myers (1997), epistemology refers to the assumptions about knowledge and how it can be obtained. Similarly, a paradigm provides a conceptual framework which reflects how a research study is designed, how data are collected and interpreted, and how the findings are presented. Willis (2007, 8) defined a paradigm as “a comprehensive belief system, world view or framework that guides research and practice in a field.” Thus, a research paradigm can be viewed as a set of basic rationales which allow researchers to recognize their roles in the research process (Guba and Lincoln, 1994).

Based on Burrell and Morgan (1994) paradigmatic frameworks, social research paradigms can be presented in a two-by-two matrix: subjectivist-objectivist and radical-regulation (Table 4.1).

Table 4.1: Paradigms matrix: subjectivist-objectivist and radical-regulation

Paradigms	Subjectivist-objectivist and radical-regulation
-Functionalist	-objective view of reality and a regulatory view of society
-Interpretivist	-subjective view of reality and a regulatory view of society
-Radical humanist	-subjective view of reality and focus on radical change
-Radical structuralist	-objective view of reality and focus on radical change

The objectivist paradigms try to determine and generalize causal relationships between the environment and the units of observation instead of interaction. On the other hand, the subjective paradigms moderate observations according to the observer and accept the existence of interaction between the observer and the observed (Green 2002; Horwich 1993; Kuhn 1977).

Radical theories break away from traditions on the levels of both theory and practice, and focus on how things change within the unit of investigation. An example of this is the ‘anything goes’ approach, where all theories are accepted and applied parallel to each other in order to enable conclusions to be drawn (Burrell and Morgan 1994; Gelei 2006).

The functionalist paradigm emphasizes the existence of an overall truth: the results of observations provide a basis for generalization. Reality is objectively determined, and is independent of both the observer and the unit of observation. In contrast, the interpretative paradigm emphasizes the relative nature of observation and truth. Interaction between the units of investigation and the environment are considered but generally stationary stages of existence are investigated (Gelei 2006).

A very similar classification on investigation paradigms in entrepreneurship research was presented by Brennan, Hayward, and Voros (2008). Table 4.2 shows how the inquiry paradigms that they identified can be matched with those published by Gelei (2006) on categorizing sociological research.

Table 4.2: Inquiry paradigms – comparison of authors

Gelei (2006)	Brennan, Hayward, and Voros (2008)
-Functionalist theories	-Positivism
-Interpretative theories	-Constructivism
-Radical humanism	-Criticalism, participatory research
-Radical structuralism	-Post-positivism

Many research studies have attempted to bridge between these two paradigms due to the complexity of modern research today. For example, Creswell (2003) illustrated the differences between these paradigms based on several assumptions. As presented in Table 4.3, these provide further understanding of the choice of available paradigms. Basically, Creswell (2003) highlighted two major research paradigms: positivist and interpretivist.

Table 4.3: Interpretivist vs. positivist paradigms

Assumption	Interpretivist	Positivist
-Ontological	-reality is subjective and multiple	-reality is objective and singular
-Epistemological	-researcher interacts with and affects the issue being researched	-researcher is independent from what is being researched
-Axiological	-scientific study is value-laden and biased	-scientific study is value-free and unbiased
-Rhetorical	-informal: use of qualitative words that evolve decisions	-formal: use of quantitative words that are based on set definitions
-Methodological	-believing in idealism, use different methods to obtain different perceptions of the phenomena	-believing in realism, focus on objectives and hypotheses formulation

Adapted from Creswell (2003)

The positivist paradigm refers the evidence of formal propositions, quantifiable measures of variables, formulation of hypotheses, hypotheses testing and drawing of inferences about a phenomenon from the sample to a stated population (Orlikowski and Baroudi 1991). The positivist approach believes that no scientific concept or research idea is so abstract that it cannot be measured or observed; rather, every scientific concept or research idea can be objectively observed and measured (Hessler 1992). In other words, the positivist paradigm is associated with the quantitative research method where hypotheses formulation and hypotheses testing are essential (Johnson and Onwuegbuzie 2004; Creswell 2003). The underlying assumption of positivism is that “the data and its analysis are value-free and data do not change because they are being observed” (Krauss 2005, , p.760). Moreover, the positivist paradigm assumes that reality is independent from the knower (Johnson and Onwuegbuzie 2004; Smith 1983); therefore, ideally, positivist researchers do not reach any conclusion from their own cognition or rationale. Instead, they usually maintain a distance from the participant(s) and what is being researched and see reality as ‘being’ rather than ‘becoming’ (Dwivedi 2007). In terms of research design, quantitative research is normally adopted by positivist researchers. In other words, it is similar to objectivist and functionalist paradigms.

The interpretivist paradigm aims to develop a natural science through social interpretation (Neuman 2003). In contrast with the positivist paradigm, the interpretivist researcher rejects the separation of researcher and participant because they believe the researcher should interact and affect the issues being researched (Creswell, 2003). Therefore, interpretivist researchers see the reality and thus have to plunge into the actor’s mind by feeling, hearing and observing how the actor interprets a phenomenon (Schwandt 1994). The interpretivist researcher proposes that the researcher should “allow the questions to emerge and change as one becomes familiar with the study content” (Krauss 2005, , p. 760) and sees all things as ‘becoming’ as opposed to ‘being’. In terms of research design, qualitative research is normally adopted by interpretivist researchers. Similarly, it focuses on subjective paradigms.

4.3 RESEARCH NOVELTY

The research novelty addresses the evaluation of the research objectives and other parameters of the research study which helps to select appropriate methodology. Wilkinson (2003) provided a framework to assess the level of novelty of a piece of research (see Table 4.4). This table can be used to determine which methodologies are

most applicable for the research in relation to theory and context. In terms of context, the current research carried significant novelty. The sustainable growth of ISMs has been the subject of scientific investigation but in this study both the sector focus and the origin of the firms are new. The ISMs in developing countries are new areas in which to test these theories. Firm life-cycle studies have been performed mostly in manufacturing industries, and many of the resource-based empirical works either lacked an industrial focus or focused more on services industries.

Table 4.4: Theory vs. method vs. context

Theory	Method	Context	
		Same	Different
	Same	Same	Retest
Different		Use new techniques to test existing theory of previously studied phenomena	Test theory in a new context using different techniques
Different	Same	Test new or borrowed theory, using usual techniques, on previously studied phenomena	Use a given technique to test new or borrowed theory in a new context
	Different	Use new techniques to test a new or borrowed theory of previously studied phenomena	Theory of new phenomena, borrowed theory, new theory

Source: Wilkinson (2003, 1314)

The theories, dimensions, subdimensions and their links that are applied in this research have a fair background in the literature. Thus, the same theories are used in this research as in previous research in this field. On the other hand, there is an opportunity to either test the theories in the new context in a usual way or by using different techniques. The following section will assess the methodological fitness of the available methodological options in order to conclude with a recommendation regarding the methodology to be used in this research, also taking into consideration the epistemological conclusions.

4.4 METHODOLOGICAL FITNESS

Edmondson and McManus (2007) made recommendations based on the maturity stage of the theory being empirically tested. They defined three levels of theoretical maturity. Nascent theories are a group of theories for which little or no background exists. Intermediate theory research draws upon prior (empirical) work and receives support from the body of literature, but proposes new constructs or the establishment of new relationships between constructs. Mature theories are supported by precise models. Constructs already exist and further research builds upon the logical connections between them. After investigation of the growth theories, the current research has

concluded that there are no single theories that can explain the growth pattern of the organization with the theory still under construction (see Chapter 3). Hence, the current research has aimed to propose some new dimensions and subdimensions. Therefore, the current research has needed to apply different techniques (see Table 4.4).

At the level of the conceptual framework, there is theoretical novelty in this research as the composition of constructs is new compared to what has appeared in previous literature. The novelty includes the holistic approach to factors influencing entrepreneurial activities and firm growth, incorporated in the conceptual framework. In theoretical terms, these can be considered unique features of this study. However, this research did not aim to build a new theory or establish new links between existing constructs: instead, it built several constructs and only attempted to verify the existing theories in an altered structure. Thus, the theoretical background of this research can be considered mature.

Corresponding to the maturity of the theoretical background as well as the novelty of the research, a positivist, quantitative methodology was considered most appropriate for the conduct of this research. The reasons were that this research provides evidence of hypotheses (Chapter 6), quantifiable measures of variables (Chapter 6), hypotheses testing and the drawing of inferences about a phenomenon from the sample to a stated population.

Within the positivist paradigm, the mixed-method design has been adopted in this research which corresponds to 'same theory, a new context and different techniques'. Small business, in the context of ISMs in developing countries, is far from maturity. Therefore, to study ISMs' sustainable performance and their theoretical dimensions, subdimensions and variables needed to be borrowed from other established studies, namely, entrepreneurship, management, sociology and economics research which has applied the same theories. However, it would be quite an optimistic assumption that those factors could be effectively utilised to deal with ISMs in a very dissimilar context. The behaviour of informal microenterprises is more likely to be different to that in the manufacturing industry. The widely acceptable factors needed to be verified by a group of representatives. Moreover, it was also not unlikely that new factors would be explored that were considered as important factors in that particular environment. The qualitative study was intended to perform this role.

4.5 RESEARCH METHOD

After evaluating the research paradigms, research novelty and methodological fitness, the current research considered elements of both qualitative and quantitative methods; often proposed as a 'mixed method' or third paradigm view (Tashakkori and Teddlie 1998). According to Tashakkori and Teddlie (1998, 11), "mixed method research studies use qualitative and quantitative data collection and analysis techniques in either a parallel or sequential phase". Greene et al. (1989, 25) defined the mixed method as "studies that include at least one quantitative method (designed to collect numbers) and one qualitative method (to collect words), where neither type of method is inherently linked to any particular inquiry paradigm". In favour of the mixed method, Creswell (2003) asserted that the mixed method utilises the capability of various data collections and enhances the validity of research measurements. This is due to the fact that each method, either qualitative or quantitative, has its own limitations. More specifically, a mono-method study will "inevitably yield biased and limited results" (Greene, Caracelli, and Graham 1989, 2). Therefore, the combination of qualitative and quantitative methods would compensate for their mutual and overlapping weaknesses (Greene, Caracelli, and Graham 1989). Furthermore, the mixed method provides cohesive and coherent outcomes as each method has its own strengths in providing relevant data (Hohenthal 2006). The quantitative method, for example, provides a strong foundation for a theoretical background, and qualitative methods provide real insights into real issues for real people.

According to Creswell (2003, 62, 68, 72, 77), there are four major types of the mixed-method research design; triangulation, embedded, explanatory and exploratory. The triangulation design proposes that the researcher should collect and compare the data from both qualitative and quantitative methods to "validate or expand quantitative results with qualitative data". The embedded design is a design that includes "the collection of both qualitative and quantitative data, but one of the data types plays a supplemental role within the overall design". The explanatory design proposes "the collection and analysis of quantitative data ... followed by the subsequent collection and analysis of qualitative data". The exploratory design consists of an opposite sequence which "starts with qualitative data, to explore a phenomenon, and then builds to the second, quantitative phase".

In determining the appropriate mixed method for the current research, it was essential to again reflect upon the objectives of the current research. As discussed in Chapter 1,

the main objective of this research was to explore the antecedents of the sustainable growth of informal microenterprises. Based on the previous theoretical foundation and framework, the preliminary model (Figure 3.1) was proposed in Chapter 3. This model needed to be tested in terms of applicability and validity in order to provide sufficient comprehensiveness to explain associated behaviour. Thus, a field study through semi-structured interviews was employed. A survey was then carried out to test the comprehensive model to ensure its applicability and to improve its explanatory power (the details of the processes are discussed in the next section).

4.6 RESEARCH PROCESS

As there has been limited previous research on the sustainable development of ISMs, the research process was divided into a number of phases. The whole process in this study is diagrammatically presented in Figure 4.1.

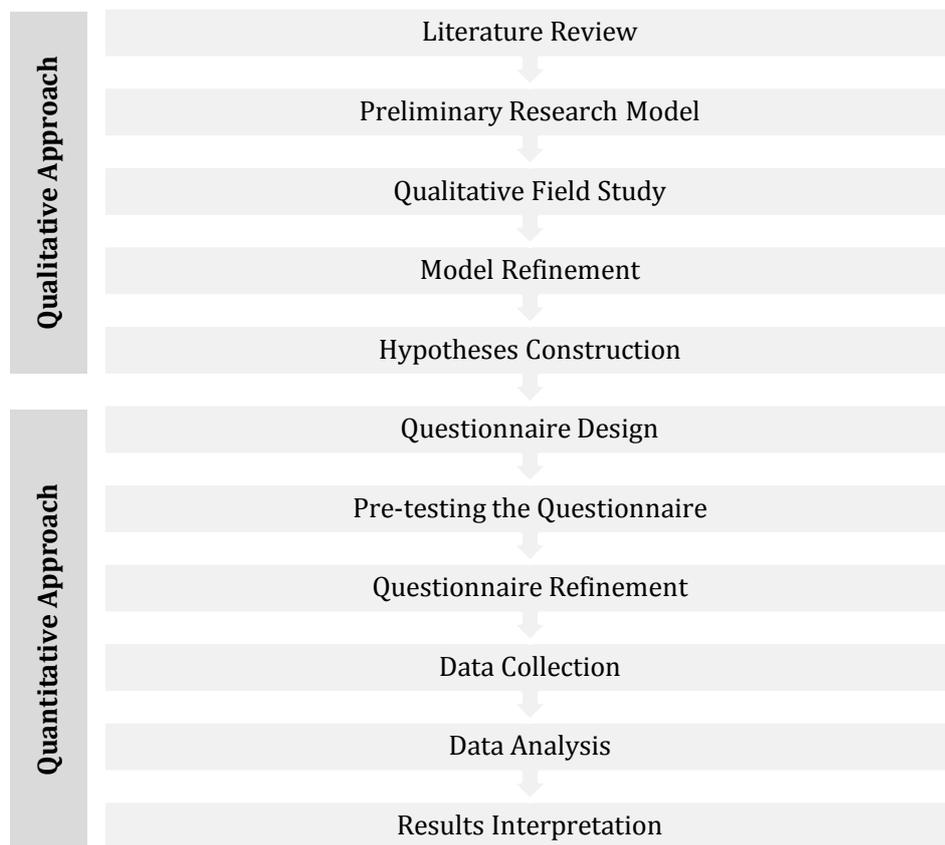


Figure 4.1: The sequential research process

Step-1: Literature Review: The research started by analysing current literature on small business antecedent factors and its sustainable outcomes. The literature search was made in every possible and available knowledge repository including journals,

books, seminar proceedings, working papers and case studies. The extensive literature-search assisted the research to find the current and past related works and current literature gap. From a number of possible research topics, considering the scope of this research, only one facet of the problems has been identified which was formally named as the research objective. Several research questions were developed which broke down the research objective in order to have greater control of the research topic.

Step-2: Preliminary Research Model: Based on the review of the existing works in the literature, a preliminary research model of the sustainable growth of ISMs was developed (see Figure 3.1). The model was later refined with the support of additional literature review and the field study.

Step-3: Qualitative Field Study: The field study through interviews was then conducted with eight micro-firm owners (tea-stall owners), three NGO executives and three local government officials (ward commissioners) from Bangladesh. The objectives of each interview were to search for and identify concepts and procedures that might not have been reported or recognized in the literature review and to evaluate the worthiness of the concepts identified in the literature review. The interviews were conducted using semi-structured interview questions which were developed with the assistance of the literature review. The interview scripts were transcribed mostly by the researcher. The transcribed data were analysed by the researcher in two stages. The first stage dealt with each single interview transcript, while the second stage dealt with cross-interview transcripts to integrate all the individual factors, variables and their relationships to produce the combined model. Chapter 5 describes this process in detail.

Step-4: Model Refinement: Based on the results from the qualitative data analysis and the literature review, the preliminary model was refined. The necessary addition of items or constructs as well as elimination of the duplicate constructs and items were done at this stage. A research model was then finalized.

Step-5: Hypotheses Construction: Hypotheses were constructed at this stage based on the final research model and also on past theories from the literature. The respective theories were used to guide the hypotheses construction.

Step-6: Questionnaire Design: A tentative questionnaire was designed based on the 14 hypotheses that had been constructed in the previous step. Measurements in the

questionnaire relied heavily on the available instruments designed in the past literature. Additional new measurements were based on the findings from the qualitative field study. The combination of measurement items and constructs was subjected to a pre-test for validity and reliability before conducting the survey.

Step-7: Pre-testing the Questionnaire: The tentative questionnaire was pre-tested before it was widely disseminated. The pre-test was conducted with five micro-firms and two academic researchers who were expert in entrepreneurship research. The purpose of the pre-test was to consult the expertise in the relevant field in order to enhance content validity.

Step-8: Questionnaire Refinement: Necessary changes were then accordingly made to refine the tentative instrument based on the pre-test result prior to the actual survey. The final questionnaire was thus ready to be distributed among the respondents of the survey.

Step-9: Data Collection: The quantitative data collection process only involved micro-firm owners (tea-stall owners). Eight trained surveyors were employed to gather data from micro-firm owners (tea-stall owners) with a structured questionnaire. A sample of 438 responses was gathered, which was more than enough for partial least square (PLS)-based data analysis.

Step-10: Data Analysis: Data gathered through the survey were analysed by SPSS software and PLS-based structural equation modelling (SEM). The SPSS analyses produced descriptive statistics and variance inflation factor (VIF) while PLS tested convergent validity, discriminant validity and the hypotheses. The G*Power software was also used for power analysis.

Step-11: Results' Interpretation: The final step of the research was the interpretation of the results obtained from both qualitative and quantitative data analyses.

4.7 QUALITATIVE FIELD STUDY

This phase of the study endeavoured to explore the phenomena of the sustainable growth of ISMs to validate and enhance the dimensions, subdimensions and variables that were identified as part of the comprehensive literature review. The qualitative method was considered as the most appropriate due to the exploratory nature of this part of the research. Scholars have argued that understanding a phenomenon from the viewpoint of the participants is difficult to achieve when textual data are quantified

(Kaplan and Maxwell 1994). Therefore, a 'pseudo case study' that involved a qualitative study of a small number of participants would meet the objectives of this phase of the study.

Therefore, a field study approach was adopted as the research method for the qualitative phase. Moreover, qualitative methods permit the evaluator to study selected issues in depth and detail. In order to ensure the positivist stance of this research, the field study was performed without being constrained by predetermined outcomes instead relying on openness and details from qualitative inquiry (Patton 1990).

4.7.1 Sample Selection

Samples for qualitative studies are usually much smaller than those used in quantitative studies. However, the suggested sample size of qualitative studies varies among researchers. Creswell and Miller (2000) suggested five to 25, whereas Morse (1994) recommended at least six. This study approached, in total, 14 cases: eight micro-firm owners (tea-stall owners), three NGO executives and three local government officials (ward commissioners). Since the tea-stall significantly represents informal microenterprises (under hotel and restaurant services: 0.21% of the total GDP) in Bangladesh (Maligalig, Cuevas, and Rosario 2009), the tea-stall microenterprise was chosen as the main sample category. This technique is appropriate as King, Keohane, and Verba (1994, 67-8) stated that "we could first select our community very carefully in order to make sure that it is especially representative of the rest of the country ...". In addition, the NGO and local government sample categories were selected as the best approach is to consult key informants who are knowledgeable about ISMs' challenges and opportunities, and this approach "might yield better and more reliable data" (Weiss 1994). As with many qualitative studies, this research employed convenience sampling rather than other methods of sampling (Zikmund, Carr, and Griffin 2012).

4.7.2 Data Collection

The data collection and analysis method in qualitative studies is different from that used in quantitative techniques (Guba and Lincoln 1994). The interview has been accepted as one of the major techniques of data collection for qualitative study (Maykut and Morehouse 1994). Many researchers in various fields such as psychology (Magolda, 1992) and education (Bogdan and Biklen 1982) have employed interviews as a method of qualitative data collection. Researchers have identified three categories of interview

(Babbie 2001; Nieswiadomy 2002): standardized (formal or structured), unstandardized (informal or non-directive) and semi-standardized (guided-semi-structured or focused). For this study, the semi-structured interview was chosen as a method of collecting relevant qualitative data to explore and refine the model. Two sets of semi-structured questionnaires were developed, depending upon the categories of the sample (see Appendices E and F). The data were obtained based on a one-to-one personal interview. This method enables the acquisition of factual and other information as it emerges during the conversation with the respondent. Thus, the face-to-face interview ensures the quality of the data. At the same time, this technique allows the freedom to probe for further in-depth explanations and details in specific key areas. In the case of the micro-firms (tea-stall owners), no prior contact was made, and interviews were carried out in their business premises where the vendor was usually busy and continued to do their work. On the other hand, in the case of the NGOs and local government officials, the interview schedules were arranged by telephone at the convenience of the interviewees. These interviews took place at their office premises. All interview participants were from Khulna City, the third largest city of Bangladesh. Before starting the interview, the interviewees were initially approached by providing a brief description of the researcher's purpose along with addressing the ethical issues. During the interview session, the interviewees were allowed to express their ideas freely and the interviewers were allowed to seek clarification. This process of question, explanation and clarification allowed for testing and negotiation of understanding. It ensured the understandability both for the interviewer and the interviewee. The interview data were noted and voices were recorded with the permission of the participants. The interviews were conducted in Bangla and then translated into English.

4.7.3 Data Analysis

The transcribed interviews were analysed by using the content analysis method. Content analysis can determine key factors, constructs and the links between constructs. Huberman and Miles (1994) recommended the content analysis technique as being useful in an exploratory research study for examining the determinants of behavioural patterns. Content analysis can be used in many ways but, in this study, content analysis was applied in two phases. The initial steps dealt with an individual script, and the further steps involved integrating these individual scripts. Both inductive and deductive logical thinking skills were applied to extract and classify the factors and constructs. The inductive process started with conducting, transcribing and

analysing the interview transcripts. Analysis was performed manually due to the simple nature of the language and the low number of individual transcripts. Next, the full details from the transcripts were reviewed to uncover key patterns/themes. The inductive process was completed by identifying the themes using key words. The deductive process began with labelling and categorizing the key words to determine the latent factors corresponding to the constructs. Furthermore, links were established among the factors and constructs followed by matching the factors and variables with the literature. Lastly, the factors and constructs were revised and modified. However, it was important to ensure that all the factors, constructs and links obtained through the qualitative study were sustained.

4.8 QUANTITATIVE STUDY METHOD

After developing the research model with assistance from the literature review and the qualitative field study, the second phase of the research was aimed at finding the important dimensions, subdimensions and variables affecting the sustainable growth of ISMs. A number of hypotheses were derived from the model which were subjected to empirical testing that focused on verifying or rejecting these hypotheses (Anderson 1987). Since the methods used in this phase were designed to be detached and independent of the specific situation under study, a quantitative method was considered most appropriate. Furthermore, the sample size was large and spread over a wide geographical location. Therefore, the survey method was considered most appropriate for this study and a questionnaire-based survey was adopted.

4.8.1 Questionnaire Development

Based on the comprehensive research model, a questionnaire was designed to explore the important factors and to test the relationships among the constructs. In designing the survey, this study adopted closed-ended questions. A Likert scale was used to measure all the dimensions. It has been reported that during at least the past 15 years, the application of SEM has mostly relied on the Likert scale (Byrne 2006) and similarly, it has been adopted in this research. Hair et al. (2007) suggested that there are two choices; odd or even numbers in selecting scale categories. Many studies have used a seven-point Likert scale, having a central 'neutral' point. Based on the experience or judgment of the researcher, the central point is used when it is perceived that some portion of the respondents is likely to feel neutral about the issue being examined. However, Matell and Jacoby (1971) advised either not to use or to use the neutral point when the scale consisted of many points. Furthermore, avoiding the central tendency

error of respondents was another reason to use a six-point scale. The central tendency error is observed when respondents answer a middle choice 'neutral' or 'neither agree or disagree' without really meaning that. Therefore, this study has used a six-point Likert scale.

4.8.2 Pre-testing the Questionnaire

Prior to conducting the actual survey, the quantitative survey process conducted a pre-test to identify any problems with the survey instrument. The objective of the pilot study was not to run the model in PLS software but rather to examine the descriptive statistics and whether the respondents would find difficulty with understanding any of the items or whether they would prefer a different style of presentation of the survey. The pre-test process took a convenient sample of five micro-firm owners (tea-stall owners) who participated in the field study. Two doctoral research students were also included in this process. The participants were asked to record the time required to complete the survey and if they found any problem with the wording or any other issues with the questionnaire. The questionnaire was then finalized by making minor changes after obtaining the participants' opinions regarding the meaning and clarity of the questions. The study translated the measures into the local language (Bangla) and retranslated it into English repeating this process to the point that a panel of experts, fluent in both English and Bangla, confirmed that the two versions were reasonably comparable (Andaleeb 2001). Upon responses from the pre-test, the study made context-specific adjustments to finalize the pilot version of the questionnaire.

4.8.3 Sampling

Specifying the target population is the fundamental building block of the sampling design process. Generally, the target population represents the sample elements or objects that have the relevant information and about which inferences are drawn (Malhotra 2008). The target population also draws the boundary line between respondents and non-respondents. Thus, it is necessary to be as specific as possible to decide on who should and who should not be in the sample. The population for this study was defined as micro-firm owners in the informal sector in Bangladesh. Informal microenterprises in developing countries are heterogeneous in nature; for simplicity, tea-stall owners were therefore chosen. As mentioned earlier, tea-stall microenterprises also significantly represent informal microenterprises. Khulna City was selected as the sample frame. A total of 450 survey questionnaires were completed. A sufficient sample is very important so that generalization trends can be derived by

studying this sample. Twelve questionnaires were excluded due to excessive missing data. The sampling approach was based on a simple random sample.

4.8.4 Data Collection

The data-gathering strategy under the survey method is generally predicated on the nature of survey interaction and the mode of questionnaire administration (Malhotra 2008). This study used location intercept techniques because these methods ensure good response rates in comparison with other methods (Andaleeb 2001; Malhotra 2008). This strategy was executed in a physical setting in the local language in Bangladesh (Andaleeb 2001). The survey instrument together with a covering letter explaining the purpose and instruction of the survey were provided to the micro-firm owners. The duration of the period in which the survey was conducted was around five months.

The data from each response were immediately input into SPSS software. The raw data showed some missing values meaning that the respondents either refused to answer or overlooked the question. Either way, data were examined closely for the analysis stage. Responses deemed to be invalid or incomplete were discarded from the analyses. There were 12 questionnaires that had to be discarded due to invalid responses or missing values. The response rate for the study was 87%. As this was a study intended to measure effects and make generalizations about a population, the size of the response rate compellingly exceeded the minimum threshold level (> 60%) for a face-to-face survey (Wholey, Hatry, and Newcomer 2010).

4.8.5 Data Analysis

The quantitative analysis was conducted using the structural equation modelling (SEM) technique. SEM is a second-generation multivariate technique which allows the modelling of links among multiple dependent and independent variables (Chin 2010). In terms of construct validity, it enables the measurement of latent variables using manifest variables, items or indicators (Chin 1998). For many researchers, SEM is equivalent to carrying out covariance-based SEM (CB-SEM) analyses commonly using software such as Amos, LISREL and others. But SEM also needs to be thought of as including another unique and very useful approach—partial least squares SEM (PLS-SEM). PLS path modelling is based on an algorithm that, firstly, estimates the best weights of each block of the measurement model and then estimates the path coefficients in the structural model (Chin and Newsted 1999). Thus, the latent variable

component scores or weight estimates depend on how well the measurement model and structural model are specified. PLS was chosen over Amos and LISREL for this study because it is better suited for causal modelling when the sample size is relatively small and when the model is complex (Hulland 1999; Teo, Wei, and Benbasat 2003). It is evident that the ability of PLS to model latent constructs under non-normality conditions and to handle analysis with small sample sizes have made PLS popular among researchers in recent years (Compeau and Higgins 1995; Chin 1998). Moreover, PLS is more appropriate when the measurement items are not well established and are used within a new measurement context (Barclay, Higgins, and Thompson 1995). In other words, PLS is suitable when the primary objective of the research is the explanation of the model variance for one or more constructs and when the research focus is on theory development. Moreover, the capability of handling formative as well as reflective indicators and constructs was one of the greatest incentives for adopting PLS. With the rationale stated above, PLS was considered as the most appropriate data analysis tool for the quantitative part of this study. This study has used PLS to establish the relationship between constructs and thus to test the hypotheses. Therefore, the data collected in this study were analysed using the PLS technique utilising the SmartPLS version 2.0 computer software that was developed by Ringle, Wende, and Alexander (2012).

4.8.6 Estimating the Hierarchical Model

According to Becker, Klein, and Wetzels (2012), there are three approaches to modelling hierarchical latent variables in PLS-SEM: (1) the repeated-indicator approach; (2) the two-stage approach; and (3) the hybrid approach. The current study used the repeated-indicator approach and the two-stage approach in analysing the first-order and second-order measurement model.

4.8.6.1 Repeated-indicator Approach

For estimating this hierarchical reflective–formative construct model, this study used the manifest variables. Overall, the manifest variables in this model were used twice, that is, to estimate the first-order latent variables and the second-order latent variables. As PLS-SEM produces ‘determinate latent variable scores’, thus the factor scores of lower-order variables were used for higher-order factors (Wetzels, Odekerken-Schroder, and Van Oppen 2009; Chin 1998b). Furthermore, there is no restriction on the residual covariance structure in terms of the measurement error terms and disturbance terms in PLS path analysis which helps to identify a model (Chin

and Newsted 1999; Fornell and Bookstein 1982). Therefore, PLS-SEM was used in this study to estimate the parameters of the outer model (or measurement model) through the repeated use of manifest variables (e.g., Lohmöller 1989; Wold 1982). Using this approach, this study created the second-order constructs that represent all the manifest variables of the underlying first-order latent variables.

4.8.6.2 Two-stage Approach

For estimating this hierarchical reflective-formative construct model, this study also used the two-stage approach. In this approach, latent variable scores are created in PLS-SEM (Tenenhaus et al. 2005). It computes the first-order construct scores in a first-stage model in the absence of the second-order constructs and, next, applies these first-stage construct scores as indicators for the second-order latent variable (e.g., Wetzels, Odekerken-Schroder, and Van Oppen 2009; Wilson and Henseler 2007). Therefore, this study has used the repeated-indicator model in the first stage and then used the first-order construct scores in the second stage.

The two-stage approach has several advantages and objectives. Firstly, it can calculate a more parsimonious model on the second-order or third-order analysis in the absence of the first-order constructs (Becker, Klein, and Wetzels 2012). Secondly, the use of the repeated-indicator approach in the higher-order formative construct cannot explain any variance of the higher-order construct and, accordingly, their paths to the higher-order construct will be zero (not significant) (Ringle, Sarstedt, and Straub 2012; Wetzels, Odekerken-Schroder, and Van Oppen 2009). This problem can be reduced when the two-stage approach is used. Therefore, PLS-SEM was used in this study to estimate the parameters of the outer model (or measurement model) through the two-stage approach.

4.8.7 Partial Least Squares (PLS) Procedures

Two procedures were involved in the PLS analysis: assessment of the measurement model and assessment of the structural model (Table 4.5). The details of the analysis are explained in Chapter 7.

Table 4.5: The two-step approach of PLS analysis

Stage	Type of Item	Type of Measurement	Minimum Requirement
1. Assessment of measurement model	Reflective	Convergent validity	
		i- Item reliability	Item loading ≥ 0.7 Significance of t -value ≥ 1.65
		ii- Internal consistency iii- Average variance extracted (AVE)	Calculated value ≥ 0.7 Calculated value ≥ 0.5
2. Assessment of structural model	Formative	Discriminant validity	Square root of AVE of construct > correlation between the construct and other constructs
		i- AVE analysis	Item loadings of construct > all other cross-item loadings of the construct
		ii- Cross-loading matrix	Indicator's weight (relative importance) and loading (absolute importance) and significance of t -value ≥ 1.65
2. Assessment of structural model	Reflective and formative	i- Indicator weight	VIF ≤ 05 or 10 $R^2 \geq 0.25$ or 0.50 or 0.75
		ii- Multicollinearity	Significance of t -value ≥ 1.65
		Amount of variance explained	Cross-validated redundancy of $Q^2 > 0$
		Test of hypotheses	Power $(1-\beta) > 0.80$
		Predictive relevance	Significance of t -value ≥ 1.65
		Power analysis	
Multi-group analysis			
-Smith-Satterthwaite test			

4.8.7.1 Assessment of Measurement Model

The first stage was the assessment of the measurement model through the examination of convergent validity, discriminant validity and indicator weight. Convergent validity measures the correlations of items in a single construct. The reflective items were tested for convergent validity by determining item reliability, internal consistency and average variance extracted (AVE).

Item Reliability: This refers to an analysis which estimates the amount of variance in each individual indicator's measure (Barclay, Higgins, and Thompson 1995). PLS item reliability assessment examines how well each item is related to their respective construct which is sometimes referred to as simple correlation. The calculated correlation leads to an item loading which gives an indication of the item's strength. In PLS, the minimum requirement for item reliability is 0.7 with corresponding minimum significance of a t -value of 1.65 (Hair, Ringle, and Sarstedt 2011). Researchers have different opinions on the acceptable value of item loadings. Scholars have suggested that items with low loadings should be carefully reviewed especially if the items have been taken from a strong theoretical background (Nunnally 1978). The advice from the literature is that low loadings are attributed to several reasons including incorrect wording in the questionnaire, misunderstanding by the respondents, using improper items to measure constructs or applying questions from one context to another (Hulland 1999).

Internal Consistency: Internal consistency is used to establish the convergent validity. Convergent validity assures that there is correlation among the items for a construct. Chin and Gopal (1995) suggested that a better estimate can be gained using the composite reliability formula of Werts et al. (1974) because there is no assumption in PLS that all indicators are equally weighted for internal consistency (Chin 1998b). In addition, in PLS, the internal consistency is not influenced by the number of indicators. Moreover, PLS measurement uses the item loadings obtained within the causal model (Fornell and Larcker 1981; Barclay, Higgins, and Thompson 1995). Composite reliability checks the internal consistency of a construct. The first measure developed by Fornell and Larcker (1981) used composite reliability as the measure of internal consistency. The value of composite reliability can be calculated using the following formula (Chin 1998b; Barclay, Higgins, and Thompson 1995).

$$\rho_c = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \text{Var}(\epsilon_i)}$$

Where:

λ_i = the factor loading which represents simple correlation between the item and its construct, and
 $\text{Var}(\epsilon_i) = 1 - \lambda_i^2$, the unique/error variance.

The benchmark of 0.7 is considered as the minimum value for composite reliability to establish the convergent validity of the measurement model; as suggested by Nunnally and Bernstein (1994) and Barclay, Higgins, and Thompson (1995).

The second measure, the average variance extracted (AVE), represents the average variance extracted of a construct by its corresponding items and assesses the amount of variance that is captured by an underlying factor in relation to the amount of variance due to measurement error (Stiglitz and Weiss 1981). Chin (1998b) has suggested that the value of AVE can be obtained using the formula below:

$$AVE = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \text{Var}(\epsilon_i)}$$

where;

λ_i factor loading; denotes the simple correlation between the item and its construct (item loading), and
 $\text{Var}(\epsilon_i) = 1 - \lambda_i^2$ (the variance)

It is suggested that a construct should achieve a value greater than or equal to 0.5 in order to achieve adequate reliability (Fornell and Larcker 1981; Nunnally 1978; Barclay, Higgins, and Thompson 1995). Furthermore, Jiang et al. (2002) argued that the 0.5 landmark for AVE is “conservative”, and AVE less than 0.5 should also be considered

arguing that “very often, variance extracted estimates will be below 0.5, even when reliabilities are acceptable”.

Discriminant Validity: This refers to the degree to which constructs differ from each other in the same model (Hulland 1999; Barclay, Higgins, and Thompson 1995). Using PLS, discriminant validity analysis was used in this study to test statistically the degree of variance shared among items and constructs in the model. Although it does not happen very frequently, an item could potentially share more variance with other constructs than the construct that it intends to measure. Discriminant validity checks for this flaw.

To establish discriminant validity, the square root of the AVE is compared to the inter-construct correlations. It identifies the potentially overlapping construct where items might tap into different constructs. Discriminant validity is considered adequate when the AVE for one construct is greater than its shared variance (Fornell and Larcker 1981) with another construct. The PLS typically assesses discriminant validity by examining the correlation at both construct and item level. Usually, these results are compared in a table format.

In the final analysis for discriminant validity, cross-loadings for each item were explored and compared across all constructs and have been presented in the form of a cross-loading matrix. To prove discriminant validity, an item should not load higher on other constructs than on the construct that it intends to measure; otherwise, it should be excluded from the model (Chin 1998).

Indicator Weight and Multicollinearity: The formative items were not correlated; therefore, convergent validity and discriminant validity could not be applied. Instead, indicator weight, which describes the relative importance of each item towards the formation of the construct, was calculated (Hair, Ringle, and Sarstedt 2011). The goal was to ensure that each item contributes towards the construct’s formation. For items with very low indicator weight, the items’ contributions towards construct conceptualization were reviewed. As recommended by Diamantopoulos and Winklhofer (2001), conceptual considerations were prioritized before any indicator was eliminated. Furthermore, Hair, Ringle, and Sarstedt (2011) suggested that before elimination of any formative item, the indicator’s weight (relative importance) and loading (absolute importance) and their significance of t -value ≥ 1.65 should be considered. Next, multicollinearity was tested by calculating the variance inflation

factor (VIF). This was to ensure that each indicator had a distinct influence on the intended latent variable (Diamantopoulos and Winklhofer 2001). The maximum threshold for the VIF is 5 (Hair, Ringle, and Sarstedt 2011) or 10 (Kleinbaum et al. 1998). Therefore, items that did not meet the requirement of multicollinearity were eliminated.

4.8.7.2 Assessment of Structural Model

The structural model comprised the hypothesized relationships between latent constructs in the research model (Santosa, Wei, and Chan 2005). The assessment process involved evaluating the explanatory power of the independent variables (R^2) and examining the direction of path coefficients and the value of t -statistics (Santosa, Wei, and Chan 2005; Barclay, Higgins, and Thompson 1995). In addition, the study applied predictive relevance (Q^2) and power analysis ($1-\beta$) to establish further rigour of the empirical findings.

Amount of Variance Explained or R Squared (R^2): The predictive power of the current research model was assessed by obtaining the R^2 values (Santosa, Wei, and Chan 2005; Barclay, Higgins, and Thompson 1995). This represents the extent to which the independent constructs explain the dependent constructs. The interpretation of R^2 is similar to the traditional regression model (Fornell and Larcker 1981; Barclay, Higgins et al. 1995). Therefore, R^2 values would determine the explanatory power of a component of the model by indicating the amount of variance in the construct which was explained by its corresponding independent constructs. The well-accepted value of R^2 is 0.1 or above (Rai, Patnayakuni, and Patnayakuni 2006, , for example; Teo, Wei, and Benbasat 2003). However, (Hair, Ringle, and Sarstedt 2011) suggested that R^2 values of 0.75, 0.50 or 0.25 for endogenous latent variables in the structural model can be measured as substantial, moderate or weak, respectively.

Path Coefficient (β) and Statistical Significance of t -value: Having established the explanatory power of the model through the amount of variance explained from R^2 values, the next test was to evaluate the relationship of the constructs as hypothesized in this research. More specifically, the statistical analysis was evaluated by assessing the path coefficient (β) and the t -value. The β and the t -values were derived from the bootstrapping method.

Predictive Relevance (Q^2): The current study applied the predictive sample reuse technique (Q^2) to ensure predictive relevance (Chin 2010; Fornell and Bookstein 1982;

Geisser 1975). Based on the blindfolding procedure, Q^2 assesses the predictive validity of a big complex model using PLS. While estimating parameters for a model under the blindfolding procedure, it shows how well the data that were collected empirically can be reconstructed with the help of the model and the PLS parameters (Fornell and Cha 1994). The predictive measure for the block of indicators is based on the following parameters:

$$Q^2 = 1 - \frac{\sum_D E_D}{\sum_D O_D}$$

where:

E = the sum of squares of prediction error

O = the sum of squares error using the mean for prediction

D = omission distance

Q^2 can be obtained by using cross-validated communality or cross-validated redundancy. Q^2 is generally estimated using an omission distance of 5-10 under existing PLS software packages. The rule of thumb indicates that a cross-validated redundancy of $Q^2 > 0$ is regarded as a predictive model (Chin 2010). The study estimates the cross-validated redundancy to estimate the predictive relevance of the hierarchical ISMs' sustainable performance model in the next chapter.

Power Analysis (1-β): Power (1-β) is defined as “the probability of rejecting H0, when H1 is true” (Marx and Larsen 2006). In other words, power is the probability of obtaining a statistically significant result (H1), that is, successfully rejecting H0 (Cohen 1988). In positivist-quantitative research, the importance of power analysis lies in establishing the facts under study by successfully rejecting H0, accepting H1 and making decisions. However, power is less understood and less explored in the small business and entrepreneurship literature. In developing and testing a complex model using PLS, this study has applied power analysis to validate the implications of sample sizes. Although it is generally assumed that sample size is not vital in the overall model (Falk and Miller 1992), adequate sample size is important to improve overall estimates and reduce standard errors (Hui and Wold 1982; Marcoulides and Saunders 2006). Specifically, if small sample sizes (N=20) were used in large complex models, they would not detect low-valued structural path coefficients (β=0.20) until large sample sizes (N > 150) were used (Chin and Newsted 1999, 333). Besides, in the case of moderately non-normal data, “a markedly larger sample size is needed despite the inclusion of highly reliable indicators in the model” (Marcoulides and Saunders 2006,

6). These findings are consistent with Joreskog and Wold (1979) observations which highlighted that “PLS estimates are asymptotically correct in the joint sense of consistency (large number of cases) and consistency at large (large number of indicators for each latent variable).” Thus, to confirm adequacy in the sample, the study estimated power in the PLS-SEM-based estimates in order to ensure rigour in the complex modelling.

The power dynamics depend on three parameters: the significance level (α) of the test, the sample size (N) of the study and the effect size (ES) of the population (Cohen 1988). In order to assess the adequacy of sample size of large complex models, the power analysis should be conducted on the portion of the model with the largest number of predictors (Chin and Newsted 1999). Although early researchers used to rely on power charts (see, e.g., Scheffé 1959) and power tables (e.g., Cohen 1988), these are now supplemented by PC-based efficient, precise and easy-to-use power analysis programs (Goldstein 1989) such as G*Power 3.1.2 (Faul et al. 2009). The general convention is that the power of a statistical test should be at least 0.80 (Cohen 1988). Thus, high power (> 0.80) indicates that there is a high degree of probability of producing significant results when the relationship is truly significant. Thus, by applying power analysis, this study has confirmed its confidence in the hypothesized relationships in the research model (see Chapter 7).

4.9 SUMMARY

This chapter has described the research methodology used in this research. Comparing the current trends of research approaches used within the small business and entrepreneurship fields, an appropriate research approach has been selected for guiding this particular study. This chapter has also presented the systemic overview of the research method and tools used for this research. It was also discussed here that this research has followed the mixed-method research technique. In addition, the measures of the mixed-method approach have been briefly discussed.

CHAPTER 5

FIELD STUDY AND THE COMPREHENSIVE RESEARCH MODEL¹⁰

“Somewhere, something incredible is waiting to be known”.

—Carl Sagan

5.1 INTRODUCTION

As mentioned earlier, this study has adopted a mixed-method approach. Hence, a qualitative research analysis has been conducted through a field study. This chapter presents the analyses of the data that were produced from the field study. The field study has been undertaken through semi-structured interviews with eight micro-firm owners (tea-stall owners), three NGO executives, and three local government officials (ward commissioners) from the Khulna region of Bangladesh. This qualitative approach has been performed, primarily, to fine tune the preliminary model, proposed earlier (Figure 3.1). As the preliminary research model consisted of variables and factors taken from traditional small business and entrepreneurship research studies, the factors needed to be contextualized and justified in the current setting, while some additional

¹⁰ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Qualitative and Quantitative Evidence” in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
- b. Khan, E.A. (2013). “Investigating the Dimensions of Financial Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in a Developing Country”, *Curtin Business School Doctoral Colloquium*, Curtin University, Perth, Australia.
- c. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation” in *Proceedings of the 26th Annual SEAAANZ Conference*, Sydney, Australia.
- d. Khan, E.A. (2013). “Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries – Field Study and Survey Experiment”, *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.
- e. Khan, E.A., Rowe, A.L. and Quaddus, M. (2013). “The Relationship of Personality Traits of Informal Micro-enterprise Entrepreneurs, Role of Business Environment, and Firm Sustainable Performance – Qualitative Evidence from Bangladesh” in *Proceedings of the Business and Economics Society International Conference*, Perth, Australia.
- f. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Personality Traits, Entrepreneurial Orientation, Business Environment, and Micro-Firm Sustainable Performance: A Multidimensional Assessment” in *Proceedings of the International Studying Leadership Conference*, Perth, Australia.
- g. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Marketing Capabilities and Sustainable Performance of Informal Social Microenterprises (ISMEs) in Developing Countries” in *Proceedings of the 2nd Annual Conference on Global Economics, Business, and Finance (GEBF)*, Hong Kong.
- h. Khan, E.A., Rowe, A.L. and Quaddus, M. (2012). “Exploring Sustainable Growth of Social Micro-enterprises in an Emerging Economy” in *Proceedings of the 15th EMAN Conference on Environmental and Sustainability Management Accounting in collaboration with the CSEAR International Congress on Social and Environmental Accounting Research*, Helsinki, Finland.

factors have evolved. In subsequent phases, the explored factors have been identified and were confirmed by the existing literature.

Overall, this chapter presents the data analysis techniques and results of the field study. The following section first presents the rationale for considering the qualitative research approach for this study. The operational overview of the field study is presented next. Results of the field study are then presented and interpreted in detail. The comprehensive finalized model is finally presented.

5.2 OPERATIONAL OVERVIEW OF THE FIELD STUDY

Not many studies have focused on the sustainable growth of informal social microenterprises (ISMs) due to their informal nature and the fact that they operate outside the bureaucratic environment. Therefore, this research has used a field study approach, as qualitative study is “particularly well suited to new research areas or research areas in which existing theory seems insufficient” (Eisenhardt 1989, 548-9). Specifically, this study has used a multiple case-based field study approach which is reflected “as an appropriate research design when the purpose of the research is descriptive, theory building and practice-based, and where the profound thoughts and experiences of the subjects are important” (Benbasat, Goldstein, and Mead 1987). Studies that use “multiple cases are generally more rigorous than single case studies” (Eisenhardt 1989). In performing the exploratory study in the following stages, the essential factors have been explored, collated and modified from the literature whereas some other factors have been produced which were confirmed and modified during the field study. The interview questions were semi-structured.

5.2.1 Sample Selection

Since the focus of this study was to investigate the sustainable growth of ISMs in the context of a developing country, three groups were considered as the target groups: informal microenterprises, NGOs and local governments. NGOs and local governments were selected as they were more knowledgeable about the microentrepreneurs’ community. Urban and semi-urban area tea-stall owners were covered in the field study which excluded rural areas. A convenience sampling technique was chosen to select the sample for the field study. In the field study interviews, a total of 14 participants were included in different categories.

Table 5.1 presents the profile of the participants in the field study. Interviews with eight microenterprises (tea-stall owners), three NGOs (executives) and three local governments (ward commissioners) were undertaken.

Table 5.1: Participants' profile

Participant	Position	Profile
A	Sole Proprietor	Tea-stall Business
B	Sole Proprietor	Tea-stall Business
C	Sole Proprietor	Tea-stall Business
D	Sole Proprietor	Tea-stall Business
E	Sole Proprietor	Tea-stall Business
F	Sole Proprietor	Tea-stall Business
G	Sole Proprietor	Tea-stall Business
H	Sole Proprietor	Tea-stall Business
I	Assistant Executive	NGO
J	Assistant Executive	NGO
K	Assistant Executive	NGO
L	Ward Commissioner	Local Government
M	Ward Commissioner	Local Government
N	Ward Commissioner	Local Government

5.2.2 Interview Questionnaire Development

For this field study, two sets of semi-structured questionnaires were developed and used depending upon the category of the sample. One set was for informal microenterprises: the other set for NGOs and local governments was similar. Overall, 11 questions were produced to cover the five main objectives of this study (see Appendices E and F).

Question 1 was introduced to warm up the start of the interview session. Question 2 was developed to explore the dynamic capabilities of the microenterprise such as its entrepreneurial orientation. Questions 3, 4 and 5 were asked in order for the participants to describe the availability of resources (human, social and financial). Question 5 addressed the favourable and unfavourable environment. Questions 7, 8 and 9 aimed to explore sustainability outcomes (economic, social and natural environment). Question 10 was incorporated to identify the life cycle of the firm. Question 11 was aimed to explore new themes or constructs. The two sets of the complete questionnaires are attached in Appendices E and F. It should be noted that these questions for the field study were subjected to Curtin University's ethical requirements.

A pilot interview was conducted to test the data collection interview using the set of factors and indicators. The pilot interview assisted in testing the simplicity, applicability and validity of the questionnaire using participant feedback such as whether the questions were too intense, ambiguous or time-consuming. The pilot

interview also helped to find other issues related to the study. Two participants, one micro-firm owner and one NGO executive took part in the pilot study. After conducting the pilot study, almost all the questions were found to be relevant.

During the pilot study, the participants answered questions which led to new questions, rather than following the sequence of the interview questions. It was decided to ask questions following the way in which the participants had answered. This interview process was adopted to make the interview session more friendly and natural, and to gain in-depth insights about the factors and indicators. The field study questionnaire was finalized with some minor corrections based on the feedback from the pilot study. Since the tea-stall owner participants were illiterate and, to some extent, not familiar with the technical terms of the study, very simple and familiar wording was incorporated in the development of the field study questionnaire.

5.2.3 Data Collection

In this study, a semi-structured interview method was used to gather relevant data in order to investigate the basic model of the sustainable growth of ISMs. Within the semi-structured interview, questions encompassed the following areas of information:

- General perceptions and understanding of entrepreneur orientation and its effect on a microenterprise's performance
- The resources that have influence on the entrepreneur orientation and on the sustainable growth of an informal social microenterprise
- The sustainability performance factors of informal social microenterprises
- The direct role of antecedent factors on outcomes
- The moderating role on growth of the micro-firm life-cycle stage.

Convenience sampling was used. In all cases, a face-to-face interview method was conducted. This method enables the acquisition of factual and other information. Thus, the face-to-face interview confirms the quality of the data. At the same time, this technique allows the freedom of probing for further in-depth explanations and details in specific key areas. In the case of the NGOs and local government officials, the interview schedules were arranged by telephone at the convenience of the interviewees. These interviews took place at their office premises. In the case of tea-stall owners, no prior contact was made, and interviews were carried out in their business premises.

Before starting the interview, the interviewees were initially approached by providing a brief description of the researcher's current academic profile and the purpose of the study. This was followed by explaining that their participation was fully voluntary and would be treated as strictly confidential and completely anonymous. The interview data were noted and voices were recorded with the permission of the participants.

A total of 14 interviews were conducted among the three categories of organization. During the interview session, the interviewees were allowed to freely express their ideas and the interviewers were allowed to seek clarification. This process of question, explanation and clarification allows for testing and negotiation of understanding. It ensures understandability for both the interviewer and the interviewee.

The main part of the interview session started with the basic questions. The logic behind asking a basic question before going into the detail of the concept is for introductions and to warm up the participants. After introductions and warming up, the participants were asked the 10 leading questions. Each and every leading question consisted of a subsequent secondary or probing question to provide the imperative depth and insight needed for a better understanding of the extracted responses. During the field study interview, in the case of the micro-firm owners, the number of probing questions produced was more than the researcher had expected. This occurred to ensure the understandability. The number of probing questions was at a reasonable level in the case of the NGO and local government participants. In addition, the researcher ensured accurate data from participants' body language and physical and emotional cues.

The interviews were conducted mainly in Bangla; the recordings of the interviews were transcribed in Bangla as soon as possible to capture significant cues while they were still alive in the researcher's memory, and were then translated into English. Thus, special attention was given to keeping the respondents' original meaning during the transcription process. The average duration to complete each interview session was approximately 45 minutes.

5.2.4 Data Analysis

The transcribed interviews were analysed by using the content analysis method. Content analysis can determine key factors, constructs and the links between constructs. Nearly 100 pages of verbatim transcripts were produced from the micro-audio recording and notes taken from the 14 participants involved in the field study

interview. A summary of field study data is presented in Appendix G. Miles and Huberman (1994) recommended the content analysis technique as being useful in an exploratory research study to examine the determinants of behavioural patterns. Content analysis can be used in many ways but, in this study, content analysis was applied in two phases. The initial step dealt with an individual transcript and the later step involved the integration of these individual transcripts. Both inductive and deductive logical thinking skills were applied to extract and classify the factors and constructs (Figure 5.1).

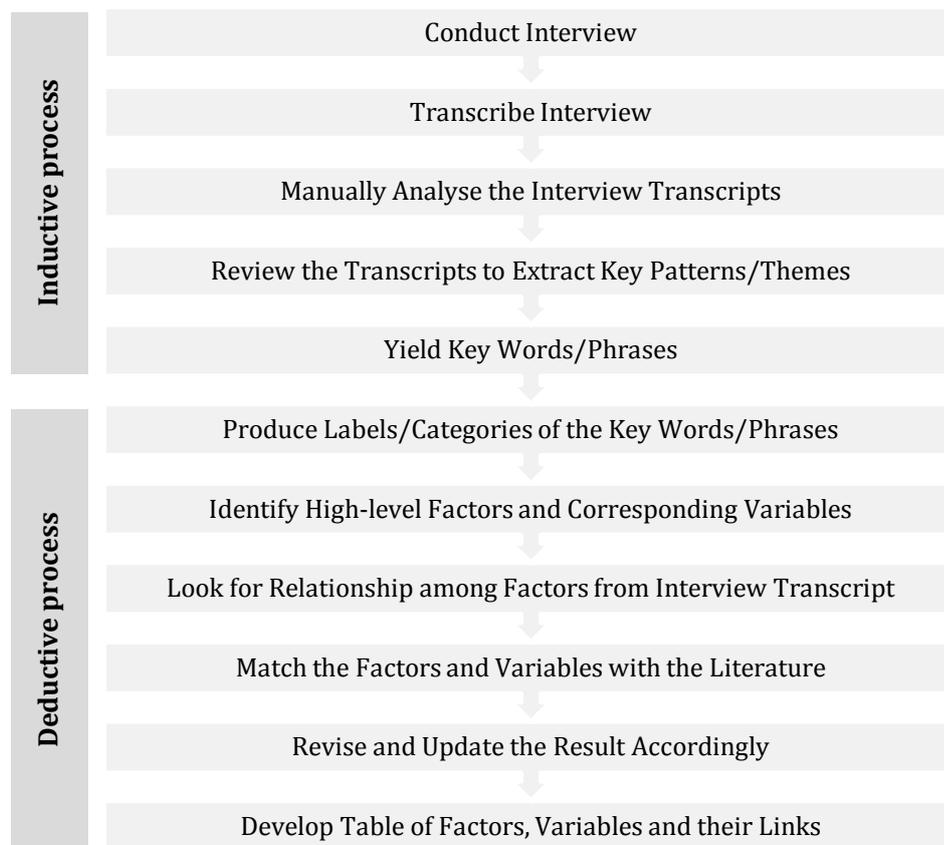


Figure 5.1: Stage 1 - Analysis of individual transcripts

Stage 1 started with conducting, transcribing and analysing the interview transcripts. Analysis was performed manually, due to the simple nature of the language and the low number of individual transcripts. Next, the full details of the transcripts were reviewed to discover key patterns/themes. The inductive process finished with identifying the themes by using key words. The deductive process began with labelling and categorizing the key words to determine the latent factors corresponding to constructs. Furthermore, links were established among the factors and constructs followed by matching the factors and variables with the literature. Lastly, the factors and constructs

were revised and modified. However, it was important to ensure that all the factors, constructs and links obtained through the qualitative study were sustained.

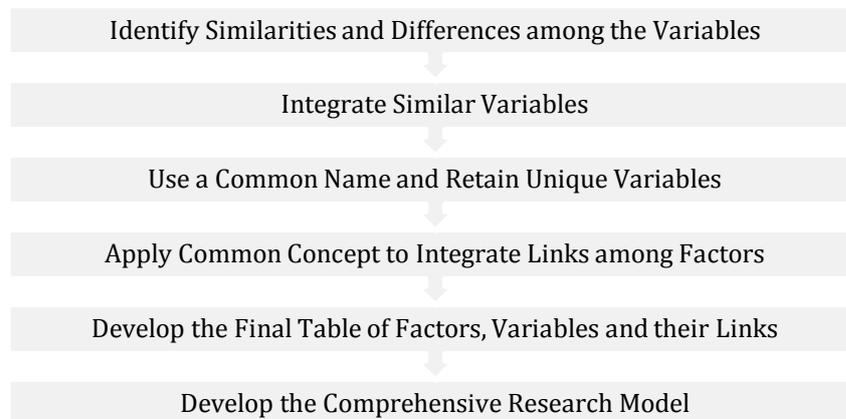


Figure 5.2: Stage 2 – Cross-examination of all transcripts

The second stage of content analysis was undertaken to develop a finalized comprehensive conceptual model based on the identification of the factors, constructs, indicators and their links in Stage 1. Stage 2 commenced by scrutinizing the 14 individual conceptual models. This step attempted to identify similarities and differences among the variables. Similar variables were then integrated and amalgamated by being given a specific suitable name and unique variables were retained. A common concept was then applied to integrate links among the factors and constructs. Furthermore, a matrix table was developed to show factors, variables and their links. This matrix table provided a clear picture of the findings and helped to eliminate inconsistent constructs. Finally, the new combined comprehensive model was developed as shown in Figure 5.3.

5.3 FINDINGS (1st Stage: Inductive Analysis)

This section presents the findings from the field study analysis based on the first stage of content analysis. Firstly, it presents the dimensions, subdimensions and variables explored, then the relationship between the variables, and finally the construction of the modified research model. Table 5.2 provides a high-level list of the dimensions, subdimensions and variables with subsequent frequencies.

5.3.1 Dimensions, Subdimensions and Variables

5.3.1.1 Entrepreneurial Orientation

Innovativeness: It was obvious from the field study that some innovativeness prevailed among the microenterprises. Four out of eight microenterprise participants

mentioned that their micro-firms had adopted a range of innovativeness. Micro-firms A, B, C and G participants were unanimous in commenting on their innovativeness by saying “*care about the quality of products*” (Micro-firm A); “*sells bananas, cookies, cakes ...*” (Micro-firm B); “*made of cow’s pure milk*” (Micro-firm C); and “*make three colours milk tea*” (Micro-firm G). However, it was found that only half of the interviewed micro-firm owners were encouraged to be creative, innovative and to seek out new things. This 50% cared about innovativeness because of customer demand. Likewise, a quarter of the microenterprises were not influenced by innovativeness because of less customer demand as the microenterprise owners: mentioned that “*special tea is not demanded*” (Micro-firm F) or “*do not sell any kind of special tea*” (Micro-firm D). One out of six non-microenterprise (NGO and local government) participants felt that “*many tea-stalls serve special tea*” (NGO I).

Risk taking: Apparently, not many respondents felt the risk in microenterprise businesses: “*moderate level*” (Micro-firm A), “*little risk*” (Micro-firm B), “*little risk*” (Micro-firm E) or “*low risk*” (Local government L). Points made by Micro-firms A, B, E and Local government L reflected the ability to calculate the risk in business. There were also positive attitudes found regarding risk taking: “*prosper in this business*” (Micro-firm C) or “*every business has risk*” (Micro-firm H). Micro-firms D and G emphasized experimenting and exploration of risk-taking opportunities as they stated “*do my business attentively*” (Micro-firm D) and “*a trial and error basis*” (Micro-firm G).

Proactiveness: The proactiveness of micro-firms appeared in the field study participants’ statements. Micro-firms A, C and G took initiative in every situation, as they focused by: “*... asks customer about their preferences*” (Micro-firm A); “*... ask the customers about their taste and demand*” (Micro-firm C); and “*... read the customers’ eyes, and serve them according to requirements*” (Micro-firm G). These three micro-firms adopted proactiveness in every circumstance to make their business successful. Some other proactiveness characteristics featured in Micro-firm A’s responses: according to him, “*... we get products on credit from the suppliers ...*” (Micro-firm A) and “*... we are planning to open a pigeon project ...*” (Micro-firm A). These statements reflected that microenterprises are proactive in identifying opportunities as well as in their response to stakeholders.

Competitive Aggressiveness: The field study also confirmed the competitive aggressiveness of microenterprises. Micro-firm A agreed that “*... the restaurants are our competitors*” (Micro-firm A). Some other comments also revealed the nature of the

competitiveness of microenterprises. Micro-firms D and G perceived that “... *think to catch customers*” (Micro-firm D) and “*some other restaurants spread rumours ...*” (Micro-firm G). Micro-firm G also addressed the need to compete with restaurants as best as possible, “*I always used Starship brand condensed milk and fine brand tea. Others used different brands.*” (Micro-firm G). Micro-firm C stressed that “*they [restaurants] are making tea with condensed milk but our tea is a special one which is made of the pure milk of cows*” (Micro-firm G). Overall, 29% of participants agreed about microenterprises’ competitive aggressiveness behaviour.

Autonomy: Micro-firms A, C, D, E and F and NGO I and Local government L talked about the autonomy of micro-firms. Micro-firm A preferred to operate their business in their own administrative way “... *like to go in our own ways*” (Micro-firm A). Micro-firm A also desired freedom, and agreed with other Micro-firms C, D and F who expressed the freedom and independent nature of their business: “*independently*” (Micro-firm C), “*freedom to make decisions*” (Micro-firm D) or “*independence*” (Micro-firm F). Participants, NGO I and Local government L, also agreed on this nature of microenterprise: “*usually husband and wife both make the decision*” (NGO I), and “*they manage everything by themselves*” (Local government L). In contrast, micro-firm E viewed this differently: “*my family members do not engage themselves in this matter*” (Micro-firm E).

5.3.1.2 Human Capital

Demographic: Participants appreciated the point that the demographic characteristics of human resources add value to micro-business. Relevant and other work experience were commonly voiced by participants: “*I worked in his restaurant*” (Micro-firm A); “*I worked in a fish-processing company*” (Micro-firm C); “*earlier, I had a sweets shop*” (Micro-firm D); and “*I also worked in a restaurant*” (Micro-firm G). However, other micro-firm participants stated that they had no work experience. For example, Micro-firm E stated that “*I have no experience prior to starting this business*”. Two participants (Local government N and NGO I) emphasized the value of having work experience: “... *should have minimum knowledge or experience or expertise*” (Local government N). Interestingly, some unique skills were found among the microenterprise owners: for instance: “*I used to do the tea-stall business as well as working as a painter*” (Micro-firm A). In addition to work experience, participants also mentioned their educational profile. Most of the micro-firm owners’ educational profiles were characterized by responses stating no education, primary or secondary, and higher secondary level of

schooling; for example, “never been to school” Micro-firm (A); “studied up to class five” Micro-firm (B); or “stopped my school after class eight” Micro-firm (C). The participants in the field study considered the involvement of family members as an important factor, for example, “they want to involve everyone of [the] family”. Micro-firm E mentioned the importance of family involvement in their business: “I have survived so far only because of the help from them [family members]”. Some others pointed out who was involved in their micro-business: “Only my mother and brothers support me” (Micro-firm C). But Micro-firm D mentioned a different opinion: “in my family, I have six members. It does not matter. I have to help by myself”. One micro-firm H talked about the size of the number of family members and its effectiveness in business: “I think if the number was more than five, then some problems could be created”. Two Micro-firms E and H stated the age and maturity level of family members and their contributions: “I have nine boys and girls. Of them, one girl is the eldest and she is 32 years old” (Micro-firm E).

Psychographic: The psychographic characteristics of human capital were also considered as important predictors in micro-firm business. Micro-firm D realized that tacit knowledge was important to run the business: “run tea-stall with our own skills and knowledge.” Along with this micro-firm, some others ensured that they were applying tacit knowledge in their business: “I manage the tea-stall with my own tacit knowledge” (Micro-firm A); and “... I have enough knowledge” (Micro-firm C). One participant supported this notion of microenterprises. “... most of them don’t have formal education. They apply tacit knowledge to run business” (NGO I). Some other psychographic characteristics also featured during the field study such as the extraordinary commitment among family team members. As Micro-firm A stated: “they [family member] always help in the tea-stall with their heart and knowledge”. Having a friendly environment and intimate relationships among team members also appeared significant: “whenever I request them [family team member] to do something in favour of the tea-stall, they [family team member] usually do that for me” (Micro-firm D). These psychographic characteristics were accepted by two respondents, Local government M and NGO K: “Actually, it’s a family business. Everybody of the family looks after a tea-stall by rotations, and has a contribution” (Local government M). Voluntary labour significantly contributes in micro-firm businesses as found from the field study: “owner needs a supporting hand. If they [micro-firm] hire a labourer from outside, then they have to pay Tk. 100 per day” (NGO I). Three Micro-firms A, B and D explained the nature of

voluntary work specifically as: *“my eldest son sits here and serves in the tea-stall. Voluntarily, they come and sit here”* (Micro-firm A).

5.3.1.3 Social Capital

Structural: The structural factors of micro-firms have been established through the field study. In the field study, the participants highlighted structural factors in terms of the types of value networks. The informal networks with family, relatives, friends or others yielded value to micro-firms. This was apparent in dialogues with several micro-firms. Micro-firms A, B, C, D, G and H confirmed this notion: for example: *“I had one close brother, I got help from him”* (Micro-firm G) and *“Some customer advised me ...”* (Micro-firm H). Regarding professional networks, the majority of micro-firms talked about the suppliers' support. Micro-firm A stated that *“the suppliers decorate tea-stall with their own products”*. Similarly, Micro-firms B, C, D and H agreed with this point. NGO I emphasized the networking of micro-firms with suppliers. *“Having good relationships with suppliers helps to get extra support in their business”* (NGO I). One micro-firm addressed networking with customers: *“We want to make customers speak happily about our products”* (Micro-firm A). NGO and local government participants explained the range of networking of microenterprises: for example: *“the success depends on a perfect application of a network”* (Local Government L).

Cognitive: The cognitive subfactor of social capital was confirmed by field study participants, and was viewed as a contributor towards the success of micro-firms. This contributor was described by participants variously as having the same ambitions, collective goals, same language or narratives. Two micro-firms described their family vision regarding micro-business: *“every member in our family wants to see tea-stall in a good position. We share plan with our family members”* (Micro-firm A) and *“I do share my plan with my family members”* (Micro-firm D). Similarly, these two micro-firms also were dedicated to achieving collective goals: *“our family members wish me to grow more with our business”* (Micro-firm A) and *“my family feels that I will do something bigger”* (Micro-firm D). Micro-firm D also talked about the advantage of having the same language and narrative among the micro-firm's members: *“when I talk to my family members and relatives, they are much closer to me. The way I talk to them ..., they can understand me easily.”* NGO I confirmed the cognitive features of micro-firms: *“every family has their own language culture, history and they share everything with each other.”*

Relational: The relational characteristics of social capital such as trust, norms and obligations were evident from the field study participants' statements. Some of the micro-firms talked about trust in a similar manner: "*we trust all of them*" (Micro-firm A); "*I do believe all of my family members*" (Micro-firm C); and "*I do believe in my family members, relatives*" (Micro-firm D). Along with these participants, some others also focused on norms and respect, for example: "*our family members respect each other*" (Micro-firm A). NGO I also agreed about this cognitive behaviour of micro-firms: "*The tea-stall is one type of family attachment business that is surviving. Every person feels for each other because of norms.*" Micro-firms A and D expressed concern about the obligatory aspects: "*I try to provide food, clothing, etc. After all, I am their father; if I could not provide that, then they would not be happy*" (Micro-firm A).

5.3.1.4 Financial Capital

Sources of Finance: Financial capital is the most important factor for any organization, especially for micro-firms. The availability of finance depends on the source. Micro-firms' financial sources are unique because of their informality. Several sources were explored from the field study conversation with participants. Initially, micro-firms rely on personal savings of the owner or family members. This was reflected by Micro-firms B, F and G: "*started our business with my own personal savings*" (Micro-firm B). This was also confirmed by NGO I, NGO J and Local government L: "*initially, they manage capital by own savings. Furthermore, they also borrow money from surroundings*" (NGO I). Apart from these sources, micro-firms also highlighted relatives, friends or known persons as financial sources: "*I got this loan from my friends*" (Micro-firm C). Micro-firms were reluctant to borrow loans using institutional arrangements: "*I know about micro-credit, and did not take any finance from them because I have to pay interest to them ...*" (Micro-firm D). However, one micro-firm stated: "*I just collected Tk. 2000 from World Vision*" (Micro-firm H). The perception of local government participants was focused on institutional borrowing. Participants NGO I and NGO J expressed a different opinion: "*most of the micro- and small business owners collect money from NGO*" (NGO I) and "*quite a few tea-stall owners take micro-credit from various NGOs*" (NGO J).

Capital Structure: Capital structure plays a dominant role in access to financial resources. In the context of micro-firm financing, capital structure has unique characteristics such as small capital requirements, flexible time horizon and lower cost and risk of capital compared to other firms, and this was evident from the field study. Several micro-firm owners agreed that micro-firms only need a small amount of capital

to start the business: “*need less money*” (Micro-firm B); “*it does not require huge capital*” (Micro-firm C); “*small amount of capital*” (Micro-firm E); or “*approximately Tk. 7000*” (Micro-firm F). One NGO participant also confirmed this requirement: “*does not require too much capital*” (NGO I).” Micro-firms were not interested in collecting loans from the bank or NGOs: “*many things [needed] to get finance from micro-credit providers.*” (Micro-firm D) and “*it [bank or NGO] does require formal procedures*” (NGO I). Micro-firms liked informal sources from which to collect loans due to the flexible time frame in which to pay back the loan: “*I paid it [loan] back within three months*” (Micro-firm A) and “*tea-stall owner also gets a longer time horizon to pay back money to friends or relatives*” (NGO I). Apart from the time horizon, the field study participants also talked about cost and risk of capital, for example: “*low rate of interest*” (Micro-firm A); “*did not have to pay any interest*” (Micro-firm C); and “*did not pay any interest for the money*” (Micro-firm F). Two field study participants also highlighted the risk of capital: “*I did not feel the risk*” (Micro-firm A) and “*they [micro-firm owner] don’t bother about the high interest rate*” (Local government L).

5.3.1.5 Business Environment

Turbulent: In a turbulent environment, opportunities for business organizations are reduced due to unpredictable changes in customer preferences and competitors. The field study participants reported that micro-firms faced turbulent environment forces in terms of competitors’ behaviour, customer demand and taste, and the nature of products and services. One micro-firm described the following action against competitors: “*I did not sell coffee but if somebody asks then I make coffee for them*” (Micro-firm G). One local government official reported how micro-firms deal with customer demand and taste: “*they know which products will be sold in that area*” (Local government M). Unpredictability of price also has an effect on micro-business operation: “*if the price of sugar goes up. They have nothing [they can] do at that time, because they [micro-firm owner] cannot charge more from the customers*” (NGO I).

Hostile: A hostile environment represents an unfavourable situation caused by legal, political and economic constraints. This inverse condition implies competition for reduced opportunities. Micro-firms operate their business in a hostile environment. The impact of this hostile environment was mentioned by Micro-firms A, B and G. They described how extortionists and law enforcement authorities influenced their business, for example: “*someone [extortionist] threatened and told me not to sell cow’s milk tea here*” (Micro-firm G). NGO I and Local government M also confirmed these difficulties of

micro-firms: *“sometimes, the muscle-man does not pay the bill after drinking tea”* (NGO I). Participants also reported that due to government pressure, it was very hard to keep afloat: *“sometimes it is difficult to open every day because of government pressure”* (Micro-firm B) or *“there is the pressure from law enforcement department, as we sell beside the road”* (Micro-firm C). NGO and local government participants also reported these hostile conditions: *“actually, tea-stall owner operates the business on government property such as roads and highway land, or on private land. That is why they [micro-firm owner] have the fear of being blown out from the street”* (NGO I).

Munificent: A munificent environment is the opposite of turbulent and hostile environments. This environment can provide a more favourable situation and opportunities for micro-firms. Field study participants mentioned several characteristics of the munificent environment such as rules and regulations, education and training, public attitude and financial institutions’ views. NGO K emphasized that micro-firms should operate within a bureaucratic environment: *“City Corporation should have proper planning”* (NGO K). However, the existing few rules and regulations provided a favourable environment for micro-firms. NGO I emphasized training and vocational education for micro-firms: *“if we introduce training among them, then they can improve more”* (NGO I). Micro-firms A, F and H and Local government L talked about the favourable attitude of financial institution: *“I want to get a loan from agriculture office immediately, because the interest rate is only 8%”* (Micro-firm A); *“... many needy peoples [micro-firm owner] [are] involve[d] with the BRAC [NGO]”* (Micro-firm F); and *“World Vision [NGO] helps me”* (Micro-firm H). NGO I and Local government L also agreed on the aspects of this favourable environment. A supportive public attitude was also mentioned in the field study. It was reflected in statements by NGO I and Local government L and M participants, for example: *“they [micro-firm] are doing a good job and it’s not a crime”* (Local government L).

5.3.1.6 Sustainable Performance

Economic: Economically sustainable firm performance is considered to consist of several aspects: employment, sales growth, income stability, profitability and return on investment. Employment was considered as a positive indicator by field study participants Micro-firms A and D, and NGO I, for example, *“it is my job”* (Micro-firm D). Micro-firms A, B, D and G agreed that their sales were gradually increasing: *“gradually growing”* (Micro-firm A); *“customer base is increasing”* (Micro-firm B); *“sales are increasing day by day”* (Micro-firm D); and *“it became big because of customers and God”*

(Micro-firm G). In addition, NGOs I and L observed the positive sales growth of micro-firms. Income stability is also an important indicator for measuring economic performance. All Micro-firms A, B, C, D, E, F, G and H confirmed that their income was not stable over time. It fluctuated depending upon the location, days, seasons and weather. Nevertheless, they moderately agreed that their income fluctuated at an acceptable level, for example, *"I do not get the same earnings all the season"* (Micro-firm C); *"income always remains the same"* (Micro-firm D); and *"Income may be good one day but it may be bad next day"* (Micro-firm E) and these views were similarly narrated by NGOs I and J and Local government L. Return on investment also appeared as an important indicator. Micro-firms A, B and D reported that *"return on investment is moderate"* (Micro-firm A); *"profit margin is medium"* (Micro-firm B); and *"income is so far so good"* (Micro-firm D). The profitability of micro-firms was also confirmed from the field study data. Most of the micro-firms as well as the NGO and local government participants strongly supported the profitability of micro-firms: *"profitable business"* (Micro-firm A); *"profitable business"* (Micro-firm B); *"profitable business for me"* (Micro-firm C); *"business is profitable"* (Micro-firm F); *"make a profit"* (Micro-firm H); *"a profitable business"* (NGO I); *"quite profitable"* (NGO J); and *"earn profits"* (Local government L).

Social: From the field study, several social indicators were found to reflect micro-firms' social performance, namely, basic needs, social recognition, empowerment, freedom and control, and child labour. All participants viewed micro-firms as a way to fulfil the daily basic needs of their family, for example, *"we cannot bear all these things [basic needs]"* (Micro-firm A); *"We bear the family expense somehow"* (Micro-firm B); and *"able to maintain the life living cost"* (Micro-firm C). NGO and local government participants provided contrary information by stating that, for instance, micro-firm activities *"cannot provide per-day minimum caloric intake for the family"* (NGO I) and *"difficult to fulfil basic needs"* (NGO K). As for freedom and control over the course of one's own lifestyle, some tea-stall owners found that ISMs were the tool to reach that goal. Several tea-stall owners (Micro-firms A, B, C and G) agreed that their lifestyle was far better than in their previous jobs, such as, working as a rickshaw puller or daily labourer. For example, Micro-firm G confirmed that *"I am now far better off than I was in my previous job"*. This view was also confirmed by Local government L and N. In terms of social recognition, Micro-firm B considered that the micro-firm generated moderate social recognition in society: *"I do feel my status in the society."* (Micro-firm B). However, Micro-firm C perceived that: *"it is not so prestigious job"*. NGOs I and K viewed this

identically: “... *better than a daily labourer or rickshaw puller*”. Moreover, a significant number of opinions emerged from the field study regarding social empowerment, for example, “*I have created some wealth*” (Micro-Firm D) or “*I got a daughter married*” (Micro-Firm E). Furthermore, since the child labour issue was considered sensitive, none of the tea-stall owners mentioned the involvement of children in their micro-firms. However, from the field observations, it was found that micro-firms used child labour on a part-time basis. NGO I and Local government L confirmed the use of child labour in micro-firms.

Natural Environment: Natural environment performance also covers a varied range of indicators. Every organization contributes to degrading the environment through factors such as water and energy use, waste and emissions, waste management, space management and hygiene factors. As for the water and energy used, almost every micro-firm from the field study believed that they used water and energy at a minimal expenditure level and in an environmentally-friendly manner. Along with others, Micro-firm C affirmed that they “*use[d] chaff processing wood for making fire. Now it is almost 9 kg every day ... need almost 8 pitchers of water per-day.*” NGOs I and J confirmed these statements. In addition, participants noted that the creation of waste and emissions was also at acceptable levels. Micro-firms C, D and E mentioned that chaff-log was a good thing and it emitted a low level of smoke. NGOs I, J and K confirmed these views. All micro-firms provided positive statements regarding waste management, for example: “*we produce waste tea. Sometimes we throw it out or put it on the tree plant base. We put the ashes in the ‘Kachu’ tree. It makes the tree base strong. We make fire with waste plastic bags. We sweep three times a day.*” (Micro-firm A). Conversely, NGOs I and J and Local government M and N disagreed with these statements. The hygiene factor was also reflected in a positive manner in the field study. All the micro-firms pointed out that they cared about the hygiene factors when they served customers, for example: “*I always try to keep the biscuits and other food products in a clean box and serve the tea in clean cups*” (Micro-firm F). NGO I disagreed with this statement.

5.3.1.7 Firm Life Cycle

It was obvious from the field study that micro-firm businesses cross several stages in their life cycle: start, growth, mature and decline. The field study found that some micro-firms were in the start and decline stages, others were in the growth and mature stages. Micro-firms B and C stated that “*I hope to build a permanent shop if the business goes well*” and “*for bearing the expenses of my family, I just started this business*”. This

indicated that Micro-firms B and C were remaining in the start stage. On the other hand, Micro-firm D was in the growth stage: “sales are increasing somehow”. Micro-firms A, F and H were prevailing in the mature stage: “I have started this business about 18 months. Profit is more or less same every day” (Micro-firm F). Apart from these responses, this field study revealed that Micro-firm E was preparing to close down their business: “now I am thinking to do other things, closing the shop.”

Table 5.2 Dimensions, subdimensions and variables supported by field study

Dimensions, Subdimensions and Variables	Participants													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Entrepreneurial Orientation														
Innovativeness														
-actively introduces improvements and innovations	√		√			√								
-creative in its methods of operation			√				√		√					
-seeks out new ways to do things	√			√			√							
Risk taking														
-considers the term “risk taker” as a positive attribute	√	√			√								√	
-encourages taking calculated risks with new ideas			√					√						
-emphasizes both exploration and experimentation for opportunities				√			√							
Proactiveness														
-takes the initiative in every situation	√		√				√							
-excels at identifying opportunities	√													
-initiates actions to which other organizations respond	√													
Competitive Aggressiveness														
-operates in intensely competitive environment	√													
-takes a bold or aggressive approach when competing				√			√							
-tries to undo and out-manoeuvre the competition as best as possible			√				√							
Autonomy														
-allowed to make and instigate changes	√													
-given the freedom to make their own decisions	√	√	√	√		√			√			√		
-given authority and responsibility to act alone					√									
Human Capital														
Demographic														
-relevant or other work experience	√		√	√	√	√	√		√				√	√
-relevant or other skills	√	√	√				√							
-explicit knowledge or education level	√	√	√	√	√		√		√		√		√	√
-number of family members			√	√	√		√	√	√		√			
-age or maturity level					√			√						
Psychographic														
-tacit knowledge	√	√	√	√		√			√					
-extraordinary commitment	√							√						
-friendly and intimate relationships		√		√							√		√	
-voluntary labour	√	√		√					√					√
Social Capital														
Structural														
-family, relatives and friends yield value by giving advice	√	√	√	√			√	√						
-some suppliers assist by providing product solutions	√	√	√	√				√	√					
-some customers help by generating word-of-mouth recommendations	√													
-enough numbers of contacts and acquaintances									√	√		√		√
Cognitive														
-share the same ambitions and vision	√			√										
-enthusiastic about pursuing the collective goals	√			√										

-share the same language and narratives to understand each other			√					√												
Relational																				
-trust and believe in each other	√		√	√																
-show norms and respect for each other	√	√		√	√	√				√										
-have obligation to support each other	√			√						√										
Financial Capital																				
Finance Sources																				
-acquires loans from personal or family members' savings		√					√	√		√	√		√							
-seeks loan from relatives or friends	√		√																	
-searches for loan from known persons					√															
-prefers institutional borrowing				√						√	√	√	√							√
Capital Structure																				
-needs small amount of capital to start and run the business		√	√		√	√	√			√										
-faces few procedural requirements for acquiring loan				√						√										√
-enjoys flexible time frame to pay back loan	√			√		√				√										
-enjoys lower cost of capital	√		√			√				√	√									
-faces lower risk tolerance of capital	√																			√
Business Environment																				
Turbulent																				
-actions of competitors are easy to predict										√										
-demand and consumer tastes are easy to forecast																				√
-the product/service patterns do not change much																				√
Hostile																				
-threats from extortionists and law enforcement authorities	√	√								√	√									√
-hard to keep afloat due to government pressure	√	√	√								√									√
-control and manipulate extortion; and government pressure										√										
Munificent																				
-few rules and regulations; providing a favourable environment																				√
-educational and training programmes											√	√	√							
-financial institutions are willing to finance	√						√			√	√	√								√
-supportive public attitude											√									√
Sustainable Performance																				
Economic																				
-provides employment to us and others	√			√						√										
-sales growth	√	√		√				√		√										√
-income stability	√	√	√	√	√		√	√	√	√										√
-return on investment	√	√		√						√	√	√	√	√						√
-profitability	√	√	√	√			√	√	√	√	√	√	√							√
Social																				
-ensures basic needs for our family	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
-enhances our social recognition in society		√	√	√	√					√	√	√	√	√	√	√	√	√	√	√
-improves our empowerment in society				√	√					√	√	√	√	√	√	√	√	√	√	√
-provides freedom and control over the course of our own lifestyle	√	√	√							√	√	√	√	√	√	√	√	√	√	√
-concerned about child labour use											√									√
Natural Environment																				
-uses energy and water in an environmentally-friendly manner	√	√	√	√	√			√	√	√	√									
-produces few wastes and emissions				√	√	√				√	√	√								√
-concerned about waste management	√	√	√	√	√	√	√	√	√	√	√	√	√							√
-uses small space to set up and operate business				√	√															√
-concerned about hygiene factors	√	√	√	√	√	√	√	√	√	√	√									
Firm Life Cycle	√	√	√	√	√	√	√	√	√	√	√									

5.4 FINDINGS OF OTHER RELEVANT FACTORS (1st Stage: Inductive Analysis)

Two other important factors emerged from the field study, namely, personality traits and marketing capabilities. These two factors are very relevant with the resource-based view since personality traits describe the personal capabilities of micro-firm

owners and marketing capabilities focus on micro-firm marketing resources. This section presents the findings on these two relevant factors from the field study analysis based on the first stage of content analysis (see Table 5.3).

5.4.1 Dimensions, Subdimensions and Variables

5.4.1.1 Personality Traits

Achievement Motivation: The achievement motivation of micro-firm owners was observed during conversation with participants in the field study. Micro-firm owners A, B, G and H indicated that they had built their business with hard efforts, for example, “*I was hard-working from my childhood*” (Micro-firm A) and “*I have grown with a hard effort*” (Micro-firm G). At the same way, NGO I and Local government L also agreed with this notion. Micro-firm B pointed out that micro-firm business “*requires less skills and effort to open and operate*”. It also appeared that micro-firms had the tendency to accomplish something of great significance with hard work: “*I believe I can do something*” (Micro-firm C) and “*I want to do something bigger*” (Micro-firm D).

Tolerance for Ambiguity: The micro-firm owner has to operate their business in an ambiguous situation. This situation also denotes insufficient information and an unpredictable environment. Micro-firm owners are less likely to be capable of handling ambiguous situations and this forces them to find a less complicated business. This was reflected in Micro-firm A’s statements: “*... working as a painter from morning to evening was not a comfortable job. That’s why I decided to open a tea-stall*” and “*Selling tea and chatting with customers is easy and enjoyable work*”. Other participants were silent when it came to explaining this characteristic.

Locus of Control: The micro-firm owner’s personal characteristics were determined by both the internal and external locus of control as reported in the field study. Micro-firm B’s owner was controlled by the external locus of control: “*I like to work independently; I am confident*” (Micro-firm B). On the other hand, Micro-firm A’s owner was influenced by the internal locus of control: “*If God bless on me, then I can carry on my tea-stall and survive*”. Micro-firm G’s owner trusted in both points: “*If God wishes to give, then God can give it easily*” and “*I am committed to run a tea-stall*” (Micro-firm G).

Risk-taking Propensity: The risk-taking propensity of micro-firm owners was also characterized in the field study data. NGO J believed that there are “*some uncertainties among the tea-stall owners. Most of them are conscious about it*”. On the other hand, NGO I reported a reason for being involved in taking risks: “*since they could not find another*

job, they are trying to be self-dependent by a tea-stall." Micro-firm D's owner's statement expressed the tendency to take risks: *"I took a risk by opening a new shop"*.

5.4.1.2 Marketing Capabilities

Product/Service: The field study participants emphasized the product and service capabilities of micro-firms by highlighting special products, secret methods, customer requirements and quick service. Micro-firms E and F highlighted special products which was supported by NGO I: *"Many tea-stalls serve special tea to the customers"*. One micro-firm confirmed that he had a secret recipe: *"it is my business secret"* (Micro-firm G). Micro-firms A, B and D commented on meeting customer requirements. This ability was appreciated by NGO I and Local government L: *"customer can make order according to their requirements directly"* and *"customer can make their own requirements."* Micro-firms B, D, E and H focused on quick customer service. NGOs I and J also pointed to this indicator: *"many of them can serve customers promptly"* and *"tea is ready in very short time in these tea-stalls"*.

Price: The respondents presented the pricing capabilities of micro-firms in terms of offering lower prices, charging higher prices for special products and lower production costs. Micro-firms A, B, C, D, E, F and H spoke out about pricing using a similar tone: *"price is half"*, *"charge a lower price"* or *"prices are cheaper"*. This nature of the prices of micro-firms was confirmed by NGO I and Local government K and L. Micro-firm D also explained that they can charge lower prices because of some production cost factors: *"actually, a restaurant has to pay rent, electricity bill. I don't need to pay such things"*. Only Micro-firm G argued that his product price was higher in some special cases: *"some of my tea items are [more] expensive than [a] restaurant"*.

Place: Place, as in the location, becomes a vital factor for micro-firms in attracting more customers. Place factors described by field study participants included convenient location, very small space to operate and flexible business hours. Micro-firm D and NGOs I and J addressed the point that micro-firms attract more customers because of their convenient location: *"When customers are walking beside the street, it is more convenient for them to buy cigarettes or to drink tea compared to a restaurant"* (Micro-firm D). Micro-firm A talked about space convenience in terms of operating a business: *"if you find some space beside the street then you can easily open a shop"*. Micro-firms A, B, C, D, F and H focused on flexible business hours. This was also supported by Local

government M: “most of them open their shop in the very [early] morning and close at midnight”.

Promotion: The promotional characteristics that were introduced by field study participants were in terms of the word-of-mouth promotion strategy, cooking and demonstrating in front of customers and being friendly in dealing with customers. Micro-firm D and NGO I pointed out how word-of-mouth promotion worked: “this relationship [customer relationship] helps to generate a word-of-mouth recommendation” and “the goodwill spreads out very fast”. Micro-firms A, D and F also emphasized the cooking demonstration. This capability was appreciated by NGO I and Local government N. “They [customer] get the tea in front of their eyes with their own taste within a short time” (Local government N). Micro-firms A, B, D, F and H agreed on the essential aspect of being friendly in dealing with customers: “customers could not find friendly atmosphere in a restaurant” (Micro-firm A).

Market Segment: It was remarkable that a market segment existed for micro-firms: this market segment was labelled as comprising a large number of lower-income customers who were stable, profitable and easily accessible. Micro-firms A, B, C, E, F and H were almost identical in noting that their class of customers comprised: “lower-income people”, “lesser-income people” or “rickshaw puller or low earners”. This was confirmed by Local government N. Micro-firms B, D and E and NGOs I and K also indicated that this large market segment was stable and profitable: “lower-income customer visits our tea-stall regularly” (Micro-firm D) and “they have some fixed customer” (NGO K). NGO K and Local government L talked about the accessibility of this market segment: “the customers that come here: basically, they are in the lower income-level. For this [reason], they don’t have to search for a target market” (NGO K).

Table 5.3 Dimensions, subdimensions and variables supported by field study

Dimensions, Subdimensions and Variables	Participants													
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Personality Traits														
Achievement Motivation														
-work at my best	√	√					√	√	√				√	
-accomplish tasks requiring skills and effort	√													
-accomplish something of great significance		√	√	√			√			√				
-do a difficult job well				√										
Tolerance for Ambiguity														
-lead life without a routine frame	√													
-tackle a complicated problem rather than solving an easy one	√													
-make important decisions on the basis of insufficient information	√													
Locus of Control														
-confident to make plan work		√												
-little or nothing to do with luck	√							√						
-willing to admit mistakes								√						

Table 5.4 has been developed from the content analysis transcripts, presented in the previous subsections 5.3.1 and 5.4.1. The table shows the linkages established between the dimensions. For example, the notion of EO → SP represents the influence of entrepreneurial orientation on micro-firm sustainable performance. It is observed that almost all respondents except NGOs J and K and Local government M and N found that entrepreneurial orientation had a direct influence on micro-firm sustainable performance. The relationship between these two factors was observed from the statement: *“many [micro-firm owner] tea-stalls serve special tea to the customers. It [entrepreneurial orientation] is a one kind of creativity of a tea-stall owner, and helps them [micro-firm] to create goodwill”* (NGO I). Except for Local government L and NGO J, all the respondents confirmed the relationship between HC → SP: *“I [micro-firm owner] cannot read that much but I [micro-firm owner] can give signatures. I [micro-firm owner] run this business with my own knowledge”* (Micro-firm F). In the case of the FC → SP relationship, all participants except Local government M noted this connection. Local government K and M jointly disagreed on the established relationship of FC → SP. Excluding Micro-firms D and E, others supported the link between BE → SP. The relationship between PT → EO was not supported by Micro-firms E and F, NGO K or Local government M and N. All participants settled on the link between MC → SP. However, whenever it was not possible to draw a relationship from direct comments, detailed data analysis was performed. For example, several factors and links emerged from casual comments of the participants. *“... business has three phases: customers, operations and inbounds. If you don’t have capital [financial capital], then you can’t do business [firm performance]. You have tea but you don’t have cookies, you already have hot water but you don’t have tea, or you have tea but you don’t have milk ... Customer wants milk tea, you give them red tea ... then you can’t run your business [firm performance] ... You have to arrange [entrepreneurial orientation] and keep all these things [marketing capabilities]”* (Micro-firm G). This statement produced several factors such as financial capital, entrepreneurial orientation, marketing capabilities and firm performance and established some links such as FC → SP, MC → SP, EO → SP, MC → EO and FC → EO. Similarly, in order to establish the relationship between dimensions the subjective judgments of the respondents have been considered: *“at the beginning [start stage], the tea-stall owners try to survive hand-to-mouth [social and financial performance]. They [micro-firm] think about daily needs and try to fulfil it [social performance]. Gradually, they [micro-firm] apply tacit knowledge [psychographic human capital], ability [social capital, financial capital, entrepreneurial orientation, etc.] and*

customer service approach [marketing capabilities], and expand their business [growth stage]. In this way, they [micro-firm] adapt [human capital, social capital, financial capital, entrepreneurial orientation, etc.] and reach solvency [firm performance]. Although they [micro-firm] have hope about the future [mature stage], but initially they [micro-firm] concentrate on daily needs” (NGO I). This statement represents several moderating links, for example, FLC (PT, EO, HC, SC, FC, MC, BE, SP). On the other hand, links were also established based on the objective judgments of participants. For example: Micro-firm D stated that “my [micro-firm owner] heart and belief forced me to start a tea-stall”. This statement connects the link between PT → EO.*

5.5 FINDINGS (2nd Stage: Deductive Analysis)

The objective of this section was to develop a comprehensive model based on comparing the findings from the field study and the initial model. More specifically, this section discusses the dimensions which either evolved from the field study or were different from the existing literature. Most of the indicators in the field study were supported by the literature review as discussed in Chapter 3.

It was noted that the literature review identified the human capital subdimensions in different forms, for example: type – “knowledge,” “skills and abilities”; context – “leadership context” “global context,” “organizational activity”; and antecedents – “human resource management,” “turnover,” “other antecedents” (for more see Chapter 3). However, the field study confirmed two forms of human capital subdimensions: demographic and psychographic. Actually, the formation of these two subdimensions was supported by identifying key variables and grouping constructs in the literature review. Therefore, human capital higher-order constructs with two first-order subconstructs were incorporated in the comprehensive model.

Similarly, the literature review recognized the gap when it came to explaining the financial capital dimensions and subdimensions. No specific subdimensions of financial capital were found in the literature (for more, see Chapter 3). The existing literature described financial capital in terms of various variables. The literature review identified these key variables and labelled two constructs: sources of finance and capital structure. The field study analysis revealed the existence of these two financial capital subconstructs, and suggested that the financial capital second-order construct was relatively new. In view of this, the financial capital higher-order dimension along with two new subdimensions was incorporated into the final model.

In the context of informal microenterprises, the current field study explored two higher-order dimensions, namely, personality traits and marketing capabilities. As mentioned earlier, these two factors clearly matched the concept of resource-based theory, since the resource-based view considers a wider range of dynamic capabilities and resources. During the field study, the personality traits of micro-firm owners appeared significantly throughout the conversation. However, no question had formally been incorporated in the semi-structured questionnaire for the field study. Four subdimensions under the personality trait higher-order dimension emerged from the field study. The four subdimensions were: achievement motivation, tolerance of ambiguity, locus of control and risk-taking propensity. These four subdimensions and one higher-order dimension were identical with the findings of the literature review. To confirm these four subdimensions and one higher-order dimension, the current study surfed through the literature and found evidence. Thus, personality traits were considered as an important factor and have been added to the current comprehensive model.

In the field study's semi-structured questionnaire, the current study kept the option of exploring additional relevant dimensions and variables. In so doing, the field study found the dominant factor, marketing capabilities, which explained some subdimensions. These marketing capabilities consisted of product/service, price, place, promotion and market segment. Therefore, this study reviewed the marketing-related literature and attempted to find evidence. The marketing literature explained marketing capabilities by considering a huge range of variables and dimensions. Based on the field study analysis, however, this study focused on only five subdimensions of the marketing capabilities construct. Since the literature review and field study justified the multidimensional nature of the marketing capabilities construct, the current study has structured this dimension and these subdimensions into the comprehensive model.

In addition, the current study compared the findings of the literature review and field study for some other dimensions and subdimensions. The entrepreneurial orientation higher-order construct comprised innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. The social capital construct with its subconstructs: structural, cognitive and relational was established theoretically and empirically in the literature. The business environment dimension of the subconstructs: turbulent, hostile and munificent also appeared with sound empirical support. The current field study confirmed these established dimensions and

subdimensions. Therefore, the current study has suggested incorporating these dimensions and subdimensions into the final model.

In defining the sustainable performance of the firm, the existing literature on small business and entrepreneurship has only focused on economic performance and, to some extent, non-economic performance. The small business and entrepreneurship literature was unexpectedly silent when it came to explaining other performance dimensions such as social and natural environmental. However, the current study explored the essence of the social and natural environmental performance dimensions from other relevant literature. The firm sustainable performance dimension is therefore explained as a higher-order construct built with economic, social and natural environmental subdimensions. The current study then conducted the field study and found support for this view. Hence, the current study has incorporated the firm sustainable performance dimension in terms of economic, social and natural environmental subdimensions into the comprehensive model.

The current study has adopted the firm life-cycle theory as it is applicable in the micro-firm context. However, the question was how many stages should be considered to explain the micro-firm life cycle? Therefore, it was necessary to find an answer to this question from the literature. Theoretically and empirically, the literature analysis revealed that for the micro-firm, a four-stage life-cycle analysis was suitable with these four stages being introduction, growth, maturity and decline. The intention was to define these four stages to investigate how the micro-firm's life-cycle stages (start, growth, mature and decline) were not identical in terms of capabilities, resources, the business environment and firm performance. This notion was supported by the literature review and was confirmed by the field study investigation. Therefore, the current study has embraced the life-cycle concept in the comprehensive model.

The conceptualization of reflective and formative constructs was considered in the comprehensive model based on theoretical and empirical foundations and the field study. This study has carefully examined and conceptualized the understanding from the literature and field study data and has concluded that entrepreneurial orientation with subconstructs: innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy is reflective in nature. Similarly, personality traits with subconstructs, achievement motivation, tolerance for ambiguity, locus of control and risk-taking propensity are reflective in manner. Firm sustainability performance with

subconstructs, economic, social and natural environmental is also reflective. Human capital (demographic and psychographic), social capital (structural, cognitive and relational), financial capital (sources of finance and capital structure) and business environment (turbulent, hostile and munificent) second-order dimensions with their corresponding subdimensions are formative. However, it was suggested that further investigation be undertaken.

The focus of the qualitative analysis was to confirm the dimensions, subdimensions and their links as identified in the literature and to uncover additional constructs that could further enhance the initial research model. The analysis validated all the dimensions and subdimensions identified in the literature review. The analysis also exposed several new constructs that were to be incorporated into the initial research model. The dimensions and subdimensions that were chosen after careful rationalization were consolidated into the final research model.

5.6 JUSTIFICATION OF THE FINDINGS

With support from the literature, this section provides the justification for the selected dimensions and subdimensions that were developed from the field study. It is emphasized that the dimensions and subdimensions that were derived from the field study, on the basis of commonality and consistency, were also supported by the existing literature. Therefore, this justification establishes the competency and adequacy of each construct and dimension in the existing literature. Table 5.5 presents the dimensions, subdimensions and links that have been finalized and the relevant support from the literature.

Table 5.5: Justification of dimensions, subdimensions and links for the comprehensive model

Links between Dimensions	Justification
PT (AM, TA, LC, RP) → SP (SO, EC, EN)	-supported by literature review
PT (AM, TA, LC, RP) → EO (IN, RT, PO, CA, AU)	-suggested by 09 field study participants
EO (IN, RT, PO, CA, AU) → SP (SO, EC, EN)	-supported by literature review
HC (DE, PS) → SP (SO, EC, EN)	-suggested by 09 field study participants
HC (DE, PS) → EO (IN, RT, PO, CA, AU)	-supported by literature review
SC (ST, CO, RE) → SP (SO, EC, EN)	-suggested by 10 field study participants
SC (ST, CO, RE) → EO (IN, RT, PO, CA, AU)	-supported by literature review
FC (FS, CS) → SP (SO, EC, EN)	-suggested by 12 field study participants
FC (FS, CS) → EO (IN, RT, PO, CA, AU)	-supported by literature review
MC (PD, PI, PL, PM, MS) → SP (SO, EC, EN)	-suggested by 09 field study participants
MC (PD, PI, PL, PM, MS) → EO (IN, RT, PO, CA, AU)	-supported by literature review
BE (TU, HO, MU) → SP (SO, EC, EN)	-suggested by all field study participants
BE (TU, HO, MU) → EO (IN, RT, PO, CA, AU)	-supported by literature review
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-suggested by 09 field study participants
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-supported by literature review
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-suggested by 12 field study participants
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-supported by literature review
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-suggested by 09 field study participants
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-supported by literature review
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-suggested by all field study participants
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-supported by literature review
FLC* [PT (AM, TA, LC, RP), EO (IN, RT, PO, CA, AU), HC (DE, PS), SC (ST, CO, RE), FC (FS, CS), MC (PD, PI, PL, PM, MS), BE (TU, HO, MU), SP (SO, EC, EN)]	-suggested by 08 field study participants

Abbreviations for the dimensions and subdimensions

PT-Personality Traits	EO-Entrepreneurial Orientation	HC-Human Capital	FC-Financial Capital	PM-Promotion	SP-Sustainable Performance
AM-Achievement Motivation	IN-Innovativeness	DE-Demographic	FS-Sources of Finance	MS-Market Segment	SO-Social
TA-Tolerance for Ambiguity	RT-Risk Taking	PS-Psychographic	CS-Capital Structure	BE-Business Environment	EC-Economic
LC-Locus of Control	PO-Proactiveness	SC-Social Capital	MC-Marketing Capabilities	TU-Turbulent	EN-Natural Environment
RP-Risk-taking Propensity	CA-Competitive Aggressiveness	ST-Structural	PD-Product/service	HO-Hostile	FLC-Firm Life Cycle
	AU-Autonomy	CO-Cognitive	PI-Price	MU-Munificent	
		RE-Relational	PL-Place		

5.7 THE COMPREHENSIVE RESEARCH MODEL

As discussed earlier, a comparison was made between the initial model and the findings of the field study. Justifications of the selected dimensions, subdimensions and links were then made. As a result, this section proposes a comprehensive model for the current research. Figure 5.3 illustrates this comprehensive model.

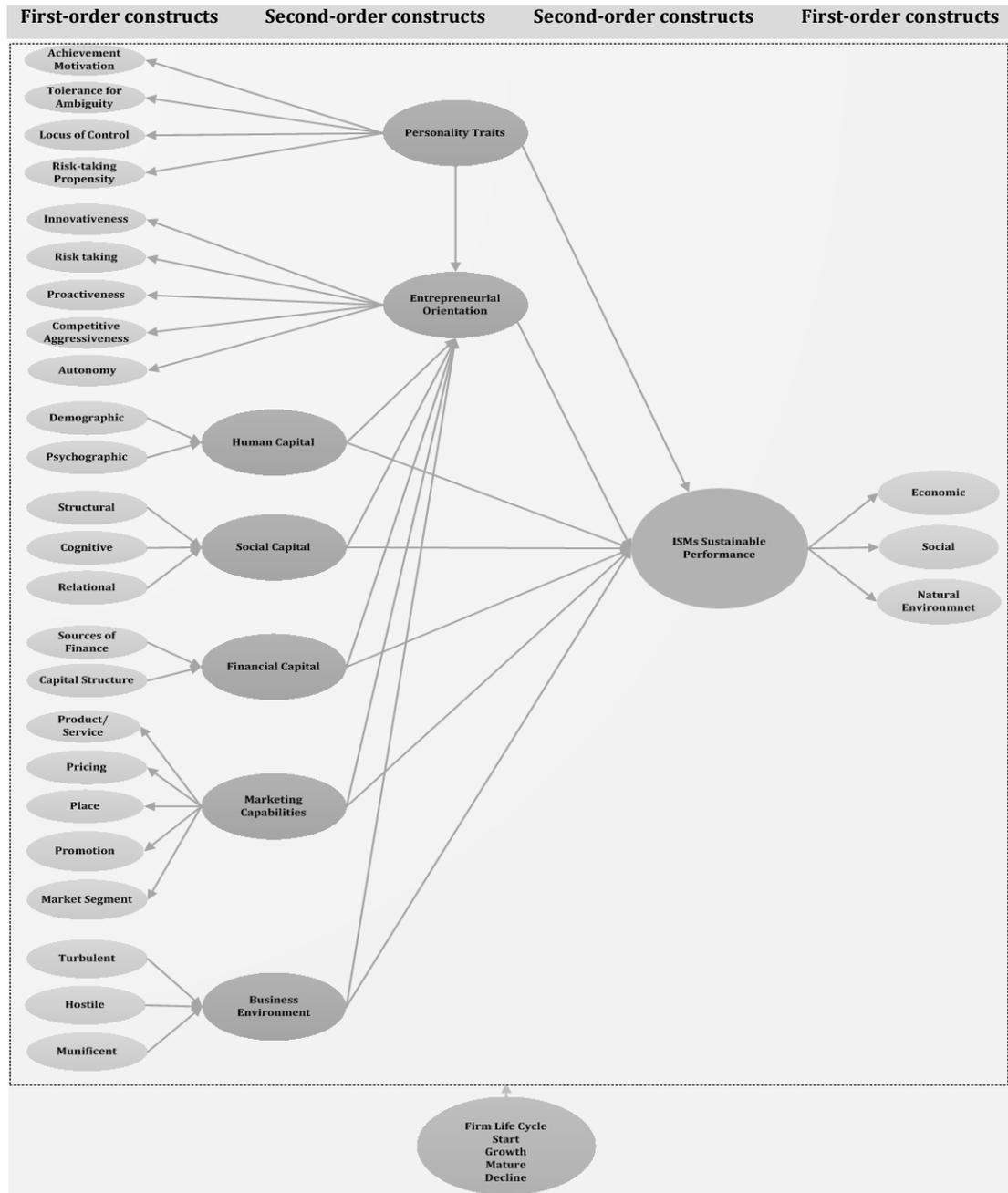


Figure 5.3: The comprehensive research model

The model is a combination of the quantitative and qualitative approaches. As shown in Figure 5.3, two more dimensions consisting of the nine subdimensions that were most influential were added to the initial model: personality traits and marketing

capabilities. Based on the analysis from the field study, these two dimensions consisting of nine subdimensions were found to have made a very significant contribution in influencing the micro-firm entrepreneurial activities and sustainable performance. This comprehensive model shows the direct and moderating links. All the antecedents (entrepreneurial orientation, personality traits, human capital, social capital, financial capital, marketing capabilities and business environment) directly influence firm sustainable performance. On the other hand, personality traits, human capital, social capital, financial capital, marketing capabilities and business environment have direct effects on entrepreneurial orientation. In terms of moderating effect, firm life-cycle stages (start, growth, mature and decline) moderate the firm's capabilities, resources, business environment and performance, as was proposed in the initial model, with this also confirmed. In addition to all these links, the comprehensive research model establishes the formative and reflective characteristics of dimensions and subdimensions. With this comprehensive model as the foundation, the next step is to describe and test the relationship among the constructs.

5.8 SUMMARY

This chapter has presented the findings of the field study and has proposed a research model. Qualitative data were generated from 14 interviews conducted with eight micro-firm owners, three NGO executives and three local government officials in Bangladesh. The main objective of this field study was to test the applicability of the initial model proposed earlier, and to explore the dimensionality of related constructs. As an overview, the 'content analysis' technique consisting of inductive and deductive phases was employed to analyse the data. Moreover, theoretical as well as lateral replication was used in the deductive phase. Dimensions, subdimensions, variables and some measures were explored and were then further scrutinized under the light of the literature. Moreover, relationships among dimensions have been established. Based on this analysis, a combined model (integrating all dimensions, subdimensions and variables from each interview) was developed. This model was then compared with the initial model (derived from the literature review) to propose the comprehensive research model. This model demonstrates the 'complete' sustainable performance of the microenterprises' framework in explaining the antecedents and outcomes. More specifically, it shows how each construct is related to other constructs. Therefore, in explaining the links, research hypotheses were developed which are the main focus in the next chapter.

CHAPTER 6

HYPOTHESES AND INSTRUMENT DEVELOPMENT¹¹

“For every fact there is an infinity of hypotheses”.

—Robert Pirsig

6.1 INTRODUCTION

Referring to the comprehensive research model (Figure 5.3) developed from the literature review and the qualitative field study, this chapter presents the development of hypotheses and research instruments. This chapter first presents the hypotheses. Subsequent sections then present the development of research instruments. Most of the instruments were developed from the literature while being contextualised in the context of the current study. Similarly, the items developed from the field study were verified by the existing literature. While developing the hypotheses and measurement instruments, this study emphasized firm-level factors rather than individual factors.

6.2 HYPOTHESES DEVELOPMENT

This study has argued that the micro-firm sustainable performance model is a hierarchical construct which consists of eight second-order dimensions and 27 first-order subdimensions. Among these dimensions and subdimensions, the sustainable performance second-order dimension is reflected in three subdimensions (i.e.,

¹¹ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Qualitative and Quantitative Evidence” in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
- b. Khan, E.A. (2013). “Investigating the Dimensions of Financial Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in a Developing Country”, *Curtin Business School Doctoral Colloquium*, Curtin University, Perth, Australia.
- c. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation” in *Proceedings of the 26th Annual SEAAZ Conference*, Sydney, Australia.
- d. Khan, E.A. (2013). “Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries – Field Study and Survey Experiment”, *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.
- e. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Personality Traits, Entrepreneurial Orientation, Business Environment, and Micro-Firm Sustainable Performance: A Multidimensional Assessment” in *Proceedings of the International Studying Leadership Conference*, Perth, Australia.
- f. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Marketing Capabilities and Sustainable Performance of Informal Social Micro-enterprises (ISMEs) in Developing Countries” in *Proceedings of the 2nd Annual Conference on Global Economics, Business, and Finance (GEBF)*, Hong Kong.

economic, social and natural environment). Other dimensions and subdimensions are considered as antecedents of sustainable performance. In addition, personality traits, human capital, social capital, financial capital, marketing capabilities and business environment are also considered as antecedents of the entrepreneurial orientation. Moreover, the firm life-cycle dimension is introduced to examine the antecedents and outcomes in various stages (see Figure 5.3). In the following sections, the study discusses the association between constructs and proposes relevant hypotheses.

6.2.1 Personality Traits

The importance of the personality approach in small business and entrepreneurship studies was noted by Kamineni (2002, 89) who stated that the use of psychological attributes “has found a prominent place in the entrepreneurship literature and hence cannot be ignored”. Korunka et al. (2003) also discussed personality traits in their view of personal resources. The personality traits of entrepreneurs have been experiencing growing research interest. Some efforts have been undertaken to clarify enterprise success or failure in terms of the personal characteristics of entrepreneurs (e.g., Glancey, Greig, and Pettigrew 1998; Stewart Jr and Roth 2001).

In establishing links between psychological factors and firm performance, Miner (1997, 19) asserted, “if one wishes to understand, predict, and influence people toward entrepreneurial success, the only comparison that matters is between successful and less successful or failed entrepreneurs”. De Vries (1977) reviewed 11 empirical studies and concluded that high need for achievement, autonomy, independence and moderate risk-taking propensity contribute to venture success. Similarly, Bonnett and Furnham (1991) also found that achievement need, tolerance for ambiguity, risk-taking propensity and locus of control are associated with entrepreneurial firm success. Miner (1996) linked personality traits with firm performance in terms of four basic types, that is, personal achiever, super salesperson, real manager and expert idea generator. A study by Halim et al. (2012) also established a link between personality traits, namely, need for achievement, creativity, innovative and locus of control, and grabbing market opportunities and business performance. Therefore, personality traits have been identified as playing a key role in driving ventures towards success.

Similarly, the findings of the field study indicated agreement on the effect of personality traits on firm performance: nine of the 14 participants agreed that personality traits have an effect on firm performance. For example, Micro-firm G commented that “... *if somebody has a good intention, and keeps his mind cool and steady, he/she [micro-firm*

owner] will get success". On the other hand, NGO I remarked that "since they [micro-firm owner] could not find another other job, they [micro-firm owner] are trying to be self-dependent by a tea-stall".

Based on the literature review and field study investigation, it was expected that personality traits would have an effect on firm performance. Accordingly, the following hypothesis was developed:

H1a: Personality traits will positively influence the sustainable performance of ISMs.

The literature review also established the link between personality traits and entrepreneurial orientation. McClelland (1987) stated that individuals with a high achievement motivation are entrepreneurially-orientated, take pleasure in difficult tasks and goals, and are more probable to accomplish success. Similarly, entrepreneurs tackle less-structured, more hesitant sets of possibilities (Bears 1982), and bear the ultimate responsibility for the decision [entrepreneurial orientation] (Gasse 1982). Brandstätter (1997) addressed the view that internal locus of control was related to starting up a venture and achieving success, and Chell, Haworth, and Brearley (1991, 42) described the risk-taker as someone "who in the context of a business venture, pursues a business idea when the probability of succeeding is low".

Likewise, the field study also explored these links. For example: Micro-firm D stated that "*my [micro-firm owner] heart and belief forced me to start a tea-stall beside the street; otherwise I [micro-firm owner] would not start a tea-stall. I [micro-firm owner] want to do something bigger [firm performance] with this tea-stall, but it is not easy to do so [entrepreneurial orientation]."*

Surfing the existing literature and from the field study, it was expected that personality traits would have a direct effect on entrepreneurial orientation. Accordingly, the following hypothesis was developed:

H1b: Personality traits will positively influence the entrepreneurial orientation of ISMs.

6.2.2 Entrepreneurial Orientation

The entrepreneurial orientation of a firm has become a central concept for many scholars in the area of small business and entrepreneurship research. The entrepreneurial orientation at the firm level focuses on dynamic capability and function of the enterprise itself, rather than the personality traits of entrepreneurs, although the

entrepreneurial firm is an annex of the entrepreneur. Peters and Waterman (1982) obtained a distinct entrepreneurial identity that shows a degree of difference in terms of capability (i.e., innovativeness, risk taking), administrative style (autonomy, proactiveness) and competitive aggressiveness.

The entrepreneurial orientation highlights small business as a process, or a set of activities within an enterprise, and shows the impacts that the firm's processes and activities have upon the enterprise's performance (Miller and Friesen 1982; Burgelman 1984). Over the last several decades, the link between entrepreneurial orientation and firm performance has been proven in entrepreneurship research (e.g., Hofer and Sandberg 1987; Wiklund and Shepherd 2005). Researchers have emphasized that entrepreneurial orientation is positively connected with enterprise growth and success (Covin and Slevin 1991; Lumpkin and Dess 1996). It was also suggested that firms with high levels of entrepreneurial orientation will accomplish better performance than those possessing low levels of entrepreneurial orientation (Keh, Nguyen, and Ng 2007; Zahra 1991).

The current field study also found that 71% of the field study participants shared the same view of the influence of entrepreneurial orientation on firm performance. The participants acknowledged that micro-firms were possessed of some sort of strategic orientation, for example: "*the way I [micro-firm owner] am doing our own business, I [micro-firm owner] did not find too much risk. I [microenterprise] see my tea-stall as usual. I [micro-firm owner] cannot afford a high risk that is for sure*" (Micro-firm F).

Based on the literature review and field study evidence, the following hypothesis was proposed:

H2: Entrepreneurial orientation will positively influence the sustainable performance of ISMs.

6.2.3 Human Capital

A recent perspective in human capital research has been the examination of the influence of levels of demographic (education, experience, etc.) and psychographic (tacit knowledge, commitment, etc.) characteristics on organizational outcomes. The demographic and psychographic set of human capital ensures the knowledge base and problem-solving skills. Therefore, human capital characteristics are important in understanding firm performance (Watson, Stewart Jr, and BarNir 2003).

Research has generally supported the association between human capital and entrepreneurial firm performance (Cooper, Gimeno-Gascon, and Woo 1994): many scholars have established that human capital positively influences organizational performance in entrepreneurial firms (Chandler and Hanks 1998; Duchesneau and Gartner 1990). The entrepreneurial firm's education and work experience delivers the tacit knowledge essential for formulating strategy, obtaining resources and all of the other supervisory necessities associated with firm performance (Watson, Stewart Jr, and BarNir 2003). Demographic and psychographic differences among the organizational team members can result in negative outcomes (Pfeffer 1983): while greater levels of human capital associated with explicit and tacit knowledge, work experience and skills, and others' abilities may positively influence firm performance, differences in human capital, that is, demographic and psychographic resources sometimes result in negative business outcomes.

Findings from the field study demonstrated that all the participants except NGO J and Local government L perceived that human capital predictors are the important predictors in determining firm performance. In explaining the influence of human capital, micro-firm D, for example, stated: "*I [micro-firm owner] have a good relationship with my family, sons and daughters. I [micro-firm owner] do not have any problem with them, and it is an important thing. Whenever I [micro-firm owner] request them to do something in favour of the tea-stall, they usually do that for me.*"

Referring to the existing literature and the field study, the following hypothesis was proposed:

H3a: Human capital will positively influence the sustainable performance of ISMs.

It was also evident from the literature review that the entrepreneurial orientation of a firm is likely to make the most of its human capital to generate superior performance. Conversely, the entrepreneurial orientation of a firm is limited in its ability to achieve better performance if there is an inadequate amount of human resources. A certain strategic orientation demands a unique set of behaviour and attitudes from the employee (Cappelli and Singh 1992). A good set of behaviours (commitment, voluntary participation, etc.) and profile (education, work experience, etc.) from employees can have an influence on opportunity recognition and resource mobilization, and achieve better firm performance (Dimov and Shepherd 2005). Therefore, it is assumed that human capital can influence firm strategic orientation.

The field study also demonstrated these relationships. For instance: NGO I mentioned that *“I [NGO executive] found the tea-stall owners have some experience such as in restaurant, as a labourer, tailoring, as a maidservant, etc. Their [micro-firm owners] previous experience helps them directly or indirectly in [the] tea-stall.”*

As illustrated in the literature and field study, the following hypothesis was presented:

H3b: Human capital will positively influence the entrepreneurial orientation of ISMs.

6.2.4 Social Capital

Social capital is a significant source for the creation of the inimitable value-generating resources that are inherent in a firm’s network of relationships (e.g., Zaheer, Gulati, and Nohria 2000; Zaheer and McEvily 1999). This social capital, often characterized as a set of resources embedded in networks, contributes to firm performance (e.g., Arregle et al. 2007; Burt 2007; Leana and Pil 2006). The concept ‘social capital’ is likely to include multiple dimensions of resources and capabilities such as structural, cognitive and relational components (Nahapiet and Ghoshal 1998).

The firm can use its social capital to acquire other resources such as human and financial resources (Burt 1992). Weak social capital means insufficient interactions and bonding among the firm members and with external parties, and will cause negative impacts on firm performance. On the other hand, “[f]requent and close social interactions permit actors to know one another, to share important information and to create a common point of view” (Tsai and Ghoshal 1998, 465). As such, micro-firms may produce more social capital and ensure positive firm performance. Many scholars have already established the social capital–performance relationship: from a positive relationship (e.g., Andersson, Forsgren, and Holm 2002; Park and Luo 2001) to a negative relationship (e.g., Rowley, Behrens, and Krackhardt 2000). As such, the current study has considered the components of social capital (e.g., structural, cognitive and relational) that contribute to the wealth and non-economic value creation goals of the micro-firm.

With regard to the influence of social capital on firm performance, all the field study participants stated that social capital provided a set of resources and capabilities that contributed to their micro-firm performance. For example, Micro-firm C stated that *“my [micro-firm owner] suppliers provide me goods like tea, cigarettes, biscuits, etc. in a timely way. I [micro-firm owner] am new to this business but they serve me properly”*.

Based on the field study findings and prior literature, social capital was expected to have either positive or negative effects on firm performance. The following hypothesis explaining this relationship was therefore developed:

H4a: Social capital will positively influence the sustainable performance of ISMs.

The literature has suggested that lack of social capital indicates poor interactions and ties with internal and external parties. Moreover, it means lack of trust, norms and obligation. Therefore, it will cause undesirable effects on entrepreneurial orientation. For example, entrepreneurially-orientated firms tend to achieve firm visions and goals autonomously (Lumpkin and Dess 1996). However, without satisfactory resources, all strategic plans are going to fail which is discouraging to innovation (Evans 2010). Therefore, social capital can have positive or negative impacts on entrepreneurial orientation. Moreover, social capital plays a vital role in recognizing entrepreneurial opportunities. Aldrich and Zimmer (1986) discovered that social networks are essential to opportunity identification, idea testing and resource acquisition for firm performance. Thus, entrepreneurial orientation can have an important role between social capital and firm performance.

The field study results also showed these relationships. For example, Micro-firm A narrated that “*earlier, we [micro-firm] bought products and materials from the wholesale market. It [entrepreneurial orientation] was a hard job. Nowadays, it [entrepreneurial orientation] has become easy. The suppliers [social capital] decorate the tea-stall with their own products*”.

Referring to the existing literature and field study, the following hypothesis was proposed:

H4b: Social capital will positively influence the entrepreneurial orientation of ISMs.

6.2.5 Financial Capital

Financial capital is one of the necessary resources required for enterprises to form and subsequently operate. This financial resource describes the access to funding and financial opportunities (Meyskens et al. 2010). Access to finance and financial opportunities depends on sources of finance and capital structure and has been shown to have important implications for the operations of the business and for its potential to expand (Cassar 2004). Numerous options of financial sources and flexible capital

structure can alleviate other areas of resource constraints and enhance firm performance.

Small business and entrepreneurship researchers have focused on financial capital as a vital resource in any firm's creation and growth. Many studies have revealed that a scarcity of financial capital can be a key block to firm performance (e.g., Gaskill, Van Auken, and Manning 1993). The amount of capital raised should be positively associated with venture survival and success. Cooper et al. (1992) found that, of eight prior studies that examined links between initial capital requirements and performance, six showed that sufficient capital was associated with better performance. Likewise, in a study of Jamaican microenterprises, Honig (1998) established that higher levels of financial capital improved the earnings of the firm. The empirical evidence investigating growth and financing linkages was inconclusive in the study by Michaelas, Chittenden, and Poutziouris (1999) who found future growth to be positively linked to leverage and long-term debt while Chittenden, Hall, and Hutchinson (1996) and Jordan, Lowe, and Taylor (1998) found mixed evidence.

Furthermore, based on the findings of the field study, all participants except Local government K and M agreed that financial capital was a great contributor to firm performance. For instance, Micro-firm A narrated that "*I [micro-firm owner] have paid an extra Tk. 200 as a cost of capital. I [micro-firm owner] mean Tk. 1,200 per month. I [micro-firm owner] did not feel the risk, because I [micro-firm owner] knew that, once I [micro-firm owner] started a tea-stall, I [micro-firm owner] can easily make money and return it to them*". On the other hand, Local government L reported that "*actually, a bank loan consists of many procedures and conditions, and, they [micro-firm] can't fulfil the conditions*".

In accordance with the above premises, the following hypothesis was proposed.

H5a: Financial capital will positively influence the sustainable performance of ISMs.

Lee, Lee, and Pennings (2001) asserted that the most important resources are financial resources. Available sources of finance and access to financial capital can enable firms to carry out business ideas and to be sustained and grow during mainly complex phases of their development (Peneder 2010). An empirical study by Engel and Keilbach (2007) established the positive role of financing on entrepreneurial orientation especially on innovation behaviour. Sources of finance and financial structure should

interrelate with entrepreneurial orientation in describing performance. Financial capital facilitates the firm in undertaking new strategies and innovative tasks that might not be possible in an environment with poorer resources (Cyert and March 1963; Levinthal and March 1981). Thus, financial capital stimulates a firm's innovativeness. Risk taking engages the firm in creating more resources, investing in untested ideas, bringing new offerings to the customer and obtaining high returns by grabbing opportunities (Baird and Thomas 1985; Lumpkin and Dess 1996; Miller and Friesen 1982). Therefore, the availability of financial capital can mitigate the chance of risky steps becoming fatal, thus inspiring risk taking. Proactiveness deals with the downsizing of resources from businesses in the mature stages of the life cycle and deploying resources in new areas (Venkatraman 1989). This process could be easier if the firm has financial capital available.

The field study also supported the findings of the literature review. As Micro-firm B stated: *"this tea-stall business is very easy to run and needs less money [financial capital] to operate and start [entrepreneurial orientation]. We [micro-firm] started a tea-stall business, because of micro-capital"*.

Accordingly, the current study has hypothesized as follows:

H5b: Financial capital will positively influence the entrepreneurial orientation of ISMs.

6.2.6 Marketing Capabilities

Linking marketing capabilities with firm performance has become a clear priority among marketing scholars (Rust, Moorman, and Dickson 2002). Similarly, small business and entrepreneurship scholars have also predicted that marketing capabilities have influence on firm performance (Qureshi and Mian 2010). Srivastava, Fahey, and Christensen (2001) also linked marketing capabilities with the resource-based firm view. However, noticeably little attention has been paid to the marketing capabilities by which small firms deploy and enhance their firm performance.

Day (1994) focused on 'marketing capability' as the ability of a firm to apply its knowledge, technology and resources to satisfy the desires of the market. The growth of a firm arises from the value it generates for its target customers by introducing suitable products and marketing techniques. Therefore, a firm needs to collect information, and develop marketing methods and skills to upgrade its abilities to adjust to new challenges. Two marketing capability areas have been observed: (1) 'marketing mix' capabilities, such as product improvement, pricing, selling, promotional

management and channel management (e.g., Vorhies and Morgan 2005), and (2) 'marketing strategy' (e.g., Morgan et al. 2003). These capabilities are crucial factors that can lead to better firm performance (e.g., Vorhies and Morgan 2005; Dutta, Zbaracki, and Bergen 2003). Furthermore, the marketing capabilities of the firm have been predicted to positively influence firm performance by some scholars (Day 1994; Hunt and Morgan 1995).

The field study has also shown that micro-firms have some sort of marketing capabilities that lead them to generate firm performance. Interestingly, all the participants agreed with this notion. For example: Micro-firm G argued that "*I [micro-firm owner] do not teach anyone about making a special tea. It is not fruitful to teach others since it is my [micro-firm owner] business secret*".

Therefore, in considering the findings of the literature review and the field study data, the following hypothesis describing the relationship between marketing capabilities and firm performance was developed:

H6a: Marketing capabilities will positively influence the sustainable performance of ISMs.

In relation to marketing capabilities and strategic orientation, a business strategy involves identifying and selecting market segments, developing appropriate offerings and assembling the resources required to produce and deliver the offerings. In developing appropriate offerings (product/service, price, promotion), a firm needs to be more innovative. An innovative firm can generate new products and services, attract customers with their innovative promotional strategies, and produce products and services at a lower price. Similarly, in identifying and selecting market segments, the firm needs to be more proactive and aggressive. Market segments are not enduring but continuously changing. In this notion, the firm must come up with a proactive and aggressive attitude to retain and expand its market segment. To pursue innovative ideas, firms must also emphasize and encourage risk taking and autonomous behaviour. Therefore, entrepreneurial orientation and marketing capabilities exist in a close relationship.

The field study has also established this relationship. For example, Micro-firm D stated that "*this relationship helps to generate a word-of-mouth recommendation. I [micro-firm owner] hope customers will come to me because of my words. Customers are the kings.*"

In summary, the following hypothesis was drawn:

H6b: Marketing capabilities will positively influence the entrepreneurial orientation of ISMs.

6.2.7 Business Environment

In addition to internal factors (e.g., skills and resources), research has identified external sources such as the business environment which are linked to firm performance. Many studies have emphasized that an enabling business environment is a major factor determining small firm success (e.g., Sethuraman 1997; De Soto 2001). A more comprehensive understanding of the nature of small business, entrepreneurship and firm success is enabled by simultaneously incorporating environmental influences within a framework (Lumpkin and Dess 1996). Increasingly, the environment's influence upon firm performance is being explored.

These days, institutional, regulatory and legal frameworks are the three important pillars shaping business environments (ILO 2000). These three pillars can be labelled under the categories of hostile and munificent business environments. Weak institutions, regulations and legal frameworks lead to higher transaction costs and hinder firm performance. In a hostile environment, the micro-firm faces several constraints such as pressure from extortionists and law enforcement authorities due to the informal business nature of the micro-firm. Similarly, financial institutions are not willing to provide finance, and human development agencies are not willing to provide vocational education and training. Another characteristic of the business environment is business competition, commonly called 'the turbulent environment'. This turbulent environment features competitors' actions, unstable tastes and demands of consumers, changes in product and service patterns, etc. This environment can be manageable depending on the dynamic capabilities of the micro-firm. The lack of enabling business environments has hampered the development of the micro-firm (Sethuraman 1997). Therefore, according to Sethuraman, poor enabling environments are growth barriers and hence negatively influence success. On the other hand, a good favourable environment protects small firms from being exploited and ensures firm growth (Van Dijk 1996; Sethuraman 1997).

The field study investigation also found this mixed evidence. Except for Micro-firms D and E, all other participants accepted these views. For example, *"since a tea-stall is beside the street, it can be blown out at any time by the authorities. Actually, the tea-stall owner operates the business on government property such as roads and highway land, or on private land. That is why they [micro-firm] have the fear of being blown out from the*

street” (NGO I). Another example stated that: “*they [micro-firm] need training on how to increase the assets ...*” (NGO J).

Based on the literature review and field study evidence, the following hypothesis was proposed.

H7a: The business environment will positively influence the sustainable performance of ISMs.

The association between the business environment and firm success is extremely complex in terms of it being able to stimulate firm-specific strategic behaviours (Porter 1980). Firms require resources from their environment and turn them into products. Thus, entrepreneurial orientation is a complex factor because it affects strategic resource choices (Atuahene-Gima and Ko 2001) that favour opportunity utilization (Miller 1983). Only those firms that respond with the right strategic option in a particular environment may be able to alter advantages. Constraints related to a hostile environment reduce strategic options (Miller 1983). On the other hand, the presence of good opportunities in a munificent environment allows firms to absorb possible losses linked with a strategic orientation (Wiklund and Shepherd 2005). In a turbulent environment, quick change and the volatility of future events offer plenty of opportunities or reduce existing opportunities and resources for firms, and make obstacles for strategic choices (Utterback 1996).

It was also evident from the field study, that the business environment and entrepreneurial orientation have a complex relationship. For instance, NGO I reported that “*...the price instability of tea materials. They [micro-firms] fall into a problem, if the price of sugar goes up. They [micro-firms] have nothing [they can] do at that time, because they cannot charge more from the customers. The final risk is credit sales. They [micro-firms] cannot recover the money from credit sales*”.

As per the above discussion, the study developed the following hypothesis:

H7b: The business environment will positively influence the entrepreneurial orientation of ISMs.

6.2.8 Firm Life Cycle

According to the firm life-cycle theory, firms must pass all stages of development or die, and early development stages are not significant (Lewis and Churchill 1983; Scott and

Bruce 1987). Stages are sequential in nature and progress is irreversible (Quinn and Cameron 1983). Lewis and Churchill (1983) introduced a model for small firms which consists of five stages: existence, survival, success, take-off and resource maturity. Each stage is discussed in terms of size, diversity, complexity and the management factors. Scott and Bruce (1987) also presented a similar model but named the different stages: inception, survival, growth, expansion and maturity. Many small business development models are related to the work of Lewis and Churchill (1983) and Scott and Bruce (1987): some of these have only been theoretically tested (e.g., Hisrich and Peters 1998; Mount, Zinger, and Forsyth 1993) while others have been empirically verified (e.g., Mitra and Pingali 1999; Dodge and Robbins 1992).

The current field study also found the different life-cycle stages of the micro-firm. As NGO I described: *“at the beginning, the tea-stall owners try to survive hand-to-mouth. They [micro-firms] think about daily needs and try to fulfil them. Gradually, they [micro-firms] apply tacit knowledge, ability and customer service approach, and expand their business. In this way, they [micro-firms] adapt and reach solvency. Although they [micro-firms] have hope about the future, but initially they [micro-firms] concentrate on daily needs”*.

Based on the literature and field study evidence, the current study proposed the following hypothesis:

H8: The firm life cycle has a significant moderating effect on the relationship between ISMs' performance and its immediate antecedents.

6.3 HYPOTHESES AT A GLANCE

Based on the comprehensive model, overall 14 major hypotheses have been developed. The comprehensive model consists of the factors and variables explored from both the literature review and the field study. Table 6.1 presents all the hypotheses as developed above. In addition, Figure 6.1 illustrates the hypothesized research model.

Table 6.1: Summary of hypotheses statements

Constructs	Links	Hypotheses statements
Personality Traits (PT)	PT → SP	H1a: Personality traits will positively influence the sustainable performance of ISMs.
	PT → EO	H1b: Personality traits will positively influence the entrepreneurial orientation of ISMs.
Entrepreneurial Orientation (EO)	EO → SP	H2: Entrepreneurial orientation will positively influence the sustainable performance of ISMs.
	HC → SP	H3a: Human capital will positively influence the sustainable performance of ISMs.
Human Capital (HC)	HC → EO	H3b: Human capital will positively influence the entrepreneurial orientation of ISMs.
	SC → SP	H4a: Social capital will positively influence the sustainable performance of ISMs.
Social Capital (SC)	SC → EO	H4b: Social capital will positively influence the entrepreneurial orientation of ISMs.
	FC → SP	H5a: Financial capital will positively influence the sustainable performance of ISMs.
Financial Capital (FC)	FC → EO	H5b: Financial capital will positively influence the entrepreneurial orientation of ISMs.
	MC → SP	H7a: Marketing capabilities will positively influence the sustainable performance of ISMs.
Marketing Capabilities (MC)	MC → EO	H6b: Marketing capabilities will positively influence the entrepreneurial orientation of ISMs.
	BE → SP	H7a: The business environment will positively influence the sustainable performance of ISMs.
Business Environment (BE)	BE → EO	H7b: The business environment will positively influence the entrepreneurial orientation of ISMs.
	FLC* (<i>Immediate antecedents and outcomes</i>)	H8: The firm life cycle has a significant moderating effect on the relationship between ISMs' performance and its immediate antecedents.
Firm Life Cycle (FLC)		

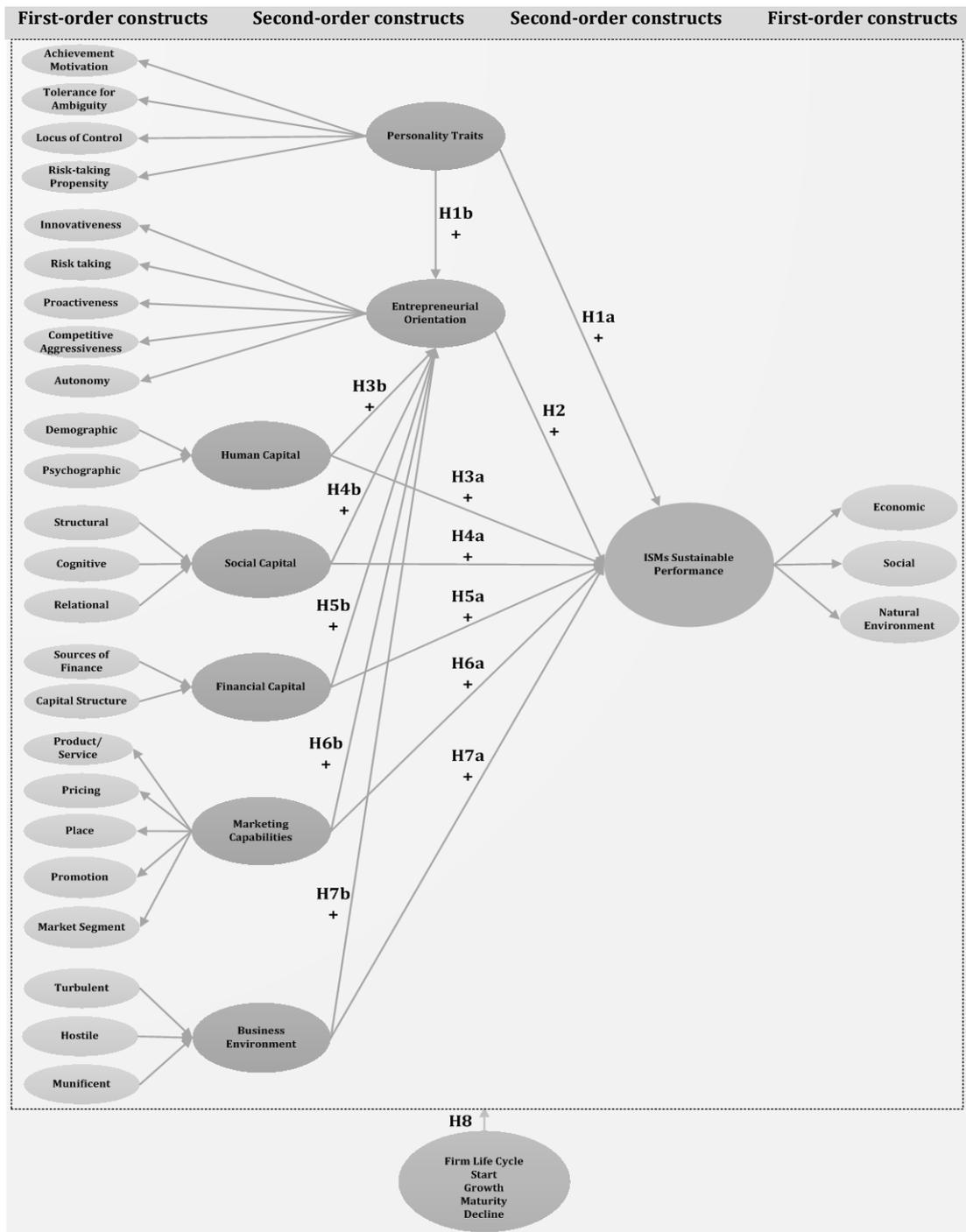


Figure 6.1: The hypothesized research model

6.4 INSTRUMENT DEVELOPMENT

The main objective of this section is to develop and validate a research instrument to measure the sustainable growth of ISMs. Given the infancy stage of research into the sustainable growth of ISMs, there is a scarcity of reliable and valid instruments for sufficiently capturing the dimensions, subdimensions and variables. Previous small business antecedent and outcome scales were not precisely designed for sustainable

growth in the ISMs' settings and may not be exclusively suitable in this case because the sustainable growth of ISMs is a dynamic, multidimensional concept the evaluation of which needs to be context-dependent.

6.4.1 Instrument Development Process

To develop an instrument to measure the sustainable growth of ISMs, this study began by investigating the dimensions, subdimensions and variables that influence the multidimensional outcomes of the sustainable growth of ISMs as outlined in the initial model. Through this process, the study primarily identified and developed six primary dimensions and 18 subdimensions that overall reflected and formed the sustainable growth of ISMs. Apart from that, this process recognized all of the firm life-cycle dimensions (see Chapter 3). This research expected that the findings of the qualitative study would support the initially conceptualized components and also produce additional components. In addition to confirming the initial model, the field study produced two primary dimensions and nine subdimensions (see Chapter 5). In the comprehensive model, firstly, personality traits reflected the micro-firm owners' psychological characteristics in terms of achievement motivation, tolerance for ambiguity, locus of control and risk-taking propensity. Secondly, entrepreneurial orientation referred to the strategic orientation of micro-firms and included innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. Human capital formed the level of human resources by characterizing demographic and psychographic differences. Social capital indicated the structural, cognitive and relational phenomena of micro-firms. Financial capital dealt with the sources of finance and financial structure. Marketing capabilities focused on the product/service, price, place, promotion and market segment. Business environment described the turbulent, hostile and munificent environment. The final primary dimension was sustainable performance which represented the economic, social and natural environmental outcome of microenterprises. Overall, the firm life cycle presented the progression of micro-firms in terms of start, growth, mature and decline. Throughout our conceptual and field study exploration, the sustainable growth of micro-firms was identified as a higher-order, multidimensional construct.

6.4.2 Scale Development

In order to develop scales for the subdimensions of sustainable growth of ISMs (i.e., achievement motivation, tolerance for ambiguity, locus of control, risk-taking propensity, innovativeness, risk taking, proactiveness, competitive aggressiveness,

autonomy, demographic, psychographic, structural, cognitive, relational, sources of finance, capital structure, product/service, price, place, promotion, market segment, turbulent, hostile, munificent, economic, social and natural environmental), at this stage, the creation and sorting of items were undertaken. The aim of items' creation was to ensure content validity by choosing the appropriate items for the construct. In contrast, the aim of items' sorting was to guarantee construct validity. In order to produce an items' pool for each construct, at this stage, items were recognized from present instruments; additional items were produced via the field study; and finally, field study analysis was aligned with current scales to match construct definitions (Churchill Jr 1979; MacKenzie, Podsakoff, and Podsakoff 2011; Moore and Benbasat 1991) by an analyst having proficiency in both English and Bangla. In terms of the measurement scale, Section 1 and Section 10 questions were measured by a nominal, ordinal, ratio scale. Sections 2–9 were measured by an interval scale. A six-point Likert scale was used for respondents to express their opinion of the extent of their agreement and disagreement on each statement. The reason for the choice of this scale was to avoid a central tendency error. The pattern of choosing the 'neutrality' answer is commonly found in conducting research in Asian countries, including Bangladesh (Trompenaars and Hampden-Turner 1998). Similarly, the six-point Likert scale was used in Sections 2–9 of the questionnaire.

The study followed a procedure to conduct instrument testing. Firstly, the primary version of the items in English (see Table 6.3) was developed and then these items were translated into the local language (Bangla). Secondly, the local version was retranslated until a panel of experts proficient in both languages agreed that the two versions were sensibly similar (Fassnacht and Koese 2006). With regard to translation–retranslation, Teo and Liu (2007, 28) commented that “[t]his process was conducted not only because it can prevent any distortions in meaning across cultures where necessary, but also because it can enhance the translation equivalence”. It is worth noting that back-translation is an established mechanism in cross-country research which ensures that the local language version has the same meaning as the version in the original language (Mullen 1995). Thirdly, the study conducted a pre-test of seven convenient samples (five micro-firm owners and two doctoral research students) to make sure that the question content, wording, sequence, format and layout, question difficulty and instructions were correct (Moore and Benbasat 1991; Churchill Jr 1979; MacKenzie, Podsakoff, and Podsakoff 2011). Finally, upon the response from the pre-

test, the study made context-specific adjustments to finalize the main version of the questionnaire (see Appendix H).

6.4.3 Reflective and Formative Measurements

In the main part of the questionnaire consisting of Sections 2–9, 97 items were developed that comprised 59 reflective items and 38 formative items. The decision rules are summarised in Table 6.2.

Table 6.2: Decision rules for formative or reflective measurements

Decision rule	Formative model	Reflective model
1. Direction of causality from construct to measure implied by the conceptual definition	Direction of causality is from items to construct	Direction of causality is from construct to items
Are the indicators (items) (a) defining characteristics or (b) manifestations of the construct?	Indicators are defining characteristics of the construct	Indicators are manifestations of the construct
Would changes in the indicators/items cause changes in the construct or not?	Changes in the indicators should cause changes in the construct	Changes in the indicator should not cause changes in the construct
Would changes in the construct cause changes in the indicators?	Changes in the construct do not cause changes in the indicators	Changes in the construct cause changes in the indicators
2. Interchangeability of the indicators/items	Indicators need not be interchangeable	Indicators should be interchangeable
Should the indicators have the same or similar content?	Indicators need not have the same or similar content	Indicators should have the same or similar content theme
Do the indicators share a common theme?	Indicators need not share a common theme	Indicators should share a common theme
Would dropping one of the domains of the construct indicators alter the conceptual domain of the construct?	Dropping an indicator may alter the conceptual domain of the construct	Dropping an indicator should not alter the conceptual domain of the construct
3. Covariation among the indicators	Not necessary for indicators to covary with each other	Indicators are expected to covary with each other
Should a change in one of the indicators be associated with changes in the other indicators?	Not necessarily	Yes
4. Nomological net of the construct indicators	Nomological net for the indicators may differ	Nomological net for the indicators should not differ
Are the indicators/items expected to have the same antecedents and consequences?	Indicators are not required to have the same antecedents and consequences	Indicators are required to have the same antecedents and consequences

Source: Jarvis, MacKenzie, and Podsakoff (2003)

Traditional measurement models tend to rely on reflective items (Churchill Jr 1979). Reflective items are deemed to be caused by the latent variable. Due to the causal nature of the relationship between each item and the latent variable, any change in the item would result in changes in the corresponding latent variable. Therefore, there are high correlations between items (Fornell and Bookstein 1982). On the other hand, the formative items show the opposite direction of the causal relationship (Diamantopoulos and Winklhofer 2001). Therefore, the items cause the latent variable. The items are assured as not being correlated and measure different underlying

dimensions of the latent variable (Chin 1998). The differing nature of the constructs in the conceptual model warranted the need for both formative and reflective items. The rationale was to develop items that could proficiently measure each individual construct. Theoretical deliberations are integral in determining whether a construct should be modelled as having reflective or formative indicators (Jarvis, MacKenzie, and Podsakoff 2003; Diamantopoulos and Siguaw 2006). In some cases, choosing correctly between reflective vs. formative measures can be difficult (Hulland 1999; Diamantopoulos and Siguaw 2006). In response to this, Jarvis, MacKenzie, and Podsakoff (2003) developed a set of conceptual criteria that can be used as a guideline for determining the choice of either a reflective or formative measurement perspective.

Based on the above conceptual considerations and further literature suggestions, the 35 constructs were scrutinized and were modelled as either reflective or formative. Details of the items for each construct are provided in the following sections.

6.5 QUESTIONNAIRE DEVELOPMENT

To conduct the survey for this research, a questionnaire was developed based on the existing relevant literature and the field study. The questionnaire was formatted to test the research hypotheses according to the comprehensive model as proposed in Figure 5.3. Overall, the questionnaire contained 109 questions included in 10 sections. The 10 sections were in accordance with the focus of this study. The first section sought information about the demographic background of the respondents. In the main part of the questionnaire, consisting of nine sections (Sections 2–9), the focus was to measure the antecedents and outcomes for the sustainable growth of ISMs. Section 10 focused on determining the firm life-cycle stages. In order to test the hypotheses, a set of questions were developed (see Appendix H). The next section presents the details of the development of the questionnaire.

6.5.1 Questionnaire Section 1: Background Information

The objective of this section was to gain information about the demographic particulars of the respondents involved in this research. The demographic details included the respondent's details (gender, marital status, age, education, family size) and the firm's details (family members' engagement in business, number of waged employees, business location, business age and sales). Table 6.3 presents the demographic items used and the related references. Three questions in the background information section (BI1, BI2 and BI8) used nominal scales (categories with no implied order); another three (BI3, BI4 and BI10) used ordinal scales (categories in an order); and the

remaining four (BI5, BI6, BI7 and BI19) used true numeric values that represented a measure. It should be mentioned here that BI6, BI7 and BI10 measured the size of the firm using three different measures: number of family members engaged in micro-business, number of waged employees and monthly average sales. Using three different measures was intentional because one size measure does not necessarily describe the size variable accurately. For example, the number of family members engaged in the micro-business could be confusing and may be misleading. In the context of this research, as it was very difficult to identify the number of family members engaged in a dedicated way to the micro-business, it was assumed here that ‘the family members engaged in micro-business’ was the number of people responsible for the micro-business. At the same time, it was assumed that the number of waged employees was also the number of those responsible for the micro-business. The monthly average sales was recommended to measure firm size; therefore, monthly average sales were sought.

Table 6.3: Background information items

Items	Variables	Measures
BI1	Gender	Nominate gender
BI2	Marital Status	Nominate marital status
BI3	Age	Nominate age of microentrepreneur
BI4	Education	Nominate the highest level of education
BI5	Family Size	Total number of family members
BI6	Family Members’ Involvement	Number of family members engaged in micro-firm
BI7	Number of Waged Employees	Number of people engaged in micro-firm excluding family members
BI8	Business Location	Nominate business location
BI9	Business Age	Age of micro-business
BI10	Sales	Nominate monthly average sales

6.5.2 Questionnaire Sections 2–9: Antecedents and Outcomes

The main focus of Sections 2–9 of the questionnaire was to identify and measure the influence of the antecedent and outcome factors on the sustainable growth of ISMs. More specifically, the questions measured the influence of the constructs of personality traits, entrepreneurial orientation, human capital, social capital, financial capital, marketing capabilities, business environment and sustainable performance factors. In the questionnaire, the six-point Likert scale was used for respondents to express their opinion of the extent of their agreement or disagreement on each statement. The justification of using the six-point Likert scale was presented in subsection 6.4.2.

6.5.2.1 Questionnaire Section 2: Personality Traits

As described earlier, the dimension of personality traits was derived from the findings of the field study. This construct received significant attention from almost all the participants in the field study. Later, this dimension and its subdimensions were also

confirmed by literature review. This dimension and subdimensions have actually received a fair amount of attention in the psychology literature. Many studies have been conducted to measure the influence of personality traits on entrepreneurial orientation and firm performance. In this research, four subdimensions (i.e., achievement motivation, tolerance for ambiguity, locus of control and risk-taking propensity) were used to measure the personality traits dimension. In selecting items for the different constructs of personality traits, this study focused first on the field study findings and then the subdimensions and items were justified according to the relevant literature (see Edwards 1954; Budner 1962; Rotter 1966; Jackson 1978). Altogether, 10 items were selected to measure the subdimensions of personality traits (see Table 6.4).

6.5.2.2 Questionnaire Section 3: Entrepreneurial Orientation

Entrepreneurial orientation dimensions comprised innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy with regard to achieving the sustainable growth of ISMs. There were 15 reflective items in this section: three items on innovativeness, three items on risk taking, three items on proactiveness, three items on competitive aggressiveness and three items on autonomy. The items were formed by referencing both the field study data and literature review (see Hughes and Morgan 2007). Innovativeness was reflected by the dynamic capabilities of micro-firms in generating or transforming an idea and applying it to produce products, services, processes, structures or policies that were fresh to the enterprise. Innovativeness items were focused on improvements and innovations, method of operation and new ideas. The firm's risk taking was focused on a constructive direction towards calculating risks, exploration and experimentation for opportunities. The risk-taking items addressed having a positive attitude about risk, encouraged taking risks and emphasized exploration and experimentation. The proactiveness of a firm was characterized by opportunity-seeking and forward-looking behaviour. Proactiveness items were denoted in terms of taking the initiative in situations and identifying opportunities. Competitive aggressiveness was defined as the intensity of the firm's effort to perform better than its counterparts. The items of competitive aggressiveness indicated a competitive environment and having a bold and aggressive approach. Autonomy referred to the self-regulating behaviour carried out by owners or teams. The item of autonomy was stated as being the administrative structure of micro-firms. The items and the sources of reference are listed in Table 6.4.

6.5.2.3 Questionnaire Section 4: Human Capital

Human capital factors are factors inside the firm that facilitate the growth of ISMs. The two subfactors identified for this study were demographic and psychographic resources. The demographic resources of a firm relate to the demographic features of the micro-firm members. Five items, namely, relevant or other work experience, relevant or other skills, explicit knowledge or level of education, family team size, age or maturity level were devised to measure this subconstruct (see Cooper, Gimeno-Gascon, and Woo 1994; Eisenhardt and Schoonhoven 1990). On the other hand, in micro-firm operations, participation of family members and their tacit knowledge, extraordinary commitment, friendly and intimate relationships, and voluntary labour were the key unique characteristics, and this led to a new dimension of microenterprise psychographic resources. This construct was measured with four variables, namely, tacit knowledge, extraordinary commitment, friendly relationships and voluntary labour (see Gimeno et al. 1997; Donnelley 1988; Sirmon and Hitt 2003). Table 6.4 Section 4 shows the details of these nine measures and their references.

6.5.2.4 Questionnaire Section 5: Social Capital

Social capital deals with the numerous social relationships and networks that facilitate the discovery and exploitation of opportunities. The social capital factor was measured by three subdimensions and 10 items (see Tsai and Ghoshal 1998; Pearson, Carr, and Shaw 2008). The micro-firm structural subdimension refers to the social interactions, including the network types and strength of ties, among the participants. This subdimension was formed by four items, that is, valuable advice from family, relatives, and friends; assistance from suppliers; customer role; and number of contacts and acquaintances. The cognitive subdimension described a shared unique language and narratives that are commonly known and understood. This subdimension consisted of three items: ambitions and vision, collective goals, and language and narratives. The relational subdimension was centred on the degree of respect, trust, trustfulness and friendliness which existed between micro-firm members. Three items were considered to measure this construct: trust and belief, norms and respect, and obligation. Table 6.4 Section 5 details the measurement items and their related references.

6.5.2.5 Questionnaire Section 6: Financial Capital

Financial resources describe the access to funding and financial opportunities that has an influence on strategic orientation and ISMs' success. This construct was constituted by two subdimensions and nine items. Sources of finance were concerned with the

sources from which a microentrepreneur with limited funds could access finances for their enterprise. Four items explaining four sources were incorporated to measure this subconstruct: personal or family member savings, relatives or friends, known person and institutional borrowing (see Cassar 2004; Myers 1984). Access to finance depended on the capital structure of financial resources and this led to firm success. Capital structure subconstructs were measured by five items, namely, amount of capital, procedural requirements, flexible time frame, the cost of capital and risk tolerance of capital (see Cassar 2004; Sirmon and Hitt 2003; Cooper, Gimeno-Gascon, and Woo 1994). Table 6.4 Section 6 shows the measurement items that were devised to measure this construct in the questionnaire and their references.

6.5.2.6 Questionnaire Section 7: Marketing Capabilities

Marketing capabilities constructs were built upon five subconstructs and 16 items (see Vorhies and Morgan 2005). The product/service capabilities subdimension was constituted with four items by focusing on special product, secret cooking method, customer product requirements and serves customer quickly. The price subdimension referred to three items: lower price, charges higher price in special context, and ability to minimize cost of production. The place subdimension was focused on three items: convenient location, small space requirements and flexible business hours. The promotion subdimension was structured with three items: word-of-mouth strategy, cooking and demonstrating in front of customers, and dealing with customers in a friendly manner. Finally, the market segment subdimension was reported using three items, namely, large number of lower-income customers, stable and profitable customers, and easily accessible to market segment. Table 6.4 Section 7 presents the measurement items and their related references.

6.5.2.7 Questionnaire Section 8: Business Environment

The construct of the business environment referred to the influence of external forces on micro-firm activities that determined firm performance. Drawing upon the existing research and the field study, the business environment element was proposed and incorporated 10 items under three subdimensions: turbulent, hostile and munificent (see Covin and Slevin 1989; Naman and Slevin 1993; Gnyawali and Fogel 1994). In a turbulent environment, the unpredictable behaviour of customers and competitors may foster or reduce firm opportunities. These subdimensions were measured by three items, that is, actions of competitors, change in customer demand and tastes, and change in product/service patterns. A hostile environment describes an environment in which unfavourable elements reduce the number of opportunities and create more

competition. The hostile environment subdimension was formulated with three items, namely, threats from extortionists and law enforcement authorities, government pressure, and control and manipulation of extortion and government pressure. Munificence reflected the generosity, bounty and carrying capacity that prevailed within the environment. This subdimension was focused on four items, namely, rules and regulations, educational and training programme, role of financial institutions and supportive public attitude. Ten items were used to measure the business environment construct and are shown in Table 6.4 Section 8.

6.5.2.8 Questionnaire Section 9: Outcomes

The main focus of this section of the questionnaire was to identify and measure the outcomes for the sustainable growth of ISMs. More specifically, these questions measured the performance of the micro-firm with 15 items under three subdimensions: economic, social and natural environmental (see Gatersleben and Vlek 1998; Biart 2002). The economic outcome of the micro-firm refers to job creation, sales trends, earning, profitability and investment. This subdimension was measured by five items, namely, employment, sales growth, income stability, return on investment and profitability. Social performance focused on work, human needs, social justice, human dignity and participation. The social outcome subdimension constituted five items: ensuring basic needs, social recognition, empowerment, freedom and control, and child labour. The natural environmental performance of the micro-firm was also considered in this study as it focused on a healthy, productive natural ecosystem. This subdimension were measured by five items, specifically, the use of energy and water, production of wastes and emissions, waste management, use of a small space and hygiene factors. Table 6.4 Section 9 details these items in the questionnaire, their measurements and related references.

6.5.3 Questionnaire Section 10: Microenterprise Life Cycle

This section was designed to explore the micro-firm's current life-cycle stage. The questions in this section were measured by a nominal scale. Four categories, namely, start, growth, mature and decline were included. Since 'firm life cycle' is a technical term, an explanation of each category was presented to respondents. These categories were basically highlighted by profit and sales, assuming that capabilities, resources and the business environment would be different in each life-cycle stage. Moreover, another similar question was incorporated in the questionnaire only for the surveyor to validate the micro-firm life-cycle stage. Table 6.4 Section 10 presents the demographic items used and the related references.

Table 6.4: Measurement of items related to antecedents and outcomes

Dimensions/Subdimensions/Items/Statements/Sources		
Subdimensions		Sources
Achievement Motivation (AM)	I want to...	Edwards (1954); Field Study
	AM1 work at my best.	
	AM2 accomplish tasks requiring skills and effort.	
	AM3 accomplish something of great significance.	
	AM4 do a difficult job well.	
Tolerance for Ambiguity (TA)	I like to...	Budner (1962); Field Study
	TA1 lead my life without a routine-frame.	
	TA2 tackle a complicated problem rather than solve an easy one.	
	TA3 take important decisions on the basis of insufficient information.	
Locus of Control (LC)	LC1 When I make plans, I am confident to make them work.	Rotter (1966); Field Study
	LC2 Getting what I want has little or nothing to do with luck.	
	LC3 I am always willing to admit mistakes.	
Risk-taking Propensity (RP)	RP1 I am not cautious about unpredictable situations.	Jackson (1978); Field Study
	RP2 I enjoy taking risks.	
	RP3 I willingly get involved in situations with uncertain outcomes.	
Subdimensions		Sources
Innovativeness (IN)	Our "tea-stall"...	Hughes and Morgan (2007); Field Study
	IN1 actively introduces improvements and innovations.	
	IN2 is creative in its methods of operation.	
	IN3 seeks out new ways to do things.	
Risk Taking (RT)	Our "tea-stall"...	Hughes and Morgan (2007); Field Study
	RT1 considers the term "risk taker" as a positive attribute.	
	RT2 encourages taking calculated risks with new ideas.	
	RT3 emphasizes both exploration and experimentation for opportunities.	
Proactiveness (PR)	Our "tea-stall"...	Hughes and Morgan (2007); Field Study
	PR1 takes the initiative in every situation (e.g., working with others).	
	PR2 excels at identifying opportunities.	
	PR3 initiates actions to which other organizations respond (e.g., suppliers).	
Competitive Aggressiveness (CA)	Our "tea-stall"...	Hughes and Morgan (2007); Field Study
	CA1 operates in an intensely competitive environment.	
	CA2 takes a bold or aggressive approach when competing	
	CA3 tries to undo and out-manoeuvre the competition as best as possible.	
Autonomy (AU)	Our "tea-stall" members (e.g., family members, employees)...	Hughes and Morgan (2007); Field Study
	AU1 are allowed to make and instigate changes in the way they perform their tasks.	
	AU2 are given the freedom to make their own decisions on how to go about doing their work.	
	AU3 are given authority and responsibility to act alone for the interests of the business.	
Subdimensions		Sources
Demographic (DE)	The following attributes add value to our business.	Gimeno et al. (1997);

Psychographic (PS)	DE1	Relevant or other work experience of “tea-stall” members.	Cooper, Gimeno-Gascon, and Woo (1994); Eisenhardt and Schoonhoven (1990); Field Study Gimeno et al. (1997); Donnelley (1988); Sirmon and Hitt (2003); Field Study
	DE2	Relevant or other skills of “tea-stall” members.	
	DE3	Explicit knowledge or education level of “tea-stall” members.	
	DE4	Number of family members working in the “tea-stall”.	
	DE5	Age or maturity level of “tea-stall” members.	
		The following features add value to our ‘tea-stall’ business.	
	PS1	Tacit knowledge of “tea-stall” members.	
	PS2	Extraordinary commitment of the “tea-stall” members.	
	PS3	Friendly and intimate relationships among the “tea-stall” members.	
	PS4	Voluntary labour provided by the family members.	
Subdimensions		Section 5: Social Capital (SC)	Sources
Structural (ST)	ST1	Family, relatives and friends yield value to our “tea-stall” by giving advice.	Tsai and Ghoshal (1998); Pearson, Carr, and Shaw (2008); Field Study Tsai and Ghoshal (1998); Field Study Tsai and Ghoshal (1998); Field Study
	ST2	Some suppliers assist our “tea-stall” by providing product solutions.	
	ST3	Some customers help our “tea-stall” by generating word-of-mouth recommendations.	
	ST4	Our “tea-stall” has enough number of contacts and acquaintances.	
		Our “tea-stall” members’ (family members, employees)...	
Cognitive (CO)	CO1	share the same ambitions and vision of the tea-stall business.	
	CO2	are enthusiastic about pursuing the collective goals.	
	CO3	share the same language and narratives to understand each other.	
		Our “tea-stall” members (e.g., family members, employees)...	
Relational (RE)	RE1	trust and believe in each other.	Tsai and Ghoshal (1998); Field Study
	RE2	show norms and respect for each other.	
	RE3	have obligation to support each other.	
Subdimensions		Section 6: Financial Capital (FC)	Sources
Finance Sources (FS)		Our “tea-stall”...	Cassar (2004); Myers (1984); Field Study
	FC1	acquires loans from personal or family members’ savings.	
	FC2	seeks loan from relatives or friends.	
	FC3	searches for loan from known persons.	
	FC4	prefers institutional borrowing.	
Capital Structure (CS)		Our “tea-stall”...	Cassar (2004); Sirmon and Hitt (2003); Cooper, Gimeno-Gascon, and Woo (1994); Field Study
	CS1	needs small amount of capital (less than Tk. 10,000) to start and run the business.	
	CS2	faces few procedural requirements for acquiring loan.	
	CS3	enjoys flexible time frame to pay back loan.	
	CS4	enjoys lower cost of capital.	
	CS5	faces lower risk tolerance of capital.	
Subdimensions		Section 7: Marketing Capabilities (MC)	Sources
Product/Service (PD)		Our “tea-stall”...	Vorhies and Morgan (2005); Field Study
	PD1	produces special tea for customers.	
	PD2	has a secret tea-making method.	
	PD3	can fulfil customer product requirements.	
	PD4	serves customers quickly.	

Price (PI)	Our "tea-stall"...	Vorhies and Morgan (2005); Field Study
	PI1 offers lower price than restaurants.	
	PI2 charges higher price for special tea than restaurants.	
	PI3 has the ability to produce products at lower cost than restaurants.	
Place (PL)	Our "tea-stall"...	Vorhies and Morgan (2005); Field Study
	PL1 prides in more convenient location for customers compared to formal restaurants.	
	PL2 needs a very small space to operate business than restaurants.	
	PL3 has the advantage of flexible business hours than restaurants.	
Promotion (PM)	Our "tea-stall"...	Vorhies and Morgan (2005); Field Study
	PM1 uses word-of-mouth promotion strategy to attract new customers.	
	PM2 can cook and demonstrate in front of customers.	
	PM3 is friendly in dealing with customers.	
Market Segment (MS)	Our "tea-stall"...	Vorhies and Morgan (2005); Field Study
	MS1 serves to a large number of lower-income customers.	
	MS2 has stable and profitable customers.	
	MS3 can be easily accessible to the lower-income customers.	
Subdimensions	Section 8: Business Environment (BE)	Sources
Turbulent (TU)	In "tea-stall" industry...	Covin and Slevin (1989); Naman and Slevin (1993); Field Study
	TU1 actions of the competitors are easy to predict.	
	TU2 demand and consumer tastes are easy to forecast.	
	TU3 the product/service patterns do not change much.	
Hostile (HO)	Our "tea-stall"...	Covin and Slevin (1989); (Naman and Slevin 1993); Field Study
	HO1 has threats from extortionists and law enforcement authorities.	
	HO2 is hard to keep afloat, due to government pressure.	
	HO3 can control and manipulate extortion, and government pressure to its own advantage.	
Munificent (MU)	MU1 There are few rules and regulations that govern "tea-stall"; providing a favourable environment for doing a business.	Gnyawali and Fogel (1994); Field Study
	Within my geographic area...	
	MU2 educational and training programmes are available to improve vocational and business skills for "tea-stall" businesses.	
	MU3 financial institutions are willing to finance "tea-stall" businesses.	
	MU4 there is a supportive public attitude towards "tea-stall" businesses.	
Subdimensions	Section 9: Sustainable Performance	Sources
Economic (EC)	EC1 We see our "tea-stall" is providing employment to us and others.	Gatersleben and Vlek (1998); Field Study
	Our "tea-stall's" economic performance is at an acceptable level in terms of ...	
	EC2 sales growth.	
	EC3 income stability.	
	EC4 return on investment.	
	EC5 profitability.	
Social (SO)	Our "tea-stall"...	Biart (2002); Gatersleben and Vlek (1998); Field Study
	SO1 ensures basic needs for our family.	
	SO2 enhances our social recognition in society.	
	SO3 improves our empowerment in society.	

<p>Natural Environment (EN)</p> <p>Dimension Firm Life Cycle</p>	<p>SO4 provides freedom and control over the course of our own lifestyle. SO5 is concerned about child labour use. Our "tea-stall"...</p> <p>EN1 uses utilities (e.g., energy and water) in an environmentally-friendly manner. EN2 produces few wastes and emissions. EN3 is concerned about waste management. EN4 uses small space to set up and operate business. EN5 is concerned about hygiene factors.</p> <p>Section 10: Firm Life Cycle</p> <p>Start Growth Mature Decline</p>	<p>Gatersleben and Vlek (1998); Field Study</p> <p>Sources Kimberly (1979); Kazanjian and Drazin (1989); Quinn and Cameron (1983); Field Study</p>
---	--	--

6.6 COMMON METHOD BIAS ASSESSMENT

In developing this questionnaire, the issue of common method bias (CMB) was addressed. CMB refers to the “degree to which correlations are altered (inflated) due to a methods effect” (Meade, Watson, and Kroustalis 2007). CMB occurs “when the same method is used to measure correlations between variables” (Schwarz, Schwarz, and Rizzuto 2008). Several positional sources of common method biases that are related to ‘items’ characteristic effects’ have been addressed by prior research (Jarvis, MacKenzie, and Podsakoff 2003). Examples of this bias include: 1) ‘negatively-worded or reverse-coded items’ and 2) ‘social desirability bias’ (Jarvis, MacKenzie, and Podsakoff 2003; Meade, Watson, and Kroustalis 2007). To handle a bias arising from negatively-worded or reverse-coded items, a positively-worded statement avoids the use of such statements. This procedure is undertaken as respondents might be unaware of the inconsistency of the statement questions compared to other statements. With regards to social desirability bias (SDB), few procedures have been undertaken. SDB basically “refers to the need for social approval and acceptance and the belief that this can be attained by means of culturally acceptable and appropriate behaviour” (Crowne and Marlowe 1964, 109). In general, SDB can be considered as the major bias in behavioural research, whereby a respondent over-reports and under-reports behaviour. Thus, in order to manage this bias, an introduction was set up in the questionnaire to emphasize the purpose of the study and highlight the privacy and confidentiality of the respondents’ answers. Respondents were notified that the questionnaire was given with no intention of determining whether their answer was considered right or wrong, rather it was only for research purposes. Considering that ‘ISM sustainable development’ is a subjective issue, it was very important to highlight this matter to avoid any aggravation to the respondents while they were answering the questionnaire. In addition, the definition of firm life-cycle stages was provided to give a clearer picture. Most importantly, the procedures were undertaken to control common method bias and increase the reliability of the measurement.

6.7 PRE-TESTING OF THE RESEARCH INSTRUMENTS

The research instrument used in the quantitative phase of the study was evaluated using the pre-testing method. According to Straub (1989), the draft of a research instrument needs to be qualitatively examined in the pre-test stage. The basis of pre-testing was to evaluate the survey instrument before it was administered to the whole population of ISMs in Bangladesh. The objective was to identify any potential

weaknesses and to confirm the clarity and validity of the instrument. The pre-test was also used to confirm the time needed by the respondents to complete the survey.

Alreck and Settle (1995) stated that the pre-test can be used as a means of validating the research instrument (Thong and Yap 1995). They suggested that a method to administer a draft instrument was to distribute it to a limited sample and then follow up by interviewing the sample. Subjects for the pre-test can be selected from colleagues, respondent surrogates or even actual respondents, and the sample for the pre-test can be a convenient sample (Cooper and Emory 1995).

Face-to-face interviews were incorporated in the pre-test stage. A convenient sample of five ISM owners in Bangladesh and two doctoral research students was used for this pre-test. Following the completion of the questionnaire, each of the respondents was interviewed to discuss the validity and reliability of the content of the instrument. The use of the interview method in the pre-test was suggested by Straub (1989). The follow-up interviews attempted to identify any problems or weaknesses with the questionnaire such as question ambiguity and scales' format (Thong and Yap 1995). During the interview process, which took about 20–30 minutes for each participant, the researcher posed the questions verbally and wrote the important results on paper.

The pre-test also measured the complexity of the instrument and the length of time that it took to complete the survey. With ISM owners, surveys that were perceived to be complex and time-consuming would have a greater chance of failure, and therefore lead to a poor response rate (Thong and Yap 1995). Thus, this study considered that providing the potential survey participants with an accurate estimate of how long the questionnaire would take to complete was important as ISM owners in Bangladesh are likely to be constrained with time. The time estimate also provided a good guide on how well participants would respond to the survey requests.

In general, the feedback on the complexity of the instrument was positive. The majority of the respondents could easily understand the content and no significant difficulties were found in answering the questionnaire. Participants benchmarked the time taken to complete the survey to be from 15–20 minutes.

The feedback obtained from this pre-test phase was used to further refine the instrument for the next phase of the study. A copy of the finalized survey instrument

can be found in Appendix H. The data collected from these seven participants from the pre-testing phase were not included in the final sample of the main study.

6.8 SUMMARY

This chapter has presented the 14 hypotheses that were derived from the final research model developed in the previous chapter. This chapter also detailed the development of the questionnaire which was the survey instrument. The factors and items used in the survey instrument were derived from the final research model, developed in the previous chapter. This chapter also summarised the sources of the factors with their associated items, as used in the survey instrument. The process of pre-testing the survey instrument and the findings of the pre-test were also discussed in the final section of this chapter. The following chapter will discuss the questionnaire survey quantitative data analysis.

CHAPTER 7

SURVEY AND QUANTITATIVE DATA ANALYSIS¹²

“There’s no such thing as qualitative data. Everything is either 1 or 0”.

—Fred Kerlinger

7.1 INTRODUCTION

A survey was conducted among tea-stall micro-firms in Bangladesh. Since the tea-stall significantly represents the informal microenterprises (under the hotel and restaurant services: 0.21% of the total GDP) in Bangladesh (Maligalig, Cuevas, and Rosario 2009), the tea-stall microenterprise was chosen as the main sample category. As a result, data from 438 respondents were collected. The data were then categorized in terms of micro-firm life-cycle stages, that is, start (sample 95), growth (sample 120), mature (sample 111) and decline (sample 112). The organization and presentation of the quantitative analyses and discussion have been grouped into four different discussion sections. This chapter starts with the overview of the survey. Then, a descriptive analysis of the survey respondents is presented. The next section presents the ISMs’ antecedents and consequences factors while the following section presents the ISMs’ antecedents and consequences factors based on the moderating effect of firm life-cycle stages. Using the collected data, this chapter presents the empirical results of the data

¹² Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Qualitative and Quantitative Evidence” in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
- b. Khan, E.A. (2013). “Investigating the Dimensions of Financial Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in a Developing Country”, *Curtin Business School Doctoral Colloquium*, Curtin University, Perth, Australia.
- c. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). “The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation” in *Proceedings of the 26th Annual SEAANZ Conference*, Sydney, Australia.
- d. Khan, E.A. (2013). “Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries – Field Study and Survey Experiment”, *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.
- e. Khan, E.A., Rowe, A.L. and Quaddus, M. (2013). “The Relationship of Personality Traits of Informal Micro-enterprise Entrepreneurs, Role of Business Environment, and Firm Sustainable Performance – Qualitative Evidence from Bangladesh” in *Proceedings of the Business and Economics Society International Conference*, Perth, Australia.
- f. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Personality Traits, Entrepreneurial Orientation, Business Environment, and Micro-Firm Sustainable Performance: A Multidimensional Assessment” in *Proceedings of the International Studying Leadership Conference*, Perth, Australia.
- g. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). “Marketing Capabilities and Sustainable Performance of Informal Social Micro-enterprises (ISMEs) in Developing Countries” in *Proceedings of the 2nd Annual Conference on Global Economics, Business, and Finance (GEBF)*, Hong Kong.

analysis which used the partial least squares (PLS) method based on the structural equation modelling (SEM) technique.

7.2 SURVEY OVERVIEW

7.2.1 Sample Selection and Data Collection

The duration of the survey was around five months. For this research, the sample was gathered from tea-stall micro-firms in Bangladesh by using a simple random sampling technique. As noted earlier, the tea-stall significantly represents the informal microenterprises in Bangladesh. A total of 450 surveys were completed. A sufficient sample is very important so that generalization trends can be derived by studying this sample. Twelve surveys were excluded owing to excessive missing data. The most effective data collection method for this research was considered to be the face-to-face survey. This method allowed the most flexibility in the data collection process compared to other methods. In addition, a wide variety of questions can be asked in a face-to-face interview because the respondents can see the questionnaire and an interviewer is present to clarify ambiguities (Malhotra 2008). Even though this technique was time-consuming, it was expected to increase the sample numbers of those willing to respond (see more in Chapter 6).

7.2.2 Response Rate

A low response rate has long been acknowledged as a major problem of research surveys (Moulton et al. 2008). Many techniques available in the research arena are followed by researchers to increase the response rate. These techniques include sending one or more reminders, including a souvenir gift and offering a prize through a lottery. However, all these techniques are complementary to a properly-designed questionnaire. Therefore, it is important to increase the interest and awareness of respondents about the research by encouraging them to take part. Taking this into consideration, this study applied location intercept techniques because these techniques offer maximum response rates (Andaleeb 2001; Malhotra 2008). This strategy was executed in a physical setting in Bangladesh in the local language (Andaleeb 2001). The survey instrument together with the cover letter explaining the purpose of and instructions for completing the survey were provided to the microenterprises' owners. To increase credibility, the Curtin University logo was included on the cover letter. To secure their confidence, respondents were assured that their identity could never be detected thus ensuring their privacy and anonymity. Unlike other surveys, this survey did not include a 'follow-up' procedure. This was

actually not possible as the questionnaire did not include any reference code to check whether a particular respondent had replied or not. This was done intentionally to increase the reliability and thus the response rate.

7.2.3 Data Screening

Before the data analysis process takes place, the properties of the data have to be addressed in advance. Researchers have to review responses from individual questionnaires and then transfer the information from questionnaires to a format for statistical analysis. The data are reviewed to seek out errors in the form of invalid data including blank questionnaires or missing values. This procedure is carried out to produce clean data for the research analysis (Jackson 2004; Alreck and Settle 1995). In this study, using the data screening review process, 12 questionnaires were found to be incomplete and thus were excluded to avoid misleading results in the analysis.

7.2.4 Pilot Test

Based on the usable responses, a pilot test using PLS analysis was conducted. In total, 25 responses were considered. The main objective in conducting the pilot test was to get an overview of the applicability of the data in this research, not to assess the structural or measurement models. The pilot test found some adjustments that were needed: for example, one question read: “Our ‘tea-stall’ is very hard to keep afloat, due to government pressure”. It was observed that by having the word ‘very’ in the question, the respondents’ tendency was to answer ‘strongly agree’. Therefore, the word ‘very’ was eliminated from that question. The same trend was observed in the question: “Our ‘tea-stall’ has major threats from extortionists and law enforcement authorities”. Therefore, the word ‘major’ was deleted. Some other wording adjustments were also performed for better readability.

7.3 DESCRIPTIVE PRESENTATION OF THE SAMPLE

As mentioned previously, respondents for this survey were specifically tea-stall micro-firm owners in Bangladesh who had started an informal microenterprise in the form of entrepreneurship. Based on data from the 438 usable questionnaires from this research, descriptive analysis using SPSS software was conducted to understand the study respondents’ demographic background. The following sections will discuss the demographic characteristics of the respondents.

Gender: As shown in Table 7.1, the final data (438 samples) included 76.9% males (n=337) and 23% females (n=101). A male majority could be expected due to the fact that men still dominate in informal micro-firm businesses in Bangladesh.

Table 7.1: Survey respondents by gender

Gender	Frequency	Percentage (%)
Male	337	76.9
Female	101	23.1

Marital Status: The respondents were asked to indicate their current marital status. As shown in Table 7.2, the majority of microenterprise owners were married (87.9%), followed by never married (10%), and others (9%).

Table 7.2: Survey respondents by marital status

Marital Status	Frequency	Percentage (%)
Married	385	87.9
Never married	44	10.0
Others	09	2.1

Age: The respondents were asked to select an age range rather than putting a numeric number. The age groups were divided into six categories. As shown in Table 7.3, most respondents were aged between 31 and 50 years old. Younger participants (below 30 years old) comprised 22.4% while 11.6% of the respondents were more than 51 years old. Only 2.1% were over 60 years old. An interpretation of this finding would be that the senior person of a family is willing to be involved in a microenterprise business.

Table 7.3: Survey respondents by age

Age	Frequency	Percentage (%)
Below 20 years old	17	3.9
21-30 years old	81	18.5
31-40 years old	172	39.3
41-50 years old	108	24.7
51-60 years old	51	11.6
Over 60 years old	9	2.1

Education: Table 7.4 shows the profile of the level of education attained by survey respondents with 13% of respondents having no education. In all, 46.4% of respondents had primary education having completed lower primary school (Years 1-3) or primary school (Years 4-5). A significant 37% of respondents had completed lower high school (Years 6-8) or high school (Years 9-10). Finally, a small group (3.7%) of respondents had attained other qualifications.

Table 7.4: Survey respondents by education

Education	Frequency	Percentage (%)
No education	57	13.0
Lower primary school (1-3)	123	28.1
Primary school (4-5)	80	18.3
Lower high school (6-8)	69	15.8
High school (9-10)	93	21.2
Others	16	3.7

Family Size: Table 7.5 shows that for the majority of micro-firm owners (84.3%), family size was between 3–7 persons. In terms of large family sizes (8–13), 9% of respondents were in this category. Apart from that, only 6.8% of respondents were single or in a couple.

Table 7.5: Survey respondents by family size

Family Size	Frequency	Percentage (%)
1	5	1.1
2	25	5.7
3	52	11.9
4	102	23.3
5	94	21.5
6	67	15.3
7	54	12.3
8	16	3.7
9	13	3.0
10	5	1.1
11	2	0.5
13	3	0.7

Family Member Involvement: Table 7.6 shows that micro-firm owners received support from family members in running their business: 82% of respondents agreed that 1–2 family members were involved in their business. A further 5.7% agreed that more than two family members were involved while 12.3% relied on their own efforts.

Table 7.6: Survey respondents by family member involvement

Family Member Involvement	Frequency	Percentage (%)
0	54	12.3
1	183	41.8
2	176	40.2
3	18	4.1
4	6	1.4
6	1	0.2

Waged Worker: The respondents were asked to nominate the number of waged workers in their micro-firms. Table 7.7 shows that the majority of micro-firm owners relied on their family member workers rather than using waged workers. Only 11.4% used a waged worker.

Table 7.7: Survey respondents by waged worker

Number of Waged Workers	Frequency	Percentage (%)
0	388	88.6
1	43	9.8
2	6	1.4
3	1	0.2

Location: The respondents were asked to mention their business location. Table 7.8 shows that 62.3% of micro-firms were located in the urban area and 37.7% were in the suburban area.

Table 7.8: Survey respondents by location

Location	Frequency	Percentage (%)
Urban	273	62.3
Suburban	165	37.7

Firm's Age: The respondents were asked to state their firm's age. The profiles in Table 7.9 show that 31.3% of respondents were in micro-firms from 1–4 years in age, 34% were in firms between 5–8 years of age, 21% were in firms from 9–12 years of age. Only 14.7% were in firms above 13 years of age.

Table 7.9: Survey respondents by firm's age

Firm's Age (Number of Years)	Frequency	Percentage (%)
1	18	4.1
2	50	11.4
3	41	9.4
4	28	6.4
5	44	10.0
6	33	7.5
7	34	7.8
8	38	8.7
9	24	5.5
10	26	5.9
11	14	3.2
12	28	6.4
13	10	2.3
14	12	2.7
15	14	3.2
16	4	0.9
17	7	1.6
18	2	0.5
20	5	1.1
21	1	0.2
22	1	0.2
26	2	0.5
30	1	0.2
35	1	0.2

Sales: Respondents were asked about the monthly average sales in their micro-firms. As shown in Table 7.10, 32% of respondents had sales below Tk. 6,000, 37.2% of respondents had sales between Tk. 6,001–12,000 while 40.8% of respondents had sales of more than Tk. 12,001.

Table 7.10: Survey respondents by monthly average sales

Monthly Average Sales	Frequency	Percentage (%)
Below Tk. 3000	48	11.0
Tk. 3001–Tk. 6000	92	21.0
Tk. 6001–Tk. 9000	74	16.9
Tk. 9001–Tk. 12000	45	10.3
Tk. 12001–Tk. 15000	82	18.7
Above Tk. 15000	97	22.1

7.4 DATA ANALYSIS PART 1: (Main model antecedents and outcomes)

The study used partial least square-based structural equation modelling (PLS-SEM) to check the properties of the hierarchical measurement model (first-order and second-order) in terms of item reliability, internal consistency and discriminant validity (Barclay, Higgins, and Thompson 1995; Hulland 1999) for the reflective constructs. For the formative constructs, this study tested item reliability and multicollinearity. The SmartPLS version 2.0 computer software was used (Ringle, Wende, and Alexander 2012). It should be noted that PLS-SEM has been designed to accommodate both formative and reflective types of indicators of constructs. Reflective indicators ‘reflect’ the latent construct and are expressed as a function of the construct. They measure the same underlying dimensions and should be correlated. Formative indicators, on the hand, ‘cause’ the latent construct and the construct is a function of the formative measures. They represent different dimensions of the construct and thus are not assumed to be correlated.

As discussed in Chapter 4, the current study used the repeated-indicator approach and the two-stage approach in analysing the first-order and second-order measurement model.

7.4.1 First-order Measurement Model

The first-order measurement model consisted of 27 constructs. Among these constructs, 17 were reflective, namely, achievement motivation, tolerance for ambiguity, locus of control, risk-taking propensity, innovativeness, risk taking, proactiveness, competitive aggressiveness, autonomy, product/service, price, place, promotion, market segment, economic, social and natural environmental. These 17 constructs represented 59 reflective indicators. On the other hand, 10 were formative constructs, namely, demographic, psychographic, structural, cognitive, relational, sources of finance, capital structure, turbulent, hostile and munificent. Likewise, these 10 constructs were characterized with 38 formative indicators.

Item Reliability: Item reliability examines how well each item relates to its respective construct (see more in Chapter 4). Some studies have accepted loadings less than the 0.7 cut-off level taking into consideration the exploratory nature of these studies (Fornell and Larcker 1981). Other studies have recommended loadings higher than the 0.7 cut-off level with the minimum critical t -value of 1.65 (e.g., Hair, Ringle, and Sarstedt 2011). Referring to Hair, Ringle, and Sarstedt (2011) argument, this research has adopted the minimum cut-off level of 0.7 with the minimum critical t -value of 1.65 for item loading. Based on these criteria, all the loadings achieved the minimum value of 0.7 with the minimum t -value of 1.65 for first-order reflective constructs, as shown in Table 7.11. This result confirmed that all items were sufficient to represent their respective reflective constructs.

On the other hand, indicator weight provides information on the relative importance of the formative items towards the formation of the corresponding latent construct. There is no agreement in the literature on the acceptable value of the weights (Rai, Patnayakuni, and Patnayakuni 2006). However, Hair, Ringle, and Sarstedt (2011) strongly recommended that the relative importance of each indicator's weight be considered for the formative items along with the minimum critical t -value of 1.65. In addition, they also suggested examining loadings with the minimum critical t -value of 1.65. Following Hair, Ringle, and Sarstedt (2011) recommendation, the item reliability of formative items was estimated by assessing the minimum critical t -value of 1.65. Accordingly, three items in the 'capital structure' construct failed to meet this criterion: CS2, CS3 and CS4. PLS was run again deleting these three items. However, another nine items TA3, LC2, PD1, PD2, PL3, PM1, EC5, SO5 and EN5 were then deleted because the 'tolerance for ambiguity', 'locus of control', 'product/service', 'place', 'promotion', 'economic' and 'natural environmental' constructs could not attain the acceptable criterion of cross-loadings which was able to be achieved after deleting these items. Based on this procedure, the loadings or weights achieved the minimum critical t -value of 1.65 as shown in Table 7.11. This result confirmed that all items were sufficient to represent their respective formative constructs.

In addition, to examine **multicollinearity**, the variance inflation factor (VIF) scores for each item were calculated. The higher the VIF score, the higher the degree of multicollinearity. VIF values below 10 are considered acceptable in determining low multicollinearity (Kleinbaum et al. 1998). Furthermore, Hair, Ringle, and Sarstedt (2011) recommended the VIF value be at a maximum level of 5. The SPSS 20 statistical

package was utilised to run regression analysis with the PLS construct latent variable scores as the dependent variable and the items as independent variables. The results depicted in Table 7.11 show that all the VIF scores were below 5. Therefore, all the formative items were retained.

Internal Consistency: Internal consistency is a second-generation procedure that measures reliability. The minimum value for internal consistency was specified as 0.7 (Hair, Ringle, and Sarstedt 2011; Fornell and Larcker 1981). Internal consistency was obtained from PLS analysis for each construct and the results are displayed in Table 7.11. The data show that all the constructs met the criterion for a minimum value of 0.7. The lowest internal consistency was 0.876 for 'tolerance for ambiguity' (TA) whilst the highest was 0.971 for 'autonomy' (AU). The high internal consistency values for all the constructs ensured the reliability of the measurement model.

Average variance extracted (AVE) is a measure that indicates the amount of variance in the item that is explained by the construct (Fornell and Larcker 1981). Fornell and Larcker (1981) and Hair, Ringle, and Sarstedt (2011) specified the rule of thumb for the minimum value of AVE as being 0.5. Results of the statistical analysis in Table 7.11 show that all the AVE values were above 0.5. The largest value was 0.918 for 'autonomy' (AU) whilst the lowest was 0.745 for 'natural environmental' (EN). Therefore, the measurement model satisfied all the necessary criteria and achieved convergent validity. Hence, these results clearly indicated that the items in each construct were highly correlated and reliable.

Discriminant Validity: To establish discriminant validity, the square root of the AVE was compared to the inter-construct correlations. Table 7.12 presents the square root of AVE (diagonal elements) and the correlations between constructs (off-diagonal elements). It shows that the square root of AVE was greater than the off-diagonal elements across the row and down the column. These findings have shown that all the results were satisfactory which confirms the establishment of discriminant validity at the construct level.

In the final analysis for discriminant validity, cross-loadings for each item were explored and compared across all constructs (Hair, Ringle, and Sarstedt 2011). This procedure was conducted to fulfil the assessment at the item level. In this test, analysis was conducted by measuring the extent to which the indicators' loadings of a construct differed from the loadings of other constructs. One should expect each block of

indicators to load higher for its respective construct than indicators for other constructs. The matrix of loading and cross-loading is shown in Table 7.13. The results indicated that all items demonstrated higher loadings in their respective constructs in comparison to their cross-loadings in other constructs. Therefore, this confirmed that the measurement model had strong discriminant validity at the items' level.

Based on the outcomes shown in Tables 7.11–7.13, the overall results for the measurement model have provided satisfactory empirical support for reliability, and convergent and discriminant validity of the first-order constructs. Having established that the measurement model is adequate and sufficient, the next phase of PLS analysis was conducted, that is, the assessment of the measurement model in the second-order construct level using the repeated-indicator and two-stage approaches. This analysis is presented in the next section.

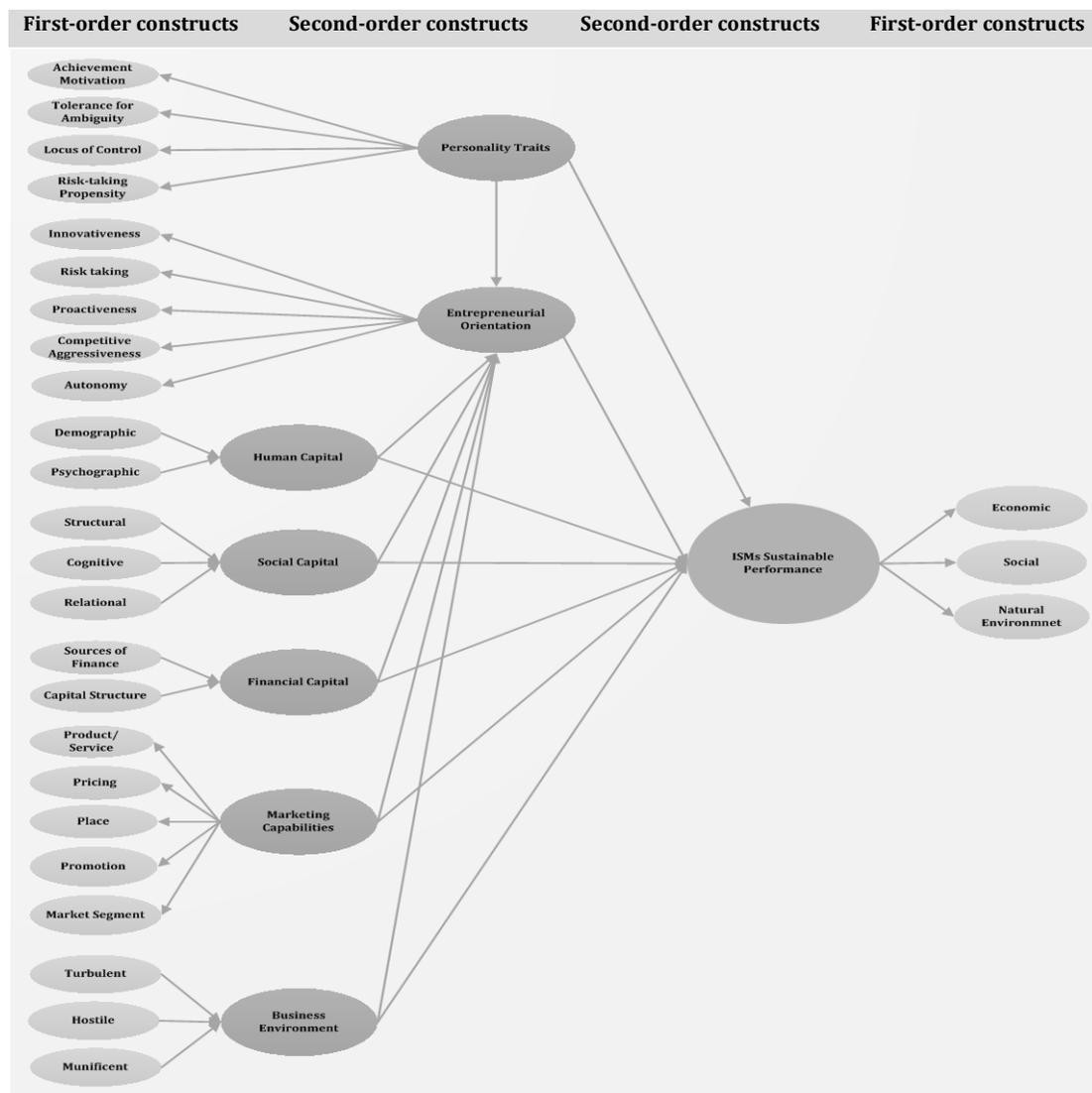


Figure 7.1: The main model antecedents and outcomes

Table 7.11: Psychometric properties for first-order constructs: Main model (repeated-indicator approach)

		Dimensions/Subdimensions/Items				VIF	AVE	CR
Subdimensions	Personality Traits (PT)	L	L t-v	W	W t-v			
Achievement	I want to...						0.842	0.955
Motivation (AM)	AM1 work at my best.	0.925	128.430	0.276	70.917	-		
	AM2 accomplish tasks requiring skills and effort.	0.943	196.798	0.287	74.974	-		
	AM3 accomplish something of great significance.	0.900	85.082	0.255	68.853	-		
	AM4 do a difficult job well.	0.902	83.295	0.271	72.943	-		
Tolerance for Ambiguity (TA)	I like to...						0.780	0.876
	TA1 lead my life without a routine frame.	0.912	145.344	0.631	35.754	-		
	TA2 tackle a complicated problem rather than solve an easy one.	0.854	42.317	0.497	74.764	-		
	TA3 take important decisions on the basis of insufficient information.							
Locus of Control (LC)	LC1 When I make plans, I am confident to make them work.	0.934	171.127	0.564	73.353	-	0.859	0.924
	LC2 Getting what I want has little or nothing to do with luck.							
	LC3 I am always willing to admit mistakes.	0.920	117.851	0.515	97.495	-		
Risk-taking Propensity (RP)	RP1 I am not cautious about unpredictable situations.	0.900	105.756	0.409	47.173	-	0.822	0.933
	RP2 I enjoy taking risks.	0.917	122.297	0.359	62.246	-		
	RP3 I willingly get involved in situations with uncertain outcomes.	0.903	78.830	0.336	43.957	-		
Subdimensions	Entrepreneurial Orientation (EO)							
Innovativeness (IN)	Our "tea-stall" ...						0.825	0.934
	IN1 actively introduces improvements and innovations.	0.910	101.845	0.370	64.630	-		
	IN2 is creative in its methods of operation.	0.896	100.735	0.353	63.079	-		
	IN3 seeks out new ways to do things.	0.920	115.429	0.378	64.511	-		
Risk Taking (RT)	Our "tea-stall" ...						0.861	0.949
	RT1 considers the term "risk taker" as a positive attribute.	0.925	106.314	0.365	76.908	-		
	RT2 encourages taking calculated risks with new ideas.	0.950	208.871	0.375	72.839	-		
	RT3 emphasizes both exploration and experimentation for opportunities.	0.909	100.907	0.337	62.271	-		
Proactiveness (PR)	Our "tea-stall" ...						0.793	0.920
	PR1 takes the initiative in every situation (e.g., working with others).	0.892	111.675	0.407	50.862	-		
	PR2 excels at identifying opportunities.	0.918	96.498	0.378	59.069	-		
	PR3 initiates actions to which other organizations respond (e.g., suppliers).	0.861	61.199	0.338	49.728	-		
Competitive Aggressiveness (CA)	Our "tea-stall" ...						0.804	0.925
	CA1 operates in an intensely competitive environment.	0.846	44.358	0.322	42.950	-		
	CA2 takes a bold or aggressive approach when competing	0.930	143.458	0.405	48.215	-		
	CA3 tries to undo and out-manoeuvre the competition as best as possible.	0.913	111.979	0.385	49.622	-		
Autonomy (AU)	Our "tea-stall" members (e.g., family members, employees)...						0.918	0.971
	AU1 are allowed to make and instigate changes in the way they perform their tasks.	0.955	195.891	0.345	78.016	-		
	AU2 are given the freedom to make their own decisions on how to go about doing their work.	0.969	269.904	0.352	95.627	-		
	AU3 are given authority and responsibility to act alone to the interests of the business.	0.951	142.073	0.346	78.889	-		
Subdimensions	Human Capital (HC)							

Demographic (DE)	The following attributes add value to our business.						-	-
	DE1	Relevant or other work experience of “tea-stall” members.	0.782	25.590	0.011	0.188	2.958	
	DE2	Relevant or other skills of “tea-stall” members.	0.900	55.228	0.220	4.173	4.361	
	DE3	Explicit knowledge or education level of “tea-stall” members.	0.929	74.709	0.254	4.280	4.744	
	DE4	Number of family members working in the “tea-stall”.	0.891	35.766	0.183	2.779	3.688	
	DE5	Age or maturity level of “tea-stall” members.	0.939	65.504	0.420	6.296	3.280	
Psychographic (PS)	The following features add value to our “tea-stall” business.						-	-
	PS1	Tacit knowledge of “tea-stall” members.	0.742	28.879	0.115	2.265	2.180	
	PS2	Extraordinary commitment of the “tea-stall” members.	0.910	59.934	0.148	2.469	4.761	
	PS3	Friendly and intimate relationships among the “tea-stall” members.	0.962	99.708	0.546	9.486	3.745	
	PS4	Voluntary labour provided by the family members.	0.893	51.052	0.285	6.232	2.952	
Subdimensions	Social Capital (SC)							
Structural (ST)	ST1	Family, relatives and friends yield value to our “tea-stall” by giving advice.	0.665	18.361	0.382	6.729	1.703	-
	ST2	Some suppliers assist our “tea-stall” by providing product solutions.	0.846	35.873	0.519	12.085	1.726	-
	ST3	Some customers help our “tea-stall” by generating word-of-mouth recommendations.	0.548	12.808	-0.239	4.872	2.023	-
	ST4	Our “tea-stall” has enough number of contacts and acquaintances.	0.877	38.811	0.499	10.796	2.089	-
Cognitive (CO)	Our “tea-stall” members’ (family members, employees)...						-	-
	CO1	share the same ambitions and vision of the tea-stall business.	0.907	65.977	0.198	3.381	4.326	
	CO2	are enthusiastic about pursuing the collective goals.	0.964	142.409	0.531	9.650	4.961	
	CO3	share the same language and narratives to understand each other.	0.884	59.975	0.349	10.173	2.310	
Relational (RE)	Our “tea-stall” members (e.g., family members, employees)...						-	-
	RE1	trust and believe in each other.	0.917	64.193	0.415	9.034	2.606	
	RE2	show norms and respect for each other.	0.930	84.743	0.409	8.509	3.166	
	RE3	have obligation to support each other.	0.898	55.759	0.266	5.583	3.114	
Subdimensions	Financial Capital (FC)							
Finance Sources (FS)	Our “tea-stall”...						-	-
	FC1	acquires loans from personal or family members’ savings.	0.760	18.605	0.698	17.400	1.038	
	FC2	seeks loan from relatives or friends.	0.552	10.098	0.150	1.788	2.380	
	FC3	searches for loan from known persons.	0.649	13.815	0.280	3.716	2.573	
	FC4	prefers institutional borrowing.	0.516	10.192	0.396	6.841	1.137	
Capital Structure (CS)	Our “tea-stall”...						-	-
	CS1	needs small amount of capital (less than Tk. 10,000) to start and run the business.	0.398	2.675	0.411	2.604	1.000	
	CS2	faces few procedural requirements for acquiring loan.						
	CS3	enjoys flexible time frame to payback loan.						
	CS4	enjoys lower cost of capital.						
	CS5	faces lower risk tolerance of capital.	0.912	12.070	0.918	13.194	1.000	
Subdimensions	Marketing Capabilities (MC)							
Product/Service (PD)	Our “tea-stall”...						0.904	0.950
	PD1	produces special tea for customers.						
	PD2	has a secret tea making method.						
	PD3	can fulfil customer product requirements.	0.949	129.275	0.513	77.667	-	
	PD4	serves customers quickly.	0.954	149.310	0.539	72.949	-	

Price (PI)	Our "tea-stall" ...							0.838	0.939
	PI1 offers lower price than restaurants.	0.948	220.324	0.403	41.015	-			
	PI2 charges higher price for special tea than restaurants.	0.832	30.494	0.286	23.243	-			
Place (PL)	PI3 has the ability to produce products at lower cost than restaurants.	0.961	194.246	0.396	43.609	-			
	Our "tea-stall" ...							0.831	0.907
	PL1 prides in more convenient location for customers compared to formal restaurants.	0.932	190.949	0.609	39.087	-			
Promotion (PM)	PL2 needs a very small space to operate business than restaurants.	0.891	59.894	0.486	60.931	-			
	PL3 has the advantage of flexible business hours than restaurants.								
	Our "tea-stall" ...							0.886	0.940
Market Segment (MS)	PM1 uses word-of-mouth promotion strategy to attract new customers.								
	PM2 can cook and demonstrate in front of customers.	0.941	169.967	0.527	110.931	-			
	PM3 is friendly in dealing with customers.	0.942	179.785	0.535	104.740	-			
Subdimensions	Our "tea-stall" ...							0.835	0.938
	MS1 serves to a large number of lower-income customers.	0.902	91.320	0.340	71.927	-			
	MS2 has stable and profitable customers.	0.905	93.929	0.374	72.510	-			
Turbulent (TU)	MS3 can be easily accessible to the lower-income customers.	0.933	157.301	0.380	73.185	-			
	Business Environment (BE)								
	In "tea-stall" industry...							-	-
Hostile (HO)	TU1 actions of the competitors are easy to predict.	0.862	35.240	0.326	6.729	2.153			
	TU2 demand and consumer tastes are easy to forecast.	0.911	62.487	0.449	9.984	2.308			
	TU3 the product/service patterns do not change much.	0.845	36.015	0.367	9.052	1.798			
Munificent (MU)	Our "tea-stall" ...							-	-
	HO1 has threats from extortionists and law enforcement authorities.	0.652	4.784	0.166	0.687	1.444			
	HO2 is hard to keep afloat, due to government pressure.	0.869	10.497	0.542	2.847	1.573			
Subdimensions	HO3 can control and manipulate extortion, and government pressure to its own advantage.	0.828	9.191	0.509	3.243	1.327			
	MU1 There are few rules and regulations that govern "tea-stall"; providing a favourable environment for doing a business.	0.916	57.506	0.570	11.399	1.762			
	Within my geographic area...								
Economic (EC)	MU2 educational and training programmes are available to improve vocational and business skills for "tea-stall" businesses.	0.698	19.656	0.119	2.653	1.888			
	MU3 financial institutions are willing to finance "tea-stall" businesses.	0.555	13.682	0.146	3.944	1.252			
	MU4 there is a supportive public attitude towards "tea-stall" businesses.	0.868	29.847	0.361	6.412	2.456			
Social (SO)	Sustainable Performance (SP)								
	EC1 We see our "tea-stall" is providing employment to us and others.	0.915	118.320	0.286	46.992	-		0.820	0.948
	Our "tea-stall's" economic performance is at an acceptable level in terms of ...								
Social (SO)	EC2 sales growth.	0.908	101.896	0.261	47.532	-			
	EC3 income stability.	0.873	56.192	0.286	29.480	-			
	EC4 return on investment.	0.926	119.198	0.272	45.023	-			
Social (SO)	EC5 profitability.								
	Our "tea-stall" ...							0.799	0.941
	SO1 ensures basic needs for our family.	0.819	47.276	0.272	51.706	-			

Natural Environment (EN)	S02	enhances our social recognition in society.	0.901	73.876	0.274	52.036	-		
	S03	improves our empowerment in society.	0.929	142.296	0.283	60.382	-		
	S04	provides freedom and control over the course of our own lifestyle.	0.922	112.939	0.291	63.873	-		
	S05	is concerned about child labour use.							
		Our "tea-stall" ...						0.745	0.921
	EN1	uses utilities (e.g., energy and water) in an environmentally-friendly manner.	0.888	69.941	0.293	41.218	-		
	EN2	produces few wastes and emissions.	0.927	166.423	0.310	33.343	-		
	EN3	is concerned about waste management.	0.827	33.952	0.251	28.385	-		
	EN4	uses small space to set up and operate business.	0.804	39.247	0.305	23.788	-		
EN5	is concerned about hygienic factors.								

Abbreviations:

L-Loadings

W-Weights

L *t*-Loadings *t*-value

W *t*- Weights *t*-value

VIF-Variance Inflation Factor

AVE-Average Variance Extracted

CR-Composite Reliability

Table 7.12: Psychometric properties for first-order constructs: AVE square root (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM	0.918																										
TA	0.842	0.883																									
LC	0.786	0.853	0.927																								
RP	0.650	0.778	0.815	0.907																							
IN	0.789	0.809	0.821	0.732	0.908																						
RT	0.621	0.753	0.744	0.846	0.720	0.928																					
PR	0.668	0.727	0.768	0.746	0.791	0.755	0.890																				
CA	0.689	0.690	0.647	0.585	0.767	0.569	0.718	0.897																			
AU	0.656	0.649	0.595	0.543	0.661	0.559	0.672	0.699	0.958																		
DE	0.679	0.731	0.804	0.760	0.779	0.744	0.785	0.599	0.668	-																	
PS	0.733	0.769	0.815	0.763	0.786	0.711	0.737	0.642	0.680	0.915	-																
ST	0.728	0.758	0.766	0.710	0.757	0.634	0.743	0.626	0.623	0.785	0.797	-															
CO	0.768	0.776	0.773	0.753	0.766	0.725	0.717	0.619	0.648	0.850	0.900	0.788	-														
RE	0.783	0.795	0.811	0.747	0.790	0.687	0.718	0.672	0.620	0.834	0.882	0.786	0.905	-													
FS	0.752	0.765	0.766	0.686	0.752	0.651	0.674	0.563	0.537	0.776	0.796	0.752	0.761	0.758	-												
CS	0.304	0.327	0.331	0.285	0.291	0.226	0.145	0.248	0.102	0.251	0.326	0.316	0.301	0.309	0.272	-											
PD	0.736	0.752	0.735	0.670	0.800	0.616	0.761	0.742	0.708	0.731	0.755	0.714	0.708	0.741	0.657	0.248	0.951										
PI	0.663	0.772	0.814	0.773	0.744	0.738	0.820	0.575	0.598	0.811	0.786	0.777	0.765	0.780	0.745	0.200	0.754	0.915									
PL	0.791	0.723	0.704	0.634	0.702	0.553	0.663	0.657	0.601	0.653	0.690	0.688	0.690	0.746	0.686	0.258	0.779	0.697	0.911								
PM	0.779	0.762	0.742	0.657	0.798	0.621	0.752	0.761	0.730	0.732	0.771	0.732	0.740	0.768	0.676	0.232	0.896	0.749	0.821	0.941							
MS	0.731	0.771	0.768	0.681	0.710	0.651	0.731	0.588	0.597	0.708	0.729	0.694	0.708	0.743	0.691	0.241	0.770	0.832	0.746	0.788	0.914						
TU	0.741	0.748	0.724	0.681	0.726	0.616	0.721	0.675	0.664	0.712	0.756	0.748	0.732	0.766	0.698	0.269	0.816	0.771	0.810	0.844	0.793	-					
HO	0.054	0.217	0.250	0.331	0.327	0.269	0.284	0.254	0.047	0.236	0.246	0.261	0.253	0.260	0.189	0.261	0.256	0.255	0.136	0.183	0.112	0.183	-				
MU	0.806	0.786	0.757	0.730	0.716	0.676	0.628	0.619	0.637	0.694	0.753	0.723	0.787	0.786	0.688	0.333	0.723	0.724	0.770	0.751	0.752	0.764	0.213	-			
EC	0.587	0.452	0.394	0.352	0.513	0.340	0.433	0.581	0.608	0.373	0.434	0.405	0.478	0.451	0.354	0.108	0.579	0.308	0.535	0.624	0.395	0.500	0.058	0.553	0.906		
SO	0.695	0.716	0.674	0.624	0.683	0.521	0.554	0.650	0.531	0.585	0.662	0.650	0.705	0.750	0.618	0.326	0.721	0.638	0.746	0.722	0.637	0.718	0.338	0.759	0.585	0.894	
EN	0.682	0.739	0.755	0.703	0.712	0.584	0.632	0.631	0.518	0.680	0.758	0.734	0.743	0.775	0.681	0.410	0.743	0.700	0.739	0.745	0.682	0.724	0.391	0.758	0.484	0.787	0.863

Table 7.13: Psychometric properties for first-order constructs: Cross-loadings (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM1	0.925	0.806	0.733	0.595	0.737	0.532	0.609	0.646	0.600	0.618	0.687	0.706	0.724	0.759	0.701	0.322	0.721	0.634	0.794	0.752	0.698	0.734	0.092	0.767	0.536	0.722	0.699
AM2	0.943	0.814	0.772	0.648	0.752	0.596	0.631	0.644	0.598	0.653	0.710	0.716	0.729	0.757	0.736	0.304	0.700	0.653	0.765	0.748	0.715	0.723	0.086	0.777	0.514	0.686	0.679
AM3	0.900	0.708	0.644	0.536	0.652	0.565	0.533	0.567	0.575	0.572	0.610	0.585	0.667	0.645	0.644	0.279	0.566	0.502	0.635	0.615	0.595	0.582	-0.068	0.706	0.554	0.529	0.519
AM4	0.902	0.757	0.729	0.602	0.750	0.584	0.674	0.669	0.634	0.645	0.678	0.656	0.697	0.708	0.676	0.208	0.707	0.637	0.701	0.738	0.669	0.675	0.080	0.704	0.554	0.603	0.596
TA1	0.865	0.912	0.853	0.734	0.816	0.682	0.734	0.656	0.640	0.750	0.783	0.769	0.777	0.818	0.784	0.296	0.769	0.799	0.775	0.778	0.790	0.759	0.158	0.784	0.436	0.717	0.724
TA2	0.595	0.854	0.633	0.634	0.592	0.649	0.531	0.555	0.493	0.517	0.553	0.547	0.574	0.560	0.542	0.282	0.537	0.539	0.471	0.547	0.548	0.542	0.235	0.586	0.356	0.530	0.568
LC1	0.770	0.852	0.934	0.780	0.816	0.742	0.763	0.641	0.627	0.780	0.782	0.730	0.758	0.778	0.754	0.239	0.734	0.814	0.682	0.733	0.761	0.703	0.241	0.750	0.404	0.658	0.733
LC3	0.683	0.725	0.920	0.729	0.701	0.633	0.657	0.556	0.469	0.707	0.726	0.688	0.672	0.722	0.662	0.382	0.624	0.691	0.621	0.639	0.659	0.637	0.221	0.650	0.322	0.588	0.663
RP1	0.704	0.783	0.847	0.900	0.743	0.733	0.715	0.600	0.516	0.749	0.777	0.720	0.747	0.779	0.737	0.336	0.680	0.763	0.677	0.682	0.699	0.707	0.310	0.711	0.333	0.664	0.746
RP2	0.554	0.676	0.702	0.917	0.637	0.806	0.687	0.502	0.503	0.670	0.661	0.621	0.669	0.629	0.571	0.216	0.577	0.668	0.509	0.546	0.582	0.570	0.282	0.646	0.319	0.483	0.577
RP3	0.488	0.641	0.646	0.903	0.594	0.766	0.618	0.476	0.451	0.635	0.618	0.573	0.618	0.605	0.534	0.210	0.550	0.659	0.521	0.542	0.554	0.559	0.307	0.618	0.301	0.533	0.569
IN1	0.748	0.765	0.772	0.694	0.910	0.655	0.735	0.711	0.592	0.708	0.735	0.704	0.742	0.777	0.711	0.230	0.738	0.707	0.662	0.730	0.696	0.687	0.274	0.681	0.449	0.650	0.662
IN2	0.697	0.681	0.696	0.614	0.896	0.591	0.651	0.705	0.599	0.675	0.694	0.653	0.657	0.682	0.636	0.340	0.729	0.596	0.638	0.721	0.576	0.661	0.339	0.629	0.517	0.651	0.666
IN3	0.705	0.758	0.767	0.684	0.920	0.714	0.766	0.676	0.611	0.738	0.712	0.704	0.688	0.693	0.701	0.228	0.714	0.721	0.614	0.726	0.660	0.630	0.279	0.641	0.435	0.562	0.615
RT1	0.616	0.703	0.705	0.803	0.687	0.925	0.738	0.529	0.520	0.731	0.697	0.607	0.697	0.657	0.641	0.212	0.562	0.681	0.502	0.591	0.611	0.578	0.224	0.619	0.290	0.436	0.507
RT2	0.586	0.723	0.704	0.812	0.698	0.950	0.716	0.589	0.534	0.679	0.652	0.603	0.672	0.637	0.602	0.236	0.610	0.695	0.523	0.592	0.621	0.596	0.288	0.635	0.356	0.515	0.578
RT3	0.522	0.668	0.663	0.738	0.618	0.909	0.645	0.462	0.500	0.661	0.631	0.554	0.648	0.619	0.568	0.179	0.542	0.678	0.515	0.544	0.578	0.540	0.235	0.629	0.298	0.500	0.540
PR1	0.747	0.811	0.844	0.772	0.823	0.752	0.892	0.698	0.621	0.792	0.798	0.766	0.771	0.788	0.767	0.287	0.745	0.824	0.688	0.757	0.751	0.719	0.272	0.699	0.401	0.641	0.715
PR2	0.590	0.628	0.666	0.701	0.691	0.705	0.918	0.612	0.598	0.708	0.653	0.645	0.644	0.627	0.583	0.138	0.685	0.732	0.617	0.665	0.657	0.656	0.242	0.570	0.367	0.465	0.539
PR3	0.419	0.476	0.514	0.496	0.578	0.542	0.861	0.602	0.573	0.580	0.493	0.556	0.477	0.475	0.420	-0.072	0.589	0.619	0.446	0.570	0.526	0.536	0.242	0.380	0.387	0.349	0.407
CA1	0.640	0.554	0.489	0.376	0.592	0.370	0.509	0.846	0.588	0.419	0.480	0.496	0.492	0.547	0.452	0.258	0.593	0.389	0.579	0.639	0.472	0.560	0.074	0.493	0.507	0.532	0.476
CA2	0.640	0.672	0.649	0.617	0.747	0.585	0.739	0.930	0.653	0.634	0.654	0.636	0.622	0.678	0.579	0.214	0.709	0.612	0.637	0.724	0.583	0.663	0.285	0.609	0.524	0.636	0.624
CA3	0.581	0.622	0.591	0.558	0.712	0.555	0.663	0.913	0.637	0.538	0.578	0.543	0.541	0.576	0.477	0.204	0.686	0.525	0.553	0.680	0.521	0.589	0.299	0.555	0.532	0.575	0.584
AU1	0.638	0.623	0.566	0.514	0.633	0.530	0.636	0.662	0.955	0.634	0.648	0.592	0.617	0.596	0.509	0.111	0.663	0.557	0.563	0.679	0.569	0.619	0.017	0.612	0.556	0.480	0.483
AU2	0.615	0.613	0.560	0.523	0.642	0.540	0.660	0.674	0.969	0.646	0.654	0.611	0.621	0.590	0.508	0.081	0.690	0.584	0.574	0.712	0.572	0.639	0.061	0.610	0.580	0.516	0.503
AU3	0.632	0.631	0.583	0.524	0.627	0.536	0.635	0.674	0.951	0.641	0.654	0.586	0.626	0.598	0.527	0.102	0.683	0.580	0.590	0.707	0.575	0.650	0.056	0.608	0.611	0.530	0.503
DE1	0.581	0.574	0.614	0.556	0.610	0.566	0.618	0.511	0.600	0.782	0.725	0.582	0.668	0.630	0.644	0.147	0.529	0.592	0.463	0.571	0.510	0.535	0.112	0.511	0.374	0.381	0.437
DE2	0.639	0.644	0.716	0.658	0.726	0.668	0.728	0.589	0.658	0.900	0.805	0.678	0.755	0.748	0.664	0.239	0.653	0.689	0.555	0.660	0.620	0.627	0.164	0.585	0.400	0.488	0.541
DE3	0.655	0.704	0.758	0.701	0.719	0.692	0.717	0.562	0.625	0.929	0.857	0.735	0.800	0.801	0.752	0.252	0.660	0.781	0.617	0.679	0.659	0.659	0.204	0.649	0.308	0.559	0.634
DE4	0.598	0.626	0.711	0.682	0.687	0.649	0.665	0.509	0.605	0.891	0.842	0.726	0.784	0.724	0.681	0.267	0.627	0.688	0.545	0.638	0.600	0.600	0.226	0.631	0.330	0.487	0.620
DE5	0.610	0.689	0.754	0.729	0.723	0.706	0.749	0.542	0.588	0.939	0.852	0.738	0.784	0.778	0.731	0.199	0.712	0.783	0.642	0.694	0.688	0.692	0.251	0.665	0.340	0.578	0.669
PS1	0.465	0.519	0.546	0.548	0.584	0.563	0.652	0.503	0.593	0.753	0.742	0.587	0.633	0.585	0.562	0.096	0.584	0.571	0.451	0.577	0.480	0.544	0.173	0.446	0.353	0.347	0.453
PS2	0.648	0.670	0.722	0.695	0.727	0.661	0.696	0.591	0.676	0.884	0.910	0.717	0.820	0.773	0.717	0.231	0.693	0.706	0.583	0.716	0.649	0.657	0.191	0.647	0.410	0.529	0.633
PS3	0.735	0.759	0.805	0.736	0.780	0.678	0.701	0.636	0.608	0.851	0.962	0.764	0.860	0.863	0.786	0.360	0.732	0.741	0.683	0.747	0.720	0.733	0.243	0.735	0.425	0.649	0.750
PS4	0.639	0.686	0.722	0.684	0.651	0.626	0.621	0.523	0.631	0.817	0.893	0.722	0.827	0.804	0.690	0.296	0.653	0.740	0.627	0.668	0.648	0.687	0.228	0.717	0.354	0.664	0.713
ST1	0.540	0.544	0.553	0.475	0.455	0.403	0.403	0.296	0.370	0.530	0.573	0.665	0.582	0.619	0.594	0.279	0.426	0.601	0.514	0.441	0.532	0.530	0.088	0.570	0.132	0.522	0.523
ST2	0.569	0.621	0.663	0.616	0.656	0.555	0.751	0.563	0.564	0.707	0.670	0.846	0.639	0.644	0.595	0.155	0.646	0.688	0.543	0.632	0.606	0.624	0.252	0.557	0.354	0.477	0.606
ST3	0.363	0.516	0.579	0.491	0.442	0.488	0.523	0.246	0.278	0.587	0.546	0.548	0.501	0.522	0.556	0.244	0.414	0.686	0.322	0.362	0.541	0.433	0.190	0.406	-0.075	0.341	0.411
ST4	0.627	0.703	0.699	0.652	0.697	0.620	0.649	0.561	0.511	0.712	0.722	0.877	0.709	0.680	0.699	0.374	0.630	0.709	0.575	0.646	0.613	0.652	0.284	0.628	0.307	0.571	0.637
CO1	0.723	0.689	0.684	0.653	0.707	0.648	0.649	0.585	0.647	0.766	0.824	0.733	0.907	0.818	0.686	0.241	0.635	0.649	0.603	0.687	0.614	0.628	0.178	0.700	0.501	0.569	0.615
CO2	0.723	0.759	0.760	0.749	0.762	0.746	0.752	0.618	0.659	0.855	0.880	0.749	0.964	0.858	0.732	0.265	0.708	0.767	0.624	0.730	0.703	0.704	0.257	0.731	0.453	0.629	0.693
CO3	0.692	0.678	0.671	0.647	0.634	0.574	0.544	0.500	0.488	0.699	0.772	0.702	0.884	0.824	0.677	0.323	0.592	0.655	0.686	0.620	0.610	0.670	0.234	0.746	0.396	0.740	0.726
RE1	0.763	0.696	0.718	0.637	0.721	0.553	0.565	0.608	0.536	0.713	0.811	0.708	0.848	0.917	0.711	0.341	0.653	0.615	0.710	0.693	0.626	0.670					

PD4	0.749	0.737	0.724	0.644	0.764	0.587	0.711	0.721	0.674	0.708	0.753	0.702	0.709	0.746	0.657	0.267	0.954	0.721	0.789	0.869	0.762	0.798	0.218	0.742	0.548	0.718	0.740
PI1	0.686	0.778	0.803	0.751	0.724	0.704	0.814	0.595	0.611	0.777	0.759	0.756	0.751	0.779	0.715	0.158	0.776	0.948	0.720	0.776	0.850	0.786	0.203	0.727	0.348	0.647	0.697
PI2	0.469	0.575	0.645	0.613	0.609	0.612	0.634	0.390	0.437	0.702	0.656	0.632	0.639	0.613	0.625	0.180	0.501	0.832	0.455	0.496	0.566	0.527	0.317	0.531	0.184	0.453	0.523
PI3	0.639	0.744	0.775	0.746	0.703	0.706	0.787	0.565	0.575	0.752	0.738	0.736	0.705	0.736	0.703	0.216	0.753	0.961	0.700	0.744	0.829	0.767	0.210	0.706	0.291	0.627	0.680
PL1	0.779	0.715	0.719	0.609	0.743	0.555	0.705	0.677	0.639	0.692	0.712	0.705	0.707	0.743	0.702	0.191	0.804	0.716	0.932	0.849	0.742	0.798	0.137	0.743	0.588	0.715	0.703
PL2	0.651	0.592	0.548	0.543	0.514	0.442	0.482	0.504	0.435	0.477	0.527	0.533	0.534	0.604	0.533	0.291	0.595	0.538	0.891	0.625	0.606	0.668	0.109	0.654	0.366	0.640	0.641
PM2	0.689	0.686	0.660	0.605	0.732	0.564	0.732	0.719	0.694	0.660	0.676	0.670	0.653	0.680	0.593	0.139	0.851	0.704	0.762	0.941	0.720	0.794	0.190	0.671	0.578	0.653	0.670
PM3	0.777	0.749	0.737	0.632	0.771	0.605	0.684	0.713	0.681	0.718	0.775	0.708	0.740	0.765	0.679	0.297	0.836	0.706	0.783	0.942	0.763	0.795	0.155	0.742	0.596	0.707	0.732
MS1	0.687	0.705	0.677	0.595	0.581	0.551	0.561	0.435	0.437	0.574	0.625	0.618	0.631	0.668	0.636	0.305	0.608	0.712	0.655	0.628	0.902	0.686	0.047	0.685	0.270	0.569	0.599
MS2	0.594	0.673	0.695	0.642	0.666	0.628	0.777	0.548	0.602	0.702	0.670	0.644	0.626	0.641	0.620	0.073	0.737	0.823	0.661	0.738	0.905	0.726	0.135	0.636	0.346	0.522	0.585
MS3	0.726	0.736	0.732	0.627	0.693	0.601	0.658	0.620	0.587	0.658	0.700	0.640	0.682	0.725	0.640	0.288	0.757	0.742	0.727	0.786	0.933	0.758	0.121	0.741	0.455	0.654	0.685
TU1	0.702	0.662	0.614	0.587	0.638	0.552	0.606	0.621	0.621	0.602	0.672	0.645	0.633	0.664	0.585	0.263	0.719	0.608	0.710	0.743	0.657	0.862	0.111	0.661	0.470	0.572	0.591
TU2	0.617	0.650	0.640	0.604	0.684	0.573	0.750	0.654	0.666	0.689	0.675	0.671	0.638	0.658	0.617	0.119	0.798	0.724	0.709	0.809	0.721	0.911	0.184	0.646	0.481	0.601	0.633
TU3	0.642	0.655	0.645	0.596	0.574	0.488	0.507	0.487	0.441	0.562	0.637	0.645	0.651	0.691	0.627	0.353	0.607	0.674	0.709	0.649	0.694	0.845	0.174	0.705	0.356	0.714	0.674
HO1	0.048	0.110	0.173	0.222	0.240	0.143	0.229	0.205	-0.025	0.166	0.160	0.177	0.194	0.199	0.115	0.128	0.175	0.176	0.122	0.134	0.108	0.138	0.652	0.123	-0.021	0.263	0.247
HO2	0.006	0.205	0.250	0.301	0.294	0.263	0.332	0.221	0.066	0.257	0.240	0.263	0.226	0.256	0.181	0.144	0.247	0.325	0.124	0.180	0.144	0.203	0.869	0.135	-0.053	0.294	0.357
HO3	0.085	0.172	0.168	0.257	0.250	0.202	0.129	0.197	0.030	0.136	0.176	0.175	0.195	0.174	0.141	0.318	0.183	0.099	0.096	0.125	0.032	0.098	0.828	0.234	0.178	0.266	0.307
MU1	0.705	0.702	0.668	0.625	0.632	0.567	0.572	0.545	0.573	0.596	0.648	0.666	0.696	0.707	0.599	0.216	0.676	0.683	0.735	0.695	0.692	0.720	0.219	0.916	0.495	0.733	0.691
MU2	0.592	0.598	0.541	0.589	0.491	0.550	0.356	0.453	0.442	0.497	0.559	0.456	0.590	0.554	0.507	0.396	0.437	0.477	0.456	0.470	0.474	0.497	0.146	0.698	0.376	0.559	0.557
MU3	0.482	0.402	0.372	0.414	0.412	0.468	0.490	0.391	0.494	0.452	0.425	0.393	0.459	0.392	0.385	-0.037	0.410	0.418	0.406	0.456	0.438	0.433	-0.061	0.555	0.461	0.260	0.268
MU4	0.727	0.708	0.713	0.673	0.657	0.605	0.520	0.545	0.512	0.634	0.706	0.641	0.700	0.718	0.636	0.466	0.623	0.601	0.657	0.643	0.657	0.640	0.220	0.868	0.439	0.656	0.718
EC1	0.620	0.479	0.437	0.374	0.524	0.378	0.414	0.534	0.571	0.378	0.446	0.401	0.490	0.457	0.393	0.138	0.537	0.342	0.523	0.604	0.429	0.483	0.012	0.561	0.915	0.544	0.477
EC2	0.494	0.406	0.364	0.334	0.450	0.340	0.452	0.508	0.590	0.370	0.382	0.361	0.406	0.381	0.286	0.005	0.521	0.322	0.460	0.560	0.399	0.439	0.042	0.482	0.908	0.488	0.376
EC3	0.516	0.369	0.308	0.274	0.428	0.205	0.297	0.506	0.460	0.275	0.364	0.345	0.428	0.418	0.307	0.161	0.503	0.188	0.506	0.532	0.271	0.447	0.063	0.487	0.873	0.572	0.484
EC4	0.489	0.380	0.315	0.292	0.452	0.310	0.410	0.554	0.584	0.331	0.378	0.360	0.404	0.374	0.292	0.079	0.535	0.265	0.445	0.563	0.332	0.440	0.097	0.471	0.926	0.511	0.410
SO1	0.561	0.546	0.504	0.453	0.591	0.382	0.529	0.592	0.519	0.467	0.500	0.545	0.548	0.574	0.466	0.123	0.639	0.487	0.647	0.640	0.497	0.612	0.304	0.578	0.628	0.819	0.628
SO2	0.651	0.648	0.615	0.558	0.592	0.451	0.416	0.544	0.424	0.517	0.611	0.554	0.634	0.697	0.567	0.405	0.596	0.525	0.668	0.618	0.541	0.633	0.291	0.712	0.455	0.901	0.709
SO3	0.630	0.714	0.663	0.621	0.645	0.541	0.563	0.616	0.497	0.575	0.635	0.646	0.672	0.715	0.605	0.276	0.690	0.687	0.679	0.682	0.643	0.678	0.335	0.701	0.464	0.929	0.741
SO4	0.640	0.647	0.622	0.593	0.610	0.482	0.471	0.569	0.459	0.531	0.616	0.577	0.660	0.693	0.569	0.357	0.648	0.577	0.673	0.641	0.592	0.643	0.281	0.718	0.546	0.922	0.732
EN1	0.605	0.637	0.665	0.615	0.631	0.518	0.552	0.554	0.447	0.643	0.713	0.675	0.684	0.700	0.630	0.420	0.652	0.592	0.622	0.645	0.573	0.619	0.361	0.659	0.423	0.664	0.888
EN2	0.619	0.683	0.719	0.665	0.649	0.524	0.560	0.550	0.435	0.633	0.719	0.714	0.696	0.734	0.651	0.380	0.650	0.676	0.653	0.662	0.634	0.663	0.372	0.706	0.402	0.749	0.927
EN3	0.484	0.605	0.651	0.640	0.655	0.590	0.596	0.516	0.398	0.638	0.656	0.598	0.603	0.629	0.558	0.312	0.647	0.637	0.561	0.623	0.545	0.586	0.451	0.556	0.291	0.561	0.827
EN4	0.628	0.621	0.570	0.514	0.532	0.399	0.483	0.552	0.499	0.443	0.531	0.541	0.575	0.606	0.509	0.298	0.619	0.515	0.702	0.639	0.595	0.626	0.186	0.679	0.534	0.721	0.804

7.4.2 Second-order Measurement Model

At this stage, the study estimated the measurement properties of higher-order constructs using the repeated-indicator and two-stage approaches (Becker, Klein, and Wetzels 2012), that is, the second-order antecedents. These comprised personality traits, entrepreneurial orientation, human capital, social capital, financial capital, marketing capabilities, business environment constructs and the outcome sustainable performance construct, following the procedures described in Chapter 4.

In the repeated-indicator approach, the second-order personality traits construct consisted of 13 items (4+3+3+3) in which four items reflected achievement motivation, three items reflected tolerance for ambiguity, three items reflected locus of control and three items reflected risk-taking propensity. The second-order entrepreneurial orientation construct consisted of 15 items (3+3+3+3+3) in which three items reflected innovativeness, three items reflected risk taking, three items reflected proactiveness, three items reflected competitive aggressiveness and three items reflected autonomy. The second-order human capital construct consisted of nine items (5+4) in which five items formed demographic and four items formed psychographic. The second-order social capital construct consisted of 10 items (4+3+3) in which four items formed structural, three items formed cognitive and three items formed relational. The second-order financial capital construct consisted of nine items (4+5) in which four items formed sources of finance and five items formed capital structure. The second-order marketing capabilities construct consisted of 16 items (4+3+3+3+3) in which four items reflected product/service, three items reflected price, three items reflected place, three items reflected promotion and three items reflected market segment. The second-order business environment construct consisted of 10 items (3+3+4) in which three items formed turbulent, three items formed hostile and four items formed munificent. The second-order sustainable performance outcome construct consisted of 15 items (5+5+5) in which five items reflected economic, five items reflected social and five items reflected natural environmental. In measuring the items and constructs in the first-order level, this study at first deleted three items CS2, CS3 and CS4 based on the item reliability criterion and also eliminated another nine items TA3, LC2, PD1, PD2, PL3, PM1, EC5, SO5 and EN5 based on the cross-loadings criterion. Therefore, these items were also deleted from second-order constructs. The study confirmed that the loadings or weights of the retained first-order latent variables on the second-order factors achieved the minimum critical *t*-value of 1.65 (see Table 7.15). The results depicted in Table 7.14 also show that all the VIF scores were below 10. Therefore, all

the formative items were retained. The results also ensured that the composite reliability (CR) and AVE values of the second-order model were greater than 0.7 and 0.5 respectively, which provided evidence of reliable and valid higher-order measures (see Table 7.14).

This study also conducted the two-stage approach to provide evidence of reliable and valid higher-order measures. In the two-stage approach, the second-order personality traits construct consisted of four items (four constructs) in which the four items reflected achievement motivation, tolerance for ambiguity, locus of control and risk-taking propensity. The second-order entrepreneurial orientation construct consisted of five items (five constructs) in which five items reflected innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. The second-order human capital construct consisted of two items (two constructs) in which two items formed demographic and psychographic. The second-order social capital construct consisted of three items (three constructs) in which three items formed structural, cognitive and relational. The second-order financial capital construct consisted of two items (two constructs) in which two items formed sources of finance and capital structure. The second-order marketing capabilities construct consisted of five items (five constructs) in which five items reflected product/service, price, place, promotion and market segment. The second-order business environment construct consisted of three items (three constructs) in which three items formed turbulent, hostile, and munificent. The second-order sustainable performance outcome construct consisted of three items (three constructs) in which three items reflected economic, social and natural environmental. As mentioned earlier, this study deleted three items CS2, CS3 and CS4 based on the item reliability criterion, and also eliminated another nine items TA3, LC2, PD1, PD2, PL3, PM1, EC5, SO5, and EN5 based on the cross-loadings criterion. After deleting the items based on item reliability and cross-loadings criteria, this study used the latent variables scores to establish each item (first-order construct). The study confirmed that loadings or weights of the items (first-order latent variables) on the second-order constructs achieved the minimum critical *t*-value of 1.65 (see Table 7.15). The result has also shown that all the VIF scores were below 10. Therefore, all the formative items were retained. The results also ensured that the CR and AVE values of the second-order model were greater than 0.7 and 0.5 respectively (see Table 7.15).

Table 7.14: Psychometric properties for second-order constructs: Main model (repeated-indicator approach)

		Dimensions/Subdimensions/Items						
Subdimensions	Personality Traits (PT)	L	L t-v	W	W t-v	VIF	AVE	CR
Achievement	I want to...					-	0.686	0.960
Motivation (AM)	AM1 work at my best.	0.856	61.657	0.113	57.544			
	AM2 accomplish tasks requiring skills and effort.	0.888	86.840	0.116	61.631			
	AM3 accomplish something of great significance.	0.791	40.741	0.101	42.824			
	AM4 do a difficult job well.	0.838	57.216	0.110	49.218			
Tolerance for Ambiguity (TA)	I like to...					-		
	TA1 lead my life without a routine frame.	0.917	117.254	0.122	50.214			
	TA2 tackle a complicated problem rather than solve an easy one.	0.722	25.712	0.098	31.982			
	TA3 take important decisions on the basis of insufficient information.							
Locus of Control (LC)	LC1 When I make plans, I am confident to make them work.	0.898	87.235	0.121	45.944	-		
	LC2 Getting what I want has little or nothing to do with luck.							
	LC3 I am always willing to admit mistakes.	0.820	53.886	0.109	45.508			
Risk-taking Propensity (RP)	RP1 I am not cautious about unpredictable situations.	0.873	60.566	0.116	51.047	-		
	RP2 I enjoy taking risks.	0.766	36.695	0.102	51.339			
	RP3 I willingly get involved in situations with uncertain outcomes.	0.717	23.485	0.097	32.272			
Subdimensions	Entrepreneurial Orientation (EO)							
Innovativeness (IN)	Our "tea-stall" ...					-	0.631	0.962
	IN1 actively introduces improvements and innovations.	0.832	54.307	0.090	42.949			
	IN2 is creative in its methods of operation.	0.796	41.459	0.086	42.439			
	IN3 seeks out new ways to do things.	0.851	50.309	0.090	37.836			
Risk Taking (RT)	Our "tea-stall" ...					-		
	RT1 considers the term "risk taker" as a positive attribute.	0.782	40.074	0.082	40.306			
	RT2 encourages taking calculated risks with new ideas.	0.802	43.457	0.084	44.837			
	RT3 emphasizes both exploration and experimentation for opportunities.	0.721	31.074	0.076	31.726			
Proactiveness (PR)	Our "tea-stall" ...					-		
	PR1 takes the initiative in every situation (e.g., working with others).	0.872	87.273	0.094	42.323			
	PR2 excels at identifying opportunities.	0.811	44.395	0.085	40.193			
	PR3 initiates actions to which other organizations respond (e.g., suppliers).	0.724	30.171	0.074	29.878			
Competitive Aggressiveness (CA)	Our "tea-stall" ...					-		
	CA1 operates in an intensely competitive environment.	0.669	24.579	0.072	28.585			
	CA2 takes a bold or aggressive approach when competing	0.840	52.969	0.089	44.566			
	CA3 tries to undo and out-manoeuvre the competition as best as possible.	0.800	42.953	0.084	45.649			
Autonomy (AU)	Our "tea-stall" members (e.g., family members, employees)...					-		
	AU1 are allowed to make and instigate changes in the way they perform their tasks.	0.790	37.065	0.082	44.006			
	AU2 are given the freedom to make their own decisions on how to go about doing their work.	0.806	42.074	0.084	49.351			
	AU3 are given authority and responsibility to act alone to the interests of the business.	0.792	37.266	0.083	43.911			
Subdimensions	Human Capital (HC)							
Demographic (DE)	The following attributes add value to our business.					6.120	-	-

	DE1	Relevant or other work experience of “tea-stall” members.	0.740	23.358	-0.003	0.091			
	DE2	Relevant or other skills of “tea-stall” members.	0.852	39.668	0.145	3.551			
	DE3	Explicit knowledge or education level of “tea-stall” members.	0.879	51.774	0.021	0.450			
	DE4	Number of family members working in the “tea-stall”.	0.844	31.722	-0.033	0.726			
	DE5	Age or maturity level of “tea-stall” members.	0.888	55.535	0.134	2.475			
Psychographic (PS)		The following features add value to our ‘tea-stall’ business.					6.120		
	PS1	Tacit knowledge of “tea-stall” members.	0.737	28.761	0.049	0.947			
	PS2	Extraordinary commitment of the “tea-stall” members.	0.904	61.524	0.081	1.392			
	PS3	Friendly and intimate relationships among the “tea-stall” members.	0.956	87.497	0.459	7.156			
	PS4	Voluntary labour provided by the family members.	0.887	49.767	0.249	5.366			
Subdimensions		Social Capital (SC)							
Structural (ST)	ST1	Family, relatives and friends yield value to our “tea-stall” by giving advice.	0.598	18.367	0.086	1.905	2.858	-	-
	ST2	Some suppliers assist our “tea-stall” by providing product solutions.	0.762	25.641	0.209	4.245			
	ST3	Some customers help our “tea-stall” by generating word-of-mouth recommendations.	0.493	12.744	-0.170	5.002			
	ST4	Our “tea-stall” has enough number of contacts and acquaintances.	0.789	25.430	0.195	3.642			
Cognitive (CO)		Our “tea-stall” members’ (family members, employees)...					6.046		
	CO1	share the same ambitions and vision of the tea-stall business.	0.856	43.461	-0.029	0.662			
	CO2	are enthusiastic about pursuing the collective goals.	0.911	57.172	0.242	5.229			
	CO3	share the same language and narratives to understand each other.	0.835	39.908	0.065	1.822			
Relational (RE)		Our “tea-stall” members (e.g., family members, employees)...					5.997		
	RE1	trust and believe in each other.	0.880	44.939	0.212	4.751			
	RE2	show norms and respect for each other.	0.891	56.300	0.226	5.100			
	RE3	have obligation to support each other.	0.861	51.180	0.095	2.361			
Subdimensions		Financial Capital (FC)							
Finance Sources (FS)		Our “tea-stall”...					1.080	-	-
	FC1	acquires loans from personal or family members’ savings.	0.750	18.171	0.632	15.023			
	FC2	seeks loan from relatives or friends.	0.544	10.147	0.133	1.864			
	FC3	searches for loan from known persons.	0.640	13.829	0.259	3.876			
	FC4	prefers institutional borrowing.	0.509	10.074	0.437	8.018			
Capital Structure (CS)		Our “tea-stall”...					1.080		
	CS1	needs small amount of capital (less than Tk. 10,000) to start and run the business.	0.159	2.554	0.145	3.736			
	CS2	faces few procedural requirements for acquiring loan.							
	CS3	enjoys flexible time frame to payback loan.							
	CS4	enjoys lower cost of capital.							
	CS5	faces lower risk tolerance of capital.	0.365	6.049	0.118	2.521			
Subdimensions		Marketing Capabilities (MC)							
Product/Service (PD)		Our “tea-stall”...					-	0.705	0.966
	PD1	produces special tea for customers.							
	PD2	has a secret tea making method.							
	PD3	can fulfil customer product requirements.	0.848	50.234	0.103	54.619			
	PD4	serves customers quickly.	0.892	69.935	0.108	61.108			
Price (PI)		Our “tea-stall”...					-		

Place (PL)	PI1	offers lower price than restaurants.	0.908	138.085	0.105	61.070					
	PI2	charges higher price for special tea than restaurants.	0.645	15.346	0.075	16.972					
	PI3	has the ability to produce products at lower cost than restaurants.	0.891	100.841	0.103	62.402					
Promotion (PM)	Our "tea-stall"...								-		
	PL1	prides in more convenient location for customers compared to formal restaurants.	0.876	80.756	0.106	69.728					
	PL2	needs a very small space to operate business than restaurants.	0.699	23.044	0.084	29.782					
Market Segment (MS)	Our "tea-stall"...								-		
	PM1	uses word-of-mouth promotion strategy to attract new customers.									
	PM2	can cook and demonstrate in front of customers.	0.865	73.462	0.105	65.649					
Subdimensions Turbulent (TU)	PM3	is friendly in dealing with customers.	0.878	82.843	0.107	66.014					
	Our "tea-stall"...								-		
	MS1	serves to a large number of lower-income customers.	0.785	40.350	0.089	40.880					
Subdimensions Hostile (HO)	MS2	has stable and profitable customers.	0.864	72.869	0.099	61.398					
	MS3	can be easily accessible to the lower-income customers.	0.876	73.695	0.102	64.205					
	Business Environment (BE) In "tea-stall" industry...								2.406	-	-
Munificent (MU)	TU1	actions of the competitors are easy to predict.	0.793	29.268	0.145	4.028					
	TU2	demand and consumer tastes are easy to forecast.	0.838	37.737	0.304	8.494					
	TU3	the product/service patterns do not change much.	0.777	30.180	0.089	2.870					
Subdimensions Economic (EC)	Our "tea-stall"...								1.048		
	HO1	has threats from extortionists and law enforcement authorities.	0.227	4.061	0.028	0.924					
	HO2	is hard to keep afloat, due to government pressure.	0.303	5.626	0.085	2.762					
Subdimensions Social (SO)	HO3	can control and manipulate extortion, and government pressure to its own advantage.	0.289	5.121	0.066	2.672					
	MU1	There are few rules and regulations that govern "tea-stall"; providing a favourable environment for doing a business.	0.854	45.461	0.272	7.294					
	Within my geographic area...								2.436		
Subdimensions Economic (EC)	MU2	educational and training programmes are available to improve vocational and business skills for "tea-stall" businesses.	0.650	18.593	0.105	3.626					
	MU3	financial institutions are willing to finance "tea-stall" businesses.	0.518	12.894	0.080	3.652					
	MU4	there is a supportive public attitude towards "tea-stall" businesses.	0.809	26.561	0.207	4.638					
Subdimensions Social (SO)	Sustainable Performance (SP) EC1 We see our "tea-stall" is providing employment to us and others.		0.731	19.910	0.101	26.514			-	0.587	0.944
	Our "tea-stall's" economic performance is at an acceptable level in terms of ...										
	EC2	sales growth.	0.666	16.446	0.092	22.241					
Subdimensions Social (SO)	EC3	income stability.	0.730	27.226	0.098	34.036					
	EC4	return on investment.	0.694	20.020	0.095	27.919					
	EC5	profitability.									
Subdimensions Social (SO)	Our "tea-stall"...										
	SO1	ensures basic needs for our family.	0.804	41.864	0.113	35.117			-		
	SO2	enhances our social recognition in society.	0.810	40.925	0.116	26.604					
Subdimensions Social (SO)	SO3	improves our empowerment in society.	0.837	69.889	0.121	30.900					

Natural Environment (EN)	S04	provides freedom and control over the course of our own lifestyle.	0.859	63.767	0.122	30.979	
	S05	is concerned about child labour use.					
		Our "tea-stall" ...					
	EN1	uses utilities (e.g., energy and water) in an environment-friendly manner.	0.767	21.083	0.112	21.843	-
	EN2	produces few wastes and emissions.	0.811	37.176	0.119	30.979	
	EN3	is concerned about waste management.	0.655	15.970	0.098	17.968	
	EN4	uses small space to set up and operate business.	0.797	34.721	0.114	29.705	
EN5	is concerned about hygienic factors.						

Abbreviations:

L-Loadings

W-Weights

L *t-v*-Loadings *t*-value

W *t-v*-Weights *t*-value

VIF-Variance Inflation Factor

AVE-Average Variance Extracted

CR-Composite Reliability

Table 7.15: Psychometric properties for second-order construct: Main model (two-stage approach)

		Dimensions/Subdimensions/Items						
Subdimensions	Personality Traits (PT)	L	L t-v	W	W t-v	VIF	AVE	CR
Achievement	I want to...	0.896	67.674	0.274	69.437	-	0.841	0.955
Motivation (AM)	AM1 work at my best.							
	AM2 accomplish tasks requiring skills and effort.							
	AM3 accomplish something of great significance.							
	AM4 do a difficult job well.							
Tolerance for Ambiguity (TA)	I like to...	0.949	203.525	0.282	60.732	-		
	TA1 lead my life without a routine frame.							
	TA2 tackle a complicated problem rather than solve an easy one.							
	TA3 take important decisions on the basis of insufficient information.							
Locus of Control (LC)	LC1 When I make plans, I am confident to make them work.	0.942	201.191	0.275	61.855	-		
	LC2 Getting what I want has little or nothing to do with luck.							
	LC3 I am always willing to admit mistakes.							
Risk-taking Propensity (RP)	RP1 I am not cautious about unpredictable situations.	0.881	55.270	0.260	56.942	-		
	RP2 I enjoy taking risks.							
	RP3 I willingly get involved in situations with uncertain outcomes.							
Subdimensions	Entrepreneurial Orientation (EO)							
Innovativeness (IN)	Our "tea-stall" ...	0.914	90.931	0.256	45.023	-	0.754	0.939
	IN1 actively introduces improvements and innovations.							
	IN2 is creative in its methods of operation.							
	IN3 seeks out new ways to do things.							
Risk Taking (RT)	Our "tea-stall" ...	0.828	46.167	0.217	37.479	-		
	RT1 considers the term "risk taker" as a positive attribute.							
	RT2 encourages taking calculated risks with new ideas.							
	RT3 emphasizes both exploration and experimentation for opportunities.							
Proactiveness (PR)	Our "tea-stall" ...	0.908	91.541	0.234	49.175	-		
	PR1 takes the initiative in every situation (e.g., working with others).							
	PR2 excels at identifying opportunities.							
	PR3 initiates actions to which other organizations respond (e.g., suppliers).							
Competitive Aggressiveness (CA)	Our "tea-stall" ...	0.866	71.518	0.229	38.872	-		
	CA1 operates in an intensely competitive environment.							
	CA2 takes a bold or aggressive approach when competing							
	CA3 tries to undo and out-manoeuvre the competition as best as possible.							
Autonomy (AU)	Our "tea-stall" members (e.g., family members, employees)...	0.822	41.697	0.214	36.201	-		
	AU1 are allowed to make and instigate changes in the way they perform their tasks.							
	AU2 are given the freedom to make their own decisions on how to go about doing their work.							
	AU3 are given authority and responsibility to act alone to the interests of the business.							
Subdimensions	Human Capital (HC)							

Demographic (DE)	The following attributes add value to our business.	0.949	81.201	0.233	2.754	6.120	-	-
	DE1 Relevant or other work experience of “tea-stall” members.							
	DE2 Relevant or other skills of “tea-stall” members.							
	DE3 Explicit knowledge or education level of “tea-stall” members.							
	DE4 Number of family members working in the “tea-stall”.							
	DE5 Age or maturity level of “tea-stall” members.							
Psychographic (PS)	The following features add value to our “tea-stall” business.	0.996	288.285	0.783	9.732	6.120		
	PS1 Tacit knowledge of “tea-stall” members.							
	PS2 Extraordinary commitment of the “tea-stall” members.							
	PS3 Friendly and intimate relationships among the “tea-stall” members.							
	PS4 Voluntary labour provided by the family members.							
Subdimensions	Social Capital (SC)							
Structural (ST)	ST1 Family, relatives and friends yield value to our “tea-stall” by giving advice.	0.906	44.030	0.334	4.022	2.858	-	-
	ST2 Some suppliers assist our “tea-stall” by providing product solutions.							
	ST3 Some customers help our “tea-stall” by generating word-of-mouth recommendations.							
	ST4 Our “tea-stall” has enough number of contacts and acquaintances.							
Cognitive (CO)	Our “tea-stall” members’ (family members, employees)...	0.947	61.591	0.266	3.682	6.046		
	CO1 share the same ambitions and vision of the tea-stall business.							
	CO2 are enthusiastic about pursuing the collective goals.							
	CO3 share the same language and narratives to understand each other.							
Relational (RE)	Our “tea-stall” members (e.g., family members, employees)...	0.965	81.447	0.462	6.999	5.997		
	RE1 trust and believe in each other.							
	RE2 show norms and respect for each other.							
	RE3 have obligation to support each other.							
Subdimensions	Financial Capital (FC)							
Finance Sources (FS)	Our “tea-stall”...	0.989	123.989	0.948	42.952	1.080	-	-
	FC1 acquires loans from personal or family members’ savings.							
	FC2 seeks loan from relatives or friends.							
	FC3 searches for loan from known persons.							
	FC4 prefers institutional borrowing.							
Capital Structure (CS)	Our “tea-stall”...	0.410	7.092	0.152	2.869	1.080		
	CS1 needs small amount of capital (less than Tk. 10,000) to start and run the business.							
	CS2 faces few procedural requirements for acquiring loan.							
	CS3 enjoys flexible time frame to payback loan.							
	CS4 enjoys lower cost of capital.							
	CS5 faces lower risk tolerance of capital.							
Subdimensions	Marketing Capabilities (MC)							
Product/Service (PD)	Our “tea-stall”...	0.928	136.784	0.233	71.199	-	0.827	0.960
	PD1 produces special tea for customers.							
	PD2 has a secret tea making method.							
	PD3 can fulfil customer product requirements.							
	PD4 serves customers quickly.							

Price (PI)	Our "tea-stall" ...	0.882	105.640	0.209	55.142	-		
	PI1 offers lower price than restaurants.							
	PI2 charges higher price for special tea than restaurants.							
	PI3 has the ability to produce products at lower cost than restaurants.							
Place (PL)	Our "tea-stall" ...	0.890	82.221	0.217	74.505	-		
	PL1 prides in more convenient location for customers compared to formal restaurants.							
	PL2 needs a very small space to operate business than restaurants.							
	PL3 has the advantage of flexible business hours than restaurants.							
Promotion (PM)	Our "tea-stall" ...	0.940	193.689	0.236	74.535	-		
	PM1 uses word-of-mouth promotion strategy to attract new customers.							
	PM2 can cook and demonstrate in front of customers.							
	PM3 is friendly in dealing with customers.							
Market Segment (MS)	Our "tea-stall" ...	0.905	91.531	0.205	61.774	-		
	MS1 serves to a large number of lower-income customers.							
	MS2 has stable and profitable customers.							
	MS3 can be easily accessible to the lower-income customers.							
Subdimensions	Business Environment (BE)							
Turbulent (TU)	In "tea-stall" industry...	0.922	52.758	0.495	10.694	2.406	-	-
	TU1 actions of the competitors are easy to predict.							
	TU2 demand and consumer tastes are easy to forecast.							
	TU3 the product/service patterns do not change much.							
Hostile (HO)	Our "tea-stall" ...	0.362	6.871	0.161	5.937	1.048		
	HO1 has threats from extortionists and law enforcement authorities.							
	HO2 is hard to keep afloat, due to government pressure.							
	HO3 can control and manipulate extortion, and government pressure to its own advantage.							
Munificent (MU)	MU1 There are few rules and regulations that govern "tea-stall"; providing a favourable environment for doing a business.	0.933	62.869	0.521	11.436	2.436		
	Within my geographic area...							
	MU2 educational and training programmes are available to improve vocational and business skills for "tea-stall" businesses.							
	MU3 financial institutions are willing to finance "tea-stall" businesses.							
	MU4 there is a supportive public attitude towards "tea-stall" businesses.							
Subdimensions	Sustainable Performance (SP)							
Economic (EC)	EC1 We see our "tea-stall" is providing employment to us and others.	0.745	23.226	0.287	21.959	-	0.747	0.898
	EC2 Our "tea-stall's" economic performance is at an acceptable level in terms of ...							
	EC3 sales growth.							
	EC4 income stability.							
	EC5 return on investment.							
	EC5 profitability.							
Social (SO)	Our "tea-stall" ...	0.932	187.150	0.424	39.180	-		
	SO1 ensures basic needs for our family.							
	SO2 enhances our social recognition in society.							

Natural Environment (EN)	S03	improves our empowerment in society.				
	S04	provides freedom and control over the course of our own lifestyle.				
	S05	is concerned about child labour use.				
		Our "tea-stall" ...	0.905	65.867	0.432	38.840
	EN1	uses utilities (e.g., energy and water) in an environment-friendly manner.				
	EN2	produces few wastes and emissions.				
	EN3	is concerned about waste management.				
EN4	uses small space to set up and operate business.					
EN5	is concerned about hygienic factors.					

Abbreviations:

L-Loadings

W-Weights

L *t-v*-Loadings *t*-value

W *t-v*- Weights *t*-value

VIF-Variance Inflation Factor

AVE-Average Variance Extracted

CR-Composite Reliability

7.4.3 Structural Model (Main model)

Following the measurement model assessment, assessment of the structural model was performed to estimate the relationship between the higher-order constructs as predicted in the hypotheses based on the research model. To conduct this assessment, the statistical significance and the amount of variance explained were evaluated based on three pieces of information; path coefficient (β), statistical significance of t -value and amount of variance explained or R squared (R^2) (Santosa, Wei, and Chan 2005). In addition, predictive relevance (Q^2) (Hair, Ringle, and Sarstedt 2011) and power analysis ($1-\beta$) (Cohen 1988) were also considered. A bootstrapping procedure, that is, the non-parametric approach was used to gather all information.

Direct Effect: Path Coefficient (β) and Statistical Significance of t -value

As shown in Table 7.16, six hypotheses out of 13 were accepted. It was found that personality traits, human capital and marketing capabilities had positive influences on entrepreneurial orientation. On the other hand, social capital, marketing capabilities and business environment had positive influences on firm sustainable performance. In Figure 7.2, the path-coefficient values (β) and the t -values are shown.

Table 7.16: Evaluation of the research hypotheses (Direct effect)

Hypotheses	Links	(β)	t -value	Results
H1a	PT → SP	0.069	0.961	Rejected
H1b	PT → EO	0.462	6.609***	Accepted
H2	EO → SP	0.019	0.257	Rejected
H3a	HC → SP	-0.169	1.996	Rejected
H3b	HC → EO	0.225	2.911***	Accepted
H4a	SC → SP	0.293	2.973***	Accepted
H4b	SC → EO	0.021	0.279	Rejected
H5a	FC → SP	-0.016	0.250	Rejected
H5b	FC → EO	-0.105	2.249	Rejected
H6a	MC → SP	0.228	2.662***	Accepted
H6b	MC → EO	0.367	5.394***	Accepted
H7a	BE → SP	0.466	6.583***	Accepted
H7b	BE → EO	-0.024	0.437	Rejected

Significant * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
 $.05=1.645$; $.025=1.96$; $.01=2.32$; $.005=2.57$

Personality traits was supported as a highly significant factor of ISMs' entrepreneurial orientation ($\beta=0.462$; $t=6.609$), supporting H1b. However, the influence of personality traits ($\beta=0.069$; $t=0.961$) in ISMs' sustainable performance was not found to be significant thus rejecting H1a.

Among the resource and capability factors, human capital ($\beta=0.225$; $t=2.911$) and marketing capabilities ($\beta=0.367$; $t=5.394$) were found to have positive influences on the ISMs' entrepreneurial orientation whereas financial capital ($\beta=-0.105$; $t=2.249$) had a statistically significant negative results can not be used to accept a hypothesis when a

positive result was expected. Therefore, H3b and H6b were accepted. The influence of social capital ($\beta=0.021$; $t=0.076$) on the ISMs' entrepreneurial orientation was not found to be significant thus rejecting H4b. On the other hand, social capital ($\beta=0.293$; $t=2.973$) and marketing capabilities ($\beta=0.228$; $t=2.662$) had positive influences on firm sustainable performance while human capital ($\beta=-0.169$; $t=1.996$) had a statistically significant negative result. Financial capital ($\beta=-0.016$; $t=0.250$) was found to be non-significant. Therefore, H4a and H6a were accepted while H3a and H5a were rejected.

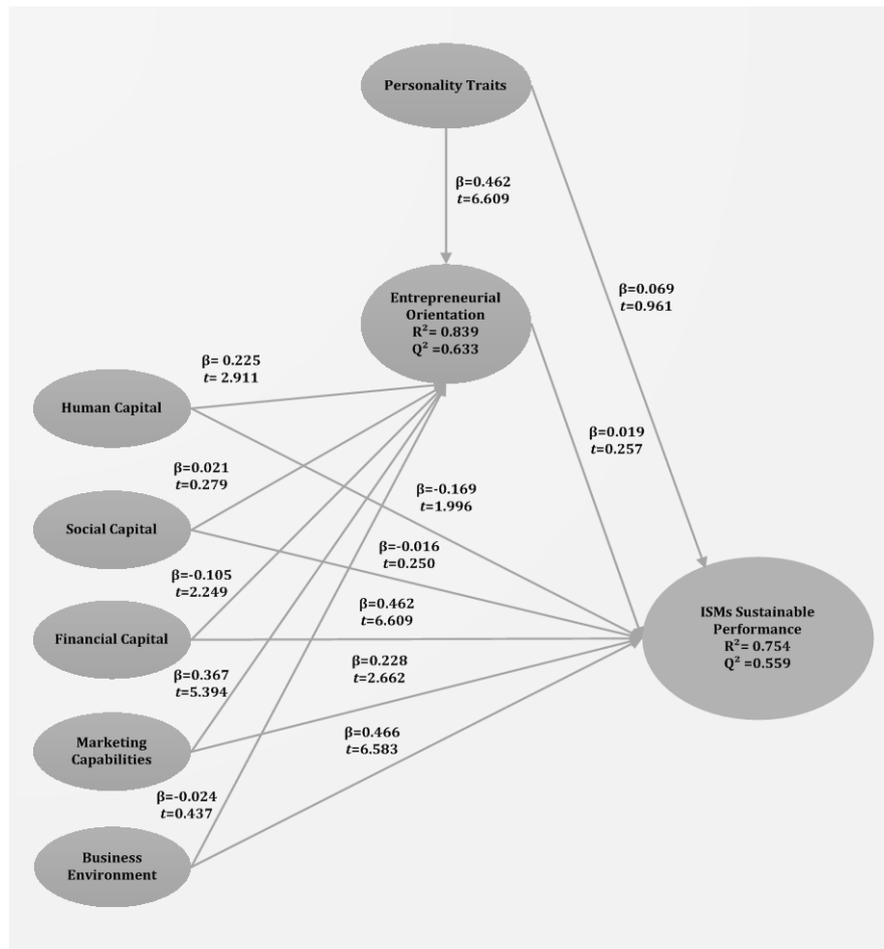


Figure 7.2: The main effects model

With regard to external forces, business environment ($\beta=0.466$; $t=6.583$) was supported as the factor that affected the ISMs' sustainable performance. However, business environment ($\beta=-0.024$; $t=0.437$) did not have a significant impact on the ISMs' entrepreneurial orientation. Thus, H7a was accepted and H7b was rejected.

Finally, the analysis of data found the non-significant impact of entrepreneurial orientation ($\beta=0.529$; $t=0.257$) on the ISMs' sustainable performance. Therefore, H2a was rejected.

Total Effect: Path Coefficient (β) and Statistical Significance of t -value

This research was also interested in evaluating not only one construct's direct effect on another but also its total effect. The sum of direct and indirect effects is referred to as the total effect. The findings shown in Table 7.17 indicated that business environment ($\beta=0.465$; $t=6.599$) had the strongest total effect on sustainable performance, followed by marketing capabilities ($\beta=0.235$; $t=3.142$) and social capital ($\beta=0.294$; $t=2.979$). However, human capital ($\beta=-0.165$; $t=2.074$) was accounted as having a negative total impact on sustainable performance. Personality traits ($\beta=-0.077$; $t=1.158$) and financial capital ($\beta=-0.018$; $t=0.288$) were found to be non-significant.

Although the direct effect of marketing capabilities ($\beta=-0.228$; $t=2.662$) on sustainable performance was not very strong, the total effect (both direct and indirect combined) was quite pronounced: marketing capabilities ($\beta=0.235$; $t=3.142$), indicating the relevance of marketing capabilities in explaining sustainable performance. On the other hand, the total effect of social capital ($\beta=0.294$; $t=2.979$), and business environment ($\beta=0.465$; $t=6.599$) was not pronounced in comparison to the direct effects of social capital ($\beta=0.293$; $t=2.973$), and business environment ($\beta=0.466$; $t=6.583$).

Table 7.17: Evaluation of the total effect

Links	Path coefficient	t -value	Results
PT → SP	0.077	1.158	Rejected
HC → SP	-0.165	2.074	Rejected
SC → SP	0.294	2.979***	Accepted
FC → SP	-0.018	0.288	Rejected
MC → SP	0.235	3.142***	Accepted
BE → SP	0.465	6.599***	Accepted

Significant * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
.05=1.645; .025=1.96; .01=2.32; .005=2.57

Amount of Variance Explained or R Squared (R^2)

The R^2 value was examined for each predicted variable to assess the explanatory power of the model. This represents the extent to which the independent constructs explain the dependent constructs. The interpretation of R^2 is similar to the traditional regression model. Based on the scores of R^2 , as shown in Figure 7.2, the antecedent's independent factors explained 83.9% of the variance for entrepreneurial orientation and 75.4% of the variance for the ISMs' sustainable performance. R^2 values of 0.75, 0.50 or 0.25 for the endogenous latent variables in the structural model could be described as substantial, moderate or weak, respectively (Hair, Ringle, and Sarstedt 2011). Overall, the findings have shown that all scores of R^2 value highly satisfied the requirement for the 0.75 cut-off value.

Predictive Relevance Q^2

In addition to evaluating the magnitude of the R^2 values as a criterion of predictive accuracy, this study also examined the predictive sample reuse technique or Q^2 . Using the blindfolding procedure with the omission distance of 7 (Hair, Ringle, and Sarstedt 2011), the study obtained a cross-validated redundancy Q^2 of 0.633 for entrepreneurial orientation, and 0.559 for the ISMs' sustainable performance (see Figure 7.2). All these values of Q^2 were greater than zero ($Q^2 > 0$), which was indicative of a highly predictive model (Chin 2010).

Power Analysis (1- β)

The power analysis (1- β) was also shown to validate the study's empirical findings. The study used G*Power 3.1.3 (Faul et al. 2009) to conduct the power test (post hoc) to estimate the validity of statistical parameters. A value of 0.80 is used for power (Cohen 1988). The study estimated power of 0.99 for the base model with the sample size of 438, at 0.05 significance level and 0.10 effect size (see Table 7.18 and Figure 7.3). The size of estimated power (0.99) compellingly exceeded the cut-off value of 0.80 (Cohen 1988). Thus, high power (> 0.80) confirmed that the study had adequate confidence in the hypothesized relationships in the research model.

Table 7.18: Power analysis (1- β)

t-tests - Linear multiple regression: Fixed model, single regression coefficient			
Analysis: Post hoc: Compute achieved power			
Input		Output	
Tail(s)	= Two	Non-centrality parameter δ	= 6.618157
Effect size f^2	= 0.1	Critical t	= 1.965496
α err prob	= 0.05	Df	= 430
Total sample size	= 438	Power (1- β err prob)	= 0.999998
Number of predictors	= 7		

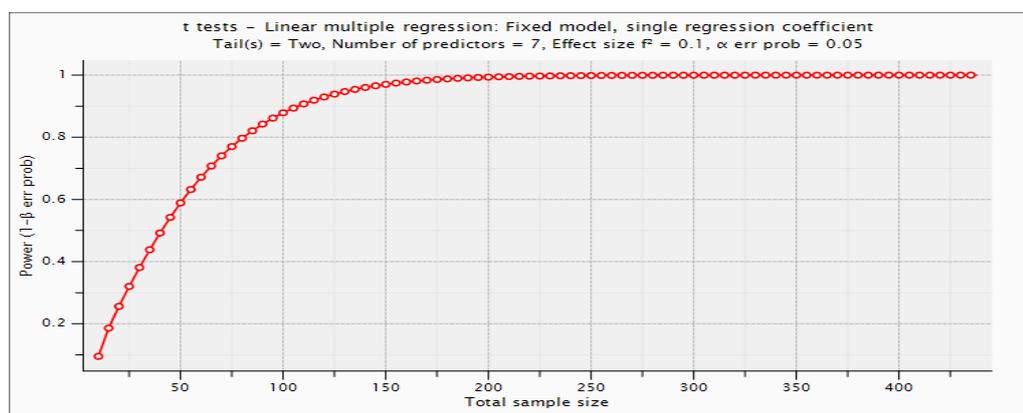


Figure 7.3: Power analysis (1- β)

7.5 DATA ANALYSIS PART 2: (Life-cycle model antecedents and outcomes)

The second part of data analysis in this research was to examine the differences of the antecedent and outcomes' factors based on the moderating effect of firm life-cycle

stages, that is, start, growth, mature and decline. In the structural model, the analysis was extended by using multi-group analysis to test the significant moderating effect of this construct. The procedure is explained in a later section. Before proceeding with the analysis, Tables 7.19 and 7.20 are presented to show the total respondents' four stages: start, growth, mature and decline. Firstly, the respondents were asked to determine their firm's current life-cycle stage. Later, the surveyors were requested to determine the firm's current life-cycle stage from their own observation (see Appendix H, survey questionnaire Section 10). Finally, this study adopted the surveyors' observations to determine and analyse the firm life-cycle stage. According to the micro-firm owners shown in Table 7.19, 26.5% were in the start stage, 24.4% were in the growth stage, 24.7% were in the mature stage and 24.4% were in the decline stage. On the other hand, the surveyors observed that 21.7% were in the start stage, 27.4% were in the growth stage, 25.3% were in the mature stage and 25.6% were in the decline stage (Table 7.20).

Table 7.19: Survey respondents by life-cycle stage (Micro-firm owner)

Life-Cycle Stages (Micro-firm owner)	Frequency	Percentage (%)
Start	116	26.5
Growth	107	24.4
Mature	108	24.7
Decline	107	24.4

Table 7.20: Survey respondents by life-cycle stage (Surveyor)

Life-Cycle Stages (Surveyor)	Frequency	Percentage (%)
Start	95	21.7
Growth	120	27.4
Mature	111	25.3
Decline	112	25.6

The item measurement model was again examined for the item reliability, internal consistency, average variance extracted (AVE) and variance inflation factor (VIF). Table 7.21 presents the detailed items' loadings and weights and the relative *t*-value for each sub-sample (i.e., start, growth, maturity and decline). The same minimum cut-off value of 0.7 with minimum critical *t*-value of 1.65 was applied for reflective items, while for formative items, the same relative importance of each indicator's weight was considered with the minimum critical *t*-value of 1.65. Based on this criterion, loading and weight items were discarded (such as CS1 and CS2 from the start sub-sample; CS3 and CS4 from the growth sub-sample; FS2, CS1, SC3, CS5, PD2 and HO3 from the mature sub-sample; and CS1 and CS2 from the decline sub-sample). Some other items were further deleted (such as TA3, LC2, IN2, PR3, PI2, PM1, EC5, SO1 and SO5 from the start sub-sample; TA3, LC2, PD2, PI2, PM1, HO3, EC5, SO1, SO5 and EN4 from the growth

sub-sample; TA3, LC2, PR1, PD1, PL2, PM1, EC5, SO1, SO5, EN1, EN3 and EN5 from the mature sub-sample; and AM3, TA3, LC2, RP1, PD1, PD2, PI1, PL3, PM1, EC3, SO5 and EN4 from the decline sub-sample) because some constructs could not attain the acceptable criterion of cross-loadings which was able to be achieved after deleting these items. VIF values below 10 were considered acceptable in determining low multicollinearity for formative items. Furthermore, the specification for the minimum value of internal consistency was 0.7 whilst the AVE value should be greater than 0.5. Therefore, the convergent validity for each subgroup was established in the first-order measurement model.

The discriminant validity for each subgroup was also assessed. Tables 7.22a–7.22d indicate that the square root of the AVE of each construct is larger than its correlation with other constructs. The correlations of the items with its latent variable scores are detailed in Tables 7.23a–7.23d. The result shows that all items are loaded higher on the construct they intended to measure. This confirms that discriminant validity was achieved.

Table 7.21: Psychometric properties for first-order constructs: Firm life-cycle model (repeated-indicator approach)

DM	Start stage									Growth stage						Mature stage						Decline stage								
	SDM	Item	L	L t-v	W	W t-v	VIF	AVE	CR	L	L t-v	W	W t-v	VIF	AVE	CR	L	L t-v	W	W t-v	VIF	AVE	CR	L	L t-v	W	W t-v	VIF	AVE	CR
PT	AM	AM1	0.918	48.574	0.276	34.126	-	0.832	0.952	0.942	101.078	0.264	46.760	-	0.883	0.968	0.896	42.821	0.287	25.247	-	0.782	0.935	0.949	97.718	0.353	52.598	-	0.885	0.959
		AM2	0.940	94.406	0.288	35.606	-	-	-	0.957	138.259	0.280	53.346	-	-	-	0.898	50.854	0.297	22.600	-	-	-	0.953	113.428	0.354	66.082	-	-	-
		AM3	0.921	57.274	0.267	34.896	-	-	-	0.953	103.971	0.268	51.188	-	-	-	0.876	26.391	0.264	22.101	-	-	-	-	-	-	-	-	-	-
	TA	TA1	0.870	34.585	0.266	32.878	-	-	-	0.907	44.677	0.251	39.628	-	-	-	0.867	31.651	0.282	23.806	-	-	-	0.921	52.315	0.356	40.816	-	-	-
		TA2	0.923	67.108	0.592	30.370	-	0.826	0.905	0.922	88.828	0.626	17.272	-	0.801	0.889	0.913	85.458	0.735	13.036	-	0.691	0.816	0.903	65.774	0.622	19.491	-	0.772	0.871
		TA3	0.894	37.898	0.508	46.191	-	-	-	0.867	21.175	0.488	41.246	-	-	-	0.740	9.099	0.445	12.521	-	-	-	0.854	23.453	0.514	34.741	-	-	-
	LC	LC1	0.959	177.856	0.535	64.830	-	0.917	0.956	0.931	101.046	0.583	30.309	-	0.845	0.916	0.914	68.113	0.569	26.206	-	0.823	0.903	0.931	74.700	0.555	37.140	-	0.858	0.924
		LC2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		LC3	0.955	139.798	0.510	86.673	-	-	-	0.907	48.508	0.504	47.017	-	-	-	0.901	45.036	0.533	32.826	-	-	-	0.922	57.557	0.524	49.007	-	-	-
	RP	RP1	0.942	97.053	0.386	38.812	-	0.873	0.954	0.899	63.565	0.419	18.360	-	0.803	0.924	0.891	54.959	0.425	24.296	-	0.805	0.925	-	-	-	-	-	0.914	0.955
		RP2	0.937	82.990	0.350	43.912	-	-	-	0.926	88.599	0.383	24.486	-	-	-	0.887	46.744	0.334	26.021	-	-	-	0.957	125.836	0.525	45.089	-	-	-
		RP3	0.924	51.456	0.334	42.792	-	-	-	0.863	22.884	0.311	12.510	-	-	-	0.913	53.654	0.357	26.459	-	-	-	0.956	132.664	0.521	41.487	-	-	-
	IN	IN1	0.933	55.959	0.524	57.839	-	0.875	0.933	0.887	45.160	0.380	21.517	-	0.813	0.929	0.864	29.735	0.400	17.751	-	0.719	0.885	0.940	69.402	0.356	57.153	-	0.878	0.956
		IN2	-	-	-	-	-	-	-	0.901	53.005	0.365	29.905	-	-	-	0.807	19.697	0.354	14.994	-	-	-	0.928	98.496	0.343	47.943	-	-	-
		IN3	0.938	75.442	0.545	33.566	-	-	-	0.915	49.502	0.365	27.966	-	-	-	0.871	33.623	0.424	14.475	-	-	-	0.944	105.842	0.368	50.625	-	-	-
RT	RT1	0.951	97.144	0.363	48.101	-	0.899	0.964	0.884	30.160	0.362	26.084	-	0.828	0.935	0.930	68.599	0.380	19.239	-	0.846	0.943	0.935	66.854	0.348	52.984	-	0.875	0.954	
	RT2	0.960	111.328	0.348	55.004	-	-	-	0.952	99.713	0.392	28.361	-	-	-	0.925	78.672	0.380	19.021	-	-	-	0.955	124.091	0.381	41.720	-	-	-	
	RT3	0.933	74.027	0.344	48.048	-	-	-	0.893	37.760	0.340	23.329	-	-	-	0.905	36.900	0.327	12.054	-	-	-	0.915	55.000	0.340	43.054	-	-	-	
PR	PR1	0.942	109.303	0.547	39.780	-	0.881	0.937	0.904	75.134	0.417	20.627	-	0.776	0.912	-	-	-	-	-	0.860	0.925	0.918	76.578	0.393	32.931	-	0.848	0.944	
	PR2	0.935	75.600	0.518	63.294	-	-	-	0.916	37.311	0.387	23.765	-	-	-	0.933	53.540	0.559	20.678	-	-	-	0.931	79.528	0.354	39.835	-	-	-	
	PR3	-	-	-	-	-	-	-	0.819	20.976	0.327	16.177	-	-	-	0.922	43.584	0.519	19.626	-	-	-	0.913	50.350	0.339	33.497	-	-	-	
CA	CA1	0.853	19.463	0.338	20.171	-	0.801	0.924	0.881	36.579	0.333	25.660	-	0.815	0.930	0.797	12.550	0.311	8.034	-	0.726	0.888	0.813	19.051	0.314	21.397	-	0.807	0.926	
	CA2	0.920	59.020	0.403	21.144	-	-	-	0.922	61.482	0.393	26.645	-	-	-	0.916	77.896	0.480	12.079	-	-	-	0.943	99.725	0.398	27.861	-	-	-	
	CA3	0.911	40.200	0.375	23.764	-	-	-	0.905	53.191	0.381	27.211	-	-	-	0.839	24.654	0.373	12.721	-	-	-	0.933	95.674	0.396	27.237	-	-	-	
AU	AU1	0.944	78.099	0.350	25.414	-	0.887	0.959	0.965	126.594	0.347	47.935	-	0.935	0.978	0.942	57.841	0.342	32.231	-	0.910	0.968	0.951	90.008	0.349	35.418	-	0.903	0.965	
	AU2	0.955	90.401	0.348	31.881	-	-	-	0.973	177.000	0.349	54.475	-	-	-	0.968	127.653	0.356	41.253	-	-	-	0.965	116.210	0.359	44.680	-	-	-	
	AU3	0.927	32.274	0.364	29.771	-	-	-	0.964	125.928	0.338	50.748	-	-	-	0.951	81.369	0.350	33.374	-	-	-	0.935	63.214	0.344	31.246	-	-	-	
HC	DE	DE1	0.861	21.405	0.011	0.104	4.368	-	-	0.806	12.660	0.115	0.842	3.720	-	-	0.819	8.246	0.208	1.171	2.509	-	-	0.693	12.424	-0.083	0.898	2.539	-	-
		DE2	0.931	46.323	0.322	3.404	6.021	-	-	0.800	12.335	0.036	0.313	3.710	-	-	0.886	18.414	0.257	2.333	3.157	-	-	0.935	43.324	0.239	1.420	6.672	-	-
		DE3	0.898	29.691	0.060	0.558	5.157	-	-	0.937	26.692	0.437	2.409	5.321	-	-	0.886	15.153	0.272	2.303	3.682	-	-	0.932	39.774	0.189	1.456	6.067	-	-
		DE4	0.958	62.596	0.411	4.053	5.629	-	-	0.758	8.591	-0.073	0.563	2.990	-	-	0.736	5.368	-0.024	0.128	2.542	-	-	0.938	42.185	0.201	1.370	6.709	-	-
		DE5	0.919	32.672	0.265	2.695	3.889	-	-	0.944	25.120	0.556	3.530	2.717	-	-	0.916	23.054	0.414	2.313	2.741	-	-	0.975	73.374	0.482	3.657	5.903	-	-
PS	PS1	0.855	25.504	0.285	4.827	2.316	-	-	0.730	11.615	0.061	0.405	2.282	-	-	0.763	11.352	0.295	2.695	1.896	-	-	0.700	15.091	0.039	0.556	2.665	-	-	
	PS2	0.919	34.456	0.149	1.865	5.168	-	-	0.860	15.758	0.080	0.679	3.785	-	-	0.927	27.295	0.307	2.041	3.784	-	-	0.900	38.169	-0.043	0.380	7.186	-	-	
	PS3	0.954	55.821	0.424	3.812	6.015	-	-	0.974	58.436	0.597	4.272	4.361	-	-	0.885	17.203	0.380	2.546	2.462	-	-	0.967	71.266	0.672	8.451	3.768	-	-	
	PS4	0.923	48.509	0.233	3.158	4.331	-	-	0.911	27.484	0.335	2.838	3.013	-	-	0.757	6.770	0.204	1.270	2.013	-	-	0.910	37.343	0.398	4.120	4.247	-	-	
	PS5	0.715	13.397	0.220	2.410	1.866	-	-	0.848	17.095	0.569	4.445	1.796	-	-	0.759	10.336	0.501	3.947	1.961	-	-	0.656	10.095	0.225	2.945	1.499	-	-	
SC	ST	ST1	0.917	30.015	0.506	5.629	2.132	-	-	0.744	10.101	0.229	2.388	1.926	-	-	0.696	8.399	0.506	5.839	1.270	-	-	0.899	28.883	0.532	5.668	2.571	-	-
		ST2	0.684	9.701	-0.024	0.222	2.147	-	-	0.735	12.389	-0.174	1.688	2.851	-	-	0.774	12.078	0.026	0.188	2.569	-	-	0.558	7.968	-0.118	1.599	1.720	-	-
		ST3	0.896	27.362	0.440	5.286	2.299	-	-	0.879	16.375	0.541	4.847	2.910	-	-	0.745	9.318	0.332	3.681	1.600	-	-	0.926	36.688	0.475	5.053	2.583	-	-
		ST4	0.923	46.450	0.171	1.568	4.876	-	-	0.949	39.454	0.436	2.778	4.002	-	-	0.889	23.273	0.228	1.274	3.897	-	-	0.847	24.607	-0.210	1.864	5.083	-	-
		ST5	0.976	86.140	0.556	5.730	5.486	-	-	0.954	48.857	0.393	3.119	4.541	-	-	0.941	34.052	0.523	2.727	4.102	-	-	0.960	91.645	0.712	6.563	5.318	-	-
CO	CO1	0.924																												

MC	PD	PD1	0.855	22.722	0.247	18.268	-	0.761	0.927	0.879	36.400	0.340	29.442	-	0.821	0.932	0.798	0.888	0.955	0.977		
		PD2	0.868	21.181	0.260	12.955	-															
		PD3	0.885	31.654	0.294	14.216	-															
	PI	PD4	0.880	23.223	0.344	9.019	-															
		PI1	0.983	280.357	0.506	120.785	-	0.966	0.983	0.977	222.111	0.515	105.109	-	0.954	0.977	0.842	0.941	0.977	230.293	0.506	131.828
		PI2					-													257.544	0.517	100.441
	PL	PI3	0.983	284.828	0.512	126.572	-			0.977	220.975	0.509	96.600	-			0.827	0.906	0.928	30.847	0.465	24.353
		PL1	0.861	30.806	0.432	15.611	-	0.724	0.887	0.905	61.032	0.382	35.033	-	0.825	0.934	0.742	0.852	0.956	126.094	0.595	16.449
		PL2	0.869	27.325	0.370	18.604	-			0.926	50.771	0.365	38.297	-					0.953	155.756	0.583	27.661
	PM	PL3	0.822	17.269	0.374	15.779	-			0.893	50.052	0.353	34.043	-					0.930	54.552	0.478	42.618
		PM1					-	0.856	0.922													
		PM2	0.924	76.205	0.538	40.681	-			0.935	77.250	0.533	62.376	-			0.827	0.906	0.954	133.753	0.520	79.753
MS	PM3	0.926	72.997	0.543	45.909	-			0.936	86.632	0.537	47.976	-					0.956	132.930	0.527	93.347	
	MS1	0.924	58.534	0.353	39.019	-	0.848	0.944	0.939	80.066	0.342	45.627	-	0.891	0.961	0.768	0.908	0.907	39.852	0.330	28.466	
	MS2	0.915	48.572	0.369	38.526	-			0.954	78.082	0.355	52.051	-					0.910	53.331	0.370	34.486	
BE	TU	MS3	0.925	62.121	0.363	43.816	-		0.938	83.832	0.363	44.155	-					0.952	109.538	0.383	32.785	
		TU1	0.877	17.640	0.369	5.261	2.352			0.828	15.777	0.227	2.105	2.278			0.674	6.221	0.146	1.712	1.544	
		TU2	0.849	19.524	0.253	2.943	2.395			0.899	24.769	0.393	3.818	2.553			0.884	22.148	0.528	6.469	1.735	
	HO	TU3	0.908	31.008	0.509	6.066	1.915			0.912	31.972	0.503	6.693	1.990			0.857	21.736	0.508	6.644	1.470	
		HO1	0.546	2.987	0.195	0.806	1.184			-0.302	0.614	-1.132	2.326	1.758			0.973	3.496	0.991	3.482	1.006	
		HO2	0.900	9.756	0.539	2.367	1.723			0.521	1.216	1.264	3.358	1.758			0.155	0.336	0.231	0.526	1.006	
	MU	HO3	0.883	8.003	0.463	1.831	1.800												0.938	16.204	0.672	2.756
		MU1	0.895	20.782	0.504	5.527	1.796			0.888	29.139	0.431	3.544	2.009			0.936	31.531	0.846	11.447	1.306	
		MU2	0.739	11.185	0.196	1.932	1.967			0.784	13.281	0.222	3.000	1.919			0.377	2.944	-0.028	0.267	1.900	
	SP	EC	MU3	0.590	8.177	0.097	1.286	1.498			0.585	7.061	0.099	1.179	1.365			0.529	5.646	0.343	4.677	1.099
			MU4	0.896	25.594	0.387	3.583	2.832			0.917	18.158	0.419	3.142	2.676			0.451	3.219	0.082	0.700	1.835
			EC1	0.884	40.617	0.329	14.324	-	0.719	0.911	0.883	41.750	0.290	14.815	-	0.818	0.947	0.864	39.941	0.348	7.479	-
SO		EC2	0.823	19.391	0.266	11.358	-			0.915	54.741	0.277	23.300	-			0.852	18.775	0.268	12.046	-	
		EC3	0.804	12.965	0.287	9.483	-			0.901	45.622	0.263	19.350	-			0.822	18.687	0.288	12.022	-	
		EC4	0.878	37.411	0.296	14.676	-			0.919	55.764	0.276	16.667	-			0.894	21.322	0.262	10.897	-	
EN		EC5					-												0.859	29.855	0.289	13.925
		SO1					-	0.893	0.962										0.906	68.626	0.314	18.190
		SO2	0.939	75.885	0.349	45.486	-			0.877	23.447	0.329	15.203	-	0.840	0.940	0.871	0.953	0.892	45.022	0.257	35.031
EN		SO3	0.944	81.838	0.354	42.398	-			0.934	86.781	0.377	21.956	-			0.914	54.149	0.343	38.086	-	
		SO4	0.952	84.931	0.355	45.398	-			0.937	71.145	0.384	22.906	-			0.937	64.624	0.355	45.628	-	
		SO5					-			0.937	71.145	0.384	22.906	-			0.949	104.959	0.373	40.303	-	
	EN1	0.912	56.680	0.236	28.776	-	0.801	0.953	0.931	109.856	0.307	23.217	-	0.788	0.937	0.760	0.863	0.937	90.665	0.280	46.986	
	EN2	0.932	82.376	0.236	26.339	-			0.928	82.609	0.317	22.469	-			0.847	9.981	0.522	7.208	-		
EN	EN3	0.919	70.495	0.226	31.625	-												0.948	88.861	0.273	51.283	
	EN4	0.838	24.660	0.216	27.368	-			0.827	18.437	0.255	12.266	-			0.895	31.377	0.623	7.348	-		
	EN5	0.871	24.741	0.202	21.791	-			0.860	32.932	0.243	15.896	-					0.925	63.706	0.257	47.123	

Abbreviations:

PT-Personality Traits	EO-Entrepreneurial Orientation	HC-Human Capital	FC-Financial Capital	BE-Business Environment	SP-Sustainable Performance	L-Loadings
AM-Achievement Motivation	IN-Innovativeness	DE-Demographic	FS-Sources of Finance	TU-Turbulent	W-Weights	
TA-Tolerance for Ambiguity	RT-Risk Taking	PS-Psychographic	CS-Capital Structure	HO-Hostile	L <i>t-v</i> -Loadings <i>t</i> -value	
LC-Locus of Control	PO-Proactiveness	SC-Social Capital	MC-Marketing Capabilities	MU-Munificent	W <i>t-v</i> -Weights <i>t</i> -value	
RP-Risk-taking Propensity	CA-Competitive Aggressiveness	ST-Structural	PD-Product/service	EN-Natural Environment	VIF-Variance Inflation Factor	
	AU-Autonomy	CO-Cognitive	PI-Price	DM-Dimensions	AVE-Average Variance Extracted	
		RE-Relational	PL-Place	SDM-Subdimensions	CR-Composite Reliability	
			PM-Promotion			
			MS-Market Segment			

Table 7.22a: Psychometric properties for first-order constructs: AVE square root for start stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM	0.912																										
TA	0.867	0.909																									
LC	0.830	0.898	0.957																								
RP	0.744	0.839	0.859	0.934																							
IN	0.845	0.862	0.843	0.784	0.935																						
RT	0.782	0.875	0.848	0.867	0.844	0.948																					
PR	0.815	0.851	0.828	0.781	0.860	0.849	0.939																				
CA	0.671	0.683	0.668	0.589	0.803	0.661	0.733	0.895																			
AU	0.646	0.623	0.589	0.563	0.679	0.592	0.651	0.683	0.942																		
DE	0.866	0.911	0.887	0.803	0.862	0.844	0.871	0.725	0.728	-																	
PS	0.856	0.895	0.909	0.824	0.877	0.833	0.842	0.737	0.754	0.948	-																
ST	0.791	0.821	0.796	0.756	0.837	0.812	0.801	0.687	0.652	0.860	0.842	-															
CO	0.878	0.894	0.841	0.779	0.861	0.814	0.802	0.674	0.617	0.896	0.905	0.860	-														
RE	0.891	0.901	0.875	0.804	0.867	0.843	0.825	0.720	0.642	0.897	0.914	0.860	0.929	-													
FS	0.795	0.871	0.809	0.743	0.790	0.778	0.823	0.632	0.608	0.872	0.846	0.777	0.813	0.806	-												
CS	0.469	0.460	0.542	0.378	0.455	0.335	0.391	0.438	0.412	0.510	0.558	0.313	0.431	0.448	0.453	-											
PD	0.621	0.699	0.709	0.712	0.697	0.703	0.697	0.749	0.713	0.772	0.780	0.691	0.653	0.697	0.702	0.468	0.872										
PI	0.767	0.833	0.804	0.786	0.803	0.845	0.833	0.669	0.546	0.847	0.803	0.861	0.792	0.852	0.786	0.286	0.746	0.983									
PL	0.751	0.731	0.711	0.732	0.745	0.703	0.735	0.652	0.507	0.765	0.749	0.763	0.773	0.821	0.702	0.332	0.698	0.811	0.851								
PM	0.730	0.683	0.702	0.656	0.744	0.673	0.707	0.741	0.595	0.751	0.755	0.729	0.701	0.768	0.639	0.353	0.823	0.797	0.799	0.925							
MS	0.771	0.794	0.765	0.714	0.779	0.772	0.767	0.646	0.502	0.819	0.780	0.792	0.768	0.826	0.742	0.341	0.718	0.905	0.822	0.844	0.921						
TU	0.770	0.750	0.756	0.753	0.759	0.744	0.728	0.662	0.635	0.804	0.807	0.817	0.795	0.839	0.690	0.365	0.786	0.843	0.852	0.854	0.859	-					
HO	0.268	0.394	0.470	0.482	0.414	0.440	0.444	0.441	0.427	0.465	0.481	0.416	0.401	0.335	0.418	0.400	0.520	0.342	0.328	0.280	0.267	0.362	-				
MU	0.839	0.813	0.823	0.790	0.783	0.760	0.755	0.693	0.622	0.843	0.856	0.787	0.825	0.868	0.710	0.491	0.732	0.768	0.808	0.793	0.774	0.841	0.415	-			
EC	0.482	0.445	0.483	0.457	0.567	0.440	0.453	0.570	0.518	0.516	0.568	0.508	0.536	0.517	0.418	0.500	0.583	0.412	0.486	0.559	0.419	0.581	0.543	0.549	0.848		
SO	0.741	0.787	0.772	0.736	0.726	0.707	0.646	0.645	0.561	0.799	0.835	0.763	0.847	0.852	0.728	0.483	0.728	0.723	0.760	0.730	0.731	0.783	0.420	0.826	0.621	0.945	
EN	0.745	0.780	0.796	0.765	0.750	0.689	0.728	0.717	0.571	0.799	0.821	0.751	0.782	0.811	0.758	0.489	0.741	0.738	0.797	0.768	0.747	0.761	0.506	0.857	0.635	0.824	0.895

Table 7.22b: Psychometric properties for first-order constructs: AVE square root for growth stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM	0.940																										
TA	0.839	0.895																									
LC	0.761	0.858	0.919																								
RP	0.546	0.740	0.788	0.896																							
IN	0.717	0.750	0.754	0.620	0.901																						
RT	0.486	0.696	0.672	0.803	0.696	0.910																					
PR	0.709	0.751	0.715	0.669	0.717	0.720	0.881																				
CA	0.714	0.691	0.625	0.510	0.692	0.510	0.734	0.903																			
AU	0.704	0.733	0.648	0.529	0.617	0.476	0.679	0.775	0.967																		
DE	0.569	0.690	0.731	0.700	0.689	0.699	0.663	0.514	0.505	-																	
PS	0.612	0.699	0.760	0.709	0.663	0.648	0.623	0.506	0.524	0.895	-																
ST	0.692	0.742	0.746	0.668	0.677	0.557	0.730	0.567	0.574	0.710	0.733	-															
CO	0.650	0.705	0.719	0.698	0.673	0.667	0.728	0.564	0.529	0.795	0.878	0.769	-														
RE	0.679	0.749	0.768	0.727	0.650	0.622	0.685	0.606	0.594	0.822	0.871	0.808	0.883	-													
FS	0.713	0.746	0.768	0.624	0.760	0.575	0.672	0.575	0.570	0.769	0.803	0.765	0.753	0.732	-												
CS	0.460	0.472	0.459	0.383	0.383	0.350	0.368	0.249	0.222	0.357	0.395	0.468	0.386	0.419	0.376	-											
PD	0.745	0.810	0.725	0.574	0.715	0.588	0.705	0.668	0.709	0.693	0.697	0.696	0.664	0.705	0.752	0.414	0.906										
PI	0.739	0.843	0.821	0.729	0.669	0.648	0.754	0.634	0.734	0.709	0.745	0.772	0.742	0.806	0.726	0.445	0.800	0.977									
PL	0.826	0.828	0.778	0.607	0.617	0.598	0.688	0.646	0.745	0.655	0.672	0.704	0.649	0.743	0.704	0.431	0.789	0.844	0.908								
PM	0.764	0.807	0.730	0.575	0.684	0.548	0.704	0.720	0.763	0.658	0.681	0.707	0.651	0.716	0.695	0.403	0.862	0.802	0.818	0.935							
MS	0.739	0.802	0.763	0.615	0.630	0.550	0.647	0.599	0.752	0.616	0.724	0.672	0.673	0.733	0.721	0.392	0.734	0.840	0.806	0.800	0.944						
TU	0.714	0.792	0.727	0.629	0.642	0.604	0.677	0.638	0.778	0.636	0.692	0.674	0.661	0.728	0.713	0.350	0.806	0.840	0.826	0.801	0.813	-					
HO	0.068	0.237	0.134	0.137	0.062	0.158	0.216	0.104	0.290	0.236	0.162	0.146	0.115	0.190	0.103	0.051	0.299	0.273	0.154	0.208	0.133	0.235	-				
MU	0.765	0.791	0.760	0.721	0.635	0.633	0.651	0.621	0.682	0.667	0.733	0.700	0.723	0.773	0.709	0.452	0.684	0.854	0.841	0.779	0.829	0.797	0.157	-			
EC	0.562	0.442	0.327	0.197</																							

Table 7.22c: Psychometric properties for first-order constructs: AVE square root for mature stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM	0.884																										
TA	0.823	0.831																									
LC	0.770	0.834	0.907																								
RP	0.617	0.693	0.791	0.897																							
IN	0.765	0.730	0.792	0.680	0.848																						
RT	0.497	0.619	0.696	0.812	0.551	0.920																					
PR	0.328	0.399	0.517	0.518	0.525	0.527	0.927																				
CA	0.531	0.479	0.462	0.360	0.645	0.269	0.501	0.852																			
AU	0.415	0.511	0.444	0.346	0.537	0.320	0.626	0.589	0.954																		
DE	0.574	0.610	0.742	0.650	0.716	0.602	0.670	0.482	0.648	-																	
PS	0.593	0.613	0.714	0.637	0.696	0.544	0.563	0.467	0.656	0.894	-																
ST	0.699	0.799	0.822	0.729	0.697	0.613	0.510	0.445	0.556	0.772	0.745	-															
CO	0.688	0.688	0.718	0.632	0.652	0.530	0.399	0.376	0.535	0.819	0.857	0.786	-														
RE	0.689	0.688	0.752	0.661	0.706	0.521	0.453	0.419	0.441	0.815	0.806	0.756	0.874	-													
FS	0.767	0.743	0.687	0.643	0.710	0.606	0.435	0.462	0.464	0.670	0.624	0.701	0.698	0.678	-												
CS	0.320	0.298	0.138	0.188	0.247	0.269	0.151	0.111	0.071	0.165	0.122	0.187	0.197	0.208	0.413	-											
PD	0.636	0.607	0.629	0.573	0.758	0.438	0.608	0.604	0.606	0.627	0.641	0.654	0.568	0.604	0.566	0.059	0.893										
PI	0.631	0.688	0.806	0.778	0.706	0.690	0.665	0.402	0.510	0.778	0.725	0.817	0.710	0.730	0.699	0.253	0.634	0.917									
PL	0.731	0.697	0.670	0.671	0.678	0.519	0.462	0.494	0.381	0.598	0.561	0.683	0.655	0.700	0.792	0.364	0.660	0.703	0.861								
PM	0.693	0.693	0.701	0.564	0.795	0.448	0.615	0.671	0.662	0.692	0.687	0.692	0.647	0.634	0.679	0.166	0.840	0.691	0.711	0.910							
MS	0.698	0.655	0.733	0.567	0.642	0.528	0.587	0.424	0.466	0.651	0.613	0.710	0.633	0.694	0.665	0.155	0.664	0.803	0.711	0.719	0.876						
TU	0.714	0.680	0.700	0.607	0.667	0.444	0.538	0.578	0.498	0.620	0.578	0.726	0.641	0.675	0.673	0.191	0.746	0.688	0.744	0.772	0.723	-					
HO	0.167	0.071	0.166	0.206	0.218	0.045	0.224	0.265	0.092	0.202	0.229	0.130	0.264	0.263	0.198	-0.092	0.179	0.233	0.244	0.263	0.253	0.210	-				
MU	0.766	0.717	0.720	0.621	0.685	0.494	0.430	0.467	0.470	0.592	0.598	0.734	0.724	0.693	0.734	0.277	0.680	0.682	0.775	0.732	0.691	0.752	0.330	-			
EC	0.374	0.273	0.213	0.060	0.452	-0.027	0.325	0.546	0.443	0.242	0.217	0.208	0.259	0.244	0.328	0.104	0.543	0.189	0.443	0.558	0.340	0.465	0.261	0.524	-		
SO	0.668	0.629	0.557	0.498	0.578	0.293	0.154	0.496	0.295	0.410	0.404	0.631	0.588	0.606	0.620	0.210	0.544	0.528	0.700	0.570	0.579	0.674	0.239	0.718	0.484	-	
EN	0.535	0.595	0.536	0.445	0.412	0.271	0.130	0.330	0.194	0.246	0.319	0.544	0.525	0.487	0.463	0.072	0.355	0.466	0.548	0.450	0.475	0.513	0.246	0.626	0.320	0.689	0.871

Table 7.22d: Psychometric properties for first-order constructs: AVE square root for decline stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM	0.941																										
TA	0.875	0.878																									
LC	0.849	0.844	0.926																								
RP	0.594	0.733	0.704	0.956																							
IN	0.830	0.872	0.894	0.715	0.937																						
RT	0.672	0.804	0.764	0.867	0.757	0.935																					
PR	0.689	0.758	0.852	0.754	0.881	0.784	0.921																				
CA	0.715	0.791	0.774	0.659	0.823	0.703	0.758	0.898																			
AU	0.662	0.676	0.676	0.635	0.677	0.730	0.687	0.632	0.950																		
DE	0.732	0.741	0.830	0.733	0.815	0.767	0.866	0.668	0.792	-																	
PS	0.807	0.826	0.850	0.738	0.844	0.760	0.836	0.777	0.767	0.901	-																
ST	0.772	0.761	0.813	0.669	0.827	0.674	0.820	0.686	0.673	0.861	0.895	-															
CO	0.820	0.828	0.826	0.768	0.840	0.796	0.793	0.743	0.801	0.873	0.905	0.819	-														
RE	0.854	0.847	0.850	0.686	0.874	0.748	0.800	0.803	0.739	0.836	0.894	0.811	0.912	-													
FS	0.764	0.753	0.770	0.615	0.795	0.647	0.707	0.647	0.576	0.760	0.827	0.828	0.759	0.735	-												
CS	0.565	0.527	0.440	0.387	0.466	0.387	0.261	0.480	0.318	0.309	0.477	0.468	0.484	0.475	0.506	-											
PD	0.821	0.827	0.870	0.738	0.892	0.718	0.875	0.802	0.729	0.846	0.856	0.838	0.840	0.866	0.725	0.415	0.977										
PI	0.681	0.749	0.819	0.736	0.824	0.757	0.864	0.653	0.696	0.856	0.835	0.815	0.838	0.796	0.768	0.285	0.851	0.942									
PL	0.843	0.726	0.754	0.589	0.761	0.582	0.713	0.693	0.640	0.743	0.787	0.748	0.761	0.810	0.679	0.433	0.849	0.701	0.942								
PM	0.859	0.828	0.851	0.655	0.865	0.713	0.827	0.785	0.742	0.823	0.878	0.841	0.853	0.881	0.774	0.448	0.923	0.838	0.886	0.955							
MS	0.800	0.810	0.808	0.717	0.789	0.728	0.806	0.660	0.641	0.760	0.781	0.751	0.753	0.762	0.678	0.356	0.864	0.782	0.779	0.855	0.923						
TU	0.769	0.749	0.753	0.638	0.774	0.647	0.793	0.709	0.679	0.806	0.850	0.829	0.818	0.820	0.738	0.386	0.852	0.781	0.854	0.905	0.796	-					
HO	0.252	0.361	0.392	0.364	0.506	0.268	0.447	0.519	0.100	0.220	0.313	0.380	0.319	0.400	0.294	0.125	0.449	0.377	0.267	0.348	0.288	0.315	-				
MU	0.806	0.804	0.727	0.698	0.762	0.698	0.633	0.671	0.727	0.679	0.766	0.711	0.803	0.797	0.644	0.517	0.757	0.703	0.777	0.764	0.736	0.710	0.323	-			
EC	0.666	0.682	0.652	0.666	0.635	0.																					

Table 7.23a: Psychometric properties for first-order constructs: Cross-loadings for start stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN	
AM1	0.918	0.791	0.763	0.684	0.749	0.701	0.733	0.594	0.617	0.793	0.806	0.770	0.824	0.851	0.692	0.483	0.553	0.713	0.716	0.655	0.704	0.746	0.247	0.809	0.485	0.730	0.721	
AM2	0.940	0.832	0.786	0.740	0.805	0.763	0.760	0.615	0.648	0.835	0.828	0.793	0.839	0.845	0.766	0.401	0.643	0.757	0.744	0.734	0.749	0.761	0.268	0.819	0.438	0.718	0.729	
AM3	0.921	0.768	0.738	0.621	0.735	0.666	0.695	0.556	0.530	0.758	0.733	0.651	0.766	0.761	0.713	0.483	0.477	0.621	0.597	0.571	0.654	0.623	0.213	0.731	0.407	0.615	0.622	
AM4	0.870	0.770	0.739	0.667	0.794	0.720	0.788	0.685	0.558	0.771	0.752	0.667	0.772	0.792	0.728	0.346	0.590	0.706	0.677	0.698	0.703	0.674	0.248	0.699	0.426	0.637	0.642	
TA1	0.899	0.923	0.867	0.787	0.853	0.823	0.815	0.655	0.650	0.883	0.892	0.839	0.872	0.902	0.839	0.462	0.683	0.838	0.714	0.729	0.791	0.784	0.297	0.813	0.462	0.769	0.770	
TA2	0.660	0.894	0.760	0.736	0.704	0.765	0.727	0.582	0.470	0.766	0.724	0.639	0.744	0.724	0.738	0.367	0.579	0.663	0.607	0.497	0.643	0.563	0.430	0.654	0.338	0.654	0.638	
LC1	0.812	0.897	0.959	0.845	0.825	0.829	0.826	0.678	0.573	0.883	0.883	0.803	0.833	0.857	0.831	0.510	0.712	0.820	0.692	0.690	0.780	0.743	0.451	0.794	0.463	0.761	0.806	
LC3	0.775	0.822	0.955	0.797	0.788	0.794	0.758	0.600	0.555	0.814	0.858	0.719	0.776	0.817	0.715	0.529	0.643	0.717	0.668	0.654	0.682	0.705	0.448	0.782	0.462	0.716	0.716	
RP1	0.785	0.853	0.887	0.942	0.787	0.816	0.790	0.604	0.593	0.852	0.854	0.775	0.793	0.825	0.791	0.446	0.724	0.805	0.741	0.680	0.754	0.790	0.447	0.801	0.461	0.763	0.783	
RP2	0.663	0.777	0.777	0.937	0.716	0.829	0.732	0.544	0.478	0.711	0.726	0.679	0.701	0.715	0.657	0.349	0.612	0.711	0.646	0.560	0.627	0.633	0.478	0.711	0.379	0.613	0.673	
RP3	0.626	0.713	0.732	0.924	0.688	0.786	0.659	0.495	0.498	0.676	0.721	0.658	0.682	0.705	0.623	0.251	0.653	0.679	0.660	0.592	0.610	0.680	0.428	0.697	0.439	0.679	0.682	
IN1	0.807	0.828	0.817	0.776	0.933	0.789	0.789	0.725	0.602	0.794	0.841	0.784	0.849	0.857	0.719	0.410	0.627	0.782	0.679	0.674	0.743	0.742	0.370	0.744	0.537	0.718	0.719	
IN3	0.774	0.786	0.762	0.692	0.938	0.790	0.820	0.775	0.667	0.819	0.800	0.783	0.764	0.767	0.758	0.441	0.677	0.721	0.713	0.717	0.714	0.679	0.404	0.722	0.524	0.643	0.686	
RT1	0.809	0.876	0.864	0.861	0.831	0.951	0.889	0.643	0.563	0.851	0.825	0.836	0.794	0.795	0.836	0.321	0.656	0.836	0.718	0.680	0.791	0.731	0.353	0.767	0.360	0.680	0.683	
RT2	0.718	0.805	0.780	0.851	0.789	0.960	0.791	0.630	0.531	0.770	0.762	0.750	0.753	0.789	0.711	0.325	0.665	0.815	0.643	0.630	0.732	0.704	0.434	0.721	0.473	0.659	0.656	
RT3	0.693	0.806	0.767	0.753	0.780	0.933	0.731	0.607	0.591	0.776	0.783	0.765	0.767	0.773	0.718	0.307	0.679	0.751	0.636	0.599	0.670	0.680	0.469	0.673	0.421	0.671	0.619	
PR1	0.815	0.879	0.867	0.784	0.865	0.825	0.942	0.695	0.617	0.869	0.848	0.795	0.815	0.829	0.838	0.445	0.661	0.814	0.726	0.682	0.756	0.701	0.423	0.776	0.431	0.666	0.776	
PR2	0.714	0.715	0.684	0.680	0.748	0.768	0.935	0.681	0.605	0.765	0.729	0.706	0.686	0.717	0.702	0.285	0.646	0.748	0.652	0.645	0.682	0.664	0.411	0.637	0.419	0.544	0.585	
CA1	0.630	0.571	0.528	0.449	0.661	0.539	0.551	0.853	0.527	0.596	0.625	0.633	0.640	0.680	0.480	0.273	0.577	0.623	0.631	0.601	0.663	0.599	0.598	0.249	0.617	0.451	0.629	0.609
CA2	0.643	0.680	0.693	0.626	0.801	0.661	0.778	0.920	0.604	0.714	0.710	0.653	0.642	0.692	0.685	0.457	0.721	0.673	0.665	0.697	0.637	0.638	0.505	0.646	0.580	0.601	0.706	
CA3	0.533	0.576	0.563	0.494	0.685	0.568	0.911	0.698	0.630	0.439	0.639	0.560	0.531	0.564	0.517	0.698	0.432	0.703	0.502	0.484	0.631	0.498	0.541	0.410	0.598	0.491	0.509	0.606
AU1	0.647	0.581	0.557	0.532	0.627	0.548	0.608	0.630	0.944	0.684	0.702	0.610	0.563	0.611	0.529	0.395	0.626	0.492	0.484	0.558	0.454	0.577	0.326	0.613	0.473	0.497	0.548	
AU2	0.590	0.554	0.506	0.521	0.613	0.550	0.610	0.608	0.955	0.662	0.692	0.611	0.557	0.586	0.546	0.345	0.648	0.512	0.459	0.548	0.463	0.594	0.405	0.584	0.432	0.489	0.501	
AU3	0.589	0.624	0.600	0.536	0.677	0.574	0.620	0.690	0.927	0.711	0.736	0.621	0.621	0.615	0.640	0.422	0.736	0.538	0.488	0.575	0.500	0.623	0.472	0.562	0.556	0.596	0.563	
DE1	0.815	0.793	0.778	0.680	0.788	0.720	0.785	0.607	0.612	0.861	0.824	0.723	0.784	0.790	0.751	0.428	0.577	0.753	0.644	0.627	0.710	0.666	0.323	0.737	0.453	0.623	0.703	
DE2	0.801	0.839	0.791	0.715	0.801	0.781	0.821	0.679	0.733	0.931	0.879	0.781	0.830	0.794	0.821	0.498	0.745	0.791	0.780	0.697	0.765	0.758	0.394	0.773	0.488	0.744	0.716	
DE3	0.787	0.814	0.809	0.707	0.807	0.802	0.842	0.669	0.706	0.898	0.866	0.752	0.779	0.822	0.807	0.488	0.695	0.781	0.685	0.679	0.745	0.713	0.356	0.752	0.384	0.696	0.650	
DE4	0.857	0.872	0.861	0.754	0.845	0.786	0.827	0.706	0.675	0.958	0.906	0.828	0.880	0.856	0.837	0.479	0.702	0.794	0.720	0.721	0.772	0.752	0.446	0.800	0.522	0.756	0.771	
DE5	0.756	0.850	0.839	0.807	0.756	0.804	0.787	0.641	0.627	0.919	0.875	0.813	0.811	0.831	0.816	0.448	0.741	0.796	0.738	0.691	0.768	0.759	0.490	0.801	0.440	0.756	0.775	
PS1	0.669	0.758	0.781	0.775	0.789	0.772	0.759	0.638	0.649	0.807	0.855	0.750	0.731	0.708	0.714	0.414	0.711	0.691	0.595	0.587	0.610	0.650	0.518	0.647	0.519	0.640	0.657	
PS2	0.813	0.849	0.833	0.769	0.828	0.758	0.767	0.701	0.710	0.881	0.919	0.744	0.827	0.849	0.817	0.574	0.749	0.748	0.716	0.737	0.756	0.731	0.393	0.805	0.478	0.756	0.758	
PS3	0.839	0.859	0.877	0.751	0.820	0.775	0.810	0.704	0.695	0.905	0.954	0.778	0.876	0.906	0.825	0.568	0.728	0.767	0.757	0.760	0.788	0.790	0.397	0.839	0.508	0.820	0.815	
PS4	0.807	0.809	0.820	0.730	0.775	0.738	0.718	0.651	0.725	0.870	0.923	0.805	0.867	0.867	0.734	0.489	0.673	0.726	0.653	0.666	0.683	0.765	0.455	0.840	0.574	0.825	0.752	
ST1	0.636	0.624	0.539	0.523	0.564	0.513	0.521	0.387	0.502	0.637	0.654	0.715	0.627	0.656	0.600	0.372	0.466	0.592	0.551	0.473	0.543	0.590	0.194	0.570	0.349	0.575	0.581	
ST2	0.729	0.720	0.736	0.720	0.808	0.768	0.771	0.691	0.562	0.771	0.735	0.917	0.759	0.762	0.686	0.259	0.635	0.802	0.689	0.684	0.736	0.745	0.407	0.715	0.502	0.643	0.697	
ST3	0.585	0.683	0.670	0.558	0.567	0.623	0.625	0.375	0.403	0.692	0.672	0.684	0.608	0.648	0.687	0.255	0.490	0.681	0.473	0.445	0.630	0.514	0.266	0.504	0.165	0.548	0.523	
ST4	0.673	0.761	0.728	0.659	0.722	0.738	0.705	0.592	0.606	0.786	0.777	0.896	0.801	0.785	0.713	0.240	0.632	0.774	0.691	0.657	0.714	0.732	0.396	0.708	0.411	0.736	0.642	
CO1	0.853	0.827	0.788	0.681	0.810	0.732	0.712	0.607	0.544	0.811	0.831	0.800	0.923	0.883	0.699	0.451	0.553	0.709	0.689	0.661	0.724	0.722	0.361	0.553	0.782	0.513	0.778	0.712
CO2	0.861	0.893	0.821	0.770	0.848	0.815	0.811	0.685	0.633	0.894	0.888	0.816	0.976	0.897	0.809	0.445	0.661	0.785	0.743	0.694	0.765	0.763	0.394	0.795	0.504	0.804	0.762	
CO3	0.783	0.789	0.770	0.724	0.776	0.728	0.707	0.583	0.531	0.803	0.832	0.832	0.924	0.862	0.751	0.327	0.587	0.724	0.747	0.624	0.675	0.765	0.372	0.768	0.520	0.823	0.731	
RE1	0.840	0.808	0.782	0.727	0.793	0.722	0.705	0.641	0.623	0.815	0.869	0.749	0.880	0.935	0.715	0.490	0.619	0.695	0.748	0.693	0.723	0.757	0.310	0.844	0.546	0.849	0.797	
RE2	0.805	0.843	0.809	0.763	0.817	0.810	0.798	0.736	0.637	0.837	0.850	0.822	0.855	0.942	0.738	0.365	0.704	0.829	0.788	0.767	0.787	0.809	0.311	0.790	0.451	0.783	0.735	
RE3	0.858	0.892																										

PD3	0.503	0.554	0.554	0.588	0.581	0.608	0.582	0.627	0.638	0.620	0.635	0.593	0.510	0.558	0.528	0.233	0.885	0.676	0.550	0.752	0.652	0.678	0.352	0.582	0.483	0.555	0.552	
PD4	0.699	0.713	0.730	0.676	0.715	0.668	0.684	0.755	0.598	0.787	0.768	0.726	0.716	0.768	0.680	0.417	0.880	0.797	0.763	0.896	0.825	0.822	0.343	0.798	0.534	0.749	0.805	
PI1	0.759	0.818	0.801	0.780	0.802	0.834	0.822	0.655	0.532	0.822	0.788	0.853	0.774	0.835	0.767	0.273	0.716	0.983	0.799	0.777	0.890	0.817	0.339	0.735	0.397	0.687	0.733	
PI3	0.750	0.819	0.780	0.766	0.777	0.827	0.816	0.661	0.542	0.842	0.791	0.840	0.783	0.840	0.778	0.288	0.751	0.983	0.795	0.789	0.889	0.840	0.332	0.774	0.414	0.734	0.718	
PL1	0.701	0.658	0.648	0.586	0.723	0.618	0.698	0.693	0.516	0.731	0.720	0.718	0.726	0.766	0.657	0.297	0.660	0.772	0.861	0.799	0.767	0.781	0.341	0.702	0.569	0.722	0.718	
PL2	0.573	0.515	0.529	0.603	0.545	0.473	0.524	0.478	0.408	0.544	0.554	0.529	0.550	0.628	0.460	0.301	0.586	0.552	0.869	0.638	0.639	0.696	0.217	0.656	0.412	0.595	0.663	
PL3	0.632	0.685	0.628	0.687	0.618	0.700	0.642	0.472	0.356	0.664	0.624	0.690	0.686	0.689	0.663	0.247	0.525	0.732	0.822	0.585	0.681	0.689	0.270	0.701	0.235	0.612	0.647	
PM2	0.655	0.606	0.650	0.651	0.689	0.631	0.675	0.676	0.498	0.657	0.675	0.693	0.644	0.697	0.551	0.228	0.758	0.760	0.735	0.924	0.755	0.795	0.246	0.717	0.546	0.679	0.704	
PM3	0.694	0.658	0.649	0.563	0.688	0.614	0.634	0.695	0.603	0.732	0.721	0.656	0.653	0.724	0.632	0.424	0.765	0.714	0.744	0.926	0.806	0.784	0.272	0.750	0.488	0.672	0.716	
MS1	0.735	0.784	0.737	0.716	0.709	0.721	0.687	0.506	0.385	0.758	0.727	0.765	0.753	0.807	0.707	0.337	0.606	0.843	0.764	0.722	0.924	0.788	0.225	0.722	0.357	0.731	0.693	
MS2	0.670	0.704	0.684	0.661	0.725	0.744	0.771	0.631	0.479	0.745	0.686	0.728	0.647	0.706	0.682	0.217	0.695	0.877	0.754	0.785	0.915	0.779	0.300	0.651	0.399	0.561	0.663	
MS3	0.726	0.709	0.694	0.598	0.716	0.668	0.660	0.643	0.521	0.761	0.742	0.695	0.725	0.772	0.661	0.391	0.681	0.779	0.752	0.823	0.925	0.806	0.211	0.767	0.402	0.733	0.708	
TU1	0.635	0.637	0.684	0.669	0.663	0.659	0.644	0.614	0.658	0.718	0.669	0.725	0.708	0.632	0.710	0.578	0.365	0.741	0.711	0.703	0.728	0.702	0.877	0.370	0.714	0.520	0.614	0.644
TU2	0.639	0.636	0.602	0.610	0.641	0.647	0.720	0.650	0.544	0.682	0.640	0.708	0.625	0.679	0.619	0.196	0.742	0.785	0.771	0.810	0.808	0.849	0.327	0.681	0.436	0.594	0.672	
TU3	0.735	0.696	0.692	0.692	0.692	0.663	0.605	0.532	0.502	0.720	0.743	0.740	0.795	0.797	0.628	0.354	0.638	0.751	0.782	0.747	0.778	0.908	0.281	0.798	0.549	0.799	0.695	
HO1	0.298	0.251	0.255	0.316	0.255	0.285	0.262	0.230	0.264	0.303	0.268	0.195	0.252	0.205	0.264	0.156	0.220	0.159	0.232	0.136	0.149	0.143	0.546	0.294	0.202	0.135	0.307	
HO2	0.220	0.379	0.471	0.459	0.413	0.448	0.471	0.445	0.386	0.450	0.466	0.462	0.392	0.328	0.420	0.311	0.489	0.397	0.322	0.264	0.286	0.349	0.900	0.337	0.395	0.395	0.432	
HO3	0.197	0.304	0.358	0.375	0.305	0.310	0.301	0.338	0.362	0.352	0.383	0.280	0.304	0.255	0.304	0.435	0.461	0.209	0.236	0.241	0.181	0.316	0.883	0.380	0.628	0.391	0.460	
MU1	0.727	0.711	0.704	0.727	0.668	0.716	0.639	0.590	0.484	0.695	0.703	0.710	0.726	0.777	0.568	0.263	0.640	0.762	0.755	0.748	0.731	0.791	0.368	0.895	0.518	0.759	0.761	
MU2	0.609	0.598	0.607	0.517	0.556	0.502	0.503	0.558	0.653	0.707	0.722	0.553	0.595	0.642	0.607	0.553	0.618	0.486	0.536	0.509	0.445	0.571	0.310	0.739	0.374	0.647	0.618	
MU3	0.553	0.489	0.483	0.479	0.524	0.524	0.655	0.427	0.298	0.509	0.473	0.553	0.530	0.511	0.427	0.201	0.406	0.516	0.563	0.487	0.516	0.518	0.291	0.590	0.324	0.341	0.445	
MU4	0.774	0.748	0.781	0.713	0.740	0.647	0.699	0.631	0.572	0.786	0.811	0.690	0.752	0.778	0.680	0.595	0.642	0.616	0.691	0.696	0.692	0.725	0.363	0.896	0.472	0.733	0.797	
EC1	0.471	0.485	0.535	0.452	0.578	0.464	0.429	0.561	0.541	0.551	0.610	0.503	0.542	0.527	0.442	0.542	0.586	0.422	0.466	0.575	0.451	0.576	0.513	0.519	0.884	0.614	0.617	
EC2	0.334	0.342	0.382	0.383	0.446	0.374	0.406	0.407	0.446	0.419	0.415	0.433	0.387	0.367	0.311	0.333	0.483	0.366	0.409	0.370	0.304	0.452	0.523	0.400	0.823	0.467	0.451	
EC3	0.413	0.257	0.292	0.310	0.359	0.207	0.231	0.366	0.249	0.293	0.377	0.297	0.418	0.401	0.243	0.404	0.325	0.198	0.402	0.441	0.282	0.424	0.257	0.469	0.804	0.522	0.526	
EC4	0.403	0.408	0.411	0.398	0.525	0.433	0.466	0.581	0.507	0.471	0.504	0.480	0.457	0.442	0.406	0.397	0.568	0.404	0.367	0.489	0.369	0.507	0.547	0.464	0.878	0.491	0.544	
SO2	0.709	0.725	0.722	0.686	0.638	0.617	0.551	0.579	0.524	0.738	0.781	0.671	0.782	0.789	0.625	0.475	0.632	0.609	0.677	0.650	0.645	0.694	0.401	0.799	0.569	0.939	0.774	
SO3	0.718	0.787	0.744	0.704	0.747	0.729	0.703	0.679	0.577	0.792	0.811	0.797	0.819	0.836	0.748	0.402	0.765	0.776	0.743	0.760	0.745	0.781	0.394	0.768	0.597	0.944	0.780	
SO4	0.675	0.720	0.721	0.695	0.673	0.657	0.578	0.571	0.489	0.735	0.775	0.694	0.800	0.791	0.691	0.492	0.665	0.663	0.735	0.659	0.683	0.744	0.397	0.776	0.595	0.952	0.781	
EN1	0.655	0.708	0.717	0.695	0.666	0.586	0.615	0.630	0.542	0.738	0.759	0.671	0.716	0.742	0.675	0.504	0.684	0.637	0.717	0.704	0.671	0.704	0.423	0.797	0.611	0.810	0.912	
EN2	0.702	0.731	0.775	0.730	0.681	0.657	0.655	0.624	0.496	0.763	0.795	0.734	0.761	0.803	0.694	0.490	0.664	0.711	0.761	0.721	0.713	0.734	0.473	0.817	0.569	0.827	0.932	
EN3	0.632	0.711	0.696	0.662	0.684	0.638	0.672	0.713	0.535	0.711	0.730	0.661	0.687	0.701	0.678	0.420	0.681	0.662	0.679	0.709	0.666	0.679	0.482	0.766	0.585	0.716	0.919	
EN4	0.625	0.575	0.604	0.585	0.586	0.465	0.515	0.603	0.430	0.578	0.614	0.553	0.624	0.623	0.536	0.445	0.582	0.479	0.634	0.576	0.502	0.577	0.456	0.706	0.629	0.675	0.838	
EN5	0.726	0.767	0.772	0.758	0.749	0.744	0.817	0.642	0.555	0.788	0.774	0.743	0.710	0.756	0.822	0.313	0.709	0.823	0.782	0.724	0.796	0.708	0.429	0.740	0.435	0.643	0.871	

Table 7.23b: Psychometric properties for first-order constructs: Cross-loadings for growth stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM1	0.942	0.808	0.691	0.489	0.642	0.422	0.626	0.646	0.674	0.501	0.528	0.643	0.608	0.638	0.658	0.405	0.699	0.724	0.805	0.714	0.685	0.671	0.079	0.725	0.573	0.637	0.579
AM2	0.957	0.828	0.774	0.577	0.697	0.497	0.707	0.664	0.668	0.586	0.633	0.705	0.663	0.680	0.720	0.477	0.703	0.737	0.822	0.741	0.745	0.720	0.028	0.778	0.512	0.618	0.608
AM3	0.953	0.790	0.714	0.516	0.715	0.494	0.689	0.677	0.658	0.545	0.565	0.670	0.614	0.623	0.672	0.456	0.701	0.667	0.759	0.717	0.688	0.647	0.060	0.706	0.515	0.548	0.573
AM4	0.907	0.722	0.676	0.466	0.639	0.409	0.640	0.700	0.648	0.504	0.571	0.577	0.551	0.609	0.628	0.387	0.699	0.646	0.717	0.697	0.656	0.643	0.095	0.662	0.515	0.501	0.514
TA1	0.891	0.922	0.864	0.694	0.773	0.635	0.758	0.674	0.695	0.695	0.709	0.765	0.721	0.758	0.773	0.487	0.780	0.841	0.827	0.759	0.777	0.745	0.174	0.800	0.441	0.668	0.671
TA2	0.576	0.867	0.649	0.625	0.547	0.613	0.568	0.550	0.610	0.523	0.523	0.540	0.521	0.562	0.537	0.343	0.660	0.649	0.638	0.680	0.647	0.668	0.262	0.595	0.340	0.545	0.653
LC1	0.768	0.890	0.931	0.742	0.781	0.699	0.725	0.665	0.695	0.722	0.738	0.711	0.703	0.739	0.791	0.361	0.756	0.836	0.798	0.745	0.776	0.759	0.165	0.741	0.312	0.613	0.672
LC3	0.622	0.673	0.907	0.706	0.593	0.527	0.580	0.473	0.482	0.615	0.655	0.658	0.614	0.670	0.610	0.494	0.565	0.662	0.620	0.587	0.616	0.565	0.074	0.651	0.287	0.530	0.631
RP1	0.613	0.716	0.811	0.899	0.596	0.679	0.612	0.508	0.526	0.669	0.714	0.633	0.702	0.730	0.670	0.420	0.585	0.736	0.641	0.572	0.638	0.615	0.131	0.728	0.230	0.621	0.670
RP2	0.492	0.682	0.708	0.926	0.581	0.772	0.671	0.449	0.500	0.639	0.651	0.649	0.648	0.651	0.577	0.302	0.529	0.657	0.526	0.523	0.560	0.583	0.130	0.628	0.179	0.481	0.602
RP3	0.324	0.572	0.569	0.863	0.474	0.714	0.499	0.400	0.375	0.560	0.514	0.493	0.501	0.549	0.393	0.291	0.406	0.541	0.439	0.432	0.426	0.474	0.103	0.564	0.103	0.497	0.496
IN1	0.723	0.711	0.712	0.581	0.887	0.613	0.648	0.665	0.617	0.625	0.637	0.642	0.683	0.682	0.729	0.332	0.675	0.667	0.640	0.635	0.633	0.621	0.027	0.661	0.331	0.492	0.548
IN2	0.616	0.636	0.622	0.505	0.901	0.609	0.610	0.634	0.553	0.606	0.570	0.557	0.553	0.530	0.629	0.348	0.645	0.530	0.523	0.611	0.515	0.580	0.061	0.535	0.323	0.440	0.559
IN3	0.597	0.680	0.702	0.589	0.915	0.661	0.679	0.571	0.496	0.630	0.583	0.630	0.579	0.542	0.693	0.355	0.612	0.609	0.502	0.601	0.552	0.532	0.080	0.517	0.194	0.339	0.576
RT1	0.476	0.614	0.607	0.722	0.683	0.884	0.700	0.436	0.389	0.650	0.594	0.532	0.629	0.553	0.562	0.309	0.497	0.546	0.489	0.474	0.493	0.516	0.099	0.552	0.014	0.359	0.464
RT2	0.472	0.679	0.641	0.761	0.660	0.952	0.674	0.530	0.491	0.653	0.600	0.503	0.609	0.584	0.544	0.304	0.564	0.609	0.567	0.501	0.505	0.580	0.184	0.575	0.197	0.501	0.554
RT3	0.373	0.604	0.586	0.707	0.553	0.893	0.587	0.420	0.417	0.604	0.576	0.484	0.582	0.561	0.460	0.347	0.544	0.617	0.581	0.525	0.505	0.554	0.146	0.604	0.126	0.590	0.559
PR1	0.751	0.799	0.805	0.726	0.750	0.715	0.904	0.690	0.662	0.723	0.744	0.799	0.802	0.790	0.746	0.446	0.742	0.817	0.735	0.726	0.721	0.699	0.211	0.706	0.321	0.576	0.695
PR2	0.633	0.697	0.656	0.688	0.644	0.730	0.916	0.614	0.565	0.626	0.560	0.661	0.671	0.612	0.601	0.366	0.601	0.681	0.612	0.617	0.578	0.617	0.158	0.635	0.290	0.412	0.531
PR3	0.459	0.452	0.382	0.304	0.472	0.423	0.819	0.638	0.564	0.364	0.294	0.430	0.408	0.361	0.391	0.130	0.498	0.457	0.440	0.497	0.373	0.446	0.204	0.337	0.373	0.179	0.291
CA1	0.707	0.569	0.490	0.311	0.565	0.278	0.586	0.881	0.685	0.324	0.337	0.472	0.421	0.449	0.490	0.266	0.602	0.500	0.568	0.643	0.506	0.529	0.058	0.496	0.563	0.396	0.401
CA2	0.654	0.672	0.624	0.565	0.666	0.554	0.725	0.922	0.697	0.595	0.575	0.596	0.628	0.667	0.580	0.232	0.616	0.631	0.630	0.661	0.575	0.623	0.127	0.637	0.393	0.431	0.524
CA3	0.582	0.623	0.570	0.484	0.637	0.525	0.667	0.905	0.716	0.453	0.440	0.461	0.465	0.511	0.482	0.183	0.593	0.577	0.550	0.647	0.539	0.569	0.091	0.540	0.417	0.406	0.452
AU1	0.684	0.689	0.624	0.509	0.606	0.454	0.662	0.765	0.965	0.488	0.498	0.545	0.504	0.576	0.546	0.218	0.690	0.692	0.725	0.716	0.712	0.752	0.246	0.646	0.517	0.479	0.436
AU2	0.678	0.715	0.616	0.515	0.616	0.479	0.663	0.748	0.973	0.486	0.507	0.575	0.510	0.567	0.565	0.209	0.694	0.722	0.720	0.756	0.739	0.749	0.305	0.664	0.528	0.505	0.463
AU3	0.682	0.723	0.642	0.511	0.568	0.448	0.646	0.734	0.964	0.492	0.516	0.544	0.522	0.581	0.542	0.216	0.673	0.715	0.716	0.743	0.730	0.756	0.291	0.670	0.542	0.536	0.492
DE1	0.545	0.552	0.635	0.545	0.618	0.526	0.570	0.493	0.422	0.806	0.705	0.556	0.640	0.633	0.696	0.241	0.533	0.482	0.459	0.544	0.465	0.486	0.120	0.472	0.213	0.319	0.607
DE2	0.492	0.512	0.631	0.569	0.633	0.558	0.608	0.487	0.451	0.800	0.695	0.560	0.650	0.657	0.598	0.324	0.507	0.487	0.467	0.509	0.489	0.484	0.105	0.467	0.210	0.314	0.551
DE3	0.571	0.675	0.730	0.715	0.664	0.680	0.655	0.511	0.459	0.937	0.822	0.678	0.746	0.806	0.716	0.363	0.614	0.687	0.605	0.595	0.595	0.576	0.208	0.638	0.171	0.510	0.701
DE4	0.423	0.461	0.605	0.604	0.604	0.542	0.511	0.348	0.283	0.758	0.728	0.618	0.649	0.634	0.658	0.416	0.440	0.477	0.422	0.434	0.447	0.397	0.013	0.533	0.048	0.340	0.637
DE5	0.487	0.624	0.649	0.627	0.628	0.650	0.589	0.436	0.469	0.944	0.870	0.675	0.756	0.756	0.725	0.341	0.680	0.667	0.633	0.628	0.572	0.612	0.231	0.641	0.158	0.547	0.718
PS1	0.379	0.479	0.462	0.410	0.515	0.471	0.539	0.392	0.392	0.761	0.730	0.546	0.649	0.594	0.611	0.161	0.534	0.435	0.383	0.513	0.405	0.441	0.245	0.391	0.152	0.237	0.575
PS2	0.484	0.548	0.632	0.629	0.623	0.547	0.563	0.439	0.457	0.820	0.860	0.643	0.750	0.719	0.721	0.315	0.592	0.601	0.490	0.591	0.598	0.554	0.172	0.641	0.159	0.436	0.695
PS3	0.609	0.690	0.756	0.691	0.673	0.627	0.621	0.524	0.521	0.874	0.974	0.722	0.862	0.867	0.776	0.374	0.678	0.717	0.643	0.668	0.718	0.662	0.123	0.689	0.183	0.575	0.788
PS4	0.557	0.638	0.686	0.659	0.536	0.602	0.522	0.400	0.456	0.781	0.911	0.649	0.788	0.777	0.732	0.408	0.635	0.724	0.674	0.609	0.665	0.674	0.179	0.736	0.205	0.683	0.767
ST1	0.614	0.632	0.661	0.582	0.506	0.489	0.567	0.393	0.460	0.607	0.650	0.848	0.673	0.747	0.673	0.349	0.600	0.727	0.715	0.615	0.634	0.616	0.053	0.660	0.181	0.570	0.644
ST2	0.531	0.544	0.537	0.453	0.483	0.304	0.596	0.521	0.502	0.489	0.505	0.744	0.555	0.582	0.522	0.401	0.447	0.542	0.478	0.470	0.453	0.454	0.151	0.497	0.255	0.321	0.602
ST3	0.488	0.594	0.614	0.537	0.523	0.500	0.591	0.371	0.399	0.622	0.624	0.735	0.622	0.640	0.635	0.434	0.555	0.696	0.539	0.506	0.618	0.514	0.187	0.553	0.014	0.417	0.582
ST4	0.566	0.669	0.654	0.604	0.684	0.547	0.691	0.533	0.492	0.667	0.658	0.879	0.679	0.667	0.691	0.469	0.644	0.658	0.520	0.624	0.582	0.571	0.210	0.567	0.233	0.428	0.698
CO1	0.645	0.671	0.682	0.629	0.675	0.600	0.704	0.592	0.539	0.747	0.821	0.760	0.949	0.826	0.755	0.332	0.650	0.689	0.604	0.631	0.608	0.619	0.116	0.644	0.220	0.505	0.731
CO2	0.614	0.691	0.696	0.686	0.653	0.692	0.735	0.548	0.500	0.778	0.844	0.705	0.954	0.857	0.709	0.356	0.630	0.709	0.598	0.624	0.674	0.643	0.135	0.688	0.215	0.561	0.724
CO3	0.505	0.562	0.588	0.614	0.484	0.531	0.526	0.360	0.391	0.653	0.750	0.843	0.743	0.579	0.403	0.529	0.649	0.602	0.520	0.571	0.552	0.046	0.686	0.204	0.680	0.720	
RE1	0.647	0.590	0.698	0.576	0.607	0.479																					

PD1	0.582	0.694	0.647	0.570	0.639	0.608	0.588	0.530	0.510	0.637	0.621	0.602	0.611	0.631	0.651	0.414	0.879	0.691	0.673	0.681	0.570	0.674	0.324	0.641	0.375	0.670	0.642
PD3	0.674	0.749	0.638	0.461	0.654	0.513	0.643	0.598	0.670	0.591	0.608	0.601	0.575	0.592	0.680	0.446	0.928	0.703	0.688	0.814	0.686	0.741	0.264	0.621	0.495	0.539	0.628
PD4	0.759	0.757	0.685	0.535	0.652	0.487	0.681	0.680	0.733	0.657	0.664	0.684	0.620	0.691	0.711	0.277	0.912	0.775	0.778	0.838	0.731	0.771	0.233	0.747	0.579	0.682	0.626
PI1	0.763	0.845	0.814	0.718	0.657	0.627	0.735	0.634	0.722	0.687	0.726	0.756	0.741	0.794	0.716	0.424	0.790	0.977	0.833	0.785	0.821	0.824	0.226	0.848	0.393	0.721	0.709
PI3	0.680	0.802	0.789	0.705	0.649	0.639	0.738	0.604	0.712	0.698	0.730	0.752	0.708	0.781	0.702	0.447	0.772	0.977	0.815	0.781	0.820	0.817	0.307	0.819	0.341	0.719	0.707
PL1	0.835	0.777	0.764	0.515	0.656	0.487	0.701	0.678	0.739	0.617	0.643	0.718	0.653	0.693	0.742	0.388	0.779	0.761	0.905	0.845	0.743	0.783	0.151	0.776	0.566	0.628	0.637
PL2	0.726	0.734	0.670	0.533	0.521	0.552	0.582	0.590	0.673	0.591	0.578	0.590	0.539	0.658	0.551	0.426	0.705	0.759	0.926	0.745	0.712	0.747	0.131	0.762	0.471	0.707	0.588
PL3	0.686	0.744	0.681	0.611	0.498	0.596	0.585	0.486	0.611	0.573	0.609	0.605	0.574	0.672	0.620	0.358	0.660	0.780	0.893	0.630	0.742	0.718	0.137	0.754	0.332	0.669	0.564
PM2	0.687	0.759	0.624	0.521	0.620	0.499	0.676	0.702	0.771	0.577	0.562	0.633	0.550	0.617	0.631	0.324	0.828	0.747	0.766	0.935	0.715	0.751	0.256	0.713	0.540	0.578	0.608
PM3	0.741	0.750	0.740	0.554	0.658	0.526	0.641	0.646	0.657	0.654	0.712	0.689	0.667	0.722	0.668	0.430	0.785	0.753	0.763	0.936	0.780	0.747	0.132	0.744	0.512	0.659	0.725
MS1	0.703	0.741	0.691	0.561	0.548	0.482	0.578	0.506	0.662	0.539	0.673	0.627	0.651	0.688	0.656	0.384	0.645	0.791	0.734	0.702	0.939	0.759	0.075	0.746	0.353	0.589	0.583
MS2	0.677	0.746	0.717	0.573	0.609	0.524	0.634	0.542	0.710	0.603	0.692	0.627	0.628	0.675	0.708	0.311	0.699	0.798	0.761	0.750	0.954	0.767	0.180	0.789	0.367	0.589	0.611
MS3	0.713	0.781	0.750	0.605	0.625	0.549	0.618	0.644	0.753	0.600	0.684	0.649	0.628	0.712	0.675	0.414	0.733	0.790	0.787	0.809	0.938	0.776	0.119	0.810	0.505	0.649	0.657
TU1	0.695	0.711	0.643	0.565	0.591	0.550	0.651	0.600	0.707	0.534	0.583	0.631	0.571	0.638	0.639	0.257	0.711	0.702	0.726	0.716	0.717	0.828	0.127	0.656	0.333	0.453	0.539
TU2	0.607	0.671	0.577	0.471	0.596	0.482	0.622	0.647	0.771	0.554	0.569	0.576	0.546	0.583	0.660	0.188	0.790	0.717	0.702	0.766	0.667	0.899	0.321	0.658	0.514	0.558	0.586
TU3	0.631	0.730	0.703	0.627	0.543	0.576	0.566	0.491	0.625	0.590	0.669	0.604	0.630	0.703	0.613	0.434	0.664	0.792	0.766	0.670	0.773	0.912	0.159	0.774	0.367	0.713	0.638
HO1	-0.181	-0.100	-0.050	0.143	0.092	0.245	0.057	-0.111	-0.273	0.060	0.042	0.040	0.147	0.015	-0.002	0.074	-0.138	-0.151	-0.191	-0.120	-0.206	-0.155	-0.302	-0.043	-0.250	-0.005	0.066
HO2	-0.108	0.098	0.060	0.236	0.132	0.344	0.221	-0.017	-0.015	0.240	0.166	0.151	0.222	0.163	0.080	0.107	0.113	0.080	-0.049	0.057	-0.079	0.047	0.521	0.086	-0.180	0.165	0.216
MU1	0.684	0.712	0.638	0.548	0.520	0.506	0.550	0.503	0.643	0.499	0.588	0.639	0.617	0.651	0.591	0.375	0.648	0.769	0.790	0.668	0.705	0.736	0.230	0.888	0.445	0.743	0.630
MU2	0.534	0.673	0.594	0.731	0.505	0.637	0.507	0.463	0.468	0.573	0.596	0.470	0.585	0.597	0.525	0.347	0.593	0.690	0.596	0.580	0.653	0.604	0.150	0.784	0.313	0.688	0.580
MU3	0.487	0.433	0.353	0.330	0.431	0.318	0.459	0.508	0.521	0.404	0.407	0.437	0.391	0.409	0.464	0.091	0.492	0.488	0.493	0.539	0.547	0.489	-0.014	0.585	0.360	0.283	0.320
MU4	0.723	0.695	0.758	0.691	0.610	0.575	0.609	0.598	0.595	0.678	0.731	0.659	0.688	0.762	0.694	0.487	0.669	0.763	0.762	0.736	0.776	0.707	0.061	0.917	0.442	0.708	0.713
EC1	0.617	0.493	0.424	0.247	0.383	0.173	0.425	0.502	0.516	0.218	0.239	0.354	0.274	0.344	0.376	0.281	0.535	0.438	0.524	0.572	0.486	0.486	0.037	0.490	0.883	0.438	0.407
EC2	0.501	0.411	0.300	0.209	0.273	0.114	0.338	0.439	0.526	0.198	0.200	0.248	0.201	0.299	0.271	0.165	0.486	0.352	0.486	0.542	0.449	0.446	0.054	0.475	0.915	0.478	0.279
EC3	0.431	0.321	0.211	0.115	0.244	0.065	0.269	0.423	0.443	0.113	0.097	0.188	0.155	0.184	0.211	0.187	0.437	0.287	0.388	0.437	0.287	0.337	0.038	0.375	0.901	0.403	0.284
EC4	0.475	0.365	0.237	0.136	0.231	0.094	0.292	0.442	0.490	0.156	0.182	0.233	0.204	0.252	0.258	0.206	0.482	0.275	0.425	0.477	0.337	0.394	0.068	0.399	0.919	0.442	0.303
SO2	0.549	0.604	0.567	0.557	0.431	0.484	0.376	0.373	0.438	0.501	0.552	0.445	0.495	0.591	0.445	0.469	0.585	0.651	0.652	0.575	0.584	0.594	0.192	0.720	0.332	0.877	0.551
SO3	0.588	0.685	0.584	0.546	0.456	0.497	0.473	0.475	0.546	0.527	0.585	0.588	0.598	0.647	0.505	0.373	0.695	0.730	0.722	0.653	0.630	0.672	0.219	0.757	0.470	0.934	0.618
SO4	0.553	0.593	0.567	0.548	0.412	0.474	0.408	0.402	0.454	0.487	0.573	0.493	0.582	0.611	0.434	0.407	0.626	0.647	0.648	0.590	0.563	0.606	0.178	0.721	0.524	0.937	0.607
EN1	0.598	0.651	0.634	0.547	0.533	0.435	0.545	0.488	0.453	0.649	0.746	0.720	0.729	0.735	0.678	0.477	0.640	0.664	0.601	0.677	0.625	0.615	0.180	0.683	0.408	0.596	0.931
EN2	0.556	0.700	0.666	0.669	0.525	0.522	0.490	0.466	0.496	0.689	0.785	0.743	0.740	0.803	0.683	0.492	0.648	0.715	0.648	0.666	0.660	0.660	0.182	0.747	0.354	0.721	0.928
EN3	0.432	0.615	0.558	0.523	0.573	0.578	0.446	0.431	0.358	0.590	0.607	0.542	0.575	0.595	0.533	0.475	0.619	0.540	0.531	0.601	0.452	0.553	0.166	0.552	0.259	0.509	0.827
EN5	0.559	0.657	0.664	0.627	0.601	0.538	0.636	0.426	0.377	0.741	0.761	0.765	0.736	0.721	0.730	0.453	0.562	0.644	0.544	0.580	0.566	0.554	0.176	0.592	0.207	0.435	0.860

Table 7.23c: Psychometric properties for first-order constructs: Cross-loadings for mature stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM1	0.896	0.783	0.674	0.541	0.669	0.386	0.245	0.421	0.372	0.486	0.545	0.675	0.696	0.654	0.698	0.293	0.613	0.559	0.699	0.671	0.623	0.710	0.165	0.756	0.402	0.694	0.554
AM2	0.898	0.764	0.728	0.605	0.706	0.488	0.243	0.484	0.309	0.521	0.538	0.647	0.602	0.644	0.739	0.313	0.550	0.632	0.685	0.632	0.643	0.647	0.154	0.720	0.302	0.626	0.519
AM3	0.876	0.670	0.619	0.462	0.611	0.426	0.204	0.458	0.272	0.438	0.476	0.533	0.562	0.568	0.670	0.259	0.483	0.428	0.605	0.502	0.583	0.554	0.110	0.587	0.261	0.576	0.438
AM4	0.867	0.687	0.699	0.566	0.715	0.458	0.467	0.515	0.514	0.581	0.537	0.613	0.572	0.568	0.602	0.265	0.601	0.602	0.591	0.639	0.618	0.610	0.160	0.638	0.353	0.462	0.376
TA1	0.838	0.913	0.835	0.715	0.749	0.594	0.450	0.447	0.492	0.656	0.665	0.789	0.741	0.752	0.772	0.287	0.641	0.764	0.775	0.706	0.750	0.725	0.214	0.765	0.257	0.658	0.615
TA2	0.465	0.740	0.497	0.378	0.403	0.410	0.154	0.340	0.336	0.288	0.281	0.493	0.322	0.305	0.396	0.194	0.306	0.284	0.287	0.392	0.233	0.330	-0.194	0.348	0.188	0.327	0.321
LC1	0.706	0.791	0.914	0.771	0.747	0.680	0.529	0.397	0.453	0.689	0.667	0.791	0.689	0.676	0.673	0.137	0.605	0.824	0.647	0.658	0.745	0.645	0.236	0.697	0.173	0.539	0.547
LC3	0.691	0.721	0.901	0.662	0.689	0.580	0.405	0.443	0.349	0.656	0.629	0.699	0.611	0.689	0.571	0.112	0.534	0.633	0.568	0.614	0.579	0.625	0.061	0.606	0.216	0.469	0.422
RP1	0.686	0.734	0.827	0.891	0.700	0.693	0.431	0.368	0.333	0.638	0.627	0.796	0.660	0.699	0.686	0.145	0.592	0.762	0.689	0.594	0.612	0.645	0.128	0.626	0.063	0.561	0.510
RP2	0.454	0.516	0.609	0.887	0.508	0.783	0.478	0.282	0.275	0.507	0.529	0.518	0.477	0.479	0.458	0.195	0.393	0.618	0.471	0.414	0.410	0.424	0.188	0.471	-0.027	0.284	0.286
RP3	0.486	0.588	0.664	0.913	0.597	0.719	0.493	0.308	0.316	0.588	0.543	0.611	0.539	0.572	0.559	0.173	0.533	0.696	0.620	0.488	0.476	0.538	0.249	0.554	0.120	0.462	0.372
IN1	0.725	0.708	0.702	0.578	0.864	0.478	0.435	0.568	0.454	0.593	0.597	0.637	0.609	0.677	0.692	0.320	0.673	0.637	0.671	0.705	0.629	0.640	0.268	0.682	0.431	0.587	0.417
IN2	0.562	0.500	0.589	0.502	0.807	0.342	0.345	0.567	0.401	0.557	0.575	0.498	0.507	0.528	0.456	0.015	0.656	0.449	0.457	0.630	0.411	0.523	0.164	0.454	0.426	0.471	0.322
IN3	0.652	0.636	0.715	0.640	0.871	0.563	0.540	0.512	0.503	0.665	0.598	0.628	0.540	0.587	0.643	0.268	0.607	0.690	0.585	0.685	0.578	0.533	0.125	0.593	0.305	0.417	0.309
RT1	0.468	0.578	0.653	0.822	0.543	0.930	0.523	0.248	0.318	0.643	0.602	0.601	0.554	0.561	0.597	0.256	0.425	0.694	0.523	0.426	0.515	0.415	0.044	0.432	-0.083	0.254	0.235
RT2	0.453	0.555	0.605	0.709	0.487	0.925	0.469	0.348	0.325	0.486	0.429	0.540	0.448	0.388	0.529	0.252	0.386	0.575	0.448	0.411	0.451	0.413	0.059	0.452	0.051	0.289	0.285
RT3	0.451	0.578	0.667	0.706	0.488	0.905	0.460	0.130	0.231	0.529	0.468	0.550	0.459	0.493	0.546	0.233	0.397	0.636	0.460	0.399	0.491	0.397	0.019	0.485	-0.047	0.265	0.227
PR2	0.406	0.433	0.547	0.605	0.535	0.587	0.933	0.451	0.551	0.625	0.564	0.505	0.439	0.475	0.470	0.158	0.631	0.658	0.501	0.600	0.580	0.564	0.274	0.479	0.282	0.223	0.189
PR3	0.194	0.302	0.406	0.347	0.435	0.383	0.922	0.479	0.613	0.619	0.477	0.439	0.296	0.362	0.331	0.122	0.492	0.573	0.351	0.538	0.505	0.429	0.136	0.311	0.322	0.056	0.048
CA1	0.403	0.311	0.230	0.118	0.454	0.015	0.247	0.797	0.454	0.244	0.264	0.171	0.199	0.230	0.320	0.031	0.408	0.099	0.331	0.489	0.222	0.374	0.220	0.273	0.517	0.337	0.147
CA2	0.519	0.517	0.528	0.436	0.645	0.330	0.590	0.916	0.624	0.573	0.520	0.532	0.420	0.482	0.489	0.153	0.608	0.503	0.534	0.662	0.482	0.619	0.205	0.510	0.455	0.528	0.343
CA3	0.420	0.362	0.367	0.307	0.520	0.284	0.380	0.839	0.398	0.352	0.363	0.367	0.302	0.311	0.342	0.077	0.498	0.347	0.364	0.540	0.333	0.443	0.263	0.370	0.449	0.371	0.322
AU1	0.387	0.480	0.390	0.288	0.513	0.287	0.548	0.564	0.942	0.584	0.633	0.500	0.509	0.421	0.441	0.058	0.572	0.445	0.342	0.596	0.426	0.418	0.044	0.435	0.382	0.257	0.189
AU2	0.374	0.460	0.422	0.327	0.505	0.312	0.631	0.579	0.968	0.644	0.621	0.541	0.496	0.405	0.429	0.052	0.611	0.498	0.367	0.658	0.457	0.492	0.103	0.442	0.454	0.277	0.156
AU3	0.427	0.523	0.457	0.373	0.518	0.315	0.610	0.542	0.951	0.624	0.623	0.549	0.527	0.435	0.457	0.093	0.551	0.515	0.380	0.638	0.448	0.512	0.116	0.467	0.431	0.310	0.209
DE1	0.406	0.409	0.480	0.396	0.556	0.339	0.549	0.475	0.677	0.819	0.747	0.518	0.631	0.555	0.511	0.168	0.489	0.541	0.413	0.559	0.400	0.432	0.140	0.426	0.309	0.229	0.050
DE2	0.493	0.478	0.623	0.532	0.659	0.515	0.613	0.495	0.628	0.886	0.804	0.616	0.665	0.684	0.531	0.100	0.548	0.635	0.455	0.619	0.551	0.506	0.166	0.428	0.218	0.267	0.072
DE3	0.559	0.639	0.708	0.641	0.608	0.602	0.510	0.357	0.567	0.886	0.842	0.788	0.823	0.785	0.660	0.131	0.519	0.782	0.565	0.608	0.638	0.557	0.159	0.566	0.064	0.439	0.363
DE4	0.391	0.487	0.612	0.555	0.490	0.453	0.374	0.240	0.563	0.736	0.784	0.698	0.711	0.589	0.434	-0.043	0.452	0.606	0.363	0.501	0.452	0.435	0.043	0.443	0.028	0.291	0.316
DE5	0.532	0.580	0.734	0.652	0.670	0.594	0.650	0.398	0.496	0.916	0.778	0.746	0.751	0.784	0.623	0.163	0.613	0.736	0.604	0.636	0.637	0.625	0.213	0.605	0.254	0.437	0.305
PS1	0.268	0.306	0.387	0.403	0.507	0.376	0.670	0.468	0.590	0.683	0.763	0.406	0.474	0.476	0.344	0.074	0.495	0.478	0.323	0.551	0.395	0.342	0.302	0.317	0.228	0.062	-0.017
PS2	0.522	0.551	0.653	0.548	0.635	0.509	0.520	0.422	0.650	0.855	0.927	0.679	0.794	0.698	0.573	0.154	0.541	0.666	0.445	0.603	0.537	0.473	0.170	0.507	0.173	0.308	0.249
PS3	0.647	0.622	0.716	0.630	0.674	0.520	0.400	0.392	0.465	0.772	0.885	0.699	0.818	0.794	0.641	0.127	0.638	0.662	0.617	0.632	0.597	0.599	0.151	0.601	0.206	0.475	0.395
PS4	0.531	0.575	0.627	0.541	0.467	0.390	0.264	0.246	0.518	0.670	0.757	0.740	0.797	0.737	0.506	0.022	0.427	0.630	0.467	0.485	0.516	0.514	0.150	0.591	0.090	0.544	0.479
ST1	0.630	0.616	0.600	0.500	0.507	0.310	0.093	0.294	0.261	0.447	0.498	0.759	0.655	0.638	0.558	0.192	0.451	0.579	0.582	0.464	0.563	0.567	0.178	0.607	0.121	0.727	0.612
ST2	0.357	0.520	0.569	0.504	0.462	0.497	0.697	0.306	0.584	0.667	0.579	0.696	0.491	0.490	0.423	0.076	0.553	0.591	0.417	0.567	0.513	0.503	0.057	0.531	0.243	0.177	0.166
ST3	0.530	0.657	0.728	0.657	0.583	0.605	0.384	0.270	0.318	0.664	0.621	0.774	0.647	0.693	0.563	0.120	0.506	0.751	0.510	0.509	0.626	0.573	0.042	0.506	0.014	0.535	0.395
ST4	0.569	0.633	0.645	0.620	0.583	0.573	0.305	0.410	0.366	0.581	0.561	0.745	0.579	0.514	0.579	0.149	0.404	0.626	0.502	0.478	0.457	0.521	0.032	0.445	0.070	0.492	0.430
CO1	0.555	0.586	0.623	0.542	0.610	0.464	0.404	0.368	0.585	0.764	0.831	0.683	0.889	0.752	0.607	0.161	0.519	0.629	0.527	0.579	0.521	0.482	0.250	0.630	0.295	0.413	0.391
CO2	0.584	0.635	0.698	0.624	0.642	0.585	0.506	0.358	0.606	0.862	0.863	0.754	0.941	0.794	0.642	0.161	0.561	0.715	0.553	0.630	0.600	0.588	0.211	0.622	0.193	0.438	0.370
CO3	0.684	0.591	0.561	0.484	0.471	0.316	0.112	0.280	0.225	0.518	0.576	0.628	0.813	0.766	0.596	0.202	0.417	0.513	0.654	0.494	0.534	0.596	0.256	0.681	0.241	0.705	0.647
RE1	0.675	0.567	0.570	0.469	0.565	0.297	0.069	0.323	0.267	0.511	0.624	0.568	0.794	0.801	0.589	0.168	0.445	0.438	0.605	0.493	0.511	0.535	0.243	0.650	0.292	0.641	0.565
RE2	0.534	0.591	0.647	0.582	0.648																						

PI2	0.513	0.552	0.668	0.661	0.549	0.567	0.446	0.240	0.360	0.646	0.593	0.715	0.608	0.580	0.568	0.227	0.364	0.875	0.530	0.443	0.615	0.514	0.183	0.493	-0.028	0.412	0.388
PI3	0.587	0.609	0.753	0.756	0.678	0.680	0.663	0.405	0.466	0.693	0.671	0.733	0.605	0.637	0.628	0.212	0.645	0.941	0.642	0.656	0.752	0.634	0.204	0.585	0.172	0.471	0.400
PL1	0.688	0.640	0.628	0.553	0.698	0.409	0.461	0.513	0.438	0.598	0.573	0.624	0.605	0.619	0.715	0.305	0.699	0.618	0.891	0.743	0.639	0.712	0.172	0.740	0.517	0.601	0.459
PL3	0.562	0.555	0.519	0.612	0.447	0.497	0.324	0.321	0.196	0.416	0.376	0.548	0.517	0.587	0.647	0.325	0.412	0.595	0.830	0.455	0.583	0.557	0.258	0.582	0.217	0.609	0.491
PM2	0.553	0.556	0.560	0.448	0.685	0.340	0.669	0.638	0.672	0.609	0.574	0.544	0.523	0.535	0.564	0.175	0.759	0.608	0.625	0.905	0.614	0.676	0.311	0.651	0.585	0.427	0.355
PM3	0.704	0.702	0.712	0.576	0.759	0.473	0.455	0.583	0.536	0.649	0.673	0.710	0.651	0.616	0.669	0.127	0.769	0.648	0.667	0.915	0.692	0.728	0.170	0.680	0.434	0.605	0.462
MS1	0.697	0.627	0.659	0.535	0.535	0.458	0.278	0.259	0.298	0.472	0.504	0.664	0.599	0.624	0.628	0.125	0.539	0.666	0.648	0.576	0.874	0.619	0.222	0.658	0.230	0.641	0.526
MS2	0.488	0.550	0.621	0.539	0.593	0.549	0.793	0.453	0.586	0.724	0.627	0.632	0.542	0.613	0.580	0.218	0.618	0.783	0.616	0.693	0.840	0.645	0.255	0.576	0.331	0.353	0.298
MS3	0.657	0.544	0.644	0.412	0.555	0.373	0.448	0.395	0.326	0.502	0.472	0.567	0.522	0.585	0.538	0.059	0.582	0.654	0.602	0.614	0.913	0.631	0.184	0.583	0.328	0.537	0.431
TU1	0.591	0.469	0.423	0.359	0.458	0.249	0.250	0.507	0.359	0.353	0.469	0.447	0.448	0.442	0.452	0.149	0.582	0.371	0.555	0.581	0.435	0.674	0.149	0.511	0.304	0.447	0.350
TU2	0.545	0.574	0.619	0.529	0.626	0.443	0.700	0.584	0.620	0.669	0.591	0.630	0.546	0.569	0.530	0.136	0.738	0.643	0.586	0.749	0.647	0.884	0.175	0.631	0.453	0.427	0.306
TU3	0.671	0.607	0.614	0.544	0.532	0.343	0.261	0.386	0.233	0.423	0.390	0.647	0.566	0.612	0.645	0.191	0.536	0.580	0.696	0.576	0.626	0.857	0.189	0.679	0.357	0.755	0.591
HO1	0.196	0.064	0.139	0.157	0.189	0.004	0.193	0.265	0.087	0.152	0.195	0.079	0.234	0.221	0.177	-0.077	0.154	0.165	0.211	0.245	0.231	0.188	0.973	0.321	0.297	0.244	0.255
HO2	-0.119	0.035	0.122	0.218	0.134	0.181	0.141	0.010	0.027	0.225	0.158	0.224	0.138	0.191	0.098	-0.067	0.114	0.300	0.152	0.088	0.105	0.100	0.155	0.051	-0.145	-0.013	-0.029
MU1	0.733	0.681	0.663	0.544	0.607	0.390	0.289	0.415	0.348	0.460	0.484	0.684	0.666	0.659	0.650	0.259	0.587	0.605	0.720	0.653	0.631	0.694	0.308	0.936	0.492	0.779	0.703
MU2	0.563	0.508	0.503	0.485	0.319	0.376	-0.109	0.173	0.007	0.231	0.284	0.479	0.413	0.368	0.378	0.000	0.211	0.353	0.302	0.211	0.350	0.367	0.038	0.377	-0.193	0.501	0.427
MU3	0.343	0.332	0.369	0.383	0.427	0.406	0.536	0.317	0.496	0.524	0.469	0.364	0.380	0.308	0.469	0.206	0.466	0.428	0.414	0.471	0.392	0.412	0.195	0.529	0.313	0.107	0.026
MU4	0.532	0.501	0.563	0.519	0.409	0.435	-0.013	0.152	0.076	0.364	0.431	0.528	0.513	0.484	0.414	-0.151	0.368	0.405	0.396	0.289	0.395	0.424	0.052	0.451	-0.052	0.448	0.413
EC1	0.547	0.418	0.334	0.205	0.518	0.116	0.245	0.476	0.399	0.287	0.306	0.310	0.382	0.334	0.450	0.177	0.530	0.326	0.499	0.577	0.422	0.476	0.196	0.593	0.864	0.564	0.421
EC2	0.233	0.227	0.221	0.092	0.412	0.031	0.514	0.517	0.504	0.340	0.261	0.234	0.224	0.256	0.256	0.097	0.511	0.273	0.426	0.556	0.370	0.435	0.273	0.438	0.852	0.348	0.177
EC3	0.258	0.145	0.083	-0.068	0.256	-0.163	0.032	0.397	0.230	0.038	0.047	0.070	0.161	0.138	0.195	0.028	0.373	-0.053	0.267	0.313	0.088	0.314	0.198	0.391	0.822	0.408	0.289
EC4	0.177	0.094	0.053	-0.062	0.333	-0.112	0.354	0.487	0.394	0.153	0.103	0.065	0.073	0.075	0.177	0.031	0.437	0.069	0.298	0.448	0.263	0.352	0.237	0.335	0.894	0.295	0.163
SO2	0.638	0.566	0.494	0.412	0.447	0.221	-0.007	0.383	0.151	0.283	0.318	0.544	0.533	0.550	0.537	0.187	0.411	0.397	0.611	0.442	0.476	0.612	0.178	0.649	0.365	0.914	0.694
SO3	0.617	0.640	0.557	0.530	0.586	0.353	0.271	0.502	0.360	0.478	0.438	0.670	0.581	0.600	0.643	0.288	0.544	0.600	0.705	0.590	0.594	0.658	0.237	0.698	0.446	0.937	0.623
SO4	0.617	0.557	0.509	0.451	0.582	0.245	0.162	0.500	0.310	0.383	0.374	0.554	0.533	0.547	0.557	0.119	0.561	0.481	0.644	0.559	0.550	0.617	0.251	0.665	0.538	0.949	0.615
EN2	0.455	0.540	0.578	0.527	0.403	0.341	0.121	0.245	0.170	0.301	0.361	0.626	0.516	0.472	0.401	-0.070	0.333	0.566	0.490	0.373	0.448	0.494	0.203	0.558	0.125	0.622	0.847
EN4	0.478	0.502	0.376	0.272	0.323	0.150	0.108	0.325	0.168	0.143	0.210	0.348	0.410	0.387	0.408	0.175	0.291	0.273	0.468	0.411	0.387	0.408	0.225	0.537	0.408	0.585	0.895

Table 7.23d: Psychometric properties for first-order constructs: Cross-loadings for decline stage (repeated-indicator approach)

	AM	TA	LC	RP	IN	RT	PR	CA	AU	DE	PS	ST	CO	RE	FS	CS	PD	PI	PL	PM	MS	TU	HO	MU	EC	SO	EN
AM1	0.949	0.827	0.799	0.530	0.797	0.597	0.654	0.725	0.614	0.698	0.776	0.738	0.765	0.824	0.725	0.549	0.812	0.631	0.866	0.855	0.788	0.769	0.237	0.779	0.592	0.741	0.746
AM2	0.953	0.820	0.799	0.541	0.757	0.614	0.602	0.654	0.603	0.666	0.747	0.710	0.759	0.793	0.700	0.570	0.755	0.589	0.778	0.786	0.744	0.711	0.193	0.754	0.609	0.699	0.730
AM4	0.921	0.823	0.798	0.605	0.787	0.686	0.688	0.638	0.653	0.701	0.756	0.730	0.790	0.792	0.733	0.478	0.751	0.701	0.735	0.783	0.728	0.692	0.281	0.742	0.680	0.691	0.702
TA1	0.890	0.903	0.849	0.621	0.861	0.679	0.771	0.745	0.694	0.781	0.829	0.769	0.794	0.851	0.741	0.452	0.873	0.748	0.821	0.885	0.831	0.785	0.293	0.771	0.621	0.744	0.778
TA2	0.626	0.854	0.616	0.676	0.655	0.743	0.541	0.637	0.475	0.497	0.604	0.549	0.651	0.618	0.569	0.479	0.553	0.552	0.418	0.539	0.570	0.507	0.348	0.632	0.576	0.577	0.551
LC1	0.809	0.834	0.931	0.661	0.871	0.743	0.817	0.718	0.711	0.793	0.803	0.741	0.792	0.827	0.710	0.322	0.828	0.799	0.693	0.806	0.751	0.690	0.382	0.743	0.668	0.724	0.815
LC3	0.762	0.727	0.922	0.642	0.783	0.670	0.760	0.716	0.537	0.744	0.771	0.765	0.736	0.745	0.717	0.498	0.783	0.717	0.705	0.770	0.746	0.706	0.344	0.601	0.535	0.692	0.810
RP2	0.567	0.689	0.695	0.957	0.694	0.815	0.726	0.610	0.630	0.728	0.698	0.653	0.741	0.661	0.575	0.382	0.707	0.702	0.550	0.600	0.668	0.606	0.340	0.675	0.662	0.554	0.645
RP3	0.568	0.714	0.650	0.956	0.672	0.844	0.716	0.650	0.583	0.674	0.713	0.626	0.727	0.652	0.601	0.358	0.705	0.705	0.577	0.654	0.702	0.615	0.357	0.659	0.611	0.603	0.668
IN1	0.772	0.810	0.837	0.675	0.940	0.686	0.857	0.783	0.609	0.798	0.809	0.790	0.786	0.833	0.735	0.441	0.855	0.751	0.722	0.822	0.769	0.744	0.482	0.685	0.511	0.742	0.841
IN2	0.778	0.771	0.811	0.649	0.928	0.657	0.767	0.784	0.600	0.684	0.757	0.755	0.766	0.802	0.738	0.463	0.800	0.726	0.740	0.789	0.667	0.708	0.526	0.735	0.610	0.850	0.849
IN3	0.783	0.867	0.864	0.685	0.944	0.780	0.851	0.747	0.692	0.806	0.804	0.780	0.808	0.821	0.762	0.408	0.850	0.836	0.680	0.819	0.779	0.724	0.418	0.722	0.661	0.731	0.817
RT1	0.645	0.757	0.711	0.766	0.671	0.935	0.719	0.641	0.661	0.717	0.716	0.625	0.737	0.689	0.612	0.407	0.624	0.664	0.513	0.661	0.665	0.612	0.199	0.594	0.618	0.485	0.598
RT2	0.661	0.804	0.763	0.877	0.784	0.955	0.792	0.740	0.691	0.736	0.738	0.680	0.781	0.731	0.648	0.394	0.759	0.765	0.583	0.725	0.746	0.655	0.380	0.691	0.708	0.624	0.716
RT3	0.577	0.690	0.665	0.785	0.660	0.915	0.685	0.583	0.698	0.697	0.677	0.583	0.712	0.677	0.552	0.281	0.624	0.689	0.533	0.608	0.625	0.542	0.158	0.672	0.741	0.509	0.584
PR1	0.791	0.854	0.892	0.693	0.905	0.779	0.918	0.791	0.697	0.836	0.869	0.823	0.817	0.845	0.791	0.408	0.858	0.844	0.732	0.861	0.798	0.783	0.391	0.695	0.628	0.731	0.844
PR2	0.601	0.623	0.745	0.716	0.781	0.698	0.931	0.650	0.629	0.799	0.748	0.729	0.720	0.705	0.592	0.218	0.805	0.762	0.695	0.746	0.749	0.740	0.362	0.561	0.498	0.569	0.769
PR3	0.487	0.595	0.702	0.674	0.735	0.681	0.913	0.638	0.562	0.752	0.676	0.704	0.641	0.644	0.551	0.069	0.747	0.773	0.528	0.662	0.670	0.659	0.486	0.474	0.415	0.562	0.720
CA1	0.648	0.625	0.607	0.400	0.584	0.515	0.519	0.813	0.547	0.496	0.612	0.491	0.587	0.653	0.484	0.486	0.604	0.401	0.610	0.652	0.513	0.577	0.251	0.525	0.385	0.594	0.536
CA2	0.657	0.740	0.722	0.654	0.807	0.680	0.746	0.943	0.586	0.659	0.750	0.689	0.722	0.769	0.641	0.438	0.779	0.668	0.647	0.752	0.623	0.678	0.525	0.635	0.530	0.812	0.766
CA3	0.631	0.757	0.749	0.689	0.803	0.683	0.752	0.933	0.574	0.632	0.724	0.650	0.684	0.739	0.605	0.387	0.763	0.660	0.615	0.710	0.634	0.651	0.583	0.639	0.533	0.788	0.748
AU1	0.642	0.664	0.644	0.605	0.640	0.703	0.655	0.572	0.951	0.749	0.707	0.640	0.758	0.695	0.543	0.326	0.671	0.645	0.586	0.689	0.633	0.624	0.048	0.703	0.644	0.492	0.551
AU2	0.619	0.641	0.652	0.613	0.668	0.690	0.676	0.627	0.965	0.769	0.755	0.664	0.793	0.714	0.557	0.287	0.711	0.688	0.621	0.722	0.592	0.650	0.164	0.708	0.640	0.580	0.619
AU3	0.628	0.621	0.630	0.591	0.622	0.688	0.628	0.602	0.935	0.740	0.724	0.613	0.731	0.696	0.540	0.292	0.694	0.651	0.618	0.704	0.602	0.662	0.072	0.661	0.625	0.537	0.554
DE1	0.498	0.560	0.564	0.556	0.506	0.669	0.590	0.436	0.690	0.693	0.655	0.593	0.624	0.558	0.568	0.264	0.493	0.604	0.442	0.554	0.510	0.562	-0.033	0.487	0.513	0.283	0.446
DE2	0.709	0.726	0.799	0.714	0.766	0.773	0.796	0.622	0.780	0.935	0.840	0.777	0.836	0.806	0.685	0.285	0.753	0.777	0.657	0.743	0.687	0.705	0.165	0.666	0.597	0.556	0.701
DE3	0.696	0.693	0.769	0.620	0.753	0.674	0.768	0.632	0.761	0.932	0.855	0.821	0.836	0.805	0.735	0.342	0.788	0.807	0.692	0.793	0.671	0.769	0.185	0.633	0.534	0.601	0.736
DE4	0.666	0.693	0.754	0.709	0.715	0.741	0.801	0.617	0.822	0.938	0.860	0.799	0.845	0.773	0.691	0.274	0.793	0.794	0.680	0.781	0.721	0.784	0.147	0.641	0.570	0.561	0.714
DE5	0.702	0.715	0.809	0.725	0.806	0.750	0.870	0.648	0.735	0.975	0.872	0.849	0.826	0.793	0.759	0.298	0.828	0.847	0.738	0.799	0.761	0.792	0.236	0.648	0.580	0.596	0.801
PS1	0.463	0.512	0.555	0.572	0.530	0.606	0.656	0.483	0.718	0.764	0.700	0.650	0.652	0.567	0.562	0.186	0.614	0.616	0.519	0.608	0.517	0.661	0.011	0.453	0.468	0.371	0.558
PS2	0.692	0.728	0.768	0.708	0.739	0.750	0.802	0.656	0.777	0.917	0.900	0.823	0.862	0.794	0.742	0.369	0.781	0.786	0.667	0.792	0.715	0.797	0.177	0.618	0.564	0.581	0.750
PS3	0.812	0.823	0.843	0.702	0.844	0.729	0.791	0.765	0.678	0.833	0.967	0.877	0.862	0.861	0.836	0.544	0.808	0.781	0.749	0.838	0.767	0.806	0.323	0.755	0.665	0.730	0.849
PS4	0.688	0.714	0.742	0.691	0.723	0.701	0.789	0.686	0.798	0.883	0.910	0.794	0.850	0.823	0.691	0.303	0.812	0.804	0.735	0.819	0.694	0.797	0.259	0.673	0.538	0.680	0.758
ST1	0.574	0.454	0.506	0.362	0.491	0.434	0.450	0.335	0.572	0.615	0.626	0.656	0.611	0.588	0.572	0.342	0.507	0.539	0.498	0.546	0.459	0.552	-0.008	0.494	0.444	0.400	0.475
ST2	0.622	0.662	0.756	0.639	0.779	0.613	0.852	0.627	0.584	0.834	0.806	0.899	0.703	0.711	0.721	0.241	0.789	0.766	0.630	0.741	0.701	0.751	0.434	0.556	0.427	0.602	0.798
ST3	0.289	0.400	0.512	0.420	0.463	0.477	0.621	0.322	0.404	0.608	0.525	0.558	0.467	0.449	0.496	0.043	0.514	0.638	0.248	0.475	0.442	0.452	0.251	0.232	0.270	0.269	0.474
ST4	0.728	0.745	0.751	0.625	0.752	0.646	0.713	0.663	0.591	0.738	0.815	0.926	0.763	0.745	0.788	0.564	0.767	0.761	0.695	0.800	0.688	0.754	0.381	0.699	0.550	0.686	0.734
CO1	0.744	0.708	0.676	0.691	0.685	0.715	0.661	0.603	0.744	0.768	0.793	0.737	0.847	0.807	0.642	0.541	0.708	0.663	0.659	0.739	0.656	0.672	0.172	0.716	0.669	0.581	0.638
CO2	0.758	0.801	0.807	0.795	0.813	0.812	0.813	0.702	0.778	0.873	0.882	0.805	0.960	0.869	0.732	0.444	0.820	0.835	0.686	0.827	0.761	0.781	0.297	0.749	0.706	0.682	0.782
CO3	0.831	0.774	0.748	0.661	0.770	0.701	0.672	0.704	0.768	0.787	0.845	0.762	0.941	0.882	0.709	0.536	0.771	0.728	0.782	0.798	0.663	0.768	0.272	0.799	0.702	0.774	0.760
RE1	0.844	0.779	0.777	0.604	0.796	0.629	0.686	0.732	0.658	0.747	0.851	0.772	0.859	0.921	0.720	0.620	0.794	0.680	0.782	0.820	0.670	0.742	0.321	0.738	0.624	0.817	0.794
RE2	0.737	0.783	0.789	0.669	0.829	0.762	0.805	0.752	0.750	0.811	0.829	0.742	0.853	0.941	0.653	0.333	0.807	0.770	0.731	0.836	0.706	0.784	0.402	0.710	0.602	0.759	0.784
RE3	0.825	0.803	0.805	0.629	0.807	0.669	0.715	0.755	0.630	0.761	0.816	0.755	0.834	0.925	0.692	0.425	0.813	0.755	0.758	0.797	0.750	0.7					

PI2	0.549	0.624	0.712	0.671	0.729	0.703	0.751	0.558	0.643	0.750	0.726	0.694	0.776	0.687	0.690	0.265	0.694	0.928	0.536	0.678	0.589	0.629	0.340	0.618	0.682	0.592	0.729
PI3	0.716	0.773	0.821	0.713	0.816	0.723	0.865	0.662	0.668	0.852	0.837	0.828	0.802	0.802	0.752	0.273	0.888	0.956	0.760	0.879	0.855	0.822	0.369	0.699	0.583	0.678	0.815
PL1	0.828	0.742	0.801	0.618	0.801	0.623	0.767	0.691	0.683	0.791	0.804	0.759	0.764	0.809	0.707	0.391	0.884	0.761	0.953	0.904	0.813	0.845	0.244	0.767	0.609	0.719	0.800
PL2	0.754	0.613	0.601	0.480	0.616	0.458	0.556	0.607	0.506	0.591	0.666	0.641	0.661	0.709	0.559	0.429	0.700	0.539	0.930	0.752	0.638	0.757	0.262	0.689	0.450	0.699	0.650
PM2	0.768	0.740	0.781	0.618	0.817	0.650	0.806	0.735	0.677	0.782	0.797	0.806	0.776	0.799	0.704	0.324	0.896	0.794	0.827	0.954	0.803	0.871	0.390	0.670	0.500	0.727	0.817
PM3	0.872	0.840	0.843	0.634	0.835	0.710	0.773	0.764	0.740	0.790	0.880	0.800	0.853	0.883	0.774	0.532	0.867	0.807	0.865	0.956	0.830	0.858	0.275	0.788	0.677	0.784	0.815
MS1	0.777	0.723	0.669	0.551	0.655	0.614	0.635	0.542	0.490	0.602	0.629	0.609	0.628	0.656	0.562	0.379	0.702	0.568	0.690	0.715	0.907	0.670	0.135	0.628	0.571	0.472	0.611
MS2	0.641	0.704	0.762	0.718	0.750	0.677	0.848	0.593	0.646	0.769	0.732	0.743	0.686	0.662	0.630	0.169	0.836	0.820	0.689	0.793	0.910	0.747	0.323	0.638	0.526	0.552	0.729
MS3	0.802	0.813	0.798	0.704	0.773	0.718	0.739	0.685	0.628	0.724	0.791	0.718	0.762	0.787	0.680	0.441	0.845	0.763	0.775	0.852	0.952	0.782	0.322	0.765	0.642	0.681	0.771
TU1	0.770	0.721	0.645	0.577	0.680	0.618	0.663	0.641	0.625	0.701	0.754	0.731	0.753	0.744	0.633	0.467	0.763	0.628	0.789	0.829	0.727	0.880	0.169	0.639	0.564	0.622	0.679
TU2	0.657	0.681	0.736	0.639	0.756	0.640	0.825	0.663	0.662	0.808	0.802	0.790	0.758	0.758	0.699	0.255	0.824	0.800	0.774	0.851	0.761	0.952	0.342	0.645	0.483	0.640	0.802
TU3	0.708	0.621	0.605	0.428	0.599	0.406	0.526	0.599	0.486	0.579	0.719	0.687	0.690	0.711	0.647	0.436	0.659	0.591	0.763	0.738	0.621	0.834	0.305	0.653	0.469	0.680	0.700
HO1	0.226	0.273	0.353	0.269	0.430	0.165	0.424	0.478	0.077	0.251	0.285	0.395	0.269	0.349	0.264	0.107	0.441	0.326	0.300	0.333	0.255	0.346	0.871	0.233	0.016	0.552	0.521
HO2	0.219	0.322	0.391	0.286	0.506	0.207	0.467	0.486	0.099	0.257	0.332	0.376	0.307	0.412	0.288	0.013	0.447	0.388	0.260	0.354	0.273	0.332	0.938	0.249	0.019	0.590	0.575
HO3	0.222	0.319	0.252	0.398	0.327	0.309	0.236	0.386	0.071	0.054	0.160	0.232	0.229	0.236	0.198	0.292	0.277	0.223	0.163	0.202	0.211	0.146	0.761	0.363	0.250	0.456	0.321
MU1	0.712	0.711	0.664	0.635	0.705	0.626	0.648	0.624	0.729	0.690	0.716	0.687	0.738	0.733	0.572	0.358	0.756	0.682	0.774	0.738	0.703	0.719	0.302	0.936	0.664	0.637	0.636
MU2	0.562	0.566	0.448	0.550	0.442	0.587	0.292	0.462	0.479	0.401	0.497	0.352	0.643	0.570	0.429	0.518	0.358	0.396	0.408	0.419	0.401	0.398	0.097	0.656	0.725	0.515	0.421
MU3	0.328	0.327	0.284	0.442	0.237	0.530	0.311	0.186	0.455	0.380	0.309	0.198	0.444	0.321	0.197	0.212	0.243	0.331	0.245	0.250	0.313	0.261	-0.232	0.378	0.610	0.122	0.157
MU4	0.799	0.795	0.709	0.671	0.732	0.683	0.564	0.616	0.640	0.595	0.721	0.661	0.752	0.748	0.633	0.592	0.681	0.653	0.689	0.703	0.696	0.612	0.289	0.934	0.761	0.728	0.655
EC1	0.613	0.561	0.524	0.520	0.512	0.593	0.385	0.402	0.526	0.423	0.509	0.386	0.618	0.541	0.423	0.447	0.439	0.482	0.496	0.492	0.515	0.439	-0.044	0.683	0.901	0.439	0.445
EC2	0.545	0.588	0.551	0.567	0.504	0.644	0.465	0.433	0.576	0.471	0.516	0.443	0.558	0.514	0.401	0.392	0.486	0.539	0.427	0.480	0.562	0.414	0.020	0.645	0.919	0.397	0.434
EC4	0.532	0.557	0.509	0.553	0.541	0.595	0.464	0.520	0.631	0.474	0.564	0.485	0.614	0.582	0.460	0.478	0.537	0.557	0.508	0.540	0.424	0.464	0.221	0.701	0.859	0.583	0.518
EC5	0.686	0.721	0.727	0.722	0.692	0.788	0.674	0.567	0.651	0.727	0.729	0.649	0.800	0.756	0.628	0.425	0.678	0.767	0.591	0.673	0.731	0.640	0.145	0.710	0.906	0.547	0.662
SO1	0.583	0.620	0.679	0.575	0.748	0.508	0.694	0.760	0.519	0.593	0.660	0.660	0.686	0.728	0.551	0.399	0.770	0.637	0.622	0.703	0.544	0.651	0.655	0.568	0.422	0.892	0.770
SO2	0.741	0.702	0.678	0.454	0.749	0.479	0.546	0.743	0.521	0.555	0.695	0.637	0.720	0.803	0.635	0.559	0.713	0.559	0.733	0.734	0.505	0.655	0.497	0.710	0.508	0.936	0.741
SO3	0.716	0.759	0.778	0.615	0.811	0.610	0.688	0.799	0.521	0.600	0.712	0.677	0.738	0.805	0.625	0.425	0.791	0.686	0.675	0.763	0.632	0.669	0.664	0.685	0.541	0.945	0.832
SO4	0.742	0.716	0.684	0.586	0.735	0.538	0.581	0.731	0.525	0.551	0.702	0.627	0.697	0.770	0.604	0.529	0.746	0.621	0.747	0.720	0.604	0.638	0.479	0.756	0.573	0.919	0.751
EN1	0.791	0.749	0.830	0.607	0.866	0.634	0.770	0.771	0.597	0.747	0.827	0.796	0.812	0.843	0.779	0.505	0.826	0.740	0.742	0.809	0.684	0.783	0.525	0.698	0.583	0.839	0.937
EN2	0.751	0.719	0.822	0.570	0.832	0.561	0.738	0.722	0.499	0.695	0.800	0.761	0.762	0.804	0.420	0.812	0.735	0.740	0.786	0.701	0.738	0.538	0.674	0.529	0.818	0.948	
EN3	0.648	0.679	0.795	0.653	0.793	0.625	0.793	0.705	0.548	0.722	0.766	0.706	0.712	0.756	0.635	0.265	0.830	0.757	0.709	0.770	0.698	0.743	0.563	0.604	0.493	0.787	0.920
EN5	0.683	0.712	0.826	0.741	0.831	0.720	0.870	0.669	0.618	0.821	0.820	0.811	0.779	0.768	0.752	0.316	0.844	0.847	0.705	0.824	0.781	0.807	0.462	0.598	0.570	0.678	0.925

7.5.1 Second-order Measurement Model

The study again estimated the measurement properties of higher-order constructs for each subgroup using the two-stage approach to provide evidence of reliable and valid higher-order measures. After examining the first-order constructs earlier, this study deleted several items based on item reliability and cross-loading criteria. After deleting the items, this study used the latent variables scores to establish each item (first-order construct). The results for retaining items for each subgroup are portrayed in Table 7.24. The study confirmed that the loadings or weights of the items (first-order latent variables) on the second-order constructs achieved the minimum critical *t*-value of 1.65 for each subgroup. The result also shows that all the VIF scores were below 10. Therefore, all the formative items were retained. The results also ensured that the composite reliability and AVE of the second-order model were greater than 0.7 and 0.5 respectively for each subgroup. Therefore, this study provided evidence of reliable and valid second-order measures for each subgroup.

Table 7.24: Psychometric properties for second-order constructs: Firm life-cycle stage (two-stage approach)

		Start stage							Growth stage							Mature stage							Decline stage						
		L	L t-v	W	W t-v	VIF	AVE	CR	L	L t-v	W	W t-v	VIF	AVE	CR	L	L t-v	W	W t-v	VIF	AVE	CR	L	L t-v	W	W t-v	VIF	AVE	CR
PT	AM	0.917	39.171	0.264	42.563	-	0.880	0.967	0.875	30.253	0.276	28.838	-	0.818	0.947	0.893	51.929	0.284	17.819	-	0.817	0.947	0.915	39.851	0.269	40.883	-	0.827	0.950
	TA	0.962	166.289	0.273	38.327	-			0.954	125.572	0.299	27.366	-			0.931	83.961	0.289	24.809	-			0.951	93.662	0.283	33.514	-		
	LC	0.957	117.353	0.271	44.473	-			0.942	101.026	0.277	30.852	-			0.940	119.679	0.284	30.469	-			0.938	91.508	0.291	31.298	-		
	RP	0.916	52.643	0.258	37.902	-			0.842	19.185	0.252	21.093	-			0.848	25.156	0.249	14.328	-			0.828	22.324	0.256	27.971	-		
EO	IN	0.948	90.273	0.245	25.951	-	0.791	0.950	0.872	28.689	0.239	17.552	-	0.731	0.931	0.863	39.730	0.329	18.600	-	0.609	0.886	0.934	80.987	0.248	31.990	-	0.796	0.951
	RT	0.895	40.510	0.233	26.852	-			0.792	15.358	0.220	12.736	-			0.670	9.637	0.223	7.209	-			0.889	46.191	0.217	34.358	-		
	PR	0.926	78.590	0.232	27.474	-			0.903	42.123	0.243	19.973	-			0.797	17.866	0.231	13.268	-			0.926	64.956	0.230	32.863	-		
	CA	0.871	35.163	0.216	25.367	-			0.870	38.436	0.227	15.412	-			0.781	14.860	0.254	11.849	-			0.881	38.949	0.223	24.236	-		
HC	AU	0.798	16.139	0.195	14.755	-			0.834	25.852	0.240	14.363	-			0.779	17.754	0.237	13.189	-			0.827	18.398	0.202	28.584	-		
	DE	0.973	85.797	0.293	2.002	9.823			0.956	38.491	0.368	2.112	5.022			0.988	54.848	0.684	2.530	4.972			0.933	49.088	0.188	1.757	5.309		
	PS	0.996	213.483	0.718	5.018	9.823			0.986	68.445	0.657	3.843	5.022			0.952	20.829	0.340	1.186	4.972			0.997	217.620	0.827	8.235	5.309		
	ST	0.932	42.697	0.281	2.941	4.292			0.915	25.691	0.344	2.048	2.999			0.965	22.297	0.633	2.102	2.761			0.887	23.082	0.194	2.160	3.280		
SC	CO	0.961	83.346	0.227	1.981	8.169			0.930	21.499	0.261	1.578	4.738			0.892	8.947	0.121	0.461	5.012			0.965	66.639	0.344	3.062	6.690		
	RE	0.982	104.526	0.529	3.898	8.158			0.967	38.683	0.459	2.833	5.586			0.898	10.432	0.313	1.923	4.482			0.978	97.128	0.506	4.333	6.442		
	FS	0.979	52.460	0.874	14.828	1.259			0.964	40.743	0.855	14.876	1.164			0.992	41.080	1.048	21.901	1.206			0.989	73.133	0.902	15.491	1.345		
	CS	0.627	7.277	0.231	2.422	1.259			0.610	7.221	0.289	3.355	1.164			0.298	2.039	-0.136	0.923	1.206			0.628	8.637	0.172	1.840	1.345		
MC	PD	0.872	23.545	0.222	31.927	-	0.838	0.963	0.911	47.810	0.221	40.458	-	0.848	0.965	0.870	35.657	0.232	19.818	-	0.771	0.944	0.966	164.943	0.229	34.041	-	0.867	0.970
	PI	0.931	81.747	0.220	30.776	-			0.931	104.843	0.221	45.318	-			0.867	27.805	0.217	15.664	-			0.898	51.714	0.215	23.613	-		
	PL	0.902	41.700	0.217	38.873	-			0.925	49.141	0.217	50.543	-			0.861	30.719	0.227	29.805	-			0.904	48.949	0.201	35.336	-		
	PM	0.932	79.108	0.220	26.748	-			0.931	81.370	0.222	44.164	-			0.908	58.454	0.249	24.634	-			0.968	183.792	0.224	54.092	-		
BE	MS	0.937	89.198	0.214	38.747	-			0.905	50.692	0.205	39.071	-			0.882	28.452	0.213	18.667	-			0.918	51.865	0.203	37.231	-		
	TU	0.917	24.653	0.375	2.952	3.427			0.927	33.776	0.421	4.995	2.833			0.918	30.132	0.473	6.061	2.313			0.906	20.373	0.491	6.044	2.049		
	HO	0.588	5.969	0.225	3.838	1.209			0.242	2.928	0.046	0.964	1.061			0.346	2.356	0.057	0.811	1.127			0.525	8.097	0.212	3.354	1.135		
	MU	0.956	58.475	0.547	4.276	3.597			0.964	70.268	0.622	7.394	2.744	0.664	0.853	0.950	52.597	0.575	7.264	2.481			0.907	23.374	0.490	6.799	2.060		
SP	EC	0.807	15.438	0.292	13.771	-	0.796	0.921	0.661	8.164	0.269	6.550	-			0.673	6.764	0.307	4.929	-	0.670	0.857	0.786	16.071	0.331	24.694	-	0.775	0.911
	SO	0.929	57.755	0.409	20.988	-			0.898	52.666	0.464	16.440	-			0.916	70.887	0.480	12.813	-			0.918	78.504	0.392	27.026	-		
	EN	0.934	66.625	0.411	22.699	-			0.864	21.681	0.469	16.203	-			0.846	14.837	0.418	10.123	-			0.930	67.550	0.408	27.430	-		

Abbreviations:

PT-Personality Traits	EO-Entrepreneurial Orientation	HC-Human Capital	FC-Financial Capital	BE-Business Environment	SP-Sustainable Performance	L-Loadings
AM-Achievement Motivation	IN-Innovativeness	DE-Demographic	FS-Sources of Finance	TU-Turbulent	Performance	W-Weights
TA- Tolerance for Ambiguity	RT-Risk Taking	PS-Psychographic	CS-Capital Structure	HO-Hostile	EC-Economic	L t-v-Loadings t-value
LC-Locus of Control	PO-Proactiveness	SC-Social Capital	MC-Marketing Capabilities	MU-Munificent	SO-Social	W t-v- Weights t-value
RP-Risk-taking Propensity	CA-Competitive Aggressiveness	ST-Structural	PD-Product/service		EN-Natural Environment	VIF-Variance Inflation Factor
	AU-Autonomy	CO-Cognitive	PI-Price		DM-Dimensions	AVE-Average Variance Extracted
		RE-Relational	PL-Place		SDM-Subdimensions	CR-Composite Reliability
			PM-Promotion			
			MS-Market Segment			

7.5.2 Structural Model (Life-cycle Model)

In this stage, the assessment of the structural model based on the subgroups (start, growth, mature and decline) was conducted, as shown in Figures 7.4a–7.4d. Hypotheses testing commenced once the measurement model was assessed and adjusted. The results of the hypotheses testing are displayed in Table 7.25.

Direct Effect: Path Coefficient (β) and Statistical Significance of t-value

In terms of the direct relationship between the components and the ISMs' entrepreneurial orientation in the start stage, growth stage, mature stage and decline stage subgroups, the findings have shown that there is a significant effect of human capital ($\beta=0.440$, $t=3.022$) and marketing capabilities ($\beta=0.231$, $t=1.848$) in the start stage. In the growth stage, personality traits ($\beta =0.540$, $t=3.622$) and marketing capabilities ($\beta=0.359$, $t=2.271$) were found to be significant. Personality traits ($\beta=0.350$, $t=2.750$), human capital ($\beta=0.547$, $t=2.360$) and marketing capabilities ($\beta =0.522$, $t=2.870$) were found to be significant in the mature stage. In the decline stage, personality traits (0.501 , $t=5.424$) and human capital ($\beta=0.257$, $t=2.088$) were significant. On the other hand, some relationships were observed as non-significant. Personality traits ($\beta =0.237$, $t=1.509$), social capital ($\beta=0.099$, $t=0.566$), financial capital ($\beta=-0.003$, $t=0.035$) and business environment ($\beta=-0.035$, $t=0.265$) were found to be non-significant in the start stage. Human capital ($\beta =0.003$, $t=0.025$), social capital ($\beta=0.091$, $t=0.655$), financial capital ($\beta=0.034$, $t=0.318$) and business environment ($\beta=-0.043$, $t=0.315$) were accounted to be non-significant in the growth stage. In the mature stage, financial capital ($\beta=-0.030$, $t=0.431$), social capital ($\beta=-0.456$, $t=2.586$) and business environment ($\beta=0.018$, $t=0.155$) were accounted to be non-significant. The following non-significant relationships were found in the decline stage: social capital ($\beta=0.150$, $t=0.938$), financial capital ($\beta=-0.105$, $t=1.444$), marketing capabilities ($\beta=0.145$, $t=1.067$) and business environment ($\beta=0.019$, $t=0.213$).

The direct relationship between the components and the ISMs' sustainable performance was also estimated. The findings showed that there was a significant effect of financial capital ($\beta=0.189$, $t=1.816$) and business environment ($\beta=0.634$, $t=4.710$) in the start stage. Social capital ($\beta=0.228$, $t=1.824$), marketing capabilities ($\beta=0.344$, $t=1.931$) and business environment ($\beta=0.428$, $t=3.124$) were accounted to be significant in the growth stage. In the mature stage, social capital ($\beta=0.459$, $t=1.692$) and business environment ($\beta=0.598$, $t=3.579$) were found to be significant. In the decline stage, personality traits ($\beta=0.199$, $t=1.885$), social capital ($\beta=0.412$, $t=2.000$)

and business environment ($\beta=0.310, t=2.619$) were found to be significant. Regarding the direct relationship between the components and the ISMs' sustainable performance, the following hypotheses were found to be non-significant in different subgroups. In the start stage, five hypotheses were rejected: personality traits ($\beta=-0.202, t=1.272$), entrepreneurial orientation ($\beta=-0.118, t=0.832$), human capital ($\beta=0.116, t=0.573$), social capital ($\beta=0.269, t=1.478$) and marketing capabilities ($\beta=0.054, t=0.377$). Entrepreneurial orientation ($\beta=-0.267, t=2.505$), personality traits ($\beta=0.153, t=1.095$), human capital ($\beta=0.005, t=0.052$) and financial capital ($\beta=0.000, t=0.003$) were rejected in the growth stage. In the mature stage, five hypotheses were found to be non-significant: personality traits ($\beta=-0.106, t=0.645$), entrepreneurial orientation ($\beta=0.097, t=0.595$), human capital ($\beta=-0.582, t=2.972$), financial capital ($\beta=0.094, t=0.844$) and marketing capabilities ($\beta=0.157, t=0.868$). In the decline stage, entrepreneurial orientation ($\beta=0.155, t=1.079$), human capital ($\beta=-0.198, t=1.107$), financial capital ($\beta=0.065, t=0.709$) and marketing capabilities ($\beta=0.033, t=0.175$) were not accepted.

Total Effect: Path Coefficient (β) and Statistical Significance of t-value

The total effect findings shown in Table 7.26 indicated that business environment ($\beta=0.638; t=4.742$) had the strongest total effect on sustainable performance over financial capital ($\beta=0.189; t=1.827$) in the start stage. Other total effects were found to be non-significant in the start stage: personality traits ($\beta=-0.230, t=1.368$), human capital ($\beta=0.064, t=0.345$), social capital ($\beta=0.257, t=1.401$) and marketing capabilities ($\beta=0.027, t=0.203$). In the growth stage, only business environment ($\beta=0.439; t=2.961$) was accepted whilst personality traits ($\beta=0.009, t=0.066$), human capital ($\beta=0.005, t=0.039$), social capital ($\beta=0.203, t=1.586$), financial capital ($\beta=0.009, t=0.084$) and marketing capabilities ($\beta=0.248, t=1.273$) were not accepted. In the mature stage, social capital ($\beta=0.414, t=1.650$) and business environment ($\beta=0.600, t=3.657$) were accepted. On the other hand, personality traits ($\beta=-0.072, t=0.480$), human capital ($\beta=-0.529, t=3.442$), financial capital ($\beta=0.091, t=0.823$) and marketing capabilities ($\beta=0.208, t=1.291$) were rejected. Personality traits ($\beta=0.277, t=2.742$), social capital ($\beta=0.435, t=2.052$) and business environment ($\beta=0.313, t=2.611$) were significant in the decline stage. On the other hand, human capital ($\beta=-0.158, t=0.914$), financial capital ($\beta=0.049, t=0.514$) and marketing capabilities ($\beta=0.056, t=0.301$) were non-significant.

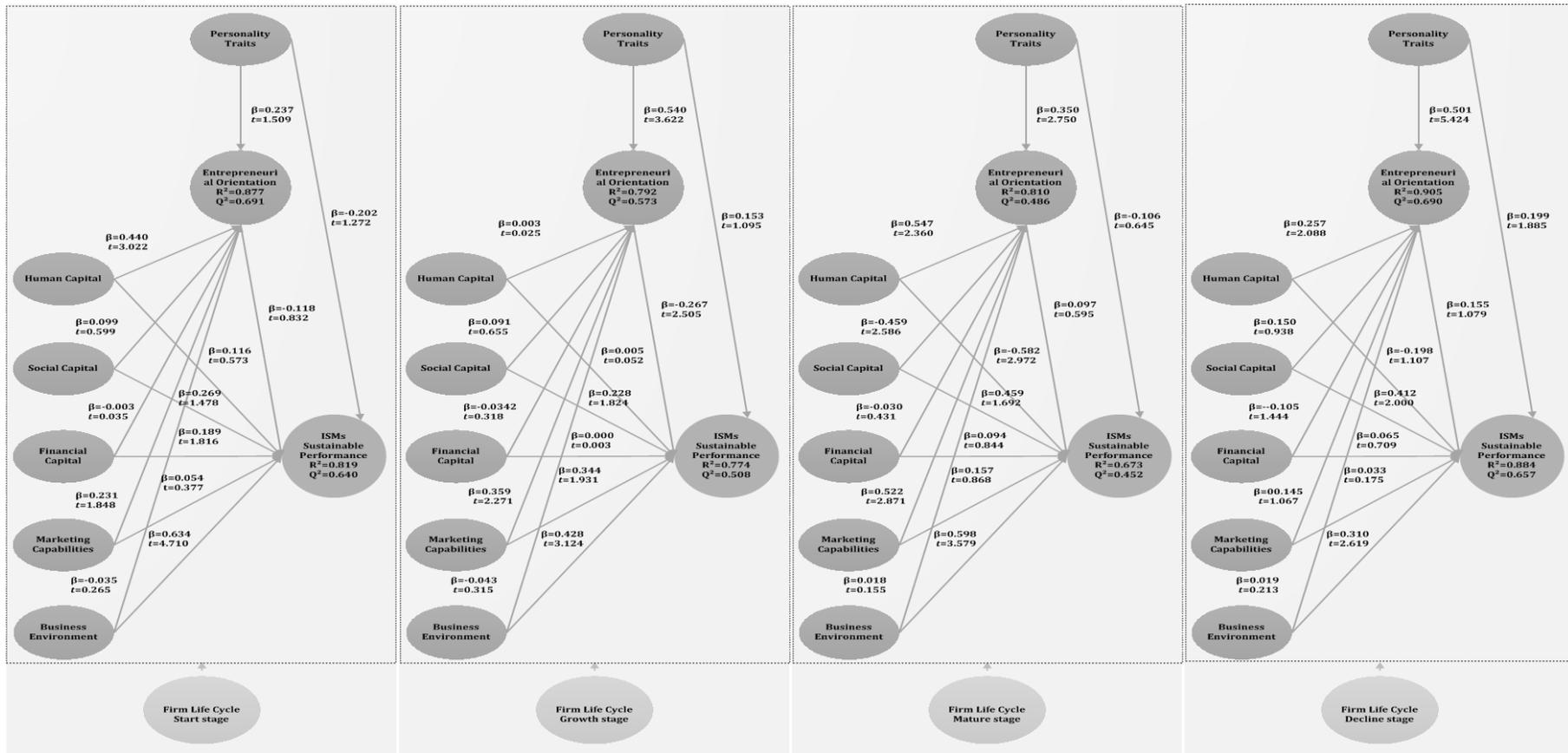


Figure 7.4a: Start stage model

Figure 7.4b: Growth stage model

Figure 7.4c: Mature stage model

Figure 7.4d: Decline stage model

Table 7.25: Evaluation of the research hypotheses (Direct effect)

Hypotheses	Links	Start stage			Growth stage			Mature stage			Decline stage		
		(β)	t-value	Results	(β)	t-value	Results	(β)	t-value	Results	(β)	t-value	Results
H1a	PT → SP	-0.202	1.272	Rejected	0.153	1.095	Rejected	-0.106	0.645	Rejected	0.199	1.885	Accepted
H1b	PT → EO	0.237	1.509	Rejected	0.540	3.622	Accepted	0.350	2.750	Accepted	0.501	5.424	Accepted
H2	EO → SP	-0.118	0.832	Rejected	-0.267	2.505	Rejected	0.097	0.595	Rejected	0.155	1.079	Rejected
H3a	HC → SP	0.116	0.573	Rejected	0.005	0.052	Rejected	-0.582	2.972	Rejected	-0.198	1.107	Rejected
H3b	HC → EO	0.440	3.022	Accepted	0.003	0.025	Rejected	0.547	2.360	Accepted	0.257	2.088	Accepted
H4a	SC → SP	0.269	1.478	Rejected	0.228	1.824	Accepted	0.459	1.692	Accepted	0.412	2.000	Accepted
H4b	SC → EO	0.099	0.566	Rejected	0.091	0.655	Rejected	-0.456	2.586	Rejected	0.150	0.938	Rejected
H5a	FC → SP	0.189	1.816	Accepted	0.000	0.003	Rejected	0.094	0.844	Rejected	0.065	0.709	Rejected
H5b	FC → EO	-0.003	0.035	Rejected	-0.034	0.318	Rejected	-0.030	0.431	Rejected	-0.105	1.444	Rejected
H6a	MC → SP	0.054	0.377	Rejected	0.344	1.931	Accepted	0.157	0.868	Rejected	0.033	0.175	Rejected
H6b	MC → EO	0.231	1.848	Accepted	0.359	2.271	Accepted	0.522	2.870	Accepted	0.145	1.067	Rejected
H7a	BE → SP	0.634	4.710	Accepted	0.428	3.124	Accepted	0.598	3.579	Accepted	0.310	2.619	Accepted
H7b	BE → EO	-0.035	0.265	Rejected	-0.043	0.315	Rejected	0.018	0.155	Rejected	0.019	0.213	Rejected

Table 7.26: Evaluation of the total effect

Links	Start stage			Growth stage			Mature stage			Decline stage		
	(β)	t-value	Results	(β)	t-value	Results	(β)	t-value	Results	(β)	t-value	Results
PT → SP	-0.230	1.368	Rejected	0.009	0.066	Rejected	-0.072	0.480	Rejected	0.277	2.742	Accepted
HC → SP	0.064	0.345	Rejected	0.005	0.039	Rejected	-0.529	3.442	Rejected	-0.158	0.914	Rejected
SC → SP	0.257	1.401	Rejected	0.203	1.586	Rejected	0.414	1.650	Accepted	0.435	2.052	Accepted
FC → SP	0.189	1.827	Accepted	0.009	0.084	Rejected	0.091	0.823	Rejected	0.049	0.514	Rejected
MC → SP	0.027	0.203	Rejected	0.248	1.273	Rejected	0.208	1.291	Rejected	0.056	0.301	Rejected
BE → SP	0.638	4.742	Accepted	0.439	2.961	Accepted	0.600	3.657	Accepted	0.313	2.611	Accepted

Amount of Variance Explained or R Squared (R²) and Predictive Relevance Q²

As shown in Table 7.27, the antecedent independent factors explained 87.7 % of the variance for entrepreneurial orientation, and 81.9% of the variance for the ISMs' sustainable performance in the start stage. In the growth stage, the factors explained 79.2 % of the variance for entrepreneurial orientation, and 77.4% of the variance for the ISMs' sustainable performance. In the mature stage, 81.0% and 67.3% of the variance were accounted for for entrepreneurial orientation and the ISMs' sustainable performance respectively. In the decline stage, it was 90.5% and 88.4% respectively. Overall, the findings have shown that all scores of R² value satisfied the requirement.

Similarly, Table 7.27 shows the cross-validated redundancy, Q². In the start stage, this was 0.691 for entrepreneurial orientation and 0.640 for the ISMs' sustainable performance; in the growth stage, it was 0.573 for entrepreneurial orientation and 0.508 for the ISMs' sustainable performance; in the mature stage, it was 0.486 for entrepreneurial orientation and 0.452 for the ISMs' sustainable performance; and in the decline stage, it was 0.690 for entrepreneurial orientation and 0.657 for the ISMs' sustainable performance. All these values of Q² were greater than zero (Q² > 0) which was indicative of a highly predictive model for each subgroup.

Table 7.27: Evaluation of R² and Q²

	R ²				Q ²			
	Start stage	Growth Stage	Mature stage	Decline stage	Start stage	Growth stage	Mature stage	Decline stage
EO	0.877	0.792	0.810	0.905	0.691	0.573	0.486	0.690
SP	0.819	0.774	0.673	0.884	0.640	0.508	0.452	0.657

Power Analysis (1-β)

In a same way, the study also conducted power analysis (1-β) to validate the empirical findings of the study for each subgroup (see Tables 7.28a–7.28d. and Figures 7.5a–7.5d). High power (> 0.80) confirmed that the study had adequate confidence in the hypothesized relationships in the research model for each group.

Table 7.28a: Power analysis (1-β) start stage

t-tests – Linear multiple regression: Fixed model, single regression coefficient Analysis: Post hoc: Compute achieved power			
Input		Output	
Tail(s)	= Two	Non-centrality parameter δ	= 3.082207
Effect size f^2	= 0.1	Critical t	= 1.987608
α err prob	= 0.05	Df	= 87
Total sample size	= 95	Power (1- β err prob)	= 0.861713
Number of predictors	= 7		

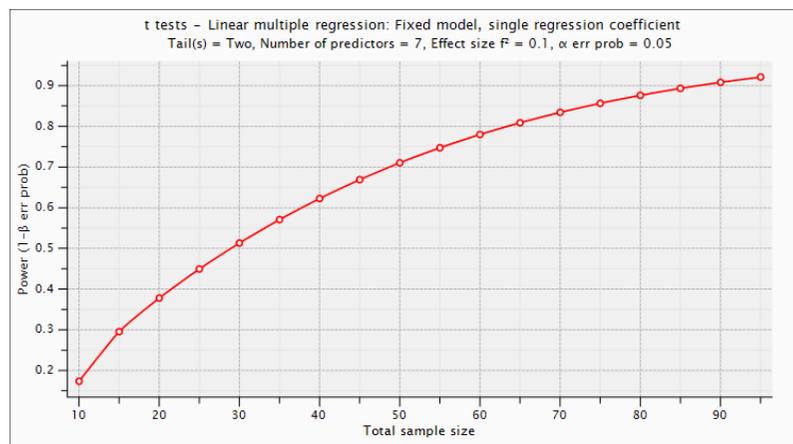


Figure 7.5a: Power analysis (1-β) start stage

Table 7.28b: Power analysis (1-β) growth stage

t-tests – Linear multiple regression: Fixed model, single regression coefficient Analysis: Post hoc: Compute achieved power			
Input		Output	
Tail(s)	= Two	Non-centrality parameter δ	= 3.464102
Effect size f^2	= 0.1	Critical t	= 1.981372
α err prob	= 0.05	Df	= 112
Total sample size	= 120	Power (1- β err prob)	= 0.929797
Number of predictors	= 7		

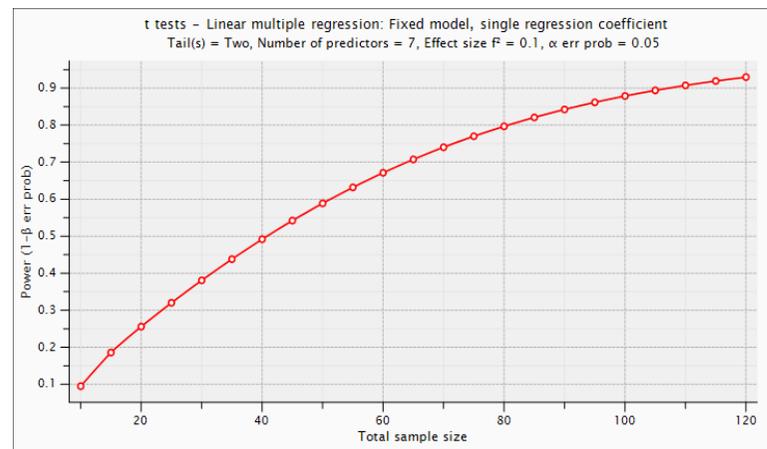


Figure 7.5b: Power analysis (1-β) growth stage

Table 7.28c: Power analysis (1-β) mature stage

t-tests – Linear multiple regression: Fixed model, single regression coefficient Analysis: Post hoc: Compute achieved power			
Input		Output	
Tail(s)	= Two	Non-centrality parameter δ	= 3.331666
Effect size f^2	= 0.1	Critical t	= 1.983264
α err prob	= 0.05	Df	= 103
Total sample size	= 111	Power (1-β err prob)	= 0.909955
Number of predictors	= 7		

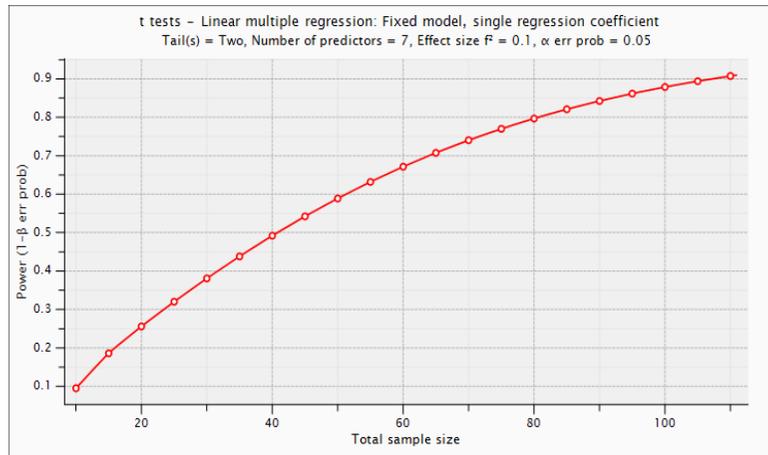


Figure 7.5c: Power analysis (1-β) mature stage

Table 7.28d: Power analysis (1-β) decline stage

t-tests – Linear multiple regression: Fixed model, single regression coefficient Analysis: Post hoc: Compute achieved power			
Input		Output	
Tail(s)	= Two	Non-centrality parameter δ	= 3.346640
Effect size f^2	= 0.1	Critical t	= 1.983038
α err prob	= 0.05	Df	= 112
Total sample size	= 112	Power (1-β err prob)	= 0.912389
Number of predictors	= 7		

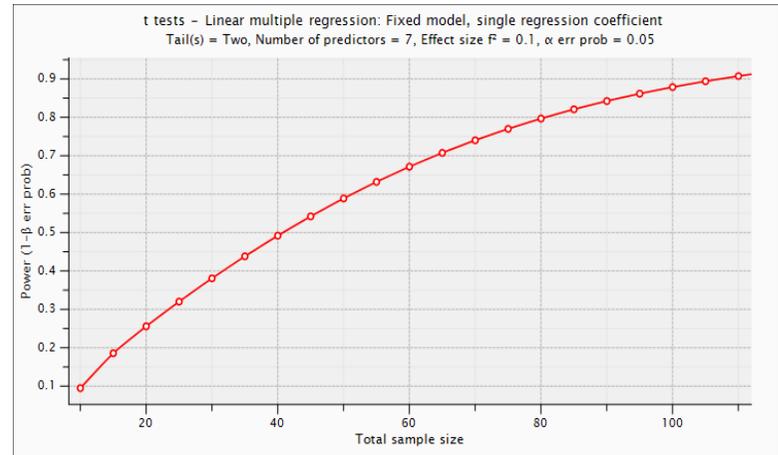


Figure 7.5d: Power analysis (1-β) decline stage

The analysis was then extended to test the moderating effect of life-cycle stages (start, growth, mature and decline). In this analysis, the Smith-Satterthwaite test was employed because the samples were not distributed normally and the variances of the group were not equal (Chin 2000; Moores and Chang 2006). In accordance with this procedure, a *t*-test was calculated by the following equation:

$$t = \frac{Path_{sample_1} - Path_{sample_2}}{\sqrt{\left[\frac{(m-1)^2}{(m+n-2)} * SE_{sample1}^2 + \frac{(n-1)^2}{(m+n-2)} * SE_{sample2}^2 \right]} * \left[\sqrt{\frac{1}{m} + \frac{1}{n}} \right]}$$

The path sample refers to the value of the path coefficient according to the subgroup, whereas SE refers for the standard error of the subgroup. Information for both was gathered from the bootstrapping sample procedures. After the *t*-test was calculated, a *p*-value was determined with *m+n-2* degrees of freedom where *m* and *n* are the sample of the subgroup.

Table 7.29 presents the results from this procedure for the path coefficient (β), standard error (SE) and *t*-value to determine the significant effect of life-cycle stages (start, growth, mature and decline). To recall, Hypothesis H8 was developed to describe the moderating effect of the life-cycle stage.

As shown in Table 7.29, a mixed result was detected in the life-cycle stages of start, growth, mature and decline. The life-cycle stages were divided into three categories: the life-cycle stages between start stage and growth stage; growth stage and mature stage; and mature stage and decline stage were not the same.

There were significance differences in the path coefficients (β) in the three subgroups. Personality traits had a significant influence on sustainable performance, and human capital had a significant influence on entrepreneurial orientation in the two subgroups between the stages of start and growth. Between the stages of growth and mature, entrepreneurial orientation and human capital had a higher impact on sustainable performance; and human capital and social capital had a higher effect on entrepreneurial orientation. Between the mature and decline stages, social capital and marketing capabilities had a significant effect on entrepreneurial orientation. Based on these overall results, H8 was supported with the mixed-mode approach.

Table 7.29: Results of pooled error term *t*-tests by subgroup

Links	Start stage		Growth stage				Growth stage		Mature stage				Mature stage		Decline stage			
	(β)	SE	(β)	SE	<i>t</i> -value	Results	(β)	SE	(β)	SE	<i>t</i> -value	Results	(β)	SE	(β)	SE	<i>t</i> -value	Results
PT → SP	-0.202	0.159	0.153	0.139	1.689	Accepted	0.153	0.139	-0.106	0.165	1.211	Rejected	-0.106	0.165	0.199	0.106	1.572	Rejected
PT → EO	0.237	0.157	0.540	0.149	1.394	Rejected	0.540	0.149	0.350	0.127	0.963	Rejected	0.350	0.127	0.501	0.092	0.962	Rejected
EO → SP	-0.118	0.142	-0.267	0.107	0.391	Rejected	-0.267	0.107	0.097	0.163	1.904	Accepted	0.097	0.163	0.155	0.144	0.267	Rejected
HC → SP	0.116	0.202	0.005	0.104	0.743	Rejected	0.005	0.104	-0.582	0.196	2.719	Accepted	-0.582	0.196	-0.198	0.179	1.457	Rejected
HC → EO	0.440	0.146	0.003	0.137	2.505	Accepted	0.003	0.137	0.547	0.232	2.064	Accepted	0.547	0.232	0.257	0.123	1.114	Rejected
SC → SP	0.269	0.182	0.228	0.125	0.192	Rejected	0.228	0.125	0.459	0.271	0.796	Rejected	0.459	0.271	0.412	0.206	0.137	Rejected
SC → EO	0.099	0.176	0.091	0.139	0.037	Rejected	0.091	0.139	-0.456	0.176	2.463	Accepted	-0.456	0.176	0.150	0.160	2.558	Accepted
FC → SP	0.189	0.104	0.000	0.101	1.290	Rejected	0.000	0.101	0.094	0.111	0.626	Rejected	0.094	0.111	0.065	0.092	0.203	Rejected
FC → EO	-0.003	0.099	-0.034	0.107	0.206	Rejected	-0.034	0.107	-0.030	0.070	0.029	Rejected	-0.030	0.070	-0.105	0.072	0.744	Rejected
MC → SP	0.054	0.144	0.344	0.178	1.223	Rejected	0.344	0.178	0.157	0.181	0.741	Rejected	0.157	0.181	0.033	0.190	0.474	Rejected
MC → EO	0.231	0.125	0.359	0.158	0.612	Rejected	0.359	0.158	0.522	0.182	0.679	Rejected	0.522	0.182	0.145	0.136	1.670	Accepted
BE → SP	0.634	0.135	0.428	0.137	1.061	Rejected	0.428	0.137	0.598	0.167	0.797	Rejected	0.598	0.167	0.310	0.118	1.416	Rejected
BE → EO	-0.035	0.131	-0.043	0.137	0.045	Rejected	-0.043	0.137	0.018	0.118	0.304	Rejected	0.018	0.118	0.019	0.089	0.004	Rejected

7.6 SUMMARY

This chapter has presented the results of the quantitative analysis of the survey conducted among ISM owners in Bangladesh to explore the sustainable performance of ISMs in a developing country. The analysis started with the descriptive test to describe the demographics of the respondents. The full analysis was then described in a later section. Data analysis using the component-based PLS technique was adopted for this study. In particular, SmartPLS was used. The PLS technique was considered because of the nature of the data (reflective as well as formative items), smaller sample size and the nature of the study (exploratory study). In order to meet the objective of the current research, the analysis of the data was divided into two parts. In the first part, an examination was conducted to investigate the overall influence of antecedent factors on the ISMs' sustainable performance. The second part of analysis examined the moderating effect of firm life-cycle stages (start, growth, mature and decline) on its immediate antecedents and outcomes. Two stages of data analyses were performed: assessment of the measurement model and assessment of the structural model. In assessing the measurement model, tests for convergent validity and discriminant validity were performed. Convergent validity was achieved through examining item loadings and *t*-values of the reflective indicators, weights and *t*-values of the formative indicators, and multicollinearity tests especially for the formative items. Discriminant validity was achieved through examining the square root of AVE to determine the inter-construct correlations, and developing and analysing the cross-loading matrix. To assess the structural model, path coefficients (β), significance of *t*-values, R^2 (amount of variance explained), Q^2 (predictive relevance) and power analysis ($1-\beta$) were examined.

Based on the results from the measurement model and the structural model, the hypotheses developed in Chapter 6 were tested and evaluated. Overall, of the 14 hypotheses proposed in the current research based on the comprehensive research model, seven hypotheses were supported. The implications of these results and outcomes will be discussed in Chapter 8.

CHAPTER 8

RESULTS AND DISCUSSIONS¹³

"Discussion is an exchange of knowledge; argument is an exchange of ignorance".

—Robert Quillen

8.1 INTRODUCTION

This chapter aims to discuss the empirical findings of the previous chapter. These findings will be discussed in terms of the major research questions and the hypotheses proposed in Chapter 6. In addressing the research questions, objectives and hypotheses, this study firstly described and validated a context-specific, multidimensional, hierarchical-reflective-formative informal social microenterprises (ISMs) model. The proposed research model was then analysed by examining the direct effects of the firm's capabilities, resources and business environment forces that would lead to ISMs' entrepreneurial orientation and sustainable performance. In the same section, the moderating effects of the firm life-cycle stages on its immediate antecedents and outcomes are also discussed. The next section concludes by presenting a summary of the results.

8.2 DISCUSSION OF CONSTRUCTS' DIMENSIONALITY

This study has provided empirical findings by developing a hierarchical-reflective-formative ISMs' sustainable performance model (see Figure 7.1 in Chapter 7) using

¹³ Parts of this chapter have been presented and published in the following conferences and publications:

- a. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). "Business Environment and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries-Qualitative and Quantitative Evidence" in *Proceedings of the 2nd International Conference on Entrepreneurship and Business Management (ICEBM)*, Bali, Indonesia.
- b. Khan, E.A. (2013). "Investigating the Dimensions of Financial Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in a Developing Country", *Curtin Business School Doctoral Colloquium*, Curtin University, Perth, Australia.
- c. Khan, E.A., Quaddus, M. and Rowe, A.L. (2013). "The Dynamics of Social Capital and Sustainable Performance of Informal Social Microenterprises (ISMs) in an Emerging Nation: An Empirical Investigation" in *Proceedings of the 26th Annual SEAAZ Conference*, Sydney, Australia.
- d. Khan, E.A. (2013). "Human Capital and Sustainability Performance of Informal Social Microenterprises (ISMs) in Developing Countries – Field Study and Survey Experiment", *Emerging Research Initiatives and Development in Business: CGSB Research Forum*. Curtin Graduate School of Business, Curtin University, Perth, Australia.
- e. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). "Personality Traits, Entrepreneurial Orientation, Business Environment, and Micro-Firm Sustainable Performance: A Multidimensional Assessment" in *Proceedings of the International Studying Leadership Conference*, Perth, Australia.
- f. Khan, E.A., Quaddus, M. and Rowe, A.L. (2012). "Marketing Capabilities and Sustainable Performance of Informal Social Micro-enterprises (ISMEs) in Developing Countries" in *Proceedings of the 2nd Annual Conference on Global Economics, Business, and Finance (GEBF)*, Hong Kong.

data from a developing country. To establish the dimensionality of first-order and second-order reflective–formative constructs in this stage, the study used the approach of repeated indicators in estimating the higher-order latent variables and confirmed adequate measurement and structural properties. The study applied component-based SEM, or PLS path modelling, in developing and validating the higher-order ISMs construct. The study showed that ISMs’ hierarchical-reflective-formative construct was adequately reflected and formed by eight second-order dimensions underlying 27 first-order dimensions. Among these dimensions and subdimensions, four dimensions (i.e., personality traits, entrepreneurial orientation, marketing capabilities and sustainable performance) and 17 first-order dimensions (i.e., achievement motivation, tolerance for ambiguity, locus of control, risk-taking propensity, innovativeness, risk taking, proactiveness, competitive aggressiveness, autonomy, product/service, pricing, place, promotion, market segment, economic, social and natural environmental) were considered as reflective. On the other hand, another four dimensions (i.e., human capital, social capital, financial capital and business environment) and 10 first-order dimensions (i.e., demographic, psychographic, structural, cognitive, relational, sources of finance, capital structure, turbulent, hostile and munificent) were measured as formative. The findings confirmed that all the dimensions and subdimensions were reliable and valid. In the following sections, the relationship between dimensions and subdimensions is discussed with their empirical and theoretical insights.

8.2.1 Personality Traits

The study tested five first-order dimensions underlying the construct of personality traits. The results of the first-order dimensions were very promising. The explained variance R^2 for the achievement motivation dimension was 85%, supporting its role as a critical component. This finding was consistent with the literature which indicated that achievement motivation reflects a person’s willingness to do a difficult task well, and to accomplish something of great significance (Rauch and Frese 2000). Tolerance for ambiguity reflected 88% of the personality traits variance (R^2), confirming that microentrepreneurs led life within a less routine frame and continually faced complicated problems. This relationship was supported by the literature (Budner 1962). Locus of control reflected 86% of the personality traits variance (R^2), confirming that ISM owners’ personal behaviour was influenced by personal judgments and efforts (Rotter 1966). Finally, risk-taking propensity reflected 76% of the personality traits variance (R^2), confirming that microentrepreneurs were willing to admit mistakes and took risks in uncertain environments (Jackson 1978). Overall, the findings confirmed

personality traits as a significant dimension incorporating achievement motivation, tolerance for ambiguity, locus of control and risk-taking propensity as the critical subdimensions in the context of the ISM owners' psychological characteristics in developing countries. These findings reflected that any improvement in any one of these subdimensions can have a significant positive impact on the personality traits of the ISM owner.

8.2.2 Entrepreneurial Orientation

The findings of the study proved a strong, significant relationship between entrepreneurial orientation and its subdimensions, that is, innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. Innovativeness reflected 83% of the entrepreneurial orientation variance (R^2), supporting the micro-firm's ability and creativity to introduce innovation. This finding reflected that the innovative firm creates and introduces new products/services and technologies and can generate astonishing performance (Zahra 1996). Risk taking of the firm reflected 69% of the entrepreneurial orientation variance (R^2), supporting the view that the microentrepreneur encouraged taking risks and emphasized exploration and experimentation (Kreiser and Davis 2010). Proactiveness reflected 82% of the entrepreneurial orientation variance (R^2), proving that being proactive in every situation and excelling at identifying opportunity were important to ensure an overall entrepreneurial orientation (Miller and Friesen 1978). Competitive aggressiveness reflected 75% of the entrepreneurial orientation variance (R^2), supporting the micro-firm's bold and aggressive behaviour in a competitive environment (Lumpkin and Dess 2001). Finally, autonomy of the firm reflected 69% of the entrepreneurial orientation variance (R^2), supporting the view that firms with autonomous behaviour such as high entrepreneurial cultures, practices and the power of the team can stimulate entrepreneurial success (Lumpkin, Cogliser, and Schneider 2009). Overall, the findings supported entrepreneurial orientation as a significant dimension incorporating innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy in the context of ISMs' entrepreneurial orientation in developing countries.

8.2.3 Human Capital

The study found two first-order dimensions, namely, demographic and psychographic underlying the construct of human capital. In the first-order measurement model, nearly all weights were significant. The only exception was 'relevant or other work experience'. However, the loadings were significant. The research also needed to check

whether the level of multicollinearity was a critical issue. In the first-order formative measurement model, the highest variance inflation factor (VIF) had a value of 4.744 and 4.761 in demographic and psychographic dimensions, respectively. Hence, multicollinearity was relatively low and did not pose a problem. The manifest variables' weights indicated how important each variable was for determining the associated latent variable. With regard to the latent variable 'demographic', for example, with a weight of 6.296, the variable 'age or maturity level' was regarded as of major importance. By contrast, with a weight of 0.188, 'relevant or other work experience' was hardly relevant. With regard to the latent variable 'psychographic', for example, with a weight of 9.486, the variable 'friendly and intimate relationships' was regarded as of major importance. In the second-order measurement model, VIF had a value of 6.120. Overall, the findings confirmed that human capital, integrating demographic and psychographic characteristics, was a significant dimension.

8.2.4 Social Capital

In the social capital second-order dimension, this study tested three first-order dimensions: structural, cognitive and relational. All weights were significant in the first-order measurement model. The highest VIF had a value of 2.089, 4.961 and 3.166 in structural, cognitive and relational, respectively. With regard to the latent variable 'structural', for example, with a weight of 12.085, the variable 'suppliers' was regarded as of major importance. With regard to the latent variable 'cognitive', for example, with a weight of 10.173, the variable 'language and narratives' was regarded as of main importance. With regard to the latent variable 'relational', for example, with a weight of 9.034, the variable 'trust' was observed as of key importance. In the second-order measurement model, VIF had a value of 2.858, 6.046 and 5.997 in structural, cognitive and relational, respectively. Therefore, the findings confirmed that social capital, incorporating structural, cognitive and relational, was a significant dimension.

8.2.5 Financial Capital

The study established two first-order dimensions of financial capital, namely, sources of finance and capital structure. The first-order measurement model confirmed that all the weights were significant in the sources of finance subdimension. In the capital structure subdimension, only 'small amount of capital' and 'lower risk tolerance of capital' were significant. The highest VIF had a value of 2.573 and 1.000 in 'sources of finance' and 'capital structure' respectively. With respect to the latent variable 'sources of finance', for example, with a weight of 6.841, the variable 'institutional borrowing'

was viewed as of most importance. With a weight of 13.196, the variable 'lower risk tolerance of capital' was regarded as of foremost importance in the 'capital structure' subdimension. In the second-order measurement model, VIF had a value of 1.080. Thus, the findings confirmed that financial capital, adding sources of finance and capital structure, was a significant dimension.

8.2.6 Marketing Capabilities

Results of the study supported marketing capabilities as a significant dimension in terms of product/service, pricing, place, promotion and market segment subdimensions. Product/service explained 84% of the overall marketing capabilities variance (R^2), confirming that it was important to serve customers quickly and fulfil customer product requirements. Pricing explained 82% of the overall marketing capabilities variance (R^2), supporting the crucial role of the pricing strategy of ISMs. Place explained 76% of the overall marketing capabilities variance (R^2), confirming that convenient location and small space requirement were important in operating a microenterprise. Promotion explained 86% of the overall marketing capabilities variance (R^2), supporting the promotional capabilities of micro-firms in view of being service-oriented and having the ability to cook and demonstrate in front of customers. Finally, market segment explained 85% of the overall marketing capabilities variance (R^2), confirming that micro-firms had specific lower-income customers who were stable and profitable. Overall, the findings supported that marketing capabilities were a significant second-order dimension incorporating innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy in the context of ISMs in developing countries.

8.2.7 Business Environment

The study considered three first-order dimensions of business environment, namely, turbulent, hostile and munificent. In the first-order measurement model, nearly all weights were significant. The only exception was the weight for 'threats from extortionists and law enforcement authorities'. However, the loadings were significant. The highest VIF had a value of 2.308, 1.573 and 2.456 in turbulent, hostile and munificent, respectively. With regard to the latent variable 'turbulent', for example, with a weight of 9.052, the variable 'actions of the competitors' was considered as of highest significance. With regard to the latent variable 'hostile', for example, with a weight of 3.243, the variable 'control and manipulate extortion, and government pressure' was regarded as very prominent. By contrast, with a weight of 0.687, the

variable 'threats from extortionists and law enforcement authorities' was less relevant. With regard to the latent variable 'munificent', for example, with a weight of 11.399, the variable 'few rules and regulations' was regarded as very important. In the second-order measurement model, VIF had a value of 2.406, 1.048 and 2.436 in turbulent, hostile and munificent, respectively. Accordingly, the findings confirmed that business environment, assimilating turbulent, hostile and munificent, was a significant dimension.

8.2.8 Sustainable Performance

The study also tested the second-order outcome dimension underlying the three first-order subdimensions, namely, economic, social and natural environmental performance. The explained variance R^2 for the economic subdimension was 61%, for the social subdimension was 86% and for the natural environmental subdimension was 78%. The results indicated that the ISMs had expressed their positive response to include these three elements of ISMs' sustainable performance. Economic performance was explained by employment generation, sales growth, income stability and return on investment. Social performance confirmed the basic need requirements, recognition, empowerment, freedom and control in lifestyle. Natural environmental performance supported utilities' uses, wastes and emissions, waste management and small space requirement. Overall, the findings suggested that sustainable performance was a significant second-order dimension incorporating economic, social and natural environmental performance to explain overall firm performance in the context of ISMs in developing countries.

8.3 DISCUSSION OF HYPOTHESES

The empirical findings in Chapter 7 showed that, overall, the developed research model explained the antecedent factors that lead to the sustainable performance of ISMs in a developing country. The findings also supported (the mixed-mode approach) the moderating effects of life-cycle stages as proposed in the model. In this step, the study used the two-stage approach of estimating the higher-order latent variables and confirmed adequate measurement and structural properties. The results of the testing of the hypotheses were detailed in Chapter 7. These results revealed that, out of seven hypotheses related to ISMs' sustainable performance, three were significant. These were: social capital, marketing capabilities and business environment. In addition, out of six hypotheses related to entrepreneurial orientation, three were statistically accepted. The moderating effect of the firm start, growth, mature and decline stages in

its immediate antecedents and outcomes was also accepted with the mixed-mode approach results. In regard to the remaining hypotheses, there was no statistical evidence to conclude the significance of these relationships. As hypothesized in the study, the firm's capabilities, resources and business environment forces were seen to have an influence on the success of ISMs. These findings confirmed the appropriateness of the research model in using the resource-based theory and the firm life-cycle theory as its theoretical basis to underpin the model. The following sections discuss the findings related to the individual hypotheses proposed earlier (see Table 7.16 in Chapter 8).

8.3.1 Personality Traits to Sustainable Performance (H1a)

The lack of evidence to support Hypothesis H1a indicated that personality traits of ISM owners were not a significant determinant of ISMs' sustainable performance. This finding was not consistent with the findings of previous relevant studies such as those by De Vries (1977), Bonnett and Furnham (1991), Glancey, Greig, and Pettigrew (1998), Stewart Jr and Roth (2001), and Halim et al. (2012) among many others who placed a strong emphasis on personality traits in regards to small business success. This result also contradicted the field study findings, as 64% of interviewees agreed with the link between personality traits and sustainable performance. These survey findings were surprising because in a developing country, microentrepreneurs' personal characteristics play a more important role, compared to any other variable for the success of a business. The trait model describes the high motivation (McClelland 1987), tolerance for ambiguity (Budner 1962), internal locus of control (Rotter 1966) and moderate risk-taking propensity (McClelland 1987) that contribute to venture success. The willingness of microentrepreneurs to exploit opportunities is a function of various personality characteristics. Psychological traits characterize personal differences and determine the possibility of an individual being involved in entrepreneurial activity.

In the context of ISMs in a developing country, the lack of employment opportunities in the overall economy motivates underprivileged people (microentrepreneurs) to take a risk in a ambiguous situation with their locus of control to fulfil their economic and social needs. Therefore, the ISM entrepreneurs frequently faced different problems and situations which were not able to be overcome with their existing psychological character. In order to respond in diverse situations and deal with differing resource availability, dynamic personality characteristics are needed to be successful. This could

be one possible reason why personality traits do not appear to have a significant bearing on success. The literature also pointed out that thousands of firms start up in every year but, of these, only 10% survive and grow (e.g., Cassar 2006). Therefore, it is necessary for a microentrepreneur to analyse his/her own personal strengths and weaknesses before starting a new business. In addition, this study also realized that studies on personality traits for small firms in developing countries were very rare and, hence, there is a need for further investigation of this aspect.

8.3.2 Personality Traits to Entrepreneurial Orientation (H1b)

The findings of the study showed that there is significant statistical evidence to support a positive relationship between personality traits and entrepreneurial orientation. This finding was consistent with the results of previous relevant studies (e.g., Kickul et al. 2010; Chandler and Hanks 1998; Zainol and Ayadurai 2011). The field study analysis also revealed that 64% of the participants agreed that the personality traits of micro-firm owners play a significant role in the firm-level entrepreneurial orientation activities. The firm-level entrepreneurial orientation is an extension of the entrepreneur, embracing the owner and obtaining a different identity that shows a degree of difference in terms of capability (innovativeness, risk taking) and administrative style (autonomy, proactiveness, competitive aggressiveness).

The theoretical implication is that personality traits and entrepreneurial orientation can be successfully combined into the ISMs' growth model. In the context of a developing country, most of the ISMs consist of self-employed people and they open microenterprises for personal fulfilment and family obligation. Therefore, their individual capability powerfully transfers into firm-level entrepreneurial orientation. The microentrepreneur's personal capability inspires the members of the family to undertake a risky venture, makes them more proactive in every situation, motivates them to come out with innovative ideas, encourages them to be involved in a competitive environment, and gives them autonomy and freedom to make decisions. Therefore, the amalgamation of theories is an expedient approach towards investigating personality traits and entrepreneurial orientation. The practical implication is that the role of personal capability should not be overlooked by policy makers and relevant agencies. They may reassess and modify the various micro-credit programmes, and vocational and technical education programmes to improve the personal capability of microentrepreneurs. For example, easy access to finance may lead to increased motivation and risk-taking propensity of microentrepreneurs to come

up with risky innovative ideas. Similarly, these kinds of initiatives would help microentrepreneurs to deal with ambiguous situations more proactively and aggressively, and make them rely upon the external locus of control.

8.3.3 Entrepreneurial Orientation to Sustainable Performance (H2)

In Hypothesis H2, entrepreneurial orientation was hypothesized to be one of the important factors for micro-firm sustainable performance. However, there was no evidence in this research to suggest that entrepreneurial orientation was significantly associated with micro-firm sustainable performance, although many have proven it empirically in their previous studies (e.g., Wiklund and Shepherd 2005; Pearce et al. 2010). Some scholars have also suggested that firms conceiving high levels of an entrepreneurial orientation will accomplish better performance than those that are possessed with low levels of entrepreneurial orientation (e.g., Zahra 1991; Keh, Nguyen, and Ng 2007; Chow 2006). Likewise, in the field study, the majority of participants (71%) also perceived the role of entrepreneurial orientation in micro-firms' sustainable performance.

The possible explanation for the non-significance of this relationship was the confounding effect of other factors on entrepreneurial orientation and micro-firm sustainable performance. Entrepreneurial orientation is a resource-consuming concept which serves to incorporate and focus capabilities and resources, possibly resulting in firm sustainable performance. Hence, the micro-firm entrepreneurial strategies require dynamic capabilities and resources to play a vital role in the firm's ability to be entrepreneurial (Wiklund and Shepherd 2005). In other words, the micro-firm's entrepreneurial orientation should be equipped with human, social and financial resources as well as some dynamic capabilities (i.e., personal and marketing) as being essential to ISMs' sustainable development. However, ISMs in a developing country have been suffering from resource acquisition and the lack of dynamic capabilities. Another possible reason was the unpredictable business environment. In a developing country, ISMs face a dynamic, hostile and unstable environment which may reduce the exploration and exploitation of entrepreneurial opportunities.

8.3.4 Human Capital to Sustainable Performance (H3a)

The quantitative findings of this study found the negative statistical significance rather than the positive significance of human capital on the success of microenterprises. Statistically significant negative results can not be used to accept since a positive result was expected. However, these findings were supported by a study by Pfeffer (1983).

This result was not supported by the participants in the field study. The majority of the field study participants (86%) agreed on the positive link between human capital and the sustainable performance of microenterprises. Similarly, most of the studies of small business have found that the human capital of micro-firms in terms of demographic (e.g., Watson, Stewart Jr, and BarNir 2003; Unger et al. 2011) and psychographic (e.g., Sharma and Salvato 2011; Zahra et al. 2008) dimensions was positively associated with firm performance. Therefore, this study suggests that human capital may have a positive impact on firm performance. This study also recognized that studies on human capital for micro-firms in developing countries were limited and, hence, there is a need for further investigation.

The reason behind the negative statistical significance results can be interpreted as follows. Most of the microentrepreneurs and their family members have poor educational backgrounds and also an absence of formal training. They apply experience and skills acquired through experimentation or passed down in the family. Very high proportions of people working in the sector are trained by the sector itself and use their own tacit knowledge. Therefore, these variances of human capital resources seem to be not contributing to firm success in a positive way. Furthermore, heterogeneity in terms of maturity/age level and team size was also characterized in the ISMs' sector. The ISM owner involves their family members such as their spouse and children in their business. The maturity distance and infrequent team size among the members disrupt harmony in achieving firm success. This may also have an effect on commitment, relationships and voluntary labour.

8.3.5 Human Capital to Entrepreneurial Orientation (H3b)

This study found very strong evidence in support of Hypothesis H3b suggesting that human capital was a positive determinant of successful entrepreneurial orientation of the micro-firm. This was in accordance with the studies of Kickul et al. (2010), Chandler and Hanks (1994), Davidsson and Honig (2003), etc. The field study also supported this notion. As mentioned earlier, entrepreneurial orientation was a resource-consuming strategic construct and human resources was the main element of this factor. Without human resources, capability (innovativeness, risk taking) and administrative style (autonomy, proactiveness, competitive aggressiveness) cannot be executed. Therefore, to reach the acceptable level of entrepreneurial orientation, the firm must ensure a good combination of demographic and psychographic characteristics of human capital.

Based on the above significant relationship, it is possible to interpret that human capital is a pillar of successful entrepreneurial orientation in a developing country. The microenterprise owner depends upon their own and their family members' education, experience and skills to set up and operate a business. Along with this, they also rely upon tacit knowledge, commitment, intimate relationships and voluntary participants. This is the set of resources of micro-firms that encourages microentrepreneurs to implement strategies and acquire firm goals. Furthermore, these resources increase micro-firm's entrepreneurial alertness, and help them to take risks and discover innovative opportunities. They also help to cultivate skills such as proactiveness, competitive aggressiveness and autonomy for monitoring diverse functions and interacting with different constituents. Thus, good human capital in the entrepreneurial orientation in terms of demographic and psychographic dimensions provides a consistent alignment with a micro-business's entrepreneurial strategic orientation. The practical implication is that policy makers and relevant agencies may design specific family-based vocational and technical education programmes to improve the condition of micro-firm-level human capital. For example, tea-stall businesses, street food vending and other similar types of economic activities mostly require the same strategic human resources. Based on the category of economic activities, introduction of vocational and technical education programmes might improve the situation of micro-firm human capital and contribute more in entrepreneurial orientation.

8.3.6 Social Capital to Sustainable Performance (H4a)

This study attempted to examine the impact of social capital on micro-firm sustainable performance (H4a) in a developing country. The findings of this study supported the strong positive statistical significance of social capital on micro-firm performance. The findings of the field study also supported this notion. These findings were aligned with those of many previous studies (e.g., Andersson, Forsgren, and Holm 2002; Park and Luo 2001; Dess and Shaw 2001). Social capital has been associated with the successful deployment of microenterprises. Appropriate social capital is considered vital to create and share knowledge and information within a firm and is believed to be an important source for firm sustainable performance. Weak social capital means insufficient interactions and bonding among the firm members and with external parties, and will cause negative impacts on firm performance.

Based on the above significant relationship, it can be concluded that micro-firms are likely to possess an abundance of internal network ties along with external network

ties such as close ties to neighbours, friends, family members, suppliers and customers and this often plays a vital role in the performance of ISMs' activities. These adequate networks are the sources of potential economic and other support in the case of ISMs falling on hard times. Similarly, the shared language and narratives are common among micro-firms in a developing country because these are deeply embedded in the micro-firm's history (Pearson, Carr, and Shaw 2008). Furthermore, the presence of trust, norms and obligation among the internal and external parties produces a congenial atmosphere, synergy and stability that help micro-firms to achieve sustainable performance. The practical implication is that local governments and NGOs may arrange regular fortnightly or monthly meetings by inviting local microentrepreneurs as well as other professional bodies (e.g., suppliers, banks, instructors). This interactive meeting would create scope for exchanging and sharing of ideas and information among external parties and provide opportunities. This, in turn, will lead to nurturing more social capital among micro-firms.

8.3.7 Social Capital to Entrepreneurial Orientation (H4b)

The social capital is a good contributor to entrepreneurial orientation. Hypothesis H4b posited that the the social capital would influence micro-firm entrepreneurial strategic orientation. The results of the statistical analysis did not support the proposed hypothesis and were contrary to the field study findings which revealed that most of the participants perceived the link between the social capital and entrepreneurial orientation of micro-firms. These results were also not consistent with previous findings from small business studies which reported on the significant influence of social capital on the entrepreneurial orientation by explaining the social relationships and networks that facilitate the discovery and exploitation of entrepreneurial opportunities (e.g., Aldrich and Zimmer 1986; Leana and Van Buren 1999).

One possible explanation for the rejection of the hypothesis was micro-firms' fragile social capital in relation to entrepreneurial orientation. This means that the existing structural social capital of the micro-firm is not sufficient to foster the entrepreneurial strategic orientation of micro-firms. Insubstantial interactions and bonding with internal and external members reduce the risk taking, proactiveness and competitive aggressiveness activities. Another plausible explanation is that cognitive factors such as shared codes and language, narratives and vision are the central building blocks of the micro-firm's entrepreneurial execution strategy. However, the current study has suggested that these essential elements were weak with regard to micro-firms in a

developing country. Therefore, social capital had a non-significant impact on capability (innovativeness), and administrative style (autonomy). Furthermore, lack of relational social capital factors such as trust, norms and obligations reduce the undertaking of collective decision making and actions.

8.3.8 Financial Capital to Sustainable Performance (H5a)

The present study, in Hypothesis H5a, proposed that numerous options of financial sources and a flexible capital structure could alleviate other areas of resource constraints and enhance firm performance. Results from the data analysis revealed that the direction of this influence was rejected. These findings contradict previous studies on the link between financial capital and the sustainable performance of microenterprises. For example, Cooper et al. (1992) revealed that, of eight prior studies that examined links between initial capital requirements and performance, six found that sufficient capital was associated with better performance. Some other studies have also established this mixed evidence link (e.g., Honig 1998; Michaelas, Chittenden, and Poutziouris 1999; Jordan, Lowe, and Taylor 1998). The quantitative findings were also not in alignment with the field study analysis in which the majority of the participants perceived the link between financial capital and the sustainable performance of microenterprises.

The possible reason that can explain these findings is the role of other factors. In fact, there is clear evidence in developing countries that most ISMs are curtailed by the lack of access to formal credit sources, and this has been considered as a common challenge. This challenge appears to be due to the informality of microenterprises. Formal financial institutions are not confident in financing the ISMs because of the latter's informality. Therefore, informal sources of finance have become the last resort of ISMs with these being volatile and uncertain in nature. Higher interest rates or cost of capital also limit access to financial opportunity and increase the risk of capital. Existing formal financial institutions are charging higher interest rates in most of the developing countries causing a major hindrance towards the growth of ISMs.

8.3.9 Financial Capital to Entrepreneurial Orientation (H5b)

Hypothesis H5b examined the influence of financial capital on the micro-firm's strategic entrepreneurial orientation. The quantitative findings showed negative significant influence of financial capital on strategic entrepreneurial orientation rather than positive significant influence. This result was not in line with evidence from the literature review which supported financial capital positively influencing the micro-

firm's strategic entrepreneurial orientation (e.g., Engel and Keilbach 2007; Peneder 2010). The field study participants supported the link between financial capital and strategic entrepreneurial orientation. Therefore, the direction of this influence was rejected. The negative significant result indicated that lack of availability and access to finance would hinder other areas of resource constraints and the strategic orientation of micro-firms. In other words, financial capital facilitates firms in proactively undertaking new strategies and innovative risky tasks that might not be possible in a more resource-poor environment (Levinthal and March 1981).

The possible reason behind the negative statistical significance can be argued as follows. ISMs in a developing country usually experience difficulties raising capital from external sources which force them to raise capital internally such as from their own savings or the savings of their families and friends, where available. However, the collections of capital from these sources are not sufficient to undertake risk that brings out innovation. In addition, the moneylender source is expensive due to higher interest rates. This might reduce the proactiveness of firms in executing strategic risky ideas. Furthermore, NGOs also charge higher interest, and government-run financial institutions maintain complicated procedures. There is also evidence that many micro-firm owner abuse the loans which they collect from NGOs and government, for example, buying luxury items for their household or spending on entertainment.

8.3.10 Marketing Capabilities to Sustainable Performance (H6a)

Hypothesis H6a was proposed with the expectation that marketing capabilities would influence the sustainable growth of the micro-firm. Statistical analysis has demonstrated a strong positive support for this hypothesis. The findings of the current research are consistent with many studies (e.g., Rust, Moorman, and Dickson 2002; Qureshi and Mian 2010). Data from the field study have also demonstrated that marketing capabilities play an essential role in firm performance. This positive association indicates that in developing countries, micro-firms possess some sort of marketing capabilities by default. For example, most of the micro-firms enjoy locational advantage due to informality. This locational advantage helps them to attract more customers. Customers also seek a conveniently located shop to save their time and effort. Similarly, micro-firms can serve a large portion of lower-income customers, and the lower-income group are willing to choose and get products/services from ISMs due to price advantages. Therefore, ISMs can easily access this lower-income group which is stable and profitable.

The implication of finding the positive influence of the marketing capabilities' factor on the sustainable growth of the micro-firm is significant. The theoretical implication is that marketing capabilities and sustainable performance can be meaningfully incorporated into the ISMs' growth model. In the context of a developing country, micro-firms bear some marketing capabilities such as product/service, price, place, promotion and specific market segment to sustain firm performance. Due to informality, ISMs receive waivers from rent for space, registration fees and other utilities' fees. Therefore, they can offer lower prices for their products and services compared to formal businesses. In addition, direct interaction with customers benefits them by being able to provide quick service to customers and cook and demonstrate in front of customers. Furthermore, friendly dealing with customers ensures the stability of their customer base. The practical implication is that the existing marketing capabilities of micro-firms are not a sign of government contributions. Therefore, there is still room to improve the marketing capabilities of micro-firms by taking some formal initiatives. Policy makers or other relevant agencies could introduce some business tools and marketing tuition among microentrepreneurs to enhance the marketing capabilities of micro-firms.

8.3.11 Marketing Capabilities to Entrepreneurial Orientation (H6b)

There was strong statistical evidence to support the view that a set of marketing capabilities influences the strategic entrepreneurial orientation of micro-firms in a developing country. The corresponding *t*-value for this relationship was relatively high, suggesting the strong positive association of these two factors. The result was consistent with a previous relevant study by Day (1994) where it was postulated that the successful development of products/services and marketing methods are essential components of strategic entrepreneurial orientation. These capabilities are concerned with the processes of entrepreneurial marketing strategy development and execution (Morgan and Strong 2003). Therefore, a microenterprise needs to improve its marketing capabilities to increase its abilities to adapt marketing innovation, face new challenges with proactiveness, undertake an aggressive marketing approach, calculate risk with new ideas and enhance management capabilities. This finding also was in accord with the field study results. The majority of the field study participants supported the link between marketing capabilities and entrepreneurial strategic orientation.

The implication of the positive influence of marketing capabilities on entrepreneurial orientation is as follows. Since the study established a strong positive association between these two factors, theoretically, marketing capabilities and entrepreneurial orientation can be included into the ISMs' performance model. Micro-firms in a developing country have adapted marketing knowledge and skills acquired through trial and practice, by serving as apprentices or through being passed down in the family. These characteristics help them to bring forward and execute ideas in new product and service development, as well as making them proactive and aggressive in undertaking their strategy. ISMs enjoy locational advantage, lower pricing strategy and a large stable and profitable lower-income target market due to the informal nature of their business. All these characteristics increase the strategic entrepreneurial orientation of micro-firms. The absence of formal marketing knowledge has commonly appeared among microenterprises in a developing country. Therefore, applied marketing education in relation to the entrepreneurial orientation concept might improve the situation.

8.3.12 Business Environment to Sustainable Performance (H7a)

The findings of this study have shown that there is positive significant statistical evidence to support a relationship between the business environment and sustainable firm performance. This has been supported by the literature (e.g., Kreiser and Davis 2010; Pearce et al. 2010; Rosenbusch, Rauch, and Bausch 2013; Zainol and Wan Daud 2011). Miller (1983) argued that in a turbulent environment, customer preferences change unpredictably and opportunities are reduced, impacting on firm success. Similarly, firms operating in hostile and less munificent environments face difficulties in acquiring resources such as financial and human capital and experience decreased profit margins (Wiklund and Shepherd 2005). Thus, the business environment can positively or negatively influence firm performance. The field study investigation also found this mixed evidence with the majority of field study participants accepting these notions. Therefore, the findings of this current research were both meaningful and evocative.

An explanation for accepting Hypothesis H7a is as follows. In a developing country, an ISM operates its business in a less turbulent environment. For example, customer preferences are stable, and product/service patterns are not complex. On the other hand, due to being informal in nature, the ISM faces several hostile situations such as extortion and government pressure in running their business. However, they can

control and manipulate extortion to some extent. They also receive waivers from law enforcement authorities due to government social obligations to the society. Similarly, some bountiful environments also exist. For instance, having few rules and regulations associated with ISMs encourages poor people to undertake this informal activity. Moreover, the positive public attitude and some supportive programmes (education and training) directly impact on ISMs' performance. Therefore, this study suggests that the government should handle ISMs' activities more carefully and gently so they can survive and run their business without anxiety. In addition, NGOs and other agencies should develop more innovative microenterprise development programmes such as soft loans (loans with no interest or a below-market rate of interest) or applied business courses to create a more generous environment.

8.3.13 Business Environment to Entrepreneurial Orientation (H7b)

It was found from this study that the business environment being related to entrepreneurial orientation did not affect firms' strategic decisions. This finding of the study was not supported by the literature. Past researchers have predicted that the relationship between the business environment and entrepreneurial orientation is highly complex in terms of the possibility that it may stimulate firm-specific strategic behaviours (Atuahene-Gima and Ko 2001; Miller 1983; Wiklund and Shepherd 2005). However, the finding was supported by the field study. It was confirmed by the field study that firms with less complex and friendlier environments can improve their strategic orientation. Entrepreneurial orientation is a critical factor because it is influenced by the business environment for strategic decision making and resource allocation purposes. Only those firms that apply the appropriate strategic orientation in a specific environment may be able to get advantages provided by the environment.

The possible reasons for this non-significant relationship can be interpreted as follows. In a developing country, the business environment is easy to predict and customer demand does not change much. Therefore, ISMs are not very eager to come up with innovative ideas and to take risky, bold and proactive action. A less hostile environment also does not influence entrepreneurial managerial style. Similarly, ISMs in a developing country are reluctant to gain advantage from a munificent environment in terms of education and training. Thus, the existing munificent environment is less likely to have an influence on entrepreneurial orientation.

8.3.14 Firm Life-Cycle* Antecedents and Outcomes (H8)

Hypothesis H8 hypothesized the moderating effect of the firm life-cycle stages. The hypothesis was supported with the mixed-mode approach because there was a significant difference between the subgroups (e.g., start and growth, growth and mature, and mature and decline) on the link between firm life-cycle stages and its immediate antecedents and outcomes (see Table 7.29 in Chapter 7). Between start and growth stages, only the links between PT → SP and HC → EO were significant. Other links such as PT → EO, SC → EO, FC → EO, MC → EO, BE → EO, EO → SP, HC → SP, SC → SP, FC → SP, MC → SP and BE → SP were non-significant. In the stage between growth and mature, links between HC → EO, SC → EO, EO → SP and HC → SP were significant. Other links were non-significant. In the stage between mature and decline, only SC → EO and MC → EO links were found to be significant. To some extent, the mixed finding was consistent with firm life-cycle studies (e.g., Mitra and Pingali 1999; Dodge and Robbins 1992; Lester, Parnell, and Carraher 2003). The field study data analysis also yielded similar results whereby 57% of the participants agreed on the moderating influence of firm life-cycle stages on its immediate antecedents and outcomes.

The mixed results can be interpreted by stating that between the start and growth stage, the micro-firm faces several resource, capability and business environment constraints such as financial capital, social capital, marketing capabilities, entrepreneurial orientation and an unfavourable environment that restricts the growth of the firm in moving from the start to the growth stage. The personality traits of the microentrepreneur appear low in significance because of these constraints. At this stage, the micro-firm only ensures its human capital through their family members' dedication. In the stage between growth and mature, micro-firms can overcome several resource difficulties. To ensure progress from the growth to mature stage, micro-firms need more resources and capability. The study shows that between these two stages, micro-firms can manage human capital, social capital and entrepreneurial capability. Other resources, capabilities and the external environment including financial capital, personality traits, marketing capabilities and business environment forces need to be managed. In the stage between mature and decline, only SC → EO and MC → EO links appeared significant. This was because the micro-firm could not manage other resources, capabilities and business environment forces to sustain the mature stage.

The practical implication is that policy makers should consider the life-cycle stage of micro-firms during policy implementation. The micro-firm in the start and decline

stage requires more support than the micro-firm in the growth and mature stage. Furthermore, success requires a variety of inputs at various stages and policy makers should be aware of the need for these inputs.

8.4 SUMMARY

This chapter has presented the interpretation of the results of the PLS analysis for the comprehensive research model of ISMs' sustainable growth. The findings of the questionnaire survey among ISM owners in Bangladesh were discussed according to the suggested hypotheses in this study. The results of this study generally supported the structure of the two prominent grounding theories, namely, the resource-based theory and the firm life-cycle theory that were considered essential in examining the antecedents and outcomes in the context of ISMs in a developing country.

This study has argued that ISMs' growth is not a simple process and that the inclusion of resources, capabilities and environment forces' factors in the analysis of outcomes factors will yield a different result than when each factor is analysed separately. This has been examined by using PLS-SEM data analysis. The results were greatly varied. For example, entrepreneurial orientation seemed to influence sustainable performance when they were stand-alone. However, the inclusion of resources, capabilities or business environment forces' factors immediately increased the impact of entrepreneurial orientation on sustainable growth implying that success studies are better enlightened if a multidimensional approach is used.

Among the 14 research hypotheses, the supported proposed relationships were: PT → EO, HC → EO, MC → EO, SC → SP, MC → SP and BE → SP, and the moderating effects of the firm life cycle on its immediate antecedents and outcomes. The firm's internal resources and capabilities were shown to have impacts on the entrepreneurial orientation of the micro-firm. Again, the firm's internal resources, capabilities and business environment were found to have influence on firm sustainable performance. In addition, effects of the firm life cycle on its immediate antecedents and outcomes were found significant with the mixed-mode approach in this study. The chapter also provided possible explanations for the hypotheses that were not supported in this study. Finally, this study also discussed the important implications particularly in the context of a developing country.

In the next chapter, the thesis will conclude by presenting the summary of the research, its contributions and limitations, as well as the future directions.

CHAPTER 9

CONCLUSIONS AND FUTURE DIRECTIONS

"Merely to adopt the more powerful assumption is no more than to assume the more powerful conclusion".

—Robert M Solow

9.1 INTRODUCTION

Informal social microenterprises (ISMs) in a developing country represent an important potential for job creation and combating poverty. Chapter 2 described the importance and rationale behind this research which was conducted to examine the sustainable growth of ISMs in a developing country. Chapter 3 developed a conceptual model after reviewing the literature. Chapter 4 justified the use of the mixed-method approach. A field study was conducted to refine the initial research model (Chapter 5). Based on the findings of the field study and literature review, a comprehensive research model was developed. The formal links were drawn from the model in Chapter 6. The results of the quantitative data analysis were presented in Chapter 7. Chapter 8 presented the discussion of the findings.

The current final chapter provides the summary and conclusion of this research. Based on the research questions and objectives, the next section presents a summary of the research. In addition, the research theme, methodology, analysis, results and interpretation of this research are discussed. This chapter also addresses how the research findings contribute to existing knowledge in terms of theoretical and practical aspects. Furthermore, the limitations of this research are also identified. In the final section, future directions are outlined in order to suggest potential areas that could be pursued in the context of the area of this research.

9.2 RESEARCH SUMMARY

The importance and rationale of this research has been the continuous interest in ISMs' sustainable growth issues by academics and practitioners. The ISM has received greater attention with the objective of employment generation and poverty reduction in the developing world; however, this subject has received less attention from the

perspective of the empirical evaluation of the dynamics of ISMs in this domain. To reduce such a conspicuous gap and provide deep and rich insights for academics and practitioners, this research has theorized an integrated model of ISMs' sustainable growth which was grounded in the resource-based theory as well as the firm life-cycle theory. This research employed a mixed-method approach which combined qualitative and quantitative methods of data collection and analysis process. The dimensions, subdimensions and variables of the initial research model, developed from the comprehensive literature review, were validated and enhanced by a qualitative field study. The field study involved 14 interviews in Bangladesh. Using a semi-structured interview protocol, the data collected from the field study were analysed through the content analysis approach. The combination of factors from the literature and field study resulted in the development of the comprehensive research model. The comprehensive research model consisted of the firm's resources, capabilities, business environment, sustainable performance and moderating factors of the firm life-cycle stages. Consequently, hypotheses within the model were established. The measurements of the factors used in this study were mostly sourced from the theories as well from previous small business studies. These measures and some unique factors with their measuring items were assured via the field study to be more appropriate for use in the current study. The research survey was conducted in the second phase of the study. A questionnaire was developed based on the combined research model. The initial research questionnaire was examined by a pre-testing method. The layout and contents of the questionnaire were slightly revised according to the feedback obtained from the pre-testing. The partial least squares (PLS)-based SEM was applied for the analysis of the data. The PLS analysis followed the PLS framework by sequentially assessing, firstly, the measurement model and, secondly, the structural model. The repeated-indicator and two-stage approaches were applied to assess the reliability and validity of this model. Overall, findings confirmed the significant dimensions, subdimensions and variables for ISMs' sustainable growth. The results of the hypotheses were mixed. Of the 14 hypotheses, seven were accepted. The results have both theoretical and practical implications and will add value to the small business literature. This study could also serve as input for policy makers.

The following section presents the significant contributions that the findings of this study make to the knowledge regarding the sustainable growth of ISMs, especially for the developing country.

9.3 RESEARCH CONTRIBUTIONS

The following section discusses the study's contributions in terms of theory and practice.

9.3.1 Theoretical Contributions

This study represents an important contribution to theory by integrating two theoretical perspectives to identify dimensions, subdimensions and variables that influence the successful growth of ISMs. It draws upon the resource-based theory and the firm life-cycle theory concerning ISMs' sustainable growth. Therefore, there are a few major theoretical contributions that have been established in this research.

Firstly, this study extends the resource-based view of the firm in the ISMs' domain by developing and validating a higher-order ISMs' sustainable growth model on eight second-order dimensions and 27 subdimensions. By encompassing the combined explanatory power of each component, the ISMs' sustainable growth model advances resource-based theory in ISMs' research while presenting a parsimonious structure. The study has identified a comprehensive, yet parsimonious, set of dimensions, subdimensions and variables that help to predict the sustainable growth of ISMs with their outcome dimensions, subdimensions and variables. Secondly, the study adds novelty to resource-based theory by modelling the association between overall resources, capabilities, business environment and sustainable performance with several new antecedents' and outcomes' reflective and formative constructs which have not been investigated before. Thirdly, this study has successfully included several second-order constructs such as human capital, financial capital, marketing capabilities and sustainable performance as part of the ISMs' integrated model. These associations, conceptualizations and evaluations are important in understanding the role of antecedents on ISMs' outcomes. Fourthly, this study also extends the life-cycle theory of the firm in the ISMs' domain. Taking into account the moderating effects of firm life-cycle stages on its immediate antecedents and outcomes, the study developed and empirically tested a better conceptual model for understanding the sustainable growth of ISMs. This study found a mixed result for these relationships. However, previous empirical studies did not find any significance. Therefore, this study has established the empirical validation of the firm life-cycle theory by delivered consistent results. The final and foremost theoretical contribution was in examining the resources, capabilities, business environment and sustainable performance as well as the firm life-cycle stages, taking the ISMs' sector in a developing country as the context. This

contextual research is important as the ISMs are seen as income-generating-activities for up to half of the Bangladeshi population and as sources of economic growth. To the best of the researcher's knowledge, this study is among very few that have attempted to examine possible antecedents and outcomes with regard to the sustainable growth of ISMs in the context of a developing country.

9.3.2 Practical Contributions

This study presents a better understanding of the significant dimensions, subdimensions and variables that affect successful growth of ISMs in a developing country. Therefore, this study has proposed some practical contributions.

Firstly, the ISMs' sector contributes in poverty alleviation and employment generation; however, policy makers are still struggling to incorporate this significant sector into the mainstream economy. For example, ISMs' development agencies could be developed using various policy strategies such as credit programmes, education and vocational training and business development support services as tools to support informal sector operators. These initiatives urgently require the knowledge of what determines ISMs' success in the first place. Such interventions need to take into account the nature of the diversity in the ISMs' sector related to growth patterns and the success factors associated with it. From that angle, this study could serve as an input for policy makers. Secondly, it has been borne out in this study that neither resources such as human resources and financial capital nor capabilities such as entrepreneurial orientation and personality traits would have significant influence on microenterprise success. This is a sign of failure for a developing country with more than half of its employment composed of microenterprise operators. This calls for policy makers to revisit the current intervention strategies to evaluate whether these interventions have worked. Thirdly, most important for policy makers is the recognition of the life-cycle stage of micro-firms during policy implementation. The study suggests that an indiscriminate approach to microenterprise support is less effective. The firm in the start and decline stages needs more interventions that would remedy the problems of risk and uncertainty than the firm in the growth and mature stages. Therefore, success requires a variety of inputs at various stages and policy makers should be aware of these inputs and the tools required to move firms up the ladder of success. Finally, it is important to note that success is complex to understand and that policy makers should be specific about the goals they want to achieve before interventions of any kind. Evidence on the determinants of success revealed in this study has shown that sociological, managerial

and behavioural factors are equally as important as economic factors. Thus, understanding success demands interdisciplinary thinking where psychology, sociology, management and economics converge to understand the outcome of a business that is run by a human being.

9.4 RESEARCH LIMITATIONS

The results of this research offer an inclusive model that can enable academics and policy makers to understand the preconditions of ISMs' sustainable growth in a developing country. Despite the major findings, this research needs to be considered in view of its limitations.

This research was conducted within the specific domain of the ISMs (i.e., tea-stall micro-firm) and in one country. But the reality is that ISMs take place in the informal sector and their activities are largely varied and complex in terms of size, degree of informality and heterogeneity of business. Thus, there might be variation in the applicability of the components and consequences in agriculture, manufacturing, hotels and restaurants, etc. Replication in other contexts would increase confidence in the research model.

The sample only represents ISMs from an Asian developing country (i.e., Bangladesh). Therefore, there is a limitation regarding the generalizability of findings to other ISMs in other developing countries. There might be a difference in the understandings of the antecedents and outcomes of ISMs in Asian, African and Latin American developing countries, and also in individualistic and collectivist communities.

Data were collected under a cross-sectional design, so the study contains typical limitations associated with this kind of research methodology. For example, the model represents the static nature of ISMs' evaluation as the findings are confined to a single point of time. A longitudinal study can overcome this limitation by providing a deeper understanding.

This model does not explain the process model of small firm growth: rather, it focuses on the set of antecedents that has impact on firm growth. The four stages of the small firm life cycle do not represent the sequential process: rather, it is a set of typical situations occurring sequentially. Therefore, the current model is not a process model which may limit the concept of small firm growth.

In addition, the current model upholds the capability, resource and external environment in a heterogeneity approach within the structure of the value, rarity,

inimitability and operability (VIRO) framework presented by Barney (1991). This model also ignores perhaps the main essence of the “sustained competitive advantage” concept of resource-based theory. This model explains only the sustainability of firm performance; therefore, this model may be criticized. However, unfortunately, there is no single model which can explain the small firm capabilities, resources, business environment forces, life cycle and performance in a hierarchical manner.

9.5 FUTURE DIRECTIONS

Future research could take several new directions.

While a model developed for the ISMs’ sector by considering only the tea-stall micro-business in a particular industry (i.e., hotels and restaurants) may not be suitable for application in another industry, it provides the stepping stone for such a study and model. Acknowledging the findings of this research, a more industry-specific model could be developed for an interested industry which would help generalize the problem structure. Similarly, this model could be tested in other similar industries in a developing country.

Future work could investigate the present study in cross-cultural settings by incorporating respondents from Asian, African and Latin American developing countries. Information on the differences across cultures might be of considerable interest and significance to both researchers and policy makers. However, some issues should be taken into account, such as, consistency in instrument development and validation, response bias with regard to measurement equivalence, demographic profile of respondents and response style.

Although the variance explained by the research model is quite high for this study, future work should attempt to identify and test additional boundary conditions of the model with a view to presenting an even richer understanding of ISMs’ antecedents and outcomes. This extension might be shaped in terms of additional contextual variables; moderating and mediating influences; multi-group analysis (e.g., gender, age, etc.); geographical location differences (e.g., urban and village); and other contexts. Findings from such studies might enhance the overall generalizability of the ISMs’ model. Future studies could extend the present research model by adding some new constructs based on the dynamics of the research context. Furthermore, future research could introduce and examine a process model by using the current proposed dimensions and subdimensions.

“The end is in the beginning and lies far ahead”.
---Ralph Ellison

REFERENCES

- Aga, Gemechu Ayana, and Barry Reilly. 2011. "Access to Credit and Informality among Micro and Small Enterprises in Ethiopia." *International Review of Applied Economics* 25 (3): 313-329.
- Agafonoff, Alexander. 1995. "Attacking Poverty through Microenterprise Financing." *Agenda: A Journal of Policy Analysis and Reform* 2 (3): 341-350.
- Ahmed, Kashfia; and Tanbir Ahmed Chowdhury. 2009. "Performance Evaluation of SMEs of Bangladesh." *International Journal of Business and Management* 4 (7): 126.
- Akyüz, Kadri Cemil, Ilker Akyüz, Hasan Serin, and Hicabi Cindik. 2006. "The Financing Preferences and Capital Structure of Micro, Small and Medium Sized Firm Owners in Forest Products Industry in Turkey." *Forest Policy and Economics* 8 (3): 301-311.
- Alam, Chowdhury Mahbul, and Kazuhiro Miyagi. 2004. *An Approachable Analysis of Micro Enterprises in Bangladesh*.
- Alchian, Armen A. 1950. "Uncertainty, Evolution, and Economic Theory." *The Journal of Political Economy* 58 (3): 211-221.
- Aldrich, Howard. 1999. "Evolving Organisations."
- Aldrich, Howard E, and Ted Baker. 2000. "Blinded by the Cities? Has There Been Progress in Entrepreneurship Research." *Entrepreneurship* 2000: 377-400.
- Aldrich, Howard E. 1979. "Organizations and Environments." 165-176.
- Aldrich, Howard, and Catherine Zimmer. 1986. "Entrepreneurship through Social Networks." *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.
- Alreck, Pamela L, and Robert B Settle. 1995. "The Survey Research Handbook: Guidelines and Strategies for Conducting a Survey, 2e." New York, NY: McGraw Hill.
- Andaleeb, Syed Saad. 2001. "Service Quality Perceptions and Patient Satisfaction: A Study of Hospitals in a Developing Country." *Social Science & Medicine* 52 (9): 1359-1370.
- Anderson, Brian S, and Yoshihiro Eshima. 2011. "The Influence of Firm Age and Intangible Resources on the Relationship between Entrepreneurial Orientation and Firm Growth among Japanese SMEs." *Journal of Business Venturing*.
- Anderson, Dennis. 1982. "Small Industry in Developing Countries: A Discussion of Issues." *World Development* 10 (11): 913-948.
- Anderson, Janet. 1987. "The Markedness Differential Hypothesis and Syllable Structure Difficulty." *Interlanguage phonology: The acquisition of a second language sound system*: 279-291.
- Andersson, Ulf, Mats Forsgren, and Ulf Holm. 2002. "The Strategic Impact of External Networks: Subsidiary Performance and Competence Development in the Multinational Corporation." *Strategic Management Journal* 23 (11): 979-996.
- Arregle, Jean-Luc, Michael A Hitt, David G Sirmon, and Philippe Very. 2007. "The Development of Organizational Social Capital: Attributes of Family Firms." *Journal of Management Studies* 44 (1): 73-95.
- Arya, Bindu, and Zhiang Lin. 2007. "Understanding Collaboration Outcomes from an Extended Resource-Based View Perspective: The Roles of Organizational Characteristics, Partner Attributes, and Network Structures†." *Journal of Management* 33 (5): 697-723.
- Ashe, Jeffrey. 1985. *The Pisces Experience: Local Efforts in Micro-Enterprise Development: The Division*.
- Asian Development Bank. 2011. "A Handbook on Using the Mixed Survey for Measuring Informal Employment and the Informal Sector."
- . 2012. "The Informal Sector and Informal Employment in Bangladesh." *Country Report 2010*.
- Atuahene-Gima, Kwaku, and Anthony Ko. 2001. "An Empirical Investigation of the Effect of Market Orientation and Entrepreneurship Orientation Alignment on Product Innovation." *Organization Science* 12 (1): 54-74.
- Autio, E, and M Mustakallio. 2003. "Family Firm Internationalization: A Model of Family Firm Generational Succession and Internationalization Strategic Postures" *Theories of the Family Enterprise Conference, University of Pennsylvania, Philadelphia, (December)*.
- Babbie, Earl. 2001. "The Practice of Social Research. Belmont, Ca: Wadsworth/Thomson Learning." Inc.

- Bacchetta, Marc, Ekkehard Ernst, and Juana P Bustamante. 2009. *Globalization and Informal Jobs in Developing Countries*: International Labour Organization.
- Bagachwa, Mboya SD, DF Bryceson, and V Jamal. 1997. "The Rural Informal Sector in Tanzania." *Farewell to farms: de-agrarianisation and employment in Africa.:* 137-154.
- Baird, Inga Skromme, and Howard Thomas. 1985. "Toward a Contingency Model of Strategic Risk Taking." *Academy of Management Review*: 230-243.
- Barclay, Donald, Christopher Higgins, and Ronald Thompson. 1995. "The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use as an Illustration." *Technology Studies* 2 (2): 285-309.
- Barney, Jay. 1991. "Firm Resources and Sustained Competitive Advantage." *Journal of Management* 17 (1): 99-120.
- Barney, Jay B. 2001. "Resource-Based Theories of Competitive Advantage: A Ten-Year Retrospective on the Resource-Based View." *Journal of Management* 27 (6): 643-650.
- Batjargal, Bat. 2005. "Entrepreneurial Versatility, Resources and Firm Performance in Russia: A Panel Study." *International Journal of Entrepreneurship and Innovation Management* 5 (3): 284-297.
- . 2007. "Internet Entrepreneurship: Social Capital, Human Capital, and Performance of Internet Ventures in China." *Research Policy* 36 (5): 605-618.
- Bearse, Peter J. 1982. "A Study of Entrepreneurship by Region and SMSA Size." *Frontiers of Entrepreneurship Research* 2: 78-112.
- Becchetti, Leonardo, and Giovanni Trovato. 2002. "The Determinants of Growth for Small and Medium Sized Firms. The Role of the Availability of External Finance." *Small Business Economics* 19 (4): 291-306.
- Becker, Jan-Michael, Kristina Klein, and Martin Wetzels. 2012. "Hierarchical Latent Variable Models in PLS-SEM: Guidelines for Using Reflective-Formative Type Models." *Long Range Planning*.
- Begley, Thomas M, and David P Boyd. 1988. "Psychological Characteristics Associated with Performance in Entrepreneurial Firms and Smaller Businesses." *Journal of Business Venturing* 2 (1): 79-93.
- Benbasat, Izak, David K. Goldstein, and Melissa Mead. 1987. "The Case Research Strategy in Studies of Information Systems." *MIS Quarterly* 11 (3): 369-386.
- Bessant, John, Bob Phelps, and Richard Adams. 2005. *External Knowledge: A Review of the Literature Addressing the Role of External Knowledge and Expertise at Key Stages of Business Growth and Development: Final Report*: Advanced Institute of Management Research.
- Bhagavatula, Suresh, Tom Elfring, Aad van Tilburg, and Gerhard G van de Bunt. 2010. "How Social and Human Capital Influence Opportunity Recognition and Resource Mobilization in India's Handloom Industry." *Journal of Business Venturing* 25 (3): 245-260.
- Bhuiyan, Shahid N, Bulent Menguc, and Simon J Bell. 2005. "Just Entrepreneurial Enough: The Moderating Effect of Entrepreneurship on the Relationship between Market Orientation and Performance." *Journal of Business Research* 58 (1): 9-17.
- Biart, Michel. 2002. "Social Sustainability as Part of the Social Agenda of the European Community." *Soziale Nachhaltigkeit: Von der Umweltpolitik zur Nachhaltigkeit*: 5-10.
- Bigsten, Arne, and Mulu Gebreeyesus. 2007. "The Small, the Young, and the Productive: Determinants of Manufacturing Firm Growth in Ethiopia." *Economic Development and Cultural Change* 55 (4): 813-840.
- Bjerke, Björn. 2007. *Understanding Entrepreneurship*: Elgar.
- Blayney, Robert G, and Maria Otero. 1985. *Small and Micro-Enterprises: Contributions to Development and Future Directions for Aid's Support*: United States. Agency for International Development.
- Bogdan, Robert Charles, and Sari Knopp Biklen. 1982. *Qualitative Research for Education*: Allyn and Bacon Boston.
- Bonnett, Celia, and Adrian Furnham. 1991. "Who Wants to Be an Entrepreneur? A Study of Adolescents Interested in a Young Enterprise Scheme." *Journal of Economic Psychology* 12 (3): 465-478.
- Brandstätter, Hermann. 1997. "Becoming an Entrepreneur—a Question of Personality Structure?" *Journal of Economic Psychology* 18 (2): 157-177.

- Breman, Jan. 1980. "The Informal Sector" in *Research: Theory and Practice*. Vol. 3: CASP, Erasmus University Rotterdam.
- Brennan, L, P Hayward, and J Voros. 2008. "Approaches to Validity in Entrepreneurship Research" *2008 Regional Frontiers of Entrepreneurship Research Exchange*: Swinburne University of Technology.
- Brüderl, Josef, and Peter Preisendörfer. 1998. "Network Support and the Success of Newly Founded Business." *Small Business Economics* 10 (3): 213-225.
- Brush, Candida G, and Radha Chaganti. 1999. "Businesses without Glamour? An Analysis of Resources on Performance by Size and Age in Small Service and Retail Firms." *Journal of Business Venturing* 14 (3): 233-257.
- Budner, Stanley. 1962. "Intolerance of Ambiguity as a Personality Variable." *Journal of Personality*.
- Burgelman, Robert A. 1984. *Designs for Corporate Entrepreneurship in Established Firms*: Graduate School of Business, Stanford University.
- Burrell, Gibson, and Gareth Morgan. 1994. *Sociological Paradigms and Organisational Analysis*: Heinemann.
- Burt, Ronald S. 1992. "V the Social Structure of Competition."
 ———. 2007. "Secondhand Brokerage: Evidence on the Importance of Local Structure for Managers, Bankers, and Analysts." *Academy of Management Journal* 50 (1): 119-148.
- Busenitz, Lowell W. 1999. "Entrepreneurial Risk and Strategic Decision Making It's a Matter of Perspective." *The Journal of Applied Behavioral Science* 35 (3): 325-340.
- Byrne, Barbara. 2006. "Structural Equation Modeling with Eqs: Basic Concepts, Applications, and Programming (Multivariate Applications)(Multivariate Applications Series)."
- Cabrera-Suárez, Katiuska, Petra De Saá-Pérez, and Desiderio García-Almeida. 2001. "The Succession Process from a Resource-and Knowledge-Based View of the Family Firm." *Family Business Review* 14 (1): 37-46.
- Campbell, Rex R, John C Spencer, and Ravindra G Amonker. 1993. "The Reported and Unreported Missouri Ozarks: Adaptive Strategies of the People Left Behind." *Forgotten places: Uneven development in rural America*: 30-52.
- Campin, Suzanne Rosina. 2010. "Micro-Business Community Responsibility—Approaches, Motivations and Barriers."
- Cappelli, Peter, and Harbir Singh. 1992. "Integrating Strategic Human Resources and Strategic Management." *Research frontiers in industrial relations and human resources*: 165-192.
- Carlson, Dawn S, Nancy Upton, and Samuel Seaman. 2006. "The Impact of Human Resource Practices and Compensation Design on Performance: An Analysis of Family-Owned SMEs." *Journal of Small Business Management* 44 (4): 531-543.
- Carpenter, Robert E, and Bruce C Petersen. 2002. "Is the Growth of Small Firms Constrained by Internal Finance?" *Review of Economics and Statistics* 84 (2): 298-309.
- Carr, Jon C, Michael S Cole, J Kirk Ring, and Daniela P Blettner. 2011. "A Measure of Variations in Internal Social Capital among Family Firms." *Entrepreneurship Theory and Practice* 35 (6): 1207-1227.
- Carrington, Donley, and Mike Tayles. 2011. "The Mediating Effects of Sensemaking and Measurement on the Intellectual Capital and Performance Linkage" *Proceedings of the 3rd European Conference on Intellectual Capital*: Academic Conferences Limited.
- Cassar, Gavin. 2004. "The Financing of Business Start-Ups." *Journal of Business Venturing* 19 (2): 261-283.
 ———. 2006. "Entrepreneur Opportunity Costs and Intended Venture Growth." *Journal of Business Venturing* 21 (5): 610-632.
- Cassel, Dieter, and Ernst Ulrich Cichy. 1985. *The Shadow Economy and Economic Policy in East and West: A Comparative System Approach*: Fachbereich Wirtschaftswiss., Univ. Duisburg, Gesamthochsch.
- Castells, Manuel, and Alejandro Portes. 1989. "World Underneath: The Origins, Dynamics, and Effects of the Informal Economy." *The informal economy: Studies in advanced and less developed countries* 12.
- Chakravarthy, Balaji S. 1986. "Measuring Strategic Performance." *Strategic Management Journal* 7 (5): 437-458.

- Chandler, Gaylen N, and Steven H Hanks. 1994. "Market Attractiveness, Resource-Based Capabilities, Venture Strategies, and Venture Performance." *Journal of Business Venturing* 9 (4): 331-349.
- . 1998. "An Examination of the Substitutability of Founders Human and Financial Capital in Emerging Business Ventures." *Journal of Business Venturing* 13 (5): 353-369.
- Charmes, J. 2006. "Measurement of the Contribution of Informal Sector/Informal Employment to Gdp in Developing Countries: Some Conceptual and Methodological Issues." *Expert Group on Informal Sector Statistics, Paper 1*.
- Chell, E, J Haworth, and S Brearley. 1991. "The Entrepreneurial Personality: Cases, Concepts and Categories." London, UK: Routledge.
- Chen, Cheng-Nan, Lun-Chung Tzeng, Wei-Ming Ou, and Kai-Ti Chang. 2007. "The Relationship among Social Capital, Entrepreneurial Orientation, Organizational Resources and Entrepreneurial Performance for New Ventures." *Contemporary Management Research* 3 (3).
- Chen, Martha, Jennefer Sebstad, and Lesley O'Connell. 1999. "Counting the Invisible Workforce: The Case of Homebased Workers." *World Development* 27 (3): 603-610.
- Child, John. 1972. "Organizational Structure, Environment and Performance: The Role of Strategic Choice." *Sociology* 6 (1): 1-22.
- Chin, Wynne W. 1998. "Commentary: Issues and Opinion on Structural Equation Modeling." *MIS Quarterly* 22 (1): 7-16.
- . 2010. "How to Write up and Report PLS Analyses." In *Handbook of Partial Least Squares*, 655-690. Springer.
- Chin, Wynne W, and Abhijit Gopal. 1995. "Adoption Intention in Gss: Relative Importance of Beliefs." *ACM SigMIS Database* 26 (2-3): 42-64.
- Chin, Wynne W, and Peter R Newsted. 1999. "Structural Equation Modeling Analysis with Small Samples Using Partial Least Squares." *Statistical Strategies for Small Sample Research* 1 (1): 307-341.
- Chin, Wynne W. 1998b. "The Partial Least Square Approach to Structural Equation Modeling." In *Modern Methods for Business Research*, ed. G.A Marcoulides, 295-336. London: Lawrence Erlbaum Associates.
- Chittenden, Francis, Graham Hall, and Patrick Hutchinson. 1996. "Small Firm Growth, Access to Capital Markets and Financial Structure: Review of Issues and an Empirical Investigation." *Small Business Economics* 8 (1): 59-67.
- Chow, Hau Siu Irene. 2006. "The Relationship between Entrepreneurial Orientation and Firm Performance in China."
- Chow Kong Wing, Clement, and Michael Fung Ka Yiu. 1996. "Firm Dynamics and Industrialization in the Chinese Economy in Transition: Implications for Small Business Policy." *Journal of Business Venturing* 11 (6): 489-505.
- Chrisman, James J, Jess H Chua, and Shaker A Zahra. 2003. "Creating Wealth in Family Firms through Managing Resources: Comments and Extensions." *Entrepreneurship Theory and Practice* 27 (4): 359-365.
- Chua, Jess H, James J Chrisman, Franz Kellermanns, and Zhenyu Wu. 2011. "Family Involvement and New Venture Debt Financing." *Journal of Business Venturing* 26 (4): 472-488.
- Churchill Jr, Gilbert A. 1979. "A Paradigm for Developing Better Measures of Marketing Constructs." *Journal of Marketing Research*: 64-73.
- Cohen, Jack. 1988. *Statistical Power Analysis for the Behavioral Sciences*: Routledge Academic.
- Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology*: S95-S120.
- Coleman, Susan. 2007. "The Role of Human and Financial Capital in the Profitability and Growth of Women-Owned Small Firms." *Journal of Small Business Management* 45 (3): 303-319.
- Colemann, James. 1990. "Foundations of Social Theory." *J. Colemann. Cambr.(Mass.)*.
- Compeau, Deborah R., and Christopher A. Higgins. 1995. "Computer Self-Efficacy: Development of a Measure and Initial Test." *MIS Quarterly* 19 (2): 189-211.
- Cooper, Arnold C. 1993. "Challenges in Predicting New Firm Performance." *Journal of Business Venturing* 8 (3): 241-253.

- Cooper, Arnold C, Tim Folta, Javier Gimeno-Gascon, and Carolyn Y Woo. 1992. "Entrepreneurs' Exit Decisions: The Role of Threshold Expectations" *Academy of Management Proceedings*: Academy of Management.
- Cooper, Arnold C, and F Javier Gimeno-Gascon. 1990. *Entrepreneurs, Processes of Founding, and New Firm Performance*: Institute for Research in the Behavioral, Economic, and Management Sciences, Krannert Graduate School of Management, Purdue University.
- Cooper, Arnold C, F Javier Gimeno-Gascon, and Carolyn Y Woo. 1994. "Initial Human and Financial Capital as Predictors of New Venture Performance." *Journal of Business Venturing* 9 (5): 371-395.
- Cooper, Arnold C, Gary E Willard, and Carolyn Y Woo. 1986. "Strategies of High Performing New and Small Firms: A Reexamination of the Niche Concept." *Journal of Business Venturing* 1 (3): 247-260.
- Cooper, Arnold, F Javier Gimeno-Gascón, and Carolyn Y Woo. 1997. "Initial Human and Financial Capital as Predictors of New Venture Performance." *The Journal of Private Equity* 1 (2): 13-30.
- Cooper, Donald R, and C William Emory. 1995. "Business Research Methods, Chicago: Richard D. Irwin." Inc.
- Cooper, Juett R. 1998. "A Multidimensional Approach to the Adoption of Innovation." *Management Decision* 36 (8): 493-502.
- Covin, Jeffrey G, and Teresa Joyce Covin. 1990. "Competitive Aggressiveness, Environmental Context, and Small Firm Performance."
- Covin, Jeffrey G, and Danny Miller. 2013. "International Entrepreneurial Orientation: Conceptual Considerations, Research Themes, Measurement Issues, and Future Research Directions." *Entrepreneurship Theory and Practice*.
- Covin, Jeffrey G, and Dennis P Slevin. 1989. "Strategic Management of Small Firms in Hostile and Benign Environments." *Strategic Management Journal* 10 (1): 75-87.
- . 1991. "A Conceptual Model of Entrepreneurship as Firm Behavior."
- Covin, Jeffrey G, Dennis P Slevin, and Randall L Schultz. 1994. "Implementing Strategic Missions: Effective Strategic, Structural and Tactical Choices." *Journal of Management Studies* 31 (4): 481-506.
- Cresswell, J.W. 2003. *Research Design: Quantitative, Qualitative & Mixed Method Approaches*. United States: Sage publication.
- Creswell, John. "J. 2003. Research Design Qualitative, Quantitative, and Mixed Methods Approaches." *Handbook of Mixed Methods in Social & Behavioral Research*: 209-240.
- Creswell, John W, and Dana L Miller. 2000. "Determining Validity in Qualitative Inquiry." *Theory into Practice* 39 (3): 124-130.
- Crook, T Russell, Samuel Y Todd, James G Combs, David J Woehr, and DJ Ketchen. 2011. "Does Human Capital Matter? A Meta-Analysis of the Relationship between Human Capital and Firm Performance." *Journal of Applied Psychology* 96 (3): 443-456.
- Crowne, D.P. , and D. Marlowe. 1964. "The Approval Motive." *Wiley, New York, USA*.
- Cyert, Richard M, and James G March. 1963. "A Behavioral Theory of the Firm." *Englewood Cliffs, NJ* 2.
- Daily, Gretchen C. 1997. *Nature's Services: Societal Dependence on Natural Ecosystems*: Island Pr.
- Damanpour, Fariborz, and J Daniel Wischnevsky. 2006. "Research on Innovation in Organizations: Distinguishing Innovation-Generating from Innovation-Adopting Organizations." *Journal of Engineering and Technology Management* 23 (4): 269-291.
- Daniels, Lisa. 1999. "The Role of Small Enterprises in the Household and National Economy in Kenya: A Significant Contribution or a Last Resort?" *World Development* 27 (1): 55-65.
- Darwin, Charles. 1859. "On the Origins of Species by Means of Natural Selection." *London: Murray*.
- Davidsson, Per, Leona Achtenhagen, and Lucia Naldi. 2005. "Research on Small Firm Growth: A Review."
- Davidsson, Per, Frédéric Delmar, and Johan Wiklund. 2006. *Entrepreneurship and the Growth of Firms*: Edward Elgar Publishing.
- Davidsson, Per, and Benson Honig. 2003. "The Role of Social and Human Capital among Nascent Entrepreneurs." *Journal of Business Venturing* 18 (3): 301-331.

- Davila, Antonio, George Foster, and Mahendra Gupta. 2003. "Venture Capital Financing and the Growth of Startup Firms." *Journal of Business Venturing* 18 (6): 689-708.
- Davis, Justin L, R Greg Bell, G Tyge Payne, and Patrick M Kreiser. 2010. "Entrepreneurial Orientation and Firm Performance: The Moderating Role of Managerial Power." *American Journal of Business* 25 (2): 41-54.
- Day, George S. 1994. "The Capabilities of Market-Driven Organizations." *The Journal of Marketing*: 37-52.
- De Soto, Hernando. 2001. "Dead Capital and the Poor." *Sais Review* 21 (1): 13-44.
- De Vries, MFR. 1977. "The Entrepreneurial Personality: A Person at the Crossroads." *Journal of Management Studies* 14 (1): 34-57.
- Deakins, David, Mark S Freel, and Kate Mason. 1996. *Entrepreneurship and Small Firms*: McGraw-Hill Maidenhead.
- Dess, Gregory G, and Donald W Beard. 1984. "Dimensions of Organizational Task Environments." *Administrative Science Quarterly*: 52-73.
- Dess, Gregory G, Brian C Pinkham, and Haibin Yang. 2011. "Entrepreneurial Orientation: Assessing the Construct's Validity and Addressing Some of Its Implications for Research in the Areas of Family Business and Organizational Learning." *Entrepreneurship Theory and Practice* 35 (5): 1077-1090.
- Dess, Gregory G, and Jason D Shaw. 2001. "Voluntary Turnover, Social Capital, and Organizational Performance." *Academy of Management Review*: 446-456.
- Diamantopoulos, Adamantios, and Judy A Siguaw. 2006. "Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration." *British Journal of Management* 17 (4): 263-282.
- Diamantopoulos, Adamantios, and Heidi M Winklhofer. 2001. "Index Construction with Formative Indicators: An Alternative to Scale Development." *Journal of Marketing Research*: 269-277.
- Diez de Medina, Rafael. 2011. "Statistical Update on Employment in the Informal Economy." Geneva, CH: International Labour Organization. http://laborsta.ilo.org/sti/DATA_FILES/20110610_Informal_Economy.pdf.
- Dimov, Dimo P, and Dean A Shepherd. 2005. "Human Capital Theory and Venture Capital Firms: Exploring "Home Runs" and "Strike Outs"." *Journal of Business Venturing* 20 (1): 1-21.
- Dobbs, Matthew, and RT Hamilton. 2007. "Small Business Growth: Recent Evidence and New Directions." *International Journal of Entrepreneurial Behaviour & Research* 13 (5): 296-322.
- Dodge, H Robert, and John E Robbins. 1992. "An Empirical Investigation of the Organizational Life Cycle Model for Small Business Development and Survival." *Journal of Small Business Management* 30 (1): 27-37.
- Donnelley, Robert G. 1988. "The Family Business." *Family Business Review* 1 (4): 427-445.
- Duchesneau, Donald A, and William B Gartner. 1990. "A Profile of New Venture Success and Failure in an Emerging Industry." *Journal of Business Venturing* 5 (5): 297-312.
- Dulansey, Maryanne, and James Austin. 1985. *Small-Scale Enterprise and Women*: Kumarian Press.
- Dutta, Shantanu, Mark J Zbaracki, and Mark Bergen. 2003. "Pricing Process as a Capability: A Resource-Based Perspective." *Strategic Management Journal* 24 (7): 615-630.
- Dwivedi, YK. 2007. *Consumer Adoption and Usage of Broadband*. NY: IRM Press.
- Edmondson, Amy C, and Stacy E McManus. 2007. "Methodological Fit in Management Field Research." *Academy of Management Review* 32 (4): 1155-1179.
- Edwards, Allen L. 1954. "Manual for the Personal Preference Schedule." *New York: Psychological Corp.*
- Eisenhardt, Kathleen M, and Claudia Bird Schoonhoven. 1990. "Organizational Growth: Linking Founding Team, Strategy, Environment, and Growth among Us Semiconductor Ventures, 1978-1988." *Administrative Science Quarterly*: 504-529.
- . 1996. "Resource-Based View of Strategic Alliance Formation: Strategic and Social Effects in Entrepreneurial Firms." *Organization Science* 7 (2): 136-150.
- Eisenhardt, Kathleen M. 1989. "Building Theories from Case Study Research." *The Academy of Management Review* 14 (4): 532-550.
- Emerson, Jed, and F Twersky. 1996. "New Social Entrepreneurs: The Success, Challenge and Lessons of Non-Profit Enterprise Creation." *San Francisco*.

- Engel, Dirk, and Max Keilbach. 2007. "Firm-Level Implications of Early Stage Venture Capital Investment—an Empirical Investigation." *Journal of Empirical Finance* 14 (2): 150-167.
- Evans, David S. 1987. "Tests of Alternative Theories of Firm Growth." *The Journal of Political Economy* 95 (4): 657-674.
- Evans, David S, and Boyan Jovanovic. 1989. "An Estimated Model of Entrepreneurial Choice under Liquidity Constraints." *The Journal of Political Economy*: 808-827.
- Evans, Paul. 2010. *The Global Challenge*: Tata McGraw-Hill Education.
- Falk, R Frank, and Nancy B Miller. 1992. *A Primer for Soft Modeling*: University of Akron Press Akron, OH.
- Fassnacht, Martin, and Ibrahim Koese. 2006. "Quality of Electronic Services Conceptualizing and Testing a Hierarchical Model." *Journal of Service Research* 9 (1): 19-37.
- Faul, Franz, Edgar Erdfelder, Axel Buchner, and Albert-Georg Lang. 2009. "Statistical Power Analyses Using G* Power 3.1: Tests for Correlation and Regression Analyses." *Behavior Research Methods* 41 (4): 1149-1160.
- Feige, Edgar L. 1979. "How Big Is the Irregular Economy?" *Challenge* 22 (5): 5-13.
- . 1990. "Defining and Estimating Underground and Informal Economies: The New Institutional Economics Approach." *World Development* 18 (7): 989-1002.
- . 2007. *The Underground Economies: Tax Evasion and Information Distortion*: Cambridge University Press.
- Feld, Lars P, and Friedrich Schneider. 2010. "Survey on the Shadow Economy and Undeclared Earnings in Oecd Countries." *German Economic Review* 11 (2): 109-149.
- Ferman, Patricia R, and Louis A Ferman. 1973. "The Structural Underpinnings of the Irregular Economy." *Asia Pacific Journal of Human Resources* 8 (1): 1-17.
- Fluitman, Fred, and Xavier Oudin. 1991. *Skill Acquisition and Work in Micro-Enterprises: Evidence from Lome, Togo. Discussion Paper No. 31*: ERIC.
- Fornell, Claes, and Fred L Bookstein. 1982. "Two Structural Equation Models: Lisrel and PLS Applied to Consumer Exit-Voice Theory." *Journal of Marketing Research*: 440-452.
- Fornell, Claes, and Jaesung Cha. 1994. "Partial Least Squares." *Advanced Methods of Marketing Research* 407: 52-78.
- Fornell, Claes, and David F Larcker. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." *Journal of Marketing Research*: 39-50.
- Fosler, R Scott. 1978. "State and Local Government Productivity and the Private Sector." *Public Administration Review* 38 (1): 22-27.
- Freel, Mark. 2006. "Patterns of Technological Innovation in Knowledge-Intensive Business Services." *Industry and Innovation* 13 (3): 335-358.
- Freel, Mark S. 2000. "Towards an Evolutionary Theory of Small Firm Growth." *Journal of Enterprising Culture* 8 (04): 321-342.
- Freeman, Christopher. 1982. "The Economics of Industrial Innovation." *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.
- Frey, Bruno S. 1989. *How Large (or Small) Should the Underground Economy Be?*: NY: Cambridge U. Press.
- Frey, Bruno S, Hannelore Weck, and Werner W Pommerehne. 1982. "Has the Shadow Economy Grown in Germany? An Exploratory Study." *Weltwirtschaftliches Archiv* 118 (3): 499-524.
- Gaskill, LR, Howard E Van Auken, and Ronald A Manning. 1993. "A Factor Analytic Study of the Perceived Causes of Small Business Failure." *Journal of Small Business Management* 31: 18-18.
- Gasse, Yvon. 1982. "Elaborations on the Psychology of the Entrepreneur." *Encyclopedia of Entrepreneurship*: 57-71.
- Gatersleben, Brigitta, and Charles Vlek. 1998. "Household Consumption, Quality of Life, and Environmental Impacts: A Psychological Perspective and Empirical Study." *Green households*: 141-183.
- Gaughan, Joseph P, and Louis A Ferman. 1987. "Toward an Understanding of the Informal Economy." *The Annals of the American Academy of Political and Social Science*: 15-25.
- Geisser, Seymour. 1975. "The Predictive Sample Reuse Method with Applications." *Journal of the American Statistical Association* 70 (350): 320-328.

- Gelei, A. 2006. "The Interpretive Approach to Organization." *Vezetestudomány* 37: 79-97.
- George, Bradley A. 2011. "Entrepreneurial Orientation: A Theoretical and Empirical Examination of the Consequences of Differing Construct Representations." *Journal of Management Studies* 48 (6): 1291-1313.
- Gërzhani, Klarita. 2004. "The Informal Sector in Developed and Less Developed Countries: A Literature Survey." *Public choice* 120 (3-4): 267-300.
- Ghoshal, Sumantra, Martin Hahn, and Peter Moran. 2002. "Management Competence, Firm Growth and Economic Progress." *Pitelis, C. The growth of the firm: the legacy of Edith Penrose. New York: Oxford: 279-308.*
- Gibrat, R. 1931. "Les Inégalités Economiques (Sirey, Paris)."
- Gilbert, Brett Anitra, Patricia P McDougall, and David B Audretsch. 2006. "New Venture Growth: A Review and Extension." *Journal of Management* 32 (6): 926-950.
- Gimeno, Javier, Timothy B Folta, Arnold C Cooper, and Carolyn Y Woo. 1997. "Survival of the Fittest? Entrepreneurial Human Capital and the Persistence of Underperforming Firms." *Administrative Science Quarterly*: 750-783.
- Ginsberg, Ari. 1985. "Measuring Changes in Entrepreneurial Orientation Following Industry Deregulation: The Development of a Diagnostic Instrument" *Proceedings of the International Council of Small Business*,
- Glancey, Keith, Malcolm Greig, and Malcolm Pettigrew. 1998. "Entrepreneurial Dynamics in Small Business Service Firms." *International Journal of Entrepreneurial Behaviour & Research* 4 (3): 249-268.
- Gnyawali, Devi R, and Daniel S Fogel. 1994. "Environments for Entrepreneurship Development: Key Dimensions and Research Implications." *Entrepreneurship Theory and Practice* 18: 43-43.
- Goldstein, Richard. 1989. "Power and Sample Size Via Ms/Pc-Dos Computers." *The American Statistician* 43 (4): 253-260.
- Gottschalk, Petter. 2007. *Business Dynamics in Information Technology*: Idea Group Publishing.
- Grande, Jorunn, Einar Lier Madsen, and Odd Jarl Borch. 2011. "The Relationship between Resources, Entrepreneurial Orientation and Performance in Farm-Based Ventures." *Entrepreneurship and Regional Development* 23 (3-4): 89-111.
- Green, Pam. 2002. "Slices of Life: Qualitative Research Snapshots." *Slices of Life: Qualitative Research Snapshots*: xvi.
- Greene, Jennifer C., Valerie J. Caracelli, and Wendy F. Graham. 1989. "Toward a Conceptual Framework for Mixed-Method Evaluation Designs." *Education Evaluation and Policy Analysis* 11: 255-274.
- Grossman, Gregory. 1985. "The Second Economy in the Ussr and Eastern Europe: A Bibliography." Duck University Durham NC.
- Guba, Egon G, and Yvonna S Lincoln. 1994. "Competing Paradigms in Qualitative Research." *Handbook of Qualitative Research* 2: 163-194.
- Guba, EY Lincoln, and Yvonna Lincoln. "Y.(1994). Competing Paradigms in Qualitative Research." *Handbook of Qualitative Research. California: Sage*: 105-117.
- Gulyani, Sumila, and Debabrata Talukdar. 2010. "Inside Informality: The Links between Poverty, Microenterprises, and Living Conditions in Nairobi's Slums." *World Development* 38 (12): 1710-1726.
- Gunday, Gurhan, Gunduz Ulusoy, Kemal Kilic, and Lutfihak Alpkan. 2011. "Effects of Innovation Types on Firm Performance." *International Journal of Production Economics* 133 (2): 662-676.
- Günther, Isabel, and Andrey Launov. 2012. "Informal Employment in Developing Countries: Opportunity or Last Resort?" *Journal of Development Economics* 97 (1): 88-98.
- Gutmann, Peter M. 1977. "The Subterranean Economy." *Financial Analysts Journal*: 26-34.
- Haile, Getinet Astatike. 2005. "The Nature of Self-Employment in Urban Ethiopia."
- Hair, JF, AH Money, and P Samouel. 2007. *Research Methods for Business*. USA: Wiley.
- Hair, Joe F, Christian M Ringle, and Marko Sarstedt. 2011. "PLS-SEM: Indeed a Silver Bullet." *The Journal of Marketing Theory and Practice* 19 (2): 139-152.
- Halim, Muhammad Abi Sofian Abdul, Shaladin Muda, Wan Abd Aziz Wan Mohd Amin, and Ahmad Munir Mohd Salleh. 2012. "The Significance Difference on Entrepreneurial Profile toward Entrepreneurial Personality in Micro and Small Business: Malaysia Creative Industry." *Asian Social Science* 8 (3): 236.

- Hamel, Gary, and Coimbatore Krishnarao Prahalad. 1994. "Competing for the Future." *Harvard Business School Press, Boston, MA*.
- Hamilton, Oliver, Daniel Shapiro, and Aidan Vining. 2002. "The Growth Patterns of Canadian High-Tech Firms." *International Journal of Technology Management* 24 (4): 458-472.
- Hamilton, Robert T, and Mark A Fox. 1998. "The Financing Preferences of Small Firm Owners." *International Journal of Entrepreneurial Behaviour & Research* 4 (3): 239-248.
- Hanks, Steven H, Collin J Watson, Erik Jansen, and Gaylen N Chandler. 1993. "Tightening the Life-Cycle Construct: A Taxonomic Study of Growth Stage Configurations in High-Technology Organizations." *Entrepreneurship Theory and Practice* 18: 5-5.
- Harding, Philip, and Richard Jenkins. 1989. *The Myth of the Hidden Economy: Towards a New Understanding of Informal Economic Activity*: Open University Press Milton Keynes.
- Harper, Malcolm. 1984. *Small Business in the Third World: Guidelines for Practical Assistance*: Wiley New York.
- Hart, Keith. 1973. "Informal Income Opportunities and Urban Employment in Ghana." *The Journal of Modern African Studies* 11 (01): 61-89.
- Hart, Stuart L. 1992. "An Integrative Framework for Strategy-Making Processes." *Academy of Management Review*: 327-351.
- . 1995. "A Natural-Resource-Based View of the Firm." *Academy of Management Review*: 986-1014.
- Haugh, H, JA Robinson, J Mair, and K Hockerts. 2009. "A Resource-Based Perspective of Social Entrepreneurship." *International perspectives on social entrepreneurship research: Palgrave Macmillan, Basingstoke*: 99-116.
- Headd, Brian, and Bruce Kirchoff. 2009. "The Growth, Decline and Survival of Small Businesses: An Exploratory Study of Life Cycles*." *Journal of Small Business Management* 47 (4): 531-550.
- Henley, Andrew. 2005. "Job Creation by the Self-Employed: The Roles of Entrepreneurial and Financial Capital." *Small Business Economics* 25 (2): 175-196.
- Hessler, Richard M. 1992. *Social Research Methods*: Thomson Learning.
- Hisrich, Robert D, and Michael P Peters. 1998. "Entrepreneurship, 4th Ed." USA: McGraw-Hill.
- Hitt, Michael A, Leonard Biermant, Katsuhiko Shimizu, and Rahul Kochhar. 2001. "Direct and Moderating Effects of Human Capital on Strategy and Performance in Professional Service Firms: A Resource-Based Perspective." *Academy of Management Journal* 44 (1): 13-28.
- Hoang, Ha, and Bostjan Antoncic. 2003. "Network-Based Research in Entrepreneurship: A Critical Review." *Journal of Business Venturing* 18 (2): 165-187.
- Hofer, Charles W, and William R Sandberg. 1987. "Improving New Venture Performance: Some Guidelines for Success." *American Journal of Small Business* 12 (1): 11-25.
- Hohenthal, Jukka. 2006. "Integrating Qualitative and Quantitative Methods in Research on International Entrepreneurship." *Journal of International Entrepreneur* 4 (4): 175-190.
- Honig, Benson. 1998. "What Determines Success? Examining the Human, Financial, and Social Capital of Jamaican Microentrepreneurs." *Journal of Business Venturing* 13 (5): 371-394.
- Hoopes, David G, Tammy L Madsen, and Gordon Walker. 2003. "Guest Editors' Introduction to the Special Issue: Why Is There a Resource-Based View? Toward a Theory of Competitive Heterogeneity." *Strategic Management Journal* 24 (10): 889-902.
- Horwich, Paul. 1993. *World Changes: Thomas Kuhn and the Nature of Science*. Vol. 331: MIT Press Cambridge, MA.
- Huang, Kun-Huang, and Tiffany Hui-Kuang Yu. 2011. "Entrepreneurship, Process Innovation and Value Creation by a Non-Profit SME." *Management Decision* 49 (2): 284-296.
- Huberman, A Michael, and Matthew B Miles. 1994. "Data Management and Analysis Methods."
- Hughes, Mathew, and Robert E Morgan. 2007. "Deconstructing the Relationship between Entrepreneurial Orientation and Business Performance at the Embryonic Stage of Firm Growth." *Industrial Marketing Management* 36 (5): 651-661.
- Hui, Baldwin S, and Herman Wold. 1982. "Consistency and Consistency at Large of Partial Least Squares Estimates." North Holland, Amsterdam.
- Hulland, John. 1999. "Use of Partial Least Squares (PLS) in Strategic Management Research: A Review of Four Recent Studies." *Strategic Management Journal* 20 (2): 195-204.

- Hunt, Shelby D, and Caroline Derozier. 2004. "The Normative Imperatives of Business and Marketing Strategy: Grounding Strategy in Resource-Advantage Theory." *Journal of Business & Industrial Marketing* 19 (1): 5-22.
- Hunt, Shelby D, and Robert M Morgan. 1995. "The Comparative Advantage Theory of Competition." *The Journal of Marketing*: 1-15.
- Imai, Katsushi S, and Md Shafiul Azam. 2012. "Does Microfinance Reduce Poverty in Bangladesh? New Evidence from Household Panel Data." *Journal of Development Studies* 48 (5): 633-653.
- International Labour Organization. 1993. "The Report of the Director - General of the ILO." 2:29.
- . 2012a. "Statistical Update on Employment in the Informal Economy." *ILO - Department of Statistics*.
- . 2012b. "World of Work Report 2012: Better Jobs for a Better Economy." *World of Work Report 2012*.
- Irava, Wayne, and Ken Moores. 2010. "Resources Supporting Entrepreneurial Orientation in Multigenerational Family Firms." *International Journal of Entrepreneurial Venturing* 2 (3): 222-245.
- Ireland, R Duane, Michael A Hitt, and David G Sirmon. 2003. "A Model of Strategic Entrepreneurship: The Construct and Its Dimensions." *Journal of Management* 29 (6): 963-989.
- Jackson, D. 2004. "Seeking a Hands-Off Approach." *Mobile Radio Technology* 22 (4): 14-21.
- Jackson, Douglas N. 1978. "Interpreter's Guide to the Jackson Personality Inventory." *Advances in Psychological Assessment* 4: 55-102.
- Jambulingam, Thanigavelan, Ravi Kathuria, and William R Doucette. 2005. "Entrepreneurial Orientation as a Basis for Classification within a Service Industry: The Case of Retail Pharmacy Industry." *Journal of Operations Management* 23 (1): 23-42.
- Jarvenpaa, Sirkka L, and Dorothy E Leidner. 1998. "An Information Company in Mexico: Extending the Resource-Based View of the Firm to a Developing Country Context." *Information Systems Research* 9 (4): 342-361.
- Jarvis, Cheryl Burke, Scott B MacKenzie, and Philip M Podsakoff. 2003. "A Critical Review of Construct Indicators and Measurement Model Misspecification in Marketing and Consumer Research." *Journal of Consumer Research* 30 (2): 199-218.
- Jawahar, IM, and Gary L McLaughlin. 2001. "Toward a Descriptive Stakeholder Theory: An Organizational Life Cycle Approach." *Academy of Management Review*: 397-414.
- Jiang, James J., Gary Klein, and Christopher L. Carr. 2002. "Measuring Information System Service Quality: Servqual from the Other Side." *MIS Quarterly* 26 (2): 145-166.
- Jiao, Hao. 2011. "A Conceptual Model for Social Entrepreneurship Directed toward Social Impact on Society." *Social Enterprise Journal* 7 (2): 130-149.
- Jo, Hyungrae, and Jinjoo Lee. 1996. "The Relationship between an Entrepreneur's Background and Performance in a New Venture." *Technovation* 16 (4): 161-211.
- Johnson, R. Burke, and Anthony J. Onwuegbuzie. 2004. "Mixed Methods Research: A Research Paradigm Whose Time Has Come." *Educational Researcher* 33 (7): 14-26.
- Johnson, Sherrill. 2000. "Literature Review on Social Entrepreneurship." *Canadian Centre for Social Entrepreneurship* 16.
- Jordan, Judith, Julian Lowe, and Peter Taylor. 1998. "Strategy and Financial Policy in Uk Small Firms." *Journal of Business Finance & Accounting* 25 (1-2): 1-27.
- Joreskog, KG, and H Wold. 1979. "The MI and PLS Techniques for Modeling with Latent Variables: Comparative Aspects" *Conference on Systems Under Indirect Observation (Causality/Structure/Prediction), Centre de Rencentres, Cartigny, University of Geneva, Geneva, Switzerland*,
- Jovanovic, Boyan. 1982. "Selection and the Evolution of Industry." *Econometrica: Journal of the Econometric Society*: 649-670.
- Jurkovich, Ray. 1974. "A Core Typology of Organizational Environments." *Administrative Science Quarterly*: 380-394.
- Jutting, Johannes, and Juan R de Laiglesia. 2009. "Is Informal Normal?: Towards More and Better Jobs in Developing Countries."
- Jütting, Johannes, Jante Parlevliet, and Theodora Xenogiani. 2008. "Informal Employment Re-Loaded." *IDS Bulletin* 39 (2): 28-36.

- Kamaluddin, Amrizah, and Rashidah Abdul Rahman. 2009. "Enhancing Organisation Effectiveness through Human, Relational and Structural Capital: An Empirical Analysis." *Malaysian Accounting Review* 8 (1): 1-17.
- Kamineni, Rajeev. 2002. "Who Is an Entrepreneur? A Review." *Small Enterprise Research* 10 (1): 88-99.
- Kanter, Rosabeth M. 1972. "Community and Commitment: Communes and Utopias in Sociological Perspective." Cambridge, MA: Harvard University Press.
- Kanter, Rosabeth Moss, and Derick Brinkerhoff. 1981. "Organizational Performance: Recent Developments in Measurement." *Annual Review of Sociology* 7: 321-349.
- Kaplan, Bonnie, and Joseph A Maxwell. 1994. "Qualitative Research Methods for Evaluating Computer Information Systems." *Evaluating health care information systems: Methods and applications* 11 (2): 137-155.
- Kaplan, Robert S. 1983. "Measuring Manufacturing Performance: A New Challenge for Managerial Accounting Research." *Accounting Review*: 686-705.
- Kazanjian, Robert K, and Robert Drazin. 1989. "An Empirical Test of a Stage of Growth Progression Model." *Management Science* 35 (12): 1489-1503.
- Keh, Hean Tat, Thi Tuyet Mai Nguyen, and Hwei Ping Ng. 2007. "The Effects of Entrepreneurial Orientation and Marketing Information on the Performance of SMEs." *Journal of Business Venturing* 22 (4): 592-611.
- Kelliher, Felicity, and Leana Reinl. 2009. "A Resource-Based View of Micro-Firm Management Practice." *Journal of Small Business and Enterprise Development* 16 (3): 521-532.
- Ketkar, Sumita, and PK Sett. 2010. "Environmental Dynamism, Human Resource Flexibility, and Firm Performance: Analysis of a Multi-Level Causal Model." *The International Journal of Human Resource Management* 21 (8): 1173-1206.
- Khandwalla, Pradip N. 1972. "Environment and Its Impact on the Organization." *International Studies of Management & Organization* 2 (3): 297-313.
- . 1976. "Some Top Management Styles, Their Context and Performance." *Organization and Administrative Sciences* 7 (4): 21-51.
- Kickul, Jill, Jianwen Liao, Lisa Gundry, and Tatiana Iakovleva. 2010. "Firm Resources, Opportunity Recognition, Entrepreneurial Orientation and Performance: The Case of Russian Women-Led Family Businesses." *International Journal of Entrepreneurship and Innovation Management* 12 (1): 52-69.
- Kilby, Peter, and David D'Zmura. 1985. *Searching for Benefits*: US Agency for International Development.
- Kimberly, John R. 1979. "Issues in the Creation of Organizations: Initiation, Innovation, and Institutionalization." *Academy of Management Journal*: 437-457.
- King, Gary, Robert O Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*: Princeton University Press.
- Kleinbaum, David G, Lawrence L Kupper, Keith E Muller, and Azhar Nizam. 1998. *Applied Regression Analysis and Multivariable Methods*: Duxbury Press 3rd Ed. Pacific Grove.
- Knight, Gary A. 1997. "Cross-Cultural Reliability and Validity of a Scale to Measure Firm Entrepreneurial Orientation." *Journal of Business Venturing* 12 (3): 213-225.
- Koka, Balaji R, and John E Prescott. 2002. "Strategic Alliances as Social Capital: A Multidimensional View." *Strategic Management Journal* 23 (9): 795-816.
- Korunka, Christian, Hermann Frank, Manfred Lueger, and Josef Mugler. 2003. "The Entrepreneurial Personality in the Context of Resources, Environment, and the Startup Process—a Configurational Approach." *Entrepreneurship Theory and Practice* 28 (1): 23-42.
- Kraaijenbrink, Jeroen, J-C Spender, and Aard J Groen. 2010. "The Resource-Based View: A Review and Assessment of Its Critiques." *Journal of Management* 36 (1): 349-372.
- Krasniqi, Florentina Xhelili, and Rahmije Mustafa Topxhiu. 2012. "The Informal Economy in Kosovo: Characteristics, Current Trends and Challenges." *Journal of Knowledge Management, Economics and Information Technology* 2 (2).
- Krauss, S.E. 2005. "Research Paradigm and Meaningmaking: A Premier." *The Qualitative Report* 10 (4): 758-770.

- Krauss, Stefanie I, Michael Frese, Christian Friedrich, and Jens M Unger. 2005. "Entrepreneurial Orientation: A Psychological Model of Success among Southern African Small Business Owners." *European Journal of Work and Organizational Psychology* 14 (3): 315-344.
- Kreiser, Patrick M, and Justin Davis. 2010. "Entrepreneurial Orientation and Firm Performance: The Unique Impact of Innovativeness, Proactiveness, and Risk-Taking." *Journal of Small Business & Entrepreneurship* 23 (1): 39-51.
- Kuhn, Thomas S. 1977. "The Essential Tension. Selected Studies in Scientific Tradition and Change." *Philosophy of Science, Chicago: University of Chicago Press, | c1977 1.*
- Kunkel, Scott, and CW Hofer. 1990. "Why Study the Determinants of New Venture Performance: A Literature Review and Rationale" *Academy of Management Proceedings*,
- Labianca, Giuseppe Joe. 2006. "A Multilevel Model of Group Social Capital." *Academy of Management Review* 31 (3): 569-582.
- Laforet, Sylvie. 2011. "A Framework of Organisational Innovation and Outcomes in SMEs." *International Journal of Entrepreneurial Behaviour & Research* 17 (4): 380-408.
- Lansberg, Ivan. 1999. *Succeeding Generations: Realizing the Dream of Families in Business*: Harvard Business Press.
- Laroche, Mireille, Marcel Mérette, and GC Ruggeri. 1999. "On the Concept and Dimensions of Human Capital in a Knowledge-Based Economy Context." *Canadian Public Policy/Analyse de Politiques*: 87-100.
- Leana, Carrie R, and Frits K Pil. 2006. "Social Capital and Organizational Performance: Evidence from Urban Public Schools." *Organization Science* 17 (3): 353-366.
- Leana, Carrie R, and Harry J Van Buren. 1999. "Organizational Social Capital and Employment Practices." *Academy of Management Review* 24 (3): 538-555.
- Lechner, Christian, Michael Dowling, and Isabell Welpel. 2006. "Firm Networks and Firm Development: The Role of the Relational Mix." *Journal of Business Venturing* 21 (4): 514-540.
- Lee, Choonwoo, Kyungmook Lee, and Johannes M Pennings. 2001. "Internal Capabilities, External Networks, and Performance: A Study on Technology-Based Ventures." *Strategic Management Journal* 22 (6-7): 615-640.
- Lee, Jia-Sheng, and Chia-Jung Hsieh. 2010. "A Research in Relating Entrepreneurship, Marketing Capability, Innovative Capability and Sustained Competitive Advantage." *Journal of Business & Economics Research*: 8 (9).
- Lee, Soo-Hoon, Phillip H Phan, and Toru Yoshikawa. 2008. "The Role of the Board and Its Interaction with the Successor's Human Capital in the Asian Family Enterprise." *Multinational Business Review* 16 (2): 65-88.
- Lester, Donald L, John A Parnell, and Shawn Carraher. 2003. "Organizational Life Cycle: A Five-Stage Empirical Scale." *International Journal of Organizational Analysis* 11 (4): 339-354.
- Levinthal, Daniel, and James G March. 1981. "A Model of Adaptive Organizational Search." *Journal of Economic Behavior & Organization* 2 (4): 307-333.
- Levitan, Lois, and Shelley Feldman. 1991. "For Love or Money: Nonmonetary Economic Arrangements among Rural Households in Central New York." *Research in rural sociology and development* 5.
- Lewis, Virginia L, and Neil Churchill. 1983. "The Five Stages of Small Business Growth." *Harvard Business Review* 61 (3): 30-50.
- Li, Yong-Hui, Jing-Wen Huang, and Ming-Tien Tsai. 2009. "Entrepreneurial Orientation and Firm Performance: The Role of Knowledge Creation Process." *Industrial Marketing Management* 38 (4): 440-449.
- Liao, Jianwen, and Harold Welsch. 2005. "Roles of Social Capital in Venture Creation: Key Dimensions and Research Implications*." *Journal of Small Business Management* 43 (4): 345-362.
- Lieberman, Marvin B, and David B Montgomery. 1988. "First-Mover Advantages." *Strategic Management Journal* 9 (S1): 41-58.
- Livingstone, Ian. 1991. "A Reassessment of Kenya's Rural and Urban Informal Sector." *World Development* 19 (6): 651-670.
- Lohmöller, Jan-Bernd. 1989. *Latent Variable Path Modeling with Partial Least Squares*: Physica-Verlag Heidelberg.

- Long, Rebecca G. 2011. "Commentary: Social Exchange in Building, Modeling, and Managing Family Social Capital." *Entrepreneurship Theory and Practice* 35 (6): 1229-1234.
- Losby, Jan L, John F Else, Marcia E Kingslow, Elaine L Edgcomb, Erika T Malm, and Vivian Kao. 2002. "Informal Economy Literature Review." *Institute for Social and Economic Development (ISED) and Microenterprise Fund for Innovation, Effectiveness, Learning, and Dissemination(FIELD)*. Available at: [http://www.ised.us/doc/Informal% 20Economy% 20Lit% 20Review. pdf](http://www.ised.us/doc/Informal%20Economy%20Lit%20Review.pdf).
- Low, Murray B, and Ian C MacMillan. 1988. "Entrepreneurship: Past Research and Future Challenges." *Journal of Management* 14 (2): 139-161.
- Lumpkin, G Tom, and Gregory G Dess. 1996. "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance." *Academy of Management Review*: 135-172.
- Lumpkin, George T, and Gregory G Dess. 2001. "Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle." *Journal of Business Venturing* 16 (5): 429-451.
- Lumpkin, GT, Claudia C Cogliser, and Dawn R Schneider. 2009. "Understanding and Measuring Autonomy: An Entrepreneurial Orientation Perspective." *Entrepreneurship Theory and Practice* 33 (1): 47-69.
- MacKenzie, Scott B, Philip M Podsakoff, and Nathan P Podsakoff. 2011. "Construct Measurement and Validation Procedures in Mis and Behavioral Research: Integrating New and Existing Techniques." *MIS Quarterly* 35 (2): 293-334.
- MacMillan, Ian C, and Diana L Day. 1988. "Corporate Ventures into Industrial Markets: Dynamics of Aggressive Entry." *Journal of Business Venturing* 2 (1): 29-39.
- MacMillan, Ian C, and Patricia E Jones. 1984. "Designing Organizations to Compete." *The Journal of Business Strategy* 4 (4): 11.
- Maditinos, Dimitrios, Dimitrios Chatzoudes, Charalampos Tsairidis, and Georgios Theriou. 2011. "The Impact of Intellectual Capital on Firms' Market Value and Financial Performance." *Journal of Intellectual Capital* 12 (1): 132-151.
- Madsen, Einar Lier. 2007. "The Significance of Sustained Entrepreneurial Orientation on Performance of Firms—a Longitudinal Analysis." *Entrepreneurship and Regional Development* 19 (2): 185-204.
- Magolda, Baxter. 1992. "Knowing and reasoning in college: Gender-related patterns in students' intellectual development."
- Mahjabeen, Rubana. 2008. "Microfinancing in Bangladesh: Impact on Households, Consumption and Welfare." *Journal of Policy Modeling* 30 (6): 1083-1092.
- Malhotra, Naresh K. 2008. *Marketing Research: An Applied Orientation, 5th Ed*: Pearson Education India.
- Maligalig, Dalisay, Sining Cuevas, and Aleli Rosario. 2009. "Informal Employment in Bangladesh." *Asian Development Bank Economics Working Paper Series* (155).
- Malik, S, and FH Abed. 2007. "Legal Mechanisms to Empower Informal Business-Bangladesh Perspective." *Work in progress, UNDP*.
- Maloney, William F. 2004. "Informality Revisited." *World Development* 32 (7): 1159-1178.
- Mansfield, Edwin. 1962. "Entry, Gibrat's Law, Innovation, and the Growth of Firms." *The American Economic Review* 52 (5): 1023-1051.
- Marcoulides, GA, and C Saunders. 2006. "Comments: PLS: A Silver Bullet." *MIS Quarterly* 30 (2): 37.
- Marx, Morris L, and Richard J Larsen. 2006. *Introduction to Mathematical Statistics and Its Applications*: Pearson/Prentice Hall.
- Massey, Claire, Kate Lewis, Virginia Warriner, Candice Harris, David Tweed, Jo Cheyne, and Alan Cameron. 2006. "Exploring Firm Development in the Context of New Zealand SMEs." *Small Enterprise Research* 14 (1): 1-13.
- Masurel, Enno, and Kees Van Montfort. 2006. "Life Cycle Characteristics of Small Professional Service Firms." *Journal of Small Business Management* 44 (3): 461-473.
- Matell, Michael S, and Jacob Jacoby. 1971. "Is There an Optimal Number of Alternatives for Likert Scale Items? Study I: Reliability and Validity." *Educational and Psychological Measurement* 31 (3): 657-674.
- Maykut, R, and R Morehouse. 1994. "Beginning Qualitative Research: A Philosophical and Practical Guide", the Falmer Press, London."

- McClelland, David C. 1987. "Characteristics of Successful Entrepreneurs*." *The Journal of Creative Behavior* 21 (3): 219-233.
- McMahon, Richard GP. 1998. "Stage Models of SME Growth Reconsidered." *Small Enterprise Research* 6 (2): 20-35.
- . 2001. "Deriving an Empirical Development Taxonomy for Manufacturing SMEs Using Data from Australia's Business Longitudinal Survey." *Small Business Economics* 17 (3): 197-212.
- McPherson, Michael A. 1995. "The Hazards of Small Firms in Southern Africa." *The Journal of Development Studies* 32 (1): 31-54.
- Mead, Donald C, and Carl Liedholm. 1998. "The Dynamics of Micro and Small Enterprises in Developing Countries." *World Development* 26 (1): 61-74.
- Meade, Adam W, Aaron M Watson, and Christina M Kroustalis. 2007. "Assessing Common Methods Bias in Organizational Research" *22nd annual meeting of the society for industrial and organizational psychology, New York,*
- Mengistae, Taye. 2006. "Competition and Entrepreneurs' Human Capital in Small Business Longevity and Growth." *Journal of Development Studies* 42 (5): 812-836.
- Meyer, John P, and Lynne Herscovitch. 2001. "Commitment in the Workplace: Toward a General Model." *Human Resource Management Review* 11 (3): 299-326.
- Meyskens, Moriah, Colleen Robb-Post, Jeffrey A Stamp, Alan L Carsrud, and Paul D Reynolds. 2010. "Social Ventures from a Resource-Based Perspective: An Exploratory Study Assessing Global Ashoka Fellows." *Entrepreneurship Theory and Practice* 34 (4): 661-680.
- Michael Schaper, Pro, and Michael Schaper. 2010. *Making Ecopreneurs: Developing Sustainable Entrepreneurship*: Gower Publishing, Ltd.
- Michaelas, Nicos, Francis Chittenden, and Panikkos Poutziouris. 1999. "Financial Policy and Capital Structure Choice in Uk SMEs: Empirical Evidence from Company Panel Data." *Small Business Economics* 12 (2): 113-130.
- Miles, Matthew B, and A Michael Huberman. 1994. "Qualitative Data Analysis: An Expanded Sourcebook. 1994." *Beverly Hills: Sage Publications.*
- Miles, Morgan P, Jeffrey G Covin, and Michael B Heeley. 2000. "The Relationship between Environmental Dynamism and Small Firm Structure, Strategy, and Performance." *Journal of Marketing Theory and Practice*: 63-78.
- Miller, Alex, and Bill Camp. 1986. "Exploring Determinants of Success in Corporate Ventures." *Journal of Business Venturing* 1 (1): 87-105.
- Miller, Danny. 1983. "The Correlates of Entrepreneurship in Three Types of Firms." *Management Science* 29 (7): 770-791.
- Miller, Danny, and Peter H Friesen. 1978. "Archetypes of Strategy Formulation." *Management Science* 24 (9): 921-933.
- . 1982. "Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum." *Strategic Management Journal* 3 (1): 1-25.
- . 1983. "Strategy-Making and Environment: The Third Link." *Strategic Management Journal* 4 (3): 221-235.
- . 1984. "A Longitudinal Study of the Corporate Life Cycle." *Management Science* 30 (10): 1161-1183.
- Miller, Harry G, and David Clarke. 1990. "Micro-Enterprise Development in Third World Countries." *International Journal of Technology Management* 5 (5): 513-522.
- Miller, Harry G, and Fred Kirschstein. 1988. "Strategic Considerations for Promoting Micro-Enterprises in Developing Countries: A Role for Higher Education Institutions." *International Review of Education* 34 (4): 495-499.
- Miller, SM. 1987. "The Pursuit of Informal Economies." *The Annals of the American Academy of Political and Social Science*: 26-35.
- Miner, John B. 1996. *4 Routes to Entrepreneurial Success*: Berrett-Koehler.
- . 1997. *A Psychological Typology of Successful Entrepreneurs*: Greenwood Publishing Group.
- Mintoo, Abdul Awal. 2006. "SMEs in Bangladesh." *CACCI Journal* 1: 1-19.
- Mintzberg, Henry. 1973. *Strategy-Making in Three Modes*: Regents of the University of California.
- . 1979. "The Structuring of Organizations: A Synthesis of the Research." *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.*

- Mitra, Reshmi, and Venugopal Pingali. 1999. "Analysis of Growth Stages in Small Firms: A Case Study of Automobile Ancillaries in India." *Journal of Small Business Management* 37: 62-75.
- Moch, Robert, Andreas Merkel, Lars Gunther, and Egon Miller. 2011. "The Dimension of Innovation in SME Networks? A Case Study on Cloud Computing and Web 2.0 Technologies in a Textile Manufacturing Network." *International Journal of Innovation and Sustainable Development* 5 (2): 185-198.
- Molloy, J, C Chadwick, R Ployhart, and S Golden. 2011. "Making Intangibles 'Tangible': A Multidisciplinary Critique and Validation Framework." *Journal of Management* 37 (5): 1496-1518.
- Moore, Gary C, and Izak Benbasat. 1991. "Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation." *Information Systems Research* 2 (3): 192-222.
- Moreno, Ana M, and Jose C Casillas. 2008. "Entrepreneurial Orientation and Growth of SMEs: A Causal Model." *Entrepreneurship Theory and Practice* 32 (3): 507-528.
- Moreno, Ana M, and José C Casillas. 2007. "High-Growth SMEs Versus Non-High-Growth SMEs: A Discriminant Analysis." *Entrepreneurship and Regional Development* 19 (1): 69-88.
- Morgan, Neil A, Shaoming Zou, Douglas W Vorhies, and Constantine S Katsikeas. 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, Robert E, and Carolyn A Strong. 2003. "Business Performance and Dimensions of Strategic Orientation." *Journal of Business Research* 56 (3): 163-176.
- Morse, Janice M. 1994. "Designing Funded Qualitative Research."
- Moser, Caroline. 1984. "The Informal Sector Reworked: Viability and Vulnerability in Urban Development." *Regional Development Dialogue* 5 (2): 135-78.
- Mosey, Simon, and Mike Wright. 2007. "From Human Capital to Social Capital: A Longitudinal Study of Technology-Based Academic Entrepreneurs." *Entrepreneurship Theory and Practice* 31 (6): 909-935.
- Moulton, Patricia, Lindam Lacey, Linda Flynn, Christine Tassone Kovner, and Carols Brewer. 2008. "Addressing the Complexities of Survey Research." *Nursing Policy Research: Turning Evidence-Based Research Into Health Policy*: 43.
- Mount, Joan, J Terence Zinger, and George R Forsyth. 1993. "Organizing for Development in the Small Business." *Long range planning* 26 (5): 111-120.
- Mullen, Michael R. 1995. "Diagnosing Measurement Equivalence in Cross-National Research." *Journal of International Business Studies*: 573-596.
- Murphy, Gregory B, Jeff W Trailer, and Robert C Hill. 1996. "Measuring Performance in Entrepreneurship Research." *Journal of Business Research* 36 (1): 15-23.
- Myers, M. 1997. "Qualitative Research in Information Systems." *MIS Quarterly* 21 (2): 241-242.
- Myers, Stewart C. 1984. "The Capital Structure Puzzle." *The Journal of Finance* 39 (3): 574-592.
- Myers, Stewart C, and Nicholas S Majluf. 1984. "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have." *Journal of Financial Economics* 13 (2): 187-221.
- Nahapiet, Janine, and Sumantra Ghoshal. 1998. "Social Capital, Intellectual Capital, and the Organizational Advantage." *Academy of Management Review*: 242-266.
- Naldi, Lucia, Mattias Nordqvist, Karin Sjöberg, and Johan Wiklund. 2007. "Entrepreneurial Orientation, Risk Taking, and Performance in Family Firms." *Family Business Review* 20 (1): 33-47.
- Naman, John L, and Dennis P Slevin. 1993. "Entrepreneurship and the Concept of Fit: A Model and Empirical Tests." *Strategic Management Journal* 14 (2): 137-153.
- Nelson, Richard R, and Sidney G Winter. 1982. *An Evolutionary Theory of Economic Change*: Belknap Press.
- Neuman, WL. 2003. *Social Research Methods: Qualitative and Quantitative Approaches*. Boston: Allyn and Bacon.
- Nicholls, Alex. 2006. *Social Entrepreneurship: New Models of Sustainable Social Change*: : OUP Oxford.
- Nieswiadomy, RM. 2002. "Quantitative Research Designs." *Foundations of nursing research*: 124-148.
- Nunnally, J. C., and I. H. Bernstein. 1994. *Psychometric Theory*. 3rd ed. New York: McGraw-Hill.

- Nunnally, JC. 1978. *Psychometric Theory*. New York, USA: Tata McGraw-Hill Education.
- Nyberg, Anthony J, Thomas P Moliterno, Donald Hale, and David P Lepak. 2012. "Resource-Based Perspectives on Unit-Level Human Capital a Review and Integration." *Journal of Management*.
- O'Farrell, Patrick N, and Dmwn Hitchens. 1988. "Alternative Theories of Small-Firm Growth: A Critical Review." *Environment and Planning* 20 (10): 1365-1383.
- Okafor, RG. 2011. "Social Capital and Venture Creation in Nigeria." *Middle Eastern Finance and Economic Journal*: 159-167.
- Oliver, Christine. 1997. "Sustainable Competitive Advantage: Combining Institutional and Resource-Based Views." *Strategic Management Journal* 18 (9): 697-713.
- Orlikowski, Wanda J, and Jack J Baroudi. 1991. "Studying Information Technology in Organizations: Research Approaches and Assumptions." *Information Systems Research* 2 (1): 1-28.
- Orser, Barbara J, Sandy Hogarth-Scott, and Allan L Riding. 2000. "Performance, Firm Size, and Management Problem-Solving." *Journal of Small Business Management* 38 (4): 42-58.
- Pahl, Raymond Edward. 1988. "Some Remarks on Informal Work, Social Polarization and the Social Structure*." *International Journal of Urban and Regional Research* 12 (2): 247-267.
- Palmer, Robert. 2004. *The Informal Economy in Sub-Saharan Africa: Unresolved Issues of Concept, Character and Measurement*: University of Edinburgh, Centre of African Studies.
- Park, Seung Ho, and Yadong Luo. 2001. "Guanxi and Organizational Dynamics: Organizational Networking in Chinese Firms." *Strategic Management Journal* 22 (5): 455-477.
- Parker, Joan C, and Tanya R Torres. 1994. *Micro-and Small-Scale Enterprises in Kenya: Results of the 1993 National Baseline Survey*: GEMINI.
- Parris, Thomas M, and Robert W Kates. 2003. "Characterizing and Measuring Sustainable Development." *Annual Review of Environment and Resources* 28 (1): 559-586.
- Patton, Michael Q. 1990. "Qualitative Evaluation and Research Methods."
- Patzelt, Holger, and Dean A Shepherd. 2011. "Recognizing Opportunities for Sustainable Development." *Entrepreneurship Theory and Practice* 35 (4): 631-652.
- Pearce, II, A John, David A Fritz, and Peter S Davis. 2010. "Entrepreneurial Orientation and the Performance of Religious Congregations as Predicted by Rational Choice Theory." *Entrepreneurship Theory and Practice* 34 (1): 219-248.
- Pearson, Allison W, Jon C Carr, and John C Shaw. 2008. "Toward a Theory of Familiness: A Social Capital Perspective." *Entrepreneurship Theory and Practice* 32 (6): 949-969.
- Peneder, Michael. 2010. "The Impact of Venture Capital on Innovation Behaviour and Firm Growth." *Venture Capital* 12 (2): 83-107.
- Penrose, Edith. 1959. "The Growth of the Firm." *White Plains, New York: ME Sharpe*.
- Penrose, Edith Tilton. 1952. "Biological Analogies in the Theory of the Firm." *The American Economic Review* 42 (5): 804-819.
- . 1995. *The Theory of Growth of the Firm*: Oxford University Press, USA.
- Pérez-Luño, Ana, Johan Wiklund, and Ramón Valle Cabrera. 2011. "The Dual Nature of Innovative Activity: How Entrepreneurial Orientation Influences Innovation Generation and Adoption." *Journal of Business Venturing* 26 (5): 555-571.
- Peters, Thomas J, and Robert H Waterman. 1982. "In Search of Excellence." *New York*.
- Pfeffer, Jeffrey. 1983. "Organizational Demography." *Research in organizational behavior*.
- Pfeffer, Jeffrey, and Gerald R Salancik. 1978. "The External Control of Organizations: A Resource Dependence Approach." *NY: Harper and Row Publishers*.
- Piroló, Luca, and Manuela Presutti. 2010. "The Impact of Social Capital on the Start-Ups' Performance Growth." *Journal of Small Business Management* 48 (2): 197-227.
- Poncet, Sandra, Walter Steingress, and Hylke Vandenbussche. 2010. "Financial Constraints in China: Firm-Level Evidence." *China Economic Review* 21 (3): 411-422.
- Poon, Simpson, and Paula MC Swatman. 1998. "A Combined-Method Study of Small Business Internet Commerce." *International Journal of Electronic Commerce*: 31-46.
- Porter, Michael E. 1980. "Competitive Strategy." *New York*.
- Portes, Alejandro, Manuel Castells, and Lauren A Benton. 1989. *The Informal Economy: Studies in Advanced and Less Developed Countries*: Johns Hopkins University Press Baltimore.
- Premaratne, SP. 2001. "Networks, Resources, and Small Business Growth: The Experience in Sri Lanka." *Journal of Small Business Management* 39 (4): 363-371.

- Putnam, Robert D. 1995. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy* 6 (1): 65-78.
- Quinn, Robert E, and Kim Cameron. 1983. "Organizational Life Cycles and Shifting Criteria of Effectiveness: Some Preliminary Evidence." *Management Science* 29 (1): 33-51.
- Qureshi, Shahid, and Sarfraz A Mian. 2010. "Antecedents and Outcomes of Entrepreneurial Firms Marketing Capabilities: An Empirical Investigation of Small Technology Based Firms." *Journal of Strategic Innovation and Sustainability* 6 (4): 26-41.
- Rai, A., Ravi Patnayakuni, and Nainika Patnayakuni. 2006. "Firm Performance Impacts of Digitally Enabled Supply Chain Integration Capabilities." *MIS Systems Quarterly* 30 (2): 225-246.
- Rauch, Andreas, and Michael Frese. 2000. "Psychological Approaches to Entrepreneurial Success: A General Model and an Overview of Findings." *International Review of Industrial and Organizational Psychology* 15: 101-142.
- Rauch, Andreas, Johan Wiklund, George T Lumpkin, and Michael Frese. 2009. "Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future." *Entrepreneurship Theory and Practice* 33 (3): 761-787.
- Reichstein, Toke, and Michael S Dahl. 2004. "Are Firm Growth Rates Random? Analysing Patterns and Dependencies." *International Review of Applied Economics* 18 (2): 225-246.
- Renooy, Piet H. 1990. *The Informal Economy: Meaning, Measurement and Social Significance*. Vol. 115: Koninklijk Nederlands aardrijkskundig genootschap.
- Revell, Andrea, and Robert Blackburn. 2007. "The Business Case for Sustainability? An Examination of Small Firms in the UK's Construction and Restaurant Sectors." *Business Strategy and the Environment* 16 (6): 404-420.
- Richard, Orlando C, Tim Barnett, Sean Dwyer, and Ken Chadwick. 2004. "Cultural Diversity in Management, Firm Performance, and the Moderating Role of Entrepreneurial Orientation Dimensions." *Academy of Management Journal* 47 (2): 255-266.
- Ringle, C, S Wende, and W Alexander. 2012. "SmartPLS Version: 2.0. M3."
- Ringle, Christian, Marko Sarstedt, and Detmar Straub. 2012. "A Critical Look at the Use of PLS-SEM in MIS Quarterly." *MIS Quarterly* 36 (1).
- Romano, Claudio A, George A Tanewski, and Kosmas X Smyrniotis. 2001. "Capital Structure Decision Making: A Model for Family Business." *Journal of Business Venturing* 16 (3): 285-310.
- Rosenbusch, Nina, Jan Brinckmann, and Andreas Bausch. 2011. "Is Innovation Always Beneficial? A Meta-Analysis of the Relationship between Innovation and Performance in SMEs." *Journal of Business Venturing* 26 (4): 441-457.
- Rosenbusch, Nina, Andreas Rauch, and Andreas Bausch. 2013. "The Mediating Role of Entrepreneurial Orientation in the Task Environment-Performance Relationship a Meta-Analysis." *Journal of Management* 39 (3): 633-659.
- Rotter, Julian B. 1966. "Generalized Expectancies for Internal Versus External Control of Reinforcement." *Psychological Monographs: General and Applied* 80 (1): 1-28.
- Rowley, Tim, Dean Behrens, and David Krackhardt. 2000. "Redundant Governance Structures: An Analysis of Structural and Relational Embeddedness in the Steel and Semiconductor Industries." *Strategic Management Journal* 21 (3): 369-386.
- Runyan, Rodney C, Patricia Huddleston, and Jane L Swinney. 2007. "A Resource-Based View of the Small Firm: Using a Qualitative Approach to Uncover Small Firm Resources." *Qualitative Market Research: An International Journal* 10 (4): 390-402.
- Runyan, Rodney, Cornelia Droge, and Jane Swinney. 2008. "Entrepreneurial Orientation Versus Small Business Orientation: What Are Their Relationships to Firm Performance?" *Journal of Small Business Management* 46 (4): 567-588.
- Rust, Roland T, Christine Moorman, and Peter R Dickson. 2002. "Getting Return on Quality: Revenue Expansion, Cost Reduction, or Both?" *The Journal of Marketing*: 7-24.
- Sabel, Charles F. 1982. *Work and Politics: The Division of Labor in Industry*: Cambridge [Cambridgeshire]; New York: Cambridge University Press.
- Santosa, Paulus Insap, Kwok Kee Wei, and Hock Chuan Chan. 2005. "User Involvement and User Satisfaction with Information-Seeking Activity." *European Journal of Information Systems* 14 (4): 361-370.
- Scheffé, H. 1959. "The Analysis of Variance. 1959." *New York*: 331-367.

- Schneider, Friedrich, Andreas Buehn, and Claudio E Montenegro. 2010. "Shadow Economies All over the World." *World Bank Policy Research Working Paper* 5356.
- Schneider, Friedrich, and Dominik Enste. 2000. *Shadow Economies around the World: Size, Causes, and Consequences*: International Monetary Fund.
- Schoepfle, Gregory K, Jorge F Perez-Lopez, and Eric Griego. 1992. *The Underground Economy in the United States*: Secretariat of Labor and Social Welfare, Sub-Secretariat" B".
- Schreiner, Mark, and Gary Woller. 2003. "Microenterprise Development Programs in the United States and in the Developing World." *World Development* 31 (9): 1567-1580.
- Schwandt, T.A. 1994. "Constructivist, Interpretivist Approaches to Human Inquiry. Handbook of Qualitative Research." In *Handbook of Qualitative Research*, eds Norman K. Denzin and Yvonna S. Lincoln. U.S.: Sage Publications, Inc.
- Schwarz, Andrew, Colleen Schwarz, and Tracey Rizzuto. 2008. "Examining the "Urban Legend" of Common Method Bias: Nine Common Errors and Their Impact" *Hawaii International Conference on System Sciences, Proceedings of the 41st Annual*: IEEE.
- Scott, Mel, and Richard Bruce. 1987. "Five Stages of Growth in Small Business." *Long Range Planning* 20 (3): 45-52.
- Sethuraman, SV. 1997. "Urban Poverty and the Informal Sector." *ILO*. Retrieved from the World Wide Web: <http://www.ilo.org/public/english/employment/recon/eiip/publ/1998/urbpover.htm>.
- Sharma, Madhav, Harry G Miller, and Ronald Reeder. 1990. "Micro-Enterprise Growth: Operational Models and Implementation Assistance in Third and Fourth World Countries." *Journal of Small Business Management* 28 (4): 9-21.
- Sharma, Pramodita, and S Manikutty. 2005. "Strategic Divestments in Family Firms: Role of Family Structure and Community Culture." *Entrepreneurship Theory and Practice* 29 (3): 293-311.
- Sharma, Pramodita, and Carlo Salvato. 2011. "Commentary: Exploiting and Exploring New Opportunities over Life Cycle Stages of Family Firms." *Entrepreneurship Theory and Practice* 35 (6): 1199-1205.
- Shepherd, Dean A, and Holger Patzelt. 2011. "The New Field of Sustainable Entrepreneurship: Studying Entrepreneurial Action Linking "What Is to Be Sustained" with "What Is to Be Developed"." *Entrepreneurship Theory and Practice* 35 (1): 137-163.
- Shepherd, Dean, and Johan Wiklund. 2009. "Are We Comparing Apples with Apples or Apples with Oranges? Appropriateness of Knowledge Accumulation across Growth Studies." *Entrepreneurship Theory and Practice* 33 (1): 105-123.
- Short, Jeremy C, Todd W Moss, and GT Lumpkin. 2009. "Research in Social Entrepreneurship: Past Contributions and Future Opportunities." *Strategic Entrepreneurship Journal* 3 (2): 161-194.
- Short, Jeremy C, G Tyge Payne, Keith H Brigham, GT Lumpkin, and J Christian Broberg. 2009. "Family Firms and Entrepreneurial Orientation in Publicly Traded Firms a Comparative Analysis of the S&P 500." *Family Business Review* 22 (1): 9-24.
- Shrader, Rod, and Donald S Siegel. 2007. "Assessing the Relationship between Human Capital and Firm Performance: Evidence from Technology-Based New Ventures." *Entrepreneurship Theory and Practice* 31 (6): 893-908.
- Simon, C, and A Witte. 1980. "The Underground Economy: Estimates of Size, Structure, and Trends." *Government regulation: Achieving Social and Economic Balance* 5: 70-120.
- Simon, Herbert Alexander. 1980. "The Behavioral and Social Sciences." *Science* 209 (4452): 72-78.
- Širec, Karin, and D Močnik. 2010. "How Entrepreneurs' Personal Characteristics Affect SMEs' Growth." *Naše gospodarstvo: revija za aktualna gospodarska vprašanja* 56 (1/2): 3-12.
- Sirmon, David G, and Michael A Hitt. 2003. "Managing Resources: Linking Unique Resources, Management, and Wealth Creation in Family Firms." *Entrepreneurship Theory and Practice* 27 (4): 339-358.
- Sirmon, David G, Michael A Hitt, and R Duane Ireland. 2007. "Managing Firm Resources in Dynamic Environments to Create Value: Looking inside the Black Box." *Academy of Management Review* 32 (1): 273-292.
- Smith, John K. 1983. "Quantitative Versus Qualitative Research: An Attempt to Clarify the Issue." *Educational Researcher* 12 (3): 6-13.
- Smith, Ken G, J Robert Baum, and Edwin A Locke. 2001. "A Multidimensional Model of Venture Growth." *Academy of Management Journal* 44 (2): 292-303.

- Smith, Ken G, Terence R Mitchell, and Charles E Summer. 1985. "Top Level Management Priorities in Different Stages of the Organizational Life Cycle." *Academy of Management Journal* 28 (4): 799-820.
- Smithies, Edward. 1984. *The Black Economy in England since 1914*: Gill and Macmillan Dublin.
- Sorenson, Ritch L, Kenneth E Goodpaster, Patricia R Hedberg, and Andy Yu. 2009. "The Family Point of View, Family Social Capital, and Firm Performance an Exploratory Test." *Family Business Review* 22 (3): 239-253.
- Srivastava, Rajendra K, Liam Fahey, and H Kurt Christensen. 2001. "The Resource-Based View and Marketing: The Role of Market-Based Assets in Gaining Competitive Advantage." *Journal of Management* 27 (6): 777-802.
- Staley, Eugene, and Richard Morse. 1965. *Modern Small Industry for Developing Countries*: McGraw-Hill.
- Stetz, Phil E, Roy Howell, Alex Stewart, John D Blair, and Myron D Fottler. 2000. "Multidimensionality of Entrepreneurial Firm-Level Processes: Do the Dimensions Covary." *Frontiers of Entrepreneurship Research*: 459-469.
- Stewart Jr, Wayne H, and Philip L Roth. 2001. "Risk Propensity Differences between Entrepreneurs and Managers: A Meta-Analytic Review." *Journal of Applied Psychology* 86 (1): 145.
- Stiglitz, Joseph E, and Andrew Weiss. 1981. "Credit Rationing in Markets with Imperfect Information." *The American Economic Review* 71 (3): 393-410.
- Straub, Detmar W. 1989. "Validating Instruments in MIS Research." *MIS Quarterly*: 147-169.
- Su, Zhongfeng, En Xie, and Yuan Li. 2011. "Entrepreneurial Orientation and Firm Performance in New Ventures and Established Firms." *Journal of Small Business Management* 49 (4): 558-577.
- Tanzi, Vito. 1983. "The Underground Economy in the United States: Annual Estimates, 1930-80 (L'économie Clandestine Aux Etats-Unis: Estimations Annuelles, 1930-80)(La" Economía Subterránea" De Estados Unidos: Estimaciones Anuales, 1930-80)." *Staff Papers-International Monetary Fund*: 283-305.
- Tashakkori, A., and C. Teddlie. 1998. *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. Vol. 46, *Applied Social Research Methods Series*. California: Sage Publications, Inc.
- Teece, David J, Gary Pisano, and Amy Shuen. 1997. "Dynamic Capabilities and Strategic Management." *Strategic Management Journal* 18 (7): 509-533.
- Tenenhaus, Michel, Vincenzo Esposito Vinzi, Yves-Marie Chatelin, and Carlo Lauro. 2005. "PLS Path Modeling." *Computational Statistics & Data Analysis* 48 (1): 159-205.
- Teo, H.H., K.K. Wei, and I. Benbasat. 2003. "Predicting Intention to Adopt Interorganizational Linkages: An Institutional Perspective." *MIS Quarterly* 27 (1): 19-49.
- Teo, Thompson SH, and Jing Liu. 2007. "Consumer Trust in E-Commerce in the United States, Singapore and China." *Omega* 35 (1): 22-38.
- Thong, James YL, and Chee-Sing Yap. 1995. "CEO Characteristics, Organizational Characteristics and Information Technology Adoption in Small Businesses." *Omega* 23 (4): 429-442.
- Tokarczyk, John, Eric Hansen, Mark Green, and Jon Down. 2007. "A Resource-Based View and Market Orientation Theory Examination of the Role of "Familiness" in Family Business Success." *Family Business Review* 20 (1): 17-31.
- Trompenaars, Fons, and Charles Hampden-Turner. 1998. *Riding the Waves of Culture*: McGraw-Hill New York.
- Tsai, Wenpin, and Sumantra Ghoshal. 1998. "Social Capital and Value Creation: The Role of Intrafirm Networks." *Academy of Management Journal*: 464-476.
- Ucbasaran, Deniz, Paul Westhead, and Mike Wright. 2008. "Opportunity Identification and Pursuit: Does an Entrepreneur's Human Capital Matter?" *Small Business Economics* 30 (2): 153-173.
- Uddin, SMN. 2008. "SME Development and Regional Economic Integration" *Seminar Proceedings, Joint Regional Workshop held in Tokyo, Japan*,
- Unger, Jens M, Andreas Rauch, Michael Frese, and Nina Rosenbusch. 2011. "Human Capital and Entrepreneurial Success: A Meta-Analytical Review." *Journal of Business Venturing* 26 (3): 341-358.
- United Nations Development Programme. 2013. "The Rise of the South: Human Progress in a Diverse World " *Human Development Report 2013*.
- Utterback, James M. 1996. *Mastering the Dynamics of Innovation*: Harvard Business Press.

- Van Dijk, Meine Pieter. 1996. "The Urban Informal Sector as a New Engine for Development: Theoretical Developments since 1972." *Asien Afrika Lateinamerika* 24 (2): 177-192.
- . 2008. "The Role of the Informal Sector to Spread Development Beyond Dar Es Salaam: Flows of People, Goods and Money." *Dilemmas of Development*: 131.
- Van Gelderen, Marco, and Paul Jansen. 2006. "Autonomy as a Start-up Motive." *Journal of Small Business and Enterprise Development* 13 (1): 23-32.
- Venkataraman, Sankaran. 2002. "The Distinctive Domain of Entrepreneurship Research." *Edward Elgar Press*.
- Venkataraman, N. 1989. "Strategic Orientation of Business Enterprises: The Construct, Dimensionality, and Measurement." *Management Science* 35 (8): 942-962.
- Venkataraman, Natarjan, and Vasudevan Ramanujam. 1986. "Measurement of Business Performance in Strategy Research: A Comparison of Approaches." *Academy of Management Review*: 801-814.
- Vorhies, Douglas W, and Neil A Morgan. 2005. "Benchmarking Marketing Capabilities for Sustainable Competitive Advantage." *Journal of Marketing*: 80-94.
- Walther, Richard. 2011. "Building Skills in the Informal Sector. Background Paper Prepared for the Education for All Global Monitoring Report 2012." UNESCO.
- Watson, John. 2007. "Modeling the Relationship between Networking and Firm Performance." *Journal of Business Venturing* 22 (6): 852-874.
- Watson, Warren, Wayne H Stewart Jr, and Anat BarNir. 2003. "The Effects of Human Capital, Organizational Demography, and Interpersonal Processes on Venture Partner Perceptions of Firm Profit and Growth." *Journal of Business Venturing* 18 (2): 145-164.
- Webster, S. "Ninth New Collegiate Dictionary. 1991." *Springfield (Mass.): Merriam-Webster.[Links]*.
- Weiss, RS. 1994. "Learning from Strangers: The Art and Method of Qualitative Interview Studies. The Free Press." *New York*.
- Werts, C.E., R.L. Linn, and K.G. Jöreskog. 1974. "Intraclass Reliability Estimates: Testing Structural Assumptions." *Educational and Psychological Measurement* 34 (1): 25-33.
- West, G Page, Charles E Bamford, and Jesse W Marsden. 2008. "Contrasting Entrepreneurial Economic Development in Emerging Latin American Economies: Applications and Extensions of Resource-Based Theory." *Entrepreneurship Theory and Practice* 32 (1): 15-36.
- Wetzels, Martin, Gaby Odekerken-Schroder, and Claudia Van Oppen. 2009. "Using PLS Path Modeling for Assessing Hierarchical Construct Models: Guidelines and Empirical Illustration." *MIS Quarterly* 33 (1): 177.
- Wholey, Joseph S, Harry P Hatry, and Kathryn E Newcomer. 2010. *Handbook of Practical Program Evaluation*. Vol. 19: Jossey-Bass.
- Wiklund, Johan. 1999. "The Sustainability of the Entrepreneurial Orientation-Performance Relationship." *Entrepreneurship Theory and Practice* 24 (1): 37-48.
- Wiklund, Johan, and Dean Shepherd. 2003. "Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities*." *Journal of Management Studies* 40 (8): 1919-1941.
- . 2005. "Entrepreneurial Orientation and Small Business Performance: A Configurational Approach." *Journal of Business Venturing* 20 (1): 71-91.
- Wilkinson, Ian F. 2003. "On Generalising: Seeing the General in the Particular and the Particular in the General in Marketing Research" *ANZMAC Conference, Adelaide*,
- Willis, Jerry W. 2007. *Foundations of Qualitative Research: Interpretive and Critical Approaches*: SAGE Publications, Incorporated.
- Wilson, Bradley, and Jörg Henseler. 2007. "Modeling Reflective Higher-Order Constructs Using Three Approaches with PLS Path Modeling: A Monte Carlo Comparison" *Australian and New Zealand Marketing Academy Conference*,
- Wiseman, Robert M, and Anthony H Catanach. 1997. "A Longitudinal Disaggregation of Operational Risk under Changing Regulations: Evidence from the Savings and Loan Industry." *Academy of Management Journal* 40 (4): 799-830.
- Wold, Herman. 1982. "Soft Modelling: The Basic Design and Some Extensions." *Systems Under Indirect Observation, Part II*: 36-37.
- Wright, Patrick M, Gary C McMahan, and Abigail McWilliams. 1994. "Human Resources and Sustained Competitive Advantage: A Resource-Based Perspective." *International Journal of Human Resource Management* 5 (2): 301-326.

- Wu, Wei-ping. 2008. "Dimensions of Social Capital and Firm Competitiveness Improvement: The Mediating Role of Information Sharing." *Journal of Management Studies* 45 (1): 122-146.
- Xu, J. 2003. "A Study of the Factors Influencing Knowledge Management Systems Diffusion in Australia." Graduate School of Business, Curtin University, Perth, Australia.
- Zaheer, Akbar, Ranjay Gulati, and Nitin Nohria. 2000. "Strategic Networks." *Strategic Management Journal* 21 (3): 203.
- Zaheer, Akbar, and Bill McEvily. 1999. "Bridging Ties: A Source of Firm Heterogeneity in Competitive Capabilities." *Strategic Management Journal* 20 (12): 1133.
- Zahra, Shaker A. 1991. "Predictors and Financial Outcomes of Corporate Entrepreneurship: An Exploratory Study." *Journal of Business Venturing* 6 (4): 259-285.
- . 1996. "Technology Strategy and Financial Performance: Examining the Moderating Role of the Firm's Competitive Environment." *Journal of Business Venturing* 11 (3): 189-219.
- . 2005. "Entrepreneurial Risk Taking in Family Firms." *Family Business Review* 18 (1): 23-40.
- Zahra, Shaker A, and William C Bogner. 2000. "Technology Strategy and Software New Ventures' Performance: Exploring the Moderating Effect of the Competitive Environment." *Journal of Business Venturing* 15 (2): 135-173.
- Zahra, Shaker A, James C Hayton, Donald O Neubaum, Clay Dibrell, and Justin Craig. 2008. "Culture of Family Commitment and Strategic Flexibility: The Moderating Effect of Stewardship." *Entrepreneurship Theory and Practice* 32 (6): 1035-1054.
- Zahra, Shaker A, James C Hayton, and Carlo Salvato. 2004. "Entrepreneurship in Family Vs. Non-Family Firms: A Resource-Based Analysis of the Effect of Organizational Culture." *Entrepreneurship Theory and Practice* 28 (4): 363-381.
- Zainol, Fakhrol Anwar, and Selvamalar Ayadurai. 2011. "Entrepreneurial Orientation and Firm Performance: The Role of Personality Traits in Malay Family Firms in Malaysia." *International Journal of Business and Social Science* 2 (1): 59-71.
- Zainol, Fakhrol Anwar, and Wan Norhayate Wan Daud. 2011. "Indigenous ("Bumiputera") Malay Entrepreneurs in Malaysia: Government Supports, Entrepreneurial Orientation and Firms Performances." *International Business and Management* 2 (1): 86-99.
- Zikmund, William G, Jon C Carr, and Mitch Griffin. 2012. *Business Research Methods*: CengageBrain.com.
- Zollo, Maurizio, and Sidney G Winter. 2002. "Deliberate Learning and the Evolution of Dynamic Capabilities." *Organization Science* 13 (3): 339-351.

APPENDIX A

COMPARISON OF FIRM GROWTH THEORIES

Criteria	The Stochastic Approach	The Evolutionary Theory	The Firm Life-cycle Theory	The Resource-based View
Focus	The linear nature of firm growth and that firm growth is independent of firm size.	The idiosyncratic nature of firm growth. The growth of the firm is an evolutionary process.	The firm growth occurs in a cyclic process.	The collection of firm resources and capabilities determine firm growth.
Concentration	A firm's previous growth cannot be used to predict future growth; and the probability of a firm is an industry-specific phenomenon.	It describes interaction of a number of internal and external forces that push firm in growth over a period of time.	It does not attempt to explain what causes a business to grow; rather, it concerns with how a firm adapts internally in order to continue its growth.	The firm comprises of differential skills, complementary assets and organizational routines and capabilities.
Major Findings	Small firms have greater capacity to innovate in specific environment to grow faster than larger firm. Large firms grow slower, because they are more diversified and thus more prone to more variable growth rates leading to decreased overall growth rate.	It offers a more plausible endogenous explanation of firm level economic growth such as heterogeneity of firms, the disequilibrating nature of firms in terms of technology, learning and time. The exclusive blind variation of biological evolution leaves no room for human motivation and conscious human decisions.	It postulates a growth process through a sequence of stages or crises without offering any supporting evidence. The sequential nature of the stages has not been proven beyond doubt. A measurement issue can also be raised regarding firm size and other characteristics.	Valuable, rare, inimitable, and non-substitutable is neither necessary nor sufficient for sustainable competitive advantage; the value of a resource is too indeterminate to provide for useful theory; and the definition of resource is unworkable.

APPENDIX B

PREVIOUS STUDIES USING THEORIES, ANTECEDENTS AND OUTCOMES

Study	Field of Study	Method Used	Theory Used	Antecedents and Outcomes Examined					
				EO	HC	SC	FC	BE	SP
Lumpkin and Dess (2001)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√				√	√
Pearce et al. (2010)	Non-profit org.	Quantitative (Survey)	Resource-based view	√				√	√
Miller (1983)	Management	Quantitative (Survey)	Contingency theory	√				√	√
Rauch et al. (2009)	Entrepreneurship	Literature analysis	Resource-based view	√					√
George (2011)	Management	Quantitative	N/A	√					
Covin and Miller (2013)	Entrepreneurship	Conceptual	N/A	√					√
Covin and Slevin (1989)	Management	Quantitative (Survey)	N/A	√				√	√
Wiklund and Shepherd (2005)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√			√	√	√
Zahra (1996)	Management	Quantitative (Survey)	N/A	√				√	√
Zainol and Wan Daud (2011)	Entrepreneurship	Quantitative (Survey)	N/A	√				√	√
Zahra and Bogner (2000)	Management	Quantitative (Survey)	N/A	√				√	√
Lumpkin and Dess (1996)	Entrepreneurship	Conceptual	Contingency theory	√	√	√		√	√
Zahra (2005)	Entrepreneurship	Quantitative (Survey)	Agency theory	√					√
Naldi et al. (2007)	Entrepreneurship	Quantitative (Survey)	N/A	√					√
Jambulingam, Kathuria, and Doucette (2005)	Marketing	Quantitative (Survey)	Resource-based view	√		√		√	√
Busenitz (1999)	Entrepreneurship	Quantitative (Survey)	N/A	√	√				
Davis et al. (2010)	Management	Quantitative (Survey)	N/A	√	√	√			√
Van Gelderen and Jansen (2006)	Management	Interview	N/A	√					
Chow (2006)	Management	Quantitative (Survey)	Resource-based view	√	√			√	√
Madsen (2007)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√		√		√	√
Kreiser and Davis (2010)	Entrepreneurship	Conceptual	Resource-based view	√		√		√	√
Runyan, Droge, and Swinney (2008)	Management	Quantitative (Survey)	Resource-based view	√					√
Kickul et al. (2010)	Management	Quantitative (Survey)	Resource-based view	√	√	√	√	√	√
Grande, Madsen, and Borch (2011)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√	√	√	√		√
Damanpour and Daniel Wischnevsky (2006)	Management	Conceptual	Innovation theory	√					
Miller and Friesen (1982)	Management	Quantitative (Survey)	Innovation theory	√				√	
Huang and Yu (2011)	Management	Case study	N/A	√					√
Laforet (2011)	Management	Interview	Grounded theory	√	√	√		√	√
Rosenbusch, Brinckmann, and Bausch (2011)	Entrepreneurship	Meta-analysis	N/A	√					√
Gunday et al. (2011)	Economics	Quantitative (Survey)	Innovation concepts	√					√

Morgan and Strong (2003)	Management	Quantitative (Survey)	N/A	√							√
Kelliher and Reindl (2009)	Management	Literature analysis	Resource-based view	√	√	√	√	√	√		
Nyberg et al. (2012)	Management	Literature analysis	Resource-based view		√						
Shepherd and Patzelt (2011)	Entrepreneurship	Conceptual	N/A								√
Gilbert, McDougall, and Audretsch (2006)	Management	Literature analysis	Resource-based view	√	√	√	√	√	√	√	√
Rosenbusch, Rauch, and Bausch (2013)	Entrepreneurship	Quantitative	Resource-based view	√					√	√	√
Runyan, Huddleston, and Swinney (2007)	Marketing	Focus group	Resource-based view			√			√	√	√
Murphy, Trailer, and Hill (1996)	Entrepreneurship	Quantitative	N/A								√
Venkatraman and Ramanujam (1986)	Management	Conceptual	N/A								√
Arya and Lin (2007)	Management	Quantitative (Survey)	Resource-based view			√	√	√	√	√	√
Anderson and Eshima (2011)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√	√	√					√
Moreno and Casillas (2008)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√				√	√	√	√
Dess, Pinkham, and Yang (2011)	Entrepreneurship	Literature analysis	N/A	√	√	√	√	√	√		
Lumpkin, Cogliser, and Schneider (2009)	Entrepreneurship	Literature analysis	N/A	√							
Cooper, Gimeno-Gascon, and Woo (1994)	Management	Quantitative (Survey)	Resource-based view					√			
Watson, Stewart Jr, and BarNir (2003)	Management	Quantitative (Survey)	N/A		√						√
Davidsson and Honig (2003)	Entrepreneurship	Quantitative (Survey)	N/A		√	√					√
Unger et al. (2011)	Entrepreneurship	Quantitative (Survey)	N/A		√						√
Honig (1998)	Management	Quantitative (Survey)	N/A		√	√	√	√			√
Romano, Tanewski, and Smyrniotis (2001)	Entrepreneurship	Quantitative (Survey)	N/A					√			√
Crook et al. (2011)	Psychology	Quantitative (Survey)	Resource-based view		√						√
Shrader and Siegel (2007)	Management	Quantitative (Survey)	Resource-based view		√						√
Gimeno et al. (1997)	Entrepreneurship	Quantitative (Survey)	N/A		√						√
Lee, Phan, and Yoshikawa (2008)	Entrepreneurship	Quantitative (Survey)	N/A		√	√					√
Sirmon and Hitt (2003)	Management	Conceptual	Resource-based view		√	√	√	√			√
Short et al. (2009)	Entrepreneurship	Literature analysis	N/A	√	√	√	√		√		√
Pearson, Carr, and Shaw (2008)	Management	Conceptual	Resource-based view				√				√
Carr et al. (2011)	Management	Quantitative (Survey)	Resource-based view				√				√
Liao and Welsch (2005)	Management	Quantitative (Survey)	Resource-based view				√				√
Chrisman, Chua, and Zahra (2003)	Management	Conceptual	Resource-based view		√	√	√	√			√
Mosey and Wright (2007)	Entrepreneurship	Multiple-case study	N/A		√	√					√
Pirola and Presutti (2010)	Entrepreneurship	Quantitative (Survey)	Resource-based view				√				√
Coleman (2007)	Entrepreneurship	Quantitative (Survey)	Resource-based view			√	√				√
Long (2011)	Entrepreneurship	Conceptual	Resource-based view				√				√
West, Bamford, and Marsden (2008)	Entrepreneurship	Qualitative	Resource-based view	√	√	√	√	√	√	√	√
Laroche, Mérette, and Ruggeri (1999)	Economics	Conceptual	N/A		√						
Okafor (2011)	Economics	Quantitative (Survey)	Resource-based view				√				√
Maditinos et al. (2011)	Management	Quantitative (Survey)	Resource-based view		√	√					√
Ketkar and Sett (2010)	Management	Quantitative (Survey)	Resource-based view		√				√		√
Kamaluddin and Rahman (2009)	Management	Quantitative (Survey)	Resource-based view		√	√					√
Batjargal (2007)	Entrepreneurship	Quantitative (Survey)	N/A		√	√					√
Lechner, Dowling, and Welp (2006)	Entrepreneurship	Quantitative (Survey)	Resource-based view				√				√

Hoang and Antoncic (2003)	Entrepreneurship	Conceptual	Resource-based view				√		√
Watson (2007)	Entrepreneurship	Quantitative (Survey)	Network theory				√		√
Tsai and Ghoshal (1998)	Management	Quantitative	Resource-based view				√		√
Sorenson et al. (2009)	Entrepreneurship	Quantitative (Survey)	Resource-based view				√		√
Arregle et al. (2007)	Entrepreneurship	Conceptual	Resource-based view				√		√
Wu (2008)	Entrepreneurship	Quantitative (Survey)	Resource-based view				√		√
Chen et al. (2007)	Entrepreneurship	Quantitative (Survey)	Resource-based view	√			√		√
Hitt et al. (2001)	Management	Quantitative	Resource-based view	√	√				√
Bhagavatula et al. (2010)	Entrepreneurship	Mixed method	Resource-based view	√	√	√			√
Irava and Moores (2010)	Management	Conceptual	Resource-based view	√	√	√		√	√
Davila, Foster, and Gupta (2003)	Management	Quantitative	Resource-based view				√		√
Cassar (2004)	Management	Quantitative	N/A				√		√
Akyüz et al. (2006)	Economics	Quantitative	N/A				√		√
Peneder (2010)	Economics	Quantitative	N/A	√			√		√
Henley (2005)	Economics	Quantitative	N/A	√			√		√
Mengistae (2006)	Development studies	Quantitative	N/A		√				√
Jo and Lee (1996)	Management	Quantitative	N/A		√				√
Ucbasaran, Westhead, and Wright (2008)	Management	Quantitative (Survey)	Resource-based view	√	√	√			√
Cabrera-Suárez, De Saá-Pérez, and García-Almeida (2001)	Management	Conceptual	Resource-based view	√	√	√	√		√
Tokarczyk et al. (2007)	Management	Case study	Resource-based view	√	√	√			√
Meyer and Herscovitch (2001)	Management	Conceptual	N/A		√				√
Donnelley (1988)	Management	Conceptual	N/A		√				√
Zahra et al. (2008)	Management	Quantitative (Survey)	Stewardship Theory		√				√
Sirmon, Hitt, and Ireland (2007)	Management	Conceptual	Resource-based view	√	√	√	√	√	√
Nahapiet and Ghoshal (1998)	Management	Conceptual	Resource-based view		√	√			√
Leana and Van Buren (1999)	Management	Conceptual	Resource-based view			√			√
Dess and Shaw (2001)	Management	Conceptual	Resource-based view			√			√
Labianca (2006)	Management	Conceptual	Resource-based view			√			√
Sharma and Manikutty (2005)	Management	Conceptual	Resource-based view			√			√
Meyskens et al. (2010)	Management	Mixed method	Resource-based view	√	√	√	√		√
Hart (1995)	Management	Conceptual	Resource-based view						√
Brüderl and Preisendörfer (1998)	economics	Quantitative	N/A		√	√	√		√
Bigsten and Gebreeyesus (2007)	Economics	Quantitative	Stochastic approach						√
McPherson (1995)	Economics	Quantitative	Economic theory						√
Parris and Kates (2003)	Environment	Conceptual	N/A						√
Revell and Blackburn (2007)	Environment	Qualitative	N/A						√
Aga and Reilly (2011)	Economics	Quantitative (Survey)	N/A					√	

Abbreviation for the antecedents and outcomes: EO-Entrepreneurial Orientation; HC-Human Capital; FC-Financial Capital; SC-Social Capital; BE-Business Environment; SP-Sustainable Performance

APPENDIX C

PREVIOUS STUDIES USING DIMENSIONS, SUBDIMENSIONS AND VARIABLES

Study	Dimensions, Subdimensions and Variables					
	Entrepreneurial Orientation	Human Capital	Social Capital	Financial Capital	Business Environment	Sustainable Performance
Lumpkin and Dess (2001)	Proactiveness; competitive aggressiveness	-	-	-	Dynamism; hostility	Financial (Sales growth; return on sales; profitability)
Pearce et al. (2010)	Innovativeness; proactiveness; risk seeking; competitive aggressiveness; autonomy seeking	-	-	-	Munificence	Congregational (Primary proxy)
Miller (1983)	Innovation; proactiveness; risk taking	-	-	-	Dynamism; heterogeneity; hostility	Financial (Sales; no. of employees); non-financial (Leader locus of control)
Rauch et al. (2009)	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	-	-	-	-	Financial; nonfinancial; archival
George (2011)	Innovation; proactiveness; risk taking	-	-	-	-	-
Covin and Miller (2013)	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	-	-	-	-	Financial
Covin and Slevin (1989)	Innovation; proactiveness; risk taking; organization structure	-	-	-	Hostility; benign	Financial (Sales growth; cash flow; profit; return on investment)
Wiklund and Shepherd (2005)	Innovation; proactiveness; risk taking	-	-	Access to finance	Hostility; benign	Financial (Sales; cash flow; profit; employee growth)
Zahra (1996)	Innovation	-	-	-	Hostility; dynamism; heterogeneity	Financial (Return on investment)
Zainol and Wan	Entrepreneurial	-	-	-	Government support	Financial (Sales; market

Daud (2011)	orientation						share; profit)
Zahra and Bogner (2000)	Innovation	-	-	-		Dynamism; heterogeneity; hostility	Financial (Market share; profit)
Lumpkin and Dess (1996)	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	Management team characteristics; size	Structure; culture	-		Dynamism; munificence; complexity; industry characteristics	Financial (Sales; market share; profitability) Non-financial (satisfaction)
Zahra (2005)	Risk taking; innovation	-	-	-		-	Financial (Sales growth; return on sales)
Naldi et al. (2007)	Innovation; proactiveness; risk taking	-	-	-		-	Financial (Profit; sales; cash flow; net worth)
Jambulingam, Kathuria, and Doucette (2005)	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy; motivation	-	Organicity; adaptability; ambiguity	-		Munificence; competitive; stability	Effectiveness; customer orientation; growth; innovative services
Busenitz (1999)	Risk taking, representativeness; overconfidence	Education; age	-	-		-	-
Davis et al. (2010)	Innovation; proactiveness; risk taking	No. of employee; age,	Prestige power; structural power; expert power	-		-	Financial (Profit)
Van Gelderen and Jansen (2006)	Autonomy	-	-	-		-	-
Chow (2006)	Innovation; proactiveness; risk taking	Experience; education	-	-		Uncertainty; business prospect	Profitability
Madsen (2007)	Entrepreneurial orientation	-	Network resources	-		Governance system resources	Market position; market share; sales; employment; financial results
Kreiser and Davis (2010)	Innovation ; proactivity; risk taking	-	Organizational structure	-		Dynamism; munificence	Financial (Profitability; growth)
Runyan, Droge, and Swinney (2008)	Innovation ; proactivity; risk-taking	-	-	-		-	Financial
Kickul et al. (2010)	Creativity; risk taking; proactive	Skills; knowledge; experience; training; education	Relationships; values; networks; culture	Sources of funding; access to capital	Opportunity recognition		Financial (sales; turnover; profitability), Non-financial (satisfaction)
Grande, Madsen, and Borch (2011)	Entrepreneurial orientation	Unique competence; firm size; location	External network	Financial position	-		Objective (market position; market share; sales; employment; growth; financial results); subjective (short-term: long-term)
Damanpour and	Innovation	-	-	-		-	-

Daniel Wischnevsky (2006)						
Miller and Friesen (1982)	Innovation; risk taking	-	-	-	Dynamism; heterogeneity; hostility	-
Huarng and Yu (2011)	Innovation	-	-	-	-	Value creation
Laforet (2011)	Innovation	Skilled workforce; in-house expertise	Networks	-	Competitive	Financial (Sales; market share; profit)
Rosenbusch, Brinckmann, and Bausch (2011)	Innovation	-	-	-	-	Overall performance
Gunday et al. (2011)	Innovation	-	-	-	-	Innovative; market; production; financial
Morgan and Strong (2003)	Aggressiveness; analysis; defensiveness; futurity; proactiveness; riskiness	-	-	-	-	Market share; customer satisfaction; competitive position; customer retention; sales; return on investment
Kelliher and Reindl (2009)	Centralised authority; minimal internal management levels; wide span of control	Tacit knowledge	Networks; simple structure; culture	Personal sources of finance; financial access	Competitive influence; government policy	-
Nyberg et al. (2012)	-	Human capital	-	-	-	-
Shepherd and Patzelt (2011)	-	-	-	-	-	Economic gain.; Non-economic gains
Gilbert, McDougall, and Audretsch (2006)	Innovation	Educational background; experience; team size; age; skill	Network relationships; organizational structure	Financial capitalization; sources of capital; access to capital	Dynamism; heterogeneity; hostility	Cash flow; income; customer base; sales; employment; market share
Rosenbusch, Rauch, and Bausch (2013)	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	-	-	-	Munificence; hostility; dynamism; complexity	Financial (Profitability; growth; capital market); Subjective
Runyan, Huddleston, and Swinney (2007)	-	-	Trust; obligation; expectation; network	-	Hostility	-
Murphy, Trailer, and Hill (1996)	-	-	-	-	-	Financial performance
Venkatraman and Ramanujam (1986)	-	-	-	-	-	Financial; operational; organizational effectiveness

Arya and Lin (2007)	-	-	Structural holes; organizational centrality	Funding sources	Government support; volunteer support	Monetary outcomes; Nonmonetary outcomes
Anderson and Eshima (2011)	Innovativeness; proactiveness; risk taking	Employee know how; intellectual property; special skills	Informal social networks; relationships; reputation	-	-	Firm growth (Sales; market share; employee)
Moreno and Casillas (2008)	Innovativeness; proactiveness; risk taking	-	-	Solvency; immediate liquidity	Hostility; dynamism	Subjective; objective
	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	-	-	-	External environment	-
Dess, Pinkham, and Yang (2011)	Innovativeness; proactiveness; risk taking; learning	Intrinsic knowledge; experience	Network; relational governance; trust; structures; cultures	Inability to enter capital markets; finance operations or expansion	Complex; dynamic; stable; simple; hostile	-
Lumpkin, Cogliser, and Schneider (2009)	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	-	-	-	-	-
Cooper, Gimeno-Gascon, and Woo (1994)	-	Education; gender; race; parents; level of management; professional advisors; number of full-time partners	-	Amount of capital invested	-	Venture survival
Watson, Stewart Jr, and BarNir (2003)	-	Age; time in business; no. of employees; education; work experience; educational differences; work experience differences	-	-	-	Financial (Profit; sales)
Davidsson and Honig (2003)	-	Years education; years' experience as manager; years' work experience; previous start-up experience	Parents in business; encouraged by friends or family; close friends or neighbours in business; married; contact with assistance agency; member of a start-up team; member of a business network	-	-	Financial (Sales; profit)
Unger et al. (2011)	-	Education; experience; training; skill	-	-	-	Financial (Sales; profit, cash flow, market share; employment, asset; output; revenue; return on investment)

Honig (1998)	-	Trade experience; no. of employees; age; education level; gender; occupation	Semiweekly church; marital status	Starting capital; received a loan	-	Profit
Romano, Tanewski, and Smyrniotis (2001)	-	-	-	External sources of funds; make shares available to nonfamily; allow nonfamily shareholders	-	No. of employees; gross sales; no. locations
Crook et al. (2011)	-	Human capital	-	-	-	Operational, financial
Shrader and Siegel (2007)	-	Experience; age; team; strategy	-	-	-	Financial (Sales; profit)
Gimeno et al. (1997)	-	General human capital; human capital specific to current venture; human capital specific to alternative occupations; psychic income from entrepreneurship; psychic income from alternative occupation; Education; work experience	-	-	-	Economic
Lee, Phan, and Yoshikawa (2008)	-	Education; work experience	Tie strength; tie diversity	-	-	Revenue; market share; profit; sales; cash flow; return on investment
Sirmon and Hitt (2003)	-	Knowledge; skills; capabilities; commitment; intimate relationships; tacit knowledge	Network; relationship;	Invested financial capital; family members loan; share with business; patient capital	-	Wealth creation
Short et al. (2009)	Entrepreneurial capabilities	Human capital	Social capital	-	Environment	Financial
Pearson, Carr, and Shaw (2008)	-	-	Structural; cognitive; relational	-	-	Wealth creation; value creation
Carr et al. (2011)	-	-	Structural; cognitive; relational	-	-	Economic; non-economic
Liao and Welsch (2005)	-	-	Structural; cognitive; relational	-	-	-
Chrisman, Chua, and Zahra (2003)	-	Duality of relationships	Social capital	Patient financial capital	-	Wealth creation, non-economic gain
Mosey and Wright (2007)	-	Human capital	Network structure; network content; network governance	-	-	Venture development
Pirola and Presutti (2010)	-	-	Trust; informality; cognitive identification; ties	-	-	Innovation; economic

Coleman (2007)	-	Total employees, firm age; owner age; owner experience; inherit; sole proprietorship; single family	-	Type of loan; bank loan; line credit; lone denied	-	Total sales; total assets
Long (2011)	-	-	Structural; cognitive; relational	-	-	-
West, Bamford, and Marsden (2008)	Entrepreneurial orientation resources	Knowledge resources	Social resources	Tangible resources	Political stability resources	Entrepreneurial economic activity
Laroche, Mérette, and Ruggeri (1999)	-	Human capital	-	-	-	-
Okafor (2011)	-	-	Structural; cognitive; relational	-	-	Venture creation
Maditinos et al. (2011)	-	Intellectual capital; human capital	Structural capital; costumer capital	-	-	Market valuation; profitability; productivity
Ketkar and Sett (2010)	-	Human resources	-	-	Dynamism	Employee performance; operating performance; financial performance
Kamaluddin and Rahman (2009)	-	Intellectual capital; human capital	Structural capital; relational capital	-	-	Organization effectiveness
	-	Human resources; organizational capabilities	-	-	-	Profitability
Batjargal (2007)	-	Internet experience; start up experience; western experience	Network size; structural holes	-	-	Survival
Lechner, Dowling, and Welpel (2006)	-	-	Network size; social networks; reputational networks; co-opetition networks; marketing networks; technology networks	-	-	Time-to-break-even; sales
Hoang and Antoncic (2003)	-	-	Network content; network governance; network structure	-	-	Venture performance
Watson (2007)	-	-	Formal networks; informal networks; network range; network intensity	-	-	Survival
Tsai and Ghoshal (1998)	-	-	Structural; cognitive; relational	-	-	Value creation
Sorenson et al. (2009)	-	-	Collaborative dialogue; ethical norms; family social capital	-	-	Profits; market share

Arregle et al. (2007)	-	-	Family social capital; organizational social capital	-	-	-
Wu (2008)	-	-	Repeated transactions; network; ties; trust	-	-	Competitiveness improvement
Chen et al. (2007)	Autonomy; innovation, risk assumption; proactivity; enthusiasm	-	Social interaction; relationship quality; external network	Financial resources	-	Profit, growth
Hitt et al. (2001)	Innovativeness	Human capital philosophy	-	-	Dynamism	Sales; profitability
Bhagavatula et al. (2010)	Strategy	Human capital	-	-	-	Total firm revenue
Irava and Moores (2010)	Opportunity recognition; resource mobilization	Human capital	Social capital	-	-	-
	Innovativeness; proactiveness; risk taking; competitive aggressiveness; autonomy	Human capital	Social capital	Financial capital	-	Non-financial
Davila, Foster, and Gupta (2003)	-	-	-	Financial capital	-	Firm growth
Cassar (2004)	-	-	-	Leverage, long-term leverage; outside financing; bank financing	-	Start-up growth
Akyüz et al. (2006)	-	-	-	founder's own savings; founder' immediate family; financial institutions; other main sources	-	-
Peneder (2010)	Innovation	-	-	Financial capital	-	Firm growth
Henley (2005)	Entrepreneurial capital	-	-	Financial capital	-	Job creation
Mengistae (2006)	-	Schooling; experience	-	-	-	Growth
Jo and Lee (1996)	-	Education; experience	-	-	-	Profitability; the degree of growth
Ucbasaran, Westhead, and Wright (2008)	Entrepreneurial capability	Education; experience; managerial capability; technical capability	Professional network; publications; business network; personal network	-	-	Opportunity recognition
Tokarczyk et al. (2007)	Strategic orientation	Family relation	Customer orientation	-	-	Competitive advantage performance
Cabrera-Suárez, De Saá-Pérez, and García-Almeida (2001)	Motivation	Cohesion; adaptability; commitment; age; gender; education; experience	Culture; internal and/or external participants' behaviour	Economic/financial situation	-	Satisfaction and expectations
Meyer and Herscovitch (2001)	-	Affective commitment; continuance commitment;	-	-	-	-

Donnelley (1988)	-	normative commitment; organizational commitment	-	-	-	-
Zahra et al. (2008)	-	Weaknesses to avoid; strengths to seek; caveats to consider	-	-	-	Sales growth; return on sales
Sirmon, Hitt, and Ireland (2007)	Entrepreneurial capability	Family culture; stewardship motivation; stewardship culture; strategic flexibility	Social capital	Financial resources	Environmental uncertainty	Value creation; wealth creation
Nahapiet and Ghoshal (1998)	-	Human resource	Intellectual capital	Structural; cognitive; relational	-	-
Leana and Van Buren (1999)	-	-	-	Organizational social capital	-	Organizational outcomes
Dess and Shaw (2001)	-	-	-	Organizational social capital	-	Organizational performance
Labianca (2006)	-	-	-	Group social capital	-	-
Sharma and Manikutty (2005)	-	-	-	Community culture; family structure	-	Postdivestment performance
Meyskens et al. (2010)	Innovativeness	Organizational structure	Types of partners; knowledge transferability	Funding sources	-	-
Hart (1995)	-	-	-	-	-	Pollution prevention; product stewardship; sustainable development
Brüderl and Preisendörfer (1998)	-	Schooling; work experience; industry- specific experience; self- employment experience; management experience	Support from social ties; help from spouse; emotional support	Start-up capital	-	No. of employees; sales volume
Bigsten and Gebreeyesus (2007)	-	-	-	-	-	Firm growth
McPherson (1995)	-	-	-	-	-	Firm growth
Parris and Kates (2003)	-	-	-	-	-	Sustainable development
Revell and Blackburn (2007)	-	-	-	-	-	Sustainability
Aga and Reilly (2011)	-	-	-	Access to credit	-	-

APPENDIX D

PREVIOUS STUDIES USING LINKS AMONG THE DIMENSIONS

Constructs	Links	Studies
Entrepreneurial Orientation (EO)	EO → SP	Zainol and Wan Daud (2011); Grande, Madsen, and Borch (2011); Kickul et al. (2010); Runyan, Droge, and Swinney (2008); Li, Huang, and Tsai (2009); Madsen (2007); Chow (2006); Wiklund (1999); Wiklund and Shepherd (2005); Davis et al. (2010); Zainol and Ayadurai (2011); Krauss et al. (2005); Su, Xie, and Li (2011); Moreno and Casillas (2008); Davidsson and Honig (2003); Chen et al. (2007); Lee and Hsieh (2010); Smith, Baum, and Locke (2001)
Human Capital (HC)	HC → SP	Madsen (2007); Chow (2006); Grande, Madsen, and Borch (2011); Širec and Močnik (2010); Chandler and Hanks (1994); Cooper, Gimeno-Gascon, and Woo (1994); Watson, Stewart Jr, and BarNir (2003); Unger et al. (2011); Chandler and Hanks (1998); Honig (1998); Crook et al. (2011); Shrader and Siegel (2007); Gimeno et al. (1997); Lee, Phan, and Yoshikawa (2008); Carlson, Upton, and Seaman (2006); Coleman (2007); Carrington and Tayles (2011); Kamaluddin and Rahman (2009); Batjargal (2007); Chen et al. (2007); Hitt et al. (2001); Smith, Baum, and Locke (2001)
Social Capital (SC)	HC → EO SC → SP	Chow (2006); Kickul et al. (2010); Chandler and Hanks (1994); Davidsson and Honig (2003); Madsen (2007); Grande, Madsen, and Borch (2011); Chandler and Hanks (1994); Honig (1998); Lee, Phan, and Yoshikawa (2008); Pirolo and Presutti (2010); Premaratne (2001); Carrington and Tayles (2011); Okafor (2011); Kamaluddin and Rahman (2009); Batjargal (2007); Lechner, Dowling, and Welpel (2006); Sorenson et al. (2009); Wu (2008); Chen et al. (2007);
Financial Capital (FC)	SC → EO FC → SP	Kickul et al. (2010); Širec and Močnik (2010); Chandler and Hanks (1994); Davidsson and Honig (2003); Chen et al. (2007); Madsen (2007); Grande, Madsen, and Borch (2011); Chandler and Hanks (1994); Cooper, Gimeno-Gascon, and Woo (1994); Chandler and Hanks (1998); Honig (1998); Coleman (2007); Davila, Foster, and Gupta (2003); Cassar (2004); Chua et al. (2011); Chen et al. (2007)
Business Environment (BE)	FC → EO BE → SP	Kickul et al. (2010); Chandler and Hanks (1994); Moreno and Casillas (2008); Miller and Friesen (1983); Rosenbusch, Rauch, and Bausch (2013); Smith, Baum, and Locke (2001)
Firm Life cycle (FL)	BE → EO FL* (EO, HC, SC, FC, BE, SP)	Miller and Friesen (1983); Rosenbusch, Rauch, and Bausch (2013); Lumpkin and Dess (2001); Masurel and Van Montfort (2006)

APPENDIX E

FIELD STUDY QUESTIONNAIRE



Curtin University

Sustainable Growth of Informal Social Microenterprises (ISMs) in a Developing Country: A Multidimensional Assessment

Questionnaire for the Informal Social Microenterprises (ISMs) Owners

I'm Eijaz Ahmed Khan, doctoral candidate at Curtin University, Australia. I would like to talk to you about how your business works. This interview is a part of data collection for my research study. I hope your provided information will give a clear picture and add value into this industry in future. Your given answers will be treated strictly confidential and completely anonymous. Do you mind if I tape this?

Intros & Warm-Up (2 minutes)

Q. 1. Please tell me about your background-why you choose to do this business?

Entrepreneurial Orientation (3 minutes)

Q. 2. Do you see what you are doing?
(How do you see yourself changing the business?)
(How you like it to change?)
(What you wanted to be?)

Human Capital (3 minutes)

Q. 3. Do others help you?
(Who are they?)
(How they help you?)

Social Capital (3 minutes)

Q. 4. Does relationship with others help you?
(Who are they in your relationship?)
(How these relationships help you?)
(How do you see these relationships?)

Financial Capital (3 minutes)

Q. 5. Do others help you with money?
(How they help you?)

Business Environment (3 minutes)

Q. 6. How you see your business?
(What way you would like to see your business?)

Economic Performance (3 minutes)

Q. 7. Does your business can make money?
(How do you see it?)

Social Performance (3 minutes)

Q. 8. Does your business can support your family?
(How do you see it?)

Natural Environment Performance (3 minutes)

Q. 9. Does your business harmful for environment?
(How do you see it?)

Firm Life Cycle (3 minutes)

Q. 10. How did you start your business?
(How do you run your business?)

Closing Exercise (2 minutes)

Q. 11. We have talked about many things. Is there anything else you would like to say about your business?

Thank you!

APPENDIX F

FIELD STUDY QUESTIONNAIRE



Curtin University

Sustainable Growth of Informal Social Microenterprises (ISMs) in a Developing Country: A Multidimensional Assessment

Questionnaire for the Non-Government Organizations (NGOs) and Local Governments

I'm Eijaz Ahmed Khan, doctoral candidate at Curtin University, Australia. I would like to talk to you about how micro tea-stall business works. This interview is a part of data collection for my research study. I hope your provided information will give a clear picture and add value into this industry in future. Your given answers will be treated strictly confidential and completely anonymous. Do you mind if I tape this?

Intros & Warm-Up (2 minutes)

Q. 1. How do you view micro tea-stall business?

Entrepreneurial Orientation (3 minutes)

Q. 2. Do you see what micro tea-stall owner are doing?
(How do you see micro tea-stall owner?)

Human Capital (3 minutes)

Q. 3. Do others help tea-stall owner?
(Who are they?)
(How they help him?)

Social Capital (3 minutes)

Q. 4. Does relationship with others help tea-stall owner?
(Who are they in these relationships?)
(How these relationships help tea-stall owner?)
(How do you see these relationships?)

Financial Capital (3 minutes)

Q. 5. Do others help tea-stall owner with money?
(How they help him?)

Business Environment (3 minutes)

Q. 6. How you see micro tea-stall business?
(What way you would like to see this business?)

Economic Performance (3 minutes)

Q. 7. Does micro tea-stall business can make money?
(How do you see it?)

Social Performance (3 minutes)

Q. 8. Does micro tea-stall business can support their family?
(How do you see it?)

Natural Environment Performance (3 minutes)

Q. 9. Does micro tea-stall business harmful for environment?
(How do you see it?)

Firm Life Cycle (3 minutes)

Q. 10. How they start their business?
(How do they run their business?)

Q. 11. Closing Exercise (2 minutes)

We have talked about many things. Is there anything else you would like to say about micro tea-stall business?

Thank you!

APPENDIX G

SUMMARY OF FIELD STUDY DATA

Dimensions/Subdimensions	Excerpt of Data
	Personality Traits
Achievement Motivation	<p>I was hard working from my childhood. (A) I do all of my tea-stall work by myself. I do not have any helping hand. (B) I left the tailoring job because the money I earn from that was not enough to run my family. At the same time, the tea-stall requires less skills and effort to open and operate. (B) I hope to build a permanent shop if the business goes well. (B) In future, I think one day it will be a huge tea-stall. My store will be the best one in this area. I believe I can do something. I think I am more intelligent and I will do something better. (C) During my jobless time, I started thinking, "it is not the right way to survive in life". I felt, I have to do something new by myself. (D) My heart and belief forced me to start a tea-stall beside the street; otherwise, I would not start a tea-stall. I want to do something bigger with this tea-stall, but it is not easy to do so. (D) I have grown with hard effort. (G) And if somebody has a good intention, and keeps his mind cool and steady, he/she will get success. (G) I had nothing but I have made this day by day. I try my best. (H) He earns money with hard working. (I) But they have something that we do not have. (J) They have taken an initiative to open and run a business. (L)</p>
Tolerance for Ambiguity	<p>Selling tea and chatting with customers is easy and enjoyable work. (A) ... working as a painter from morning to evening was not a comfortable job. That's why I decided to open a tea-stall. (A)</p>
Locus of Control	<p>If God blesses me, then I can carry on my tea-stall and survive. (A) I like to work independently; I am confident. (B) In God's world, there's no scarcity. If God wishes to give, then God can give it easily. (G) I am committed to run a tea-stall. I know by myself. (G)</p>
Risk-taking Propensity	<p>I took a risk by opening a new shop.(D) There are some uncertainties among the tea-stall owners. Most of them are conscious about it. (J) Since they could not find another job, they are trying to be self-dependent by a tea-stall. (I)</p>
	Entrepreneurial Orientation
Innovativeness	<p>Besides this, we have decided to sell <i>paan</i> and different foreign cigarettes. Ensuring good quality is our first priority. (A) We do care about the quality of products. (A) Our tea-stall sells bananas, cookies, cakes and many other things. (B) Now we sell this tea which is made of cow's pure milk. (C)</p>

<p>Risk Taking</p>	<p>We do not sell any kind of special tea such as three-layer tea or milk tea. (D) In our location, the special tea is not demanded. That is why we do not sell special tea but every day, we need 10 kg to 15 kg liquid cows' milk to serve the customers by making tea. (F) I kept <i>cake</i> as well, and the bakery owner gave me a box to preserve <i>cake</i>. (G) There are many kinds of tea we make to sell such as red tea, day-night tea, light tea, strong tea, etc. I can make three colours milk tea. Very few tea-stalls can make it. (G) Many tea-stalls serve special tea to the customers. It is a one kind of creativity for a tea-stall owner, and helps them to create goodwill. (I) Nowadays, we are facing risk but it is at a moderate level. (A) We have started this tea-stall business because of little risk. (B) We cannot say it's high or low risk business but one thing I can say, we will prosper in this business. (C) That is why I always do my business attentively. (D) This business has little risk. Our business was going well earlier but now it is not that good. (E) The way I am doing our own business, I did not find too much risk. I see my tea-stall as usual. I cannot afford a high risk that is for sure. (F) Actually, I learned these skills by myself in a trial and error basis. Nobody taught me. (G) Every business has risk: for this business, the risk is very low. I feel tense always. (H) The tea-stall owner has to face a low risk. They have a low risk. (L)</p>
<p>Proactiveness</p>	<p>Our tea-stall asks customers about their preferences. (A) Currently, we are planning to open a pigeon project beside our shop. We will make a cage behind the tea-stall and keep pigeons and sell them to the customers. We have a few goats also. (A) I have a plan to expand the tea-stall in future. (A) Another thing, we get products on credit from the suppliers, but they do not give cigarettes on credit. The supplier provides products to our tea-stall. They will come here after a few hours to collect the cash. (A) We do ask the customers about their tastes and demand. (C) The tea business has three phases: customers, operations and inbounds. If you don't have capital, then you can't do business. You have tea but you don't have cookies, you already have hot water but you don't have tea, or you have tea but you don't have milk ... Customer wants milk tea you given them red tea ... then you can't run your business ... You have to arrange and keep all these things. (G) You have to read the customers' eyes and serve them according to requirements. (G)</p>
<p>Competitive Aggressiveness</p>	<p>I agree that the restaurants are our competitors. When a customer comes to our place, it is our duty to serve them. If we could not serve them, then they will not come to us. (A) They are making tea with condensed milk but our tea is a special one which made of the pure milk of cows. (C) I think to catch customers. Customers will come to my tea-stall instead of going to a restaurant. I think it always. I think about how I could obtain more customers from a restaurant. If I improve my tea-stall's atmosphere, quality of products and good services then customers would come to know, my shop is doing well. They will initiate to come to my place. (D) Some other restaurants spread rumours that I mixed tissue paper in tea. They also complained, I mixed bread in tea. I replied to them, "If somebody proved it, then I will stop selling tea". (G)</p>
<p>Autonomy</p>	<p>I always used Star-ship brand condensed milk and finely brand tea. Other used different brands. (G) We always like to go in our own ways. (A) Working under someone, I dislike that thing. (A) Here, we are running business independently but if we were in a job, we may have to work under the boss' pressure. (C) The ways I do my tea-stall, it seems that we have freedom to make decisions. We are independent; we solely operate everything. I enjoy myself doing tea-stall business. (D) In our business, my family members do not engage themselves in this matter. Also, they do not talk about this. They have gone in different paths. (E) I like this independence, even if the profit is low. (F)</p>

In case of decision making, usually the husband and wife both make the decision. It does not mean that the wife contributes in the business so that the husband has to listen to the wife all the time. The husband and wife have the same rights in every matter. It's rarely found in other businesses ... (I)

A tea-stall owner enjoys freedom in running a business. They are independent with a tea-stall. They manage everything by themselves in a tea-stall. (L)

Human Capital

Demographic

As I told you earlier, I have experience working as a painter and in the tea-stall. I also have good skills in pigeon farming. (A)

I have never been to school. I cannot read or write. I can write only my name. (A)

Actually, from my childhood, I used to do the tea-stall business as well as working as a painter. (A)

In my childhood, I had a guru. He was my senior brother. He had a restaurant. I worked in his restaurant. I worked over there. I used to cook snacks and breakfast, etc. From there, I learnt how to make tea ... (A)

Before starting this business, I was a garment worker. I had six to seven years' work experience in the garment sector. After that, I left my job and started working in a tailor shop in a new market. (B)

I studied up to Class 5. I can read and write. (B)

Regarding our family, we have six members. I have three sisters and one brother. (B)

I have previous work experience. I worked in a fish-processing company, where I got 18-19,000 Taka (Tk.) in salary per month. (C)

I can speak in Hindi. I learnt it from going to India. (C)

I stopped my schooling after Class 8. (C)

Even my father does not support me. Only my mother and brothers support me. They think that whatever I do, I am earning honestly. (C)

Earlier, I had a sweets shop. I worked for 14 years in a sweets shop. From that time, I had a plan in my mind to open a big shop. (D)

I did not study in a school, nor did I get training anywhere. (D)

Only my sons and daughters help me. The others, they do not help me. If I do not get help from my family, then I cannot run my business. (D)

In my family, I have six members. It does not matter. I have to help by myself. (D)

I studied in school. I was admitted to Solimollah School in 1962. I studied up to Class 2. I know how to write and read. My son studied to Class 6. My three daughters studied to some extent. Another daughter did not study. (E)

I have no experience prior to starting this business. I pulled a rickshaw. I did not learn how to make tea from someone else. (E)

I have survived so far only because of the help from them. But I get them to sit there when I have my lunch or dinner so that no one enters inside. (E)

I have nine boys and girls. Of them, one girl is the eldest and she is 32 years old. (E)

There are four members in my family. My youngest son sometimes helps me with this. (F)

I do not have any kind of training or experience for running this business. I manage in my own way. (F)

I also worked in a restaurant. It was at Ferry Ghat and the name of the restaurant was Chala-chal. I served glasses of water to customers' tables. My salary was Tk. 2 per day. I worked half-days. (G)

I worked in a cinema for a long time. (G)

One lady also worked in my tea-stall. She washed dishes and other things. I paid her Tk. 25 per day. (G)

Now, my older son is reading at Class 3, my second son is reading at Class 6 and my daughter has read up to Class 8. (H)

My eldest son is 19 years old. But he does not think about the family. (H)

I have three sons and a daughter. That means the total number of family members is five. I think if the number was more than five, then some problems could be created. (H)

I found the tea-stall owners have some experience such as in restaurants, as a labourer, tailoring, as a maidservant, etc. Their previous experience helps them directly or indirectly in the tea-stall. (I)

Sometimes, they want to involve everyone of the family. Their wife also looks after the tea-stall. (I)

We know most of them do not have education. Some of them studied up to Class 4 or 5. (I)

I have seen so many sellers who have passed SSC. On the other hand, many of them are totally illiterate. (K)

Sometimes you may see that, someone running the tea-stall and his wife making pies alongside him. (K)

<p>Psychographic</p>	<p>I didn't find tea-stall owners who have training or who have previous experience of working in some places. No ... actually, it doesn't require too much experience to run a tea-stall. If they can make a tea in a good way, that's enough for them. (M)</p> <p>Very few tea-stall owners have experience at school. Some of them studied up to Class 3 or 4, but they send their children to school. (M)</p> <p>Business is business, whether it is small or large-scale: the business [owner] should have minimum knowledge or experience or expertise. (N)</p> <p>Everybody among them wants their children to be educated at a minimum level. Some of their children have passed the SSC also. (N)</p> <p>I cannot read at all. However, I do not face any problem in operating the tea-stall. I manage the tea-stall with my own tacit knowledge. I can recall everything in my memory. If I sell by credit to customers ... how much I sold, I could easily memorize when I meet customers the next time. I have two sons and one daughter. One of my sons is studying in college and the other in school. (A)</p> <p>They wish for their father to run the business smoothly. I never force them. They always help in the tea-stall with their heart and knowledge. (A)</p> <p>Often, I get busy with some other work. At that time, my sons or daughter sit in our shop. My sons and daughter come here. Especially, my eldest son sits here and serves in the tea-stall. Voluntarily, they come and sit here. (A)</p> <p>I have three sisters and the second of them helps me sometimes by bringing water. She helps me before going to school and after coming from school. (B)</p> <p>Relationships between our family members are good. The relationships are good for our tea-stall business. (B)</p> <p>I use my own knowledge for running our tea-stall. (B)</p> <p>I think I have enough knowledge. (C)</p> <p>I have a good relationship with my family, sons and daughters. I do not have any problem with them, and it is an important thing. Whenever I request them to do something in favour of the tea-stall, they usually do that for me. (D)</p> <p>According to me, knowledge is a very important thing. Without having that, nothing can be done. We run the tea-stall with our own skills and knowledge. (D)</p> <p>I do not pay money to them. I only pay family expenses. My sons and daughters seldom ask me to give them some money, I mean pocket money. I give them pocket money. (D)</p> <p>I have possessed the tactics or cleverness that is needed to run this business. It is my tactic to borrow some money from customers. I have this tactic when I need money. (E)</p> <p>I cannot read that much but I can give my signature. I run this business with my own knowledge. (F)</p> <p>That second son ... If I say, "dear, there is no meal at home." He replies, "I am coming soon, Mom." Then he must go to the market and do some work ... (H)</p> <p>Actually, most of them don't have formal education. They apply tacit knowledge to run business. (I)</p> <p>In the case of the tea-stall business, tea-stall owners need a supporting hand. If they hire a labourer from outside, then they have to pay Tk. 100 per day. They think if they use their sons or daughters, then they can save Tk. 100 per day. (I)</p> <p>We can say this business is one kind of family business as their family members directly help them. Maybe, one who is running this business, his wife helps him directly or she can suggest to him to cut out unnecessary expenses. (K)</p> <p>A tea-stall is operated by family members such as the wife, son and daughter. Actually, it's a family business. Everybody in the family looks after a tea-stall by rotation, and has a contribution. (M)</p> <p>In this business, the owner of the tea-stall works for himself; he doesn't need any extra labour. Maybe, their children who don't go to school can help him. Their main target is to minimize their cost. (N)</p>
<p>Social Capital</p>	
<p>Structural</p>	<p>When running the business, we do not get advice from friends, relatives or other persons regarding improving our tea-stall, but I get advice from my family members. (A)</p> <p>Earlier, we bought products and materials from the wholesale market. It was a hard job. Nowadays, it has become easy. The suppliers decorate the tea-stall with their own products. (A)</p> <p>We pay attention to customers' satisfaction. We want to make customers speak happily about our products and tea-stall. In this regard, we make good networks with customers. (A)</p> <p>Other people also help regarding our business. They only help us by giving suggestions without monetary help. (B)</p> <p>Apart from that, our tea-stall has a very good relationship with suppliers. They provide tea, biscuits and some other product solutions. (B)</p>

Capital Structure	<p>In most cases, at the primary level, they sell part of their assets to collect capital. (J)</p> <p>Now there are so many NGOs in our country, they are financing such projects. (K)</p> <p>A tea-stall owner uses personal savings as well as collecting money from family members or friends. (L)</p> <p>They collect money from a <i>shomity</i> [moneylender], and a <i>shomity</i> also gives loans to them. (L)</p> <p>A bank is not interested in providing a loan to a tea-stall owner if it's not in a fixed [permanent] shop. (L)</p> <p>I have seen that there are some NGOs who provide them with such opportunities. (N)</p> <p>I have paid an extra Tk. 200 as the cost of capital. I mean Tk. 1,200 per month. I did not feel the risk because I knew that, once I started a tea-stall, I can easily make money and return it to them. (A)</p> <p>I have already paid back that amount with interest. I paid it back within three months. (A)</p> <p>We have invested Tk. 3,000. I have collected it from someone else with a low rate of interest. (A)</p> <p>This tea-stall business is very easy to run and needs less money to operate and start. We started a tea-stall business, because of micro-capital. (B)</p> <p>I started this tea-stall because it does not require huge capital (C)</p> <p>For this, I did not have to pay any interest. No! Not at all. (C)</p> <p>If I started another business, I mean a large business; I needed a big amount of capital. (D)</p> <p>There are so many things [needed] to get finance from micro-credit providers. I do not want to be involved with that. (D)</p> <p>If I would take out a loan from the bank, then I have to return instalments in each and every month. (D)</p> <p>It was easy to run this business with a small amount of capital. (E)</p> <p>If you borrow from relatives or from known persons, you do not have to pay the interest. (E)</p> <p>I did not pay any interest for the money. (F)</p> <p>I started this business because I had a small amount of money. I needed approximately Tk. 7,000. (F)</p> <p>I repaid the loan about four months ago. (F)</p> <p>I did a tea-stall business, because it needs less capital. If you have one kettle, one bucket and one burner, then you can easily start a tea-stall. (G)</p> <p>I started the business with Tk. 2,000. I did not pay any interest rate. (H)</p> <p>A tea-stall business does not require too much capital. It needs small capital such as Tk. 2,000-3,000 which is sufficient to start a tea-stall. (I)</p> <p>Banks and NGOs are the formal sources. It does require formal procedures. (I)</p> <p>Tea-stall owners also get a longer-time-horizon to pay back money to friends or relatives. (I)</p> <p>Informal sources consist of their own savings, family members, friends, relatives, etc.: it does not require payment of any interest. (I)</p> <p>They don't bother about the high interest rate even if it's 80%. (L)</p> <p>Actually, a bank loan consists of many procedures and conditions, and, they can't fulfil the conditions. (L)</p>
Marketing Capabilities	
Product/Service	<p>We can deliver tea quickly according to customer requirements. (A)</p> <p>Less time is needed here to prepare tea. (B)</p> <p>We can customize our product like the amount of leaves, milk, sugar, etc. (B)</p> <p>Customers can share their own requirements. (D)</p> <p>I can provide tea to customers quickly on time. It takes less time compared to a restaurant. In that way, customers can save time. (D)</p> <p>If you go to a hotel and order a cup of tea, it will take time to serve the order. But here, you will get it quickly. (E)</p> <p>In many shops, special types of tea are sold. For example, there are tea shops in the New Market area which sell special types of tea. (E)</p> <p>Sometimes, I think about making and selling special types of tea. (F)</p> <p>I do not teach anyone about making a special tea. It is not fruitful to teach others since it is my business secret. (G)</p> <p>I can serve the customer quickly. (H)</p> <p>Many tea-stalls serve special tea to the customers. (I)</p> <p>Many of them can serve customers promptly. (I)</p>

<p>Price</p>	<p>In a tea-stall, the customer can make order according to their requirements directly. (I) Tea is ready in a very short time in these tea-stalls. (J) A customer can make their own requirements in a tea-stall. (L) Many customers drink tea in our shop instead of a restaurant, because our tea price is half theirs. (A) The product price at our tea-stall is less than in a restaurant. (B) I try to charge a lower price. (C) If I compare the price of my products with a restaurant, my products' prices are cheaper. (D) Actually, a restaurant has to pay rent and electricity bill. I don't need to pay such things. I am not paying any rent or the electricity bill; I am not paying anything. (D) The prices of the products that I sell in this shop are lower than the prices in other shops, like hotels. (E) Also, the price of the products in my shop is lower than the price in other shops. (F) Some of my tea items are [more] expensive than restaurant. (G) Product price is cheaper. (H) Lower price is also a factor. (I) The price of the tea is very cheap in a tea-stall. (L) On the other hand, they charge lower prices. (K)</p>
<p>Place</p>	<p>A tea-stall beside the street is easy to open. It does not require a big space. If you find some space beside the street, then you can easily open a shop. (A) We have advantages in the opening and closing hours of our tea-stall. We start at 6:00 a.m. morning and close at 11:30 p.m. night. (A) We open our shop every day, morning at 5 a.m. and close at 11 p.m. (B) I open my store at 8 a.m. and close at 12 a.m. That means I continue my service for a long period of time every day. (C) When customers are walking beside the street, it is more convenient for them to buy cigarettes, or to drink tea compared to a restaurant. It is very convenient for a customer. (D) I mean it is easier to find some free space beside the street. (D) I have an advantage, and that is that I can open and close my shop at any time. (D) I open my shop at 7 a.m. and close the shop around 12 a.m. (F) I open my shop at 7 a.m. and close at 10-10.30 p.m. (H) A tea-stall is more convenient for all types of people because of its location. (I) People in the town area feel much more comfortable in tea-stalls located on the footpaths. (J) Most of them open their shop in the very early morning and close at midnight: this is good for customers. (M)</p>
<p>Promotion</p>	<p>Customers cannot see how a restaurant makes tea. Maybe, customers would not like the way that a restaurant makes tea. (A) Customers could not find a friendly atmosphere in a restaurant. We have a good relationship with the customer. They are very close to us. (A) We behave politely with our customers. (B) The customer can observe the way that I make tea but, in a restaurant, the customer cannot see it. (D) This relationship helps to generate a word-of-mouth recommendation. I hope customers will come to me because of my words. Customers are the kings. (D) The relationship can be established only in a street shop. (D) Also, customers expect good behaviour from me. So I behave accordingly. (F) In restaurants, you cannot see how they make a cup of tea. (F) I will serve my customer with the best behaviour. (H) The goodwill spreads out very fast and customers coming from far away are willing to drink tea. (I) The customer can also enjoy watching the making of the tea, and save time. (I) When I get better treatment, then I must invite my friends to take tea here. (K) They get the tea in front of their eyes to their own taste within a short time. (N) They should talk to customers politely to make them happy. (N)</p>

Market Segment	<p>Usually, the lower-income people drink tea in our shop. (A) We serve all kinds of customers. (B) But lesser-income people come frequently to our tea-stall. (B) I would like to serve everyone. (C) Lower-income customers visit our tea-stall regularly. (D) The people who take tea from your shop are low earners. Most of them are rickshaw pullers or low earners. It is natural. (E) They are my regular customers. (E) But most of my customers are rickshaw pullers (F) The rickshaw pullers and other people usually come to my shop. (H) I don't think so: the restaurant is only for upper-class people and not for middle-class or lower-income people. (I) They have some fixed customers. (K) The customers that come here: basically, they are in the lower-income level. For this [reason], they don't have to search for a target market. (K) The lower-income class people drink tea in a tea-stall. That means that a tea-stall has its own target customers. (L) The customers that come here: basically, they are in the lower-income level. (N)</p>
Business Environment	
Turbulent	<p>I did not sell coffee but if somebody asks then I make coffee for them. (G). Another thing is the price instability of tea materials. They fall into a problem, if the price of sugar goes up. They have nothing [they can] do at that time, because they cannot charge more from the customers. The final risk is credit sales. They cannot recover the money of credit sales. (I) The tea-stalls are scattered over a huge area ... like a new market is an area where they prepare a different type of tea, which has a reputation. People from different places come there in the afternoon to have a cup of tea. Ward 17 is a huge area. On the other hand, in the medical college area, they have a different way of doing business. They know which products will be sold in that area: they do business with those products. (M)</p>
Hostile	<p>They caught me again and took me to the police station. Actually, they caught me to get some money from me. Finally, I gave them one packet of cigarettes. (A) We set up our tea-stall on the Khulna Development Authority's (KDA) plot. We can be blown out of it at any time. (A) Sometimes, it is difficult to open every day because of government pressure. (B) We do not need to pay rent for our space; no rent but we have to give something to the police. (B) There are customers who do not want to pay bills. (B) Now, I am in front of Uttara Motors but at any time, I may have to go from here. If the government blows out my tea-stall from the street, then I have nothing to do. I think it is risky. There is the probability of making a loss. There is the pressure from the law enforcement department as we sell beside the road. (C) Someone threatened me and told me not to sell cows' milk tea here. (G) There was a man named Rana. He protected me from the extortionist. (G) According to me, there is little risk in a tea-stall business. One risk, it appears to me, is extortion. Sometimes, the muscle-man does not pay bill after drinking tea. (I) Secondly, since a tea-stall is beside the street, it can be blown out at any time by the authorities. Actually, the tea-stall owner operates the business on government property such as roads and highways land, or on private land. That is why they have the fear of being blown out from the street. (I) The City Corporation and other authorities should have a plan to solve the problem of tea-stall owners, because most of the time, they have the fear of being blown out from the street. The tea-stall owners are reluctant to expand and to beautify their shop. We have to consider all of these things. (I) Sometimes, the police take bribery from them since they are doing business on the street. It is an open secret. (M)</p>
Munificent	<p>I want to get a loan from the agriculture office immediately because the interest rate is only 8%. (A) There are some NGOs; say, for example, many needy people are involved with the BRAC. (F) World Vision helps me by providing me with Tk. 2,000. The account is recorded in my second son's name. (H) I have seen most of the micro- and small business owners collect money from NGOs. (I) A few other points ... If we introduce training among them, then they can improve more. (I) He is also helping us. He gets benefits as well as contributing to the society. (I)</p>

They need training on how to increase assets. At first, we have to make the people understand who operates tea-stalls and that this is not a small job. (J)
 City Corporation should have proper planning. Like, they may provide a licence for a mobile tea-stall. (K)
 We are giving them a lot of suggestions for their betterment. (K)
 Another point, an easy formal financing process could help and make tea-stall owners flourish. (L)
 They are doing a good job and it's not a crime. It's really good for the society. (L)
 In my area, those who are running small businesses like tea, cake, banana selling, I treat them like my own people, own family. (M)

Sustainable Performance

Economic

Now, I do not need to get the tension of work. (A)
 Over the last three months, my tea-stall is gradually growing. (A)
 Our tea-stall income is not always stable or it goes up and down. It goes up and down but remains the same all the time. (A)
 The return on investment is moderate. Per day Tk. 200 and with that amount we can survive. (A)
 Our tea-stall is a profitable business. (A)
 We feel this business is a profitable business. (B)
 My profit margin is medium. (B)
 The amount we earn every day from our tea-stall; it varies more or less. (B)
 I think that our customer base is increasing. (B)
 I do not get the same earnings all the season or it may fluctuate. (C)
 Of course! If I am benefiting from all this course of action, then it must be a profitable business for me. (C)
 Sure, I can earn and make an income from my tea-stall. I think it is a profitable business. It seems a profitable business to me. (D)
 My tea-stall's sales are increasing day by day. Sales are increasing somehow. (D)
 It is everything for me; it is my job. I think that it is my job. (D)
 The income I earn from my tea-stall, I think, is stable most of the time. I mean my income always remains the same. (D)
 The amount I have invested in my tea-stall, the income I am earning from that investment, this income is so far so good. (D)
 Income may be good one day but it may be bad the next day. (E)
 Profit is more or less the same every day. But there may be fluctuations. (F)
 I think this business is profitable. (F)
 Friday, Saturday and Sunday: on these three days, I get many customers because of cinema shows, but the sales remain the same on other days. (G)
 At the beginning, my tea-stall was small and gradually it expanded. It became big because of customers and God. (G)
 On an average, I found I had a profit and it seems to be Tk. 300 every day. (G)
 I believe that it will make a profit. (H)
 Profit remains the same every day. It never decreases. (H)
 The income they earn from a tea-stall; it's not always stable. It depends on public gatherings, and how many vehicles run every day. It also depends on weather conditions. (I)
 It's also the way to generate employment in the society. Of course, it's self-employment. (I)
 You can find some tea-stalls were small over five years ago, but now they've grown and become larger. (I)
 Really, a tea-stall is a profitable business. Tea making costs only 60-70 paisa but it can be sold for Tk. 3 per cup. (I)
 Interestingly, some tea-stalls have monthly incomes of Tk. 40,000-50,000. Many of their incomes are more than for us. (I)
 He can earn more than Tk. 400-500 daily. (J)
 It is quite profitable. (J)
 Their earning fluctuates. (J)
 Actually, in this business, there is no scope for making a loss. I'm absolutely sure no one will make a loss in this business. It's never happened that the income is nothing. (K)

Social

Gradually, a tea-stall increases their selling and their sales are increasing. Otherwise, how did they do all these things? (L)
The real thing is that a tea-stall income goes up and down all the time. (L)
Of course, they can make a profit. Definitely, they earn profits. (L)
Some of them earn Tk. 500/600 per day and they also keep some of that for the future ... (M)
The income we earn from a small tea-stall, it cannot cover all the family expenses such as food, clothing, education, medicine and accommodation. We cannot bear all these things. (A)
I can tell you; we are happier than a rich man. Wealthy men are not happy like us. We do not have any problems. (A)
There is nothing to take it into a worse state. It is our own business. (B)
We bear the family expense somehow. That actually means what we need. We have to pay our house rent, dress, food, treatment fees. (B)
I do feel my status in the society. (B)
It is not so prestigious job. (C)
I think I could develop my lifestyle from this business. (C)
From this business, I will able to maintain the life living costs of all members of my family. I think I can do it. (C)
I have an income from my tea-stall. With that income, I can maintain my family's food, clothing, education, health, etc. I can maintain ... (D)
If somebody runs a business and becomes a wealthy person, I look at it in a simple way, that's it. (D)
I have created some wealth from my tea-stall. I bought one piece of land and deposited an amount of money in the bank. I managed my daughter's marriage ceremony. In fact, I did everything from my tea-stall. (D)
I got a daughter married. I had 14 goats and eight rickshaws. (E)
I am not getting any special sort of social status. (E)
At the beginning, whatever income was earned, the family could be managed. The market prices of the goods were very low, so I could maintain the family on small earnings. At present, I manage my family with small businesses. (E)
My business provides money for food, clothes, medicine costs, etc. I also gave money for study expenditure to one of my sons who is now dead. (F)
I gave a good education to my children and took care of them properly. I made a good effort for my children. (G)
Actually, God gives me a lot and favours me because of the tea-stall ... (G)
I am now far better off than I was in my previous job. (G)
I can take care of my sons and daughter. What I earn is not enough to lead my family but life goes on. (H)
A tea-stall owner cannot provide the per-day minimum caloric intake for the family. For an adult person, the per-day minimum caloric intake requirement is 2,100. Maybe, they can manage 2,000 or reach close to it. Nowadays, primary education is free for all. They cannot manage healthy accommodation, but they try to do it, and all members of the family work together to increase income so that they can manage good accommodation. (I)
Most of the tea-stall owners do not have any knowledge about the child labour law. They do not know children's rights and other issues. (I)
Many of them have also bought a rickshaw, or cattle, or a piece of land. They did it because of the tea-stall... (I)
A tea-stall owner's status is better than a daily labourer or rickshaw puller. (I)
A tea-stall owner's approach is self-dependent. I found many tea-stall owners had previously worked as a rickshaw puller or as a day labourer, but they chose the tea-stall business because it's a self-dependent business. They think it's one kind of self-dependent business and they enjoy it. (I)
Those who run businesses in the town area can do that. It is not impossible. Their residence may not be clean and modern, but they can manage other things. (J)
I have noticed many of them buy a rickshaw or goats, cows etc. Many of them buy land by doing that business. (J)
Maybe, it is difficult to fulfil basic needs. When a five-member family depends only on his income, then it will be very difficult. (K)
Many of them are able to buy a cow, land or build their house from this business. (K)
I think his social status is better than that of a daily labourer or rickshaw puller. (K)
A tea-stall business can fulfil the basic needs of a family such as food, clothing, accommodation and health, but they can't fulfil education costs. (L)
Whatever, they open a tea-stall, and get some dignity in the society. They get some social status. It's better than a vagabond status. (L)
Many of them can ... For example, there's a lady near my house who operates a tea-stall. She bought some land. It means that she earns a good amount of money from a

Natural Environment

tea-stall. (L)

They use their children as a helping hand in the tea-stall. They think children can help to carry materials and other things. They consider children as a labourer.

Once the children enter the tea-stall environment to take care of the shop, then they can't continue further study. (L)

With the income they earn from a tea-stall, I think they can improve their standard of living with that amount of money. (L)

I know some people who bought some land with their business. (M)

One of my known people has a tea-stall in the station road. He has a property worth 2 million Taka. He has done this entirely from this business. (N)

They are able to develop their living standard if they can run this business permanently. (N)

What I can say is those who are selling tea in this area have very little scope to develop their lifestyle after maintaining their family with their earnings. (N)

We use a chaff-log for fire. We need a 10 kg log every day. Besides that, we need 25-26 pitchers of water every day. (A)

We produce waste tea. Sometimes we throw it out or put it on the tree plant base. We put the ashes in the "Kachu" tree. It makes the tree base strong. We make fire with waste plastic bags. We sweep three times a day. We can request that the customers use the bin, but they do not listen to us most of the time. (A)

We try to keep our stall clean every time. Of course ... we care about the cleanliness while we make tea for the customers. It is our duty. All the expired products are returned to the suppliers. (A)

We do keep the cups neat and clean. The suppliers take the expired bread away. (B)

We throw away the waste tea but do not keep it for fertilizer or bury that. We throw it into the dustbin. The plastic, I take it home. (B)

We need about a 7 kg chaff-log and 15 pitchers of water every day. (B)

I use chaff processing wood for making the fire. Now, it is almost 9 kg every day. I need almost eight pitchers of water per-day. (C)

I think that this smoke which is emitted from my burning could pollute the environment. This is why I use chaff processing wood: it emits low smoke. (C)

With this by-product, I will throw this into the dustbin at night. I will burn this entire plastic bag. (C)

My stall is too small. It is difficult for me to maintain everything in this small space. It is difficult. But I do not have any room as my own. (C)

Every day, I try to make the overall environment of my shop clean. I use clean water for washing and try to keep my customers safe. (C)

I wash tea cups with hot water all the time for all customers. There might be germs in the cup. The hot water probably could remove germs. I wash cups for every customer. (D)

If I think to arrange everything within a small space, I can do that. I can also make arrangements for seats for the customers. (D)

I throw ashes and waste tea into the dustbin. Sometimes, I make a fire log with waste tea. I do not use waste tea as a fertilizer. (D)

The chaff log is a good thing. It does not create too much smoke. (D)

I need 6 kg of chaff-log and 8-10 pitchers of water every day. (D)

I need about 10 kg of wood daily. I need approximately 8-10 pots of water. (E)

This wood is useful. There is smoke before burning it. Then it does not emit smoke. (E)

I throw away these wastages into that dustbin. I use plastics as a fuel for the stove. I sell the big polythenes. (E)

I clean the cups myself. (E)

I always try to keep the biscuits and other food products in a clean box and serve the tea in clean cups. (F)

I throw the dirt into the dustbin and also a cleaner comes every morning to take away the wastages. I sell all the plastics and polythenes. (F)

I use a kerosene burner but many of the tea-stalls use chaff-logs. I spend Tk. 100 buying kerosene every day, and Tk. 25 for water. I mean that I need 20-25 pitchers of water every day. (G)

Actually, I had thrown waste tea out, but you could use it in many ways. Actually, the plastic bags are useless: they can be used in a log burner. I send them to my house to burn as a fire in a log burner. (G)

I always care about cleanliness. Every time, I wash cups and plates, and serve the customers in tidiness. (G)

My stall is in front of the office. So I have to keep it clean always. (H)

I use ashes on the way to avoid mud. (H)

Almost three and half kg of wood I need per day. The lamp requires kerosene at a cost of Tk. 5 Actually I need a huge amount of water. I need almost 10-12 pitchers per day. (H)

Most of the tea-stall owners don't use tree logs for the fire. They use *tusa* logs which are not made of tree wood. (I)
Interesting, the chaff-logs log creates less smoke. (I)
They throw waste tea here and there also: it makes an unhealthy atmosphere. (I)
The water they use and serve to customers, it's not hygienic. (I)
Many people come to take tea. If they see dirt in the tea-stalls, that would be a problem. So they try to keep the shops clean. (J)
Most of them clean up the wastage. They fear that if they keep that place dirty, they will be forced to leave that place. (J)
Most of the tea-stall owners use "chaff-logs". Their expenditure for water is relatively low. (J)
They use chaff-logs as fuel. These emit less smoke. They are actually using environment-friendly fuel. (J)
Generally they use fuel or chaff-logs which emit low smoke. Actually, *tush kath* processing wood doesn't produce so much ash. (K)
They try to keep their place neat and clean. (K)
She keeps it clean while selling tea. (L)
The tea-stall needs a very small space to operate the business. Actually, they don't need a large space. (L)
They also don't take sufficient measurement about the dust they produce in the tea-stall. (M)
They are doing serious harm to the environment. Say, for example, they are burning polythene or they just leave the tea leaves or bury them. (M)
They throw the wastage here and there that can affect the environment. (N)

Firm Life Cycle

I think we are successful with our business. (A)
I hope to build a permanent shop if the business goes well. (B)
For bearing the expenses of my family, I just started this business In future; I think one day it will be a huge tea-stall. (C)
My tea-stall's sales are increasing day by day. Sales are increasing somehow. (D)
Now, I am thinking to do other things and closing the shop. I have been thinking this for about three years. I have not been able to find any path. (E)
I started this business about 18 months ago. Profit is more or less the same every day. (F)
I have been doing this business for four years. Profit remains almost the same every day. It never decreases. (H)
At the beginning, the tea-stall owners try to survive hand-to-mouth. They think about daily needs and try to fulfil it. Gradually, they apply tacit knowledge, ability and customer service approach, and expand their business. In this way, they adapt and reach solvency. Although they have hope about the future, but initially they concentrate in daily needs. (I)

APPENDIX H

SURVEY QUESTIONNAIRE



Curtin University

Sustainable Growth of Informal Social Microenterprises (ISMs) in a Developing Country: A Multidimensional Assessment

General Instruction

This survey is a part of data collection for an academic research purpose only. Your “tea-stall” has been chosen to take part in the survey as representing informal “micro-enterprise” in this region of Bangladesh. The information collected in this survey is for understanding the relationships between tea-stall’s entrepreneurial characteristics, resources availabilities, marketing capabilities, environmental influences, viability matters, and owners’ personality traits. Please answer every item as you personally perceive it applies. Do not leave any items blank, as there are no right or wrong answers; only your opinion is sought. Most of your opinions will be measured by using a response scale from 1 (Strongly disagree) to 6 (Strongly agree). Your given answers will be valuable input for the main purpose of the academic research and will be treated as strictly confidential and completely anonymous.

Thank you very much for taking your time and effort to complete this survey!

Section 1: Background Information

This section consists of some background information regarding your family and ‘tea-stall’. Please fill or circle the appropriate answer.

1.1 Your gender.

Male

Female

1.2 Your marital status.

Married

Never married

Others

1.3 Your age group.

Below 20 years old

21–30 years old

31–40 years old

41–50 years old

51–60 years old

Over 60 years old

1.4 Your level of education.

No education

Lower primary school (1-3)

Primary school (4-5)

Lower high school (6-8)

High school (9-10)

Others

1.5 What is the total number of your family members including you? _____

1.6 How many family members are engaged in your “tea-stall” directly and indirectly? _____

1.7 How many employees work in your “tea-stall” excluding your family members? _____

1.8 Location of your “tea-stall”.

Urban

Sub-urban

1.9 How many years did you run this “tea-stall”? _____

1.10 What is the monthly average sale of your “tea-stall”?

Below Tk. 3000

Tk. 3001–Tk. 6000

Tk. 6001–Tk. 9000

Tk. 9001–Tk. 12000

Tk. 12001–Tk. 15000

Above Tk. 15000

Section 2: Personality Traits

The statements below describe your personality traits in terms of achievement motivation, tolerance for ambiguity, locus of control, and risk-taking propensity. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

Achievement Motivation

I want to...

2.1 work at my best.

2.2 accomplish tasks requiring skills and effort.

2.3 accomplish something of great significance.

2.4 do a difficult job well.

Strongly Disagree

Disagree

Somewhat Disagree

Somewhat agree

Agree

Strongly agree

1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6

Tolerance for Ambiguity						
I like to ...						
2.5 lead my life without a routine-frame.	1	2	3	4	5	6
2.6 tackle a complicated problem than to solve an easy one.	1	2	3	4	5	6
2.7 take important decisions on the basis of insufficient information.	1	2	3	4	5	6
Locus of Control						
2.8 When I make plans, I am confident to make them work.	1	2	3	4	5	6
2.9 Getting what I want has little or nothing to do with luck.	1	2	3	4	5	6
2.10 I am always willing to admit mistakes.	1	2	3	4	5	6
Risk-taking Propensity						
2.11 I am not cautious about unpredictable situation.	1	2	3	4	5	6
2.12 I enjoy taking risks.	1	2	3	4	5	6
2.13 I willingly get involved in situations with uncertain outcomes.	1	2	3	4	5	6

Section 3: Entrepreneurial Orientation

The statements below describe the entrepreneurial characteristics of your "tea-stall" in terms of innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Innovativeness						
Our "tea-stall"...						
3.1 actively introduces improvements and innovations.	1	2	3	4	5	6
3.2 is creative in its methods of operation.	1	2	3	4	5	6
3.3 seeks out new ways to do things.	1	2	3	4	5	6
Risk Taking						
Our "tea-stall"...						
3.4 considers the term "risk taker" as a positive attribute.	1	2	3	4	5	6
3.5 encourages taking calculated risks with new ideas.	1	2	3	4	5	6
3.6 emphasizes both exploration and experimentation for opportunities.	1	2	3	4	5	6
Proactiveness						
Our "tea-stall" ...						
3.7 takes the initiative in every situation (e.g., working with others).	1	2	3	4	5	6
3.8 excels at identifying opportunities.	1	2	3	4	5	6
3.9 initiates actions to which other organizations respond (e.g., suppliers).	1	2	3	4	5	6
Competitive Aggressiveness						
Our "tea-stall" ...						
3.10 operates in intensely competitive environment.	1	2	3	4	5	6
3.11 takes a bold or aggressive approach when competing.	1	2	3	4	5	6
3.12 tries to undo and out-manuever the competition as best as possible.	1	2	3	4	5	6
Autonomy						
Our "tea-stall" members (e.g., family members, employees)...						
3.13 are allowed to make and instigate changes in the way they perform their tasks.	1	2	3	4	5	6
3.14 are given the freedom to make their own decisions on how to go about doing their work.	1	2	3	4	5	6
3.15 are given authority and responsibility to act alone to the interests of the business.	1	2	3	4	5	6

Section 4: Human Capital

The statements below describe the human resources of your "tea-stall" in terms of demographic and psychographic characteristics. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Demographic						
The following attributes add value to our business.						
4.1 Relevant or other work experience of "tea-stall" members.	1	2	3	4	5	6
4.2 Relevant or other skills of "tea-stall" members.	1	2	3	4	5	6
4.3 Explicit knowledge or education level of "tea-stall" members.	1	2	3	4	5	6
4.4 Number of family members working in the "tea-stall".	1	2	3	4	5	6
4.5 Age or maturity level of "tea-stall" members.	1	2	3	4	5	6
Psychographic						
The following features add value to our 'tea-stall' business.						
4.6 Tacit knowledge of "tea-stall" members.	1	2	3	4	5	6
4.7 Extraordinary commitment of the "tea-stall" members.	1	2	3	4	5	6

4.8 Friendly and intimate relationships among the “tea-stall” members.	1	2	3	4	5	6
4.9 Voluntary labour provided by the family members.	1	2	3	4	5	6

Section 5: Social Capital

The statements below describe the social resources of your “tea-stall” in terms of structural, cognitive, and relational subdimensions. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Structural						
5.1 Family, relatives, and friends, yield value to our “tea-stall” by giving advice.	1	2	3	4	5	6
5.2 Some suppliers assist our “tea-stall” by providing product solutions.	1	2	3	4	5	6
5.3 Some customers help our “tea-stall” by generating word-of-mouth recommendations.	1	2	3	4	5	6
5.4 Our “tea-stall” has enough number of contacts and acquaintances.	1	2	3	4	5	6
Cognitive						
Our “tea-stall” members’ (family members, employees)...						
5.5 share the same ambitions and vision of the tea-stall business.	1	2	3	4	5	6
5.6 are enthusiastic about pursuing the collective goals.	1	2	3	4	5	6
5.7 share the same language and narratives to understand each other.	1	2	3	4	5	6
Relational						
Our “tea-stall” members (e.g., family members, employees)...						
5.8 trust and believe in each other.	1	2	3	4	5	6
5.9 show norms, and respect for each other.	1	2	3	4	5	6
5.10 have obligation to support each other.	1	2	3	4	5	6

Section 6: Financial Capital

The statements below describe the financial resources of your “tea-stall” in terms of sources of capital, and capital structure. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Sources of Finance						
Our “tea-stall”...						
6.1 acquires loans from personal or family member’s savings.	1	2	3	4	5	6
6.2 seeks loan from relatives or friends.	1	2	3	4	5	6
6.3 searches for loan from known persons.	1	2	3	4	5	6
6.4 prefers institutional borrowing.	1	2	3	4	5	6
Capital Structure						
Our “tea-stall”...						
6.5 needs small amount of capital (less than Tk. 10,000) to start and run the business.	1	2	3	4	5	6
6.6 faces few procedural requirements for acquiring loan.	1	2	3	4	5	6
6.7 enjoys flexible time-frame to payback loan.	1	2	3	4	5	6
6.8 enjoys lower cost of capital.	1	2	3	4	5	6
6.9 faces lower risk tolerance of capital.	1	2	3	4	5	6

Section 7: Marketing Capabilities

The statements below describe the marketing capabilities of your “tea-stall” in terms of product/service, price, place, promotion, and market segment. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Product/Service						
Our “tea-stall”...						
7.1 produces special-tea for customers.	1	2	3	4	5	6
7.2 has a secret tea making method.	1	2	3	4	5	6
7.3 can fulfil customer product requirements.	1	2	3	4	5	6
7.4 serves customers quickly.	1	2	3	4	5	6
Price						
Our “tea-stall”...						
7.5 offers lower price than restaurants.	1	2	3	4	5	6
7.6 charges higher price for special-tea than restaurants.	1	2	3	4	5	6

7.7 has the ability to produce products at lower cost than restaurants.	1	2	3	4	5	6
Place						
Our "tea-stall"...						
7.8 prides in more convenient location for customers compared to formal restaurants.	1	2	3	4	5	6
7.9 needs a very small space to operate business than restaurants.	1	2	3	4	5	6
7.10 has the advantage of flexible business hours than restaurants.	1	2	3	4	5	6
Promotion						
Our "tea-stall"...						
7.11 uses word-of-mouth promotion strategy to attract new customers.	1	2	3	4	5	6
7.12 can cook and demonstrate in front of customers.	1	2	3	4	5	6
7.13 is friendly in dealing with customers.	1	2	3	4	5	6
Market Segment						
Our "tea-stall"...						
7.14 serves to a large number of lower income customers.	1	2	3	4	5	6
7.15 has stable and profitable customers.	1	2	3	4	5	6
7.16 can be easily accessible to the lower income customers.	1	2	3	4	5	6

Section 8: Business Environment

The statements below describe the business environment of your "tea-stall" in terms of turbulent, hostile, and munificent subdimensions. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Turbulent						
In "tea-stall" industry...						
8.1 actions of the competitors are easy to predict.	1	2	3	4	5	6
8.2 demand and consumer tastes are easy to forecast.	1	2	3	4	5	6
8.3 the product/service patterns do not change much.	1	2	3	4	5	6
Hostile						
Our "tea-stall"...						
8.4 has threats from extortionist and law enforcement authorities.	1	2	3	4	5	6
8.5 is hard to keep afloat, due to government pressure.	1	2	3	4	5	6
8.6 can control and manipulate extortion, and government pressure to its own advantage.	1	2	3	4	5	6
Munificent						
8.7 There are few rules and regulations that govern "tea-stall"; providing a favourable environment for doing a business.	1	2	3	4	5	6
8.8 educational and training programmes are available to improve vocational and business skills for "tea-stall" businesses.	1	2	3	4	5	6
8.9 financial institutions are willing to finance "tea-stall" businesses.	1	2	3	4	5	6
8.10 there is a supportive public attitude towards "tea-stall" businesses.	1	2	3	4	5	6

Section 9: Sustainable Performance

The statements below describe the sustainable performance of your "tea-stall" in terms of social, economic, and natural environment. Please read each statement carefully, and then indicate the extent to which you agree or disagree by circling the number on a scale of 1 (Strongly disagree) to 6 (Strongly agree).

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly agree
Economic						
9.1 We see our "tea-stall" is providing employment to us and others.	1	2	3	4	5	6
9.2 sales growth.	1	2	3	4	5	6
9.3 income stability.	1	2	3	4	5	6
9.4 return on investment.	1	2	3	4	5	6
9.5 profitability.	1	2	3	4	5	6
Social						
Our "tea-stall"...						
9.6 ensures basic needs for our family.	1	2	3	4	5	6
9.7 enhances our social recognition in society.	1	2	3	4	5	6
9.8 improves our empowerment in society.	1	2	3	4	5	6
9.9 provides freedom and control over the course of our own lifestyle.	1	2	3	4	5	6
9.10 is concerned about child labour use.	1	2	3	4	5	6
Natural Environment						
Our "tea-stall"...						
9.11 uses utilities (e.g., energy and water) in an environmentally-friendly	1	2	3	4	5	6

manner.

9.12 produces few wastes and emissions.	1	2	3	4	5	6
9.13 is concerned about waste management.	1	2	3	4	5	6
9.14 uses small space to set up and operate business.	1	2	3	4	5	6
9.15 is concerned about hygienic factors.	1	2	3	4	5	6

Section 10: Firm Life Cycle

10.1 Which stage does your "tea-stall" belong to? For your understanding, a brief definition of each stage is given below. Please circle the appropriate stage.

- Start : Start few months ago; sales are slow, but growing gradually
- Growth : Moderate sales, but growing faster
- Mature : Good and stable volume of sales
- Decline : Declining of sales and profits; difficult to manage

Thank you very much for your time and cooperation in completing this questionnaire!

Surveyor use only

10.2 Please circle the appropriate life cycle stage of this "tea-stall" as per your perception.

- Start Growth Mature Decline

-----THE END OF SURVEY-----