

TABLE OF CONTENTS

| CHAPTER NO. | TITLE | PAGE NO. |
|-------------|--|-----------|
| | DECLARATION | ii |
| | CERTIFICATE | iii |
| | ACKNOWLEDGEMENT | iv |
| | ABSTRACT | v |
| | LIST OF TABLES | xiv |
| | LIST OF FIGURES | xx |
| 1 | INTRODUCTION | 1 |
| 1.1 | CONCEPTS OF INNOVATION | 3 |
| 1.2 | THEORIES OF INNOVATION ADOPTION | 20 |
| 1.3 | INNOVATION INITIATIVES AT THE INTERNATIONAL AND NATIONAL LEVELS | 23 |
| 1.4 | CLUSTER | 25 |
| 1.5 | SMALL AND MEDIUM ENTERPRISES | 29 |
| 1.6 | THE TEXTILE AND APPAREL INDUSTRY | 31 |
| 1.7 | SCOPE OF THE STUDY | 34 |
| 1.8 | THE KNITWEAR CLUSTER OF TIRUPUR DISTRICT | 35 |
| 1.9 | STATEMENT OF THE PROBLEM | 40 |
| 1.10 | NEED FOR THE STUDY | 41 |
| 1.11 | STRUCTURE OF THE THESIS | 42 |
| 2 | REVIEW OF LITERATURE | 44 |
| 2.1 | FACILITATORS AND BARRIERS OF INNOVATION ADOPTION | 44 |
| 2.2 | INNOVATION ADOPTION AND PERFORMANCE LINKAGE | 51 |
| 2.3 | IDENTIFICATION OF RESEARCH GAP | 60 |

| CHAPTER NO. | TITLE | PAGE NO. |
|--------------------|---|-----------------|
| 2.4 | DEVELOPING THE BROAD DIMENSIONS OF THE CONCEPTUAL MODEL | 62 |
| 2.5 | DETERMINATION OF SPECIFIC CONSTRUCTS IN THE HYPOTHESIZED MODEL | 63 |
| 2.6 | DEVELOPING THE CONCEPTUAL MODEL | 70 |
| 2.7 | CHAPTER SUMMARY | 75 |
| 3 | RESEARCH OBJECTIVES AND HYPOTHESES | 77 |
| 3.1 | GENERATION OF RESEARCH QUESTIONS | 77 |
| 3.2 | OBJECTIVES OF THE STUDY | 78 |
| 3.3 | GENERATION OF HYPOTHESES | 79 |
| 3.4 | ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND INNOVATION ADOPTION | 88 |
| 3.5 | ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND BUSINESS PERFORMANCE | 91 |
| 3.6 | CHAPTER SUMMARY | 93 |
| 4 | RESEARCH METHODOLOGY | 94 |
| 4.1 | RESEARCH APPROACH | 94 |
| 4.2 | RESEARCH DESIGN | 96 |
| 4.3 | SAMPLING DESIGN | 99 |
| 4.4 | OBSERVATIONAL DESIGN | 105 |
| 4.5 | STATISTICAL DESIGN | 113 |
| 4.6 | CHAPTER SUMMARY | 117 |
| 5 | DATA ANALYSIS AND RESULTS | 119 |
| 5.1 | DEMOGRAPHIC PROFILE OF THE RESPONDENTS | 119 |
| 5.2 | PAST PRODUCT INNOVATION ORIENTATION | 123 |

| CHAPTER NO. | TITLE | PAGE NO. |
|--------------------|---|-----------------|
| 5.3 | RESPONDENTS' OPINION ABOUT INNOVATION AND PROBLEMS WHILE INNOVATING | 124 |
| 5.4 | SOURCES OF INNOVATION INFORMATION | 124 |
| 5.5 | CASE SUMMARIES OF CONSTRUCTS IN THE HYPOTHESIZED MODEL | 126 |
| 5.6 | MOST FREQUENTLY ADOPTED INNOVATIONS BY THE SMES OF TIRUPUR CLUSTER | 139 |
| 5.7 | RELIABILITY AND VALIDITY | 141 |
| 5.8 | INFERENTIAL STATISTICS | 150 |
| 5.9 | TESTING THE STRUCTURAL MODEL- PLS PATH MODELLING | 150 |
| 5.10 | HYPOTHESES TESTING FOR EACH PATH IN THE STRUCTURAL MODEL | 157 |
| 5.11 | CLASSIFICATION OF RESPONDENTS BASED ON INNOVATION ADOPTION STATUS | 171 |
| 5.12 | CLASSIFICATION OF RESPONDENTS BASED ON INNOVATION IMPLEMENTATION STATUS | 172 |
| 5.13 | CLASSIFICATION OF RESPONDENTS BASED ON THEIR BUSINESS PERFORMANCE | 173 |
| 5.14 | TESTING THE ASSOCIATION BETWEEN INNOVATION ADOPTION AND BUSINESS PERFORMANCE CATEGORIES | 174 |
| 5.15 | TESTING THE ASSOCIATION OF DEMOGRAPHIC VARIABLES WITH INNOVATION ADOPTION AND BUSINESS PERFORMANCE. | 176 |
| 5.16 | CHAPTER SUMMARY | 195 |

| CHAPTER NO. | TITLE | PAGE NO. |
|--------------------|--|-----------------|
| 6 | DISCUSSION | 196 |
| 6.1 | IMPACT OF OBJECTIVES OF INNOVATION ON INNOVATION ADOPTION | 196 |
| 6.2 | IMPACT OF FACILITATORS OF INNOVATION ON INNOVATION ADOPTION | 198 |
| 6.3 | IMPACT OF BARRIERS ON INNOVATION ADOPTION | 203 |
| 6.4 | TYPES OF INNOVATION | 205 |
| 6.5 | IMPACT OF INNOVATION ADOPTION ON BUSINESS PERFORMANCE | 205 |
| 6.6 | ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND INNOVATION ADOPTION | 207 |
| 6.7 | ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND BUSINESS PERFORMANCE | 211 |
| 6.8 | RESULTS OF INTERVIEWS CONDUCTED WITH EXPERTS AND ENTREPRENEURS IN THE INDUSTRY | 212 |
| 6.9 | PROBLEMS FACED BY ENTREPRENEURS | 214 |
| 6.10 | SUGGESTIONS OFFERED BY THE ENTREPRENEURS | 216 |
| 6.11 | SUMMARY OF FINDINGS | 217 |
| 6.12 | RECOMMENDATIONS | 222 |
| 6.13 | CHAPTER SUMMARY | 224 |
| 7 | CONCLUSION | 225 |
| 7.1 | SUMMARY OF THE THESIS | 225 |
| 7.2 | RESEARCH CONTRIBUTION | 229 |
| 7.3 | LIMITATIONS OF THE STUDY | 233 |
| 7.4 | FUTURE DIRECTIONS | 234 |
| 7.5 | CHAPTER SUMMARY | 235 |

| CHAPTER NO. | TITLE | PAGE NO. |
|--------------------|-----------------------------|-----------------|
| | BIBLIOGRAPHY | 237 |
| | APPENDIX I | i |
| | APPENDIX II | ii |
| | QUESTIONNAIRE | iii |
| | LIST OF PUBLICATIONS | xiii |

LIST OF TABLES

| TABLE NO. | TITLE | PAGE NO. |
|------------------|--|-----------------|
| 1.1 | Stages of innovation adoption as a process | 17 |
| 1.2 | Details of big clusters in India | 28 |
| 1.3 | SWOT analysis of SMEs | 30 |
| 4.1 | Operational definition of the variables under the study | 98 |
| 4.2 | Number of units in the knitwear cluster of Tirupur | 101 |
| 4.3 | Sample size determination table | 103 |
| 4.4 | Measurement constructs - scale and source | 108 |
| 5.1 | Demographic profile of the responding companies | 120 |
| 5.2 | Personal profile of the respondents | 122 |
| 5.3 | Product innovations generated by self and/ or customers | 123 |
| 5.4 | Opinion of the respondents | 124 |
| 5.5 | Responses on sources of information regarding innovations | 125 |
| 5.6 | Case summaries of the construct 'innovation objectives' | 127 |
| 5.7 | Case summaries of the construct 'leadership' | 128 |
| 5.8 | Case summaries of the construct 'market orientation' | 129 |
| 5.9 | Case summaries of the construct 'innovation climate' | 130 |
| 5.10 | Case summaries of the construct 'organizational structure' | 131 |

| TABLE NO. | TITLE | PAGE NO. |
|------------------|--|-----------------|
| 5.11 | Case summaries of the construct ‘competition and turbulence’ | 131 |
| 5.12 | Case summaries of the construct ‘collaboration purpose’ | 132 |
| 5.13 | Case summaries of the construct ‘collaboration status’ | 133 |
| 5.14 | Case summaries of the construct ‘research and development’ | 134 |
| 5.15 | Case summaries of the construct ‘barriers to innovation adoption’ | 134 |
| 5.16 | Case summaries of the construct ‘technological innovation adoption’ | 135 |
| 5.17 | Case summaries of the construct ‘administrative innovation adoption’ | 136 |
| 5.18 | Case summaries of the construct ‘marketing innovation adoption’ | 137 |
| 5.19 | Case summaries of the construct ‘innovation implementation’ | 138 |
| 5.20 | Case summaries of the construct ‘business performance’ | 139 |
| 5.21 | Most frequently adopted innovations | 139 |
| 5.22 | Most frequently implemented innovations | 140 |
| 5.23 | Reliability test- Cronbach’s alpha table | 141 |
| 5.24 | Factor structure matrix of loading and cross loading of ‘internal facilitators of innovation adoption’ | 144 |

| TABLE NO. | TITLE | PAGE NO. |
|------------------|---|-----------------|
| 5.25 | Factor structure matrix of loading and cross loading of ‘external facilitators of innovation adoption’ | 145 |
| 5.26 | Factor structure matrix of loading and cross loading of the constructs ‘objectives’ and ‘barriers’ of innovation adoption | 147 |
| 5.27 | Factor structure matrix of loading and cross loading of the constructs ‘innovation adoption’ and ‘implementation’ | 148 |
| 5.28 | Factor structure matrix of loading and cross loading of the construct ‘business performance’ | 149 |
| 5.29 | Measurement of structural model | 151 |
| 5.30 | Correlation matrix of latent variables (Descriptive statistics N = 384) | 153 |
| 5.31 | Causal paths with ‘innovation implementation’ as moderator | 155 |
| 5.32 | Regression results of causal paths between ‘innovation objectives’ and ‘innovation adoption’ | 157 |
| 5.33 | Regression results of causal paths between ‘leadership’ and ‘innovation adoption’ | 159 |
| 5.34 | Regression results of causal paths between organizational ‘climate for innovation’ and ‘innovation adoption’ | 160 |
| 5.35 | Regression results of causal paths between ‘market orientation’ and ‘innovation adoption’ | 161 |

| TABLE NO. | TITLE | PAGE NO. |
|------------------|---|-----------------|
| 5.36 | Regression results of causal paths between ‘organizational structure’ and ‘innovation adoption’ | 162 |
| 5.37 | Regression results of causal paths between ‘focus on R& D’ and ‘innovation adoption’ | 163 |
| 5.38 | Regression results of causal paths between ‘internal facilitators’ and ‘innovation adoption’ | 164 |
| 5.39 | Regression results of causal paths between ‘competition and turbulence’ and ‘innovation adoption’ | 165 |
| 5.40 | Regression results of causal paths between ‘collaboration purpose with the cluster members’ and ‘innovation adoption’ | 166 |
| 5.41 | Regression results of causal paths between ‘external facilitators’ and ‘innovation adoption’ | 167 |
| 5.42 | Regression results of causal paths between ‘barriers’ and ‘innovation adoption’ | 168 |
| 5.43 | Regression results of causal paths between ‘innovation adoption’ and ‘business performance’ | 170 |
| 5.44 | ‘Innovation adoption’ status of the respondents | 172 |
| 5.45 | ‘Innovation implementation’ status of the respondents | 173 |
| 5.46 | ‘Business performance’ status of the respondents | 173 |
| 5.47 | Association between ‘innovation adoption’ and ‘business performance’ categories | 175 |

| TABLE NO. | TITLE | PAGE NO. |
|----------------------|--|---------------------|
| 5.48 | Association between ‘ownership structure’ and ‘innovation adoption’ | 177 |
| 5.49 | Association between ‘size’ (no. of permanent employees) and ‘innovation adoption’ | 178 |
| 5.50 | Association between ‘size’ (no. of temporary employees) and ‘innovation adoption’ | 179 |
| 5.51 | Association between ‘age’ of business and ‘innovation adoption’ | 180 |
| 5.52 | Association between ‘education’ and ‘innovation adoption’ | 181 |
| 5.53 | Association between prior ‘experience’ and ‘innovation adoption’ | 182 |
| 5.54 | Association between ‘generation in business’ and ‘innovation adoption’ | 183 |
| 5.55 | Association between ‘segment’ and ‘innovation adoption’ | 184 |
| 5.56 | Association between ‘export orientation’ and ‘innovation adoption’ | 185 |
| 5.57 | Association between ‘ownership structure’ and ‘business performance’ | 186 |
| 5.58 | Association between ‘size’ (no. of permanent employees) and ‘business performance’ | 187 |
| 5.59 | Association between ‘size’ (no. of temporary employees) and ‘business performance’ | 188 |

| TABLE NO. | TITLE | PAGE NO. |
|----------------------|---|---------------------|
| 5.60 | Association between ‘age’ of the business and ‘business performance’ | 189 |
| 5.61 | Association between ‘education’ and ‘business performance’ | 190 |
| 5.62 | Association between prior ‘experience’ and ‘business performance’ | 191 |
| 5.63 | Association between ‘generation in business’ and ‘business performance’ | 192 |
| 5.64 | Association between ‘segment’ and ‘business performance’ | 193 |
| 5.65 | Association between ‘export orientation’ and ‘business performance’ | 194 |

LIST OF FIGURES

| FIGURE NO. | TITLE | PAGE NO. |
|-----------------------|--|---------------------|
| 1.1 | Conceptual model based on diffusion of innovation theory | 21 |
| 1.2 | India's textile export trends (2006-2011) | 33 |
| 1.3 | Indian textile industry- Porter's diamond analysis | 34 |
| 1.4 | Export turnover of Tirupur cluster | 37 |
| 1.5 | Export destinations of Tirupur knitwear | 38 |
| 1.6 | Tirupur knitwear cluster eco-system | 39 |
| 1.7 | Knitwear value chain | 40 |
| 2.1 | Conceptual model | 72 |
| 2.2 | Conceptual model - Level 1 | 73 |
| 2.3 | Conceptual model - Level 2 | 73 |
| 2.4 | Internal facilitators - First order constructs | 74 |
| 2.5 | External facilitators - First order constructs | 75 |
| 2.6 | Innovation adoption - First order constructs | 75 |
| 5.1 | Path significance and regression coefficients for the structural model | 152 |
| 5.2 | Innovation implementation as a moderator | 155 |