The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.
THE EFFECTS OF SOCIAL CAPITAL, MENTORING AND INNOVATION PRACTICES ON SMALL BUSINESS PERFORMANCE: THE MODERATING ROLE OF ENVIRONMENTAL TURBULENCE

MUZAFFAR HUSSAIN SHAH

DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
November 2016
THE EFFECTS OF SOCIAL CAPITAL, MENTORING AND INNOVATION PRACTICES ON SMALL BUSINESS PERFORMANCE: THE MODERATING ROLE OF ENVIRONMENTAL TURBULENCE

By

MUZAFFAR HUSSAIN SHAH

Thesis Submitted to

Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy
Pusat Pengajian Pengurusan Perniagaan  
(School of Business Management)  
Kolej Perniagaan  
(College of Business)  
Universiti Utara Malaysia

PERAKUAN KERJA TESIS / DISERTASI  
(Certification of thesis / dissertation)

Kami, yang bertandatangan, memperakuan bahawa  
(We, the undersigned, certify that)

MUZAFFAR HUSSAIN SHAH  
calon untuk ijazah  
(candidate for the degree of)

DOCTOR OF PHILOSOPHY

 telah mengemukakan tesis / disertasi yang bertajuk:  
(has presented his/her thesis / dissertation of the following title):

THE EFFECTS OF SOCIAL CAPITAL, MENTORING AND INNOVATION PRACTICES ON SMALL  
BUSINESS PERFORMANCE: THE MODERATING ROLE OF ENVIRONMENTAL TURBULENCE

seperti yang tercatat di muka surat tajuk dan kuit tesis / disertasi.  
(as it appears on the title page and front cover of the thesis / dissertation).

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu  
dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada:  
23 November 2016.  
(That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the  
field of study as demonstrated by the candidate through an oral examination held on:  
23 November 2016)

Pengurus Viva  
(Chairman for Viva)  
: Assoc. Prof. Dr. Sa’ari Ahmad  

Tandatangan  
(Signature)

Pemeriksa Luar  
(External Examiner)  
: Assoc. Prof. Dr. Amran Awang (UITM)  

Tandatangan  
(Signature)

Pemeriksa Dalam  
(Internal Examiner)  
: Prof. Dr. Rushami Zain Yusoff  

Tandatangan  
(Signature)

Tanggal: 23 November 2016  
(Date)
Nama Nama Pelajar (Name of Student): Muzaffar Hussain Shah


Program Pengajian (Programme of Study): Doctor of Philosophy

Nama Penyelia/Penyelia-penyelia (Name of Supervisor/Supervisors): Assoc. Prof. Dr. Abdul Rahim Othman

Nama Penyelia/Penyelia-penyelia (Name of Supervisor/Supervisors): Dr. Mohd Najib Mansor
PERMISSION TO USE

In presenting this thesis in fulfillment of the requirement for a Ph.D. degree from Universiti Utara Malaysia, I agree that the University Library make it freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for the scholarly purpose may be granted by my supervisor or in his absence by the Dean of Othman Yeop Abdullah Graduate School of Business. It is understood that any copying or publication or use of this thesis or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

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

Dean of Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman
This research studies the relationship between social capital, innovative practice, mentoring, and SME performance of manufacturing firms in Punjab, Pakistan. The primary objective is to identify the moderating role of environmental turbulence on the relationship between social capital, innovative practice, mentoring, and SME performance. A theoretical model based on Contingency theory and Resource Based View (RBV) approach to the business performance of SMEs is developed. A survey method is employed, and questionnaires were used to obtain information from the owner/managers of SME in Punjab, Pakistan and cluster sampling is used for sample selection. Therefore, 500 questionnaires are distributed to the owner/managers of a small enterprise and only 340 of them are returned, giving a response rate of 68% percent. However, only 313 useable questionnaires are used for further analysis using the PLS-SEM. The high response rate is achieved due to the survey instrument being personally distributed by the researcher to the owner/managers of SME. The findings revealed that innovative practices and mentoring are positive and significant predictors of SME performance. While study fails to find the relationship between social capital and SME performance. Meanwhile mixed results are found upon investigating the moderating effect of environmental turbulence on the relationships between social capital, innovative practices, mentoring and SME performance. The findings of this study provided significant insights for both managers and researchers to further understand the effects of these variables on SME performance. The study concluded with a discussion of practical, theoretical and methodological contributions, the study limitations and suggestions for future research.

**Keywords:** social capital, innovation practices, mentoring, environment turbulence, and SME performance.
Abstrak

Kajian ini mengkaji hubungan antara modal sosial, amalan inovatif, mentoring, dan prestasi Industri Kecil Sederhana (IKS) firma pembuatan di Punjab, Pakistan. Objektif utama adalah untuk mengenal pasti peranan sederhana dari pergolakan persekitaran ke atas hubungan antara modal sosial, amalan inovatif, mentoring, dan prestasi IKS. Model teoritis berdasarkan pendekatan Kontingensi dan Pendekatan Berdasarkan Sumber (RBV) terhadap prestasi perniagaan PKS telah dibangunkan. Satu kaedah kajian telah dibuat dan soal selidik digunakan untuk mendapatkan maklumat daripada pemilik/pengurus IKS di Punjab, Pakistan dan persampelan rawak berstrata digunakan untuk pemilihan sampel. Oleh itu, 500 soal selidik telah diedarkan kepada pemilik/pengurus IKS dan hanya 340 daripada mereka telah kembali, memberikan Kadar respons sebanyak 68% peratus. Walau bagaimanapun, hanya 313 soal selidik yang digunakan untuk analisis selanjutnya menggunakan PLS-SEM. Kadar tindak balas tinggi telah dicapai kerana instrumen kajian itu secara peribadi diedarkan oleh penyelidik kepada pemilik/pengurus IKS. Dapatan kajian menunjukkan bahawa amalan inovatif dan mentor adalah positif dan peramal signifikan dari prestasi IKS. Manakala, kajian gagal untuk mencari hubungan antara modal sosial dan prestasi IKS. Sementara itu hasil yang pelbagai telah dijumpai pada siasatan kesan yang sederhana dari pergolakan persekitaran ke atas hubungan antara modal sosial, amalan inovatif, mentoring dan prestasi IKS. Hasil kajian ini telah memberikan makluman penting bagi kedua-dua pengurus dan penyelidik untuk terus memahami kesan pembolehubah prestasi IKS. Kajian ini diakhiri dengan sumbangan-sumbangan perbincangan praktikal, teori dan metodologi, batasan kajian dan cadangan untuk kajian masa depan.

Kata kunci: Modal sosial, amalan inovatif, mentoring, pergolakan persekitaran, dan prestasi IKS.
ACKNOWLEDGEMENTS

In the name of ALLAH, the most gracious, the most merciful, praise is to ALLAH, the creator and custodian of the universe. Salawat and Salam to our Prophet Muhammad, peace and blessings of ALLAH are to him and his family members, companions, and followers.

First and foremost, I would like to express my heartfelt thanks and gratitude to Allah S.W.T and our Prophet Muhammad (SAWW) for their blessing and allowing me to complete this project. In completing this research; I would like to acknowledge the intellectual sharing of many great individuals. My foremost deepest gratitude goes to my supervisors; Assoc. Prof. Dr. Abdul Rahim bin Othman and Dr. Mohd Najib bin Mansor, for devoting much of their expertise and precious times in guiding to reach the final line of this research. Thank you, for all that you did. Words cannot express my sincere appreciation to him.

Undoubtedly, this thesis would almost be impossible to complete without the assistance of family: To the soul of my father Syed Noor Hussain Bukhari and the soul of my mother; I also acknowledge my sisters and my brothers Syed Mubashar Bukhari and Syed Mudassar Bukhari for their encouragement, constant help, and everlasting love. Special thanks also go to my late parents and nephews Syed Noor Bukhari, Syed Hassan Bukhari, Syed Ali Haider Bukhari, Syed Mushleen Bukhari, Syed Huzaifa Bukhari, Syed Hamza Bukhari and nieces Syeda Hijaab Zahra and Syeda Rida Bukhari. I dedicate this thesis to them.

I am very grateful to Universiti Utara Malaysia and especially for College of Business (COB) for giving me the opportunity to complete my Doctor of Philosophy degree (Ph.D). Lastly, this acknowledgment is also dedicated to others, the kind and brilliant people, which cannot be listed one by one for their valuable help and support during all the stages of this study directly and indirectly.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TITLE PAGE</td>
<td>i</td>
</tr>
<tr>
<td>PERMISSION TO USE</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iv</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>v</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>vi</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xiii</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>xiv</td>
</tr>
<tr>
<td>LIST OF APPENDICES</td>
<td>xv</td>
</tr>
</tbody>
</table>

CHAPTER ONE INTRODUCTION .................................................. 1

1.1 Background .......................................................... 1
1.2 Problem Statement ................................................. 8
1.3 Research Questions .................................................. 20
1.4 Research Objectives .................................................. 21
1.5 Scope of the Study ................................................... 22
1.6 Significance of Study .............................................. 23
  1.6.1 Theoretical Significance ................................... 24
  1.6.2 Managerial Significance ................................... 26
1.7 Definitions of Key Terms ........................................ 27
  1.7.1 Small business ............................................... 27
  1.7.2 Small business performance ................................ 27
  1.7.3 Mentoring ..................................................... 27
  1.7.4 Social Capital ................................................ 28
  1.7.5 Innovation practices ....................................... 28
  1.7.6 Environmental Turbulence .................................. 28
1.8 Organization of thesis ............................................ 28
1.9 Summary ............................................................. 29

CHAPTER TWO LITERATURE REVIEW ........................................... 30

2.1 Introduction .......................................................... 30
2.2 Small Business ...................................................... 30
2.3 Small Business Performance ................................. 31
  2.3.1 Financial Performance ...................................... 32
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3.2</td>
<td>Non-Financial Performance</td>
<td>35</td>
</tr>
<tr>
<td>2.4</td>
<td>Mentoring</td>
<td>38</td>
</tr>
<tr>
<td>2.4.1</td>
<td>Functions of Mentoring</td>
<td>41</td>
</tr>
<tr>
<td>2.4.1.1</td>
<td>Career Support</td>
<td>42</td>
</tr>
<tr>
<td>2.4.1.2</td>
<td>Psycho-social Support</td>
<td>43</td>
</tr>
<tr>
<td>2.5</td>
<td>Social Capital</td>
<td>45</td>
</tr>
<tr>
<td>2.5.1</td>
<td>Structural Factor</td>
<td>48</td>
</tr>
<tr>
<td>2.5.2</td>
<td>Cognitive Factor</td>
<td>50</td>
</tr>
<tr>
<td>2.5.3</td>
<td>Trust Factor</td>
<td>52</td>
</tr>
<tr>
<td>2.6</td>
<td>Innovation Practices</td>
<td>53</td>
</tr>
<tr>
<td>2.6.1</td>
<td>Kinds of Innovation</td>
<td>54</td>
</tr>
<tr>
<td>2.6.2</td>
<td>Needs of Innovation Practices</td>
<td>57</td>
</tr>
<tr>
<td>2.6.3</td>
<td>Factors of Innovation Practices</td>
<td>57</td>
</tr>
<tr>
<td>2.6.3.1</td>
<td>Innovation Practices Strategy</td>
<td>59</td>
</tr>
<tr>
<td>2.6.3.2</td>
<td>Innovation Practices Culture</td>
<td>61</td>
</tr>
<tr>
<td>2.7</td>
<td>Environmental Turbulence</td>
<td>63</td>
</tr>
<tr>
<td>2.7.1</td>
<td>Technological Turbulence of Environment</td>
<td>64</td>
</tr>
<tr>
<td>2.7.2</td>
<td>Market Turbulence of Environment</td>
<td>65</td>
</tr>
<tr>
<td>2.7.3</td>
<td>Competitive Intensity of Environment</td>
<td>66</td>
</tr>
<tr>
<td>2.8</td>
<td>Underpinning Theories</td>
<td>67</td>
</tr>
<tr>
<td>2.8.1</td>
<td>Resource-Based Theory</td>
<td>68</td>
</tr>
<tr>
<td>2.8.2</td>
<td>Contingency theory</td>
<td>73</td>
</tr>
<tr>
<td>2.9</td>
<td>Social Capital and Performance</td>
<td>74</td>
</tr>
<tr>
<td>2.10</td>
<td>Innovation Practices and Performance</td>
<td>79</td>
</tr>
<tr>
<td>2.11</td>
<td>Mentoring and Performance</td>
<td>85</td>
</tr>
<tr>
<td>2.12</td>
<td>Environmental Turbulence as a Moderator</td>
<td>89</td>
</tr>
<tr>
<td>2.13</td>
<td>Summary</td>
<td>93</td>
</tr>
</tbody>
</table>

CHAPTER THREE RESEARCH METHODOLOGY

3.1 Introduction ................................................. 94
3.2 Conceptual Framework ....................................... 94
3.3 Research Design .............................................. 101
3.4 Population and Sampling Procedure ................... 102
3.4.2 Sampling Frame ........................................... 104
3.4.3 Sample Size ................................................ 105
3.4.4 Sampling Procedure ...................................... 106
3.4.5 Unit of Analysis .......................................... 108
3.5 Measurement and Instrumentation ....................... 108
3.5.1 Firm Performance .......................................... 112
3.5.2 Innovation Practices .................................... 113
3.5.3 Mentoring .................................................. 115
3.5.4 Social Capital ............................................ 118
3.5.5 Environmental Turbulence .......................................................... 120
3.6 Test of Reliability and Validity ...................................................... 121
3.7 Pilot Test ....................................................................................... 122
3.8 Data Collection Procedure ............................................................. 124
3.10 Partial Least Square Analysis ......................................................... 126
3.11 Summary ....................................................................................... 128

CHAPTER FOUR ANALYSIS AND PRESENTATION OF FINDINGS .......... 129

4.1 Introduction ................................................................................... 129
4.2 Response Rate .............................................................................. 129
4.3 Data Screening and Preliminary Analysis ......................................... 130
  4.3.1 Test of Missing data ................................................................. 131
  4.3.2 Test of Outliners .................................................................... 132
  4.3.3 Test of Normality .................................................................... 133
  4.3.4 Test of Multicollinearity ........................................................... 135
4.4 Non-Response Bias Test ................................................................. 136
4.5 Common Method Variance Test ....................................................... 138
4.6 Demographic Profile of the Respondents .......................................... 140
4.7 Descriptive Analysis of the Variables .............................................. 145
4.8 Model Quality Evaluation ............................................................... 146
  4.8.1 Evaluation of a Measurement Model through PLS-SEM ......... 147
    4.8.1.1 Test of Reliability ............................................................ 148
    4.8.1.2 Test of Validity ............................................................... 153
  4.8.2 Evaluation of a structural model ................................................ 158
    4.8.2.1 Moderating Effect ........................................................... 161
    4.8.2.2 Testing Moderating Effect ................................................. 166
    4.8.2.3 Strength of the Moderating Effects .................................... 170
    4.8.2.4 R-Square ....................................................................... 171
    4.8.2.5 Effect Size ..................................................................... 172
  4.8.3 Predictive Relevance and Redundancy ....................................... 173
4.8.4 The Goodness of Fit of the Whole Model .................................... 175
4.8.5 Summary of Hypothesis Findings .............................................. 176
4.8.6 Summary of the Chapter ............................................................ 176

CHAPTER FIVE DISCUSSION, CONCLUSION AND RECOMMENDATIONS. 178

5.1 Introduction ................................................................................... 178
5.2 Recapitulation of the Study’s Findings ............................................ 178
5.3 Discussion ...................................................................................... 181
  5.3.1 Relationship between social capital and small business performance 181
  5.3.2 Relationship between innovation practices and small business performance 185
  5.3.3 Relationship between mentoring and small business performance 187
5.3.4 The moderating role of environment turbulence ........................................ 189
5.4 Contributions of the Study ................................................................................... .. ............ 206
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Tables</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1.1 Definitions of Small Business in Pakistan</td>
<td>5</td>
</tr>
<tr>
<td>Table 1.2 Contribution of small business to GNP and GDP to the economy of Pakistan</td>
<td>5</td>
</tr>
<tr>
<td>Table 1.3 Trends in Industrial Growth in Punjab</td>
<td>6</td>
</tr>
<tr>
<td>Table 2.1a Firm Performance Criteria</td>
<td>37</td>
</tr>
<tr>
<td>Table 2.1 Firm Performance Criteria</td>
<td>38</td>
</tr>
<tr>
<td>Table 2.2 Relationship between social capital and firm performance</td>
<td>78</td>
</tr>
<tr>
<td>Table 2.3 Relationship between innovation and firm performance</td>
<td>84</td>
</tr>
<tr>
<td>Table 2.4 Relationship between mentoring and firm performance</td>
<td>88</td>
</tr>
<tr>
<td>Table 2.5 Moderating effect of environmental turbulence</td>
<td>91</td>
</tr>
<tr>
<td>Table 3.1 Criteria for Small Businesses in Pakistan</td>
<td>108</td>
</tr>
<tr>
<td>Table 3.2 Major References for Questionnaires</td>
<td>111</td>
</tr>
<tr>
<td>Table 3.3 Performance Scale</td>
<td>113</td>
</tr>
<tr>
<td>Table 3.4 Innovation Practices scale</td>
<td>115</td>
</tr>
<tr>
<td>Table 3.5 Mentoring scale</td>
<td>118</td>
</tr>
<tr>
<td>Table 3.6 Social Capital Scale</td>
<td>120</td>
</tr>
<tr>
<td>Table 3.7 Environmental Turbulence Scale</td>
<td>121</td>
</tr>
<tr>
<td>Table 3.8 Reliability and Validity of variables</td>
<td>123</td>
</tr>
<tr>
<td>Table 3.9 Latent Variable Correlations</td>
<td>124</td>
</tr>
<tr>
<td>Table 4.1 Response Rate</td>
<td>130</td>
</tr>
<tr>
<td>Table 4.2 Correlation Matrix of the Independent Variables</td>
<td>135</td>
</tr>
<tr>
<td>Table 4.3 Variance Inflation Factors and Tolerance</td>
<td>136</td>
</tr>
</tbody>
</table>
Table 4.4 Independent-Samples T-test for Non-Response Bias
Table 4.5 Demographic Characteristics of the Respondents
Table 4.6 Descriptive Statistics of variables
Table 4.7 Loadings, Composite Reliability and Cronbach's Alpha
Table 4.8 Square Roots of Average Variance Extracted and Correlations
Table 4.9 Cross Loadings
Table 4.10 Evaluation of Structural Model with Moderator ET
Table 4.11 Strength of the Moderating Effects
Table 4.12 Dependent variable and R square value
Table 4.13 Effect Sizes of the independent variables
Table 4.14 Cross-Validated Redundancy of dependent variable
Table 4.15 Summary of Hypotheses Testing
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figures</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1 Industrial Growth in Punjab (1975-2010)</td>
<td>7</td>
</tr>
<tr>
<td>Figure 2.1 Proposed Research Framework</td>
<td>95</td>
</tr>
<tr>
<td>Figure 4.1 Histogram and Normal Probability Plots</td>
<td>134</td>
</tr>
<tr>
<td>Figure 4.2 Measurement Model</td>
<td>148</td>
</tr>
<tr>
<td>Figure 4.3 Structural Model with Moderator</td>
<td>159</td>
</tr>
<tr>
<td>Figure 4.4 Model of environmental turbulence as moderator on the relationship between social capital and small business performance</td>
<td>162</td>
</tr>
<tr>
<td>Figure 4.5 Model of environmental turbulence as moderator on the relationship between innovation practices and small business performance</td>
<td>164</td>
</tr>
<tr>
<td>Figure 4.6 Model of environmental turbulence as moderator on the relationship between mentoring and small business performance</td>
<td>166</td>
</tr>
<tr>
<td>Figure 4.7 Moderating effect of environmental turbulence on innovation practices and small business performance</td>
<td>168</td>
</tr>
<tr>
<td>Figure 4.8 Moderating effect of environmental turbulence on mentoring and small business performance</td>
<td>169</td>
</tr>
<tr>
<td>Figure 4.8 Moderating Effect Size</td>
<td>171</td>
</tr>
<tr>
<td>Figure 4.9 Variables Effect Size</td>
<td>173</td>
</tr>
<tr>
<td>Figure 5.1 Moderator Model</td>
<td>190</td>
</tr>
</tbody>
</table>
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME</td>
<td>Small and medium enterprises</td>
</tr>
<tr>
<td>SBP</td>
<td>Small Business Performance</td>
</tr>
<tr>
<td>IP</td>
<td>Innovation Practices</td>
</tr>
<tr>
<td>SC</td>
<td>Social Capital</td>
</tr>
<tr>
<td>M</td>
<td>Mentoring</td>
</tr>
<tr>
<td>ET</td>
<td>Environmental Turbulence</td>
</tr>
<tr>
<td>FPCCI</td>
<td>Federation of Pakistan Chamber of Commerce and Industries</td>
</tr>
<tr>
<td>SMEDA</td>
<td>Small and Medium Enterprise Development Authority</td>
</tr>
<tr>
<td>LCCI</td>
<td>Lahore Chamber of Commerce and Industry</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>RBV</td>
<td>Resource Based-View</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>PLS-SEM</td>
<td>Partial Least Square Structural Equation</td>
</tr>
<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>CMV</td>
<td>Common Method Variance</td>
</tr>
<tr>
<td>f2</td>
<td>Effect Size</td>
</tr>
<tr>
<td>Q2</td>
<td>Construct Cross-validated Redundancy</td>
</tr>
<tr>
<td>R2</td>
<td>R-squared values</td>
</tr>
<tr>
<td>ρc</td>
<td>Composite Reliability</td>
</tr>
<tr>
<td>GoF</td>
<td>Goodness-of-Fit</td>
</tr>
</tbody>
</table>
LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A Questionnaire</td>
<td>291</td>
</tr>
<tr>
<td>Appendix B Smart-PLS Results – Measurement Model</td>
<td>298</td>
</tr>
<tr>
<td>Appendix C Blindfolding Procedure Results</td>
<td>301</td>
</tr>
</tbody>
</table>
1.1 Background

Small and medium enterprises (SMEs) have identified as the catalyst for any economy which will not only create products and services but also helps the country in resource mobilization and generation. Islam, Khan, Obaidullah, and Alam (2011) evaluated that the small and medium enterprises play a significant role in the growth and development of a nation. They can help in shortening economic problems such as poverty, unemployment, social insecurity, etc. It’s been globally acknowledged that small and medium enterprises are one of the essential means by which a country could transform from developing to the developed country or from the non-industrial to the industrial country as in the case of Vietnam, Japan and China (Chea, 2009). Furthermore, these enterprises do not only act as the motivating forces towards the transformation process but also helps to accelerate the entire process of the economic development (Cravo, Gourlay, & Becker, 2012). Consistent with the discussion above, why every country, in particular, the developing countries should focus more on SME development as the preferred means of making the nation industrialized like the Western world (Brettel, Strese, & Flatten, 2012; Rody & Stearns, 2013).

It is an indisputable fact that SMEs are blood for the economic development and prosperity. Throughout the globe, SMEs and cottage industry have strengthened the employment sector. In this regard, some statistics indicated that SMEs represents about 90% of the total firms in most of the world economies, in high-income countries, SMEs contribute 55% of GDP and over 65% of total employment (Subhan, Mehmood, &
The contents of the thesis is for internal user only


Cao, L. (2011). Dynamic capabilities in a turbulent market environment: empirical
evidence from international retailers in China. *Journal of Strategic Marketing,*
19(5), 455-469.

Carbonell, P., & Rodriguez, A. I. (2006). The impact of market characteristics and
innovation speed on perceptions of positional advantage and new product

and performance in buyer-supplier relationships. *Journal of Operations


Caron, F., & Fiore, A. (1995). 'Engineer to order' companies: how to integrate
manufacturing and innovative processes. *International Journal of Project
Management,* 13(5), 313-319.

of Scandura's (1992) and Ragins and McFarlin's (1990) mentoring measures.
In Southern Management Association Meeting, San Antonio, TX (pp. 3-6)


and quantitative methods.* Australia: John Wiley and Sons.

research: Qualitative and quantitative methods: John Wiley & Sons Australia.


226


Floyd, S. W., & Wooldridge, B. J. (1999). Reconceptualizing strategy process: A


Haubere, Julia, 2011, *Social Capital Theory: Toward a Methodological Foundation*, VS Research, Charles University, Prague


http://fpcc.org.pk/


technological innovation implementation in a telecommunication organization.

*Socialiniai Mokslai, 3(69),* 14-23.


Tools and techniques of quality management: an empirical investigation of their 

Kaplan, R. S., & Norton, D. P. (2001). Transforming the balanced scorecard from 
performance measurement to strategic management: Part I. Accounting 
horizons, 15(1), 87-104.

Firms in Turkey. Procedia-Social and Behavioral Sciences, 195, 1355-1364.

Karpacz, J., & Ingram, M. (2015). The Relationship between Innovation Strategy and 
Organizational Performance: Mediating Role of Organizational Innovativeness 
Level. In Managing Intellectual Capital and Innovation for Sustainable and 
Inclusive Society: Managing Intellectual Capital and Innovation; Proceedings 
of the MakeLearn and TIIM Joint International Conference 2015 (pp. 1331-1332). ToKnowPress.

orientation and learning orientation on innovation performance: An empirical 
study of Turkish firms. Journal of international development, 23(2), 204-219.

Kemper, J., Schilke, O., & Brettel, M. (2013). Social capital as a microlevel origin of 
589-603.

Kennan, W. R., & Hazleton, V. (2006). Internal public relations, social capital, and the 
role of effective organizational communication. Public relations theory II, 311-338.
Kennedy, S. L. (2013). *Mentoring Functions and Job Satisfaction of Community College Leaders*. ProQuest LLC. 789 East Eisenhower Parkway, PO Box 1346, Ann Arbor, MI 48106.


261


http://dx.doi.org/10.1108/APJML-09-2011-0065.


275


Smith, A. (1937). *The wealth of nations* [1776]

Smither, MJ 2011, the triggers for innovation in the agricultural processing industry, South Africa, MBA dissertation, University of Pretoria, Pretoria, viewed yymmdd <http://hdl.handle.net/2263/27031>.


279


284


organizational commitment of new staff nurses. *BMC Health Services Research*, 10(1), 240.


Dear Sir/Madam,

First and foremost, thank you very much for taking part in this survey.

I am a PhD student at Universiti Utara Malaysia, and currently conducting a survey on small business performance in Punjab, Pakistan as part of the PhD requirement. For further elaboration, I am conducting a study on the moderating effect of environmental turbulence on the small business performance, mentoring, social capital and innovation practices; A study on small business performance in Pakistan.

I am very pleased to inform you that you have been randomly selected to participate in this research. I appreciate it if you could spend 15 minutes of your time to fill in the attached questionnaire. Please be ensured that your response will strictly be used for academic purpose only.

Thank you for your effort, time and cooperation.

Researcher
Muzaffar Hussain Shah (95733)
COLLEGE OF BUSINESS
UNIVERSITI UTARA MALAYSIA
Appendix A; Questionnaire

This questionnaire consists of four (4) parts. Part 1 deals with personal information, part 2 deals with questions on small business performance, part 3 explores innovation practices, social capital and mentoring, while the part 4 deals with environmental turbulence.

Part 1- Personal Information

This section consists of 9 questions. Please tick the most relevant box.

1. Type of ownership
   - □ Sole proprietorship
   - □ Partnership

2. What is your gender?
   - □ Male
   - □ Female

3. What is your age group?
   - □ Less than 25 years of age
   - □ 26 – 35 years of age
   - □ 36 - 45 years of age
   - □ 46 – 55 years of age
   - □ Above 56 years of age
4 What is your marital status?

- Single
- Married

5 What is your education level?

- Standard
- Bachelors
- Master Degree
- Ms/M.Phil
- PhD

6 Approximately how many employees does your company have?

- 10 – 15
- 16 – 20
- 21 – 25
- 25 – 30
- 31 – 35

7 What is source of capital investment?

- Personal saving
- Family Support

8 What is your amount of capital in your business?

- 20,000-50,000 USD
- 51,000-100,000 USD
- 101,000-150,000 USD
- 151,000-200,000 USD

9 What is the age of your company?

- 1- 5 years
- 6- 10 years
- 11 - 15 years
- More than 15 years.
Part-2 Firm performance of Small business
Please review each of the following statements and tick the item that best represents your firm. Selection 1 indicates that you are strongly disagree with the statement, 7 indicates that you are strongly agree with the statement.

<table>
<thead>
<tr>
<th>No</th>
<th>small business performance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Our profitability has increased in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Our market share has increased in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Our sales volume has increased in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Our costs have decreased in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Customer satisfaction our organization has increased in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Employee satisfaction in our organization has increased in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Employee turnover has decreased in our organization in the past two years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part-3 Innovation Practices

Please review each of the following statements and tick the item that best represents your firm. Selection 1 indicates that you are strongly disagree with the statement, and 7 indicates that you are strongly agree with the statement.

<table>
<thead>
<tr>
<th>No</th>
<th>Innovation Practices</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The firm’s vision or mission includes a reference to innovation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Innovation strategy has helped the firm to achieve its strategic goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Increasing firm’s production volume is an important measure of the process of innovation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Improving administrative routines is seen as a part of firm’s innovation strategy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Internal cooperation is an important part in implementation of innovation strategy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Customer satisfaction is part of firm’s innovation strategy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Improving product quality is one of the key objectives of firm’s innovation strategy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Formulating innovation strategy increases employee’s skills.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Improving employee’s commitment, morale, or both is part of firm’s innovation strategy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The firm’s culture rewards behaviors is related to encouraging creativity and innovation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>The firm’s culture encourages informal meetings and interactions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>The firm’s culture encourages employees to share knowledge.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>The firm’s culture focuses on teamwork for long term performance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Social Capital

Please review each of the following statements and tick the item that best represents your firm. Selection 1 indicates that you are strongly disagree with the statement, and 7 indicates that you are strongly agree with the statement.

<table>
<thead>
<tr>
<th>No</th>
<th>Social capital</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In our firm, all divisions recognize that we need each other to accomplish our objectives.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>In our firm, sales people would be just as effective without working with other divisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>By working with sales people in our firm, our product division gets access to resources and product ideas.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Our firm knows our suppliers in persons.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Our firm maintains close social relationship with buyers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>The exchange of information among our contacts usually has a similar content.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The contact with which we maintain frequent relationships, in general, know each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The contacts from which we receive advices or information for making important decisions have strong relationship with us.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Our firm is characterized by mutual trust among the colleagues at multiple levels.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Our strategic alliance is about mutual respect.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Our strategic alliance is characterized by personal friendship among the top managers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Our divisions have effective communication channels.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Different amount of information is our typical issue.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Our staffs’ success is our firm’s success.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>This business deserves loyalty from all staff members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Our staff members share a common understanding about needs of our customers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Our staff members have a common understanding about market trends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

297
Mentoring
Please review each of the following statements and tick the item that best represents your firm. Selection 1 indicates that you are strongly disagree with the statement and 7 indicates that you are strongly agree with the statement.

<table>
<thead>
<tr>
<th>No</th>
<th>Career Functions of Mentoring</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mentor has shared history of his/her career with our company.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mentor has encouraged our company to prepare for advancement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Mentor has encouraged our company to try new ways of behaving in our job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Our company try to imitate the work behavior of our mentor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Our company agree with our mentor's attitudes and values regarding business.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Our company respect and admire our mentor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Our mentor has demonstrated good listening skills during our conversations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Our mentor has shared personal experiences as an alternative perspective to our company problems.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Our mentor has encouraged our company to talk openly about anxiety and fears that detract us from company work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Our mentor has conveyed empathy for the concerns and feelings our company have discussed with him/her.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Our mentor kept position and doubts our company shared with him/her in strict confidence.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Our mentor has conveyed feelings of respect for our company.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Our mentor reduced unnecessary risks that could threaten the possibility of receiving a promotion.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Our mentor helped our company to finish tasks or meet deadlines that otherwise would have been difficult to complete.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Our mentor makes our company aware of assignments that increased written and personal contact with administrators.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part-4 Environmental turbulence

Please review each of the following statements and tick the item that best represents your firm. Selection 1 indicates that you are strongly disagree with the statement, and 7, indicates that you are strongly agree with the statement.

<table>
<thead>
<tr>
<th>No</th>
<th>Environmental turbulence</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The technology in our industry is changing rapidly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Technological changes in our industry provide big opportunities to my company.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>A large number of new product ideas have been made possible through technological breakthroughs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Technological changes in our industry generate new ideas for product supply.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>In our kind of business, customer's product preferences change quite a lot over time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Our customers tend to look for new product all the time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>We are witnessing demand for our products from customers who never bought them before.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>New customers tend to have product related needs that are different from those of our existing customers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Price sensitivity is character of our customers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Competition in our industry is cutthroat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>There are many &quot;promotion wars&quot; in our industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Anything that one competitor can offers, others can match readily.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Price competition is a hallmark of our industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your cooperation

Contact: Bukhari941@gmail.com
# Appendix B

## Total Effects (Mean, STDEV, T-Values)

<table>
<thead>
<tr>
<th></th>
<th>Original Sample</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>Standard Error (STERR)</th>
<th>T Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET -&gt; SBP</td>
<td>0.103372</td>
<td>0.096444</td>
<td>0.075584</td>
<td>0.075584</td>
<td>1.367635</td>
</tr>
<tr>
<td>IP -&gt; SBP</td>
<td>0.290416</td>
<td>0.283565</td>
<td>0.073240</td>
<td>0.073240</td>
<td>3.965287</td>
</tr>
<tr>
<td>IP * ET -&gt; SBP</td>
<td>-0.106103</td>
<td>-0.118268</td>
<td>0.078942</td>
<td>0.078942</td>
<td>1.344069</td>
</tr>
<tr>
<td>M -&gt; SBP</td>
<td>0.203105</td>
<td>0.198071</td>
<td>0.068115</td>
<td>0.068115</td>
<td>2.981780</td>
</tr>
<tr>
<td>M * ET -&gt; SBP</td>
<td>-0.178626</td>
<td>-0.178074</td>
<td>0.075099</td>
<td>0.075099</td>
<td>2.378559</td>
</tr>
<tr>
<td>SC -&gt; SBP</td>
<td>-0.040154</td>
<td>-0.032880</td>
<td>0.045960</td>
<td>0.045960</td>
<td>0.873672</td>
</tr>
<tr>
<td>SC * ET -&gt; SBP</td>
<td>0.064096</td>
<td>0.039235</td>
<td>0.056472</td>
<td>0.056472</td>
<td>1.135020</td>
</tr>
</tbody>
</table>

## Cronbachs Alpha

<table>
<thead>
<tr>
<th></th>
<th>Cronbachs Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td>0.917024</td>
</tr>
<tr>
<td>IP</td>
<td>0.916586</td>
</tr>
<tr>
<td>M</td>
<td>0.918144</td>
</tr>
<tr>
<td>SBP</td>
<td>0.928512</td>
</tr>
<tr>
<td>SC</td>
<td>0.798252</td>
</tr>
</tbody>
</table>
## Latent Variable Correlations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td>0.554881</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.587191</td>
<td>0.528257</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBP</td>
<td>0.455301</td>
<td>0.399143</td>
<td>0.432461</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>0.464645</td>
<td>0.572882</td>
<td>0.540958</td>
<td>0.283305</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

## R Square

<table>
<thead>
<tr>
<th>Variable</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
</tr>
<tr>
<td>SBP</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>0.412580</td>
</tr>
</tbody>
</table>
## Composite Reliability

<table>
<thead>
<tr>
<th></th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td>0.929010</td>
</tr>
<tr>
<td>IP</td>
<td>0.928838</td>
</tr>
<tr>
<td>M</td>
<td>0.930044</td>
</tr>
<tr>
<td>SBP</td>
<td>0.937415</td>
</tr>
<tr>
<td>SC</td>
<td>0.856606</td>
</tr>
</tbody>
</table>
### Appendix c

**Blindfolding Procedure Output**

#### CV Red

<table>
<thead>
<tr>
<th></th>
<th>1-SSE/SSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td>0.502777</td>
</tr>
<tr>
<td>IP</td>
<td>0.502790</td>
</tr>
<tr>
<td>M</td>
<td>0.472397</td>
</tr>
<tr>
<td>SBP</td>
<td>0.191942</td>
</tr>
<tr>
<td>SC</td>
<td>0.469860</td>
</tr>
</tbody>
</table>

#### CV Com

<table>
<thead>
<tr>
<th></th>
<th>1-SSE/SSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td>0.502777</td>
</tr>
<tr>
<td>IP</td>
<td>0.502790</td>
</tr>
<tr>
<td>M</td>
<td>0.472397</td>
</tr>
<tr>
<td>SBP</td>
<td>0.466982</td>
</tr>
<tr>
<td>SC</td>
<td>0.469860</td>
</tr>
</tbody>
</table>
Construct Cross-validated Communality

<table>
<thead>
<tr>
<th>Total</th>
<th>SSO</th>
<th>SSE</th>
<th>1-SSE/SSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td>4069.000000</td>
<td>2023.200205</td>
<td>0.502777</td>
</tr>
<tr>
<td>IP</td>
<td>4069.000000</td>
<td>2023.147836</td>
<td>0.502790</td>
</tr>
<tr>
<td>M</td>
<td>4695.000000</td>
<td>2477.094720</td>
<td>0.472397</td>
</tr>
<tr>
<td>SBP</td>
<td>2191.000000</td>
<td>1167.842390</td>
<td>0.466982</td>
</tr>
<tr>
<td>SC</td>
<td>5321.000000</td>
<td>2820.872336</td>
<td>0.469860</td>
</tr>
</tbody>
</table>

Redundancy

<table>
<thead>
<tr>
<th></th>
<th>redundancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET</td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
</tr>
<tr>
<td>SBP</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>0.040153</td>
</tr>
</tbody>
</table>