

## TABLE OF CONTENTS

<b>ENDORSEMENT PAGE .....</b>	<b>i</b>
<b>STATEMENT OF AUTHENTICITY .....</b>	<b>ii</b>
<b>PREFACE .....</b>	<b>iii</b>
<b>TABLE OF CONTENTS .....</b>	<b>vii</b>
<b>TABLE LIST .....</b>	<b>ix</b>
<b>FIGURE LIST .....</b>	<b>xi</b>
<b>ABSTRACT.....</b>	<b>xii</b>
<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 Background.....	1
1.2 Problem Formulation .....	7
1.3 Scope of this study.....	10
1.4 Research Questions.....	12
1.5 Research Objectives.....	13
1.6 Contribution of this Research .....	14
1.7 Outline of the Writing.....	16
<b>CHAPTER 2 THEORETICAL FRAMEWORK .....</b>	<b>17</b>
2.1 Innovation as a Driver of Sustainability .....	17
2.2 Building Innovation Capacity .....	25
2.2.1 Learning Theory as a Framework of Thinking .....	25
2.2.2 Organizational Learning .....	27
2.3 Absorptive Capacity (ACAP) .....	38
2.3.1 The ACAP Concept .....	38
2.3.2 Moderating Variables for ACAP Process .....	52
2.3.3 Accumulation of Knowledge .....	63
2.4 Hypotheses Development and Research Model .....	66
<b>CHAPTER 3 RESEARCH METHODOLOGY .....</b>	<b>70</b>
3.1 Research Philosophy.....	70
3.2 Research Approach.....	70
3.3 Research Strategy .....	71
3.4 Research timeline.....	72
3.5 Data Collection, Instrumentation, and Analysis .....	73
3.5.1 Population and Sample .....	73
3.5.2 Data Collection Method.....	75
3.5.3 Questionnaire Structure .....	78
3.5.4 Measurement: Operational Definition and Indicators .....	80
3.5.5 Data Analysis Tools.....	86
3.5.6 Flow of Analysis.....	93

<b>CHAPTER 4 RESULTS.....</b>	<b>96</b>
4.1 Descriptive result .....	96
4.1.1 Demographic distribution .....	96
4.1.2 Activity Characteristics.....	101
4.1.3 Mean Score and Correlation Matrix .....	104
4.2 Hypotheses Testing Result .....	107
4.2.1 Variable Based on Loading Score .....	107
4.2.2 ACAP Process .....	111
4.2.3 Accumulation of knowledge .....	121
4.2.4 Summary of the hypotheses testing .....	131
<b>CHAPTER 5 DISCUSSION .....</b>	<b>134</b>
5.1 Discussion of the ACAP Process.....	134
5.2 Elaboration of the Moderating Variables Result .....	144
<b>CHAPTER 6 SUMMARY .....</b>	<b>154</b>
6.1 Conclusion .....	154
6.2 Contributions .....	159
6.2.1 Theoretical Contributions .....	159
6.2.2 Methodological Contributions .....	162
6.2.3 Managerial implications .....	163
6.3 Limitation and Suggestion for Improvement.....	165
<b>REFERENCES .....</b>	<b>168</b>
<b>APPENDICES.....</b>	<b>183</b>
Appendix 1: Indicators .....	183
Appendix 2: Examples of Analysis Steps.....	188
Appendix 3: List of Refined Factor Analysis .....	195
Appendix 4: Summary of HLM Process .....	207
Appendix 5: Important Abbreviations .....	209

## TABLE LIST

Table 1.1 Type of KIO service firms.....	11
Table 1.2 List of method used (20 empirical studies).....	11
Table 2.1 Summary of Relevant Organizational Theories for Innovation .....	20
Table 2.2 Development of ACAP Concept Over Years .....	39
Table 3.1 Summary of Data Collection and Data Cleaning .....	78
Table 3.2 Assessment About KKN Knowledge .....	81
Table 3.3 Group Variable 1: ACAP.....	81
Table 3.4 Group Variable 2: SIM.....	83
Table 3.5 Group Variable 3: ROA.....	84
Table 3.6 Reliability Result .....	85
Table 3.7 External assessment score.....	93
Table 3.8 Hypotheses distribution .....	94
Table 4.1 Faculty and Year Intake.....	97
Table 4.2 Places of KKN projects and Team Dispersion .....	98
Table 4.3 Average Theme per Person per Team .....	100
Table 4.4 Project Themes: Infrastructure and Human Development .....	100
Table 4.5 Place to Communicate .....	102
Table 4.6 Frequency of Communication Among Team Members .....	103
Table 4.7 Knowing Team Member in Subunit .....	103
Table 4.8 Number of People They Know (at t0) .....	104
Table 4.9 The Acquaintanceship Events.....	104
Table 4.10 Mean Score and Correlation .....	106
Table 4.11 Refined FA Model 1 Equation Set 1.....	109
Table 4.12 Summary of Refined FA Process for Model 1 (4 Equation Sets).....	110
Table 4.13 Model 1: Result Summary for IV, MO, Interaction .....	113
Table 4.14 Model 1: Moderating Test .....	114
Table 4.15 Model 1: Interaction Variety Test.....	114
Table 4.16 Model 2: Result Summary for IV, MO, Interaction .....	115
Table 4.17 Model 2: Moderating Test .....	115
Table 4.18 Model 2: Interaction Variety Test.....	115
Table 4.19 Model 3: Result Summary for IV, MO, Interaction .....	116
Table 4.20 Model 3: Moderating Test .....	116
Table 4.21 Model 3: Interaction Variety Test.....	116
Table 4.22 Model 4: Result Summary for IV, MO, Interaction .....	117
Table 4.23 Model 4: Moderating Test .....	117
Table 4.24 Model 4: Interaction Variety Test.....	117
Table 4.25 Model 5: Result Summary for IV, MO, Interaction .....	118
Table 4.26 Model 5: Moderating Test .....	118
Table 4.27 Model 5: Interaction Variety Test.....	119
Table 4.28 Model 6: Result Summary for IV, MO, Interaction .....	119
Table 4.29 Model 6: Moderating Test .....	119
Table 4.30 Model 6: Interaction Variety Test.....	120
Table 4.31 Feed forward: $R^2$ and ICC .....	121
Table 4.32 Feedback: $R^2$ and ICC .....	121



Table 4.33 KKN: Quality of Information .....	122
Table 4.34 KKN: Impact .....	123
Table 4.35 Team and Its Externalities .....	124
Table 4.36 KKN: Team and Self .....	124
Table 4.37 KKN: Understanding about the KKN and the project.....	125
Table 4.38 Assessment of Rater Answer Quality .....	126
Table 4.39 Conformity of Project Plan (t0) and Project Statement (t0, t1) .....	127
Table 4.40 Clarity of Project Statement (t0 vs. t1) .....	127
Table 4.41 Conformity of project statement (t0 vs. t1) .....	128
Table 4.42 Choices of Strategy to Finish the KKN Project (t0 vs. t1) .....	129
Table 4.43 Number of Words to Explain the KKN Project (t0 vs. t1) .....	130
Table 4.44 Perception of Acquire, Assimilate and PACAP (t0 vs. t1).....	130
Table 4.45 Summary for Independent Variable Significance.....	132
Table 4.46 Summary for Moderating Variable Significance.....	133
Table 4.47 Summary for Moderating Variation .....	133
Table 5.1 Summary of Formal MO .....	144
Table 5.2 Summary of Informal MO .....	145
Table 5.3 Summary of Learning MO.....	146
Table 5.4 Summary of Cohesive MO .....	147
Table 5.5 Summary of MO profile .....	149

## FIGURE LIST

Figure 2.1 Comparison of ACAP and 4I-OL.....	47
Figure 2.2 U Curve Model.....	53
Figure 2.3 Knowledge Creation and ACAP Process .....	64
Figure 2.3 Knowledge Absorption to Individual Model.....	65
Figure 2.5 Empirical Research Model .....	69
Figure 3.1 The Data Collection Process .....	75
Figure 3.2 Questionnaire Structure.....	79
Figure 3.3 External Assessment Process .....	92
Figure 3.4 Breakdown of ACAP process (model 1 - 6).....	94
Figure 4.1 Gender Distribution.....	98
Figure 4.2 Distribution job to an individual within a subunit (team) .....	99
Figure 4.3 Media Used to Communicate .....	102
Figure 4.4 LS Value from a Refined FA Process using Regression in SPSS) ....	110
Figure 4.5 Strategy Choices during KKN.....	129
Figure 5.1 Main Hypotheses Result.....	135
Figure 5.2 Map of Moderating Interaction .....	152