Entrepreneurial Networks and Small Business Development:
The Case of Small Enterprises in Sri Lanka

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It was in 1992 that I worked as a research assistant to Prof. dr. W.D. Lakshman, Dr. S. M. P. Senanayake and Dr. Philippe Regbier in the area of small and medium industry in Sri Lanka. I visited a number of small enterprises as well as a number of small business supporting agencies. I interviewed small entrepreneurs, employees, and officers. It was the time when I started to think of further studies on linkages among small businesses. In 1996, I formally started this research project as a Ph.D. program. It was written as a Ph.D. thesis at the Eindhoven University of Technology under the supervision of Prof. dr. Geert Duysters and Prof. dr. John Hagedoorn. Throughout this period, many individuals and institutes supported me. I would never have been able to complete this thesis without their advice, commitment and support. This thesis is on entrepreneurial networks and small business development. Now I indeed realize theoretically as well as practically that nobody will be able to succeed in his or her business without better personal networks. In this acknowledgement I wish to thank several people who, in some way, have helped me during the course of this project.

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If I forgot someone, let me apologize in advance.

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# Contents

*Acknowledgements* ix

*List of Tables* xi

*List of Figures* xii

*Acronyms and Abbreviations* 

## Chapter 1: Research Overview

1.1. Introduction 1
1.2. Research Objectives 3
1.3. Research Questions 3
1.4. Definitions of Networks 4
1.5. Organization of the Thesis 6

### Appendix 1A

Diagram: Structure of the Thesis 9

### Appendix 1B

Network Typology 10


2.1. Sri Lanka: An Overview 13
2.2. The Structure of Small Enterprises of Sri Lanka 14
2.3. Definition of Small Enterprises 16
2.4. Policy Environment 18
2.5. Institutional Environment 20
2.6. Business Environment 24
2.7. Concluding Remarks: Need for a Coordination Mechanism 28

## Chapter 3: Theoretical Background and Literature Review

3.1. Introduction 31
3.2. Theories Related to Firm Networking 33
3.2.1. Transaction Cost Approach: *Organizational Economics* Perspective 33
3.2.2. Resource Dependency Approach: *Organizational Ecology* Perspective 35
3.2.3. Social Network Approach: *Sociological Economics* Perspective 38
3.2.4. Swedish Network Model: *Marketing Perspective* 42
3.3. Potential Syntheses Between Theories 45
3.4. Empirical Studies: *Introduction* 47
3.4.1. Enterprise Formation and Entrepreneurial Networks 48
3.4.2.1. Ongoing Business and Entrepreneurial Networks 51
3.4.2.2. Network Formation and Small Business Growth 52
3.4.3. Network Dynamics: *Different Phases vs Different Networks* 55
3.5. Conclusions 58
Chapter 4: Conceptual Framework: An Integrated Approach to Small Business Development

4.1. Introduction .......................................................... 61
4.2. Integrated Approach .................................................. 61
4.3. The Entrepreneur and his External Environment: Hard-Core and Periphery ................................................. 65
4.4. Network Model for Small Business Growth ......................... 66
4.4.1. Network of Actors .................................................. 69
4.4.2. Network of Activities .............................................. 71
4.4.3. Network of Resources ............................................. 72
4.5. Conclusion ............................................................... 74

Chapter 5: Research Methodology and Some Survey Finding

5.1. Introduction .......................................................... 77
5.2. Research Methodology ................................................ 77
5.2.1. The Research Paradigm ........................................... 77
5.2.2. Types of Research Designs ....................................... 78
5.2.3. The Choice of the Research Methods ............................ 80
5.2.4. Validity, Reliability, and Pilot Survey ......................... 81
5.2.5.1. The Population and Sample ................................... 82
5.2.5.2. The Sampling Method ........................................... 83
5.2.6. The Methods of Data Gathering of the Study .................. 84
5.2.7. The Method of Data Analyzing .................................. 88
5.2.7.1. Logit Model ..................................................... 88
5.2.7.2. Variables and Measurement of the Variables ............... 89

Part II

5.3. Some Survey Findings ............................................... 93
5.3.1. A Profile of Entrepreneurs ...................................... 94
5.3.2. A Profile of the Small Enterprises in the Sample ............... 98
5.3.3. Entrepreneurial Networks ....................................... 101
5.4. Conclusions ........................................................... 105

Chapter 6: Network Formation and Small Business Growth

6.1. Introduction .......................................................... 107
6.2.1. Impact of Network on Growth-Orientation and Expansion of Firms .................................................. 107
6.2.2. Membership in Various Clubs and Societies ...................... 111
6.2.3. Discussion with Relative and Friends ............................ 112
6.2.4. External Consultants .............................................. 112
6.2.5. Attending Seminars ................................................. 113
6.2.6. Trade Fairs .......................................................... 113
6.2.7. Contacts with Other Entrepreneurs .............................. 114
6.3.1. Methodology and Data ............................................ 115
6.3.2. Data Analysis and Variables ..................................... 116
### Chapter 9: Networks, Resources, and Small Business Growth

9.1. Introduction ................................................................. 187
9.2. Literature ................................................................. 188
9.3. Analytical Framework and Hypotheses ................................. 191
9.4. Methodology and Data ................................................... 195
  9.4.1. Variables ................................................................. 195
  9.4.2. Data Analysis .......................................................... 197
9.5. Results ................................................................. 197
  9.5.1. Network Resources and Entrepreneurial Networks ............... 197
  9.5.2. Interactive Effects of Network and Resources on Business
         Performance ............................................................. 200
9.6. Discussion ............................................................. 201
9.7. Conclusion ............................................................ 203

Appendix 9A: Estimated Logit Models of Networks of Resources on
  Actors’ Networks ........................................................... 206

### Chapter 10: Summary and Conclusions, Findings, Limitations,
Recommendation/Policy Implications, and Future Research Directions

10.1. Introduction ............................................................... 209
10.2. Summary ............................................................... 209
10.3. General Findings of the Study ......................................... 215
10.4. Limitation of the Study ................................................. 219
10.5. Recommendations and Implications .................................... 220
  10.5.1. Policy Recommendations and Implications ....................... 220
  10.5.2. Future Directions of Research .................................... 222
10.6. Conclusion ............................................................. 225

### Reference

Reference ................................................................. 227

Appendix A: Questionnaire .................................................. 259

Appendix B: Map 1, Sri Lanka (districts) ................................. 273
Appendix C: Map 2, Small Firm Distribution in Kurunegala District .... 274

Nederlands Samenvatting (Dutch Summary) ............................... 275

ECIS Dissertation Series .................................................. 276
List of Tables

2.1 Relative Shares of the Manufacturing Sector, 1971-1999 14
2.2 Different Definitions of Small Enterprises Used in Sri Lanka 17
3.1 Major Aspects of the Transaction Cost Approach 34
3.2 Major Aspects of the Resource Dependence Approach 38
3.3 Major Aspects of the Social Network Approach 42
3.4 Major Aspects of the Swedish Network Model 44
5.1 Summary of Quantitative and Qualitative Paradigm Assumptions 78
5.2 Summary Comparison of Different Data-Collection Methods 87
5.3 Choice of Control Variables 92
5.4 Personal Profile of Owners I 94
5.5 Distribution of Sample Enterprises: Rural and Urban 95
5.6 Personal Profile of Owners II (Level of Education) 96
5.7 Personal Profile of Owners III (Source of TCSs And MASs) 96
5.8 Personal Profile of Owners IV (Prior Occupation) 97
5.9 Reasons for Starting The Current Business 97
5.10 Profile of Enterprises I (Industrial Categories) 98
5.11 Profile of Enterprises II (Industrial Sector, Location & Age) 99
5.12 Profile of Enterprises III (Nature of the Organizations) 100
5.13 Location of Raw Material, Location of Market, and Market Channels 101
5.14 Relative Size of the Sub-Networks 103
5.15 Importance of External Actors in Each Phase 104
5.15 Summary of The Basic Characteristics of The Methodology and Survey 106
6.1 Comparison of Network Literature with Network Indicators 111
6.2 Network Formation Activities of the Respondents 118
6.3 Performance of Small Enterprises 119
6.4 Logistic Regression Analysis of Business Performance 120
6.5 Predicted Probabilities 121
6.6 Partial Correlations Matrix I 123
6.7 Partial Correlations Matrix II (Appendix 6A) 129
7.1 Different Phases, Different Networks, and Different Functions 134
7.2 Network Involvement (Percentage as Involved in Networking) 141
7.3 Initial Capital Sources of Small Business Entrepreneurs 142
7.4 Probability Table: Family Networks and Initial Capital 143
7.5 Average Network Density Measures 145
7.6 Regression Results: Networks on Firm's Lifetime (Years) 148
7.7 Multiple Regression Analysis: Models for Network Density and Network Size 149
7.8 Some General Characteristics of the Sample (Appendix 7A) 158
7.9 Pearson Correlation Matrix of Selected Variables (Appendix 7B) 159
7.10 Multiple Regression Analysis: Models for Network Density and Network Size 160
8.1 Elements of The Subcontracting Relationship 166
8.2 Subcontracting Engagement 168
8.3 Subcontracting Arrangements & Their Sectoral Distribution 169
8.4 Pattern of Subcontracts 170
8.5 Reasons for Receiving Subcontracts 172
8.6 Difficulties in Subcontracting Business: From the Perspective of Small Enterprises 173
8.7 Regularity and Stability of Subcontract Orders 173
# List of Figures

1.1 Structure of the Analytical Chapters 7
1.2 Structure of The Thesis (Appendix 1A) 9
3.1 Basic Structure of The Swedish Model 43
3.2 Where To Go 46
3.3 Network Model for Channeling of Resources 51
3.4 Dynamic Nature of Entrepreneurial Networks 56
4.1 Rationale, Structure, and Analytical Base of the Study 63
4.2 The Entrepreneur and His Environment 65
4.3 Integrated Conceptual Model of Small Enterprise 68
4.4 Relations in Entrepreneurial Networks of Actors 70
4.5 Channeling of Resources 73
5.1 Raw Material & Output Linkages Beyond the Boarders 100
5.2 Entrepreneurial Action Set 102
6.1 Elements of Network 109
6.2 Diagram of the Hypotheses 115
7.1 Model of Network Evaluation 133
7.2 Dynamic Nature of Entrepreneurial Networks 138
7.3 Importance of Network In Each Phase 141
7.4 Sources of Initial Capital 142
7.5 Spider-Web Chart of Enterprise Networking 144
7.6 Average Network Densities and Firms’ Life Time 146
7.7 Social Network Density and Firms’ Life Time 147
7.8 Organizational Network Density and Firms’ Life Time 147
7.9 Social Network Density and Owners’ Work Experience 147
7.10 Organizational Network Density and Owners’ Work Experience 147
8.1 Overview of Firm-Level Linkages 163
8.2 Inter-Organizational Relations 164
8.3 Subcontracts as Percentage of Total Sales 171
8.4 Conceptual Framework 176
9.1 Entrepreneurial Networks, Resources, and Business Performance 193
9.2 Cyclical Behavior: Networks, Resources, And Performance 194
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>A/L</td>
<td>Advance Level</td>
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<tr>
<td>BOI</td>
<td>Board of Investment</td>
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<tr>
<td>DCS</td>
<td>Department of Census and Statistics</td>
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<tr>
<td>DSI</td>
<td>Department of Small Industries</td>
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<tr>
<td>EDB</td>
<td>Export Development Board</td>
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<tr>
<td>EOND</td>
<td>Entrepreneurial Organizational Network Density</td>
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<tr>
<td>EONS</td>
<td>Entrepreneurial Organizational Network Size</td>
</tr>
<tr>
<td>ESND</td>
<td>Entrepreneurial Social Network Density</td>
</tr>
<tr>
<td>ESNS</td>
<td>Entrepreneurial Social Network Size</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GNP</td>
<td>Gross National Product</td>
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<td>HDI</td>
<td>Human Development Index</td>
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<td>IDB</td>
<td>Industrial Development Board</td>
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<tr>
<td>ILO</td>
<td>International Labor Organization</td>
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<tr>
<td>IML</td>
<td>Individual Money Lenders</td>
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<td>LDCs</td>
<td>Less Developed Countries</td>
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<td>LSEs</td>
<td>Large Scale Enterprises</td>
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<td>MANOVA</td>
<td>Multivariate Analysis of Variance</td>
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<td>MASs</td>
<td>Management and Administrative Skills</td>
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<td>NCC</td>
<td>National Craft Council</td>
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<tr>
<td>NDC</td>
<td>National Design Center</td>
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<tr>
<td>NGOs</td>
<td>Non-Governmental Organizations</td>
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<td>NIBM</td>
<td>National Institute of Business Management</td>
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<td>O/L</td>
<td>Ordinary Level</td>
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<td>NYSCO</td>
<td>National Youth Co-operatives</td>
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<td>PQLI</td>
<td>Physical Quality of Life Index</td>
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<td>RDA</td>
<td>Resource Dependency Approach</td>
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<td>SEDD</td>
<td>Small Business Development Division</td>
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<td>SLBDC</td>
<td>Sri Lanka Business Development Center</td>
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<td>SLHB</td>
<td>Sri Lanka Handicrafts Board</td>
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<td>SMEDP</td>
<td>Small and Medium Enterprise Developers’ Project</td>
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<td>SMI</td>
<td>Small and Medium Industry</td>
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<td>SNA</td>
<td>Social Network Approach</td>
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<tr>
<td>SNM</td>
<td>The Swedish Network Model</td>
</tr>
<tr>
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<td>Small Scale Enterprises</td>
</tr>
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<td>Transaction Cost Approach</td>
</tr>
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<td>Technical and Craft Skills</td>
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<td>ULRM</td>
<td>Univariate Logistic Regression Model</td>
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<td>UNDP</td>
<td>United Nation Development Program</td>
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Chapter One

Introduction

1.1. Introduction

Historically, economic development has taken place through rapid industrialization led by agricultural transformation increasing productivity per unit of labor and land. The growth-oriented strategies pursued in the past in many developing countries, particularly in Asia, failed to address their major economic problems such as unemployment, low income and poverty (UNIDO 1991). Consequently, the new growth-oriented strategies followed by newly industrialized countries address these economic problems in different ways: attracting multinational companies through foreign direct investment promotion, introducing liberalization policy, etc. The role of the Small Scale Enterprises (SSEs) has become very significant\(^1\) in this recent trend, particularly with regard to flexible specialization\(^2\) as against the 'Fordist'\(^3\) pattern of accumulation. In addition, it has recently become difficult to speak of economic development, without considering the effects of market and economic internationalization and globalization. Within these internationalization and globalization trends, the role of small firms is also very significant in developing countries (Julien 1996, Van Dijk 1993). SSEs take advantage of globalization by turning increasingly to the new resources offered by the opening-up of international borders and in some cases by increasing exports either directly or indirectly (Julien 1996).

Nevertheless, small firms are unable to achieve their goals by themselves alone. To do so, small firms need supports and resources from ‘outsiders’\(^4\) such as other firms (Meller and Marfan 1981, Visser 1997), supporting institutions (Allesch 1993, Gibb 1993, Gibb and Zoltan 1996, Lim 1994, Sarder et al. 1997), and relatives and friends (Bridge et al. 1998, Birley 1985, Johannisson 1988.). Thus, many studies have argued that the success of small firms depends on the supporting networks (Donckels and Lambrecht 1995, Greve

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\(^4\) Outsiders or external actors. They are not directly employed by the firm
Chapter One: Introduction


In this study, networks are defined as personal relationships between an entrepreneur and his ‘external actors’ (Aldrich and Zimmer 1985, Birley 1985, Johannisson 1986, 1988). The external actors (outsiders) can be individuals or organizations. They are not directly employed by the entrepreneur. Entrepreneurs build up such network relationships (contacts) in order to obtain necessary resources and to perform activities. In this view, entrepreneurial networks consist of four major components, namely: actors, resources, activities and linkages.

Collaborative linkages and networks, as an important strategy for the development of small business sector, are increasingly the focus of attention for entrepreneurs/managers, public policy makers and academics\(^6\) (Gibb 1993, Gibb and Haas 1996). For example, a number of studies (For example, Boyd 1990, Butler and Hansen 1991, Chu 1996, Monsted 1993, 1995, Ostgaard and Birley 1996, Steier and Greenwood 1995, 2000, Sverrisson 1997, van Dijk and Rabellotti 1997) have testified the importance of networking in entrepreneurial success and economic development. Though numerous articles have been recently published in academic journals and conference proceedings, a substantial academic work with supportive empirical material with its focus on small enterprise networking in developing countries is still not available. Accordingly, there is indeed a knowledge gap in our understanding of how entrepreneurial networks are formed and how they operate in less developed countries (LDCs). As an attempt to fill the gap in the contemporary literature, this study will examine how entrepreneurial networks and linkages impact on small business growth in Sri Lanka.\(^7\) To examine the effect, 325 small entrepreneurs in Sri Lanka were interviewed. Sri Lanka is a developing country in South Asian region.

\(^5\) Such relationships ‘may reduce costs of exchange and production; they may give the parties some control over each other; …’ (Johanson, Jan and Mattsson, L.G, 1987, ‘Interorganizational Relations in Industrial Systems: A Network Approach Compared with the Transaction-Cost Approach’. International Studies Mat. and Org., Vol. XVII (1): 37)


\(^7\) See chapter 2 for further information about Sri Lanka, her economy and situation of small-scale sector.
1. 2. Research Objectives

The objectives of the study are as follows:

1) To explore how and why entrepreneurial networks of actors differ in each phase of a small business enterprise.

2) To examine the role and impact of entrepreneurial networks on small business performance.

This study in general is an attempt to understand the organizational behavior of small firms in a developing country within the context of how organizations relate to other actors in their environments.

1. 3. Research Questions

The economists' major problem is scarce resources. Their arguments always deal with cost minimizations in the allocation of scarce resources. In this regard, the perfect model given in economic theory is the perfectly competitive market model, through which resources are supposed to allocate the best solution at the lowest possible cost. Though perfect competition is theoretically correct and proven, such markets are not in practice not feasible due to imperfect information, the presence of regulations, various other involvements and barriers in the market. Such barriers create uncertainty, high asset specificity and small numbers bargaining in market, causing transaction costs to increase. High transaction costs have become one of the major obstacles for optimal resource allocation under market mechanism. Accordingly, firms look for alternatives to markets (Williamson 1991). In advanced countries in particular alliances and joint venturing are being structured and formed in every nook and cranny; it is no matter whether they are among the large firms or small firms. However, when comes to the small enterprises in LDCs, the story becomes different. The small enterprises in developing countries are also developing their linkages and relationships with other actors in their environment in order to obtain necessary resources, information and other moral support but the nature of these relationships is informal and personal. Researchers prefer to define these relationships as informal networking because the relationships do not have formal, written agreements. Recently researchers in sociology, management and organizational behavior have paid considerable attention to the rapid development and widespread nature of the networking phenomenon (for example, Aldrich et al. 1986, 1987, Aldrich and Whetten 1981, Aldrich and Zimmer 1986, Birley 1985, 1987, 1990, Birley et al. 1988, 1991, Butler and Hansen 1991, Chu 1996, Greve 1995, Johannisson 1986, 1996 etc.) However, little attention has been paid to understanding how these networks change in different phases of a firm's development; and what the impacts are on the business performances of a firm (Birley and Cromie 1988, Butler and Hansen 1991, Greve 1995). Taken that as given, this study
attempts to address the following main research questions. Further specific questions will be presented in the respective chapters.

(1) Why and how do entrepreneurs form their social and business networks?
(2) Why and how do these entrepreneurial networks differ in each phase of a firm?
(3) How do small entrepreneurs utilize these networks for business success? and
(4) What are the role and the impact of the networks on small business performances?

This study is based on an empirical work on networks in a random sample of small business enterprises, located in Sri Lanka, which is a liberalized, underdeveloped economy. The study investigates the entrepreneurial network relations in various phases of a small business, and identifies the relationship between those networks elements and business developments in terms of market expansion and entrepreneurial success.

According to the existing literature, a ‘network’ is a very complicated concept; it has different definitions; it has different terms; it is discussed in different disciplines. Therefore, before proceeding further, in order to obtain a better understanding of the networks concepts let’s define the concept.

1.4. Definitions of Networks

The concept of networks and networking was originally developed in sociology and anthropology, then used in organizational behavior and small business development. Researchers in these fields generally see networks as a specific set of relations amongst various groups/actors (Aldrich and Whetten 1981, Curran et al. 1993, Donckels and Lambrecht 1995, Johannisson 1986, Szarka 1990). According to this definition, first the network is a set, and secondly, within the set specific types of relationships obtain (Curran et al. 1993, Donckels and Lambrecht 1995, Szarka 1990). However, throughout the existing literature particularly in organizational behavior, two different and conflicting definitions of networks can be found. The first is that networks and networking have become fashionable conceptual devices for theorizing about the internal organization of larger businesses. This conceptualization tries to understand localization in business services. The second is that entrepreneurship has been conceptualized as a dynamic process that requires linkages or networks between key components of the process for its successful development. The second approach was originally developed by Aldrich and Zimmer (1986). This approach is viewed as being embedded in a social context, channeled and facilitated or constrained and inhibited by people’s positions in social networks (Aldrich and Zimmer 1986, Aldrich et al. 1986, 1987, Fombrum 1982, Granovetter 1976, 1985, Gray 1985, Larson and Starr 1993). The focus of this study is on the second approach.
Entrepreneurial Networks and Small Business Development


However, the concept of networks is still ambiguous and contradictory when it comes to the analysis of small enterprises and their networks; for example, entrepreneurial social relations, inter-organizational relations, etc. Recent studies on small business enterprises and their networks are largely concerned with the entrepreneur and his network relations (Birley and Cromie 1988, Cromie et al. 1994, Curran et al. 1993, Donckels and Lambrecht 1995, Dubini and Aldrich 1991, Falemo 1989, Ozcan 1995). In this study therefore, networks are also defined as entrepreneur’s personal relationships with his ‘external actors or outsiders’ (Aldrich and Zimmer 1985, Birley 1985, Birley and Cromie 1991, Johannisson 1986, 1988). In other words, network is here defined as long-term contacts between small business owners and external actors (persons or organizations) in order to obtain information, moral supports and other resources. The entrepreneur’s personal relationships are taken into consideration in this study because the 'entrepreneur' is the main composer in a small business firm. He is the owner. The external actors (outsiders) can be individuals or organizations (Birley 1985, Birley and Cromie 1988, Chu 1996, Dubini and Aldrich 1991). They are not directly employed by the entrepreneur. Entrepreneurs build up such network relationships (contacts) in order to obtain necessary resources and to perform activities. In this view, entrepreneurial networks consist of four major components, namely: actors, resources, activities and linkages.

Importantly, however, networks are not static: they are dynamic (Birley and Cromie 1988, Butler and Hansen 1991). Relationships, as Grabher (1993: 5) reminds us, are 'continuously constructed and reconstructed during interaction'. While the entrepreneurial network often becomes ‘amplified’ as the firm grows, entrepreneurs typically encounter difficulties in extending and sustaining appropriate relationships (Venkataraman 1989).

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8 Dubini and Aldrich (1991: 307) for example, distinguish between a 'personal' network, i.e. 'those persons with whom an entrepreneur has direct relations' and an 'extended' network, i.e. relationships between an organization and the external world.
Chapter One: Introduction

Network Typology
Small firms' networks have been categorized in a number of ways (see Appendix 1B). This study employs the concept of social networks and inter-organizational networks to analyze the network linkages in small enterprises in Sri Lanka. This is similar to the Johannisson and Birley's definitions of formal and informal linkages. Birley (1985) classified them as formal and informal networks. According to Birley (1985), formal networks consist of formal organizations such as banks, accountants, etc, while informal networks include relatives, friends, etc (see Appendix 1B). We further divide the inter-organizational networks into two components based on the nature of organizations and their facilities provided for small enterprise sector. These two components are the support networks and the inter-firm networks. NGOs, government agents/agencies, and banks and other financial institutions are considered as the support networks for this study because the main purpose of the members of the support networks is to provide various supports for the small business sector. Banks and financial institutions are considered as actors on support networks because the facilities provided by these institutions for the small business sector in Sri Lanka are support-oriented rather than business-oriented. Obviously, the members of inter-firm networks are the other enterprises, both small and large. In addition, in chapter 7, we identify business-focused networks, which include both individuals who are in the pre-existing social network, and new individuals and organization. Accordingly, the network consists of professional (Birley and Cromie 1988) such as banks, lawyers, accountants, etc with whom the entrepreneur has a relationship primarily concerned with his business.

1.5. Organization of the Thesis

This thesis is organized into ten chapters excluding the appendixes and the bibliography. Introductory chapter, chapter one, sketched the research questions, the research objectives, definition and typology of networks, and the structure of the thesis. In chapter two, we present the general background of small enterprise in Sri Lanka, which also includes definitions of small enterprises, policies, and institutional set-up. It further discusses the necessity of a coordination mechanism for the development of small business sector.

Chapter three has two major parts. In the first part, a few selected network approaches and models and potential syntheses among them are discussed. This includes transaction cost approach, resource dependence approach, social network approach and the Swedish network model. We chose these four approaches to review because they provide rationale, analytical base, and structure for our study. The rationale for our study is that a small firm

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9 This is similar to Bryson et al. (1993) identification of support networks (see Appendix 1B).
depends on its external environment due to lack of resources and less competitiveness in market. The entrepreneurial networks also to reduce transaction costs and the risk of failure. The analytical base of our study comes from the basic premise of the social network approach: that is, first, that the entrepreneurial process involves the gathering of scarce resources from the environment; and second that resources are usually obtained through the entrepreneur’s personal network. We need a structural framework which must include actors, resources, activities and linkages because all of these components are interrelated. The Swedish network model provides this structure. The second part of chapter 3 is devoted to discuss recent empirical studies relevant to our objectives. Firstly, the second part pays attention to the existing empirical studies on the impact of entrepreneurial networks on enterprise formation. Secondly, attempts are made to discuss empirical studies on the impact of entrepreneurial networks on on-going business performance. Finally, we discuss empirical studies related to the dynamic nature of entrepreneurial networks.

**Chapter four** is mainly devoted to the conceptual framework of this study, which is employed to analyze the relationship between entrepreneurial networks and small business growth. The discussion of the conceptual framework helps to identify the basic elements for the intended study (actors, activities, resources and linkages), and their impact on the performance of a single small firm. These basic elements are interrelated.

**Chapter five** of this book presents the research methodology of the study. It comprises two parts including the basic research design and the basic characteristics of our sample data. The first part of chapter five deals with the research paradigm, research validity and reliability, the survey method, the method of sampling, the method of data gathering, the measurement of the data, and the method of data analysis of the study. Part two of the chapter presents the basic characteristics of the sample including personal profile of the entrepreneurs, general profile of the small enterprises, and entrepreneurial networks. These basic characteristics are very useful for the comprehensive analyses that appear in later chapters (analytical chapters).

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**Figure 1.1: Structure of the Analytical Chapters**

- **Network Formation**
  - Chapter 6

- **Networks of Actors**
  - Chapter 7

- **Networks of Activities**
  - Chapter 8

- **Networks of Resources**
  - Chapter 9
Chapter One: Introduction

There are four analytical chapters dealing with network formation, networks of actors, networks of activities, and networks of resources (see figure 1.1). The first analytical chapter, which is chapter six of this book, tests the relationship between network formation and small business development using our sample data.

Chapter seven deals with the networks of actors: how actors in networks change over time; what is the impact of these actors in each phase of a firm's development? The purpose of the chapter is to evaluate different networks of actors in different phases of a small firm. The entrepreneurial network evaluation model developed by Butler and Hansen (1991) is used to provide the analytical guide for the discussion in chapter seven. The model, which consists of three phases of a firm: (1) entrepreneurial phase; (2) business start-up phase; and (3) on-going business phase, predicts that a firm needs different types of networks for the different phases. The chapter begins with an introduction of the model and later develops testable hypotheses. The third section of the chapter is devoted analytical methods. Then, the fourth section presents results. Finally, section five discusses the results and concludes the chapter.

Chapter eight will discuss networks of activities. The chapter consists of four major parts. The first part provides a brief overview of various types of business linkages that are relevant to small enterprises in particular. The second part examines the basic characteristics of subcontracting activities among the small enterprises in our sample. The third section analyzes the impact of entrepreneurial networks on subcontracting activities. Finally, we discuss the results and conclude them. This chapter on the whole examines why entrepreneurial networks are important for small firms to engage in subcontracting activities.

Chapter nine is on networks of resources. The questions posed in the chapter are whether there is a correlation between the entrepreneurial networks and receiving necessary resources to the firm; there is an impact of these supporting resources on the performance of a small firm; and there are interactive effects of the networks of actors and the networks of resources on the business performances. The network of resources means the resources that entrepreneurs can obtain through their personal networks. ‘Bought’ resources are not taken into consideration for the analysis. The chapter argues that network building is an investment because entrepreneurs can acquire information and other resources they need at the minimum cost.

Finally, chapter ten concludes the thesis. It includes a summary, research findings, limitations of the study, recommendation/policy implications and directions for future research.

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10 Any entrepreneur can buy ‘bought’ resources from market at any time. It does not need long-term and embedded personal relationships.
Structure of the Thesis

Introduction
Chapter 1

Sri Lanka: Overview
Chapter 2

Theoretical Background and Literature Review
Chapter 3

Conceptual Framework
Chapter 4

Methodology
Chapter 5

Network Formation
Chapter 6

Actors
Chapter 7

Activities
Chapter 8

Resources
Chapter 9

Conclusion
Chapter 10
Appendix 1B

Network Typology

Szarka (1990) categorized entrepreneurial networks into three components: (1) exchange networks, (2) communication networks and (3) social networks. The exchange network is defined as the commercial transaction between small firms and other organizations, and it is formed by the trading partners of the firm. The exchange network is further divided by Johannisson (1987a) into three elements; production networks, symbolic networks and personal networks. Production networks occur with and between trading organizations. In these networks, the flow of transactions defines the linkages. The flows of transaction may be in terms of materials, money, personnel or information. Each transaction is carefully recorded and balanced. Symbolic networks originate from community affiliations. In symbolic networks, existing norms discourage unorthodox choices of new network linkages. These ties often remain latent and weak. Personnel networks are based on true friendship. In a personal network, everybody is somebody (Johannisson 1987a). In a production network, the linkages are impersonal. In a symbolic network, the linkages are personal. While the basic rational of a production network is egoism, in symbolic networks, social control and pressure toward conformity reduce the risk for unexpected and deviant behavior. The dyadic ties in personal networks are built upon mutual trust (Johannisson 1987a). An exchange network is influenced by and interacts with the communication network and the social networks. The communication network (Szarka 1990) is the collection of those organizations and individuals with which the small firm has non-trading links that inform its business activities such as consultants and banks, the local and central government and its agents. Communication content (Aldrich and Whetten 1981) that can be formal or informal is the passing of information one person to another. Relationships are, further, characterized by official and semi-official information flows. Of course, some of these information flows do not involve monetary exchange such as sharing of technology and marketing information with other firms. The social network is formed by family, friends and acquaintances. Such contacts are important because they have an impact upon the development of the small firm. The core actor is here the small firm, the entrepreneur.

A different identification was done by Birley (1985). He divides entrepreneurial networks into two categories: formal and informal. Formal networks\(^ {11}\) include relations to, for example, banks, accountants, the local Chamber of Commerce, etc. Informal network is

\(^{11}\) Here ‘formal network’ does not mean formal networks such as alliance, joint ventures. To avoid the readers getting confused on these two concepts, throughout the study when we use the concept formal networks to refer alliance and joint ventures, it will always be specified with examples. Otherwise, what we mean by formal networks are in fact an entrepreneur’s personal relationships with outside formal organizations.
Entrepreneurial Networks and Small Business Development

relations with family members, friends, previous colleagues or previous employers and acquaintances. Curran et al. (1993) however argue that networks and networking can best be formulated within voluntary and compulsory networks. Compulsory networks are those to which an organization must belong in order to survive and operate successfully. The network relations, accordingly to Curran et al. (1993) such as with local chamber of commerce or sport club, are voluntary. They further argue that many of these networks are support networks (for example: banks, enterprise agencies, business advisers, etc.), which function to provide business advice, information and capital. But Bryson et al. (1993) argue that the two types of networks identified by Curran et al. (voluntary and compulsory) overlap with those two types of networks (formal and informal networks) as identified by Birley (1985).

Bryson et al. (1993) divided entrepreneurial networks into three categories: demand-related networks, supply-related networks, and support functions such as banks and accountants. Their division is more market oriented. Bryson et al. (1993) have emphasized informal support networks, but not social networks. According to Bryson et al. (1993), the demand-related network comprises ties associated with clients, obtaining new business and the maintenance or establishment of contacts with clients. The second type that is the supply-related network covers network ties associated with the cooperative supply of service or product. The third considers of support networks, for example banks, business advisers, family and friends. Supply-related networks are further divided into two types by Bryson et al. (1993): firstly, small business service firms form networks with other small firms, or even individuals to increase the range of services and advice they can provide; secondly, sole practitioners combine together into a network to provide a formal vehicle for their activities.

Butler and Hansen (1991) identify three types of networks: social network, business-focused network and inter-organizational strategic network. They suggest that at the entrepreneurial phase of a business, the social network provide ideas for the entrepreneur. The business-focused networks then develop gradually and are influenced by the nature of the entrepreneur’s social network. The final stage, that is the ongoing phase, inter-organizational strategic networks not only reduce the firm’s risk of failure but also provide advantages which are not obtainable as an isolated entity.
Chapter Two

Small Enterprises in Sri Lanka: Policies, Regulations and Business Environment

2.1. Sri Lanka: An Overview

Sri Lanka is located 800 km north of the equator, adjacent to the southern tip of India. With an area of 65,610 sq. km, the island is inhabited by 18.8 million people (1998 mid year). According to the World Bank, the country is gradually approaching the income level of a middle income country. In 1999, its per capita income was US $ 833. The economy grew by 4.2 percent in 1999.\(^{12}\) In addition, the country ranks high on the Physical Quality of Life Index (PQLI) and the Human Development Index (HDI). For example, in 1995 the HDI was 0.72. In terms of the PQLI, Sri Lanka is one of the highest in Asia. The country has a low infant mortality rate of 1.4 percent (1997), a high literacy rate of 91.8 percent (1998), and a high life expectancy of 72.5 years (1998).

In terms of production, Sri Lanka is primarily an agricultural country. The main crop is rice. Tea, rubber, coconut, and spices are important commercial agricultural crops. In 1999, the contribution of the agriculture sector to GDP growth was 24.1 percent. The agricultural sector grew by 4.8 percent in 1999. However, over the past few years the manufacturing industry has grown significantly. Recently, the main source of growth in the economy has been the manufacturing sector. In 1999, 17.6 percent of GDP was derived from manufacturing, and the sector grew by 5 percent. Textiles, wearing apparel and leather products are the major industrial products. For example, textile, wearing apparel and leather products constituting 44 percent (in 1998) accounted for the largest value of industrial production. The service sector, which included transport, tourism, communication, trade, financial services, public administration, defense and other services, contributed 48 percent of the growth in GDP in 1999. The sector grew by 4 percent in 1999. Tourism and financial services play a major role in the service sector.

As mentioned above, in recent years the manufacturing sector appears to have played a prominent role in the economy relative to the other economic activities; especially in terms of expanding production, export, and employment since the introduction of the liberalized economic policies in Sri Lanka in 1977. The contribution of the manufacturing sector to GDP growth was estimated at approximately 14.7 percent in 1977. In 1999, it accounted 17.6 percent. The total industrial exports as a percentage of GDP increased from about 14 percent in 1977 to 51 percent in 1995.\(^{13}\) Industrial sector employment as a percentage of

\(^{12}\) This was achieved despite the continuing civil war in the North and East of the Island.

\(^{13}\) Recent years, the proportion has declined, for example, it was around 31 percent in 1999, because the industrial sector particularly its export was affected by the slowing down of world trade due to the East Asian crisis.
total employment in the economy increased from about 10 in 1977 to 16 in 1999 (see table 2.1). There is a high degree of concentration of manufacturing establishments in two sectors, namely; food beverages and tobacco, and textiles, wearing apparel and leather products. For example, textile and wearing apparel export as a percentage of total manufacturing export increased from about 16 percent in 1977 to 68.5 percent in 1999. These exports have now become far more important over the last two decades than agricultural exports that dominated exports before 1977.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP %</th>
<th>Employment %</th>
<th>Total Export %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>18.2</td>
<td>10.0</td>
<td>1.2</td>
</tr>
<tr>
<td>1977</td>
<td>14.7</td>
<td>10.2</td>
<td>14.1</td>
</tr>
<tr>
<td>1999</td>
<td>17.6</td>
<td>16.3</td>
<td>31.3</td>
</tr>
</tbody>
</table>

The average rate of growth of the GDP is around 4.5 percent after 1977. Since 1997, the highest growth recorded in 1978 was around 8 percent. In 1999, the Sri Lankan economy grew by only 4.2 percent. As mentioned above, the per capita income was US $ 833 in 1999. In addition to the lower level of income, the rapid rise in population has no doubt aggravated the unemployment problem. The average annual unemployment rate is around 20 percent with recorded high unemployment rate among youths in the 20 to 29 age group. The whole story shows that it is important to shift policy instruments to support labor intensive industries such as SMEs.

2.2. The Structure of Small Enterprises of Sri Lanka

Any attempt to examine the small business sector of Sri Lanka is hindered by a lack of systematic information on its size and structure. Despite there having been a number of sample studies conducted by various agencies from time to time, it is rather difficult to piece them together and make a coherent picture. This is due to the variety of ways in

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14 On the basis of purchasing power parity, Sri Lanka’s per capita income was estimated at US dollars 2625 (Sources: Central Bank of Sri Lanka 1999)

15 The average annual growth rate of population between 1978 and 1999 is 1.45 percent.

16 It would be very serious when one examines small ‘enterprises’ since most of the sample studies are carried out on manufacturing industries. Enterprises include service sector businesses, informal sector businesses as well as manufacturing industries.
which small business is defined by different agencies of the government as well as non-government (see section 2.3 in this chapter).

Nevertheless, according to recent available statistics from various sources, the small industries are much more labor intensive than larger industries. For instance, their capital-labor ratio is less than one-third of that of manufacturing as a whole. The productivity of the sector is considerably lower.

Turning now to the structure of the sector, the available data from the Department of Census and Statistics (DCS) show that the industries with less than 9 workers accounted for about 29 percent of the total establishments in the manufacturing sector.\(^\text{17}\) They employed only 2.01 percent of the total number of workers in the manufacturing sector. Their value added was only 0.31 percent of the total. Small industries employing 10 to 25 workers accounted for 28 percent of the total establishments; 4.8 percent of the total employment; and 1.9 percent of the value added. However, the total contributions of small enterprises, that would include in addition to small industries, micro enterprises (manufacturing and services), small-scale service units, informal small-scale enterprises to GNP, value added and employment should be much larger than those of small industries alone.

In the most recent study\(^\text{18}\) carried out in 1999, it is reported that, almost 70 percent of small enterprises in Sri Lanka are involved in manufacturing.\(^\text{19}\) The small enterprises in services constitute about 18 percent, most of which are in the engineering and textiles and apparel sectors. The major area of manufacturing is light engineering followed by textile and apparel, food and beverages, rubber and plastics, leather and leather products, and wood and wood products. The other major sectors in which small enterprises contribute are in sectors of construction materials, printing and paper products, agro-based products, animal husbandry and chemical products.

However, it is rather difficult to present a real and clear national or regional level picture on the small enterprise sector in Sri Lanka due to a lack of information. Although some agencies use sample studies to collect data, they use different definitions. Let us figure out definitions of small firm.

\(^{17}\) There is no available data on other sectors (services and informal).


2.3. Definitions of Small Enterprises

There is no single and clear definition of small and medium scale enterprises because, for example, a ‘small’ firm in, say, the petrochemical industry is likely to have much higher levels of capitalization, sales and possibly employment, than a small firm in the car repair trades (Storey 1994: 8). However, the terms ‘enterprise’ and ‘firm’ are also often used; in the vast majority of cases small establishments in developing countries are independent firms (Little 1987). Small enterprises can be categorized into diverse ways depending on a country’s pattern and researcher’s objectives.

For example, the Bolton Committee (1971) tried to overcome the problem of definition by formulating two categories of definition; an ‘economic’ definition and a ‘statistical’ definition. According to the economic definition, there are three criteria for understanding a small firm; small firms had a relatively small share of their market place; they were managed by owners or part owners; and thirdly they were independent, in the sense of not forming part of a large enterprise. Meanwhile, the statistical definition was designed to address three main issues. The first is to quantify the current size of the small firm sector and its contribution to economic aggregates. The second purpose is to compare the extent to which the small firm sector has changed its economic contribution over time. Finally, the statistical definition has to enable a comparison to be made between the contribution of small firms in one country with that of other nations (Storey 1994: 9). According to the definitions used by the Bolton Committee, the ‘smallness’ varies sectorial.

An alternative economic definition was given by Wynarczyk et al. (1993). They argue that there are three central respects in which small firms are different to large firms: uncertainty, innovation and evolution. The central distinction between large and small firms is the greater external uncertainty of the environment in which the small firm operates, together with the greater internal consistency of its motivations and actions. The second difference between large and small firms is their role in innovation. Schumpeter (1934) saw small firms playing a role through the introduction of totally new products, and Rothwell (1989) saw that the early development of the semiconductor industry in California stemmed from the establishment of small firms which were able to grow extremely rapidly. Thus, the third area of difference between small and large firms is the much likelihood of evolution and change in the smaller firm.

Another type of classification, given by the lead of the European Commission, is widely used by various researchers recently and is more appropriate than the Bolton Committee. The SME sector itself is dis-aggregated into three components: micro-enterprises (between 0 and 9 employees), small enterprises (between 10 and 99 employees), and medium enterprises (between 100 and 499 employees). According to this definition, a clear break-point on number of employees can be identified.
The World Bank's (1978) working definition of small scale included firms with up to a maximum of US$ 250,000 of fixed assets excluding land in 1976. Furthermore, developing in the main quantitative criteria, Staley and Morse (1965) cited a wide variety of administrative and statistical definitions of small industry adopted in different countries.

Whatever the quantitative criteria used, SMEs are considered to show certain qualitative characteristics making them distinct from large-scale enterprises. According to Staley and Morse (1965), the SMEs may include the following: relatively little specialization in management, close personal contacts, handicaps in obtaining capital and credit, and there are very many of them. The distinctions can be found in terms of outlay, product type, pattern of technology, and system of organization and management. These examples clearly prove that there is no single and clear definition of small-scale enterprises.

Sri Lanka also does not have unique criteria or a unique definition for the definition of small enterprises. Different government agencies and other organizations dealing with small enterprises in Sri Lanka use different criteria and different definitions in order to identify them. Among these criteria are the number of employees, the amount of fixed investment, and the nature of the business and the sector (i.e. formal or informal), in which the industry operates. Apart from the different criteria, various types of definition were adopted by different official agencies for administrative and statistical purposes (see Lakshman et al. 1991: 5). However, researchers are likely to have to continue using their own definitions of SMEs, appropriate to their particular objectives. For this study, we initially consulted the Department of Census and Statistics (DCS), Industrial Development Board (IDB), Department of Small Industries, and Ministry of Youth Affairs for the purpose of selecting our sample. These agencies have also used different definitions (see Table 2.2).

Table 2.2

<table>
<thead>
<tr>
<th>Institution</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Census and Statistics (DCS)</td>
<td>(a) No criterion involving capital</td>
</tr>
<tr>
<td></td>
<td>(b) Number of employees less than 25</td>
</tr>
<tr>
<td>Department of Small Industries (IDB)</td>
<td>(a) Initial capital not exceeding Sri lankan Rs.</td>
</tr>
<tr>
<td></td>
<td>4,000,000</td>
</tr>
<tr>
<td></td>
<td>(b) No employment criterion</td>
</tr>
<tr>
<td>Industrial Development Board (IDB)</td>
<td>(a) Fixed assets excluding land, buildings and</td>
</tr>
<tr>
<td></td>
<td>permanent working capital not exceeding Rs.</td>
</tr>
<tr>
<td></td>
<td>4,000,000</td>
</tr>
<tr>
<td></td>
<td>(b) Number of employees less than 50</td>
</tr>
<tr>
<td>Ministry of Youth Affairs</td>
<td>(a) Fixed assets not exceeding Rs. Division 500,000</td>
</tr>
<tr>
<td></td>
<td>(b) Employment not more than 3 persons excluding proprietor.</td>
</tr>
</tbody>
</table>

Sources: Adapted from Lakshman et al. 1991: 5.
As shown in table 2.2, these agencies have defined small enterprises with reference to number of employees and amount of fixed capital. According to their definitions, the ceiling on employment and fixed capital used are respectively 50 employees and Rs. 4 million excluding land, buildings and permanent working capital. In this study, we also used this definition, employees fewer than 50 and fixed capital less than Rs. 4 million, as we used their sources to identify our sample. However, fixed capital is likely to vary rather widely, given an employment size, depending on the types, nature and location of particular enterprises.

2.4. Policy Environment

Industrialization is the main tool in restructuring an economy. During the 1950s and 60s import-substitution was the key world phenomenon in promoting industrialization. In the early seventies, with the failure of the import-substitution industrial policy in many countries, we saw that there was a notable shift of emphasis away from import-substitution industrialization to export-oriented industrialization. This is the general world tendency. Sri Lanka is no exception, but follows the general tendency.

Although the industrial sector, as a focus of economic policy, was neglected during the colonial era, it was also given little attention during the 1950s and 1960s. After independence in 1948, Sri Lanka did not experience many problems for an approximately ten-year period. Import-export trade showed a positive picture within the decade. Economic balance was maintained due to plantation crop exports, mainly tea. There was therefore scarcely any industry, and in the early 1950s there was no industrial policy or any proper planning. According to Lakshman et al. (1991), until the late fifties, industrialization did not receive much attention due to the relative contemporary prosperity of the country brought about by favorable market conditions for traditional exports, especially by the rubber boom during the Korean war (1950-52) and the tea boom (1954-55). There was thus no attention paid to industrialization because there were no major economic problems until the late fifties.

Afterwards, Sri Lanka faced a number of economic problems, such as the balance of payments deficits, unemployment, slow economic growth, etc. Such problems and challenges led to various policy changes including import substitution industrialization policy. As mentioned above, this was also the world tendency in the first half of the 1960s. However, in Sri Lanka, the policies focused mainly on large-scale industries. A number of large-scale industrial enterprises were set up as state ventures. Those industries

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21 The colonial rule in Sri Lanka has focused on plantations, which was foreign trade oriented agricultural sector. Industrial development was almost totally neglected in this process.
Entrepreneurial Networks and Small Business Development

were based on import substitution, and also depended heavily on imported intermediate goods. Due to a high degree of protection provided to industrialists\textsuperscript{22} there were substantial inefficiencies in new industry as a whole, and financial losses were heavy in state industrial enterprises. However, within this import substitution industrialization strategy, we did not see industrial enterprise promotion activities.

Furthermore, when one goes through the industrial policy changes in Sri Lanka, no clear direction is discernable: whenever government changed, policies changed. Within this tendency, the government, which came to power in 1965, introduced a new policy package through the \textit{White Paper of 1966 on foreign investment'}. It was an attempt to attract foreign direct investments into the industrial sector with a view to enhancing the technological and managerial capabilities of local industry. At the same time, a dual exchange rate system, the official lower exchange rate and the higher normal exchange rate, was introduced by the government. Under the scheme, small enterprises had some advantages because small firms were allowed to import raw materials at the lower official exchange rates, while large firms had to import raw materials at the higher premium exchange rates.

It was not the end of the story. After new government came to power in 1970,\textsuperscript{23} the situation turned around: the newly elected government moved back to the pre-1965 style control regime. The government ideology was of state capitalism. Heavy and essential industry was reserved for state ownership. The allocation of resources not only between industry and other sectors but also among different industries was determined by the state. What’s more, rigorous controls were introduced and the exchange of currency was restricted, while import substitution was encouraged. Again, in 1978, with the change of government, a more market-oriented economic policy package was introduced, comprising: liberalization of import trade and exchange payments; abolition of the dual exchange rate practice, devaluation of the currency and the introduction of a unified exchange rate system within a floating exchange regime; removal of a number of key price controls; adoption of measures to attract direct foreign investments such as the setting up of Free Trade Zones, privatizing existing public ventures, introducing new institutions to support export promotion (Lakshman 1986). The banking system was also liberalized, with interest rates being allowed to fluctuate and the opening of private and foreign banks. Although economic difficulties were experienced again in 1983 and the late 1980s, further liberalization policies to achieve a free-market economy were put in place in 1989. Dunham and Kelagame (1993) identified this is as the second phase of liberalization. In

\textsuperscript{22} There were few private industrial enterprises. There were no proper policies to encourage private entrepreneurs.

\textsuperscript{23} This party (the United Front, Sri Lanka Freedom Party a coalition with Ceylon Socialist Party) controlled the county until 1977.
Chapter Two: Small Enterprises in Sri Lanka: Policies, Regulations and Business Environment

1991, a new government came to power but the liberalized economic policy has continued. It is the third phase of the liberalization, according to Dunham and Kelagame (1995)

Several studies on the impact of liberalization have tried to discover the effect on the small industrial sector. The studies argued that the small enterprises have generally failed to take advantage of the opportunities opened up by liberalization, either trade or financial liberalization, and have been harmed in many cases by its direct and indirect consequences. For example, the survey conducted by IDB in 1980 found that most of the small enterprises were not in a position to take advantage of liberalized trade. They had to depend on the mediation of large-scale trade. Accordingly, in many cases liberalization put the small enterprises at a relative disadvantage vis-à-vis the large firms. Small firms were also affected by competitive pressure from outsiders (due to their high technology and better quality). Previous studies found that the incentives provided for export promotion have not worked for small enterprise development. Financial liberalization also did very little to help small enterprises in Sri Lanka.

To sum up, in Sri Lanka, since independence in 1948 there has been no clear development strategy and industrial policy. The policies have been changed from time to time with changes in political power. When looking at the small business sector, the situation has been even worse. There has been no macro-level policy for the development of the sector although there have been some incentives provided by different programs. However, recently there have been a large number of institutions directly involved in the promotion of the small business sector in Sri Lanka.

2.5. Institutional Environment

As mentioned above, there are fairly large numbers of government organizations which provide a variety of assistance to small enterprises. Their assistance vary from formulating policies, strategies, and programs such as providing credit, training, technology, marketing sub-contracting, and management. In addition to the government organizations, there are a large number of NGOs and some private organizations involved in the promotion of the small business sector by providing various types of assistance. Many of them were set up after the 1977 reforms. The institutional structure, according to Lakshman et al. (1994a), is an extremely complex one, with substantial overlap and a

24 The government (the People’s Alliance) still rules the Island.


duplication of functions that may even create rivalry among different institutions. The Study\textsuperscript{27} conducted by ILO (International Labor Organization) in 1995 also emphasized this type of complexity. In this section, we will first introduce some of the major support agencies, including government, private and NGOs, which assist the small business sector in Sri Lanka. Secondly, we discuss the importance of a coordinated approach in order to promote small business sector efficiently and effectively.

**Existing Institutions for helping small enterprises:**

1. **The Ministry of Youth Affairs, and Sports**
   
The ministry of youth affairs, and sports is the main policy making body relating to youth and youth development in Sri Lanka. It conducts some small enterprise development programs, especially focused on the youth of the country. The ministry runs two major projects to promote entrepreneurship among youth: a) Small Entrepreneurship Development Division (SEDD), and b) National Youth Co-operatives (NYSCO).

   a) **Small Entrepreneurship Development Division (SEDD).** The ministry through SEDD conducts short-term entrepreneurship development programs (4–5 days). These short-term orientation programs are aimed at creating awareness of self-employment as a mean of employment. This division conducts its activities in close collaboration with the National Youth Cooperatives (NYSCO), Bank of Ceylon, People’s Bank, the National Youth Council, Industrial Development Board (IDB), and other relevant organizations involved in small and medium enterprises and entrepreneurship development of the country.

   b) **The National Youth Co-operatives (NYSCO).** NYSCO was established in 1981. The NYSCO organizes various kinds of social and economic development programs for the development of youth population. With regards to small business development, the programs of the NYSCO focus on entrepreneurship development, credit operation and counseling. The NYSCO has established its’ societies at rural level. Rural level societies are coordinated through district cooperatives. The NYSCO provides assistances, guidance and advice through its well-developed network.

2. **The Ministry of Tourism and Rural Industrial Development.** The Ministry has a rural and industrial development division. The division is responsible for policies and strategies to develop and promote small and micro enterprises. Small and micro enterprise development activities are implemented by the Ministry through five agencies under its control: (a) Department of Small Industries, (b) Industrial

Chapter Two: **Small Enterprises in Sri Lanka: Policies, Regulations and Business Environment**

Development Board (IDB), (c) Sri Lanka Handicrafts Board (SLHB), (d) National Design Center (NDC), and (e) National Craft Council (NCC).

a) **Department of Small Industries**: The Department provides training, technology and marketing assistance for small entrepreneurs. In addition, it also provides various self-employment supporting services to landless rural poor, school leavers, poor women and other disadvantaged groups. The Department has offices in every district.

b) **Industrial Development Board (IDB)**: The IDB has a nationwide service network. The Board is the principal SMB development institution and is responsible for the development of sub-sectors other than textile and cottages industries. They provide various facilities including technical assistance and consultancy, demonstrations, engineering services, skills training, research and development. One of its major programs is *industrial Estates*. In addition, the IDB encourages and promotes ‘Samurdi’ recipients to start-up self-employment ventures.

c) **Sri Lanka Handicrafts Board (SLHB)**: The purpose of the SLHB is to protect handicrafts industries. The board is helping marketing and export promotion of handicrafts. The SLDB has 17 retail shops and 227 Crafts Training/Production Centers. They provide training, counseling services, technology and marketing assistance. More recently the Board, through its network, buys handicraft items from over 3000 regular suppliers.

d) **National Design Center (NDC)**: The NDC provides information and marketing, training, technical and design assistance for small entrepreneurs engaged in the production of handicraft items. The Center helps in the development of appropriate new designs and products introducing efficient methods and technology. It also provides information and marketing facilities for handicraft producers.

e) **National Craft Council (NCC)**: The purpose of the Council is to preserve and develop the traditional craft sector. It provides training, financial support and assistance in official registration and securing bank loans to artisans and other micro level entrepreneurs towards realizing those aims.

3) **Sri Lanka Export Development Board (EDB)**: The EDB generally promotes export activities through technological information, entrepreneurship and management training, product design and development, market information and marketing assistance. Assistance is also provided for participation in trade fairs, contact promotion programs and inward/outward buying missions. The Board also has a special scheme for developing small and medium businesses for export through a network of regional offices.

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28 This is a government welfare program for poor people, to develop their social and economic standard. It is similar to the ‘Janasaviya’ program, which was run until 1994.
4) Department of Textile Industry: The Department mainly assists poor women, female heads of households, and school leavers throughout the country. It provides cash grants and other financial assistance, marketing assistance, skill training and other production related advice and training. The Department also provides quality assurance and other services to the textile industry.

5) Department of Labor: The department assists landless rural poor and independent artisans in the context of small enterprises in both rural and urban areas, and mainly provides skill training and other assistance related to production.

6) Women’s Bureau: The Bureau focuses on poor women, female heads of households and women artisan throughout the country. It provides various assistance for small enterprise development among women. Its services include cash grants, initial and working capital loans, entrepreneurship, management and skill development training, technology information, research and development assistance, and assistance for official registration and bank loans.

7) Sri Lanka Business Development Center (SLBDC): This is a non-profit organization established to develop and encourage business and industry. Among the aims of the Center are fostering entrepreneurship and upgrading and expanding management training and development.

8) Small and Medium Enterprise Developers (SMED) Project: This is also a non-profit organization set up as a joint collaboration with the German Friedrich Naumann Foundation and the Federation of Chambers of Commerce and Industry in Sri Lanka. The project provides consultancy services with respect to technology requirements in specialized areas.

9) National Institute of Business Management (NIBM): The institute conducts training programs to train and educate managerial and supervisory staff of SMEs in modern management and productivity aspects.

10) SANASA Movement: SANASA, which is a popular organization based on cooperative principles and predominantly a rural based movement, is the apex body of Thrift and Credit Cooperative Societies in Sri Lanka. It has more than eight thousand primary societies throughout the Island. This Movement provides credit and loan facilities, training and education, marketing, and insurance facilities for small entrepreneurs.
11) SARVODAYA Movement: This is also a rural based movement. The SARVODAYA movement conducts community development programs, which include social, economic, and cultural activities. The movement, throughout its well-established network, provides credits and loan facilities, training and education for self-employees and small entrepreneurs through its economic division.

To sum up, apart from the major department and agencies directly involved in the development of the small business sector, indirectly a number of government, private, and non-profit organizations provide various facilities for the development of the sector. On the other hand, apart from the national level institutes, there are a large number of regional level supporting institutes set up for the development of the small business sector. As previous studies (Alwis 1998, Lakshman et al. 1994a) found, there is no significant coordination of activities among the organizations in existence.

2.6. Business Environment

Regulations and taxation:

There is no strict legal enforcement of small business registration requirements in Sri Lanka. Most of the micro level and small enterprises have never registered. For example, according to Colombo Municipal Council reports, the total number of newly registered businesses in Colombo province amounted to 17,000 by 1997. In Kurunegala district, it amounted to about 3000 by 1997. These figures are probably an underestimate of the total number of new businesses in those areas, and most small enterprises in Sri Lanka were not registered anywhere. Registration is not obligatory, but a few would like to register as this is necessary when applying for bank loans. The main problem of registration is the complicated official work and a lot of paper work. Taxation is not a major problem.

A survey conducted by ILO (1995) found that taxation is not an important problem for the small firms in Sri Lanka because the amount of tax to be paid on turnover is not very significant. On the other hand, the obligations on micro and small entrepreneurs is also weak, simply as the net benefits of imposing dues on large are far bigger than pursuing the vast number of small units. Besides, firms with less than three employees are not liable for social security contributions. The important Termination of Employment of Workmen Act also does not come into effect if a company employs fewer than 15 persons. Although some of the government legislation and regulations should theoretically affect the small

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29 According to IDB reports the total number of small enterprises in Kurunegala district amounted to more than 7600 by 1998.

30 However, no data were available on tax contributions of enterprises by size.
entreprises, at the level of implementation, many small enterprises may be able to avoid them. Based on a survey of small and medium industry in the Kurunegala district, Lakshman et al., (1994a) indicate that government labor legislations and regulations do not affect small and medium industries seriously. According to their data, only 5 percent complained of the ‘serious’ or ‘moderate’ influence of labor regulations on business performance. The main government labor regulation includes minimum wages, labor tribunals, working standards, and statutory holidays. However, in the present situation of extensive tax benefits offered to large-scale export processing companies, it is clear that Government priorities are elsewhere.

**Infrastructure Facilities:**

Overall, the common infrastructure facilities including transport, water, telecommunications, electricity etc are very poor in Sri Lanka. These are the most important facilities for the industrial development. However, the Island is still dependent mostly on the network of roads that the British rulers constructed more than 50 years ago. The maintenance of the existing roads is very poor. Most of the small businesses suffer due to the poor road network. Small entrepreneurs also suffer from the problems of delay in obtaining electricity, water supplies and telecommunication facilities. However, entrepreneurs in rural and semi-urban areas surveyed by the ILO in 1986 did not rank lack of building and other physical facilities as a bottleneck. Based on evidence from different surveys, the ILO states that physical environment such as land, roads, electricity, is not obstructing the emergence of small businesses in Sri Lanka. But the data from a report of World Bank indicates that a further expansion on the national and international market of small enterprises may be hindered by the insufficiency of adequate modern communication provisions. In our own survey among 303 small enterprises in the Kurunegala district, inadequate infrastructure was mentioned as a problem by 42 percent of the sample. In addition to the common infrastructure facilities, Sri Lanka has introduced some special national-wide programs for promoting the development of small

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31 The impact of government labor regulations were categorized as 1) serious, 2) moderate, 3) slight, 4) no effect, and 5) no response. (Lakshman et al 1994a: 115).

32 Apart from Saturdays and Sundays, recently there were more than 25 statutory holidays applicable in the mercantile sector. Working on holidays involves the payment of double wages and would push up costs, and then down profits.

33 Infrastructure investment’s share of GDP in Sri Lanka is below the average range for other low-income countries.

34 Most of the rural areas do not have these facilities. The quality of supplies of electricity and water is very poor. This is evidenced by electricity blackouts and frequent cuts in water supply. In dry seasons, frequent cuts in water supply and electricity supply are common in Sri Lanka.

35 World Bank, 1994, p. 42.
and medium scale sector: industrial estate, export promotion village, sub-contacting exchange, and SMI Credit scheme.

Industrial Estates
The concept of ‘industrial estates’ is very popular for promoting small and medium scale industries in developing countries. According to UNIDO (1978b), ‘industrial estates have long been regarded as being among the best and most economical tools for promoting the development of manufacturing industries, especially in the medium and small sector, in countries in the process of industrialization.’ One of the main purposes of industrial estates is the encouragement of the small-scale sector, through the provision of various infrastructure facilities and economic incentives. Another purpose is the dispersal of industry away from central metropolitan regions. The first industrial estate in Sri Lanka was established in Ekala, near Colombo, in 1963. By 1998, 28 industrial estates are operating in different areas in the Island. The Ministry of Industry, and the IDB have authority to establish new industrial estates. In addition, at a regional level, some regional institutes such as Industrial Services Bureau in Kurunegala district have responsibility to establish such estates as well. By the end of 1997, seven estates are operating in different areas in Kurunegala district (see National Planning, ‘Public Investment Programme: 1997-2001’)

Export Promotion Villages
An Export Promotion Village Program was initiated by the Export Development Board (EDB) in 1981 with the aim of linking rural small producers with export markets. This concept basically entails providing an intermediate service between rural small producers and existing export houses. The operational unit of the export village is an organization that supplies products to established exporters, provides technical and managerial guidance, quality control, and transportation to the producers. The company is formed

36 An industrial estate is merely an area of raw land set aside for industry. Any promotional effect it may have is dependent on its location in relation to transport and distribution facilities and the price of land within the estate. The reasons for the establishment or promotion of industrial estates:
1. To advance national economic development by accelerating industrial development;
2. To create employment opportunities and, in many cases, to offset periodic irregularities in agricultural employment;
3. To decentralize industry and to spread the benefits of industrialization more evenly in the country, thus diversifying and increasing economic activities in rural and backward areas;
4. To promote and raise productivity in small-scale industries;
5. To promote specific industrial sectors and groups of skilled and qualified persons; and
6. To relocate industries, especially small-scale and artisan industries, away from congested urban areas.

Alexander (1963) defines industrial estates as a group of factories constructed on an economic scale in suitable sites with facilities of water, transport, electricity, steam, banks, post-office, canteen, watch and first aid provided with special arrangements for technical guidance and common service facilities.

37 UNIDO 1978b: 1.
consisting of its shareholding producers and the EDB. The companies enjoy fiscal and financial benefits because of their export-oriented character. The first export production village was established at Damadeniya in the North Western Province in 1981. By the end of 1986, 38 export production villages were registered and 18 of them were reported to be operational. There are two such export production villages in Kurunegala district. As the result of the programs, sub-contracting relationships between exporters and small-scale producers have increased.

Sub-contracting Exchange:
The sub-contracting exchange was set up within IDB under a project financed by the World Bank in 1981 to improve the information and product flow between large and small and medium scale enterprises. More specifically, the responsibility of the Exchange was to: (1) assist small and medium scale industries in gaining knowledge of potential public procurement or private orders; (2) communicate to large enterprises the production capabilities of potential sub-contractors in small and medium scale enterprises; and (3) assist small and medium scale industries in meeting required quality standards and delivery schedules. In addition, the Exchange also assisted in setting up new enterprises, which could work as sub-contractors for specific products. The activities conducted by the Exchange also include analyzing the requirements of large institutions and identifying potential products to be manufactured by small enterprises. However, an evaluation report in 1982 found that the Exchange has not proved very effective in performing its functions. The large buyers do not seem to be particularly keen to operate through the Exchange. Instead, they prefer to deal directly with known and trusted suppliers. As a result, in most cases, the Exchange has merely kept suppliers informed of potential buyers, helping them to establish direct contact with each other rather than processing orders through its own offices. However, in both urban and rural areas, a larger number of large as well as small entrepreneurs were not aware of the exchange and its activities.

SMI Credit Scheme:
The small and medium industry (SMI) credit scheme was initiated in 1979. Under the scheme, the Central Bank guarantees the Participating Credit Institutions up to a certain level (about 65 percent). The loan is provided both for setting up new enterprises and expansion of existing ones. While the project owner has to provide 25 percent of the overall cost of the project in the form of equity, the bank at competitive interest rates provides 75 percent of the overall cost of the project. However, the scheme caters for medium scale enterprises rather than small and micro enterprises.

38 After that, no new export promotion villages were established due to some political, economical, and managerial reasons.

39 The Participating Credit Institutions include the People’s Bank, Bank of Ceylon, Hatton National Bank, Commercial Bank of Ceylon and Development Finance Corporation of Ceylon.
Accordingly, Sri Lanka has a large number of supporting agencies to promote the small-scale sector. But there is no significant coordination among them. The Island also has a favorable business environment: no strict legislations and regulations; no higher taxation. But common infrastructure facilities are poor. The country, however, has some special incentive programs for small enterprise development such as industrial estates, export promotion villages, sub-contacting arrangements, credit programs etc. The problem is a proper coordination mechanism.

2.7. Concluding Remarks: Need for a Co-ordination Mechanism

In general, recently SSE development policy has become an important part of development studies. In some countries, they have also become the backbone of the economy (United Nations 1993: 13). For example, small and medium scale enterprises account for more than 90 percent of all enterprises in developing countries. Furthermore, the small-scale sector played an important role in classic development success stories (You 1995, Young 1987), for example Japan, Taiwan and Hong Kong. It is recognized that small-scale industrial employment makes up a high proportion of the employment in the entire industrial and manufacturing sector (Thomas 1991) as well as in the entire economy. As highlighted in a popular development economics text (Malcolm et al. 1987), it was hoped that SSEs would generate more employment and promote income equalization. Potential for employment creation in a country like Sri Lanka through SSEs is large for several reasons (ILO 1995: 34).

Practically, the SME sector is an important segment of Sri Lanka's industrial sector, as well as its agricultural sector, in terms of its contribution to employment, value of output, regional development and export growth. As reported by the Annual Survey of Industry in 1991, medium sized firms accounted for about 78 percent of firms in industry. Its contribution to value of output and employment were estimated to be around 20 and 27 percent respectively in 1991. The contribution to employment by small and micro-enterprises has been estimated to be around 30 percent. Hence, the combined size of the SME sector in terms of industrial employment is estimated to be around 57 percent.

The development of SMEs in various sectors in Sri Lanka can be helpful in solving problems such as low level of income, income in-distribution, unemployment, balance of payment deficit and so on. Meanwhile, the growth of the SME sector is important as a tool for transition in economic activity, from the agricultural sector to the industrial sector. Thus, the Public Investment report in 1995-1999 notes the SMEs "... will be assisted to create efficient units that could support the policy of employment creation. The estimated potential employment over the next five years from this sector is 250,000. Under the World Bank assisted credit schemes, a cumulative sum of Rs. 3396 mil has been obtained by this sector and a total of 6461 projects have been set up as at end December 1994. ... Linkages will be
Entrepreneurial Networks and Small Business Development

encouraged with the BOI\textsuperscript{40} projects and trading houses, and also with large scale and modern industrial enterprises. Special lines of credit or windows for SMIs, including micro enterprises, will be arranged within the prevailing structure of commercial and development finance institutions.\textsuperscript{41}

Furthermore, the Sri Lankan government has strongly emphasized the advantage of the SME and has also introduced various programs to support the sector (for instance: ‘SAMURDHI’\textsuperscript{42} program, industrial park/estate programs).

In this line, there are a number of organizations under various ministries of the government, which provide a variety of assistance to small enterprises. As noted, their services vary from formulation of polices, strategies and programs to delivery of inputs such as credit, training, marketing, sub-contracting and management. In addition to the government body, there are fairly large numbers of NGOs concerned with the promotion of small enterprises. Although a large number of institutions provide a variety of assistance, Lakshman \textit{et al.} (1994a) stated ‘… the existing structure of institutions involved in SMI policy is an extremely complex one, with substantial overlap and duplication of functions which may even create rivalry among different institutions. There is probably not much harm in having a multitude of institutions catering to the needs of the country’s SMI sector, if the necessary mechanisms were in operation for the required co-ordination of effort. The clear lack of an effective co-ordinating mechanism in this respect precludes the emergence of an integrated overall SMI policy with a consistent direction of purpose’ (Lakshman \textit{et al.} 1994a: 39)

However, the system has not been properly utilized due to the lack of co-ordination in the sector itself as well as with other sectors, and the lack of relevant policy to stimulate growth in this sector. The identification of various business linkages is a crucial prerequisite to introducing proper co-ordination and relevant policies. In this situation, small firms in Sri Lanka mostly depend on business owners’ personal relationships and contacts with other institutions and organizations.

\textsuperscript{40} BOI = Board of Investment, known earlier as GCEC ‘GreaterColombo Economic Commission’


\textsuperscript{42} SAMURDHI is an island-wide program, which mainly helps poor people providing basic needs for poor people, including employment opportunities.
Chapter Three

Theoretical Background and Literature Review

3.1. Introduction

This chapter is devoted to review the main theoretical and empirical literature related to the issues of small enterprise network (SEN).\(^{43}\) It is evident that a large number of researchers in different disciplines such as organizational behavior, regional and development economics, management, industrial organization, business economics, etc have studied SEN, providing a range of new ideas. For example, Butler and Hansen (1991) and others such as Birley (1985) and Greve (1995) pointed out that both broad social and inter-firm strategic networks provide a successful start-up and competitive advantage for small enterprises. Donckels and Lambrecht (1995) also highlight a positive relationship between network formations and small business growth. In addition, a number of researchers\(^{44}\) have studied on the successful small enterprises in enterprise clusters, estates and networks in Italy and Germany.\(^{45}\) Consequently, it is clear that different writers have analyzed the relationship between the small business networks and small business development in different ways in terms of their respective disciplines.

Even though there have been very many studies of SEN, the concept of small enterprise networks is still considered poorly developed\(^{46}\) in theoretical, conceptual and

\(^{43}\) Small enterprises have to link with their external actors in order to function their businesses. The actors may be individuals or organizations (see Chapter 1; definition of networks). Further, this study uses firms and enterprises in similar meanings. Therefore, invariably we use small firms or small businesses instead of small enterprises. In theory, however, enterprises include all types of established institutes either in the form of business-oriented or non-profit organizations. In this study, enterprises indicate the business-oriented organizations.

\(^{44}\) For example, Pyke et al. 1990, Sydow 1996, Ferland et al. 1996.

\(^{45}\) Industrial networks/estates are well developed in Italy and Germany. Small firms are very popular within the system. Firms in industrial districts have relatively flat organizational structures. The activities among firms, which are rather independent, strongly coordinated while there is space for competition at some level (Cooke and Morgan 1991, Jacobsen and O’Callaghan 1996, Russo 1985). One of the most important aspects of this industrial model is the integration of a wide range of disciplines and perspectives such as transaction cost approach (Williamson 1985, 1991) and the social network approach (Granovetter 1985). This system has been empirically studied by number of researchers (Axelsson and Johanson 1992, Becattini 1989, Brusco 1990, Goodman and Bamford 1990, Pedersen et al. 1994, Pyke et al. 1990, Sabel 1989, Sydow 1996).

\(^{46}\) See Curran, J et al., 1993, ‘Networks and Small Firms: Constructs, Methodological Strategies and Some Findings’. (Also see, Borch and Arthur 1995, Chu 1996, Grandori and Soda 1995, Johannisson et al. 1994, Nohria 1992, Steier and Greenwood 2000). For example, Grandori and Soda (1995) put networks at the very core of organization theory but regard their theoretical status as underdeveloped. Chu (1996) concludes that the use of social network approaches to explain entrepreneurship has been ‘limited’. Particularly lacking is any understanding of the initial stages of network development. Butler and Hansen (1988: 404) conclude ‘...social networks are very important in initializing the entrepreneurial process...’ Venkataraman (1989: 126) suggests that analyzing the properties and evolutionary patterns of the relationships established over time by entrepreneurs will provide ‘clues to understanding the problems of small business start-up, survival and growth’.
methodological terms. For example, while some researchers\textsuperscript{47} have been using the industrial district models\textsuperscript{48} to analyze small enterprise networks and regional development, others\textsuperscript{49} use all kinds of network relations of entrepreneurs to analyze individual small business development. Meanwhile, some researchers use the network concept to analyze formal types of networking such as alliance, joint ventures, etc, while others employ this concept to examine various types of informal network relationships among individuals, business firms, and other organizations. The focus of this study is on the informal network relationships.

In the literature, it is evident that the concept of small enterprise networks has been used in four ways in the small business literature, concentrating on (1) nature of small firm economics and local development; (2) technological innovation and managerial changes; (3) marketing and international business; and (4) entrepreneurship and social networks. The intention of this chapter is, however, not to review all these theoretical and empirical studies in the field of firm networking in general or informal networks in small business in particular. As a consequence, given the diversity of the network literature, to isolate a general theory of small business or small enterprise networks is also a difficult task. This study closely looks at the area of entrepreneurship and social networks because, as we mentioned in the beginning, its focus is on the relationship between entrepreneurial informal networks and small business development.

This chapter has two major parts. The first part discusses some of the relevant theories that are useful in the study of entrepreneurial networks and small business development. The discussion in the first part will further identify potential syntheses between the theories, which will be helpful in developing our conceptual framework in chapter 4. The second part reviews some relevant empirical studies in the following broad categories, namely (1) business formation and entrepreneurial networks; (2) on-going businesses and entrepreneurial networks; and (3) the dynamic nature of entrepreneurial networks.


\textsuperscript{48} There are a number of examples from Italy, Germany, Denmark, and India (Axelsson and Johanson 1992, Brusco 1990, Becattini 1989, Goodman and Bamford 1990, Pyke \textit{et al.} 1990, Sabel 1989, Sydow 1996).

3. 2. Theories Related to Firm Networking

As mentioned above, a general conceptual framework for analyzing firm networks has been lacking. Most of the previous studies have been guided by a number of theoretical perspectives\(^{50}\) such as transaction cost (Coase 1937, Williamson 1975b, 1981, 1985, 1991), resource dependence (Pfeffer and Salanick 1978), relational exchange (Dwyer et al. 1987, Heide 1995), institutional (Scott 1992, Zucker 1988), agency (Bergh 1995, Fama 1980, Jensen and William 1976), political power (Zald 1970), game (Jackson and Wolinsky 1996), social network approach (Birley 1985, 1990, Birley and Cromie 1988, Granovetter 1976, 1985, Johannisson 1988, 1993, Ostgaard and Birley 1996, Uzzi 1996, 1997, 1999), international business and marketing (Beije and Groenewegen 1992, Hakansson 1987, Hakansson and Johanson 1992, Johanson and Mattsson 1987, Moller and Wilson 1995), regional and industrial development (Axelsson and Easton 1992, Pyke et al. 1992), etc. Since a discussion on all these theories is beyond the scope of this study, we have chosen to review some of the most relevant theoretical approaches to the study, such as transaction cost approach (TCA), resource dependence approach (RDA), social network approach (SNA), and the Swedish network model (SNM). These theories look at networking from different perspectives and provide insight into the causes as well as the structure of small enterprise networking. For example, the TCA analyses firm networking from an economic point of view, while the management point of view is the basis of the RDA. The SNA explains networking from a sociological point of view and the SNM is developed on the basis of marketing. In this section, the study briefly highlights the theoretical understanding of these four approaches to networking. Our major objective in discussing these approaches is to draw attention to a wide range of possible theories as well as to identify potential syntheses among them.

3.2.1. Transaction Cost Approach: Organizational Economics Perspective

One of the widely used theoretical approaches to study enterprise networking is the transaction cost theory\(^{51}\) (Williamson 1985, Kogut 1988b). Although the analyses of this study has no direct links with TCA of enterprise networking, it is sensible to review the basic

\(^{50}\) There has been an impressive accumulation of studies focusing on inter-organizational relations and networks. See, for example, Oliver, A.L and Ebers, M, (1998), ‘Networking Network Studies: An Analysis of Conceptual Configurations in the Study of Inter–organizational Relationships’, Organization Studies, Vol. 19, No. 4, pp. 549-83. On the basis of a network analysis of the 158 articles on inter-organizational relations and networks (published in four leading journals from 1980 to 1996), Oliver and Ebers (1998) empirically analyzed the linkages among, and configurations of, core theories and concepts underlying earlier empirical research on inter-organizational relations and networks.

\(^{51}\) The genesis of TCA can be attributed to the work of Coaze (1937). Williamson (1975a) has further fleshed out Coase’s transaction theory. The TCA has its roots in the work of Arrow (1974) as well.
ideas of the TCA simply because the theoretical undercurrent of this particular approach provides a basic economic rationale for small business networking. According to the existing literature, a transaction means a transfer of a good or a service between technologically separable interfaces (Williamson 1985). Thus, the transaction costs simply means all costs involved in a transfer of goods and services from one unit to another. Transactions are, therefore, characterized by high asset specificity, small numbers bargaining and uncertainty. Given these characteristics, market transactions tend to become prohibitively costly. In such a situation, firms attempt to overcome transaction costs by vertical integration or of looking for other alternatives to the market (Williamson 1991). In other words, the market is transformed into a hierarchy. One of the purposes of the integrating is to minimize transaction costs. Accordingly, particularly small firms have to co-operate with other organizations. In addition, this approach also explains why firms are characterized by large-scale organizations. The major aspects of TCA are summarized as follows (table 3.1).

Table 3.1

<table>
<thead>
<tr>
<th>Major Aspects of the Transaction Cost Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key concept: Governance structure of transactions</td>
</tr>
<tr>
<td>Unit of analysis: Transaction events</td>
</tr>
<tr>
<td>Basic Characteristics: Uncertainty, high asset specificity, small number bargaining</td>
</tr>
<tr>
<td>Problem: High transaction costs</td>
</tr>
<tr>
<td>Solution: Hierarchy</td>
</tr>
<tr>
<td>Purpose of networking: Minimize transaction cost</td>
</tr>
<tr>
<td>Key Authors: Coase 1937, Williamson 1975a, 1985, 1991</td>
</tr>
</tbody>
</table>

The TCA has been extensively criticized on different grounds (for example, Best 1990, Groenewegen 1995, Jarillo 1990, Johanson and Mattsson 1987, Nooteboom 1994, Ring and Ven de Ven 1989, 1994). The objective of this chapter, as mentioned at the beginning, is not to evaluate or to criticize this theory in line with those different grounds or perspectives. Instead, the study looks into the perspective of small enterprise networks. The focal point of the TCA is transactional events rather than transactional or any other relationships (Ring

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52 Asset-specificity makes functional problems in case of bounded rationality and opportunism (two behavioral constraints). Small numbers is a condition that increases the likelihood of opportunism. Bounded rationality implies that trading parties are ‘intendedly rational, but only limitedly so’ (Williamson 1991). According to Williamson (1985) opportunism is the tendency of individual to pursue self-interested behavior with guile. Opportunism imposes economic damage in combination with asset-specificity, bounded rationality, and uncertainty.

53 See Williamson (1975a) and Butler (1991) for the detail on the market failures framework.

54 There are other purposes as well. For example, the other important cause for vertical integration is product innovations. Product innovation costs are normally very high. Small firms, in particular, therefore tend to become networking operations due to their limited resource base.

55 Through these relationships, firms do get some control over each other with indirect access to assets in firms with which they do not have direct relationships. In the TCA, the relationships exist only within hierarchies, but rarely in markets.
Entrepreneurial Networks and Small Business Development

In addition, in relation to small enterprise networks, one practical problem we encounter is that although the TCA provides a better basis for analyzing the organization integration, formal integration of small firms among themselves is not a general phenomenon in less developed countries like Sri Lanka. What is commonly found in these countries are informal relations with other supporting organizations and other firms, because small firms in developing countries are generally seeking for support rather than looking for avenues to reduce their transaction costs. Scholars like Kogut (1988a, 1988b) have used this approach to analyze formal networks such as joint ventures and alliances in less developed countries. However, the study argues that entrepreneurial informal networks reduce transaction costs because of the high level of trust in relationships. The high level of trust, on the one hand, enables firms to reduce negotiation costs, time, etc (Bygrave and Minniti 2000, Staber 1996b, Uzzi 1996). On the other hand, it helps to reduce transactional uncertainty as well as create opportunities for the exchange of goods and services that are usually difficult to price.

To conclude, small firms face relatively higher transaction costs even if these firms engage in inter-firm relations. The transaction cost theory gives a rationale for firm networking and alliances. But it does not help to test hypothesis on small firm networks. It is a nice tool, but provides insufficient basis for analyzing what directions firms should move in. In the words of Osborn and Hagedoorn (1997: 264) ‘We, as well as many others, also realize that with all of the multiple interpretations of transaction cost economics, it is quickly becoming more of a guiding metaphor than a tested set of propositions’. Therefore, the TCA appears to have made a more important contribution to theory building rather than to empirical studies. Nevertheless, this approach provides an economic rationale for our discussion on networking.

3.2.2. Resources Dependency Approach: Organizational Ecology Perspective

The main theme of the RDA is to understand the behavior of an organization in relation to its external environment. Basically, organizations are bound by the conditions of their

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56 ‘Trust’ acted as the governing mechanism of embeddedness relationships. It facilitates the exchange of resources and information that are crucial for high performance but are difficult to value and transfer via market ties. … Trust is a unique governance mechanism in that it promotes voluntary, non-obligating exchanges of assets and services between actors. … Trust is important because it increases an organization’s access to resources and strengthens the organization’s ability to adapt unforeseen problems (Uzzi, 1996: 678).

57 This theory is based on an organizational perspective of Thompson (Thompson, J.D., (1967), Organizations in Action. New York: McGraw-Hill. However, the RDA received its first inter-organizational treatment in a collection of articles edited by Zald (1970), and its most comprehensive treatment in Pfeffer and Salancik (1978). Interdependence and inter-organizational power are vital concepts of the RDA (Butler and Sohod 1995, Sheth and Parvatiyar 1992).

58 When one discusses the firm’s environment, there are two concepts: its internal environment, and external environment. In this study, we always consider the firm’s external environment. If we take into
environment. The external environments of firms are important for understanding actors of networks. The discussion attempts to provide reasonable answer to the following questions. How do small firms operate within their environment? Why their environment is an important determinant of their performances? How does the RDA explain these things?

According to the RDA, successful performance of a firm depends on resources and supporting networks. The resources and supports are, particularly for small firms, controlled by outside actors of the firms. Thus, firms are linked to their environments by federations, associations, customer-supplier relationships, competitive relationships, and a social-legal apparatus that define and control the nature and limits of these relationships as well (Butler and Sohod 1995, Pfeffer and Salanick 1978). Similarly Sengenberger et al. note that ‘... the firm looks for other small firms to associate with and to build a more permanent, mutually constructive network of joint support and resource sharing, possibly with the co-ordinator specialization of each firm in the network’ (Sengenberger et al. 1991: 59).

According to RDA, in order to survive, any organization requires some sort of transactions with its external environment. Organizations exchange and carry out transactions with other groups or organizations (Pfeffer and Salancik 1978). The exchanges may involve information, monetary or physical resources because enterprises are not self-contained or self-sufficient. Thus, organizations generally rely upon the environment to get supported. If resources were continuously available for the organization, even if resources are controlled by outside actors, there would be no problems for survival. The argument advanced by our study is that organizational outcomes are affected by their environment because small firms have to obtain most of the necessary resources from outsiders or the external groups. As a group, therefore, firms are interdependent since a single firm itself does not have all the necessary resources fully at its disposal. The RDA, however, indicates that interdependence can create problems of uncertainty or unpredictability for the organizations (but ‘Uncertainty itself is not problematic. It is a problem for organizations only when the uncertainty involves important interactions with other environmental elements that are important for the organization. Uncertainty is only problematic when it involves an element of critical organizational interdependence’, Pfeffer and Salancik, 1978: 69), as a result of lack of co-ordination of activities among social units.

consideration internal environment, it will be specified in the study. Otherwise, ‘environment’ means ‘external environment’.

59 However, interdependence varies with the availability of resources relative to the demands for them. Interdependence is not similar for all actors.
According to the RDA, one way of solving these problems is 'merger' and other way is co-ordination. The coordinating relationship establishes through communication. The RDA indicates that co-ordination through inter-firm linkages depends on voluntary behavior. Furthermore, according to Pfeffer and Salancik (1978), the linkages to other organizations provide three primary benefits to organizations in managing their activities related to environmental interdependence. Firstly, a linkage to another organization provides information about the activities of that organization which may impinge on or affect the focal organization. Secondly, a linkage provides a channel for communicating information to other organization on which the focal organization depends. Finally, a linkage provides an important base to ensure a commitment of support from the parties in the network. Hence, these linkages help to reduce uncertainty of a firm. As Pfeffer and Salancik, 1978 noted, “Linkages help stabilize the organization’s exchange with its environment and reduce uncertainty. Through negotiation and the arrangement of agreements with others, uncertainty is reduced directly. ... Part of the interaction between individuals serves the purpose of maintaining the relationships and exchanging information about each other and their activities. ... The more of the other, such that there are overlaps in friendship networks and other business acquaintances, the more binding their relationship becomes and the more stable and predictable it is likely to be.” (Pfeffer and Salancik 1978: 145-46)

It is evident that social networks play important role in reducing uncertainty either through mergers or co-ordination among organizations. “... We have argued that social linkages with external organizations are important for the organization as means of stabilizing the environment and for ensuring favorable resource exchanges”. The argument, as put forward by Pfeffer and Salancik (1978), is that social networks (networks of relatives and friends) are the basis for business alliance. ‘People tend to prefer conducting their

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60 A merger typically involves a restructuring of organizational dependence. Firms merge due to interdependence and competitiveness. There are three general types of merger between organizations, namely vertical integration, horizontal expansion, and diversification or conglomerations. Each type of merger is focused on different forms of interdependence and operates differently. Companies merge vertically (forward or backward) in the production process in an attempt to deal with symbiotic interdependence. Companies sometimes merge with their competitors (horizontal expansion) to reduce commensalistic interdependence which is caused by the competitive relationship of two or more parties in the environment. According to Pfeffer and Salancik (1978), the other form of merging is diversification, in which an organization acquires another organization which is neither in the same business nor in direct exchange relationship with it. However, mergers are not common among the small enterprises in less developed countries such as Sri Lanka. For researchers working with small business, although this is an important point, small businesses, particularly in LDCs, often try to work with their supporting networks (Sarder et al. 1997, Van Dijk 1997) instead of merging.

61 Organizations co-ordinate in many ways; co-optation, trade associations, cartels, reciprocal trade agreements, co-coordinating council, joint ventures, social norms etc. Pfeffer and Salancik (1978) state that such strategies are much more common than total absorption, as in merger.

business with people familiar to them’. This is one of the major arguments found in the literature in favor of the entrepreneurial networks. That means the primary social relationships of entrepreneurs eventually pave the way for more solid business relationships. In other words, business deals are originated through social deals. Table 3.2 summarizes the major points of RDA.

<table>
<thead>
<tr>
<th>Key concepts:</th>
<th>Relations to a firm’s external environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>(a) Resource dependency</td>
</tr>
<tr>
<td>characteristics:</td>
<td>(b) Interdependence</td>
</tr>
<tr>
<td></td>
<td>(c) Inter-organizational power</td>
</tr>
<tr>
<td>Basic problems:</td>
<td>Interdependence ⇒ uncertainty</td>
</tr>
<tr>
<td>Solution:</td>
<td>Networking and alliances (trade association, cartels, coordinating council, joint venture etc)</td>
</tr>
<tr>
<td>Purpose of social relationships:</td>
<td>(a) A channel for information</td>
</tr>
<tr>
<td></td>
<td>(b) Commitment of support</td>
</tr>
<tr>
<td></td>
<td>(c) Ensure favorable resource exchange</td>
</tr>
<tr>
<td></td>
<td>(d) Reduce uncertainty</td>
</tr>
<tr>
<td>Key authors:</td>
<td>Pfeffer and Salancik 1978, Sheth and Parvatiyar 1992</td>
</tr>
</tbody>
</table>

The major argument put forward in our study is that both formal and informal relations are important for small business firms. With regard to that, the study is still searching for answers to the following questions. They are how to form network relationships, the nature of the relationships between network formation and business performance, and how or whether networks change over time. The study looks forward to find answers to these questions in the proceeding discussion.

3.2.3. Social Network Approach: Sociological Economics Perspective

The logic of SNA on studying entrepreneurship and small business starts at the point where two people establish a relation or transaction. Individuals in any society involve in a number of social relationships with others. These social relationships are crucially important to the entrepreneurial process (Aldrich and Zimmer 1986, Birley and Cromie 1988, Butler and Hansen 1991, Chu 1996, Johannisson 1987b, Ostgaard and Birley 1996, Steier and Greenwood 2000, van Dijk 1997) because the information needed to start a business is passed to the entrepreneur basically through the existing social networks of friends (Aldrich and Zimmer 1986, Birley 1985, Butler and Hansen 1991) and family members (Amin 1989b, özcan 1995) particularly in LDCs. In addition, financial support

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63 ibid., p. 146.
Entrepreneurial Networks and Small Business Development

is also provided by the members of the social network (Aldrich and Zimmer 1986, Birley 1985, Grabher 1993a, Jarillo 1989, Oliver and Liebeskind 1998, özcan 1995, Peters and Brush 1996, Timmons 1994, Veciana and Clarke 1996). Recent studies⁶⁴ show that the impact of social networks is highly significant for individuals to become entrepreneurs. According to Brown and Butler (1993) and Butler and Hansen (1991), the entrepreneur’s social network is like an ‘opportunity set’. However, they emphasize that once a firm is already established, inter-organizational linkages become necessary for the firm to perform its economic activities.⁶⁵

The closeness of relationships range from between arm’s length to an embedded one (Baker 1990, Uzzi 1996, 1997, 1999). Arm’s length ties are characterized by lean and infrequent transactions. They function without prolonged personal or social contact between actors.⁶⁶ That means actors do not need to enter into continuing relationships; relationships start with special purposes; and relationships are limited to the purposes. In contrast, embedded ties or relationships create long-term social contacts. That means actors have continuing relationships. In this sense, ‘social embeddedness’⁶⁷ is defined as ‘the degree to which commercial transactions take place through social relations and networks of relations that use exchange protocols associated with social, non-commercial attachments to govern business dealings’.⁶⁸

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⁶⁵This is because, as the RDA argues, firms are interdependent, and these linkages are alternatives to the market. Due to uncertainty, high asset specificity and small numbers bargaining transaction costs are higher in the market (see section 3.2.1)


⁶⁷In the late 50s, Polanyi (1957) used this concept to discuss the social structure of modern markets. Then Granovetter (1985) studied its effect on economic action in the context of inter-firm networks. Recently, a number of scholars have used the concept of embeddedness particularly research on marketing (Moorman, Zaltman, and Deshponge 1992), Entrepreneurship ( Larson 1992), immigrant enterprise (Portes and Sensenbrenner 1993) industrial districts (Lazerson 1995), performance of organizational adaptation and performance (Uzzi 1996, 1999) etc.

The social embeddedness approach views entrepreneurship as embedded in networks of continuing social relations, and addresses enterprise networks from social behavioral point of view.

In view of the above, the embedded social relations among firms shape economic actions. Therefore, social ties are crucial assets for entrepreneurs. They create opportunities to identify new business ideas, new products, new markets, etc (Baker 1990, Gulati 1995, 1999, Gulati and Gargiulo 1999). Embedded ties also encourage entrepreneurs to take risks and innovate, as well as enhance business success under conditions of uncertainty. For example, Granovetter (1985) argued that entrepreneurs (and managers) use their social networks to overcome the uncertainty and distrust that often disturb market exchanges. In this respect, social networks obviously help to reduce transaction costs. These ties also provide benefits such as joint problem solving, information exchanging, resources sharing, etc to actors in the networks (Uzzi 1996). From the social network perspective, these benefits are products of social relations. Therefore, economic analysis of business networking will not be successful without understanding the social context in which business relations are embedded (Granovetter 1976, 1985, Staber 1996a, Uzzi 1996, 1997). For example, in industrial districts, though small firms compete against each other, they are deeply embedded in a local social milieu, which reflects cultural values and beliefs about the form and pattern of economic exchange. According to the SNA, entrepreneurs, therefore, would behave rationally and instrumentally if only they conduct their activities through social networks because economic actions are infused and mixed with social motives, and economic actors are never wholly atomized in economic life (Granovetter 1985, Johannisson 1990a, Uzzi 1997).

According to SNA, there are three basic purposes of relationships (Aldrich and Zimmer 1986, Mitchell 1969, 1973, Veciana and Clarke 1996); (1) Communication or passing information from one person to another, (2) exchange purpose (i.e. exchange of goods or services), (3) normative or personal expectations over one another because of some special characteristics. ‘The strength of relationships depends on the level, frequency, and reciprocity of relationships between persons, and varies from weak to strong’ (Aldrich and Zimmer 1986: 11). Therefore, networks can be analyzed in terms of size, density, reachability, heterogeneity, and centrality.

Granovetter (1976, 1978, 1985) also notes two types of ties; strong ties and weak ties. Close friends and associates are likely know one another, thus constituting strong ties. Strong ties often add little of values when an individual is seeking new resources, because everyone within a strong tie group has access to the same information and resource. Weak add diversity, thus there is a value in weak ties.

Economists argued in different ways: for example, Adam Smith ‘... people of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public or in some contrivance to rise prices’ (Smith Adam, (1776) 1979, ‘The Wealth of Nations’, Edited by Andrew Skinner, Baltimore: Penguin, p. 232).

For the purpose of studying entrepreneurship and small business, Johannisson (1987a) has sub-divided exchange content into production networks, symbolic networks, and personal networks. Linkages of production networks are defined by the flow of transactions such as material, money or information. The production networks are typically built at business meetings, business conferences, or through trade fairs and trade associations. Symbolic networks originate from community affiliation. Personal networks are based on friendship.
To study entrepreneurship and small business firms, SNA applies network concept in four different manners. They are (1) the effect of social forces that increase the density of networks, (2) the role of brokers and other persons or organizations that increase the accessibility of networks, (3) the importance of linkage diversity to the question of which positions in networks are most likely to produce entrepreneurs, and (4) the importance of the social resources embedded in entrepreneurs’ networks.

Finally, to study entrepreneurship, SNA provides two basic premises (Birley and Cromie 1988, Ostgaard and Birley 1996). First, the entrepreneurial process involves the gathering of scarce resources from the external environment. These resources include not only finance and other material resource but also information, ideas, advice, customers, etc. Second, resources are usually obtained through the entrepreneur’s personal network. In this aspect, a social network provides the entrepreneur with information, support, contact, and credibility.  

A number of scholars have been using SNA to analyze entrepreneurship, new venture development, and small business development. The major argument of these studies is that a new entrepreneur or a small business owner does not have enough experiences and resources. In order to do business, the entrepreneur gathers the necessary resources from the external environment through his personal network. However, a few studies have discussed how the entrepreneurial networks change in different phases of a firm. Our discussion is particularly interested to study such patterns of networks because it is argued that a firm or an entrepreneur faces different types of problems and requirements in different phases of a firm’s development (Butler and Hansen 1991, Olson 1987, Terpstra and Olson 1993) and thus needs different kinds of resources in different phases (Birley and Cromie 1988, Bridge et al. 1998, Butler and Hansen 1991, Mount et al. 1993). The major aspects of SNA are summarized in table 3.3.

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72 For example, Uzzi (1999) argues that firms are more likely to secure loans and receive lower interest rates if they are tied to their lenders through embedded ties. Elsewhere, Uzzi (1996) further argued that organizational networks operate in an embedded logic of exchange that promotes economic performance through inter-firm resource pooling, cooperation, and coordinated adaptation but that also can derail performance by sealing off firms in the network from new information or opportunities that exist outside the network. (Uzzi, 1996, 'The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect', American Sociological Review, Vol. 61: 674 - 98)


Chapter Three: Theoretical Background and Literature Review

Table 3.3

<table>
<thead>
<tr>
<th>Major Aspects of the Social Network Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key concept:</strong></td>
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<tr>
<td><strong>Basic Characteristics</strong></td>
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<tr>
<td></td>
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<tr>
<td><strong>Basic Problem:</strong></td>
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<tr>
<td><strong>Solution:</strong></td>
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<tr>
<td><strong>Purposes of relationships:</strong></td>
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<td></td>
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<td><strong>Application of networks to study entrepreneurship:</strong></td>
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<tr>
<td><strong>Basic premises to study of entrepreneurship:</strong></td>
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The discussion of SNA provided some clues on the nature of entrepreneurial networks, and their impact on business performance, which is one of the questions raised throughout the study. At the same time, the discussion of SNA reveals how actors such as entrepreneurs use their social relations to obtain necessary resources and to perform activities. The question is how these major elements such as actors, resources, activities and linkages interact with each other in networks. The SNM would help to understand interaction between these elements.

3.2.4. Swedish Network Model: Marketing Perspective

The four basic elements in SNM are (1) actors, (2) activities, (3) resources, and (4) linkages (Beije and Groenewegen 1992, Hakansson 1987, Hakansson and Johanson 1984a, 1988, 1992, Hakansson and Snehota 1995). The actors can be individuals, organizations, and government agencies (Moller and Willson 1995). Each actor has its own resources, its specific activities, and knowledge about their activities, resources and other actors in the network. Linkages between actors and resources are described as relations among the actors in the network. In addition, linkages between resources and activities are also defined as

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75 The model was originally developed in Sweden especially at the Department of Business Administration at the University of Uppsala led by Professors Hakan Hakansson, Jan Johanson, and Lars-Gunnar Mattsson, with marketing research in mind. It is, however, no longer solely tied to the area of marketing, and used other areas as well.
Entrepreneurial Networks and Small Business Development

relations between the actors in the network. Linkages can be formal or informal. Hakansson states, “… the actor’s main aim is supposed to increase its control in the network. In that struggle, the actors are using their experience and knowledge of the network as well as their relationships with others in order to improve their position. They are networking” (Hakansson 1987: 149-150). Figure 3.1 give a visual description of the Swedish network model

Figure 3.1
Basic Structure of the Swedish Model

<table>
<thead>
<tr>
<th>Network of Actors</th>
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</thead>
<tbody>
<tr>
<td>Actors perform activities and have knowledge of activities</td>
</tr>
<tr>
<td>Network of Activities</td>
</tr>
<tr>
<td>Activities link resources to each other activities change and exchange resources through the use of other resources</td>
</tr>
<tr>
<td>Resources</td>
</tr>
<tr>
<td>Actors have resources and knowledge of resources</td>
</tr>
</tbody>
</table>

Source: Axelsson (1995), Beije and Groenewegen (1992), Hakansson (1987), and further moderated by the author.

There are three ‘subnetworks’ in the whole network; namely network of actors, network of activities, and network of resources. They are intimately related to each other and are interwoven in the total network (see Figure 3.1). According to the model, actors have resources and knowledge of resources. At the same time, they perform activities and have knowledge of the activities. Activities link resources to each other (see Figure 3.1). Actors are defined as those who control resources and perform activities. However, they have independent goals, objectives and strategies even when they are linked each other in the network. Actors are free to enter and leave at any time. The relationships among the actors of the networks can be explained in different ways based on activities and resources of each other. According to Hakansson and Johanson (1992), an activity occurs when one or several actors combine, develop, exchange and create resources by utilizing other resources. The activities of an actor are always dependent on the outcome of activities of other actors (Awuah 1997) because in the process of performing activities, actors create exchange relationships among them. Beije and Groenewegen (1992) identify two main kinds of activities; transformation activities and transfer activities. To perform these activities requires resources. Resources could be physical, human and financial assets. Hakansson and Johanson (1992: 33) state, “Resources can be characterized, first, by the actors controlling the resources. They can be controlled directly by one actor or jointly
by several actors. Indirectly the resources can be controlled by those actors who have relationships with the actor directly controlling the resources. A second characteristic is the utilization of the resources in activities. How many dimensions of the resource are used and how standardized is the utilization in each of the dimensions. A third characteristic is the versatility of the resources. To what extent and at what cost can the resource be used in other activity cycles and in other transfer chains”. If there is an unlimited supply of resources, controlling them is of no interest to the actors. If resources are not controlled by actors, a network among the actors is not required. Since resources are controlled by several actors, firms need to develop and use networks.

The basic idea of this approach is that the firms (actors) in the network consist of informal contacts between actors, creating close interpersonal relations. In this approach, it is not only the actors and their relations that are important, but also the activities and resources are included in the analysis. Therefore, the basic assumption in the network model is ‘…that the individual firm is dependent on resources controlled by other firms’. The interpersonal relations provide various kinds of benefits for actors in networks. In this regard, the argument is finally whether there is a significant relationship between the network involvement and performance of actors in networks. Table 3.4 summarizes the major aspects of SNM

Table 3.4.

<table>
<thead>
<tr>
<th>Major Aspects of the Swedish Network Model</th>
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<tbody>
<tr>
<td>Key concepts:</td>
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<td>Key elements:</td>
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<td></td>
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<tr>
<td>Basic problem:</td>
</tr>
<tr>
<td>Solution:</td>
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<tr>
<td>Basic assumption:</td>
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</tbody>
</table>

To conclude, the central theme of the SNM is the provision for actors to influence one another directly or indirectly. Actors develop and maintain networks due to lack of resources for them. The model provides a useful guideline for researchers in the field of small firm networks to identify the basic elements in networks. In that sense, the model shows us how small firms can overcome their resource limitations and develop themselves through entrepreneurial networks.

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76 Johanson and Mattsson 1987: 36
Having discussed, the four major relevant theoretical approaches in the field of networking, the discussion hereafter will focus on how to integrate the basic concepts found in the discussion to create the integrated model, which is the analytical base of our study. Our study would basically use network elements of SNM because the major argument of our study is that small firms cannot better perform without direct or indirect network relationships. However, the major hypotheses of our study would be based on the SNA. (*Our integrated conceptual model will further be developed in chapter 4*).

### 3.3. Potential Synthesis Between Theories

As mentioned earlier, there is no single general theory of small business networks. Researchers have used different types of theoretical approaches in order to analyze and understand networking and small business development. *Why do small enterprises need networking?* As Williamson argues economic functions can be performed either within the boundaries of hierarchical firms (within the organization) or by market processes that cross these hierarchical boundaries; either *hierarchies* or *markets*. For small firms, the economic functions and transactions within the boundaries of hierarchical firms are either impossible or extremely difficult because small firms, being small and alone, are inherently lacking in resources. It causes higher production costs. Market mechanism is also not a better solution because perfect competition is far from reality especially in developing countries. It causes higher transaction costs. Hence, it is clear that small firms find it difficult to perform their economic activities either at the level of hierarchical firm (or bureaucracy) or market. Given this, small firms in developing countries need support to compete and survive in their businesses. Networking is one of the best solutions given in the literature for the development of small firms in LDCs because networking lies between the *hierarchy (or bureaucracy)* and the *market* (Borg 1991, Jarillo 1988, Thorelli 1986). Hierarchies and markets are regarded as being the polar ends of a variety of

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77 TCA is principally concerned with managing exchange transactions such as that the sum of production and transaction costs are minimized (Williamson 1985). Both the hierarchy and market governance mechanisms represent trade-off between production and transaction costs. Hierarchical governance imposes production costs on the firm and minimizes transaction costs. In contrast, market governance causes transaction costs on the firm and it does not create productions costs.

78 In a perfect market, transactions are carried out without transaction costs: for instance, there are alternative buyers and suppliers; information is freely available; and thus decision making is rational. Whenever these conditions do not prevail, transaction costs exist because there is a need to devote efforts to organizing, carrying out and controlling transactions among interdependent firms.

79 A similar form of organization has been suggested: the *collective form* by Butler (1980), which however operates upon the principles of moral norms and shared beliefs. It is most suited for small numbers and high interdependence (Butler 1991). 'The network concept is used as the figurative vehicle for converging the idea of actors and practices linked across the boundaries of firms and organizations by means other than prices or authority' (Kallinikos 1995: 122). According to Powell (1990), networks are more flexible than hierarchies.
governance options (Butler 1991, Williamson 1985). Figure 3.2 provides a visual interpretation of the basis of this discussion of the synthesis model.

Figure 3.2: Where to Go

<table>
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In the network, the logic of exchange differs from the economic logic of market and hierarchy. The logic of exchange of networks is considered in this study as ‘social embeddedness’ because ongoing social ties shape actors expectations and opportunities in ways that differ from the economic logic of market behavior (Granovetter 1985, Uzzi 1996).

Based on the figure 3.2 networking is the best solution for small firm development (Borg 1991, Donckels and Lambrecht 1995, Gibb 1993, Johannisson 1990b, Szarka 1990). As mentioned earlier, a small firm without networking with its external actors will be a failure. On the one hand, at the level of hierarchy firms are too small and thus growth may be hindered by lack of resources. At the market level, on the other hand, transaction costs to obtain necessary resources are extremely high.

Small firms have to obtain resources and support from ‘outsiders’ or external actors. Thus, small firms are dependent on other external actors, which is called ‘interdependence’. Hence, to study small firms and entrepreneurship, the researchers should view them within their external environment. As noted earlier, RDA examines the behavior of a firm within its environment due to dependence. SNA tries to work out how network relationships influence small business performance and in what ways social networking is applied to economic phenomena. In addition, SNA views entrepreneurship as an act of creation and small business as a way of life that is different from the rational economic behavior. As with SNA, actors and their exchange relationships are very important for small firm development. Taking all these into account, the integrated conceptual framework for our study is based on both the social and business dimensions of entrepreneurial networks. In our framework, the entrepreneurship is seen as an ongoing process of venturing forth through personal networking in which actors, resources, exchange relations and activities are the major network elements.

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80 These linkages provide numerous benefits such as a channel for communication information, a channel for information about resources, other material supports and activities, a channel for marketing, etc. Our network concept does not have legal and written agreements; network relationships are based on personal and social bond. This study uses entrepreneurs’ personal relationships with outsiders or external actors as
On the whole, there are two major arguments behind the concept of networking. Firstly, since market transactions tend to become costly, firms attempt to overcome transaction costs by networking. Secondly, in order to perform, firms need various kinds of resources. Small firms, in particular, do not have all these resources fully at their disposal. Firms gather these resources from ‘outsiders’ or, in other words ‘external actors’. As most resources are controlled by external actors, a small firm always depends on its outside actors. Therefore, in order to perform economic activities, firms have to enter into relationships with these external or outside actors. This study defines these relationships as entrepreneurial networks, that is, the relationships between an entrepreneur and his external actors.\(^{81}\)

### 3.4. Empirical Studies: Introduction

Network analysis is rather an old subject area as well as widely used in different field of studies.\(^{82}\) It has roots in anthropology, sociology and social psychology. In anthropology, Frazer (1919) and Malinowski (1922) emphasized the contents of relationships, conditions under which the relationships exist, and evaluations of relationships over time. In a sociology, Cooley (1964) and Park (1924) emphasized patterns of interaction and communication as the key to understanding social life. In the empirical research line-up, sociologists have studied networks’ effects on opinion leadership and on diffusions of innovations (Crane 1969). Social psychologists have studied communication works in small groups (Leavitt 1951). Furthermore, political scientists have studied power elites and their influence on community decision-making (Dahl 1961). Social anthropologists have treated kinship and community relationships as networks (Mitchell 1969). However, networks in economic theory, market as well as management theory, have not played an important role until very recently. There have been few large-scale studies available on organizational networks\(^{83}\) and no studies in the context of small business development particularly in developing countries.

\(^{81}\) This study uses entrepreneurs’ personal relationships with outside or external actors because an entrepreneur is the main composer in a small enterprise. In other words, the entrepreneur is the manager in his firm.


\(^{83}\) There are three reasons for lack of empirical studies on organizational network: 1) conceptualization of network has been incomplete, 2) various lines of network research have progressed independently, and thus there has been the lack of an integrating theory, and 3) there were serious methodological limits on analyses of large scale data.
As this study focuses on entrepreneurship and small-scale enterprises, it is not our intention to review all empirical studies in the field of firm networking in general or networks in small business in particular. The discussion will only focus on some selected empirical studies. The choice of empirical studies is driven by the perceived relevance of these empirical studies to our research. It is possible to put the empirical studies in three major categories:

(1) Enterprise formation and entrepreneurial networks
(2.1) On-going business and entrepreneurial networks
(2.2) Network formation and small business growth.
(3) Dynamic nature of entrepreneurial networks

3.4.1. Enterprise Formation and Entrepreneurial Networks

Burt (1992) observed that an entrepreneur brings three kinds of capital to the process of establishing a firm, namely (1) his personal financial resources, (2) his personal skills, and (3) his social resources. Entrepreneurial network researchers basically tend to focus on the third type of capital, that is social resources. In general, network researchers highlight the fact that entrepreneurial networks provide the main sources of help in assembling the resources for a successful new venture. Therefore, entrepreneurs of successful firms are more likely to spend more time communicating with relatives, friends, partners, customers, and suppliers than the entrepreneurs of unsuccessful firms.

Although the use of the network concept goes back to the social anthropology and sociology of the late 1950s, in 1985 Birley\textsuperscript{84} introduced this concept to the area of entrepreneurship and small business growth. Birley (1985) examined the extent to which the entrepreneur interacts with the networks in the entrepreneur’s external environment during the process of starting a new firm. She found that the help and guidance obtained from both informal networks (family, friends, business contacts) and formal networks (banks, accountants, lawyers) influenced the nature of a firm significantly. She also found that different networks provide different resources. However, the results showed that the main sources of help in assembling the resources of raw materials, supplies, equipment, employees, and orders were the informal contacts of family and friends. The only institution or significant formal contact was the bank. However, Huck \textit{et al}. (1999) found that credit from financial institutions is not a significant source of capital by small enterprises in the start-up phase. Their studies further confirmed the importance of personal savings and informal sources of credit in meeting the

capital requirements at the start-up phase. Ozcan (1995),\textsuperscript{85} based on extensive interviews with 216 small firms in Turkey, also found that family and friends are the main source of initial capital. Generally, business friends lend one another cash for short-term purposes. Ozcan (1995) further found that the family is not only a source of employment, partnership and initial capital, but also influences the entrepreneurs’ choice of business. Birley (1985) identified the importance of further research about the type and effectiveness of such networks in nurturing new businesses in different social and economic climates.

After that, Birley and her colleagues conducted a number of studies (Birley 1987, 1990, Birley and Cromie 1988, Birley, Cromie and Myers 1988, 1991, Cromie and Birley 1992, Cromie, Birley, and Callaghan 1994, Ostgaard and Birley 1996) regarding entrepreneurial network, small enterprise formation and new venture growth. They argue that the study of networking strategies may give new insights as well as provide alternative factors for understanding the successfulness of a venture. It is further argued that owner-managers require information to manage their enterprises and that the managers rely extensively on personal contacts to gather information. Their major argument is that a social network is very important for owner-managers as a source of information, resources, and markets. Although Birley (1985) was unable to find a significant relationship between entrepreneurial networks and small firms’ performance, recently Ostgaard and Birley (1996)\textsuperscript{86} studied the effectiveness of personal networks in terms of firm performance and growth. The study was conducted in England and multiple regression was used to analyze the data. The findings confirmed the importance of networks for firm performance and development. Duchesneau and Gartner (1988) also found that surviving entrepreneurs are more active in social relations than unsuccessful entrepreneurs, and successful entrepreneurs spend more time communicating with partners, customers, and suppliers. Hansen (1995)\textsuperscript{87} also found positive relationships between entrepreneurial network variables (entrepreneurial action set size, degree and frequency) and new organization growth.

Aldrich, Rosen and Woodwards (1987)\textsuperscript{88} also studied the impact of social networks on business initiation and profits. Their study places a strong emphasis on structural aspects of

\textsuperscript{85} His paper (Ozcan 1995) argues that the networks amongst entrepreneurs are not always innovative and may even bring some impediments to business development. However, the research examined business networks and social networks of Turkish established small firms.

\textsuperscript{86} Ostgaard and Birley 1996: 37 – 50.

\textsuperscript{87} Hansen (1995) tested three hypotheses: during the new organization’s first year (1) pre-founding entrepreneurial action set size is positively related to subsequent new organization growth; (2) pre-founding entrepreneurial action set degree is positively related to subsequent new organization; and (3) frequency of communication between pre-founding entrepreneurial action set members is positively related to subsequent new organization growth. Data were gathered through structured interviews with 44 entrepreneurs and analyzed with multiple regression. The hypotheses were strongly supported by the data.

\textsuperscript{88} The study took place in the Research Triangle area of North Carolina.
entrepreneurial networks. The authors claim that the findings of their study support the premise that social interaction is an important contributor in starting businesses and their profits. Carsrud, Gaglio, and Olm (1986) studied the use of entrepreneurial networks in the start-up stage of a business. They found that new entrepreneurs use mentors and social networks for seeking information during the establishment of their businesses. However, Carsrud, Gaglio and Olm (1986) found social networks to have only minimal impact on the development of new businesses owned by women in Texas though others (Birley 1985, Johannisson 1988, 1990a, Huck et al. 1999, Ozcan 1995) found very significant support from social networks for formation and development of small businesses. Meanwhile Carsrud, Gagli and Olm (1986) highlight, as well as others do, the difficulties of using standard quantitative survey techniques in the study of social relationships.

Johannisson and his colleagues are another group of scholars, who analyze entrepreneurial networking in the context of business formation and small business development. They discussed the extent to which and the way in which social networking is applied to economic phenomena. They argued that the key to entrepreneurial success is the ability to develop and maintain a personal network because ‘the personal network is the vehicle by which the established entrepreneurs exchanges information with and acquires resources from environment’. Personal networking appears to be a very long-term investment: ‘the new entrepreneur becomes dependent upon his personal network as a supplement to his own business resources’. An elaborate personal network will not only provide the entrepreneur with ability to trade upon ambiguity and promote quantitative growth but will also supply perspectives and experiences needed for structural changes and continued qualitative growth. It is argued that the personal network of an entrepreneur is his most valuable asset.

In brief, empirical studies of entrepreneurial networks and new business formation have addressed two interrelated issues. They are (1) the role of entrepreneurial networks in relation to new venture development; and (2) the relationships between entrepreneurial network structure (size, density, and frequency) and new venture development. The entrepreneur’s personal network is his social resource. An entrepreneur mobilizes the support and resources through his personal network. As noted, previous empirical studies have found that in the phase of a new venture formation, the social networks predominate. Information is the main resource new entrepreneurs receive from their social networks during

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89 The title of the study is ‘Entrepreneurs- Mentors, Networks, and Successful New Venture Development: An Exploratory Study.

90 This group generally accepts case study research. They have carried out a number of empirical studies: For example, Johannisson 1986, 1987a,b, 1988, 1990a, 1993, Johannisson et al. 1994, Johannisson and Nilsson 1989, Johannisson and Nowicki 1992, Johannisson and Peterson 1984. They have published a number of theoretical as well as empirical articles in various journals and presented in conferences.


92 Ibid.: 84.
the establishment of their businesses. However, all of the available empirical studies have been conducted in developed countries. So far, no empirical studies have been conducted in a developing country context in general and Sri Lanka in particular.

3. 4. 2. 1. Ongoing Business and Entrepreneurial Networks

Bryson et al. (1993) studied various types of networks utilized by small business service firms in the UK. They examined two types of networks: demand- and supply-related networks. These two include two different types of links. The demand-related networks make links with clients, and the supply-related networks provide links with other service providers with whom they can combine to offer many of the services and facilities provided by larger organizations. The central argument of their study is that small business service firms are able to compete successfully with larger firms through the use of a variety of personal, associates and business contacts. This type of network enables small firms to offer a wide range of services at competitive prices without employing a substantial full-time professional or support staff. However, the supporting network is the most important for ongoing small firms. According to Curran et al. (1993), support networks provide advice, information, and capital to small firms. On the other hand, You (1995) finds cooperative inter-firm relationships, among small firms or between small and large firms, as one of the most important determinants of small firm competitiveness and development. In general, networking appears to have been an important element in the growth of small firms.

Figure 3.3: Network Model for Channeling of Resources

Source: Falemo 1989: 170
Through a study of just 31 small manufacturing firms in the North of Sweden, Falemo (1989) explores the significance of external persons' contributions to the management of established firms. The manager’s external networks have different functions: a way to get information and a way to get scarce resources. Falemo found developed networks as one way for a manager to channel resources to the firm. Channeling of resources at the individual level between an external person and a manager can be influenced by their entrepreneurial characters (see Figure 3.3).

His study showed that managers channel resources for marketing and product development of the firm through external persons (Figure 3.3). In that sense, this model provides a better understanding of how managers use their external networks for marketing and product development of firms. However, Falemo (1989) found that the immaterial resources are dominant for the resources channeling. Jarillo (1989) studies the use of external resources under networks. Both papers of Falemo (1989) and Jarillo (1989) found some evidence to support that the efficiency of the use of external resources generates small business growth. The most important point is that small enterprises obtain external resources through owners’ personal networks. In other words, according to Jarillo (1989), networking is a system through which entrepreneurs can tap resources that are external to them. In its simplest form, Birley (1985) argues that networking consists of the use of all personal relationships to obtain advice, financing, sales, etc. Humphrey and Schmitz (1996) highlight the fact that networking helps small entrepreneurs both to reach new market and develop the capabilities to respond to the requirement of the market. Although network researchers like Falemo (1989) found that developed networks are one important way for a manager to acquire resources to the firm, the question is how to develop such networks.

3. 4. 2. 2. Network Formation and Small Business Growth

Entrepreneurs or managers use different methods to form their personal networks. There are few empirical studies available on the impact of network formation on the growth, we have no choice but to look at these few studies (Donckels and Lambrecht 1995, 1996). Donckels and Lambrecht (1995) identified external consultants, seminars, trade fairs, contact with other entrepreneurs, and discussions with relatives as sources of network formation. Their study is on the impact of network formation on small business growth. They used log-linear technique to analyze this causal relationship between formation of network and small business growth. The results suggest that formation of networks significantly influences the growth of small businesses, in particular the networking with national and international entrepreneurs. Small entrepreneurs use their networks for various purposes; for example: information gathering, enrichment of own knowledge,

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93 The survey was conducted in Belgium. 900 entrepreneurs were interviewed.
canvassing and looking for customers and suppliers, response from the external environment, and psychological significance. To set up an efficient network, an entrepreneur needs considerable resources. Donckels and Lambrecht (1995) argued that if entrepreneurs want to get into the growth league, they must invest in network formation.

Accordantly, in 1995, Donckels and Lambrecht tested two hypotheses. First, that the relations with national and international entrepreneurs are supported by other network elements, but inhibited if the family influence is too strong. Second, network formation encourages growth through contacts with national and international entrepreneurs. The hypotheses were tested by using logit models: ‘networks on contacts with entrepreneurs’, and ‘networks on growth’. The dependent variable was dichotomous (growth, no growth). 73.2 percent of the firms has been identified as growth firms. The network variables that they included in the empirical analysis are also dichotomous. They are the following (Donckels and Lambrecht 1995: 278): consultation of external consultants (fewer than two different consultants, at least two different consultants), attendance of seminars (yes, no), participation in trade fairs (yes, no), discussion with relatives (yes, no), and geographical distribution of contacts with other entrepreneurs (the most important contacts are with entrepreneurs who are regionally, nationally or internationally situated). Donckels and Lambrecht (1995) investigated the causal relation between networks and small business growth for a total sample, entrepreneurs with higher levels of education, entrepreneurs with lower levels of education, in small and medium scale companies. The connections with national and international entrepreneurs were influenced mostly by an interactive effect of trade fair participation and discussion with relatives and by a separate effect of trade fair participation. The results suggest that networks have an influence on the growth of a small business, especially through contacts with national and international entrepreneurs. The problems of their analysis is that they have not included variables like discussion with relatives, which is very important network element among small entrepreneurs (Aldrich, Rosen, and Woodward 1986, Butler and Hansen 1991, Chu 1996, Dodd 1997) particularly in developing countries. There are cases in developed countries as well (Birley and Cromie 1988, Brown and Butler 1995 Huck et al. 1999). For example, according to Goodman (1989) in small firms in Italy, the family and the community work together with small entrepreneurs. In addition, recent research has also identified memberships in professional, trade, and social associations as a network formation variable (Carroll and Teo 1996, Dodd 1997, Jansson et al. 1995, Ostgaard and Birley 1996).

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94 They conducted their research in Belgium. The sample was divided into three branches of industry: manufacturing, services, and trade. The data was analyzed by using logit models. (Donckels, R and Lambrecht, J. (1995), ‘Networks and Small Business Growth: An Explanatory Model’, Small Business Economics, Vol. 7, pp. 273-89.

95 Ibid., p. 277.

96 A growth enterprise is defined as ‘a firm which has witnessed an increase in turnover over the last three years’ (Donckels and Lambrecht, 1995: 276).
In 1996, Donckels and Lambrecht obtained similar results, examining the factors that influence the expansion decision of small and medium sized enterprises in the Brussels metropolitan area. This analysis was made of the impact of entrepreneur-and enterprise-related factors as well as of elements in the external environment on the decision to expand the business area. The training (educational) level of the entrepreneur and the number of years that the entrepreneur had been running his business were used for the entrepreneur-related factors. The enterprise-related factors included sector, growth-orientation (yes, no), family business (yes, no), size (< 10 staff, at least 10 staff), market (the main market is in the Brussels Metropolitan District, Outside the Brussels Metropolitan District), and Location (business is located in Brussels City, Outside Brussels City). The empirical data was gathered by a telephone survey. The results of the survey were presented descriptively and analytically. A Log-linear technique was used to estimate causal relations. The results showed that there was indeed influence from entrepreneur-and enterprise-related characteristics as well as from factors in the external environment on the expansion decision. The log-linear analysis indicated that the expansion decision was influenced in hierarchical order by the growth orientation of the SMEs, contacts with universities and research institutes, the sector, the entrepreneur’s training level, and the location of the main market. Donckels and Lambrecht (1996) further concluded that growth-oriented SMEs, the SMEs which have contacts with universities and research institutes, the sector ‘services to business’ and ‘wholesale trade’, highly trained entrepreneurs and SMEs whose main market is outside Brussels were more inclined to consider expansion.

The results of both studies (Donckels and Lambrecht 1995, 1996) suggest that networks have an influence on the growth of a small business, especially through contacts with other entrepreneurs. They found a causal relationship between networks and small firm growth (Donckels and Lambrecht 1995, 1997). However we found that they (Donckels and Lambrecht 1995, 1997) ignored some important variables such as discussion with friends, membership in professional associations (for example, trade associations, chamber of commerce etc.) and other social clubs. All of these variables are important when some studies entrepreneurial networks. Studies on Entrepreneurial network mainly based on social network theory.

On the whole, it is evident that entrepreneurs of established small firms face two major problems, namely limited resources and market share. Gaining access to required resources is considered the first entrepreneurial problem, while the expansion of the market share is the second major problem faced by small entrepreneurs. Small entrepreneurs use networks as an efficient way of overcoming these problems. The formation of networks helps entrepreneurs to tap resources in external environment successfully. At the same time, such networks pave the way to new markets. In addition, recently it is also evident that small enterprises tend to use subcontracting relationships to secure a stable market share. Established small firms maintain two types of network
Entrepreneurial Networks and Small Business Development

relationships: (1) social network relationships with family, friends, and acquaintances; and (2) inter-organizational networks. The inter-organizational networks consist of two types of organizations: (a) supporting network relationships with agencies such as government institutions, NGOs, banks; and (b) inter-firm relationships with other firms (large and small). It is evident that all of these network relationships are important determinants of competitiveness and development of small firms. Therefore, it is prudent to say that networking appears to have been an important element that determines the performances of small firms. However, networking is a dynamic process. The members in networks and their roles change over time.

3.4.3. Network Dynamics: Different Phases vs Different Networks.

As we discussed above, the role of entrepreneurial personal networks, by its nature, in relation to new business development is a dynamic process. The need for networking also differs, depending upon the phases of a business venture. Accordingly, the actors of entrepreneurial networks also become dynamic. Different types of networks have to be developed according to the functional and strategic needs of firms. For example, social networks are very important in initializing the entrepreneurial process (Birley 1985, Butler and Hansen 1991, Chu 1996, Greve 1995) while business-focused networks are important in the start-up phase of a firm. Basically, social network includes the family, friends, and acquaintances with whom the entrepreneur relates to primarily on a social level. On the other hand, professional or business-oriented networks include all those individual relationships that are primarily concerned with business. For an on-going business firm, links with other organizations, particularly links with other firms become important because inter-organizational networks that include supporting agencies (government institutions, NGOs, banks, and other small business supporting institutes) and other firms (large and small firms) are a way for entrepreneurs to secure information about market relationships as well as to ensure resource channels. This enhances their position and allows them to compete more effectively (Aldrich, Reese, and Dubini 1989, Aldrich and Zimmer 1986). To understand networks requires an understanding of the dynamic pattern of networks.

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99 Ostgaard and Birley, 1996, pp. 36-37.
In 1988, Birley and Cromie proposed a model of network development that moves from the start-up network (where social network relationships predominate) to a growing network (where professional networks predominate). The study was conducted in Northern Ireland in 1988. They identified that at the early stages of a small firm, social relationships predominate. At the latter stages of a firm formation, the professional network becomes more important. The entrepreneur is constantly seeking to widen the professional network as the needs of the business changes. In this regards, members of social networks can gradually become the members of the professional networks over time. Figure 3.4 illustrates the dynamic nature of the entrepreneurial networks. However, there is room for further study because Birley and Cromie (1988) analyze only social and professional networks during the early stages of a firm. Chu (1996) also analyzed how members of a network relate and how a network develops for overseas Chinese entrepreneurs in Hong Kong and Canada at different entrepreneurial phases. He found that during different phases of entrepreneurship, different networks groups become more important. Chu (1996) also found that by maintaining the existing networks and seeking new members, members appropriate for different phases join the network, improving the chances for the business to progress.

Figure 3.4
Dynamic Nature of Entrepreneurial Networks

Source: Birley and Cromie 1988: 3 - 4

In 1991, Butler and Hansen also introduced a model of entrepreneurial network evaluation. They used their entrepreneurial network evaluation model to assess the impact of social networks in identification of entrepreneurial opportunities, to examine the


104 The study was carried out in Washington State during 1988. Interviews were conducted with the founding entrepreneur at 29 wineries.
Entrepreneurial Networks and Small Business Development

development and use of networks in establishing businesses, and to explore the role of inter-organizational network in start-up firms. *(Chapter seven of this thesis is based on this model. Therefore, a detailed discussion of the model is given in chapter seven).* The model highlights three phases of business formation: (1) entrepreneurial phase, (2) business start-up phase, and (3) on-going business phase. There are three different networks: (1) social network; (2) business-focused network; and (3) inter-organizational strategic network. The social network is extremely important in the entrepreneurial phase. The entrepreneurial phase is the identification process of business opportunities. A large social network assures the entrepreneur a larger ‘opportunity set’. A larger opportunity set helps the entrepreneur to draw both intangible information and tangible resources. The second phase is the process of business formation. In this phase the business-focused network predominates and the network should reflect links to individuals and organizations that directly serve more immediate needs of the new business. In the final phase, the entrepreneur has already started the firm and is interested in growth and profit. Butler and Hansen (1991) therefore suggest that an inter-organizational strategic network begins to emerge in the ongoing phase and thus organization-to-organization links become predominant and important. One aspect of the inter-organizational links is subcontracting (Gibb 1993). It further suggests that organizational links should include not only buyer and supplier but also competitors because all of these links can provide competitive advantages. The results of Butler and Hansen’s (1991) study suggest that both broad social and inter-organizational strategic networks are important for a successful start-up and ongoing competitive advantages. But they were unable to find significant evidence in support of the development and use of business-focused networks. *(The need for the development and use of business focused networks was limited).*

Are these findings applicable to other countries? Empirical studies to test such a dynamic nature of entrepreneurial networks have been limited. The authors have emphasized on further empirical researches in this area.

To conclude, the nature as well as the role of entrepreneurial networks in relation to new venture development is a dynamic process. In the start-up phase of a firm, the entrepreneur needs initial capital, influence, and encouragement. In this phase, social network is the most important because it is the network through which entrepreneurial opportunities are communicated. The identification of opportunities is developed through social networks. At latter stages, more business-focused relationships are considered very important. During the on-going phase, the strategic network is important because this is the stage where a firm attempts to reduce its risk of failure. As an isolated unit advantages such as reduced risk for a small firm would not be obtainable. Consequently, links with other firms such as competitors, customers, and suppliers become more important and predominant at the on-going phase. Birley and Cromie (1988), Butler and Hansen (1991),

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and Chu (1996) examined the dynamic situation of entrepreneurial networks. However, empirical studies to test the dynamic nature of entrepreneurial networks are limited, creating room for further research at both theoretical and empirical level in the field of entrepreneurial networks and the nature of their dynamics. The main problem of network research is the lack of availability of reliable data on the start-up process and on the role of networks in relation to new firms particularly in less-developed countries.

3. 5. Conclusions

The main purpose of this chapter has been to review the theoretical and empirical literature related to the small business networking. The chapter began with a brief review of the theoretical studies and then the focus was shifted to the most relevant empirical studies in order to gain better understanding of the area of entrepreneurial networks and small business development, and to identify some testable research questions for the intended study. Although over the past few years much has been written about the rapid proliferation of various types of firm networking, the area of networks and small business entrepreneurship is still a challenging research field. As stated in this chapter, the network analysis is yet to be improved in methodological, theoretical and conceptual terms. The concept of networking has been addressed by researchers from different disciplines particularly in business economics, organizational ecology, and sociological economics. However, a general conceptual framework for analyzing firm networking has still been lacking. Previous studies on networking have been guided by a number of theoretical perspectives. It has not been our intention to review all of the theories and models in the field of network and networking. In this thesis, the discussion is focused only on the entrepreneurial networks and small businesses. Given that, the first part of the chapter the discussion reviewed some of the most relevant theories and models as a basis for the study of entrepreneurial networks and small business. Thus, the Transaction Cost Approach (TCA), Resource Dependency Approach (RDA), Social Network Approach (SNA), and Swedish Network Model (SNM) were taken into account in the discussion.

TCA argues that firms enter networking to reduce their transaction costs. Under conditions of uncertainty, high asset specificity and small numbers bargaining, transaction costs rise and firms eventually will look for alternatives to markets. RDA highlights that firms form networking because of resource dependency. Since critical resources are controlled by other actors in the environment, a firm must find ways to ensure a smooth and predictable flow of resources. Firms therefore tend to enter into networking. The RDA also argues that under conditions of uncertainty, social networks are important for entrepreneurs for their decision-making. According to the SNA, such relationships help small entrepreneurs in different ways such as information gathering, canvassing and looking for customers and suppliers, and psychological significance. In the SNA, entrepreneurship is conceptualized as a function of the opportunity structures and an entrepreneur is considered as a motivated actor with access
Entrepreneurial Networks and Small Business Development

The starting point of the approach for studying entrepreneurship is entrepreneurial social networks. The basic premise of the approach is that entrepreneurs gather scarce resources from the environment through their personal networks. These resources include not only finance and other material resources but also information, ideas, customers, etc. According to the SNA, social network relations are treated as containing communication content, exchange content, and normative content. Given the high significance of SNA to our study, SNA provides the basis for the empirical discussion. However, entrepreneurial networks include not only actors such as entrepreneurs, firms, individuals, etc but also resources and activities because actors link each other through resources and activities. Therefore, such elements should be integrated into the conceptual framework of the discussion. In this regard, this study employs the major network elements of SNM as well to enhance the analytical capabilities of the conceptual framework.

With regard to the empirical studies on entrepreneurial networks and small business development, they were organized into three sections in this study: (1) enterprise formation and entrepreneurial networks, (2.1) established business and entrepreneurial networks, (2.2) network formation and small business growth, and (3) dynamic nature of entrepreneurial networks. The studies of new business formation and entrepreneurial networks have been addressed in two interrelated issues: the role of entrepreneurial networks in relation to new venture development; and the relationships between entrepreneurial network structure (size, density, frequency) and new venture development. The entrepreneur’s personal network is his social resource (Johannisson 1986, Johannisson and Peterson 1984). An entrepreneur mobilizes support and resources through his personal network. Previous empirical studies have found that at the stage of a new venture formation, the social networks predominate. Information is the main resource that new entrepreneurs receive from their social networks during the establishment of their businesses.

Entrepreneurs of established small firms face two major problems: the necessary resources; and market share. Gaining access to the necessary resources becomes the first entrepreneurial problem. The second determiner is the market share. Networking is a way to overcome these problems. Using their networks entrepreneurs can tap resources that are external to them. Using their networks entrepreneurs can enter new markets. For the purpose of market stability, recently small enterprises tend to use subcontracting relationships. An established small firm maintains two types of network relationships: 1) social network relationships with family, friends, and acquaintances; 2) inter-organizational networks. The inter-organizational networks consist of two types of organizations: (1) supporting network relationships with supporting agencies such as government agencies, NGOs, banks; and (2) inter-firm relationships with other firms (large and small). All of these network relationships are important determinants of small firm competitiveness and development. Networking appears therefore to have been an
important element of small firm growth. Established entrepreneurs form and develop their networks through external consultants, seminars, trade fairs, and discussions with relatives.

The nature as well as the role of entrepreneurial networks in relation to new venture development is dynamic. At the start-up stage of a firm, the entrepreneur needs initial capital, influence, and encouragement. At this stage, social network is the most important because it is through the social network that entrepreneurial opportunities are communicated. Opportunity identification is developed through social networks, but at a later stage business-focused relationships (Birley and Cromie (1988) identify business-focused relationships as professional networks) are considered to predominate. Then, during the on-going phase, the strategic network is important because in this phase a firm attempts to reduce the firm’s risk of failure and to gain advantages not obtainable as an isolated body. Therefore, links with other firms such as competitors, customers, and suppliers become more important and predominant. Birley and Cromie (1988), and Butler and Hansen (1991) examined the dynamics of entrepreneurial networks. Empirical studies on testing the nature of the dynamics of entrepreneurial networks have been limited. So far, no empirical studies have been conducted in developing countries in this regard. There is therefore still an opportunity for theoretical as well as empirical research in the field of entrepreneurial networks in order to test the dynamic nature of such networks. The main problem of network research is the lack of availability of reliable data on the start-up process and on the role of networks in relation to new firms.

For this study, the concepts of social networks, inter-firm networks and supporting networks to analyze the network linkages of small enterprises in Sri Lanka are used. Most of the empirical studies on network linkages of small enterprises have been conducted in developed countries. Their results cannot be generalized as world phenomena because socio-economic structure differs from country to country. In that sense, our project is different from them since this study is dealing with a Less-Developed Country, Sri Lanka. The study is principally based on the social network approach, and aims to address the following general research questions (further specific questions will be presented in the respective chapters):

1. Why and how do small entrepreneurs form their social and business networks?
2. Why and how do these entrepreneurial networks differ in each phase of a firm?
3. How do they utilize these networks for business success? and
4. What are the role and impact of the networks on small business performance?

See Chapter 1 for the definitions of networks
Chapter Four

Conceptual Framework:
*An Integrated Approach to Small Business Development*

4. 1. Introduction

The aim of chapter four is to develop an integrated conceptual model to analyze entrepreneurial networks and small business growth. As a basis for this effort, chapter 3 of this study discussed the most relevant theories of firm networking (TCA, RDA, SNA, SNM) to the study and potential syntheses between them. In this chapter, the discussion will further develop the analytical framework in order to examine the impact of entrepreneurial networks on small enterprise growth. The integrated conceptual model that is going to be developed, as identified in chapter 3 (section 3.3), provides the basis for the forthcoming analytical chapters (chapters six, seven, eight, and nine). The goal is not to establish a positivist proof of the framework; rather, the study aims to demonstrate its plausibility of and how it helps us to understand the effect of social structure on economic life. Nevertheless, some testable hypotheses that are derived from the integrated framework will be presented in the analytical chapters (see chapters, six, seven, eight, and nine). Hypotheses, findings and conclusions of this study are based on two basic premises of SNA: first, the entrepreneurial process involves the gathering of resources from the environment; and second, resources are normally obtained through the entrepreneur’s personal network.

4. 2. Integrated Approach

As discussed in chapter 3, the *network analysis* is multidisciplinary (Axelsson 1992, Meeus and Oerlemans 1993). Recently the network analysis has been used in economics, sociology, and management to studying the structure and the development of small enterprises\(^{107}\) and markets.\(^{108}\) In addition, the influence of *external actors* of firms on firms’ development has also been discussed by various researchers in various disciplines such as economics,\(^{109}\) management\(^{110}\) and sociology.\(^{111}\) It was evident from the previous discussion

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that some of the researchers\textsuperscript{112} have used the network analysis to discuss in particular the role of external actors and small business development.

It was argued in chapter 3 of this study that some of the approaches often tend to provide a sort of rationale for firm networking rather than testing some specific hypotheses on enterprise networks. For example, according to TCA,\textsuperscript{113} the costs of creating the rules for negotiation, monitoring, and enforcement incurred in the process are called transaction costs. However, within entrepreneurial networks the social network relations minimize transaction costs (Bygrave and Minniti 2000, Peng and Iliuitch 1998) because, for example, such network ties create values for firms by enhancing their ability to reduce the cost of negotiations, to reduce the cost of writing contracts, and to retain clients.\textsuperscript{114} Critics, however, say that TCA is inefficient in explaining the structure of and the development of co-operation in networks which are deeply embedded in the social and historical context even though the TCA tends to believe the fact that transaction cost reasoning is the best method of explaining relations between pairs of actors. On the other hand, according to the RDA,\textsuperscript{115} firms tend to create networking or merge because of interdependency. Similar to TCA, RDA investigates what type of governance structure to choose in a specific situation (Butler and Sohod 1995, Sobredo and Schrader 1998). In the existing literature on networking, it is evident that the resource dependence perspective has been strongly emphasized (Aldrich 1979, Butler and Sohod 1995, Pfeffer and Salancik 1978) in network formation. Besides, in a more pragmatic


\textsuperscript{113} The Transaction Cost Approach (TCA) (Kogut 1988b, Williamson 1985) is one of the popular theoretical approaches for studying of enterprise networking (see Oliver and Ebers 1998). However, theoretically, the focal point of the approach is transactional events rather than transactional or other relations (Ring and Van de Ven 1989). Scholars (see Kogut 1988b) used this approach to analyze formal types of networks such as joint ventures and alliances. (see section 3.2.1 in chapter 3 of this study). Our study is about entrepreneurial informal networks


\textsuperscript{115} The main theme of the Resource Dependence Approach (RDA) (Pfeffer and Salanick 1978) is to understand the behavior of an organization within its environment (The theory is based on an organizational perspective of Thompson J.D., 1967, ‘Organization in Action’, New York: McGraw- Hill). Interdependence and inter-organizational power are vital concepts of this approach (Sheth and Parvatiyar 1992). (Interdependence creates problems of uncertainty and unpredictability of the organization). According to RDA, one of the purposes of inter-firm linkages is to reduce uncertainty. Firms merge because of the interdependence and competitiveness. In addition, emphasizing the importance of co-ordination, RDA indicates that co-ordination through inter-firm linkages depends on voluntary behavior. The linkages provide other numerous benefits as well such as a channel for communication information, a channel for information about the activities, other material supports, etc. (see section 3.2.2 in chapter 3 of this study)
Entrepreneurial Networks and Small Business Development

way, SNA discusses the importance of understanding the social context in which business relations are embedded (Granovetter 1976, 1985, Uzzi 1996). It focuses on social network relations. According to SNA, an economic analysis of business networking cannot be separated from the social context (Staber 1995, 1996a). For example, in Italian industrial districts (a vivid example for small enterprise networks), many small firms are connected by the family bond.

However, as we have noted earlier (chapter 3), our study needs an integrated approach to analysis small enterprise networks. As we argued, TCA and RDA provide the basic rationale for such an integrated approach while SNM provides the structure for the discussion. The analytical base is provided by SNA (see Figure 4.1). According to TCA, both the market and hierarchy governance mechanisms represent trade-off between transaction and production costs. Since market governance imposes high transaction costs on the producers, they look for alternatives to markets. In contrast, since hierarchical governance imposes high production costs on the producers, they are looking for alternatives to hierarchies. In addition, small firms in particular, being small, are inherently lacking in necessary resources. Therefore, small firms have to depend upon outsiders for their necessary resources. In this regard, these firms use entrepreneurs’ network relationships to deal with their problems of high transaction costs in markets and high resource dependence and production costs in hierarchies. Accordingly, networking lies between these two. As argued in chapter 3, SNA reveals how entrepreneurs use their network relationships to obtain necessary resources and to perform activities. The network relationships are the analytical base of our study. The relationships link through resources and activities. Accordingly, our analytical framework should consist of all of the elements such as resources, activities, actor and linkages. The SNM also consists of actors, resources, activities, and explains how these elements are interrelated with each other. Our integrated model employs the SNM to formulate the structure of the study. This structure describes how small firms overcome their resource limitations and develop themselves through entrepreneurial informal networks.

Figure 4.1
Rationale, Structure, and Analytical Base of the Study

<table>
<thead>
<tr>
<th>(TCA) Transaction Cost</th>
<th>(RDA) Resource Dependence</th>
</tr>
</thead>
</table>

Analytical Base
Embedded ties
(SNA)

Structure
Resources
Actors
Activities
(SNM)
Informal Networking

Some researchers use the concept of networking to discuss formal types of company networking such as strategic alliances, joint ventures (for example, Contractor and Lorange 1988, Ebers 1997, Hagedoorn 1993, Hagedoorn and Schakenraad 1994, Powell et al. 1996), while others use it to study informal types of firm linkages particularly for small enterprises. In the case of Sri Lanka, formal types of business linkages cannot be found among small enterprises. In contrast, various informal relationships between the small entrepreneurs and outsiders such as other firms, supporting organizations and social actors are widely in use. Thus, the focus in this study is on these informal relationships. Rabellotti, (1995a) interpreted such informal relationships ‘as solidarity networks, helping enterprises to survive beyond market forces would sustain’ (Rabellotti 1995a: 39). These informal network relationships are the analytical basis of the study.

Individualistic Approach

On the other hand, while some researchers use an individualistic approach focusing on individual firm behavior within the network (for example, Aldrich and Zimmer 1986, Birley 1985, Donckels and Lambrecht 1995, 1996, 1997, Dubini and Aldrich 1991, Greve 1995, Larson 1991, 1992, Larson and Starr 1993, Uzzi 1996) others employ a holistic approach to analyze the behavior of enterprises as a group (i.e., regional development or industrial development studies). For example, some researchers use all network relations of entrepreneurs to analyze small business development at individual level. Others have been using industrial district models to analyze small business networks and regional development. In this study, entrepreneurship is conceptualized as a dynamic process which requires successful development linkages among key components of the process (Aldrich and Zimmer 1986, Zuurbier 1993). The study focuses therefore on the performances of an individual firm within the context of networks. Hence, the individualistic approach is the method in this study. In that sense, networking seems to be a system through which entrepreneurs can tap necessary resources that are external to them or resources that are beyond their control.

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4. 3. The Entrepreneur and his External Environment: The ‘Hard-Core’ and Periphery

In line with many other studies,\textsuperscript{119} this study too believes that the behavior of a firm is difficult to analyze without considering its external environment. As discussed in chapter 3, firms always have to develop their relationships with the outsiders (external actors\textsuperscript{120}) in order to perform economic activities. These outsiders can be individuals, organizations, and other business firms. These groups are external actors who have direct or indirect links with the owner or entrepreneur of the firm. The argument of this study, in line with others, is that such relations can positively affect the performances of a firm (see also Birley 1985, Boyd 1990, Donckels and Lambrecht 1995, Jarillo 1989, Østgaard and Birley 1996).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4.2.png}
\caption{The Entrepreneur and his Environment}
\end{figure}

Adapted from Donckels and Lambrecht 1995: 277

As Figure 4.2 shows,\textsuperscript{121} an entrepreneur, who is the main composer of network elements, is embedded in his business and in external environment.\textsuperscript{122} The entrepreneur has to enter into relationships with other parties in his business as well as in his external environment.


\textsuperscript{120} External actors have direct or indirect links with the owner or entrepreneur. But they are not employed by the firm.

\textsuperscript{121} The model presented by Donckels and Lambrecht, 1995.

\textsuperscript{122} The entrepreneur must be viewed as being embedded within a social context (Aldrich and Zimmer 1986, Granovetter 1976, 1985, Uzzi 1996, 1999).
(Donckels and Lambrecht 1995, Johannisson 1990b, Pfeffer and Salancik 1978) because according to Sengenberger and Pyke (1992: 11), the main problem for small enterprises is not being small, but being lonely. The focus of this study is the entrepreneur’s relationships with his external environment. ‘For small firms the definition of ‘networking’ and ‘networks’ must be founded on the relationship they have with the external environment’ (Bryson et al. 1993: 268). It is common that in order to function and to survive, firms need resources such as raw materials, capital, manpower, political and social acceptance, etc (Gibb 1993, Johannisson 1988, 1989, Larson and Starr 1993). The resources will have to be acquired from external parties (they are in the firm’s external environment) such as suppliers of raw materials, banks, employees, the government and other supporting agencies, etc (Anderson et al. 1994, Duijnhouwer 1994, Easton 1992, Porter 1990) since a firm itself does not have all these resources fully at its disposal. According to Sengenberger et al., in this regard, ‘... the firm looks for other small firms to associate with and to build a more permanent, mutually constructive network of joint support and resource sharing, possibly with the co-ordinator specialization of each firm in the network’ (Sengenberger et al. 1991: 59). In this study, it is argued that performance of a firm depends on resources and the external supporting networks because the resources are, particularly for small firms, controlled by outside actors of the firms. In other words, to survive, organizations require resources. Typically, acquiring resources means that organizations must interact with others who control those resources. The interactions involve information, monetary or physical resources. Small entrepreneurs obtain these resources and support through their personal networks. Recent empirical results have supported the importance of these external links for a firm’s survival (Duijnhouwer 1994, Humphrey and Schmitz 1996, Johannisson 1988, Oliver and Liebeskind 1998, Steier and Greenwood 2000), its growth (Jarillo 1988, Donckels and Lambrecht 1995, Ostgaard and Birley 1996, Rothwell and Dogson 1991), and for entrepreneurial performance (Aldrich and Zimmer 1986, Birley 1985, Brown et al. 1990, Butler and Hansen 1991, Cromie et al. 1994, Falemo 1989, Larson 1991, Uzzi 1996).

4.4. Network Model for Small Business Growth

The main objective of the network model for small business development is to provide an integrated analysis of stability and development in small firms. A second aim of the model is to provide a basis for studying the roles of actors and sets of actors in the entrepreneurial development process. This framework help to understand how small entrepreneurs mobilize the support they need in order to maintain successful business ventures. Although there are several key concepts at the heart of network analysis, the basic elements are actors, resources, activities, and linkages (see; Axelsson 1995, Beije

Entrepreneurial Networks and Small Business Development

These network elements are related to each other. The actors can be individuals, organizations, firms, or government agencies (Birley 1985, Butler and Hansen 1991, Moller and Willson 1995). Each actor has its own resources, its specific activities and the knowledge about these activities, and resources and other actors in the network. Linkages between actors and resources can be described as relations among the actors in the network. Furthermore, linkages between resources and activities can be defined as relations between the actors in the network. Linkages could be formal and informal, direct and indirect, or compulsory and voluntary.

The study's focus here is on the ego-centered network because we are interested in analyzing a single firm which is called the focal firm or the ego-center. By definition, an ego-centered network consists of a focal actor and a set of other actors with whom the focal firm has direct ties (Burt 1982, Kalleberg 1995, Kelley 1993). In this study, the ego is a small (focal) firm. In other words, the analysis is done at an individual level because the study is concerned with individual enterprises and thus the focus is on network building and its impacts on the behavior and performance of a single firm based on the focal firm concept (see Figure 4.3).

As we already discussed in chapter 3, small enterprises generally do not possess a range of capabilities and resources to research, to commercialize, and to market new products of them (Duijnhouwer 1994, Gibb 1993). Firms, therefore, have to enter into relations with external parties such as friends, banks, government agencies, other firms, etc to acquire necessary resources. Thus, acquiring resources from the external environment means that firms must interact with others who control resources. The relationships among actors in networks can be explained in different ways based on activities and resources of each actor. Actors have independent goals, objectives and strategies. They develop and maintain relationships with each other. The focal firm (small firm) obtains resources through its networks (Easton 1992, Jarillo 1989, Larson and Starr 1993). The integrated conceptual model illustrated in Figure 4.3 presents these network relationships. The basic assumption in the network model is that the individual firm (focal firm) is dependent on resources controlled by other actors (Johanson and Mattsson 1992, 1993), and the resources are obtained through the entrepreneur’s personal network (Belotti 1995, Birley and Cromie 1988, Cromie et al. 1994, Johannisson 1987b, 1988, Ostgaard and Birley 1996, Uzzi 1996, 1999).

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124 Burt (1982) identifies three main units of analysis of networks: (1) the ego-centered network; (2) the group of cohesively related actors, and (3) the whole relation system composed of multiple actors.

125 By contrast, as mentioned elsewhere, the main concern of the holistic approach is centered around firms as groups (for example, in the case of industrial districts, Hakansson 1987, Becattini et al. 1990).
For small enterprises, the owner (entrepreneur)\textsuperscript{126} is the manager, and he controls the whole business. As Figure 4.3 shows, therefore, the behavior of a firm must be examined via the interaction of the entrepreneur and his networks of actors, resources and activities. At the same time, the networks of actors, the network of activities and the network of resources are interwoven in the total network\textsuperscript{127} (see Figure 4.3). Therefore, these external links are very important for the firm’s survival, its growth and its performance (Aldrich

\textsuperscript{126} However, Carland et al. (1984) identify some differences between an entrepreneur and a small business owner in relation to definitions. An entrepreneur is an individual who establishes and manages a business for the principal purpose of profit and growth. The entrepreneur is characterized principally by innovative behavior and will employ strategic management practices in the business. A small business owner is defined as ‘an individual who establishes and manages a business for the principal purpose of furthering personal goals. The business must be the primary source of income and will consume the majority of one’s time and resources’. Carland et al., (1984), ‘Differentiating Entrepreneurs for small business Owners: A conceptualization’, Academy of Management Review, Vol. 9, pp. 357.

\textsuperscript{127} According to Håkansson and Johanson (1984a, 1992), it is evident that three ‘ subnetworks’ (network of actors, network of activities and network of resources) are intimately related to each other. They are interwoven in the total network.
Entrepreneurial Networks and Small Business Development


To conclude, a firm needs resources to function. The networking provides a support environment for small enterprises, and guaranties that small enterprises are able to obtain resources that are essential for competitiveness and survival in markets. Resources\textsuperscript{128} are obtained through the entrepreneur’s personal network. The personal network links with external resources and activities. Hence, these personal ties generate exchange benefits in markets.\textsuperscript{129} For example, the network ties provide benefits by reducing the cost of negotiation and writing agreements (Eyiah 2001, Hummon 2000, Johanson and Mattsson 1987, Peng and Iliuitch 1998, Uzzi 1999). In addition, these ties facilitate to reduce the firm’s risk of failure (Blter and Hansen 1991, Cromie \textit{et al.} 1994). Our argument is that performance or success of an entrepreneur or an individual firm cannot be examined without taking the entrepreneur’s personal network into account. Accordingly, the study holds that a focal firm does best when it maintains network relationships with its external actors. Having discussed the overall model, the discussion pays attention to \textit{subnetworks} of the overall model in the following sections.

\textbf{4.4.1. Networks of Actors}

As we discussed above, actors\textsuperscript{130} are defined as those who perform activities and control resources. Actors may be informal units and/or formal organizations.\textsuperscript{131} With regard to our analysis of small firm-networks, the focal actor is a small firm. There are other actors in the \textit{periphery}. They can be categorized into three separate ‘\textit{sub-networks of actors}’ according to the nature and objectives of them. They are social network of actors, inter-firm network of actors, and supporting network of actors. The social network includes

\textsuperscript{128} Market transactions are also an important avenue to acquire resources.

\textsuperscript{129} For example, Uzzi (1999) found that social ties generate surplus values for the firm by promoting private information. Uzzi (1999) examined how social relations and networks benefit firms seeking financing. He argued that firms are more likely to get loans and to receive lower interest rates on loans from their network of bank ties that has a mix of embedded ties and arm’s length ties because embedded ties motivate network partners to share private information and resources, while arm’s length ties facilitate access to public information on market prices and loans opportunities. The benefits of different types of ties are optimized within one network. Thus, the argument is based on the social network approach.

\textsuperscript{130} However, all network ties discussed here are defined as entrepreneurial informal personal ties with other actors.

\textsuperscript{131} However, Bensaai (1995) describes actors as a person, an informal unit or a formal organization.
relatives, friends and acquaintance, while the inter-firm network consists of other firms (small, medium and large). The members of the supporting network are defined as the supporting agencies such as government agencies, NGOs, and banks, which provide various supports for the development of small business. Accordingly, the actors of the networks are not limited to individuals and organizations that directly involved in a specific functional activity, but also include individual and organizations providing all sorts of supporting services that are related indirectly as well to the main functional interest. Figure 4.4 shows the network relations among the actors. The entrepreneur (focal actor) creates and develops a set of external relationships with these actors. According to Håkansson (1987), there are some important common characteristics of actors: they control resources; they perform and control activities; they develop relationships with each other through exchange processes; they have their own goals; and they have different knowledge about other actors, their activities, and resources.

As Figure 4.4 shows, the focal entrepreneur has direct linkages with the actors of the three types. The actors maintain these linkages through resources and activities. For example, actors in the social network provide some basic facilities to small firms. Like many others this study, too, generally believes that the total networks of actors are important to successfully start-up a firm and to run the firm successfully in a competitive business environment. This study further argues that different phases of a firm needs different types of network relationships because the problems, difficulties (Olson 1987, Terpstra and Olson 1993) resource requirements (Butler and Hansen 1991, Mount et al. 1993) of such a firm are different in each phase it goes through. For example, at the initial stage of business, (that is, the entrepreneurial phase) the relationships between the actors of social network and an entrepreneur are very important for small firms (Aldrich and Zimmer

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Entrepreneurial Networks and Small Business Development

During the on-going phase of a small firm, the social network is still important, but may be at a lesser degree compared to the initial stage (Butler and Hansen 1991). Hence, in the on-going phase supporting and inter-organizational networks become more important than social network (Birley and Cromie 1988, Butler and Hansen 1991, Ozcan 1995). To understand networks requires an understanding of the dynamic pattern of networks. Chapter seven of this thesis will examine this behavior of network development.

Are there any impacts of the development of these networks on the performances of small enterprises?

In general, all of these entrepreneurial networks help small firms in various ways (Aydalot 1988, Brown and Butler 1993, Cromie et al. 1994, Johannisson 1986, 1988, Monsted 1994) such as providing new ideas about new products and markets, information, initial capital and other types of financial assistance, and other resources. Previous studies (for example, Birley 1985, Johannisson 1988, 1991, 1993), therefore, argued that the success of the entrepreneurial venture depends on the size and diversity of the relevant networks that are developed by the entrepreneur (Chapter six will examine how actors develop their networks; there the study will test the relationship between network formation and success of a business).

4.4.2. Networks of Activities

According to Håkansson and Johanson (1992) activities occur when one or several actors combine, develop, exchange, and/or create resources by utilizing other resources. The activities of an actor are always dependent on the outcomes of the others (Awuah 1997) because within the process of performing activities the actors create exchange relationships among them. Beije and Groenewegen (1992) identify two main kinds of activities: transformation activities and transaction activities. Through transformation activities resources are changed into different forms, creating new resources. Transaction activities are always controlled by one actor. Transaction activities transfer direct control over a resource from one actor to another. These activities thus link different actors together. In that sense, transaction activities are never a one-actor-control phenomenon. They affect and are affected by the relationship between actors involved (Håkansson and Johanson 1992).

Generally, a firm thus needs transactions with others to perform transformation activities. In traditional approaches of market, transactions among firms are analyzed based on the prices paid for goods and services. Thus, according to the traditional approaches, transactions are seen as something that takes place in the market: ties are arm’s length. According to the
network approach, transactions are viewed as network relations with other actors. Transactions, which take place through embedded ties, ‘...can be understood from the interpersonal relations as well as the interfirm relations’ (Beije and Groenewegen 1992: 98). Therefore, transactions take place within the network according to network approach. Subcontracting is an example for transaction activities. Activities are performed by subcontractors, and are also controlled by the actors.

Chapter eight of this study is about the subcontracting linkages. It examines the impact of network formation on subcontracting linkages in small business enterprises. Our study suggests that firms involved in networks would enable themselves to gather information about subcontracting and to access the subcontracting channels. To perform these activities actors require resources.

**4. 4. 3. Networks of Resources**

Resources could be physical assets (raw materials, machinery, equipment), human assets (skilled labor, knowledge), and financial assets, or tangible and intangible. Resources are not homogeneous. They are limited and can be used for a number of different dimensions and purposes. Thus, it would be difficult to determine the optimal combination of a certain resource with other resources.

All resources are controlled by actors. If there is an unlimited resource supply, actors do not need to control resources. In other words, if resources are unlimited, controlling of them is unnecessary and thus a need for networking among actors is not arisen. Within the networks, firms depend on others due to lack of resources in a single firm (Gibb 1993, Hellgren and Stjernberg 1987, Johanson and Mattsson 1993, Pyke and Sengenberger 1990). Networks provides a useful platform for resource exchanges (Benassi 1995, Dubois and Hakansson 1997, Johannisson and Peterson 1984, Monsted 1994). In other words, entrepreneurs have access to resources such as finance, information, moral support through their networks.

For example, entrepreneurial personal network relationships are crucial for even making bank loans (Bates 1991, Bond and Townsend 1996, Huck et al. 1999, Steier and Greenwood 1995, 2000, Uzzi 1999) because, as argued elsewhere, the high level of trust developed through entrepreneurial networks enables firms to reach better deals (Bygrave and Minniti 2000, Staber 1996b, Uzzi 1996). It helps to reduce negotiation costs as well. The high level of trust also enables to reduce transactional uncertainty, and to create opportunities for the exchange of goods and services including information and finance

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133 The other types of inter-firm transactional linkages, according to Dicken (1992), include ‘arms length’ transaction, strategic alliances, joint ventures, licensing, and industrial co-operation agreements.
that are usually difficult to price. In other words, it facilitates the exchange of resources and information that are crucial for high performance but are difficult to value and transfer via market ties. Accordingly, in this study, we argue that even bank finance is also embedded in entrepreneurial personal networks. In short, the entrepreneurial personal networks increase firm’s access to resources.

As argued, it is clear that in order to perform activities actors need resources. Resources are placed in different locations and different hands. According to our entrepreneurial network approach, an entrepreneur obtains resources through his personal networks\(^\text{134}\) to achieve his goals and interests (see Figure 4.5). For example, Easton (1992), to answer the question why a firm would seek to develop relationships, argued that network relationships allow the actor a more effective acquisition of resources. In resource network, there are three types of patterns of association. They are patterns of symmetry, exchange, and multiplexity (Galaskiewicz and Marsden 1978) that describe ways in which actors develop links with others through resources. *Networks of resources will be discussed in chapter nine.* One of the major arguments of chapter nine is that since actors use network ties to search for opportunities, investment (Gibb 1993, Uzzi 1999), and to get access to resources (Cromie *et al.* 1994, Falemo 1989, Johannisson 1988, Joyce *et al.* 1995, Monsted 1994, Staber 1996a), a single (focal) firm, who has better and strong network ties, would be able to obtain better and more opportunities, investment and resources efficiently (Birley and Cromie 1988, Johannisson 1988, Gibb 1993, Monsted 1994, Ostgaard and Birley 1996). In addition, these

\(^{134}\) Since the study deals with small enterprises in a developing country, the entrepreneur of a firm is the key player. He is the manager in his firm. He makes decisions.
relationships help to reduce the business risks and uncertainties as well. Finally, all of these lead to better business performance.

4.5. Conclusion

The main purpose of this chapter has been to develop the conceptual framework for the intended study. Even though over the past few years much has been written about the rapid proliferation of various types of firm networking, the area of networks and small business entrepreneurship remains a challenging research field. It is still not methodologically, theoretically and conceptually developed. The concept has been addressed by researchers in different disciplines, particularly business economics, organizational ecology, and sociological economics (see chapter 3). In organizational economics, TCA indicates that firms tend to network due to high transaction costs in markets. However, on the other hand full hierarchy imposes high production costs on the producers. Networking is regarded as being intermediate to the polar ends of the two governance options (markets and hierarchies). In organizational ecology, RDA highlights the fact that firms network because of resource dependence. In sociological economics, SNA addresses it from the social behavioral point of view. Both the RDA and the SNA deal with not only inter-firm networks, but also social networks and supporting networks. The integrated entrepreneurial network approach proposed here explains that small firms in particular tend to link with other firms, social actors, and supporting agencies. This framework help to understand how small entrepreneurs can mobilize the support they need in order to sustain successful business ventures.

However, ‘network’ here has been defined as long-term contact between small business owners and external actors (persons, business firms, or other organizations) in order to obtain resources, and to maintain their activities. In other words, the concept of networks implies co-operative efforts among, persons, business firms, government bodies, other organizations, and other entities that are interconnected through activities and resources. The study examines informal contacts that are generally based on a handshake rather than a written agreement. Further, the study analyzes only external networks and focuses on individual business development (the individualistic approach). Consequently, the concern in this study is the ego-center network. The ego is a given small firm. This study is different from others where the unit of analysis is larger such as Italian industrial district schools (Becattini et al. 1990, Piore and Sabel 1984, Pyke and Sengenberger 1990, 1992, Rabellotti 1995a, 1995b), industrial networks of Uppsala schools (Axelsaon 1992, Hakansson 1987). Nevertheless, this study uses Hakansson and Johanson's model, the Swedish Network Model, to identify network variables. The firm-centered network or ego-centered network (see Benassi 1995, Greve 1995) is composed of connected exchange relations and is dependent on other actors.

135 Nevertheless, the study analyzes ego-center networks instead of the holistic approach as in the case of Italian industrial district school or industrial networks of Uppsala school.
In this study, the focus is on network building and its impact on the behavior and performance of a single firm.

The ways in which networks have been conceptualized in this study suggest that the following elements are, therefore, necessary conditions for the emergence of networks: networks of actors, networks of activities, and networks of resources. Furthermore, three types of networks of actors have been identified: social networks, inter-firm networks, and supporting networks of actors. In general, the actors have different roles with regard to the development of small enterprises. In particular, it is expected that each of the networks plays different roles in each phase of a firm. Actors perform activities. In this regard, actors link each other through subcontracting activities. To perform activities, actors need resources. A single actor does not have all kinds of resources needed for better performances. Actors develop links with others through resources and activities. The analytical (empirical) chapters (chapter, 6, 7, 8, and 9) of this thesis will examine these three components with relations to small business growth. The entrepreneurial network approach advanced here combines organizational theory with social network theory and argues that the entrepreneurial personal ties shape economic action by creating unique opportunities as well as access to those opportunities. Therefore, the general hypothesis of this study is that small enterprises with entrepreneurial external network relationships are better off than the similar enterprises without such linkages or relationships. Based on the conceptual framework, separate specific hypotheses will further be developed and tested in each of the analytical chapters. The hypotheses, findings, conclusions of this study will be based on two basic premises of SNA: the entrepreneurial process involves the gathering of scarce resources from the environment, and resources are obtained through the entrepreneur’s personal network. This framework demonstrates how small firms use network relationships to overcome their resources and other barriers to entering new markers, and to perform successfully.
Chapter Five

Research Methodology and Data Characteristics

5.1. Introduction

The chapter is divided into two parts. The first part will discuss the research methodology which includes the research paradigm, research design, sampling, method of data gathering, measurements of variables, and analytical techniques. The second part is devoted to a descriptive analysis of the survey findings which includes the entrepreneurs’ personal profiles, the general profile of the small enterprises, and a brief picture of entrepreneurial networks. The main objective of the second part is to provide a broad picture about our sample and the entrepreneurial networks of the small enterprises prior to main analyses.

5.2. Research Methodology

The main objective of this part of the chapter is to present the research plan. Accordingly, it includes the choice of the research design, methods of data collection and data analysis. The choice of the research design is probably the most important in this stage. The sample was selected on the basis of the research design and the conceptual framework. Finally, in this part, the methods of data collection, measurements of variables, and analysis of the data are explained.

5.2.1. The Research Paradigm

This section of the chapter explains the type of research design that was selected to analyze our research questions. First, the main research designs in general are briefly discussed; and then the discussion focuses on the appropriate research design for the intended analyses of the research questions of this study.

The main criterion for the choice of the research design is the currently available theories in relation to the research problem at hand (Robson 1993, Weimer 1995). However, there is no one ideal way to develop and categorize a research design. For example, one of the major divisions of research designs is based on the ‘qualitative’ and ‘quantitative’ methods.\textsuperscript{136} Philosophers (Burrell and Morgan 1979, Creswell 1994, Hollis 1994) discuss them in relation to ontological, the nature of the focal phenomena, methodological, the

\textsuperscript{136} The notion of quality is essential to the nature of things, while quantity is elementally an amount of something. Quality refers to the what, how, when, and where of a thing its essence and ambience. Hence, qualitative research refers to the meanings, concepts, definitions, characteristics, symbols, and descriptions of things. By contrast, quantitative research refers to counts and measures of things (Berg 2001, Dabbs 1982, Jackson 1968)
nature of ways of studying those phenomena, and *epistemological*, the nature of knowledge about those phenomena, issues (see Table 5.1).

Table 5.1

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Question</th>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ontological assumption</strong></td>
<td>What is the nature of reality?</td>
<td>Reality is subjective and multiple as seen by participants in a study.</td>
<td>Reality is objective and singular, apart from the researcher.</td>
</tr>
<tr>
<td><strong>Epistemological Assumption</strong></td>
<td>What is the relationship between the researcher and research?</td>
<td>Researcher interacts with what is being investigated. Researcher is an interactor.</td>
<td>Researcher is independent of what is being investigated. No value judgment.</td>
</tr>
<tr>
<td><strong>Methodological Assumption</strong></td>
<td>What is the process of research?</td>
<td>Inductive process Theory developing Context-bound</td>
<td>Deductive process Theory testing Context-free</td>
</tr>
</tbody>
</table>

Source: Based on Creswell 1994: 5.

There is practically no single theory on the study of network linkages and small business development in developing countries (Borch and Arthur 1995, Curran et al. 1993, Jansson et al. 1995). This study starts with facts instead of a theory. The data are qualitative. The researcher is not independent of what is being researched and is thus an interactor. Consequently, the research process of this study is inductive rather than deductive. Our method is based on interactions between an inductive and deductive designs.

What type of research design did we select?

There is a close relationship between research paradigms and research designs. How does the relevant literature explain a research design? What research design is appropriate for this study? The answers can be found in the following section.

5.2.2. The Research Design

A research design is simply the framework for a study. It provides useful guidelines to collecting and analyzing data. There is no single perfect research design for all studies. Hence, many research design frameworks can be found depending on the nature of the

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138 ‘… (qualitative research) its practice is sometimes criticized for being nonscientific and thus invalid. Some qualitative research projects have been just as poorly conducted as have some quantitative studies, …’ (Berg, 2001: 2)
Entrepreneurial Networks and Small Business Development

For example, exploratory research is necessary to understand the problem more precisely and to formulate specific hypotheses, while descriptive research designs are typically concerned with determining the relationship between variables. The primary objective of exploratory research is to provide insights into and an understanding of the problem confronting the research (Babbie 1996, Marshall and Rossman 1999, Robson 1993, Saunders, Lewis, and Thornhill 2000). For example, why do small firms form their networks, and how they form their networks? How do they utilize their networks? This type of research design can be used: for example, in formulating a research problem more precisely, developing specific hypotheses, identifying key variables and their basic relationships, etc. If researchers do not have enough understanding to proceed with the research project, they should use exploratory research designs. The research process is flexible and unstructured (Adams and Schvaneveldt 1991, Saunders, Lewis, and Thornhill 2000). The sample is small and non-representative. Literature surveys, experimental surveys, focus groups, and case studies are popular methods of exploratory studies. Mostly primary data is used in exploratory studies. Usually, but not necessarily, the nature of the primary data and the analytical techniques of the data are qualitative (Berg 2001, Marshall and Rossman 1999, Maxwell 1996, Robson 1993).

On the other hand, the main objective of conclusive research is to test specific hypotheses. This type of research is typically more formal and structured than exploratory research. The sample is large and representative. The method of data analysis may be quantitative and/or qualitative (Robson 1993). Conclusive research designs may be either descriptive or causal. This type of study is typically guided by initial hypotheses. Longitudinal study and sample survey are the main types of descriptive studies. A causal research is concerned with determining ‘cause-and-effect’ relationships. Causal studies typically take the form of experiments since experiments are the best suited to determine cause and effect.

Although exploratory and descriptive research can make a contribution to the development of theory, striving for such a development is more emphatically present in causal research. However, some researchers use combined research designs for their studies (Creswell 1994, Jick 1979, Reichardt and Cook 1979, Saunders, Lewis, and Thornhill 2000). It depends on the purpose and objectives of research. Research questions also help to understand the suitable research design (Berg 2001, Marshall and Rossman 1999, Robson 1993, Weimer 1995).

The research questions in this study are: ‘Why and how do small entrepreneurs form their social and business networks?; what are the entrepreneurial network ties?; why do these networks differ in each phase (of the three different phases) of a business?; what are the role of the networks on small business performance? These questions, ‘what, why, how’, indicate exploratory or descriptive forms. The subsequent research questions, ‘the
relationship between these ties and small business performance’ or ‘the impact of the network relationships on small business performance’, indicate explanatory or testing research. Since theoretical and empirical studies in the area of network linkages and small business development have not extensively been conducted (Axelsson 1992, Borch and Arthur 1995, Johannisson et al. 1994, Oliver and Ebers 1998), this study recognizes that the descriptive parts of the study are of more importance. The identification of various social and business ties and networks is very important because the latter parts of the study analyze the relationships between these ties and small business growth.

The second part of the research questions fall into explanatory or testing basic research form. For example, the relationship between networks and small business growth is an explanatory model because linkages are explanatory factors of small business growth. However, there are no established models on these relationships. This study as a whole does not have one recognizable basic form.

To sum up, it should be stated that the level of theoretical development in the multiple constituency approach forms an extended power perspective which is considered too ill-defined to make this study part of testing research as such: the basic form of this research project is, therefore, descriptive and explanatory. It is known as the ‘triangular’ research design. 139 It improves the quality of data and in consequence the accuracy of findings, and can also lead us to a better understanding or to new questions that can be answered by later research.

5. 2. 3. The Choice of the Research Methods

As discussed before, there is a very close connection between the basic research designs and the research methods. There are a number of research methods, such as case study, survey, experimental, quasi-experimental, action research, etc. Most probably, the case study research method is for exploratory research, and the experimental research is a

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139 Triangulation refers to the combination of methodologies in the study. Through triangulation we can improve the accuracy of judgments and results by collecting data through different methods or even collecting different kinds of data on the subject matter of our study. Triangulation represents varieties of data, investigators, theories, and methods. Thus, it includes multiple data-collection procedures, multiple theoretical perspectives, and or multiple analysis techniques. The use of triangulation increases the depth of understanding an investigation can yield (Berg 2001, Denzin 1978, Janesick 1994). The main advantage of the method is that it can produce a more complete, holistic and contextual portrait of the object under study. It is particularly valuable in the analysis of qualitative data where the trust-worthiness of the data is always a worry. There are some problems with triangulation as well: 1) sometimes it can be difficult to judge if the results from different methods are consistent or not; 2) different methods can produce different results (Ghauri, Gronhaug, and Kristianslund 1995, Robson 1993). Triangulation represents varieties of data, investigators, theories, and methods. Thus, it includes multiple data-collection procedures, multiple theoretical perspectives, and or multiple analysis techniques. The use of triangulation increases the depth of understanding an investigation can yield (Berg 2001, Denzin 1978, Janesick 1994)

However, the selection of a suitable research design should not be an arbitrary choice. It depends on a number of criteria such as internal and external validity, reliability, variables, level of measurement for each variable, levels of analysis, effectiveness, time duration, cost factors, research ethics, etc (Bonoma 1985). A careful attention to all these factors by the researchers is important.

More qualitative methods that provide a deeper understanding, greater generalizability, higher external validity, and more adaptability to ongoing results that may be more useful at the theory-building stages of research (methods of exploration and description), while more quantitative methods may be more useful for theory-testing.

5.2.4. Validity, Reliability, and Pilot Survey

Validity and reliability\(^{140}\) (Creswell 1994, Cooper and Emory 1995, Mitchell and Jolley 1996) are common problems for all of the researchers. To increase validity and reliability, this study conducted a pilot survey to pre-test our questionnaire. Besides, to ensure reliability, each interview involved two researchers. Interviews were taped and transcribed. The method adopted allowed the interviewee to recount events in a chronological manner, probing where necessary to clarify who was involved in different activities, how particular contacts were made, the extent to which contacts 'knew' each other, and so on. The central concern was to obtain a story of how the firm grew. As a rule of thumb, we recorded direct and indirect ties as perceived by the respondent. Although we had a set of concepts in mind the central logic was to understand the evolution of the new venture and its context of evolving ties, through the eyes and understandings of the key principals. In addition, the researcher himself is directly involved in interviews.

The dependent and independent variables have been identified by other researchers in this field of study (Butler and Hansen 1991, Donckels and Lambrecht 1995, 1996, Ostgaard and Birley 1996, Uzzi 1999). Furthermore, the study measured dependent variables in different ways. However, it was difficult to test results repeatedly and thus the study has carefully examined others’ work and has followed their methods to test the hypotheses of this study. This helped to increase validity and reliability of our results.

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\(^{140}\) Basically validity concerns whether a developed theoretical framework is a relevant representation of reality. There are two forms of validity: the external validity and the internal validity. External validity assesses whether the research findings will be representative and whether the results can be generalized to similar circumstances. Internal validity refers to the extent to which we can conclude that a causal relationship exists between two or more variables. Reliability is concerned with the accuracy. Practically it is concerned with a wide range of factors of economy and interpretability. (Cooper and Emory 1995, Creswell 1994)
The data gathering stage of the research process started with a pilot study. The pilot survey was conducted prior to our main survey. The primary objectives of the pilot survey were to assess the efficacy of the research design and instrumentation, and to gather proxy data for probability sample selection. According to Cooper and Emory (1995), this type of pre-testing, on the one hand, reduces the risk of exhausting the supply of respondents and, on the other hand, increases the sensitivity of respondents to the purpose of the study. Meanwhile, Litwin (1995) also suggests that pilot testing helps to identify errors in formation and presentation of a study. Therefore, the pilot testing provided us a space to correct some errors before the survey was mass-produced on a wider scope to gather real data. In other words, it provided us the time and opportunity to redesign problematic parts of the survey before it was actually used.

As mentioned above, the pilot survey was conducted before selecting our research sample. The pre-testing procedure helped to select a good quality sample and to systematize the questionnaire to increase its effectiveness. The following factors of the research were substantially evaluated through the pilot survey: whether questions are understood; whether instructions are clear; whether the order of the questions is appropriate; whether the questionnaire is monotonous and questions are uninspiring; etc. This helped to increase validity and reliability of this study. The selection of sampling method is also a very important element that increases validity and reliability of the research findings. The next section of this chapter will discuss the sampling methods and selecting procedures.

5.2.5.1 The Population and the Sample

In this project, the population comprises small business enterprises in Sri Lanka (for definition of small enterprises, see chapter 2). This study is not a comparison among countries or regions. We used field survey research methods to provide a basic picture of the small business linkages and networks, and to analyze the relationship between these linkages and small business growth. In this section, the second component of the research plan that addresses the population and the sample of the study is discussed.

The choice of the ‘general population’ is initially based on the research questions and thus the general population is decided by the nature of the research questions. The general population of this study is small enterprises. The operational population is usually a subset of the operational or working population. Research data is obtained through the sample or sample population.

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141 The ‘general’ population is the population from which the finding of the study is generated. Theoretically, the ‘operational’ population is usually a larger sub-set of the general population. According to the literature, the operational population is known as the working population or the sample frame. The ‘sample’ is usually a subset of the operational or working population. Research data is obtained through the sample or sample population.

142 See footnote number 3
Entrepreneurial Networks and Small Business Development

the basis of the research framework, comprised the small enterprises in Sri Lanka. Then the research sample was selected from the operational population by using a standard sampling method.

5.2.5.2. The Sampling Method

As we have already stated, the population of this study is small enterprises (businesses) in Sri Lanka. The definition of small business enterprise (less than 50 employees) of this study is based on definitions given by various department and organizations in Sri Lanka (see chapter 2). The Department of Census and Statistics collects data from visits to a sample of 229 small and medium-sized industries. Information in the DCS database alone was not adequate for the analysis since this study takes in three stages of Entrepreneurship (opportunity identification, start-up and on-going phases). Clearly, the purpose of this study is different from DCS (this study analyzes different network relationships in different phases of a small enterprise, see chapter 7) creating a need for different types of information about small business entrepreneurs. The DCS together with various other organizations provides different types of facilities for the development of small business enterprises such as training programs, and financial and other services. The small business enterprise population, can therefore best be identified from their lists.

However, it would be highly costly if we covered the whole country. Concentration on a representative sample of small business enterprises helps to provide a control for some economic and socio-cultural factors. Consequently, we chose multistage random sampling method (Fowler 1984). In Sri Lanka, there are 28 Industrial Estates for small and medium scale industries. Collecting information from the Northern and Eastern provinces of the country is not possible due to the on-going civil war situation in the area. In addition, a few more districts were also ignored, as there are no industrial estates established in them. Further, a number of districts were intentionally disregarded because the number of industrial estates that are located within the selected districts is fewer than two. Finally, we listed all the industrial estates, which are located within the selected

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143 For example, Industrial Development Board (IDB), Development of Small Industries, Ministry of Youth Affairs, etc. (See Chapter 2)

144 Sri Lanka consists of nine provinces, which are further divided into 24 districts (see Appendix C). These 24 districts have been divided into 235 Assistant Government Agent divisions (in 1998). These Assistant Government Agents are also divided into small administrative units. The smallest administrative unit of this administrative pyramid is the Gramasewaka units.

145 The study focuses entrepreneurial informal linkages. Therefore, it is prudent to choose one region because social and cultural conditions substantially vary from region to region.

districts, namely Colombo, Gampaha, Kaluthara, Kurunegala, Puttalam, and Rathapura. From this list, one industrial estate was randomly selected. The name of the selected industrial estate is ‘Heraliyawala’. It is located in Kurunegala district, the North-Western Province of the country. Therefore, the operational population was small firms in Kurunegala district. The research sample was driven from the operational population (the sample frame).

For administrative purposes, Kurunegala district is officially divided into 27 divisional secretariats (see Appendixes D and E). The land area of the district is 4716.9 sq. km, which is 7.47 percent of the total land area of the Island. This is the third largest district in Sri Lanka. Total population of the district is 1,568,409 in 1998. In terms of the size of the population, the district ranks third among the 24 districts in the country. Nearly 90 percent of the total population of the district lives in rural areas.

The district has more than 7600 small and medium scale industrial units. Many of them are involved in agro-based products, such as fiber, coir, copra and coconut oil. Five industrial estates that were developed by the government are located in the district. In addition, there are some natural-resource-based industrial estates such as Craft Export Village in Dhammadeniya, coconut products, bricks, etc. Nearly 23 percent of the small-scale industrial units in the district are located in such types of estates. In order to choose a balance sample, we interviewed 70 small business owners from these estates. 63 of them were used for final analysis.

Due to practical difficulties (money, time, and transport), we were restricted to a sample of 325 small firms. Nearly 95 percent of respondents have accurately replied. One of the reasons for non-responses is that some declined to participate for unspecified reasons.

5.2.6. The Methods of Data Gathering of the Study

The methods of data collection generally are based on the research design and on the research questions. In addition, the selection of the methods of data collection depends on a number of other practical issues as well.

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147 Heraliyawala is the name of the village.

148 Although the study used the sample procedure, final sample consists of small enterprises that are located in the industrial estates as well as outside those estates. This procedure is important to avoid areas that are poorly spreaded infrastructure facilities.

149 Most of them are now not exist. This is the normal practice of small firms.

150 This represents about 23 percent of the total sample. 7 of them were not used for the analysis due to uncompleted questionnaires.
As secondary data cannot provide meaningful answers to the research questions, according to the requirements of the study and the nature of the research problems, primary data is collected from the field. The existing literature on primary data collection provides a number of data collection methods such as postal survey, telephone survey, computer control telephone interview, face-to-face interview, and group participating research, observations, etc. However, each method has some limitations (Berg 2001, Dillman 1978, Groves and Kahn 1979, Judd et al. 1991). Therefore, researchers in general select methods of data collection based on research objectives and some practical issues such as cost involved.

**What are the limitations of data collection methods, and why have we decided to conduct personal interviews?**

Since there are a number of technical and practical problems in postal interviews and telephone interviews, the survey for this study was conducted by face-to-face interviews (personal interviews) with a well-prepared questionnaire (Appendix A). For example, a major disadvantage of postal survey method is its high rate of non-response (Judd et al. 1991). In our pilot survey, we also had the same experience as we used both methods: the postal survey and face-to-face interviews. Data quality has another aspect besides response rate (the accuracy and completeness of response to questions). One of the less serious disadvantages of mail surveys is the requirement to use a short questionnaire. Dillman (1978) found that questionnaires of up to about 12 pages or 125 individual responses produced response rates that did not depend on length.

In our experience, another problem with postal interviews is a lack of control over order of questions. It is often important that the respondents answer one question before seeing another. Another problem of mail survey is the inability to control the context of question answering, and specifically, the presence of other people around the target respondents. Respondents may ask friends or family members to examine the questionnaire or comment on the answers that would influence the process of answering. On the other hand, a certain number of potential respondents, especially the less educated, will be unable to respond to written-mail questionnaires because of illiteracy or other difficulties in reading, writing and understanding. Some respondents may skip certain questions. It may lead to confusion, errors, or complete non-response. Sometimes respondents might answer

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151 Before the real data collection stage was started, the questionnaire has carefully been studied and moderated. A pilot survey was also used to pre-test the questionnaire.

152 Brown and Butler (1993) conducted a mail survey. Though surveys were mailed to 100 firms, only 61 were received. The response rate was very low. (Brown and Butler, 1993, ‘Networks and Entrepreneurial Development: the Shadow of Borders’, *Entrepreneurship and Regional Development*, Vol. 5: 101 – 16.

153 Our questionnaire is bigger than that of Dillman’s standard.
incorrectly because of misunderstanding of questions. Therefore, we chose face-to-face interviews.

Another alternative data collection method is telephone interviews. Recently, the use of telephone interviews in survey research has expanded rapidly. They permit a high response rate. According to Groves and Kahn (1979), the response rate of telephone interviews is, on average, just 5 percentage points lower than personal interviews. Advantages of telephone interviews include the interviewer’s ability to correct misunderstandings, motive the respondent, and probe for more detail when answers are vague. However, these abilities are higher in face-to-face interviews. Furthermore, substantially lower cost is the great advantage of telephone interviews, when compared with face-to-face interviews. Another advantage of telephone interviews is speed. Mail and personal interviews are more time-consuming than telephone interviews. With the development of computer technology, the greatest advantage of telephone interviews is that it is possible to use computer-control or assisted interviewing techniques. Nonetheless, there are some practical difficulties and disadvantages of telephone interviews. Practical difficulties are very common particularly in developing countries since they do not have extensive fixed line telephone coverage. Most small firms do not have telephones, especially in rural areas. This is also a reason why we decided to conduct a personal or face-to-face interview survey for this study even though it is the highest costly method.

For all of these reasons, we finally decided to conduct a face-to-face interview using a well-prepared questionnaire which was pre-tested in a pilot survey.

Although, face-to-face or personal interviews are the most costly form of data collection in general, they do offer important advantages. The most important advantage of personal interviews is that the interviewer can control the context of the interview, and questions can be explained in a meaningful manner and in simple words. Personal interviews can attain the highest response rate of any survey techniques; according to Judd et al. (1991), sometimes it is over 80 per cent. Furthermore, a face-to-face interviewer can best establish rapport and motivate the respondent to answer fully and accurately. It helps in improving the equality of data. Another advantage of face-to-face interviews is that they allow the greatest length in interview schedules (the questionnaire of this study is rather lengthy).

Meanwhile, the literature also explained some other disadvantages of face-to-face interviews. For example, the interviewer’s expectations or personal characteristics (such as sex, race, religion) can influence responses (Anderson et al. 1988, Judd et al. 1991). The interviewer’s personality is very important for effective face-to-face interview. However, the major disadvantage of personal interviews is their high cost, particularly
when the sample covers larger geographic areas. As result of high cost involved in personal interviews when it covers a large geographic area, the study selected the multistage random sample method. It helped us to reduce a larger geographic length of the sample. We strongly believe that the personal interview method is necessary for advancing the research on the field of entrepreneurial informal networks despite the fact that this approach is time consuming and costly. Other researchers in the field of entrepreneurial networks and small business development have used this survey technique.

The following table can be used to compare the various advantages and disadvantages of the data collection methods.

<table>
<thead>
<tr>
<th></th>
<th>Postal Interviews</th>
<th>Telephone Interviews</th>
<th>Personal Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Data quality</td>
<td>Response rate</td>
<td>Low</td>
<td>Moderate/High</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Respondent motivation</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interviewer bias</td>
<td>None</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Possible interview length</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speed</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Speed</td>
</tr>
<tr>
<td></td>
<td>Control of context &amp; question order</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ability to clarify &amp; probe</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible sample distance</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geographic areas of sample</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

325 small business owners in Sri Lanka were interviewed for this study. Twenty-two of them were rejected in the process of data editing. Finally, 303 firms were used for the data analysis. Almost 70 per cent of enterprises of the sample are manufacturing firms. 81 per cent of firms are located in rural areas. 22 per cent of the firms are located in industrial estates. 78 per cent of owners are male. The average number of employees in the firms is 7, and the average lifetime of the firms is 8 years. The second part of the chapter (section 5.3) will be on these basic characteristics of the entrepreneurs, the enterprises, and the entrepreneurial networks. However, before dealing with the detailed analysis of the survey findings, we would like to give a brief introduction to the method of data analyzing of this thesis (more detail will be discussed in relevant chapters). The descriptive analysis of the survey findings will be given afterwards.

5. 2. 7. The Method of Data Analyzing

In addition to descriptive measurements, multiple ordinary least square regression models and the multivariate technique of logit were used to test the hypothesized relationships. Logistic analysis is one of the most widely used statistical techniques for analyzing binary dependent variables (Agresti 1990, Hagenaars 1990, Maddala 1983). The results were analyzed using SPSS and TSP statistical computer packages.

5.2.7.1. Logit Model

The logit model, which is based on the cumulative logistic probability function \( F \), can be specified as follows:

\[
P_i = F(\alpha + \beta X) = \frac{e^{(\alpha + \beta X)}}{1 + e^{(\alpha + \beta X)}}
\]

Here \( e \) represents the base of natural logarithms, and \( \alpha \) and \( \beta \) are the coefficients. \( X \) is the model matrix consisting of values of explanatory variables. \( P_i \) is the probability that an individual makes a certain choice, given \( X_i \). For example, if an individual has external actors, the probability of having external actors is as:

\[
P(\text{External Actors, Yes}) = \frac{e^{(\alpha + \beta X_i)}}{1 + e^{(\alpha + \beta X_i)}}
\]

And, on the other hand, the probability that an individual does not have external actors is as:

\[
P(\text{External Actors, No}) = 1 - P(\text{External Actors, Yes}) = \frac{1}{1 + e^{(\alpha + \beta X_i)}}
\]

The likelihood function then becomes:

\[
L = \prod_0 e^{(\alpha + \beta X_i)} \prod \frac{1}{1 + e^{(\alpha + \beta X_i)}
\]

The procedure for obtaining estimates of \( \alpha \) and \( \beta \) coefficients is to maximize \( L \) with respect to the parameters. This is called the maximum likelihood method (Agresti 1990, DeMaris 1992, Maddala 1983, Pindyck and Rubinfeld 1991).

However, it is hard to interpret the logit coefficients. Therefore, most people work out odds ratios and probabilities (Mukherjee et al. 1998, Norusis 1997). A zero coefficient in a logit regression implies that an odds ratio is equal to 1 \((e^0 = 1)\), corresponding to a unit
change in the variable concerned. An odds ratio equals to 1 means that the corresponding probability is 0.5 \((e^0/(1+ e^0) = 0.5)\). This indicates that minus coefficient in a logit regression predicts less probability than 0.5 \((1/2)\), which implies that changes in the independent variable will have its less effect on the probability of choosing a given option at the midpoint of the cumulative logistic distribution.\(^{155}\) Therefore, corresponding probabilities can be calculated at the mid-point of the cumulative logistic distribution. Then these probabilities can be understood better than logit ratios themselves.

### 5.2.7.2. Variables and Measurement of the Variables

The measurement of variables was not easy in these types of studies because most of our variables are social relationships. The measurement of social relationships has always been a nagging and unresolved problem (Hall et al., 1977, p. 462). In relation to networks, in our study, respondents were asked some general questions\(^{156}\) about their networking activities: for instance, with how many people they had discussed aspects of starting or running a business with; how many hours per week they had spent developing business related contacts, and how many hours per week they had spent maintaining their contacts. In order to obtain a better and deep understanding about the external actors and their roles, respondents were given five choices of answers: *no help*, *little*, *some*, *great*, and *very great*. Besides, they were also asked about the five persons to whom they were most likely to turn for business related advice or any help. Further, the questionnaire is aimed to collect information on the relationships between the respondent and these five persons (see questionnaire, appendix A). More details about measurement and definition of variables will be given each of the analytical chapters (see the analytical chapters 6, 7, 8, and 9).

*Growth/Performance:* Based on a review of the literature (Donckels and Lambrecht, 1995; Hansen, 1995; Ostgaard and Birley, 1996) pertinent to the measurement of performance, two objectives of measures of growth are included: sales growth and increase in profitability over a three-year period. In addition, market expansion (regional, national, and international) is used as a business performance measure. Studies (Johanson and Mattsson, 1993) in the field of marketing and international business have identified a positive relationship between network formation and market expansion of small businesses.

\[
\text{Growth of Sale} = \left[\frac{(\text{Sale in 1997} - \text{Sale in 1995})/\text{Sale in 1995}}{3}\right] \times 100
\]

\[
\text{Growth of profit} = \left[\frac{(\text{Profit in 1997} - \text{Profit in 1995})/\text{Profit in 1995}}{3}\right] \times 100
\]

\(^{155}\) Generally, if the estimated probability is less than 0.5, it is predicted that the event will not occur. On the other hand, if the estimated probability is greater than 0.5, it is predicted that the event will occur.

\(^{156}\) Similar types of questions have been used in previous studies as well (Birley, Cromie, and Myers, 1991; Carroll and Teo, 1996; Hreve, 1995; Hansen, 1995; Ostgaard and Birley, 1996)
However, practically most of the small entrepreneurs in Sri Lanka do not properly maintain financial report. Thus, in most cases, they do not have any financial reports. Therefore, respondents were also asked for their past three years experiences, present situation and next year expectation. Finally, we compare the figures with our growth estimations (only for data available firms). Pearson’s correlation coefficients\(^{157}\) are estimated to measure the association between hard data and entrepreneur’s opinion on their performances \((r_{\text{sale}} = 0.961, p\text{-value} = 0.005; r_{\text{financial}} = 0.926, p\text{-value} = 0.009)\). The results illustrated that almost 94 percent of our estimations tally with respondents’ experiences.

**Network Density:** Then we measured network densities. Network density, which is an important indicator in evaluating entrepreneurial networks in the firm's different phases, is generally measured (Burt, 1992; Greve, 1995; Scott, 1991; Walker, Wasserman and Wellman, 1994) as the proportion of ties present out of the all-possible ties.\(^{158}\)

\[
D_k = \frac{\sum_{j=1}^{m} \sum_{i=1}^{n} w(a_{ijk})}{wN}
\]

\(N\) represents the number of possible ties, \(w\) is the weight for entrepreneurs' preferences on their linkages, \(a_{ij}\) stands for actors (a), the value of a relation from the \(i^{th}\) actor directed to the \(j^{th}\) actor in the \(k^{th}\) network. Density ranges between 0 and 1.00, representing the extremes of being entirely uninvolved in networks or totally engaged in them.

This study does not use the full network to measure densities for practical reasons. For example, it was impossible to ask each entrepreneur whether he/she knew every other individual, firm, and institute. This is therefore simply an analysis at the ego-centered level, only relations that are directly connected to ego are visible. This is the common practice for measuring density in ego-centered networks (Greve, 1995; Scott, 1991). Networks are defined from a focal person's perspective.\(^{159}\)

---

\(^{157}\) Pearson’s correlation coefficient is a measure of linear association. Two variables can be perfectly related, but if the relationship is not linear, Pearson’s correlation coefficient is not an appropriate statistic for measuring their association.

\(^{158}\) In term of networks of alliances, Duysters (1995) calculated network densities by dividing the number of existing alliances among actors in the network by the total number of possible links between those actors (see Duysters, 1995, p. 172).

\(^{159}\) See chapter 3.
Network Size: Network size was obtained by asking respondents to estimate the number of people/organization with whom they dealt with business activities and supports such as discussions their plans for running business, information, cash, moral support and any other resources (Greve, 1995; Walker, Wasserman, and Wellman, 1994; Wellman and Gulia, 1993). Several studies have shown that larger networks are generally more supportive (Burt, 1987; Greve, 1995; Hansen, 1995; Ostgaard and Birley, 1996; Walker, Wasserman, and Wellman, 1994; Wellman and Gulia, 1993). For example, Wellman and Gulia (1993) found that, the larger the network, the greater the number of network members who provide emotional support, goods and services. Entrepreneurs with large networks may win both ways: not only do they have more potential providers of support in their networks, but also each number of their network is more likely to be supportive. Therefore, the size of entrepreneurial networks may be one of the most important variables explaining the successful of a small enterprise (Aldrich, Rosen, and Woodward, 1987; Hansen, 1995; Johannisson, 1986; Greve, 1995; Nohria, 1992). Entrepreneurs identify product or service ideas, access to markets, information, money and other resources in their environments, and they also gain access to these resources through various members of their networks. The importance of size is recognized by almost all writers, but there have been significant shifts recently in how the term is used. One usage of size focuses upon the number of ties or links between an organization and outside contacts. These approaches converge on the basic idea that what matters is the number of links between an organization and its context: the greater the number of links, i.e. the more extensive the network, the better for the organization, irrespective of whether the links are direct or indirect (Larson 1992).

Control Variables: Before testing our hypotheses, it is very important to ensure that the potential effect of the other factors is minimized. Therefore, throughout the analysis, several other enterprise-related (such as firm’s location, number of employees, types of businesses, etc) and entrepreneurial-related (such as gender, age, place of birth, level of education, work experiences, etc.) factors are controlled for in the estimations. Previous researches (for example, Baum and Mezias, 1993; Donckels and Lambrecht, 1996; Sarder, Ghosh and Rose, 1997) have also suggested several enterprise- and entrepreneurial-related factors that affect growth. Table 5.3 exhibits these factors.

The following enterprise-related factors are included as control variables in this study: (1) Sector (manufacturing, services and trade), (2) firm’s size ((fewer than 3 workers, between 4 and 25 workers, and more than 25 workers), (3) firm’s location (firms are in industrial estates and firms are outside industrial estate), (4) major market location (Regional, national, and international) (5) Firm’s life time (number of years running the business), and (6) Family workers (yes, no). Three different types of sectors are included as an enterprise-related factor. They are manufacturing, services, and trade sectors. The reason for including the sector variable is connected with the earlier remarks and comments concerning growth and network formation given by Hansen (1987) and Donckels and Lambrecht (1995, 1997). They found that the service sector to be more in growth league than trade and manufacturing. Moreover, the service sector has a more solid network structure. Firm’s size is used as a control variable because pervious network studies have
found that the larger small enterprises to be more in the growth league (Donckels and Lambrecht, 1995; Donckels and Hoebeke, 1992; Mohan-Neill, 1995). It is therefore important to ensure that the potential effect of the size of a firm is minimized before testing our hypotheses. Firms’ location is important for network formation and business performances. Pervious studies found that firms that are inside industrial estates are more in the growth league. Those firms have a better potential for networking (Del Monte and Giannola, 1986; Grabher, 1993b; Lomi and Grandi, 1997). Finally, when one analyses the performance of small enterprises and network formation, one can not overlook the possible impact of family workers in the business. Family influence is very strong in small businesses (Chu, 1996; Johannisson, 1990a; Johannisson and Peterson, 1984). Therefore, the impact of family worker has also to be minimized before testing our hypotheses.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneur-related</strong></td>
<td></td>
</tr>
<tr>
<td>Age (Log form)</td>
<td>Years (1, 2, 3, …)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male = 1</td>
</tr>
<tr>
<td></td>
<td>Female = 0</td>
</tr>
<tr>
<td>Birth Place</td>
<td>Urban = 1</td>
</tr>
<tr>
<td></td>
<td>Rural = 0</td>
</tr>
<tr>
<td>Educational level</td>
<td>Below A/L = 1</td>
</tr>
<tr>
<td></td>
<td>Above or A/L = 0</td>
</tr>
<tr>
<td>Parent has own business</td>
<td>Yes = 1</td>
</tr>
<tr>
<td></td>
<td>No = 0</td>
</tr>
<tr>
<td>Pre-training</td>
<td>Yes = 1</td>
</tr>
<tr>
<td></td>
<td>No = 0</td>
</tr>
<tr>
<td>Owner's work experience (log form)</td>
<td>Years (1, 2, 3, …)</td>
</tr>
<tr>
<td><strong>Enterprise-related</strong></td>
<td></td>
</tr>
<tr>
<td>Sector (two dummies)</td>
<td>Manufacturing = 1</td>
</tr>
<tr>
<td>(two dummies)</td>
<td>Services = 0</td>
</tr>
<tr>
<td></td>
<td>Trade = 0</td>
</tr>
<tr>
<td></td>
<td>Manufacturing = 0</td>
</tr>
<tr>
<td></td>
<td>Services = 1</td>
</tr>
<tr>
<td></td>
<td>Trade = 0</td>
</tr>
<tr>
<td>Size (employees) (two dummies)</td>
<td>3 = 1</td>
</tr>
<tr>
<td>(two dummies)</td>
<td>4 - 25 = 0</td>
</tr>
<tr>
<td></td>
<td>25 = 0</td>
</tr>
<tr>
<td></td>
<td>3 = 0</td>
</tr>
<tr>
<td></td>
<td>4 - 25 = 1</td>
</tr>
<tr>
<td></td>
<td>25 = 0</td>
</tr>
<tr>
<td>Location (firm)</td>
<td>Industrial Estate = 1</td>
</tr>
<tr>
<td></td>
<td>General = 0</td>
</tr>
<tr>
<td>Market location (Main Market)</td>
<td>In the region</td>
</tr>
<tr>
<td></td>
<td>Outside the region in country</td>
</tr>
<tr>
<td></td>
<td>Outside the country</td>
</tr>
<tr>
<td>Firm's life time (Log form)</td>
<td>(No. of Years the running business)</td>
</tr>
<tr>
<td>Family workers</td>
<td>Yes = 1</td>
</tr>
<tr>
<td></td>
<td>No = 0</td>
</tr>
</tbody>
</table>
The entrepreneur-related factors included in this study are as follows: (1) age (age of the owner), (2) gender (male, female), (3) Place of birth (urban, rural), (4) Level of education (below advance level, and above advance level), (5) family business (yes, no), (6) pre-training (yes, no), and (7) owners’ work experience (years). The above mentioned entrepreneur-related factors have an impact on the growth orientation of an small enterprise and network formation (Donckels and Lambrecht, 1995, 1996; Welsch, 1991). According to Johannisson (1988: 85), the quality of the network is highly dependent upon given personal skills and attributes. For example, Donckels and Lambrecht (1995) found that entrepreneurs who have lower education and highly trained entrepreneurs are more likely to be in the growth league. Furthermore, the same research on network formation points out that there is a causal relationship between network formation, growth, and level of education. Aldrich at el. (1989), Brush (1992), Johannisson (1996), and Sigh and Reynolds (2001) also state that the gender composition of networks is significantly different for men and women. The present study uses these variables as control factors since it is necessary to make sure that the potentially moderating effect of those factors is minimized. Table 5.3 displays the choice of control variables and how they are operationalized.

Conclusion
This part of the chapter has described the research methodology. The discussion explained the research paradigm and the research design in order to understand the nature of this type of network research. It further described the sampling method and the method of data collection. The nature of this study is qualitative. The sample selection procedure is multi-stage random. The face-to-face interview method with small business owners was used to collect data. Apart from descriptive measurements, multiple ordinary least square regression models and the multivariate technique of logit were used to test the hypothesized relationships. Throughout the analysis, several other enterprise- and entrepreneurial-related factors are controlled for in the estimations because it is important to make sure that the potential effect of these factors is minimized before testing our hypotheses. Other relevant details on the variables that are used in each analytical chapter and the methods of data analysis will be discussed in each of the analytical chapters. Before proceeding further, the discussion will provide a brief descriptive analysis of the survey findings in the following sections.

Part II
5. 3. Some Survey Finding

In this survey, the main aim is to study the entrepreneurial networks of small enterprises in Sri Lanka. Given that, the following information was gathered through face-to-face personal interviews:

1. Entrepreneurs' personal profile.
Chapter Five: Research Methodology and Data Characteristics

2. General profile of the enterprises.
3. Entrepreneurial networks: networking, use of networking, network benefits,
4. Sub-contracting linkages
5. Performance of the firms

In this section, prior to an in-depth analysis in chapters 6, 7, 8 and 9, a brief descriptive analysis of the survey findings is provided. The aim is to provide basic characteristics of the data. As stated above, an in-depth analysis will be conducted in chapters 6, 7, 8 and 9.

This part is divided into three sections: section 5.3.1 presents an entrepreneur profile; section 5.3.2 is a profile of small enterprises; and finally, section 5.3.3 provides a basic picture on the entrepreneurial networks of the enterprises in the sample.

5. 3. 1. A Profile of Entrepreneurs

The entrepreneurial characteristics for investigation in this section include the male-female distinction, the age distribution of the entrepreneurs, their birthplace, their family background, former income earning activities, the educational level of them, and their sources of technical and management skills, etc. These characteristics help to understand the nature of the people who turn themselves into business entrepreneurs.

With regard to the male-female distinction, it is evident that still the majority of business owners are male even though there has been significant growth in female self-employment and enterprises owned by women. In our survey, we found that 78.2 per cent of the small business owners were males (see Table 5.4).

<table>
<thead>
<tr>
<th>Table 5.4</th>
<th>Personal Profile of Owners I</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Gender:</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>78.2%</td>
</tr>
<tr>
<td>B. Age</td>
<td>Mean age</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
</tr>
<tr>
<td></td>
<td>81.2%</td>
</tr>
</tbody>
</table>

In terms of entrepreneurs' age, according to Hisrich and Peters (1989), most entrepreneurs start their entrepreneurial careers between the ages of 22 and 35. In our case, it was found that 84 per cent of the owners of the enterprises started their business careers between
these ages. The entrepreneurs' present average age is 39 years. The owners’ age varies from minimum age of 17 to the maximum age of 68. While, 20.6 per cent fall into the under 30s group, only 3.3 per cent belong to the over 60s group. Table 5.4 presents more details on the age distribution of the owners.

Although it might be expected that most entrepreneurs would come from an urban background because of the industrial culture, in our sample, almost 81 per cent (table 5.4) of the entrepreneurs were born in rural areas. Only about 19 per cent of entrepreneurs were born in urban areas. Most of them are engaged in business such as textile & wearing apparel, leather (21.1 per cent), wood and wood products (22.8 per cent), and automotive repairs.

It is interesting to note how an entrepreneur who was born in a rural or urban area is engaged in different industrial sector. For example, if a selected entrepreneur is engaged in food, beverage & tobacco industrial sector (ISIC 31), there is an 81.5 per cent chance that (s)he is a person who was born in a rural area. However, when we take into consideration urban-born entrepreneurs, the majority of them are found in chemicals, petroleum & rubber (ISIC 35), textile & wearing apparel (ISIC 32), printing, and paper related products (ISIC 34), wood & wood products (ISIC 33), and automotive repairs. Table 5.5 shows these details. Basically, new technology-oriented products are popular among urban-born entrepreneurs while skill-oriented (handicrafts products) products are popular among rural-born entrepreneurs.

<table>
<thead>
<tr>
<th>ISIC</th>
<th>Sector</th>
<th>Area</th>
<th>% within sector</th>
<th>% within area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>31</td>
<td>Food, Beverage &amp; tobacco</td>
<td></td>
<td>81.5</td>
<td>18.5</td>
</tr>
<tr>
<td>32</td>
<td>Textile &amp; Wearing Apparel, Leather</td>
<td></td>
<td>73.3</td>
<td>26.7</td>
</tr>
<tr>
<td>33</td>
<td>Wood &amp; Wood Products, Furniture</td>
<td></td>
<td>81.4</td>
<td>18.6</td>
</tr>
<tr>
<td>34</td>
<td>Printing, Paper &amp; Paper Products</td>
<td></td>
<td>75.0</td>
<td>25.0</td>
</tr>
<tr>
<td>35</td>
<td>Chemical, Petroleum, Rubber</td>
<td></td>
<td>60.0</td>
<td>40.0</td>
</tr>
<tr>
<td>36</td>
<td>Non-metallic mineral products</td>
<td></td>
<td>79.2</td>
<td>20.8</td>
</tr>
<tr>
<td>37 &amp; 38</td>
<td>Light engineering, machinery &amp; equipment</td>
<td></td>
<td>88.2</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>Cor &amp; Fiber (Coconut)</td>
<td></td>
<td>89.3</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>Reed &amp; Rush ware</td>
<td></td>
<td>97.6</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Other (automotive repairs, buying &amp; selling, etc)</td>
<td></td>
<td>56.0</td>
<td>44.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>81.2</td>
<td>18.8</td>
</tr>
</tbody>
</table>

Table 5.6 presents academic background of the entrepreneurs. While about 5.3 per cent of the entrepreneurs have a degree, entrepreneurs with no formal education account only for 2 per cent. Nearly 39 per cent of owners have not even obtained G.C.E. Ordinary Level qualification. Almost 28 per cent (22.7 %: A/L passed + 5.3 %: Degree or above = 28%)
have academic qualifications beyond the G.C.E. Advance Level. In brief, the data reflects the fact that the entrepreneurs have a good formal educational background.

Table 5.6

Personal Profile of Owners II
(Level of Education)

<table>
<thead>
<tr>
<th>Education level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal education</td>
<td>2.0</td>
</tr>
<tr>
<td>&lt; G.C.E (O/L)</td>
<td>37.3</td>
</tr>
<tr>
<td>G.C.E. (O/L) passed</td>
<td>32.7</td>
</tr>
<tr>
<td>G.C.E. (A/L) passed</td>
<td>22.7</td>
</tr>
<tr>
<td>Degree</td>
<td>5.3</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In addition to formal education, Technical and Craft Skills (TCSs) are more important in particular for the small business owners. Amazingly, as the information says, the major source of acquiring TCSs is the self-study/on the job training for majority of the respondents. About 52.5 per cent of the respondents reported that they have obtained their TCSs on the basis of self-study or on the job training (see Table 5.7). Apart from that, the other important sources are former job and family tradition. Nearly 29 per cent of the entrepreneurs have acquired their TCSs through the previous jobs (16.8 per cent) and family tradition (11.9 per cent). The other sources are presented in table 5.7 (second column). These findings are consistent with some earlier studies (Lakshman et al., 1994a)

Table 5.7

Personal Profile of Owners III
(Source of TCSs and MASs)

<table>
<thead>
<tr>
<th>Sources</th>
<th>TCS (%)</th>
<th>MAS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study/on the job</td>
<td>52.5</td>
<td>65.0</td>
</tr>
<tr>
<td>Former job</td>
<td>16.8</td>
<td>5.9</td>
</tr>
<tr>
<td>Family tradition</td>
<td>11.9</td>
<td>4.0</td>
</tr>
<tr>
<td>Technical college</td>
<td>9.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Friends</td>
<td>4.0</td>
<td>1.3</td>
</tr>
<tr>
<td>Relatives</td>
<td>3.6</td>
<td>0.7</td>
</tr>
<tr>
<td>School</td>
<td>0.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Others</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Not mentioned</td>
<td>0.7</td>
<td>16.8</td>
</tr>
</tbody>
</table>

Note: (a) TCS = Technical and Craft Skills
(b) MAS = Management and Administrative Skills.

Apart from the TCSs, management and administrative skills (MASs) are very important for the entrepreneurs. The sources of these skills are reported at the third column in table 5.7. It is interesting to note that almost 65 per cent of the respondents have acquired their MASs on a self-study/on the job basis. The second important source of MASs is former job. Then, thirdly, 5.6 per cent of the entrepreneurs obtained these skills from technical colleges.
A critical point is that the impact of the formal training sources (school and technical college) on these two types of skills (MASs and TCSs) is significantly very weak and small. The two types of institutes (school and technical college) have provided TCSs only for 10.3 per cent (9.6 per cent from technical colleges and 0.7 per cent from schools), and MASs for 5.9 per cent (5.6 per cent from technical colleges and 0.3 per cent from schools). This is largely because the aim of the formal education system in Sri Lanka is substantially different from the demand for skill (MASs and TCSs) development in the small business enterprise sector.

Table 5.8

<table>
<thead>
<tr>
<th>Prior Occupation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Owner of another firm</td>
<td>11.9</td>
</tr>
<tr>
<td>2. Worker in a small firm</td>
<td>28.4</td>
</tr>
<tr>
<td>3. Worker in a large firm</td>
<td>10.6</td>
</tr>
<tr>
<td>4. Worker in the public sector</td>
<td>9.6</td>
</tr>
<tr>
<td>5. Others</td>
<td>1.3</td>
</tr>
<tr>
<td>Missing (not mentioned)</td>
<td>38.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

In addition to these characteristics, previous income earning activities are also an important factor of entrepreneurship. However, for 37.2 per cent of the entrepreneurs, the existing business venture has been the first ever income earning activity. The others had engaged in some form of income earning activities before they started or inherited the existing businesses. These activities are reported in table 5.8. The figure says that almost 39 per cent of them had worked for either other small firms (28.4 per cent) or large firms (10.6 per cent). Therefore, nearly 56 per cent of small owners of the existing businesses have had some kinds of work experiences before they started or inherited their existing business ventures.

Table 5.9

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Ranking (%)</th>
<th>Total (%)</th>
<th>None (%)</th>
<th>Average&lt;sup&gt;160&lt;/sup&gt; (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Interest and background knowledge</td>
<td>49.5</td>
<td>16.2</td>
<td>3.6</td>
<td>69.3</td>
</tr>
<tr>
<td>Failure to find another job</td>
<td>25.1</td>
<td>12.5</td>
<td>4.0</td>
<td>41.6</td>
</tr>
<tr>
<td>Advice from relatives/friends/others</td>
<td>5.0</td>
<td>6.9</td>
<td>4.0</td>
<td>15.8</td>
</tr>
<tr>
<td>Family tradition/inheritance</td>
<td>6.9</td>
<td>4.6</td>
<td>0.3</td>
<td>11.9</td>
</tr>
<tr>
<td>Good business partner</td>
<td>3.3</td>
<td>3.6</td>
<td>1.7</td>
<td>8.6</td>
</tr>
<tr>
<td>Attracted by government incentives</td>
<td>1.3</td>
<td>2.6</td>
<td>1.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Advice from banks</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>0.3</td>
</tr>
<tr>
<td>Others</td>
<td>2.0</td>
<td>0.7</td>
<td>0.7</td>
<td>3.3</td>
</tr>
</tbody>
</table>

<sup>160</sup> These figures are `weighted average percentages'. 
It is also important to understand the reasons for setting up present business. Consequently, the study analyses these reasons on the basis of the respondents' priority ranking. The figures presented in table 5.9 show that the major reason is the 'their interest and background knowledge'. The second important reason given by the respondents is the 'failure to find another job'. The percentages of their ranking are given in table 5.89.

5. 3. 2. A Profile of Small Enterprises in the Sample

In this section, some important characteristics of the small enterprises will be described in order to understand the nature of these enterprises. These characteristics include type of product, type of organization, industrial location - whether the firm is located in an industrial estate or outside- age of the firms, employees, performance etc.

With regard to the types of products, we identified nine major types of products within the sample. The categories with their ISIC two-digit code are presented table 5.10.

<table>
<thead>
<tr>
<th>ISIC Code</th>
<th>Industry Category</th>
<th>No. of Firms</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Food, Beverage &amp; Tobacco</td>
<td>27</td>
<td>8.9</td>
</tr>
<tr>
<td>32</td>
<td>Leather, Textile &amp; Wearing Apparel</td>
<td>45</td>
<td>14.9</td>
</tr>
<tr>
<td>33</td>
<td>Wood &amp; Wood Products, Furniture</td>
<td>70</td>
<td>23.1</td>
</tr>
<tr>
<td>34</td>
<td>Printing, Paper &amp; Paper Products</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>35</td>
<td>Chemical, Petroleum, Rubber</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>36</td>
<td>Non-metallic mineral products</td>
<td>24</td>
<td>7.9</td>
</tr>
<tr>
<td>37 &amp; 38</td>
<td>Light engineering, machinery &amp; equipment</td>
<td>34</td>
<td>11.2</td>
</tr>
<tr>
<td>-</td>
<td>Coir &amp; Fiber (Coconut)</td>
<td>28</td>
<td>9.2</td>
</tr>
<tr>
<td>-</td>
<td>Reed &amp; Rush ware</td>
<td>41</td>
<td>13.5</td>
</tr>
<tr>
<td>-</td>
<td>Other (Automotive repairs, buying &amp; selling etc)</td>
<td>25</td>
<td>8.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>303</td>
<td>100</td>
</tr>
</tbody>
</table>

Furthermore, as table 5.11 reports, while 69.3 per cent of the enterprises belong entirely to the manufacturing sector, only 6.1 per cent of the business ventures fall into two other sectors: services (9.9 per cent) and trade (6.3). There are some enterprises which provide combined activities (see table 5.11).

Location of the firms is important for this study because the study assumes that there are some differences in 'networking' between the firms that are located in these 'two' locations. We mentioned 'two' locations (industrial estates and outside) because the export village is also a type of industrial zone, park or estate. The export village is, however, quite different from the other industrial estates such as the Heraliyawala industrial estate.

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161 See chapter 2 for more information.
The export village can be categorized as a type of 'natural industrial zone' because before the government categorized the area as an export village, the producers had already been there, producing the same items, in an unorganized manner, however. In the case of other industrial estates, all infrastructure facilities were provided beforehand by the government authorities or other supporting agencies inviting new industrialists/entrepreneurs to establish their firm in the given area. Firms have been established as a consequence of the invitation of the authorities. These are more or less 'artificial industrial estates'. If we consider both of them as 'industrial parks or zones', 20.8 per cent of the enterprises in the sample are located in these industrial zones. One of the major concepts of the industrial estates is 'industrial networking'.

Table 5.11
Profile of Enterprises II (Industrial Sector, Location & Age)

<table>
<thead>
<tr>
<th>A). Sector</th>
<th>No. of Firms</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>210</td>
<td>69.3</td>
</tr>
<tr>
<td>Services</td>
<td>30</td>
<td>9.9</td>
</tr>
<tr>
<td>Trade</td>
<td>19</td>
<td>6.3</td>
</tr>
<tr>
<td>Manufacturing &amp; Services</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>Manufacturing &amp; Trade</td>
<td>31</td>
<td>10.2</td>
</tr>
<tr>
<td>Services &amp; Trade</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Manufacturing, Services &amp; Trade</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>303</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B). Location</th>
<th>No. of Firms</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Estates</td>
<td>22</td>
<td>7.3</td>
</tr>
<tr>
<td>Export Village</td>
<td>41</td>
<td>13.5</td>
</tr>
<tr>
<td>Outside</td>
<td>240</td>
<td>79.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>303</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C). Years of Establishment</th>
<th>No. of Firms</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960 – 1970</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>1971 – 1980</td>
<td>12</td>
<td>3.9</td>
</tr>
<tr>
<td>1981 – 1990</td>
<td>90</td>
<td>29.7</td>
</tr>
<tr>
<td>1991 – 1995</td>
<td>106</td>
<td>35.0</td>
</tr>
<tr>
<td>After 1995</td>
<td>90</td>
<td>29.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>303</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

With regard to the age of firms, it is also interesting to highlight that the majority of the firms in the sample (94.4 per cent) have been established after 1980. Nearly 30 per cent of the firms have been established after 1995. Hence, the average age of the firms is almost 8 years. The oldest firm is 39 years old. Table 5.11 C displays the age distribution of the enterprises.

In term of the nature of organizations, basically most of the small enterprises in Sri Lanka are highly individually oriented (Lakshman et al., 1994a). 89.4 per cent of the enterprises in the sample are single ownership firms. Partnerships are currently found in only 5 per cent of the total enterprises, though 12.2 per cent of the enterprises were started with a partner (table 5.12). However, most of the small business were not registered anywhere.
Table 5.12
Profile of Enterprises III (Nature of the Organizations)

<table>
<thead>
<tr>
<th>Nature</th>
<th>At the Start stage</th>
<th>Present situation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Firms</td>
<td>% of total</td>
</tr>
<tr>
<td>Single Ownership</td>
<td>244</td>
<td>80.5</td>
</tr>
<tr>
<td>Partnership</td>
<td>37</td>
<td>12.2</td>
</tr>
<tr>
<td>Others</td>
<td>22</td>
<td>7.3</td>
</tr>
</tbody>
</table>

These firms are small informal enterprises. In terms of number of employees, the size ranges from 2 to 50 workers. The majority of the firms in the sample are very small in terms of the number of employees as well as initial capital. It is evident that almost 50 per cent of the enterprises that belong to the category of micro level enterprises have employed two or three people. Further, in the sample, 83.2 per cent of the enterprises belong to the category of small enterprises, employing less than 25 people. These results in fact are not surprising when compared with national figures and figures of Lakshman et al. (1994a). They found that 83 per cent of firms belong to this group. The majority of employees are people who live within the village of the firm located.

Figure 5.1
Raw Material & Output Linkages Beyond the Boarders

International Level
Raw Material: 2.0%
Output market: 7.6%

National Level**
Raw Material: 33.0%
Output market: 21.8%

Regional level*
Raw Material: 65.0%
Output market: 70.6%

*Regional level = Village + district
**National Level = beyond the district

It is a general hypothesis that small enterprises are appropriate for supplying small local markets with a variety of relatively inexpensive consumption goods. They mainly supply
their products to the local population. Figure 5.1 shows that only 7.6 per cent of small producers deals with the foreign market.

<table>
<thead>
<tr>
<th>Location</th>
<th>A) Location of Raw Material</th>
<th>B) Location of Major Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>The industrial estate</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>The village</td>
<td>31.7</td>
<td>33.3</td>
</tr>
<tr>
<td>The district</td>
<td>32.7</td>
<td>36.3</td>
</tr>
<tr>
<td>The province</td>
<td>8.6</td>
<td>4.0</td>
</tr>
<tr>
<td>The country</td>
<td>24.4</td>
<td>17.8</td>
</tr>
<tr>
<td>Abroad</td>
<td>2.0</td>
<td>7.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C) Market Channels (% of total sales)</th>
<th>Final consumers</th>
<th>Retail agents</th>
<th>Wholesale agents</th>
<th>Export agents</th>
<th>Subcontract</th>
</tr>
</thead>
<tbody>
<tr>
<td>a). &lt; 25</td>
<td>15.3</td>
<td>9.5</td>
<td>2.6</td>
<td>1.4</td>
<td>14.3</td>
</tr>
<tr>
<td>b). 26 – 50</td>
<td>6.3</td>
<td>3.6</td>
<td>6.2</td>
<td>1.0</td>
<td>7.3</td>
</tr>
<tr>
<td>c). 51 – 75</td>
<td>5.0</td>
<td>2.3</td>
<td>1.9</td>
<td>1.6</td>
<td>2.6</td>
</tr>
<tr>
<td>d). 76 – 99</td>
<td>7.4</td>
<td>1.4</td>
<td>1.0</td>
<td>0.6</td>
<td>9.6</td>
</tr>
<tr>
<td>e). 100</td>
<td>41.6</td>
<td>1.7</td>
<td>2.6</td>
<td>1.0</td>
<td>6.6</td>
</tr>
</tbody>
</table>

1 Included only, if more than half of request raw materials is located in the relevant area.
2 Included only, if more than half of total products sells within the area.

The small firms basically should have high local linkages because a large proportion of raw material is obtained from the district the firms are located. With regard to the source of raw material, it is interesting to note that 64.4 per cent of the firms find their raw material within the district. This is an indication of strong local backward production linkages at regional level. As far as the major market of the small firms is concerned, 69.6 per cent of the firms sell their major product within the district. A few of them engage in export markets. The export oriented firms account only 7.6 per cent. However, no direct export involvement was found. The export-oriented small enterprises link with the export market either through export agents or contractors. More detail about the product channel is reported in Table 5.13. According to these data, final consumers are the major market channels of these small enterprises.

5. 3. 3. Entrepreneurial Networks

In this section, the discussion provides a basic picture of the entrepreneurial networks of the enterprises in the sample. The entrepreneurial networks and the benefits of networking will be further analyzed in the analytical chapters.

The respondents were asked with whom they feel especially willing or able to discuss their ideas on the running of the current business or starting up a new business or for running

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162 This is only concerned with the principal market for their main product.

163 We calculated these figures based on their major product and also their major market location.
their current business. In advance, they were asked to name the most important five persons and the nature of relationship between the respondent (the focal entrepreneur) and those persons. Based on the responses for the questions (question No. 19, Appendix A, the questionnaire), we developed the following network diagram (Figure 5.2).

(Figure 5.2) Entrepreneurial Action Set

<table>
<thead>
<tr>
<th>ON = Other Network</th>
<th>SON = Social Network</th>
<th>IFN = Inter-firm Network</th>
<th>SUN = Supporting Network</th>
</tr>
</thead>
</table>

- **Direct Linkage (relations)**
- **Indirect Linkage, but within Entrepreneurial Action Network**
- **Indirect Linkage, third party involvement (Outside the Action Network)**

(The direction of the arrows indicates the direction of the linkages)
As already mentioned, small entrepreneurs are basically involved in three types of network: social networks, supporting networks, and inter-firm networks. The entrepreneur can identify these actors of the networks directly himself or indirectly through others. `The others' may be network members of the ‘Action Set’ and/or members from the outside of the action set. In our case, 89.38 per cent (72.77 + 9.69 + 4.85 + 2.07) of actors are identified directly by the entrepreneur himself. Interestingly, 72.77 per cent of them are members of the social networks (see Figure 5.2).

The indirect contact means that the focal entrepreneur identifies his network members through other people (see Steier and Greenwood 1995, 2000). This is a third party involvement. As mentioned above, the third party can be a member of the primary action set or a person who is not in the primary action set. This outside person also belongs to a network of social (SON₂), supporting (SUN₂), or inter-firm (IFN₂). However, these members are not in the primary action set. In our case, about 10.58 per cent of the network members of action set comes through third party. Only 1.59 per cent of them comes outside the action set. Figure 5.2 shows these relationships and how the focal entrepreneur involves in his action set.

<table>
<thead>
<tr>
<th>Sub-networks</th>
<th>Relative Size (percentage as out of total actors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Network</td>
<td>72.86</td>
</tr>
<tr>
<td>Supporting Network</td>
<td>17.67</td>
</tr>
<tr>
<td>Inter-firm Network</td>
<td>6.81</td>
</tr>
<tr>
<td>Other</td>
<td>2.66</td>
</tr>
</tbody>
</table>

The relative size of the networks also provides a platform for an interesting discussion. The study found that 72.86 per cent of actors of the entrepreneurial network belongs to the social network. The second biggest network is the supporting network (17.67 per cent). The inter-firm network is the smallest one (6.81 per cent) when compared with other two networks. Table 5.14 presents the relative size of sub-networks. One of the reasons for these differences is that some social networks members also belong to other two networks, but the respondents prefer to identify them as members of the social network. They are close friends or family members of the entrepreneurs although they work for some supporting agencies or some other firms.

The respondents were also asked whom they contacted for advice or any information, support or help and how important these people were in the business identification phase. With regard to the other phases, the same sorts of questions were asked. The support

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164 They are also members of action set, but not belong to the primary action set. Then we can call them `the members of the secondary action set'.
given by the external actors was ranked as follows: Very Great (VG), Great (G), Some (S), Little (L), and Not Importance (NI). The basic data tabulation is presented in table 5.15.

Table 5.15
Importance of External Actors in each Phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>VG</th>
<th>G</th>
<th>S</th>
<th>L</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Business Identification Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family members/relatives</td>
<td>39.3</td>
<td>23.4</td>
<td>10.6</td>
<td>2.6</td>
<td>24.1</td>
</tr>
<tr>
<td>Friends</td>
<td>5.6</td>
<td>20.8</td>
<td>12.2</td>
<td>3.3</td>
<td>58.1</td>
</tr>
<tr>
<td>Acquaintance</td>
<td>3.0</td>
<td>9.9</td>
<td>5.6</td>
<td>3.6</td>
<td>77.9</td>
</tr>
<tr>
<td>Government agencies</td>
<td>3.3</td>
<td>10.6</td>
<td>8.9</td>
<td>1.0</td>
<td>76.2</td>
</tr>
<tr>
<td>NGOs</td>
<td>6.3</td>
<td>2.3</td>
<td>5.0</td>
<td>4.0</td>
<td>82.5</td>
</tr>
<tr>
<td>Large firms</td>
<td>1.7</td>
<td>2.3</td>
<td>1.3</td>
<td>0.3</td>
<td>94.4</td>
</tr>
<tr>
<td>Small firms</td>
<td>2.0</td>
<td>3.0</td>
<td>2.6</td>
<td>1.7</td>
<td>90.8</td>
</tr>
<tr>
<td>Financial institutions</td>
<td>-</td>
<td>0.7</td>
<td>1.3</td>
<td>0.7</td>
<td>97.4</td>
</tr>
<tr>
<td>Chamber of commerce/other societies</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>99.3</td>
</tr>
<tr>
<td>Other</td>
<td>1.0</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>98.7</td>
</tr>
<tr>
<td>B) Start-up Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family members/relatives</td>
<td>45.9</td>
<td>28.4</td>
<td>8.9</td>
<td>3.3</td>
<td>13.5</td>
</tr>
<tr>
<td>Friends</td>
<td>5.3</td>
<td>12.5</td>
<td>14.5</td>
<td>4.6</td>
<td>63.0</td>
</tr>
<tr>
<td>Acquaintance</td>
<td>2.6</td>
<td>4.6</td>
<td>6.6</td>
<td>1.0</td>
<td>85.1</td>
</tr>
<tr>
<td>Government agencies</td>
<td>3.3</td>
<td>7.6</td>
<td>8.3</td>
<td>2.3</td>
<td>78.5</td>
</tr>
<tr>
<td>NGOs</td>
<td>4.6</td>
<td>4.0</td>
<td>3.6</td>
<td>5.0</td>
<td>82.8</td>
</tr>
<tr>
<td>Large firms</td>
<td>1.0</td>
<td>2.3</td>
<td>1.3</td>
<td>0.7</td>
<td>94.7</td>
</tr>
<tr>
<td>Small firms</td>
<td>0.3</td>
<td>2.3</td>
<td>5.9</td>
<td>0.7</td>
<td>90.8</td>
</tr>
<tr>
<td>Financial institutions</td>
<td>10.2</td>
<td>15.5</td>
<td>5.0</td>
<td>1.0</td>
<td>68.3</td>
</tr>
<tr>
<td>Chamber of commerce/other societies</td>
<td>-</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>99.7</td>
</tr>
<tr>
<td>Other</td>
<td>1.0</td>
<td>0.3</td>
<td>0.7</td>
<td>2.3</td>
<td>84.8</td>
</tr>
<tr>
<td>C) On-going Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family members/relatives</td>
<td>19.1</td>
<td>27.1</td>
<td>29.0</td>
<td>8.6</td>
<td>16.2</td>
</tr>
<tr>
<td>Friends</td>
<td>2.0</td>
<td>15.2</td>
<td>33.3</td>
<td>7.9</td>
<td>41.6</td>
</tr>
<tr>
<td>Acquaintance</td>
<td>0.3</td>
<td>7.6</td>
<td>13.5</td>
<td>5.0</td>
<td>73.6</td>
</tr>
<tr>
<td>Government agencies</td>
<td>2.3</td>
<td>15.8</td>
<td>13.2</td>
<td>2.6</td>
<td>66.0</td>
</tr>
<tr>
<td>NGOs</td>
<td>7.3</td>
<td>6.3</td>
<td>8.6</td>
<td>4.3</td>
<td>73.6</td>
</tr>
<tr>
<td>Large firms</td>
<td>4.0</td>
<td>14.5</td>
<td>14.2</td>
<td>0.3</td>
<td>67.0</td>
</tr>
<tr>
<td>Small firms</td>
<td>9.9</td>
<td>41.6</td>
<td>17.8</td>
<td>1.7</td>
<td>29.0</td>
</tr>
<tr>
<td>Financial institutions</td>
<td>18.5</td>
<td>23.4</td>
<td>14.9</td>
<td>1.7</td>
<td>41.6</td>
</tr>
<tr>
<td>Chamber of commerce/other societies</td>
<td>0.7</td>
<td>0.3</td>
<td>0.7</td>
<td>-</td>
<td>98.3</td>
</tr>
<tr>
<td>Other</td>
<td>0.7</td>
<td>0.3</td>
<td>0.3</td>
<td>-</td>
<td>98.7</td>
</tr>
</tbody>
</table>

Note: VG (Very Great), G (Great), S (Some), L (Little), No (No Supports)  
All numbers are given in percentages.

Based on the data, it is evident that before actually starting a new business, that is, in the business identification phase, a substantial number of entrepreneurs in the sample (86.5 per cent) had discussed their business ideas with others. Relatives and friends were the most important link in this phase. Almost 76 per cent of respondents (39.3 + 23.4 + 10.6 + 2.6) reported that they have communicated their business ideas with relatives before they actually initiated new businesses. 39.3 per cent of them said that the importance of relatives is ‘very great’ in this phase. However, the importance of the family members was very high at the start-up stage as well. As table 5.15 shows, 45.9 per cent of the
entrepreneurs agreed that the importance of relatives was ‘very great’ in the start-up phase. It is also reported that relatives are important even during the on-going stage of the small enterprises. Further analyses will be done in the analytical chapters.

According to the information, the other important actors are friends, acquaintances, other firms (small and large), government institutions, financial institutions, NGOs and chamber of commerce and other professional societies. Nevertheless, it is important to note that only a handful of small entrepreneurs has developed links with professional organizations and societies such as the chamber of commerce. On the whole, the other important actors are banks, other firms, friends and government agencies. The data is presented in table 5.15. In-depth analyses will be done in the analytical chapters (chapters 6, 7, 8 and 9).

5.4. Conclusion

This chapter has been divided into two parts. The first part of the chapter has discussed the research methodology, which includes the research paradigm of the study, the research design, research validity and reliability, sampling and data gathering methods. The second part has provided a descriptive analysis of the survey findings, which includes an entrepreneurs’ personal profile, general profile of the small enterprises, and a brief picture of entrepreneurial networks, in order to gain a better understanding of our sample data.

The research started from the facts and information instead of theory. The nature of the data is qualitative and the research process is inductive rather than deductive. Although a number of studies are available in the field of enterprise, organizational, and industrial networks, studies on entrepreneurial networks and small business enterprises in developing countries is rare. Small enterprise network linkages in developing countries are informal arrangements. Due to lack of theoretical and empirical studies on network linkages and small business development (see chapter 3), more attention has been paid to the explanatory part of the study.

For practical as well as theoretical reasons, we chose multistage random sample. The location of the sample is the Kurunegala district, which is located in the Northwestern province of the island. Face-to-face interviews were conducted to collect data. The method is considered to be advantageous here because it provides rich data for theorizing and conducting a detailed analysis of the dynamics of entrepreneurial network relationships. One of the difficulties faced in this survey was that we were unable to find a completed and a reliable list of small enterprises. In some cases, although we had had some addresses when we went to the place, there were no firms at the addresses. The survey has covered the areas such as entrepreneurs’ personal profile, general profile of enterprises, entrepreneurial networks, subcontracting linkages, and performance of firms.
Chapter Five: Research Methodology and Data Characteristics

The following table presents the basic characteristics of the methodology and the survey.

**Table 5.16**

**Summary of the Basic Characteristics of the Methodology and the Survey**

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Paradigm</td>
<td>Inductive</td>
</tr>
<tr>
<td>2. Research design.</td>
<td>Triangular</td>
</tr>
<tr>
<td>3. Ventures studied</td>
<td>Small enterprises in Sri Lanka</td>
</tr>
<tr>
<td>4. Sample Procedure</td>
<td>Multistage sampling</td>
</tr>
<tr>
<td>5. Sample Size</td>
<td>325</td>
</tr>
<tr>
<td>6. Data Origin</td>
<td>Primary data</td>
</tr>
<tr>
<td>7. Data collection</td>
<td>Face-to-face personal interview</td>
</tr>
<tr>
<td>8. Focal unit of analysis</td>
<td>Individual (small) enterprise</td>
</tr>
<tr>
<td>9. Basic analytical methods</td>
<td>Static, descriptive analysis, <em>Logit</em> models</td>
</tr>
<tr>
<td>10. Basic characteristics of entrepreneurs</td>
<td></td>
</tr>
<tr>
<td>a. Male oriented</td>
<td></td>
</tr>
<tr>
<td>b. Rural oriented</td>
<td></td>
</tr>
<tr>
<td>c. Average age 39 yrs</td>
<td></td>
</tr>
<tr>
<td>d. Good formal education</td>
<td></td>
</tr>
<tr>
<td>e. Poor formal technical education</td>
<td></td>
</tr>
<tr>
<td>11. Basic characteristics of enterprises</td>
<td></td>
</tr>
<tr>
<td>a. Mainly manufacturing</td>
<td></td>
</tr>
<tr>
<td>b. Average age of the firms, 8 yrs.</td>
<td></td>
</tr>
<tr>
<td>c. Single ownership</td>
<td></td>
</tr>
<tr>
<td>d. Major market location: within the district</td>
<td></td>
</tr>
<tr>
<td>12. Entrepreneurial networks</td>
<td>Social networks oriented</td>
</tr>
</tbody>
</table>
Chapter Six

Network Formation and Small Business Growth

6.1. Introduction

This chapter explores the potential role and impact of the entrepreneur's networks on the success of the small business. In this study, the entrepreneurial network indicates the relationship of entrepreneurs with the outside world, which includes relatives, friends, acquaintances, other firms, government bodies etc. These network involvements are particularly valuable to the small business sector. As argued in chapters 3 and 4, without involving these network relations, a single entrepreneur can hardly succeed in his business because a single actor does not have all of the resources required for success at his disposal. The literature (Cromie et al. 1994, Donckels and Lambrecht 1995, Ebers 1997, Hand and Tomblin 1993, Jansson et al. 1995, Ostgaard and Birley 1996, Perry 1995, Perry and Pyatt 1994) argues that network formation is an essential aspect of business development. Although network research literature covers a variety of theoretical perspectives on various network involvements, there are a few studies available (Donckels and Lambrecht 1995, 1997) on the impact of network formation on the growth of a small business. However, there are no academic studies with empirical material on this topic especially focusing on less developed countries like Sri Lanka.

The purpose of this chapter is to analyze the impact of network formation on the growth of a small firm in Sri Lanka. The remainder of this chapter is organized as follows. In the next section, we develop some testable hypotheses. Section 6.3 will deal with the analytical techniques and issues. Section 6.4 will present our empirical results. Finally, section 6.5 will discuss the results, and conclude this chapter of the study.

6.2.1 Impact of Networks on Growth-Orientation and Expansion of Firms

Donckels and Lambrecht (1995, 1996) tried to fill the gap in contemporary literature by testing an explanatory model of the impact of networks on small business growth. We discussed the two studies (Donckels and Lambrecht 1995, 1996) in details in section 3.4.2.2., chapter 3.

The results of both studies (Donckels and Lambrecht 1995, 1996) suggest that networks have an influence on the growth of a small business, especially through contacts with other entrepreneurs. Meanwhile, the development of supporting infrastructure facilities is very important for the development of small business, particularly for LDCs. They found a causal relationship between networks and small firm growth (Donckels and Lambrecht 1995, 1997).

---

Although the entrepreneur’s ability, such as level of education, self-employment experiences, influences the relationship between network formulation and growth, network formation is an essential aspect of business development. However, we found that they (Donckels and Lambrecht 1995, 1997) ignored some important variables such as discussion with friends, membership in professional associations (for example, trade associations, chamber of commerce etc.) and other social clubs.\footnote{These variables as network formation elements have been identified in previous network studies (Aldrich, Rosen, and Woodward 1986, Birley and Cromie 1988, Brown and Butler 1995, Butler and Hansen 1991, Carroll and Teo 1996, Chu 1996, Dodd 1997, Goodman 1989, Huck \textit{et al}. 1999, Jansson \textit{et al}. 1995, 1997, Ostgaard and Birley 1996).} All of these variables are important when some studies entrepreneurial networks. Studies on entrepreneurial network mainly based on social network theory.

**How do entrepreneurs form networks? What are the relevant variables?**

To answer the questions, let us examine ideas and findings of different scholars. To put it in a nutshell, the network literature (Donckels and Lambrecht 1995, Ozcan 1995, Veciana and Clarke 1996) has identified three aspects of networks and networking: (1) the **determinants** of small business networks: social, communication, business and moral (Aldrich and Whetten 1981, Greve 1995, Jansson \textit{et al}. 1995, Johannisson 1986, Mitchell 1973), (2) the **link** between the relations: formal-informal, voluntary-compulsory, and direct-indirect (Curran \textit{et al}. 1993, Johannisson 1986), and (3) the **objectives** of networking (Birley 1985, Brown and Butler 1993, Falemo 1989, Larson and Starr 1993, Uzzi 1999). According to the literature (Donckels and Lambrecht 1995, Szarka 1990), the network formation elements are (for small firms) external consults, attendance at seminars, participation in trade fairs, the geographical distribution of contacts with other entrepreneurs and discussion of important business decisions with relatives. In addition, we found that membership in various clubs and societies is one of the efficient ways for managers to build up their external network relationships (Carroll and Teo 1996, Dodd 1997, Jansson \textit{et al}. 1995).

**What are the relationships between these variables and network elements?**

Let’s start our discussion from determinants of small business networks. The **determinants** of small business networks can be divided into four parts: (i) **social**, (ii) **communication**, (iii) **business**, and (iv) **moral**. Social networks are mainly maintained with family, friends and acquaintances (Brown and Butler 1993, Butler and Hansen 1991, Johannisson 1986). Managers/entrepreneurs use different types of activities in order to develop their social networks such as attending seminars, participation in the local chamber of commerce and other clubs and professional associations etc. For example involvement in different types of clubs and associations such as chambers of commerce, country clubs, allows the entrepreneurs to get to know others with similar social interests, professional work experiences, business fields (Carroll and Teo 1996, Dodd 1997). This form of interaction
Entrepreneurial Networks and Small Business Development

especially provides entrepreneurs/managers with many opportunities for communication. The social networks are contacted by entrepreneurs for external consultant, discussion with relatives (Ozcan 1995), and contact with other entrepreneurs. The second determinant is communication (Aldrich and Whetten 1981, Mitchell 1973). The communication network (Szarka 1990) is the collection of organizational and individuals with which the small firm has non-trading links that inform its business activities, such as external consulting, contacts with other entrepreneurs and discussion with relatives and friends. Business consideration is the third part within which is included exchange networks, instrumental networks and strategic networks (see Figure 6.1). Exchange network is defined by Szarka (1990) as the firms and organizations with which the small firms have commercial transactions. Johannisson (1986) identified the business elements in the instrumental network relations that are tools for realizing business objectives. According to Donckels and Lambrecht (1995, 1997), seminars and trade fairs can contribute to this process (see table 6.1). Strategic network relations are very important for small firms. According to Jarillo (1988), strategic behavior is the major reason for building linkages among firms. All network variables can therefore be fitted into strategic network relations (see Table 6.1). The final determinant is the moral aspect. These network relations are fit to contact with entrepreneurs and discussion with relatives.

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**Figure 6.1**

Elements of Network

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### Networks

- **Determinants**
  - Social
  - Communication
  - Business
  - Moral

- **Objectives**
  - Exchange
  - Instrumental
  - Strategic

---

**Networks**

**Links**

**Determinants**

- Formal
- Informal
- Direct
- Indirect
- Compulsory
- Voluntary

**Objectives**

- Information
- Feedback
- Canvassing
- Knowledge
- Financing
- Technology
- Moral

---

<table>
<thead>
<tr>
<th>Networks</th>
<th>Links</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>Communication</td>
<td>Business</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moral</td>
</tr>
<tr>
<td>Exchange</td>
<td>Instrumental</td>
<td>Strategic</td>
</tr>
</tbody>
</table>

---
Secondly, **links** between relations are also one of the factors that explain the network structure. There are different types of links (Figure 6.1): *informal against formal, indirect against direct, and compulsory against voluntary*. While informal links are constructed between family and friends, formal links take place between the entrepreneur and an organization rather than an individual (Birley 1985, Donckels and Lambrecht 1995, Johannisson 1986, Ozcan 1995). Birely (1985) states that while the formal networks consist of relations with banks, accountants, lawyers, etc., the informal includes family, friends, previous colleagues, etc. In most cases, formal links develop through informal network relations. Informal links occur in all the selected network elements. But formal links mostly occur in attending seminars, participating in trade fairs, and external consultants. The second aspect of links is compulsory as against voluntary (Curran et al. 1993, Ozcan 1995). A firm must link with some organizations and departments such as banks, government departments (for the purpose of tax and registration) in order to survive and operate successfully. These types of links are compulsory networks. Seminars, external consultants, and contact with other entrepreneurs may help to develop these links. Voluntary links are not compulsory, but provide numerous benefits. For example, participation in local chamber of commerce is not compulsory. The other aspect of links is direct against indirect. In direct links, there is a direct relation between the entrepreneur and the resource person. The entrepreneur has direct contact with relatives, friends, external consultants, and fellow entrepreneurs. Indirect networks imply that the network serves as an intermediate link. The entrepreneur obtains benefits through intermediaries. External consultants, other entrepreneurs, membership in some association, relatives and friends play the intermediary role.

Finally, **objectives** of networks have been identified by various researchers (Bjorkman and Kock 1995, Cromie et al. 1994, Donckels and Lambrecht 1995, 1997, Gibb 1993, Hakansson and Johanson 1988, Jansson et al. 1995, Jarillo 1988, Joyce et al. 1995, Mitchell 1973, Tichy 1981, etc.): (a) gathering of information; (b) response from external environment; (c) canvassing and looking for customers and suppliers; (d) enrichment of own knowledge; (e) psychological significance; and (f) sources of finance, exchange of technology (Figure 6.1). One of the main purposes of the entrepreneurial networks is gathering information. All of the network variables can be easily fitted in the purpose. Canvassing and looking for customers and suppliers including subcontractors is also a very important aspect of the networks of entrepreneurs. For example, membership in professional societies is one of the ideal channels for discussion with business people. Trade fair and seminar also provide more opportunities for managers and entrepreneurs to gather information about business and to identify new business deals. Enrichment of the entrepreneur’s own knowledge is also a very important aspect of networking. Entrepreneurs enhance their knowledge through attending seminars, participating in trade fairs, external consultants, and discussion with relatives, friends and professionals. Therefore, all of the network variables fit in with the objective of the enrichment of knowledge. Small entrepreneurs use their personal network relations to overcome their financial difficulties. In previous research studies (Ozcan 1995), we found
that relatives and family members were the major sources of financing for small business. Technology is also an important object of networking. External consultants and contacts with other entrepreneurs are better fitted into this purpose.

The following table provides a comparison of network literature with network indicators.

Table 6.1
Comparison of Network Literature with Network Indicators

<table>
<thead>
<tr>
<th>1. Determinants</th>
<th>External consultant</th>
<th>Seminars</th>
<th>Trade fairs</th>
<th>Contacts with entrepreneurs</th>
<th>Discussion with relatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Social</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>b) Communication</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>c) Business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exchange</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>- Instrumental</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>- Strategic</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>d) Moral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Links:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Informal</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>b) Formal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Direct</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Indirect</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Objectives:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Gathering information</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>b) Response from external environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Canvassing and looking after customers &amp; suppliers</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>d) Enrichment of own knowledge</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>e) Psychological significance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correspondence between literature and variables.
Source: Adapted from Donckels and Lambrecht, 1995: 274.

As we identified seven network formation elements from the literature: (1) Memberships in various clubs and societies (MEM), (2) discussion with relatives (DR), (3) Discussion with friends (FRI), (4) External consultation (EXCON), (5) Attending seminars (SEM), (6) Attending trade fairs (TF), (7) contact with entrepreneurs (CE), we put forward the following hypotheses.

6. 2. 2. Membership in Various Clubs and Societies

One of the efficient ways for a manager or a business owner (small business owners are, in fact, managers in their own right) to establish an external network of personal ties is through membership in various clubs, societies, and associations such as chambers of commerce, country clubs, associations on special areas (Dodd 1997, Jansson et al. 1995, Ozcan 1995). Belongingness to the same social groups, for instance, membership of
professional groups, are important connections for the organizational linkages. Involvement in these types of associations allow managers/entrepreneurs to get to know others with similar social interests, educational backgrounds, and professional work experiences. In particular, we argue that such professional involvements are important for managers/owners of small enterprises due to their lack of adequate technical and managerial skills. According to Carroll and Teo (1996), this form of interaction provides managers with many opportunities for communication. These opportunities help entrepreneurs/managers to develop network connections, and as the result, their businesses. Therefore, we expect that:

Hypothesis: Owners’ Membership in various clubs and societies has a positive impact on the business’ performances. (6.1a)

6. 2. 3. Discussion with Relatives and Friends

For market information, contact networks are based on inter-personal relations in small business. Discussion with relatives and friends is a major element of the formation of networks and also has a strong impact on business performances, particularly in small businesses (Aldrich, Rosen, and Woodward 1986, Dodd 1997). For example, according to Uzzi (1996, 1999) entrepreneurs spend their time, drinking tea and other beverages with different people such as clients, contractors, and intermediaries. These meetings help small business owners to identify new customers, buyers, subcontractors, and also to obtain information, advice, etc. Previous studies (Chu 1996, Hand and Tomblin 1993, Johannisson 1988, Ozcan 1995) showed that small business owners are mostly dependent upon their personal networks as a supplement to their own resources. Relatives and friends are the close resource people for small entrepreneurs. They are the small entrepreneurs' most valuable asset (Johannisson 1988, Johannisson and Peterson 1984). Ozcan (1995) pointed out that personal and social links can preserve in business practices.

Hypothesis: Discussion with family members has a positive impact on the performance of the business (6.1b)
Hypothesis: Discussion with friends has a positive impact on the performance of the business. (6.1c)

6. 2. 4. External Consultants

In general, firms seek external consultants for various purposes (for example, see Table 6.1). Meanwhile, this is one of the ideal channels for gathering information on new network actors. Small firms particularly are looking for external consultants as they operate the business with very limited resources comparing to large enterprises. In most cases, owners/managers of small enterprises do not have adequate managerial and
Entrepreneurial Networks and Small Business Development

technical skills to run their business efficiently and effectively (Duijnhouwer 1994, Ernst 1997, Holmlund and Kock 1998, Joyce et al. 1995, Staber 1996, Voeten 1993). Small firms also do not have their own research and development departments. Especially, since our sample consists of mainly micro-level firms, they do not have the capacity to employ their own internal consultants.

Bryson et al. (1993), studying UK small business services firms, found that most of the firms regularly use external researchers or consultants to enhance the skills of their internal staff. According to Bryson et al. (1993), the most important reason for small business services firms to use external consultants is to extend their existing internal staff, to manage the workload, to reduce costs, and to enhance flexibility. External consultations are also one of the important tools for network formation (Bryson et al. 1993, Donckels and Lambrecht 1996). As mentioned above, it is one of the ways that small enterprises obtain necessary information (Lang et al. 1997). Timely and relevant information is important for firms of all sizes. We can, therefore, also formulate the following hypothesis:

Hypothesis: Use of external consultants is positively related to the performance of the business. (6.1d)

6. 2. 5. Attending Seminars

Networks can be built from attendance at seminars and discussions. For example, Cromie et al. (1994) state that first meetings from business people take place at seminars or exhibitions. Participating in seminars (SEM) provides excellent opportunity to meet other entrepreneurs and resource people. In addition, entrepreneurs can gather information on their product, market, technology etc. These meetings further help entrepreneurs to look for customers and suppliers, to ask for response from external environment, and to enhance their own knowledge. Accordingly, we posit

Hypothesis: ‘Attendance at seminars’ has a positive impact on the business performance. (6.1e)

6. 2. 6. Trade Fairs

Attending trade fairs (TF), both national and international, is a very important tool for entrepreneurs as means of not only gathering market information but also identifying new network actors. However, both entrepreneur- and enterprise-related factors influence this tool. For example, Donckels and Lambrecht (1997) put forward a hypothesis, though they failed to prove it, that service sector businesses are most likely to participate in trade fairs. Nevertheless, they managed to prove that the size of the company and the level of
education significantly influenced participation in trade fairs. While the entrepreneur- and enterprise-related factors influence participation in trade fairs (TF), the participation in trade fair (TF) influences network formation. Consequently, we would expect a positive relationship between participation in trade fairs and network formation. Then, of course, the more networks are formed, the better the firms develop their businesses because, for instance, trade fairs give opportunities to entrepreneurs for gathering information, enhancing their knowledge, canvassing and looking for customers etc. Accordingly, we posit

Hypothesis: \textit{the participation in trade fairs is positively related to business performance.} \hfill (6.1f)

6. 2. 7. Contacts with Other Entrepreneurs

There are a number of factors associated with relationships between companies (Borg 1991, Rothwell and Dodgson 1991). Firstly, according to marketing theory, interaction among firms is related to the creation of formalized distribution channel agreements between firms, which are interpreted as distribution networks. In this respect, other firms are trading partners of the small business. The distribution channel agreements can be either formal, such as franchising, licensing, or distribution agreements in connection with subcontracting, or informal, such as long-term business relationships without formal agreements. This study does not examine formal networking such as alliances and joint ventures. The informal distribution network always takes place through personal contacts. The ties are relationships of trust, with no records of the exchanges (Johannisson 1988, Uzzi 1996). In other words, these are ‘gentleman’s agreements’. Secondly, small enterprises develop contacts with other firms as a result of subcontracting activities. For small firms, subcontracting can be an important means of gaining access to new production technologies without having to invest heavily in expensive production equipment. Thirdly, interaction between firms is connected with use of common technology and information. This type of connection can be seen as a major channel for the spreading of new knowledge. This interaction is very important for small enterprises as they have limited resources for research and development. Fourthly, interaction is associated with mutual interdependence. Finally, the interaction is associated with the production and marketing of services, which requires close cooperation between the buyer and seller of the services. Accordingly we posit that;

Hypothesis: \textit{The contact with other enterprises is positively associated with growth of the firm.} \hfill (6.1g)

At the same time, we also expect;

Hypothesis: \textit{The relations with other entrepreneurs (regional, national, and international) are boosted by other network elements (memberships in various clubs and societies,}
Entrepreneurial Networks and Small Business Development

discussion with relative, discussion with friends, external consultation, attending seminars, and participating trade fairs).  

6.2

The diagram of the hypotheses of this chapter can be presented as follows:

Figure 6.2
Diagram of the hypotheses

As we identify three types of business performance indicators, the hypotheses can be tested by using the different indicators: the association of entrepreneurial network formation with (a) financial growth, (b) increasing sales, and (c) the major market location. The next section will discuss data, variables, and the method of analyzing data.

6. 3. 1. Methodology and Data

We defined small business (less than 50 employees) in the terms used by the small business supporting and research agencies and departments such as IDB, Department of Small Industries, Ministry of Youth Affairs, and the DCS in Sri Lanka (see chapter 2 for the definition). Chapter 5 has discussed general information about the research method, the selection procedure of the sample, the method of data gathering, and the basic characteristics of the sample, the method of data analysis, and variables. In this section,
we pay specific attention to the method of data analysis of this particular chapter (chapter 6). In this regard, we will discuss how to test our hypotheses using our data set.

### 6.3.2. Data Analysis and Variables

Following Donckels and Lambrecht (1995), we can develop a diagram to explain what categories make up the explanatory and dependent variables. They used the following explanatory variables as the network variables: consultation of external consultants (yes, no), attendance at seminars (yes, no), participation in trade fairs (yes, no), discussion with relatives (yes, no), and geographical distribution of contacts with other entrepreneurs (regional, national, international). The dependent variable growth is dichotomous (growth, no growth). However, we categorized some variables in different ways (see the Figure 6.2) based on the nature of our data.

In addition, we use ‘discussion with friends’ (yes, no) and a ‘membership of any professional association’ (yes, no) as supplementary explanatory variables to capture some component of the social networks.

A summary of variables for this chapter is as follows:

**Dependent Variables**

Business growth in terms of profitability and sale (see the section 5.2.7.2 in chapter 5 for how they are measured)

Market expansion: \( \text{Regional/national/international} \)

**Independent variables:** (Network elements and contact)

- Membership of a professional Society (MEM) \( \text{Yes/No} \)
- Discussion with Relatives (DR) \( \text{Yes/No} \)
- Discussion with friends (FRI) \( \text{Yes/No} \)
- External Consultants (EXCON) \( \text{Yes/No} \)
- Attendance Seminars (SEM) \( \text{Yes/No} \)
- Trade Fairs/exhibitions (TF) \( \text{Yes/No} \)
- Contacts with Entrepreneurs (CE) \( \text{No contact/Regional/National/International} \)

Control variables are presented in chapter 5 (see section 5.2.7.2)
6. 3. 3. Model

The hypotheses can be tested through log-linear analysis (see DeMaris 1992, Hagenaars 1990, Maddala 1983) as our dependent variables are qualitative, dichotomic and categorical. The method helps for identifying causal relations. Regression analysis, for example, examines the relationship between a dependent variable and a set of independent variables. Analysis of variance techniques provide tests for the effects of various factors on a dependent variable. But neither technique is appropriate for categorical data, where the observations are not from populations that are normally distributed with constant variance. In this model, both dichotomic and polytomic variables can be included (the logit model is presented in section 5.7.2.1, chapter 5).

6. 4. 1. Empirical Results

This section of this chapter will present our empirical results. We mainly used logit regression techniques to test our hypotheses. Nevertheless, before proceeding to the logit regression results we would like to present the descriptive statistics of the variables used in the models in order to obtain a better understanding of the data. Therefore, this section is divided into two parts. First a descriptive analysis of the data is given. Part two presents the empirical results of the regression models.

6. 4. 2. Descriptive Analysis

Table 6.2 shows how small entrepreneurs attend network formation activities. These figures relate to the on-going phase (In this thesis, we discuss three phases of entrepreneurship, see chapter 7). 79.5 per cent of small firms have regular links with other firms (either formal or informal). But they have only 12.5 per cent of formal links with others. The formal links include: joint ventures, licensing, industrial co-operation agreement, supplier-buyer agreements etc. Others are informal linkages such as long-term selling and buying relations, subcontracts (but without formal agreements), etc. Nevertheless, most of the small entrepreneurs discuss their business matters such as marketing, raw materials, product process, technology, subcontracting, financing etc. with other entrepreneurs. As table 6.2 shows, 86.5 percent of respondents discuss on these matters with other entrepreneurs in similar field. Only 52.7 percent of them discuss regularly. Most of the discussions (38.6 percent) is on raw materials. Others are on market matters (35.5 percent), product process (11.5), subcontracting matters (8.9 percent), technology (4.5 percent), and financing (1 percent). The results also show that 65 percent of respondents discuss with other entrepreneurs in different fields. Only 28 percent of them meet regular basis. The subjects of the discussions are mainly marketing (33.1 percent), raw materials (28.4 percent), financing (25 percent), subcontracting (4.6 percent), product process (4.6 percent), and technology matters (3 percent).
Chapter Six: Network Formation and Small Business Growth

Table 6.2

<table>
<thead>
<tr>
<th>Network Formation Activities of the Respondents</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member of any professional association</td>
<td>26.7%</td>
<td>73.3%</td>
</tr>
<tr>
<td>Discussion with Relatives</td>
<td>75.6%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Discussion with Friends</td>
<td>47.5%</td>
<td>52.5%</td>
</tr>
<tr>
<td>External Consults</td>
<td>31.4%</td>
<td>68.6%</td>
</tr>
<tr>
<td>Seminar Attendances</td>
<td>35.3%</td>
<td>66.7%</td>
</tr>
<tr>
<td>External Trade Fair</td>
<td>11.6%</td>
<td>88.4%</td>
</tr>
<tr>
<td>Any kinds of Regular links with Other Firms</td>
<td>79.5%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Formal links with Others</td>
<td>12.5%</td>
<td>87.5%</td>
</tr>
<tr>
<td>Discussion with other entrepreneurs (in the same field)</td>
<td>86.5%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Discussion with other entrepreneurs (not in the same field)</td>
<td>65.0%</td>
<td>35.0%</td>
</tr>
</tbody>
</table>

As table 6.2 displays, besides the discussion with other entrepreneurs in similar field, the other most popular network element of the small business entrepreneurs is the discussion with their relatives (DR): 75.6 percent of entrepreneurs discuss business related matters with their relatives (DR), while 47.5 percent of respondents discuss with friends (FR). Meanwhile, a few, only 26.7 percent, has a membership of any kind of professional associations like chamber of commerce. As table 6.2 displays, participation in external trade fairs and participation in seminars (SEM) and short-term training are very rare among the small business entrepreneurs. 35.3 percent of them attend seminars and training courses. Only 11.6 percent of small business entrepreneurs participate in external trade fairs (TF). During the year, 31.4 percent of firms have looked for external consultants (EXCON).

6.4.3. Networking and Growth

As mentioned, the dependent variable of the first hypotheses was identified as firm growth (financial term and sale) and market expansion (international, national and regional). Table 6.3 shows that 61.4 percent of firms report growth category, while 10.2 percent of them are reported ‘not growth’. 28.4 percent of them are in neutral. In sale terms, 27.4 percent are neutral. Sales increase in 47.2 percent of firms. 18.5 percent recorded sales declining during the five-year period. In the market selected, 64.4 percent of the small business are limited to the region. In last three years, 12.9 percent of the small businesses expand their market beyond the region, but within the country. 17.5 percent of the small enterprises expand their market at international level. This only relates to market expansion in last three years. However, it does not mean that 17.5 percent of small businesses exports 100 percent of their outputs. The study does not find a strong

167 Growth in financial terms and in sale terms is measured by using available records (most small firms do not have own records) and entrepreneurs’ point of view (see methodology part)
correlation between major maker expansion and business growth in terms of either profitability \((r = 0.232, p\text{-value} = 0.001)\) or sale \((r = 0.390, p\text{-value} = 0.001)\), though the relationships are statistically highly significant and positive.

Table 6.3

<table>
<thead>
<tr>
<th>Performance of Small Enterprises(^{168})</th>
<th>in financial term</th>
<th>in sale term</th>
<th>Major Market location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>61.4%</td>
<td>47.2%</td>
<td>Regional 64.4%</td>
</tr>
<tr>
<td>Neutral</td>
<td>28.4%</td>
<td>27.4%</td>
<td>National 12.9%</td>
</tr>
<tr>
<td>Decline</td>
<td>10.2%</td>
<td>18.5%</td>
<td>International 17.5%</td>
</tr>
</tbody>
</table>

The models of growth (in financial terms, model 6.1, and in sale terms, model 6.2) and market expansion (regional, national, and international), which are about the first hypothesis, are presented in table 6.4. Entrepreneur-related and enterprise-related factors were used as control variables in all models. The dependent variable of the model 6.1 and 6.2 is binary choice as 1 for growth, and 0 for otherwise (decline).

Model 6.1 is statistically significant with a moderate goodness of fit as indicated by the value of chi-square \((p\text{-value} < 0.01, \text{Nagelkerke } R^2 = 0.363)\). The model tests the impact of network elements on growth. In this model, growth is defined in terms of finance (profits) \((1 = \text{if growth, } 0 = \text{otherwise})\). Model 6.2 also tests the same impact, but in sale terms. The second model is also significant at 0.01 levels \((p\text{-value} < 0.01, \text{Nagelkerke } R^2 = 0.238)\). Scholars (Johanson and Mattsson 1993) in the field of marketing and international business have identified a positive relationship between network formation and market expansion of small businesses. Consequently, in addition to the growth measures (profit and sale), we used market expansion in last three-years as a dependent variable to test our first hypothesis. As explained above, we have three market locations: (1) regional market, (2) national market, and (3) international market. Most of the small enterprises mainly serve the local market (see table 6.3). In our multinomial logistic model, model 6.3, we therefore used regional market as the baseline (comparison category). The baseline (regional market) is very important when the results are interpreted. Our multinomial logistic model is highly statistically significant \((p\text{-value} < 0.01, \text{Nagelkerke } R^2 = 0.767)\). Table 6.4 presents the results of the estimated models. In model 6.1 and model 6.2 the baseline is non-growth group. In model 6.3, the baseline is regional market.

\(^{168}\) The firms were divided into three groups (growth, neutral, and decline firms) on the basis of the respondents’ answers and data availability.
Chapter Six: Network Formation and Small Business Growth

Table 6.4

<table>
<thead>
<tr>
<th>Dependent</th>
<th>Growth Models(^a)</th>
<th>Market Expansion(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Financial Model 6.1</td>
<td>Sale Model 6.2</td>
</tr>
<tr>
<td></td>
<td>National</td>
<td>International</td>
</tr>
<tr>
<td>MEM</td>
<td>.404 (1.656)****</td>
<td>.673 (2.067)****</td>
</tr>
<tr>
<td>DR</td>
<td>.324 (.951)</td>
<td>.092 (.263)</td>
</tr>
<tr>
<td>FRI</td>
<td>.200 (.267)</td>
<td>.387 (1.232)</td>
</tr>
<tr>
<td>EXCON</td>
<td>-.364 (1.677)****</td>
<td>-.277 (1.659)****</td>
</tr>
<tr>
<td>SEM</td>
<td>-.091 (.263)</td>
<td>.161 (.478)</td>
</tr>
<tr>
<td>TF</td>
<td>.111 (.222)</td>
<td>.0308 (.062)</td>
</tr>
<tr>
<td>CE (RC)</td>
<td>-.189 (.553)</td>
<td>-.616 (1.861)****</td>
</tr>
<tr>
<td></td>
<td>(RC NC)</td>
<td>.263 (.564)</td>
</tr>
<tr>
<td></td>
<td>(NC)</td>
<td>.051 (.082)</td>
</tr>
<tr>
<td>Entrepreneur-related</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (log)</td>
<td>-1.006 (1.522)</td>
<td>-.622 (.973)</td>
</tr>
<tr>
<td>Gender</td>
<td>1.095 (2.335)****</td>
<td>.115 (.243)</td>
</tr>
<tr>
<td>Birth place</td>
<td>1.107 (2.360)****</td>
<td>.853 (2.318)****</td>
</tr>
<tr>
<td>Education</td>
<td>.546 (1.508)</td>
<td>.0934 (.267)</td>
</tr>
<tr>
<td>Parents’ Business</td>
<td>-.886 (2.140)****</td>
<td>-.952 (2.456)****</td>
</tr>
<tr>
<td>Pre-training</td>
<td>.222 (.536)</td>
<td>.113 (.278)</td>
</tr>
<tr>
<td>Work experience (log)</td>
<td>.381 (1.705)****</td>
<td>.187 (.878)</td>
</tr>
<tr>
<td>Enterprise-related</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector S(_1)</td>
<td>.038 (.089)</td>
<td>.251 (.592)</td>
</tr>
<tr>
<td>S(_2)</td>
<td>.272 (.733)</td>
<td>-.210 (.579)</td>
</tr>
<tr>
<td>Size SIE(_1)</td>
<td>-.549 (1.109)</td>
<td>-.486 (1.025)</td>
</tr>
<tr>
<td>SIE(_2)</td>
<td>-.111 (.228)</td>
<td>-.144 (.305)</td>
</tr>
<tr>
<td>Location</td>
<td>-1.538 (2.958)*</td>
<td>-1.454 (2.80)*</td>
</tr>
<tr>
<td>Family workers</td>
<td>.229 (.751)</td>
<td>.148 (493)</td>
</tr>
<tr>
<td>Firm’s life time</td>
<td>-.324 (1.514)</td>
<td>-.244 (1.140)</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.167 (1.291)</td>
<td>2.64 (1.092)</td>
</tr>
<tr>
<td>Nagelkerke R(^2)</td>
<td>.363</td>
<td>0.238</td>
</tr>
<tr>
<td>(\hat{\sigma}^2)</td>
<td>90.918</td>
<td>52.447</td>
</tr>
<tr>
<td>P-value for (\hat{\sigma}^2)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: t-values are in parentheses; N = 303

\(^a\) Baseline (comparison category) is non-growth group

\(^b\) Baseline (comparison category) is regional market

* p value < 0.001
** p value < 0.05
*** p value < 0.10

However, as pointed out in section 5.2.7.1 (chapter 5), it is very hard to interpret changes in logits. Therefore, we computed the predicted probabilities. Table 6.5 shows the predicted probabilities for all of the network elements.
Table 6.5
Predicted probabilities

<table>
<thead>
<tr>
<th></th>
<th>Contact with other entrepreneurs</th>
<th>Growth</th>
<th>Market Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regional  RC NC  National</td>
<td>Financial  Sale  National  International</td>
<td></td>
</tr>
<tr>
<td>MEM</td>
<td>0.44**  0.61  0.55***  0.60***  0.66**</td>
<td>0.11***  0.26**</td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>0.31  0.33  0.29  0.58  0.52</td>
<td>0.37  0.45</td>
<td></td>
</tr>
<tr>
<td>FRI</td>
<td>0.46  0.88**  0.35  0.55  0.60</td>
<td>0.63  0.52</td>
<td></td>
</tr>
<tr>
<td>EXCON</td>
<td>0.58  0.67  0.46  0.41***  0.43**</td>
<td>0.35  0.53</td>
<td></td>
</tr>
<tr>
<td>SEM</td>
<td>0.66***  0.91**  0.70***  0.48  0.54</td>
<td>0.94**  0.68***</td>
<td></td>
</tr>
<tr>
<td>TF</td>
<td>0.64  0.76  0.82**  0.53  0.53</td>
<td>0.90***  0.72</td>
<td></td>
</tr>
<tr>
<td>CE (RC)</td>
<td>-</td>
<td>0.45  0.335**  0.29  0.72</td>
<td></td>
</tr>
<tr>
<td>CE (RC NC)</td>
<td>0.51  0.37</td>
<td>-  0.82  0.92*</td>
<td></td>
</tr>
<tr>
<td>CE (NC)</td>
<td>0.57  0.53</td>
<td>-  0.92  0.85*</td>
<td></td>
</tr>
</tbody>
</table>

*p value < 0.001; ** p value < 0.05; *** p value < 0.10

Note:

a baseline or comparison category for contact with other entrepreneurs is ‘no contact.
b baseline/ comparison category for growth models (financial and sale) is ‘non-growth group’.  
c baseline or comparison category for market expansion is ‘regional market’.

Hypothesis 6.1a stated ‘Owners’ Membership in various clubs and societies has a positive impact on business performance’. As shown in Table 6.5 the variable is statistically significant in all of the performance models. In terms of financial growth, for the entrepreneurs having memberships in some clubs and/or professional associations (MEM), the probability of belonging to the growth group is 60 per cent (0.404; p-value < .10). In sale terms, the probability that the entrepreneurs, who participate in clubs and professional associations, belong to a growth group is 66 per cent (0.673; p-value < .05).

Hypotheses 6.1b and 6.1c are not supported. Discussion with relatives (DR) and discussion with friends (FRI) are statistically insignificant. However, we found a positive impact of these two network formation variables on business performance as expected in the hypotheses, but results are insignificant.

Hypothesis 6.1d predicted that external consultancy (EXCON) is positively related to business performance. Although external consultant (EXCON) is statistically significant, we are unable to find a positive impact of this network formation element on business growth (profitability: -0.364, prob. 0.41, p-value < 0.10; and sale: -0.277, prob. 0.43, p-value < 0.10). For the entrepreneurs with external consultants, the probability of belonging to a growth group is less than 50 per cent (see table 6.5).

Hypothesis 6.1e stated that attending seminars (SEM) has a positive impact on the performance of the business. Our logistic growth models do not support the hypothesis (p-values > 0.10). But our market expansion model shows a significantly positive relationship between market expansion and attending seminars. Accordingly, we found that the entrepreneurs who attend seminars are significantly more likely to be found in
national (94 per cent probability) and international markets (68 per cent probability) (compared with regional market) than the entrepreneurs who do not attend seminars. This result (market expansion model) confirms hypothesis 6.1e.

Hypothesis 6.1f indicated that the participation of trade fairs (TF) is positively related to business performance. In our growth models (financial and sale), we found a positive effect of trade fairs as expected in the hypothesis, but the results are insignificant (see table 6.5). Our market expansion model supports the hypothesis. In other words, there is a significant impact of trade fairs on market expansion. Participants in trade fairs are significantly more likely to be found in national (90 per cent probability) and international markets (72 per cent probability) than non-participants (Comparison category is regional market).

Finally, hypothesis 6.1g predicted that 'contact with other entrepreneurs' (CE) has a positive impact on business performance. In general, the hypothesis is supported by all of our performance models. Entrepreneurs with national level contacts therefore are more likely to be found in the growth group than those without any contacts and those with regional contacts. As regards market expansion, the entrepreneurs with national contacts (NC) and both national and regional contacts (RC NC) are significantly more likely to be found in national and international market (comparison category is regional market). For example, for the entrepreneurs with both regional and national contacts (RC NC), the probability of belonging to the group that produces their products for foreign markets (international market) is 92 per cent, compared with others (the entrepreneurs: no contacts with other entrepreneurs, only regional contacts (RC), only national contact (NC)).

Hypothesis 6.2 stated that relations with other (regional, national, and international) entrepreneurs are boosted by other network elements (memberships in various clubs and societies, discussion with relatives, discussion with friends, external consultation, attending seminars, and participating in trade fairs). As already mentioned during the processing of data, the small entrepreneurs in our sample do not have direct relations with international firms. We found that two network formation elements (attending seminars and participating in trade fairs) significantly influence improving relations with national level firms. For example, the entrepreneurs who attend seminars are significantly (p-value < 0.10) more likely (70 per cent probability, compared with those who do not attend seminars) to establish contact with national entrepreneurs. Our results also show a significantly higher probability (82 per cent) that the entrepreneurs who participate in trade fairs (p-value < 0.05) have connections with national level entrepreneurs. On the other hand, membership in clubs and other associations does not show a significant effect, but the entrepreneurs who participate in these kinds of associations have higher chances (65 per cent probability) of developing contacts with national level entrepreneurs. ‘External consultants’ have a positive impact on network connections, but are not statistically significant in our model. While ‘discussions
Entrepreneurial Networks and Small Business Development

with relatives’ (DR) show a negative impact on ‘contact with other entrepreneurs’ (CE), ‘discussions with friends’ (FRI) provide mixed results.

In addition to the probabilities, we estimated partial correlations for network formation variables. The partial correlation matrix displayed in table 6.6 gives similar results.

Table 6.6
Partial Correlations Matrix\(^a\) I

<table>
<thead>
<tr>
<th></th>
<th>MEM</th>
<th>S.D</th>
<th>MEM</th>
<th>DR</th>
<th>FRI</th>
<th>EXCON</th>
<th>SEM</th>
<th>TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEM</td>
<td>.2673</td>
<td>.4433</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>.7558</td>
<td>.4303</td>
<td>.0425</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRI</td>
<td>.4752</td>
<td>.5002</td>
<td>-.0504</td>
<td>.1843*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXCON</td>
<td>.3135</td>
<td>.4647</td>
<td>-.0692</td>
<td>.0102</td>
<td>.0725</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEM</td>
<td>.3531</td>
<td>.4757</td>
<td>.0755</td>
<td>.0385</td>
<td>.0207</td>
<td>.1417**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TF</td>
<td>.1155</td>
<td>.3202</td>
<td>-.0362</td>
<td>-.0274</td>
<td>-.0888</td>
<td>.1540*</td>
<td>.2250*</td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>.9340</td>
<td>1.021</td>
<td>.0278</td>
<td>-.1138***</td>
<td>-.0724</td>
<td>.0404</td>
<td>.1526*</td>
<td>.1719*</td>
</tr>
</tbody>
</table>

\(^a\) For control variables see the list of variable (section 6.3.2)

\(p\)-values (two-tailed significance) are in parentheses. \(N = 285\)

\* \(p\)-value < 0.01

\** \(p\)-value < 0.05

\*** \(p\)-value < 0.10

\(^b\) Contact with other entrepreneurs (CE) has four categories: 0 = no contact (41.3 per cent); 1 = only Regional contact (38.3 per cent); 2 = Regional National Contact (6.3 per cent); and 3 = only national (14.2 per cent)

As the variable, the relations with other entrepreneurs (CE), has been arranged in ascending order (0 = no contact; 1 = only Regional contact; 2 = Regional National Contact; and 3 = only national), the expected relationships between the relations with other entrepreneurs and the other network formation variables are positive (the second hypothesis). However, we found in table 6.6 negative relationships regarding the discussions with relatives \(r = -0.1138; p\)-value < 0.10) and friends \(r = -0.0724; p\)-value > 0.10).

Table 6.7 (Appendix 6A) further displays the relationships between network formation elements and the control variables (the enterprise-and entrepreneur-related factors). The estimated correlation coefficients show that ‘membership in various clubs and societies’ (MEM) is positively related to ‘urbaneness’ \(r = 0.106; p\)-value = 0.066), education \(r = 0.134; p\)-value = 0.019), and service sector \(r = 0.105; p\)-value = 0.069). These results are not unexpected as urban entrepreneurs have more opportunities to join such societies...
and clubs. Most of professional associations and clubs are located in urban areas. The entrepreneurs with high education also tend to join such associations. We also found that ‘discussion with relatives’ (DR) is inversely related to urbaneness ($r = -0.121; p\text{-value} = 0.035$), education ($r = -0.105; p\text{-value} = 0.069$), firms’ location ($r = -0.158; p\text{-value} = 0.006$), and gender ($r = -0.162; p\text{-value} = 0.005$), while it is positively related to pre-training ($r = 0.115; p\text{-value} = 0.046$), service sector ($r = 0.133; p\text{-value} = 0.020$), and family employees ($r = 0.104; p\text{-value} = 0.071$). ‘Discussion with relatives’ (DR) is not significantly related to other factors such as age ($p\text{-value} = 0.425$), family business ($p\text{-value} = 0.274$), manufacturing sector ($p\text{-value} = 0.277$), and work experience ($p\text{-value} = 0.821$). Meanwhile, ‘discussion with friends’ (FRI) is inversely related to age ($r = -0.137; p\text{-value} = 0.017$), education ($r = -0.101; p\text{-value} = 0.081$), family business ($r = -0.116; p\text{-value} = 0.044$), firm’s location ($r = -0.23; p\text{-value} = 0.000$), and male (gender) ($r = -0.253; p\text{-value} = 0.000$). These results do not surprise us as the entrepreneurs without higher education tend to discuss business matters significantly more with relatives and friends. ‘External consultancy’ (EXCON) is positively related to family business ($r = 0.116; p\text{-value} = 0.044$), service sector ($r = 0.114; p\text{-value} = 0.048$), firm’s size ($r = 0.117; p\text{-value} = 0.042$), firm’s location ($r = 0.134; p\text{-value} = 0.020$), and male (gender) ($r = -0.116; p\text{-value} = 0.044$). These results show that service sector, relative bigger, and firms located in industrial estates contact significantly more external consultants. ‘Attendance in seminars’ (SEM) has positive relationship with the following factors: age ($r = 0.155; p\text{-value} = 0.007$), education ($r = 0.123; p\text{-value} = 0.032$), pre-training ($r = 0.127; p\text{-value} = 0.027$), service sector ($r = 0.145; p\text{-value} = 0.048$), size of firm ($r = 0.231; p\text{-value} = 0.000$), firm’s location ($r = 0.117; p\text{-value} = 0.047$), and work experience ($r = 0.178; p\text{-value} = 0.001$). Highly-educated, including pre-training, formal education and work experience, entrepreneurs are significantly more likely to attend seminars. Compared to manufacturing and trade sectors, entrepreneurs from service sector attend more number of seminars. ‘Participating in trade fairs’ (TF) is also positively related to education ($r = 0.130; p\text{-value} = 0.024$), firm’s location ($r = 0.171; p\text{-value} = 0.003$), and male ($r = 0.095; p\text{-value} = 0.007$), while it is inversely related to service sector ($r = -0.133; p\text{-value} = 0.020$). Accordingly, we observe that trade fair participation is positively related to level of education. In addition, firms located in industrial estates and run by male owners relatively attend more number of trade fairs. The relationship between ‘contact with other entrepreneurs’ (CE) and manufacturing sector is significantly negative ($r = -0.253; p\text{-value} = 0.000$). Meanwhile, ‘contact with other entrepreneurs’ (CE) has positive relationship with education ($r = 0.137; p\text{-value} = 0.017$), service sector ($r = 0.166; p\text{-value} = 0.004$), and male (gender) ($r = 0.101; p\text{-value} = 0.080$). Highly educated and male entrepreneurs are significantly more likely to have contacts with other entrepreneurs. Service sector entrepreneurs are significantly more contacts with other entrepreneurs.

To sum up; in general, though we anticipated that network formation elements are positively related to business performance, in our analysis we found some of the network elements were negatively related to business performance. While some of our results therefore are
consistent with other findings, some contrast with them. More details will be discussed in the next section.

6.5. Discussion and Conclusion

Network relations are vital and important for small business, as particularly a small firm itself does not have all resources such as raw materials, capital, machinery, etc. Therefore, small business network researches (Best 1990, Donckels and Lambrecht 1995, Nohria 1991, Ozcan 1995, Szarka 1990, Uzzi 1999) suggest networking as a necessary strategy in obtaining resources such as gathering information, technology, finance, etc (This will be further discussed in chapter 9). Besides, MacMillan (1993) suggests that building contacts and networks are the fundamental factor in determining the success of any firm because through entrepreneurial networks, the entrepreneur can gather information, look for customers and suppliers, and obtain the other resources he needs. As regards contacts with entrepreneurs, network literature (Staber 1996a) suggests that inter-firm linkages may span various levels of aggregation: Firms may be linked only locally, sometimes, inter-regionally or globally. The purpose of this chapter has been to explore the impact of network formation on small business performances. We predicted the positive impact of network formation on business performance. Logistic regression technique was used to analyze the data. In this section, we discuss our results, and conclude this chapter of the thesis.

The first hypothesis (the first hypothesis includes seven sub-specific hypotheses) is about the impact of the formation of networks on growth. We tested this hypothesis by using three separate dependent variables. In the case of the growth in financial terms, there is only one significant direct network effect (membership in clubs and professional associations) on growth. There is an impact of external consultancy (EXCON) on growth, but it is a negative effect (probability is 41 per cent). One reason for the negative impact could be that most of the small entrepreneurs are seeking external consultants because declining of sales, market problems, machinery problems, etc. Therefore, though external consultants have an impact on the formation of networks, the relationship between growth and the network element is negative. On the other hand, entrepreneurs seeking external consultants are significantly less likely to belong to the growth group. As regards growth in sales, we found that small entrepreneurs who are members of any professional associations are significantly more likely to belong to the growth group. The results of the study were unable to find significant impacts of ‘attending seminars’ (SEM) and ‘trade fair participation’ (TF) on business performance either in terms of sale or profitability, but there are positive impacts of these two on market expansion. One explanation is that the impact of those events on profitability and sale could not be visible in short term. One can attend seminars or trade fairs today, but (s)he has to wait some
time for harvesting. The process could be two or three years even more. Different types of research methods such as longitudinal studies would provide such information.

When we looked at the market expansion of the small enterprises, we found that seminar participants are significantly more likely to belong to the group whose market has expanded last three-years at national or international level. Entrepreneurs who discuss with friends are more likely to become exporters. This is true, as most of the small entrepreneurs deal with export markets through some linking firms, but not directly. For example, the export opportunities are in the Dhamadeniya Export Village. Most cases are subcontracts. Subcontracting activities mostly take place among friends (see chapter 8). Participating in trade fairs is also consistent with our hypothesis. We found that trade fairs have a significant impact on market expansion. National as well as international buyers and subcontractors can be identified in attending trade fairs and seminars. The impact of attending trade fairs and seminars on market expansion is positive. According, the study argues how firms use network relationships to overcome barriers to enter national and international markets.

Entrepreneurs with only regional contacts (RC) are significantly less likely to be in the growth group. But those who have national level connections are more likely to belong to the growth group. In the case of the market expansion, the formation of networks is positively related to the market expansion. The results conclude that when the market expands beyond the national border, the influences of the network connections are vital and important for the small entrepreneurs.

The second hypothesis (hypothesis 6.2) of this chapter is about the network elements and the network relations with national and international entrepreneurs. We expected the relations with other entrepreneurs to be promoted by the network elements (MEM, DR, FRI, EXCON, SEM and TF), and they are positively related with the formation of networks. However, we fail to identify considerable network relations with international entrepreneurs. International relationships are more critical to these small entrepreneurs because of their educational level particularly the knowledge of English. There are other reasons as well. For example, most international businesses have been located in Colombo. Of course, Sri Lanka is a developing country. At the same time, we found that the small entrepreneurs do not have direct export opportunities. They deal with export market through some link-agents or firms. For example, Dambadeniya Export Production

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169 See Section 2.6 in chapter 2.

170 Regional means within North-Western Province only.

171 Colombo is the capital of Sri Lanka.
women in this village produce tea boxes and other ornamental items for the export markets. But they do not have direct foreign orders. The orders come through ‘Dambadeniya Export Village (pvt.) Company.’ Therefore these are such types of subcontract activities.

Although we expected (hypothesis 6.2) that all of the network elements influence network formation, the contact with other entrepreneurs (CE) is not significantly influenced by external consultancy (EXCON). One reason for the lack of significant could be that the relationship between education and CE is positive and significant. Meanwhile, we found that small entrepreneurs who attend seminars (SEM) and participate in trade fairs (TF) have a higher chance of developing relations with other entrepreneurs (CE). Discussion with relatives (DR) is also very critical because of Sri Lankan culture. Sri Lanka is a collective and group-dominated society. Unlike Western families, families in Sri Lanka represent networks of people jointed together by specific sets of familial relationships. Sri Lanka has been characterized as a family-oriented, group-dominated, collective society, in which social relations are largely built around the family. In such a society, family ties occupy an important role in entrepreneurial networks. Family members work together in their businesses as well as at home. The family relationship is stronger in rural areas. We found that the rural-entrepreneurs discuss their business matters with relatives more than the entrepreneurs in urban areas do. However, when we defined discussion with relatives we omitted very close family members if they were partners of their business. In most cases, the close family members are also a part of the businesses. Future research should be conducted in this direction. Cultural variables should be included into the overall model. It is also important to study how the other enterprise- and entrepreneur-related factors such as gender, education, firms’ location etc. separately influence on each of the network formation elements.

Finally, we found that there are some significant relationships between the network formation elements and the enterprise-and entrepreneur-related factors, though they are not very strong relationships. The results show that educated entrepreneurs are more likely to attend seminars and trade fairs, join professional and other societies, and contact other entrepreneurs, while they are less likely to discuss their business matters with relatives and friends. Meanwhile, female entrepreneurs discuss their business matters with relatives and friends more than their male counterparts. By contrast, compared to female owners, male counter-partners are looking for more external consultants, attending more seminars and

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Village, \(^{172}\) women in this village produce tea boxes and other ornamental items for the export markets. But they do not have direct foreign orders. The orders come through ‘Dambadeniya Export Village (pvt.) Company.’ \(^{173}\) Therefore these are such types of subcontract activities.

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\(^{172}\) The export production village program was started by the Export Development Board (EDB) in 1981 with the purpose of linking rural small-scale producers with export market. Dambadeniya Export Production Village is the first established village under this program. The intermediate operational unit of the export production village is a company that supplies products to established exporters. The EDB links the company with exporters. Shares in the company are purchased by the villagers and the EDB.

\(^{173}\) Refer footnote 7.
The male entrepreneurs also have more contacts with other entrepreneurs. As pointed out above, the impact of these factors on network formation should be examined in details. Such studies would deepen our understanding of entrepreneurial network relationships.

**Conclusion**

In conclusion, this chapter analyzed the impact of network formation on the growth of small enterprises in Sri Lanka. We found that network formation is an essential aspect of small business development. Networking, therefore, becomes an important element in the growth of small enterprises. However, networking is time-consuming, experience-based, and does not evolve over night. Therefore, the policy makers, small entrepreneurs, donors and others, who deal with the development of small enterprises in developing countries, can use the network formation approach apart from their traditional supporting approach. For instance, supporting institutions should organize network activities for small businesses. Small business owners should also realize the importance of constructing networks. However, there are few empirical studies available in this area particularly in less developed countries. Therefore, further research is necessary in this direction. Researchers should also deeply consider enterprise- and entrepreneur-related factors when studying networking and small businesses.
Partial Correlations Matrix

(Variables: MEM = Membership, DR = Family and Relatives, FRI = Friends, EXCON = external consultants, SEM = Seminars, TF = Trade Fairs, CE = Contacts with other Entrepreneurs.)

<table>
<thead>
<tr>
<th></th>
<th>MEM</th>
<th>DR</th>
<th>FRI</th>
<th>EXCON</th>
<th>SEM</th>
<th>TF</th>
<th>CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.065</td>
<td>.046</td>
<td>-.137**</td>
<td>-.070*</td>
<td>.155*</td>
<td>.007</td>
<td>.079</td>
</tr>
<tr>
<td>Birth Place</td>
<td>.106***</td>
<td>-.121**</td>
<td>.026</td>
<td>-.089</td>
<td>-.027</td>
<td>-.027</td>
<td>.062</td>
</tr>
<tr>
<td>Education</td>
<td>.134**</td>
<td>-.105***</td>
<td>-.101***</td>
<td>.045</td>
<td>.123**</td>
<td>.130**</td>
<td>.137**</td>
</tr>
<tr>
<td>Family business</td>
<td>-.083</td>
<td>-.063</td>
<td>-.116**</td>
<td>.027</td>
<td>.063</td>
<td>.019</td>
<td></td>
</tr>
<tr>
<td>Pre-training</td>
<td>.069</td>
<td>.115**</td>
<td>-.088</td>
<td>-.010</td>
<td>.127**</td>
<td>.020</td>
<td>-.065</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>.059</td>
<td>-.063</td>
<td>-.074</td>
<td>.047</td>
<td>.085</td>
<td>-.010</td>
<td>.037</td>
</tr>
<tr>
<td>Service</td>
<td>.021</td>
<td>-.133**</td>
<td>.013</td>
<td>.114**</td>
<td>.145**</td>
<td>-.133**</td>
<td>.044</td>
</tr>
<tr>
<td>Size &lt; 3</td>
<td>-.092</td>
<td>.120**</td>
<td>.010</td>
<td>-.113**</td>
<td>-.207*</td>
<td>-.063</td>
<td>-.253*</td>
</tr>
<tr>
<td>Size 4-25</td>
<td>.105***</td>
<td>-.083</td>
<td>-.034</td>
<td>.117**</td>
<td>.231*</td>
<td>.063</td>
<td>.166*</td>
</tr>
<tr>
<td>Firm’s location</td>
<td>.040</td>
<td>-.158*</td>
<td>-.243*</td>
<td>.134**</td>
<td>.117**</td>
<td>.171*</td>
<td>.078</td>
</tr>
<tr>
<td>Work experience</td>
<td>.042</td>
<td>-.013</td>
<td>.003</td>
<td>.056</td>
<td>.184*</td>
<td>.070</td>
<td>.092</td>
</tr>
<tr>
<td>Gender</td>
<td>.041</td>
<td>-.162*</td>
<td>-.253*</td>
<td>.116**</td>
<td>.178*</td>
<td>.095**</td>
<td>.101***</td>
</tr>
<tr>
<td>Family workers</td>
<td>-.046</td>
<td>.104***</td>
<td>-.074</td>
<td>.078</td>
<td>-.004</td>
<td>.035</td>
<td>-.014</td>
</tr>
<tr>
<td></td>
<td>.424</td>
<td>(.071)</td>
<td>(.197)</td>
<td>(.176)</td>
<td>(.952)</td>
<td>(.545)</td>
<td>(.811)</td>
</tr>
</tbody>
</table>

* For control variables see the list of variable (section 5.2.7.2)

Note: p-values (two-tailed significance) are in parentheses. N = 285

*p-value < 0.01
**p-value < 0.05
***p-value < 0.10

Contact with other entrepreneurs (CE) has four categories: 0 = no contact (41.3 per cent); 1 = only Regional contact (38.3 per cent); 2 = Regional National Contact (6.3 per cent); and 3 = only national (14.2 per cent)
Chapter Seven

Network Evaluation of Small Business Enterprises

7.1. Introduction

As noted in chapters 3 and 4 of this book, the concept of entrepreneurship cannot be discussed in isolation, particularly in small businesses. In order to function, a firm needs resources, most of which have to be acquired from third parties because a firm itself does not have all the necessary resources fully at its disposal (Anderson et al. 1994, Duijnhouwer 1994). Firms have therefore to enter into relationships with the outsiders. In other words, these outsiders are called external actors. Apart from a firm’s internal relations, its growth is dependent on its external relations as well. These external relations and their roles change over time. How do small firms deal with these external actors? Does each actor play similar roles in each phase of a firm? These are interesting questions not only for researchers and entrepreneurs, but also for policy makers.

Having said that, the purpose of this chapter is to evaluate the importance of different network actors in the different phases of a firm. The Entrepreneurial network evaluation model presented by Butler and Hansen (1991) is used for the analysis.

The remainder of the chapter is organized as follows. The next section of this chapter (section 7.2) presents the network evaluation model, which intends to examine the entrepreneurial networks in each phase of a small business. Then section 7.3 describes the research methodology including data, variables, and measurements. It is followed by the analysis of results (section 7.4), and finally (section 7.5) the discussion (7.5.1) and conclusions (7.5.2) are presented. In this chapter, we only discuss the network of actors.

7.2. Network Evaluation Model

The argument of the network evaluation model is that different types of network relationships are needed in the different phases of a firm's development. In the early stage, that is, the entrepreneurial phase, social network relationships are predominant. Then, in the start-up stage, business-focused network relationships become dominant. Finally, in the on-going

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175 Both external and internal actors are important to an organization. This study is concerned only with external relations of small enterprise owners. A number of studies (see Boyd 1990, Butler and Hansen 1991, Donckels and Lambrecht 1995, 1996, 1997, Johnston 2000) have identified the role and impact of the external relations on success of small enterprises.

176 The study was carried out in Washington. Interviews were conducted with the founding entrepreneur of 29 wineries. (Butler J. and Hansen, G. S, (1991), ‘Network Evolution, Entrepreneurial Success, and Regional Development’, Entrepreneurship and Regional Development, Vol.3, pp.1-16).
Chapter Seven: Network Evaluation of Small Business Enterprises

In the entrepreneurial phase, the firm needs inter-organizational strategic networks. Butler and Hansen (1991) introduced three stages of network development: social network, business-focused network and strategic network. They suggest that, at the entrepreneurial phase of a business, the social network provides ideas for the entrepreneur. The business-focused networks then develop gradually and are influenced by the nature of the entrepreneur’s social network (Brown et al. 1990, Butler and Hansen 1991, Chu 1996, Larson and Starr 1993, Jansson et al. 1995). Their model further emphasizes that once a firm is already established, inter-organizational strategic network ties become necessary. Inter-organizational strategic networks not only reduce the firm’s risk of failure but also provide advantages that are not obtainable as an isolated entity. Therefore, in the on-going phase, inter-organizational networks are predominant.

A number of recent studies have supported the argument. Most of them identify the impact of social networks as highly significant for the tendency of an individual to become an entrepreneur. For example, Aldrich et al. (1987) studied the impact of social networks on business formation in North Carolina. They concluded that social interaction was an important contributor to both business founding and profit of a newly founded business. At the same time, Rush et al. (1987) also discussed the importance of social networks in the enterprise formation process. According to Brown and Butler (1993) and Butler and Hansen (1991), the entrepreneur’s social network is like an opportunity set. An individual’s social network can therefore have an impact on the decision to start a business (Aldrich, Recse and Dubini 1989, Aldrich and Zimmer 1986, Chu 1996, Johannisson 1986, 1987b, 1990a, Johannisson and Nowicki 1992, Larson and Starr 1993, Oliver 1988, Oliver and Liebeskind 1998, Steier and Greenwood 2000), but an inter-organizational strategic network is needed for the on-going success of a firm (Borg 1991, Butler and Hansen 1989, Foss 1999, Fournier et al. 1992, Humphrey and Schmitz 1996, Jarillo 1988, You 1995). For example, Butler and Hansen (1991) and others (Birley 1985, Brown et al. 1990, Greve 1995) pointed out that both broad social and inter-firm strategic networks provide successful start-up and continuing competitive advantage. Bryson et al. (1993) realized that small business service firms in the U.K were able to compete successfully with large firms through using personal and other business networks. Ozcan (1995) found social networks were important for successful small businesses. Donckels and Lambrecht (1995) also show a positive relationship between networks formations and small business growth. In addition, there are a number of studies (for example, Ferland et al. 1996, Lipparini and Sobrero 1997, Pyke et al. 1990, Rabellotti 1995a, 1995b, Sydow 1992, 1996) on successful small enterprises networks in Italy and Germany.

In brief, the idea is that the nature of the networks differs in each phase of a firm. In addition, the role and impact of the networks also differ because firms face different problems in different phases (Olson 1987, Terpstra and Olson 1993), and in each phase a firm will have different demands and different resource requirements (Butler and Hansen 1991, King and
Entrepreneurial Networks and Small Business Development

Solomon 1995, Mount et al. 1993). On this basis, it is possible to conceptualize the main ideas discussed in this chapter with the help of the following model (Figure 7.1), which was presented by Butler and Hansen in 1991.

### Figure 7.1
**Model of Network Evaluation**

![Network Evaluation Model Diagram](image)

Sources: Butler and Hansen 1991: 3

### 7.2.1. Three Phases of Entrepreneurship and Networks

We, as others do (Bridge et al. 1998, Butler and Hansen 1991, Capaldo 1997, Chu 1996, Greve 1995, Larson and Starr 1993, Wilken 1979), suggest that a business be divided into three phases: (1) opportunity identification or idea development phase, (2) business start-up phase, and (3) ongoing business phase. During these three phases, networks are used for different purposes because, as mentioned above, the different phases may need different resources. It is possible to identify three different types of networks on the basis of the way resources are provided. In the literature, three different types of network relations are shown to run parallel to the three phases of entrepreneurship (Brown et al. 1990, Butler and Hansen 1991, Chu 1996, Greve 1995). They are social networks, business-focused networks, and inter-organizational networks respectively.

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177 However, there are different classifications in the literature as well. For example, Bridge et al. (1998): pre-start, start-up, growth, static, and termination. Hank et al. (1993) lifecycle model includes four stages: start-up, growth, maturity, and diversification. Johannisson and Nilsson (1989) the different phases of a business venture: idea generation, start-up, growth, maturity, decline/reconstruction. Scott and Bruce (1987) five-stage model: inception, survival, growth, expansion, and maturity.
Chapter Seven: Network Evaluation of Small Business Enterprises

### Table 7.1

<table>
<thead>
<tr>
<th>(1) Entrepreneurial Phase</th>
<th>Social Networks</th>
<th>Process of Opportunity Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Business Start-up Phase</td>
<td>Business-focused Networks</td>
<td>Business Formation</td>
</tr>
<tr>
<td>(3) On-going Business Phase</td>
<td>Strategic Networks</td>
<td>Linkage Firm to other Organizations</td>
</tr>
</tbody>
</table>

#### 7.2.1.1. Entrepreneurial Phase and Social Network

The first phase of *entrepreneurship* is when a person who may have some ideas about her/his business is motivated to start a business but has not yet started to undertake any practical action to set up a business. The characteristics of the situation must be seen as *opportunity conditions* for entrepreneurship (Butler and Hansen 1991, Gibb and Ritchie 1982). During this period the business idea is developed, and social support is sought (Bridge *et al.* 1998, Butler and Hansen 1991, Larson and Starr 1993). In other words, the opportunity identification is the initial stage of a business (Butler and Hansen 1991, Larson and Starr 1993). This is mainly done through discussions with other people such as family members, friends and acquaintances (Butler and Hansen 1991, Chu 1996, Birley and Cromie 1988, Johannisson 1986). These relationships have been identified as social networks (Aldrich and Whetten 1981, Aldrich and Zimmer 1986, Aldrich *et al.* 1986, 1987, Brown and Butler 1993, Butler and Hansen 1991, Chu 1996, Greve 1995).

In this phase, the social network is important because it is through the network that entrepreneurial opportunities are communicated. The social network provides information, sponsorship and support, credibility, control, resources and business. The entrepreneur’s social network is therefore like an *opportunity set*, which helps entrepreneurs to access both intangible information and tangible resources (Chu 1996, Falemo 1989, Larson and Starr 1993). The opportunity identification, or *opportunity set* is more likely to be developed through social networks (Butler and Hansen 1991, Brown and Butler 1993, Chu 1996, Huck *et al.* 1999). In addition, the network also strongly influences the decision process for potential entrepreneurs. A social network is, therefore, extremely important in the pre-start-up stage.

highlight the fact that rich networking skills significantly ease the process of starting a new business. Brown and Butler (1993) also argue that individuals who are centrally located in well-developed social networks are more likely to become aware of available entrepreneurial opportunities than those who have poorly developed social networks. Falemo’s (1989) opinion is that a person with a high need to achieve takes every opportunity to build up and develop his network. Falemo (1989), in the same article, further suggests that the business-oriented managers have a high degree of network orientation. Larson and Starr (1993) highlight the fact that these social relations have instrumental and economic potential and provide access to essential resources for new entrepreneurs. Shaw (1991) found that these networks had a role in the diffusion of knowledge. Aldrich et al. (1987), Brown and Butler (1993), and Rush et al. (1987) also found that a social network is important in both founding a business and in the profits of a newly established business. Further, Johannisson (1991) found and also suggested that a social network was an important part of a nation’s economic development strategy particularly when those strategies included encouraging Entrepreneurship. Others (Aldrich and Zimmer 1986, Baines and Wheelock 1998, Bridge et al. 1998, Brown and Butler 1993, Chu 1996, Deeks 1976, Goodman 1989, Huck et al. 1999, Johannisson 1988, 1989, Johnston 2000, MaCrae 1995, Steier and Greenwood 2000, Vesper 1980) have demonstrated the importance of personal networks for the creation and development of an entrepreneurial firm. Therefore, this study also expects:

Hypothesis: The entrepreneurial social network is more likely to be important at the initial stage or at the opportunity identification phase. (7.1a)

7. 2.1.2. Business Start-up Phase and Business-Focused Networks

The second phase means that entrepreneurs start planning the business in detail, which includes working on financing the business, setting up business deals and agreements, etc (Bridge et al. 1998, Gibb and Ritchie 1982). In this phase, start-up tasks such as finding initial capital, selecting supplier and buyers must be completed. The boundary between the first and the second phase is relatively unclear. However, Greve (1995) identifies the first phase as a ‘motivation phase’ where the entrepreneur is thinking of starting a business. The start-up phase is defined as a time when practical steps are taken to start a business. At the start-up stage, entrepreneurs face the problems of obtaining initial

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178 The study on networking patterns of potential entrepreneurs was conducted by Quadrangle Consulting Ltd for Scottish Enterprise National, the state funded economic development agency in 1992. The report has strongly underlined the influences of networking on the decision process for potential entrepreneurs, and also the significant impact of networking on the business start up process (see Hand and Tomblin 1993).

179 According to Vesper (1980), five key elements are needed to build a new firm.

1. Acquire technical know-how.
2. Crystallize the venture idea to capitalize on past know-how.
3. Develop personal contacts.
4. Obtain manpower and physical resources.
5. Obtain customer orders.

Although the firm could find funds from some funding programs, the most important source is personal capital, which could be collected from family members and friends (Bridge et al. 1998, Cadene 1998a, Grabher 1993b, Ozcan 1995, Huck et al. 1999, Lai 2001, Lakshman et al. 1994a, Lakshman et al. 1994b, Uzzi 1999). However, Butler and Hansen (1993) suggest that a more business-focused network begins to emerge during the start-up phase. This business-focused network, which is needed for the initial success of a firm, should reflect links to individuals and organizations that directly serve the more immediate needs of the new business. Birley and Cromie (1988) identify this network as ‘professional network’. The business-focused network, according to Birley and Cromie (1988), therefore includes both individuals who are in the pre-existing social network, and new individuals and organizations (Birley and Cromie 1988).

At this stage, business-oriented ties are more important. However, the thrust of network theory is that the information needed to start a business passed to the entrepreneur through an existing social network of friends (Aldrich and Zimmer 1986, Butler and Hansen 1991, Chu 1996, Johannisson 1986, 1988, Johannisson and Nilsson 1989, Özcan 1995). Recent studies (Aldrich et al. 1987, Bridge et al. 1998, Butler and Hansen 1991, Chu 1996, Greve 1995, Johannisson 1987b, 1988, Özcan 1995) show that the impact of social networks on the likelihood of an individual becoming an entrepreneur is highly significant. For example, Huck et al. (1999) found that apart from personal savings, informal financing is the second most important source of funding. Goodman (1989), in examining the Italian industrial districts, also stated that start-up capital is usually obtained within the family before the entrepreneur goes to local banks. Özcan (1995), in his analysis of small business in Turkey in 1995, found that families and friends, as a part of social network, support the development of small firms in various ways: by influencing the entrepreneurs’ choice of business, as a source of employment, and as a source of initial capital (Özcan 1995). In his words:

“Besides personal sources, entrepreneurs get capital from their family members, relatives and friends. Very few entrepreneurs used bank credits during early establishment” (Özcan 1995: 276)


180 This network is similar to the professional network, which was identified by Birley and Cromie (1988).

181 The professional network, according to Birley and Cromie (1988), includes all those individuals or organizations such as banks, accountants, lawyers with whom the entrepreneur has a relationship primarily concerned with his business. According to Birley and Cromie (1988), professional network fall into formal network category and social network into informal network category.
The entrepreneur therefore is forced to move into business-focused networks as the entrepreneur is seeking business advice and assistance such as initial capital, legal help, etc. Hence, we expect that:

Hypothesis: \textit{The business-focused network is more important in the second phase of a firm.} (7.1b)

7. 2.1.3. On-Going Business Phase and Strategic Networks

The third phase is entered when the business starts its operation. This is the final stage of the network evaluation model (Butler and Hansen 1991). During this phase, firms not only seek raw material, markets and various other supports, but also try to minimize risks and transaction costs. In addition, in this phase, the entrepreneurs face various kinds of problems such as bureaucratic (Bridge \textit{et al.} 1998, Capaldo 1997), financial, and technical. Therefore, firms develop inter-organizational networks known as the strategic networks.\footnote{Strategic networks are multiple linkages across firms and co-operations and long-term commitments among them (Jarillo 1988, Johanson and Mattsson 1987, Thorelli 1986). Others (Aldrich and Zimmer 1986, Borch and Huse 1993, Borch and Arthur 1995, Ebers 1997, Thorelli 1986) define strategic networks as investments in co-operative relations among firms in order to exchange or share information or resources.}

Firms link up with other firms and supporting institutions because the inter-organizational networks provide the required business information, technical advice, and financial and physical resources. In general, these types of inter-organizational links occur since firms (especially small firms) consider their counterparts as allies rather than as competitors. Generally, firms link themselves (formal agreement or informal relations) without government intervention. Sometimes a government has taken formal steps to facilitate this process by establishing industrial support agencies and/or developing industrial estates or parks.\footnote{Industrial districts (Italy and Germany) are a very popular example of small firm networks. For example, the typical Italian industrial district is a small geographic area with around 1000 to 3000 firms with fewer than 20 employees (Brusco 1990). Although some of these districts in Italy and Germany developed without government intervention, others obtained government assistance in services like market information, new technology. Industrial Estates in Sri Lanka are conceptually similar to these Italian industrial districts. Sri Lankan government provides various supporting services for these estates.}

As we have mentioned, once the start-up phase is completed, the needs of the firms become more and more complex, and then different types of networks are needed (Butler and Hansen 1991, Birley and Cromie 1988, Chu 1996, Falemo 1989). Firms continuing in business develop information linkages with their stakeholders, which include downstream channel members, government agencies/agents, NGOs (especially in LDCs) and suppliers. Then

\textsuperscript{182} Strategic networks are multiple linkages across firms and co-operations and long-term commitments among them (Jarillo 1988, Johanson and Mattsson 1987, Thorelli 1986). Others (Aldrich and Zimmer 1986, Borch and Huse 1993, Borch and Arthur 1995, Ebers 1997, Thorelli 1986) define strategic networks as investments in co-operative relations among firms in order to exchange or share information or resources.

\textsuperscript{183} Industrial districts (Italy and Germany) are a very popular example of small firm networks. For example, the typical Italian industrial district is a small geographic area with around 1000 to 3000 firms with fewer than 20 employees (Brusco 1990). Although some of these districts in Italy and Germany developed without government intervention, others obtained government assistance in services like market information, new technology. Industrial Estates in Sri Lanka are conceptually similar to these Italian industrial districts. Sri Lankan government provides various supporting services for these estates.

This thesis discusses the importance of entrepreneurial networks for small firms in general, which means that firms are within industrial estates and outside.
firms try to expand their networks not only with stakeholders but also competitors. In the on-going phase, in some cases firms link with their competitors (D'Cruz and Rugman 1992, Duijnhouwer 1994), some firms link with a larger firm (Friedman 1988, Piore and Sabel 1984, Rosenfeld 1991, 1996), for sub-contracting and some technical assistance purposes (for example, Hill 1982, Hovi 1994, Voeten 1993). In particular, small firms also link with supporting actors (Bridge et al. 1998, Bryson et al. 1993, Curran et al. 1992). On the whole, in this phase, links with other organizations become more important for small business enterprises because, as stated above, firms, in this phase, attempt to reduce the risk of failure and also try to provide advantages not obtainable in isolation. Accordingly, we posit that;

Hypothesis: *Inter-organizational network is more likely to be important for an on-going business.*

(7.1c)

Figure 7.2
Dynamic Nature of Entrepreneurial Networks

To sum-up, the entrepreneurial network literature (Aldrich and Zimmer 1986, Aldrich, Rosen and Woodward 1987, Burt 1992, Hansen 1995, Johannisson 1986, 1988, 1995a, Nohria 1992) reports that the size of social networks is positively related to new establishments and initial performance. Furthermore, the size of inter-organizational strategic network is positively related to ongoing business performances. Butler and Hansen (1991) and others (Birley 1985, Brown and Butler 1993, Greve 1995, Jansson et al. 1995) suggest that both social and inter-organizational networks successful assist at the start-up and continuation of businesses. Likewise, Brown and Butler (1993) suggest that networks provide entrepreneurs with the types of information necessary, first to identify entrepreneurial opportunities that warrant founding a business, and secondly, to ensure the success of that business (Brown and Butler 1993: 114)

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184 While the stakeholders networks is rather importance for small firms in LDCs (Van Dijk, 1996), competitor networks is hardly developed among small firms in LDCs.
In the light of what has been discussed above, finally the study further posits the Hypothesis that: *Both broad social and inter-organizational strategic networks are important to successful start-up and on-going firms, but the expansion of the inter-organizational network is faster than that of the social network.* (7.2)

### 7. 3. **Methodology and Data**

#### 7.3.1. Sample and Data

As already noted, the population of this study is the small business enterprise in Sri Lanka. The definition of a small business enterprise used in this study (business enterprises with less than 50 employees) is based on the definitions used by various departments and organizations in Sri Lanka (see chapter 2). This study cannot rely solely on the sample information provided by DCS because the study’s concern is with three phases of Entrepreneurship (opportunity identification, start-up and on-going phases). Since the study needs different types of information about small business entrepreneurs, a separate field survey was conducted. Chapter 5 (methodology chapter) of this thesis has already discussed the general details on the sample and data.

#### 7. 3. 2. 1. Regression Analysis

The hypotheses can also be tested through multiple regression analysis. We start our regression analysis selecting only one explanatory variable, which is the lifetime (or longevity) of a firm, because the study is interested in testing the relationship between the firm’s lifetime and network densities\(^{185}\) (negative relationship with Entrepreneurial Social Network Density (ESND), and positive relationship with Entrepreneurial Organizational Network Density (EOND)). Then we analyze the same hypotheses by adding some entrepreneur-related and enterprise-related variables. Selected explanatory variables are described in section 5.2.7.2, chapter 5 (Table 5.1). The correlation matrix of these variables is in the Appendix 7B. In addition, appendix 7A displays some general characteristics of the sample.

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\(^{185}\) See chapter 5 for further information about the methodology including, the research design, sample survey, basic characteristics of the sample, and the measurement of variables.

\(^{186}\) Section 5.2.7.2 in chapter 5 presents how to measure network density.
7. 3.2.2. Explanatory Variables

Both entrepreneur-related and enterprise-related factors have to be considered as explanatory variables because both types of variables have impacts on networks. However, the selection of these variables is not an arbitrary choice. Others (Donckels and Lambrecht 1996, 1997, Sarder, Ghosh and Rose 1997) have used these variables for network analyses (see section 5.2.7.2, chapter 5).

7.3.2.3. Dependent variables

Two network measures are used as dependent variables; entrepreneurial network size (ESNS and EONS), and network density; namely, social network density (ESND) and inter-organizational network density (EOND). Both network densities are calculated for each phase of a firm as well as for overall, while entrepreneurial network size has been calculated only for overall life span of a firm. These measures were chosen because of their prominence in the network literature (Burt 1987, Greve 1995, Oliver 1988, Thoits 1982, Wellman and Gulia 1993, Wellman, and Weswood 1988), although the previous studies have not used regression analysis as an analytical tool.

7. 4. Results

The results displayed in Table 7.2 show that in the first phase of a firm (hypothesis 7.1a), while 46.6 per cent of entrepreneurs obtain support from a social network, only 11.7 per cent maintains contacts with a formal network. More specifically, 75.9 per cent of entrepreneurs keep contact with their relatives. If we take the highest numbers from formal network, 23.8 per cent of entrepreneurs say that government agents or agencies are important in this phase. Accordingly, these results suggest that social networks are more important network actors during the entrepreneurial phase of a small firm.

187 Entrepreneurial Social Network Size (ESNS) and Entrepreneurial Organizational Network Size (EONS). Network size was obtained by asking respondents to estimate the number of people/organization with whom they dealt with business activities such as discussions their plans for running business. (see section 7.2.7.2, in chapter 5)

188 Inter-organizational network includes support network as well as inter-firm network.
Table 7.2

Network Involvement (percentage as involved in networking)

<table>
<thead>
<tr>
<th>Network Actors</th>
<th>1st Phase</th>
<th>2nd Phase</th>
<th>3rd Phase</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relatives</td>
<td>75.9</td>
<td>86.5</td>
<td>83.8</td>
<td>93.4</td>
</tr>
<tr>
<td>2. Friends</td>
<td>41.9</td>
<td>37.0</td>
<td>58.4</td>
<td>75.2</td>
</tr>
<tr>
<td>3. Acquaintances</td>
<td>22.1</td>
<td>14.9</td>
<td>26.4</td>
<td>36.3</td>
</tr>
<tr>
<td>4. Large Firms (LSEs)</td>
<td>5.6</td>
<td>5.3</td>
<td>33.0</td>
<td>39.3</td>
</tr>
<tr>
<td>5. Small Firms (SSEs)</td>
<td>9.2</td>
<td>9.2</td>
<td>71.0</td>
<td>79.5</td>
</tr>
<tr>
<td>6. Government Agent/institutes</td>
<td>23.8</td>
<td>21.5</td>
<td>34.0</td>
<td>44.2</td>
</tr>
<tr>
<td>7. NGOs</td>
<td>17.5</td>
<td>17.2</td>
<td>26.4</td>
<td>24.1</td>
</tr>
<tr>
<td>8. Banks/Financing Institute</td>
<td>2.6</td>
<td>31.7</td>
<td>58.4</td>
<td>64.7</td>
</tr>
</tbody>
</table>

Social Networks
Organizational Networks
Overall (Linkage with any Actors)

The business-focused network is more important at the next stage of a firm (hypothesis 7.1b), the business start-up phase. As Table 7.2 shows, the social network is rather less important in this phase; 46.1 per cent of small-scale entrepreneurs uses social network. However, the importance of formal networks is greater than that in the first phase; 17 per cent of entrepreneurs are formal network or organizational network actors. In the first phase this was 11.7 per cent. This indicates that the formal network becomes important when a firm starts its operations. These findings are presented graphically in Figure 7.3.

(Figure 7.3) Importance of Network in Each Stage

Meanwhile, social network actors are still more important than the formal/organizational network actors. The sources of initial capital as a network link provides the answer (see Table 7.3 and Figure 7.4).
Initial capital is the most important resource for an entrepreneur during the initial stage of business operation (Birley 1985, Bridge et al. 1998, ILO 1995, Lakshman et al. 1994a, Ozcan 1995, Steier and Greenwood 2000). The major source of initial capital is own finance. The second channel is family network. While 76.6 per cent of small business owners use their own fund, 52.8 per cent of entrepreneurs' financial channel are their relatives (mostly close family members). These results are shown in Table 7.3. This is one of the reasons why 86.5 per cent of small entrepreneurs (the highest number) keeps contact with relatives during the initial stage of a firm. In addition, table 7.2 shows that 31.7 per cent of entrepreneurs also engages with bankers at this stage of the firm's development. This is true because 27.4 per cent of small business owners get their initial capital from banks (Table 7.3). A comparison of initial capital is given in Figure 7.4.

### Table 7.3

<table>
<thead>
<tr>
<th>Financial Source</th>
<th>Overall</th>
<th>1st Choice</th>
<th>2nd Choice</th>
<th>3rd Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Own finance</td>
<td>76.6%</td>
<td>59.1%</td>
<td>14.5%</td>
<td>3.0%</td>
</tr>
<tr>
<td>2. Family members</td>
<td>52.8%</td>
<td>11.9%</td>
<td>30.4%</td>
<td>10.6%</td>
</tr>
<tr>
<td>3. Other relatives</td>
<td>3.6%</td>
<td>0.3%</td>
<td>0.7%</td>
<td>2.6%</td>
</tr>
<tr>
<td>4. Friends</td>
<td>16.5%</td>
<td>2%</td>
<td>7.3%</td>
<td>7.3%</td>
</tr>
<tr>
<td>5. Banks</td>
<td>27.4%</td>
<td>12.2%</td>
<td>10.6%</td>
<td>4.6%</td>
</tr>
<tr>
<td>6. Private firms</td>
<td>2.6%</td>
<td>1.0%</td>
<td>0.7%</td>
<td>1.0%</td>
</tr>
<tr>
<td>7. NGOs</td>
<td>2.6%</td>
<td>1.3%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td>8. Individual money lenders (IML)</td>
<td>9.2%</td>
<td>0.7%</td>
<td>3.0%</td>
<td>5.6%</td>
</tr>
<tr>
<td>9. Others</td>
<td>1.0%</td>
<td>0.7%</td>
<td>0.3%</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Respondents were asked to rank the importance of initial capital sources. The choices are presented in terms of their ranks.*

### (Figure 7.4) Sources of Initial Capital

Interestingly, the study found a very few women-entrepreneurs received capital from bank source (only 5 percent of women-entrepreneurs). Most of the women-entrepreneurs receive initial capital and other financial helps from relatives and friends. Women-owners rely
more heavily on informal and personal sources of financing such as their savings, loans from relatives and friends. This findings are consistent with the connections of Coleman (2000), Coleman and Carsky (1996, 1997), and the National Foundation of Women Business Owners (1996). At least three different theories have been put forth to explain why women owners may have greater difficulty obtaining capital from formal sources than men. First, some researchers argue that women are more risk averse than men and thus less likely to take on debt (Chaganti 1986, Collerett and Aubry 1990, and Scherr, Sugrue, and Ward 1993). Second, some contend that women-owned enterprises use less capital than men counterparts (Kallenberg and Leicht 1991, and Loscocco and Robinson 1991). According to this theory, since women-owned enterprises are small, they may be able to finance their needs using personal resources and other informal resources. Others argue that there may be adverse discrimination in the lending process that places women at an unfair disadvantage (Brush 1992, Riding and Swift 1990 and Scherr, Sugrue, and Ward 1993).

Table 7.4

<table>
<thead>
<tr>
<th>Source Of Initial Capital</th>
<th>FAMILY NETWORKS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Family Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81.3%</td>
<td>18.8%</td>
</tr>
<tr>
<td>% within family members</td>
<td>56.5%</td>
<td>41.1%</td>
</tr>
<tr>
<td>% with family networks</td>
<td>42.9%</td>
<td>9.9%</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>69.9%</td>
<td>30.1%</td>
</tr>
<tr>
<td>% within family members</td>
<td>43.5%</td>
<td>58.9%</td>
</tr>
<tr>
<td>% with family networks</td>
<td>33.0%</td>
<td>14.2%</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>75.9%</td>
<td>24.1%</td>
</tr>
<tr>
<td>% within family members</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>% with family networks</td>
<td>75.9%</td>
<td>24.1%</td>
</tr>
<tr>
<td>% of total</td>
<td>86.7%</td>
<td>13.3%</td>
</tr>
<tr>
<td>% within banks</td>
<td>31.3%</td>
<td>15.1%</td>
</tr>
<tr>
<td>% with family networks</td>
<td>23.8%</td>
<td>3.6%</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>71.8%</td>
<td>28.2%</td>
</tr>
<tr>
<td>% within banks</td>
<td>68.7%</td>
<td>84.9%</td>
</tr>
<tr>
<td>% with family networks</td>
<td>52.1%</td>
<td>20.5%</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>75.9%</td>
<td>24.1%</td>
</tr>
<tr>
<td>% within banks</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>% with family networks</td>
<td>75.9%</td>
<td>24.1%</td>
</tr>
<tr>
<td>% of total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Furthermore, table 7.4 (probability table) shows that the probability of seeking initial finance from family members, $P(\text{Family Networks})$, is 0.52 and where initial finance is sought from family members, the probability of the entrepreneur engaging in family networks, $P(\text{Family Networks} \mid \text{Initial Capital from family Members})$, is 0.81. On the other hand, if an entrepreneur is involved in family networks, the probability that he or she
is looking for initial capital from the family networks is 0.57. Family network is therefore very important during the business start-up stage.

_Hypothesis 7.1c_ predicted that the inter-organizational network was more likely to be important for the on-going phase of a firm or the third stage of a firm. Table 7.2 shows the importance of each network at this stage. As Table 7.2 and Figure 7.3 display, however, family members are still the most popular network actors among the small business entrepreneurs in Sri Lanka. 83.8 per cent of entrepreneurs have business relations with their family members one way or another. The second vital network actors are Small Scale Enterprises (SSEs). Their importance is 71 per cent.

(Figure 7.5) Spiderweb Chart of Enterprises Networking

There is higher inter-organizational network involvement in the on-going phase when compared with the network involvement in other two phases. For example, bank-network, which is a member of the inter-organizational network, is important for only 2.6 per cent of entrepreneurs at the first stage of a firm. In the second phase, the network is important for 31.7 per cent of entrepreneurs. However, it is reported that 71.0 per cent of entrepreneurs are involved in bank networks during the on-going stage. Furthermore, only 9.2 per cent of respondents say that the other small firms are important in the first and the second phases. But in the on-going phase, it is evident that 71.0 per cent of entrepreneurs involves in any kinds of business matters with the other small firms. However, Figure 7.5 shows that family network is the most important network for small firms.
Network Density

Density measures can also show the network involvement in the different phase of a firm. The study calculated two levels of density for two types of networks. The first one is called the density of social networks (SND) for social network actors. As mentioned elsewhere, these are informal actors. The other one, for formal actors, is organizational network density (OND). In addition to that, the study also calculated network densities for each phase of a firm. The network densities are displayed in Table 7.5.

Although the social network densities are more or less similar at each stage of a firm, the organizational network densities increase gradually with firms’ level of maturity. For example, at the entrepreneurial stage, OND is 0.08, while SND is rather higher 0.35. In the on-going phase, an OND is 0.31.

In the ongoing phase, firms try to form links with other firms and organizations. Those links would be either horizontal-vertical or buyer-seller linkages. On the other hand, particularly small firms link with other institutions, especially government institutions, for supporting purposes. Sometimes, as industrial network literature points out, firms link with larger firms for subcontracting and technical assistance. Table 7.5 shows that OND at the ongoing stage is 0.31, which is the highest average organizational network density. The average OND was 0.12 during the start-up phase of a firm. This confirmed our hypothesis that the inter-organizational network is more important for on-going business.
Figure 7.6 displays average densities of social networks and inter-organizational networks with firms' lifetimes (hypothesis 7.2). Up to the group year nine to ten, the average social network density is higher than the average inter-organizational density, and both densities increase with firms' age. However, in comparison with inter-organizational network density, the average social network density increases very slowly over the time. The slope of the line that represents the average SND is almost flat, making SND less responsive to firms' lifetimes. It is also evident that the social network density declines after a firm reaches its age of about nine to ten years.

On the other hand, Figure 7.6 shows a decline in the inter-organizational network density at the early stages of a firm. Once firms’ life spans pass the initial stage, the inter-organizational network density increases at a rapid pace until firms reach the age of eleven to twenty years. Then gradually inter-organizational network density increases and overtakes the social network density when firms are getting older and older. However, when firms reach their maturity or the age of more than twenty, both network densities are steady, but at different levels.

**Regression Result**

While Figures 7.7 and 7.8 show relationships between network densities and firm's lifetime in the business, Figures 7.9 and 7.10 display the relationships between network densities and owner's working experience in the same business. These diagrams represent four regressions of network densities on working experience and the firm's lifetime. The study found that the cubic form gave a better fit to the data than the linear and quadratic forms.

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189 The figure does not display network density in entrepreneurial phase.
The results of these three forms of regression (linear, quadratic, and cubic) are presented in Table 7.6. The estimated results as displayed in Table 7.6 (A) support our hypothesis that there is a positive relationship between entrepreneurial inter-organizational networks and firm's lifetime. The overall models as well as individual coefficients are statistically significant differing from zero at the 1 per cent level of confidence. However, the explanatory power of these models ($R^2$) is too small.

Table 7.6 (B) shows the estimated regression results of entrepreneurial social network density (ESND) in a firm's lifetime. These estimates are statistically significant differing from zero even at the 5 per cent level either for the overall models or individual coefficients. Therefore, the study is unable to make a strong conclusion on our hypothesis on the results. However, our expected negative relationship has been confirmed by the results.
Table 7.6

**Regression Results: Networks on Firm's Lifetime (years)**

<table>
<thead>
<tr>
<th>(A) Dependent EOND</th>
<th>Independent: Firm's lifetime (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>R²</td>
</tr>
<tr>
<td>Linear</td>
<td>.099</td>
</tr>
<tr>
<td>Quadratic</td>
<td>.199</td>
</tr>
<tr>
<td>Cubic</td>
<td>.205</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(B) Dependent ESND</th>
<th>Independent: Firm's Lifetime (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>R²</td>
</tr>
<tr>
<td>Linear</td>
<td>.001</td>
</tr>
<tr>
<td>Quadratic</td>
<td>.006</td>
</tr>
<tr>
<td>Cubic</td>
<td>.007</td>
</tr>
</tbody>
</table>

Note: Significant P values are in parentheses. * Significant at 1%

How do these results change once new explanatory variables are inserted into the model?

To find out, the study now uses a more systematic statistical analysis to assess the relation between entrepreneurial networks and the firm's lifetime by adding control variables such as entrepreneur-related and enterprise-related factors. These entrepreneur-related and enterprise-related variables are included in the model to ensure that the potential moderating effects of those factors are minimized. For example, Hisrich and Peters (1989) suggest that entrepreneurial experience is one of the best predictors of success.

After introducing relevant entrepreneur-related and enterprise-related variables in the analysis, we estimated four different models to represent social networks and inter-organizational networks. We chose both network density and network size as dependent variables. Models 7.1 and 7.2 (in Table 7.7) are on network density: Entrepreneurial Social Network Density (ESND) and Entrepreneurial Organizational Network Density (EOND). Model 7.3 and 7.4 (in Table 7.7) present Entrepreneurial Social Network Size (ESNS) and Entrepreneurial Organizational Network Size (EONS) respectively. The results of multiple regression analysis are given in Table 7.7.
### Table 7.7

**Multiple Regression Analysis: Models for Network Density and Network Size**

<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>Dependent Variable</th>
<th>Model 7.1</th>
<th>Model 7.2</th>
<th>Model 7.3</th>
<th>Model 7.4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneur-related</strong></td>
<td></td>
<td>ESND</td>
<td>EOND</td>
<td>ESNS</td>
<td>EONS</td>
</tr>
<tr>
<td>Age (Year)</td>
<td></td>
<td>-0.002312 (-2.781)*</td>
<td>-0.00071 (-1.284)</td>
<td>-0.053185 (-4.123)*</td>
<td>-0.01411 (-1.241)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>-0.056741 (-2.389)**</td>
<td>-0.079628 (-5.04)*</td>
<td>-0.715098 (-1.94)**</td>
<td>0.011341 (0.355)</td>
</tr>
<tr>
<td>Birth Place</td>
<td></td>
<td>0.044939 (2.394)**</td>
<td>-0.001318 (-0.106)</td>
<td>0.634708 (2.179)**</td>
<td>0.303198 (1.181)</td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
<td>-0.040321 (-2.40)**</td>
<td>-0.010702 (-0.958)</td>
<td>-0.114728 (-0.440)</td>
<td>0.192065 (0.752)</td>
</tr>
<tr>
<td>Parent has own business</td>
<td></td>
<td>0.023365 (1.251)</td>
<td>0.023012 (1.85)*</td>
<td>0.834714 (2.88)*</td>
<td>0.128739 (0.468)</td>
</tr>
<tr>
<td>Pre-training</td>
<td></td>
<td>0.01192 (0.592)</td>
<td>0.009407 (0.702)</td>
<td>0.16156 (0.517)</td>
<td>0.128739 (0.468)</td>
</tr>
<tr>
<td>Owner's work experience-firm's lifetime</td>
<td></td>
<td>0.000912 (0.79)</td>
<td>0.001442 (1.81)**</td>
<td>0.022591 (1.264)</td>
<td>0.032488 (2.062)**</td>
</tr>
<tr>
<td><strong>Enterprise-related:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector S_1</td>
<td></td>
<td>0.010335 (0.557)</td>
<td>0.007475 (0.605)</td>
<td>-0.095237 (-3.31)</td>
<td>-0.04837 (-0.191)</td>
</tr>
<tr>
<td>S_2</td>
<td></td>
<td>0.038368 (1.399)</td>
<td>0.001716 (0.094)</td>
<td>-0.049234 (-0.116)</td>
<td>-0.38734 (-0.766)</td>
</tr>
<tr>
<td>Size (employees) SE_t</td>
<td></td>
<td>-0.008799 (-0.362)</td>
<td>-0.029919 (-1.85)**</td>
<td>-0.49606 (-1.313)</td>
<td>-1.52995 (-4.597)*</td>
</tr>
<tr>
<td>SE_5</td>
<td></td>
<td>0.00616 (0.25)</td>
<td>-0.006924 (-0.422)</td>
<td>-0.560177 (-1.463)</td>
<td>-1.30084 (-3.855)*</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td>-0.026523 (-0.9232)</td>
<td>0.068263 (3.572)*</td>
<td>0.021695 (0.049)</td>
<td>0.452984 (1.154)</td>
</tr>
<tr>
<td>Family workers</td>
<td></td>
<td>0.016054 (1.101)</td>
<td>-0.003399 (-0.35)</td>
<td>0.096151 (0.425)</td>
<td>-0.10001 (-0.501)</td>
</tr>
<tr>
<td>Market location (Main Market)</td>
<td></td>
<td>-0.013341 (-0.406)</td>
<td>-0.072738 (-3.323)*</td>
<td>-0.087372 (-0.17)</td>
<td>-0.45254 (-1.006)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-0.014271 (-0.407)</td>
<td>-0.023297 (-0.999)</td>
<td>0.015357 (0.028)</td>
<td>0.338639 (0.707)</td>
</tr>
<tr>
<td><strong>Firm's life time (Log)</strong></td>
<td></td>
<td>0.020287 (1.926)**</td>
<td>0.03018 (4.31)*</td>
<td>0.594297 (3.63)*</td>
<td>0.654678 (4.546)*</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>0.303903 (5.897)*</td>
<td>0.218517 (6.371)*</td>
<td>3.660939 (4.58)*</td>
<td>2.141869 (3.039)*</td>
</tr>
<tr>
<td>R^2</td>
<td></td>
<td>0.1264</td>
<td>0.564</td>
<td>0.1362</td>
<td>0.1978</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>2.441*</td>
<td>21.79*</td>
<td>2.662*</td>
<td>4.160*</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>286</td>
<td>286</td>
<td>286</td>
<td>286</td>
</tr>
</tbody>
</table>

Note: t-values are in parentheses.
*Significant P value (P) < 0.01
**Significant P value (P) < 0.05
***Significant P value (P) < 0.10

Appendix 7B (table 7.9) displays correlation matrix for the variables used in the analysis. The results do not exhibit a strong correlation between independent variables, except between ‘entrepreneurs’ age’ and ‘firm’s life span’ ($r = 0.44$, p-value < 0.01), which,
however, suggests no possible multicollinearity problem. Researchers commonly use a
cutoff of 0.80 for correlations among independent variables for dismissing
multicollinearity problems. We also conducted an additional analysis, regressing on
independent variable on the other and examining the $R^2$ and adjusted $R^2$ –values close to
1.00 indicates serious multicollinearity problems (Berry and Feldman 1985, Hanushek and
Jackson 1977). Our estimates produced very low $R^2$ and adjusted $R^2$ –values.

Table 7.7 presents OLS regression estimates. As a numerical summary, these results look
quite satisfactory. The significant $P$-value is less than 0.01 per cent for all models. That
means each model is statistically significant at 1 per cent level. The third model has a
good R-square value ($R^2 = 0.564$). $R^2$ of the other models are small values. The estimated
coefficients displayed in Table 7.8 for the firm's lifetime (log form) are significantly
different from zero. The same results are obtained for the estimated coefficients for the
firm's lifetime without log form (see Appendix 7C), although each model (with log form)
has higher explanatory power ($R^2$) (Table 7.7). The results suggest that the firm's lifetime
is positively associated with density and size of the networks. Coefficients of the firm's
lifetime are positive values in each model, indicating that either the social network density
or organizational network density is positively related to the firm's lifetime. The study
also found similar results for network size (see Model 7.3 and 7.4 in Table 7.7).
Furthermore, there are some interesting findings in model 7.1 and 7.3 (both on social
networks). None of the coefficients for the enterprise-related variables of models 7.1 and
7.3 are statistically significant. However, all of the coefficients for entrepreneur-related
factors, except the coefficient for prior-training level, are statistically significant.

The accelerating rates of organizational network size and density however are higher than
that of social network size and density. Consequently, these results, entrepreneurial
network literature as well, suggest that both social and organizational networks of a firm
expand with the life span of firms.

7.5.1 Discussion and Conclusion

The aim of this chapter has been to evaluate the importance of different network actors in
different phases of small enterprises in Sri Lanka. On the basis of the existing literature
(Butler and Hansen 1991, Chu 1996, Greve 1995, Wilken 1979), the study was able to
identify three different phases in a firm's development: entrepreneurial phase, business
start-up phase, and on-going phase. Then different hypotheses covering these three phases
were formulated. For the purpose of identifying network actors, activities and links of
small firms, all firms of the sample were questioned in respect of both their formal and
informal networking arrangements/linkages with the other actors in the three different
phases of a firm.
Hypothesis one (7.1a) is about the social network and the entrepreneurial phase of a small enterprise. This is concerned with the first stage of a firm. During the first stage of a firm, the new entrepreneur maintains contacts with other actors for the purposes of getting advice and gathering information in particular on how to get the business started. As the literature (for example, Birley 1985, Butler and Hansen 1991, Falemo 1989, Johannisson 1986, 1988, Larson and Starr 1993, Starr and MacMillan 1990) also suggests, these informal relationships provide the grounds for independent new ventures. The entrepreneurial network further reveals that relatives, friends and acquaintances are the main network actors in this phase. According to Aldrich and Zimmer (1986), the external actors motivate new entrepreneurs. As Larson and Starr (1993) mentioned, these informal linkages come into existence first as affective ties and social relations. Beyond question, this study has come to the same conclusion, falling into line with the conclusions that other studies (Aldrich and Zimmer 1986, Birley 1985, Brown and Butler 1993, Butler and Hansen 1991, Chu 1996, Greve 1995, Johannisson 1987b, Wilken 1979) have reached, that social network is important in the entrepreneurial phase of a firm.

Nevertheless, these relations are no longer just social. The social network actors open a path for independent new ventures. Gradually, the social network changes to business-focused network, and social relations become business relations (Birley and Cromie 1988, Butler and Hansen 1991, Hakansson and Johanson 1992). It was clear that the development of good social relationships was usually seen as a prerequisite for business-oriented relationships. We found that business relationships often start with good social relationships. The actors in networks exchange information and other resources that are useful for production activities. Therefore, these relations are not just only social exchange processes; they are economic processes as well. Moreover, there is a tendency to overlap these social and business relationships over time. The hypothesis 7.1b deals with these matters, and is about the second phase of a firm.

In the second phase of a firm, business-focused networks which includes professionals such as accountants, lawyers, and bankers, are of more importance (Birley and Cromie 1988, Butler and Hansen 1991). Nevertheless, according to evidence based on the sample, the study finds that small-scale entrepreneurs in Sri Lanka, in particular, hardly ever form business-focused networks with professionals except bankers during the initial stage of a business. This type of behavior has been observed in some other countries as well (Butler and Hansen 1991, Chu 1996). For example, Butler and Hansen (1991) pointed out that small business firms seldom consult professionals during the start-up stage of businesses. According to our probability analysis, family networks are very important during the business start-up phase, though the network evaluation model (Butler and Hansen 1991)

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expects business-focused networks such as accountants, lawyers, bankers, etc to be more important in the business start-up phase. In the study, for example, it is evident that only a few small enterprises in Sri Lanka maintain regular business accounts. As a result, new small entrepreneurs hardly ever need professional advice from accountants, etc. Lawyers and other professionals are not necessary because most of the existing business rules and regulations does not affect small enterprises in Sri Lanka (see section 2.6 in chapter 2). However, it is clear that, according to Birley and Cromie (1988), some people within an entrepreneur’s social network may have a role in a part of the business-focused network.

In similar line, Ozcan (1995) and others (for example, Gulati 1999, Huck et al. 1999, ILO 1995, Johannisson 1988, Lakshman et al. 1994b) also found that most of the entrepreneurs obtain initial capital from their family members, relatives and friends. Ozcan (1995) discovered that very few used banks as a source of funding during the early stage of firms. In the case of the Italian industrial district, Goodman (1989) also found that starting-up capital is found in the family before the entrepreneur goes to the local bank. Huck et al. (1999) have also reached the similar conclusion analyzing data on small businesses in Chicago. According to Huck et al. (1999), personal savings are the most important source of financing, while informal financing is the second most important source. This finding also strongly consistent with our results. However, formal financing from banks and other formal lenders is a significantly less important source (Huck et al. 1999: 46-62). The study, nevertheless, found that although some small entrepreneurs have used bank sources for their initial funding, informal personal contacts had played a very important role in this respect.

The importance of informal sources of funding suggests that it is much worth exploring ways to combine the presumed flexibility and the other advantages of informal financial networks with the formal sector’s ability to mobilize capital. Community development financial institutions and micro-lending pools are examples of institutions that, in some ways, combine the strengths of formal and informal sources of capital (Ghatak and Guinnane 1999, Pickering and Mushinski 2001). ‘Sanasa’ banks in Sri Lanka (see section 2.5 in chapter 2), and ‘Grameen’ bank system in Bangladesh are good examples.

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193 Economists also generally focuses on the market failures, like asymmetric information, that produce rationing of micro-entrepreneurs in credit markets and small enterprise growth (Stiglitz and Weiss 1981, Carter 1988). They also analyze how various non-market informal credit alleviate the rationing arising from market failures (Besley 1995, Ghatak and Guinnane 1999, Mushinski 1999).

194 SANASA means the Thrift and Credit Co-operative Societies (TCCS). The most important feature of the TCCS is its identity not only as a financial institution, but also a Co-operative Society. The major objective
The network evaluation model further suggests that the inter-organizational network is more important for the on-going stage of a firm (Hypothesis 7.1c). In our classification, the inter-organizational network is, of course, similar to the formal network, which mainly includes government agent/agencies, bank/financial institutes, NGOs, LSEs and SSEs. Among them, large and small firms are likely to be more important at this phase since the on-going firms look at buyer-seller relationships. In other words, on-going business firms are often expecting to form demand-related and supply-related networks. Researchers (Best 1990, Brown and Butler 1993, Holmlund and Kock 1998, Joyce et al. 1995, Nonaka 1991), who work in the area of small entrepreneurship, further suggest that networking is a necessary strategy in obtaining resources. For example, Brown and Butler (1993) argued that inter-organizational networks provide resources such as the required business information, technical advice, and financial and physical resources. According to Porter's (1990) analysis, firms are linked horizontally and vertically with other firms.

The study also uses density measures to test our hypotheses. As the entrepreneurial literature reports, during the initial stage of a firm's development a social network is more important than the organizational network. This argument is supported by the density measures in this study also.

With reference to the regression results, since we have been interested in evaluating entrepreneurial networks in different stages of a firm's life, we chose the firm's lifetime as the independent variable. As mentioned above, the general hypotheses of this chapter are that while social networks are more important during the initial phase of firms, inter-organizational networks become increasingly important during the on-going phase. Assuming that a firm's lifetime represents these phases, we regressed network densities on a firm's lifetime. Entrepreneurial network literature implicitly suggests that the relationship between entrepreneurial social network and a firm's lifetime is negative, and the relationship between entrepreneurial inter-organizational network and the firm's lifetime is positive (hypotheses 7.1a, 7.1b and 7.1c). However, the entrepreneurial phase of the TCCS is to identify rural credit requirements and to make arrangements to satisfy them (Fernando 1992, Karunaratne 1995).

The Bank gives small business loans to the poorest of the rural poor on a group liability basis instead of requiring any collateral. The loan-collection rate of the Bank is far higher (nearly 98 percent) than that for any other conventional financial operating in Bangladesh (Morduch 1999, Pickering and Mushinski 2001, Wahid 1999).

Formal networks here means formal organizations such as banks, government agencies/departments, NGOs, other business firms. See Birley 1985: 108.

Demand-related networks comprise links associated with clients, obtaining new business and the maintenance or establishment of contacts with clients. Supply-related networks cover network ties associated with the co-operative supply service or product. Bryson, Wood and Keeble 1993: 266.
is not taken into account in the regression analysis because the ages of firms are calculated from the day on which firms started operations.

The study identifies two special reasons why inter-organizational network density tends to decline during the first year of a firm. One of the reasons is that, as mentioned earlier too, banks are the second important source of initial finance for a new firm. Therefore, at the early stage of a firm's development, new entrepreneurs start their contacts with banks. However, in some cases, small firms do not continue their contacts with banks even for repaying loans. The second reason is pre-entrepreneurship training. For instance, new entrepreneurs are involved in training activities in institutions or organizations before they start their business operation. In that sense, once they have formally started the business, the links with training institutions and organizations come to an end. Those are the reasons why inter-organizational network density is higher in the early stage than in the second and third years of a firm's development.

The results of the study are consistent with our second hypothesis (hypothesis 7.2). The hypothesis is that both social and inter-organizational networks are important to a successful start and continuation, but the degree of expansion of the inter-organizational network is greater than that of the social network. The results based on our multiple regression suggest that inter-organizational network expands at a faster rate than social network although both networks expand over time. However, these network density measures have links with other enterprises-related and entrepreneurs-related factors too. Entrepreneurs-related factors such as age, gender, education level, family background, work experience, and enterprise-related factors such as number of employers, firm’s location, market location, and firm’s age have significant influences on entrepreneurial networks.

None of the enterprise-related factors of ESND (model 7.1) and ESNS (model 7.3) models are statistically significant. Our results suggest that enterprise-related factors such as business sector, firm’s size, firm’s location, market location, and family employees do not have significant influence on social network density or size. By contrast, the results indicate that some enterprise-related factors such as firm’s size, firm’s location, and market location have strong influence on entrepreneurial organizational networks (see models 7.2 and 7.4). When firms become larger, their inter-organizational networks also significantly become larger and more strong. Moreover, enterprises located in an industrial estate have higher inter-organizational density than those enterprises located outside such as an industrial estate. Previous studies have also found that firms located in industrial estates have a better potential for networking (Del Monte and Giannola 1986, Grabher 1993b, Lomi and Grandi 1997).
The story is relatively different when one takes into consideration the relationship between entrepreneur-related factors and entrepreneurial networks. Almost all of the entrepreneur-related factors of entrepreneurial social networks (model 7.1 and model 7.3) are statistically significant. According to our results, age has a significantly negative effect on entrepreneurial social networks. It implies that older people have smaller entrepreneurial social networks than younger people. It goes with work experiences. We found that older people relatively have more work experiences than younger counter-partners ($0.379$, $p$-value < 0.01). Due to less work experience, younger entrepreneurs need to discuss their business matters with relatives and friends. Therefore, we suggest that younger people should have significantly bigger and stronger social networks. Entrepreneurs’ work experience has a significantly positive impact on entrepreneurial inter-organizational networks. Gender is also another important factor that has a significant impact on entrepreneurial networks. Our results suggest that female business owners have entrepreneurial networks with larger size and higher density. Further research should be focused on cross-gender ties. The results also show that urban-entrepreneurs have relatively larger size and higher density social networks. The level of education does not have a very significant effect on entrepreneurial networks, except for social network density. More in-depth research should be conducted in order to deepen our understanding of the impact of the enterprise- and entrepreneur-related factors on entrepreneurial network behavior.

In general, in the case of Sri Lanka, family members are the most important network actors for small entrepreneurs. The family network, whether it is in relation to the different phases or in overall, ranked first among the other networks. The higher significance of family network cannot be easily explained only on the basis of economic factors. There are some significant socio-cultural factors too. For example, Sri Lanka has an extended family system. Family members usually work together, discuss their problem, especially with adults. Husband and wife are partners in all walks of life. The husband

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198 We did, however, perform a simple regression analysis of age on owners’ work experience. The results of the regression are presented below:

\[
\text{Work Experience} = -3.332 + 0.379 \text{ Age} \\
(2.00)^{**} \quad (9.08)^{*} \\
\text{df. (303, 1), } F = 82.382, R^2 = 0.215
\]

Notes: \(t\)-values are in parentheses

* Statistically significant at 1% level
** Statistically significant at 5% level

Age has a statistically significant impact on work experience.

199 Life in Sri Lankan family is most peaceful and without conflict and tension. Husband and wife (actually all family members) work together at home and in the field of businesses. The older people are highly respected by the younger people. The relationship between the sibling is congenial and intimate. The seminal brothers and sisters are tied to one another by mutual help and obligation. Such cordial relationship continue life long and the separation of the sibs after marriage does not dissociate them from their seminal brothers.
never shows any disrespect to his wife and seeks her advice in all social as well as economic matters. The Children obey their parents and always act according to parents’ instructions. Sri Lanka is collectivist and group-dominated society.

Most researchers also readily agree that relationships within families can have a strong impact on how an individual performs in the work setting, especially in small businesses.

7.5.2. Conclusion

In conclusion, this chapter has addressed different network actors in different phases of small enterprises in Sri Lanka. Network evaluation model developed by Butler and Hansen (1991) provided the theoretical basis for the analysis of these different networks. As expected, social networks are more important during the initial phase of a firm. Before dealing with business, the actors have to get to know one another and about their behavior, which is a major social exchange process. Then over time, the social relations will extend to business relations: social bonds become business bonds. Further, the model also illustrates how entrepreneurs transform their informal personal networks and networking activities into inter-organizational networks. Nevertheless, both social networks and inter-organizational networks expand over time because unlike formal networks, informal linkages are mainly based on trust developed through social exchanges (Johannisson 1988, Uzzi 1996). The degree of expansion of the inter-organizational network is greater than that of the social networks. However, the study hardly identified the role of business-focused network actors such as accountants, lawyers except bankers. The study also found that the activities of the business-focused networks are mostly done by family members since the initial capital is the most important need for a new small business entrepreneur in Sri Lanka. In this case, the initial capital mainly and mostly comes from family members and the entrepreneurs’ personal finance. For example, 52.8 per cent of entrepreneurs requested initial capital from their family network actors. Finally, the study found that the other small firms play a major role in inter-organizational networks in the on-going business phase.

Overall, informal personal contacts are very important in every stage of a firm because on the basis of the sample information the study finds that, whether these entrepreneurs are looking for funding from some formal sources such as banks, or dealing with subcontracting or any other regular business activities, they scarcely ever receive these things without personal contacts. It is evident that regardless of the types of network links

200 Here formal networks mean alliances, joint ventures, etc.

201 Small enterprises in Sri Lanka use ‘own funds or funds borrowed or received as gifts from relatives as sources of initial capital in the majority of the cases: but for the purpose of expansion, the most important sources are public and private commercial banks’ (ILO 1995: 44; Also see Lakshman et al. 1994a: 124-127).
and the nature of the business activities, most requirements of small firms would not be successfully met without personal contacts. This is largely due to inherent institutional problems in most developing countries such as corruption, political involvement, and traditional bureaucratic systems. For example, the study finds that when these entrepreneurs deal with government institutes and department, first they look for relevant personal contacts before going to a particular official. Most of the entrepreneurs have complained that without such personal contacts, obtaining what they want is difficult in particular from government institutions and agencies.

The discussion in this chapter has focused on network actors. However, as noted in the fourth chapter, our network model consists of not only network actors but also other elements such as network activities, network resources and network relations. Thus, the questions of what are these networking activities, relations and resources, and how do these network elements associate with a firm's growth remain unanswered. The next two chapters will attempt to find answers to these questions.
### Table 7.8

**Some General Characteristics of the Sample (N = 303)**

<table>
<thead>
<tr>
<th></th>
<th>Owner’s Age (Year)</th>
<th>Work Experience (Year)</th>
<th>Firm’s Lifetime (Year)</th>
<th>No of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (Valid)</td>
<td>303</td>
<td>302</td>
<td>303</td>
<td>265</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>38</td>
</tr>
<tr>
<td>Mean</td>
<td>39</td>
<td>11.36</td>
<td>7.81</td>
<td>7.39</td>
</tr>
<tr>
<td>Median</td>
<td>39</td>
<td>10</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Mode</td>
<td>45</td>
<td>10</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>10.21</td>
<td>8.36</td>
<td>6.55</td>
<td>11.57</td>
</tr>
<tr>
<td>Variance</td>
<td>104.22</td>
<td>69.84</td>
<td>42.85</td>
<td>133.78</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.30</td>
<td>1.23</td>
<td>1.56</td>
<td>4.95</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.31</td>
<td>2.62</td>
<td>3.48</td>
<td>27.25</td>
</tr>
<tr>
<td>Range</td>
<td>51</td>
<td>50</td>
<td>38</td>
<td>98</td>
</tr>
<tr>
<td>Minimum</td>
<td>17</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Maximum</td>
<td>68</td>
<td>50</td>
<td>39</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing</th>
<th>Services</th>
<th>Trade</th>
<th>Manufacturing and Services</th>
<th>Manufacturing and Trade</th>
<th>Services and Trade</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector</td>
<td></td>
<td>69.3%</td>
<td></td>
<td>9.9%</td>
<td>6.3%</td>
<td>1.7%</td>
<td>10.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.3%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>General</th>
<th>Industrial estate</th>
<th>Industrial Estates established by authorities</th>
<th>Natural Industrial Estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td>79.2%</td>
<td>20.8%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td>78.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td></td>
<td>81.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>No Education</th>
<th>Primary Education (&lt; O/L)</th>
<th>Secondary Education</th>
<th>Higher Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Education</td>
<td></td>
<td>2%</td>
<td>37.3%</td>
<td>55.5%</td>
</tr>
</tbody>
</table>

|                     |                    |                          |
| Father Business Owner|                   | 17.8%                     |
| Mother Business Owner|                    | 1.7%                      |
Appendix 7B

Table 7.9
Pearson Correlation Matrix of Selected Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td>-.13**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Birth Place</td>
<td>.05</td>
<td>.07</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Education</td>
<td>.21*</td>
<td>-.12**</td>
<td>-.13**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Pre-training</td>
<td>.04</td>
<td>.08</td>
<td>.03</td>
<td>-.02</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Location</td>
<td>.20*</td>
<td>-.62*</td>
<td>-.09</td>
<td>.07</td>
<td>-.08</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Firm's Life time</td>
<td>.44*</td>
<td>-.24*</td>
<td>-.09</td>
<td>.24*</td>
<td>-.13**</td>
<td>.23*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Family employees</td>
<td>.13**</td>
<td>-.16*</td>
<td>-.04</td>
<td>.17</td>
<td>-.3</td>
<td>.15*</td>
<td>.09</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>9. ESND</td>
<td>-.14**</td>
<td>-.15*</td>
<td>.10***</td>
<td>-.16*</td>
<td>.08</td>
<td>.04</td>
<td>.02</td>
<td>.05</td>
<td>-</td>
</tr>
<tr>
<td>10. EOND</td>
<td>.16*</td>
<td>-.60*</td>
<td>-.09</td>
<td>.04</td>
<td>-.02</td>
<td>.62*</td>
<td>.31*</td>
<td>.13**</td>
<td>.32*</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.01 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
***Correlation is significant at the 0.01 level (2-tailed)
## Chapter Seven: Network Evaluation of Small Business Enterprises

### Appendix 7C

#### Table 7.10

**Multiple Regression Analysis: Models for Network Density and Network Size**

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneur-related</strong></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>ESND</td>
</tr>
<tr>
<td></td>
<td>-0.00230952</td>
</tr>
<tr>
<td></td>
<td>(-2.729)*</td>
</tr>
<tr>
<td>Gender</td>
<td>EOND</td>
</tr>
<tr>
<td></td>
<td>-0.000584374</td>
</tr>
<tr>
<td></td>
<td>(-1.0243)</td>
</tr>
<tr>
<td>Birth Place</td>
<td>ESNS</td>
</tr>
<tr>
<td></td>
<td>-0.0498355</td>
</tr>
<tr>
<td></td>
<td>(-3.756)*</td>
</tr>
<tr>
<td>Age</td>
<td>EONS</td>
</tr>
<tr>
<td></td>
<td>-0.013909</td>
</tr>
<tr>
<td></td>
<td>(-1.194)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.00556276</td>
</tr>
<tr>
<td></td>
<td>(-2.334)**</td>
</tr>
<tr>
<td>Birth Place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.078573402</td>
</tr>
<tr>
<td></td>
<td>(-4.891)</td>
</tr>
<tr>
<td>Parent has own business</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0235098</td>
</tr>
<tr>
<td></td>
<td>(1.256)</td>
</tr>
<tr>
<td>Parent has own business</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.02298359</td>
</tr>
<tr>
<td></td>
<td>(1.8215)**</td>
</tr>
<tr>
<td>Birth Place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.04484695</td>
</tr>
<tr>
<td></td>
<td>(2.3838)**</td>
</tr>
<tr>
<td>Educational level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.04152687</td>
</tr>
<tr>
<td></td>
<td>(-2.4545)**</td>
</tr>
<tr>
<td>Parent has own business</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0122007</td>
</tr>
<tr>
<td></td>
<td>(0.6052)</td>
</tr>
<tr>
<td>Owner's work experience-firm's life</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.000849</td>
</tr>
<tr>
<td></td>
<td>(0.735)</td>
</tr>
<tr>
<td>Owner's work experience-firm's life</td>
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</tr>
<tr>
<td></td>
<td>0.001224502</td>
</tr>
<tr>
<td></td>
<td>(1.5724)</td>
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<tr>
<td><strong>Enterprise-related:</strong></td>
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<tr>
<td>Sector S1</td>
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<tr>
<td></td>
<td>0.01091665</td>
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<tr>
<td></td>
<td>(0.588)</td>
</tr>
<tr>
<td>Sector S2</td>
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<td></td>
<td>0.0397799</td>
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<tr>
<td></td>
<td>(1.451)</td>
</tr>
<tr>
<td>Size (employees) S2</td>
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</tr>
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<td></td>
<td>0.00317004</td>
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<tr>
<td></td>
<td>(0.1397)</td>
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<tr>
<td>Location</td>
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<td></td>
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<td>Location</td>
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<td></td>
<td>0.07251208</td>
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<tr>
<td></td>
<td>(3.748)*</td>
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<tr>
<td>Firm's life time</td>
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<td></td>
<td>0.0023581</td>
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<tr>
<td></td>
<td>(1.71)***</td>
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<tr>
<td>Firm's life time</td>
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<td></td>
<td>0.003001295</td>
</tr>
<tr>
<td></td>
<td>(3.2209)*</td>
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<tr>
<td>Firm's life time</td>
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<tr>
<td></td>
<td>0.0855485</td>
</tr>
<tr>
<td></td>
<td>(2.56)***</td>
</tr>
<tr>
<td>Firm's life time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0755592</td>
</tr>
<tr>
<td></td>
<td>(3.972)*</td>
</tr>
<tr>
<td>Market location (Main Market)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0165716</td>
</tr>
<tr>
<td></td>
<td>(1.135)</td>
</tr>
<tr>
<td>Market location (Main Market)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.00268449</td>
</tr>
<tr>
<td></td>
<td>(-0.2726)</td>
</tr>
<tr>
<td>Market location (Main Market)</td>
<td></td>
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<tr>
<td></td>
<td>0.015105</td>
</tr>
<tr>
<td></td>
<td>(-0.428)</td>
</tr>
<tr>
<td>Market location (Main Market)</td>
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<td></td>
<td>0.076150551</td>
</tr>
<tr>
<td></td>
<td>(-3.432778)*</td>
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<tr>
<td>Constant</td>
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<tr>
<td></td>
<td>0.2304509</td>
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<tr>
<td></td>
<td>(5.96)*</td>
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<tr>
<td>Constant</td>
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<tr>
<td></td>
<td>0.224519446</td>
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<td>(6.415)*</td>
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<td>3.76308</td>
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<td>(4.623)*</td>
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<td></td>
<td>2.31866</td>
</tr>
<tr>
<td></td>
<td>(3.244)*</td>
</tr>
</tbody>
</table>

Note: *t-values are in parentheses; N = 286

*Significant P value (P) < 0.01
**Significant P value (P) < 0.05
***Significant P value (P) < 0.10
‡ Significant P value (P) < 0.01
Chapter Eight

Subcontracting Activities vs Inter-Organizational Linkage

8.1. Introduction

As noted in Chapter 3, subcontracting has recently become one of the most important features of industrial networks. This chapter, which investigates the main characteristics of subcontracting activities and the impact of entrepreneurial network formation on subcontracting activities among small enterprises in Sri Lanka, has four main sections. The first section provides a brief overview of various types of business linkages that are particularly relevant to small enterprises. The second section presents the basic characteristics of subcontracting activities among the small enterprises in our sample. The third section of this chapter analyses the impact of entrepreneurial network formation on subcontracting activities. The fourth section discusses the results and concludes the chapter.

8. 2. 1. Business Linkages

At first, we would like to present a brief overview of the nature of various business linkages that are particularly relevant to small-scale enterprises. This effort may help to investigate various types of inter-organizational networks. Four major types of business linkages can be found in the existing literature:

1. Production Linkages. Production linkages include forward and backward linkages. Forward linkages are created as a consequence of the supply of products of SMEs to other sectors, and backward linkages are created due to the demand from the SME sector for intermediate or capital goods.

2. Macro-micro policy linkages. These linkages relate to the multitude of effects that governmental policies (macro level policies such as fiscal policy, monetary policy and exchange rate policy) have on small enterprises’ operations.

3. International linkages. These linkages deal with the ‘interdependencies’ of national and international markets in which the small enterprises function.

4. Institutional Linkages. These involve the relationships among the different types of individuals and organizations that operate and interact with small enterprises.

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203 In addition, some argue that there is another type of linkage which is called ‘consumption linkage’, emanating from the expenditure of income from the marketed surplus (Harris 1987).
However, different writers have described business linkages in different ways. For example, Hirschman (1958) highlights two categories of production linkages,\textsuperscript{204} backward linkages and forward linkages.\textsuperscript{205} These linkages reflect production interdependence. The interesting area is sub-contracting. Amsden (1991) identifies three types of linkages between big and small business: namely, (1) capital, (2) technology and labor, and (3) intermediate. Firstly, financial institutions (government-controlled\textsuperscript{206} or private) prefer to give loans to large enterprises to minimize the uncertainties of default and the cost of handling a large number of small loans. Accordingly, big business appears to have been an important source of finance for small business for trade credit, equipment, and working capital loans. According to Amsden (1991), since the formal banking sector is reluctant to lend to small-scale enterprises for reasons related to transaction costs and risk aversion, the presence of big business, in it capacity as financial intermediary, may be helpful to smaller-scale firms. Thus, linkages between big and small business, therefore, include capital flows. Secondly, technology transfer between large and small enterprises has been facilitated by the movement of people,\textsuperscript{207} who leave big business to set up their own companies or work for other firms. And another step in the technology transfer process is a movement of skilled personnel from big to small enterprises, for example through sub-contracting. Finally, intermediate inputs create other types of business linkages between big firms and small firms through sub-contracting. According to Visser (1996)\textsuperscript{208} linkages constitute the functional environment of firms. Functionality means that one firm fulfills a task, which is part of the business process of another firm. Visser (1996) has classified linkages according to their direction in the supply chain: upstream linkages, downstream linkages, trans-industry linkages, and lateral and diagonal linkages (see Figure 8.1). Upstream linkages refer to the supply channel of material inputs. Downstream linkages connect producers with consumer markets either directly or through traders or other industry branches. Trans-industry linkages relate to the supply of supplementary goods and services such as repair services, equipment, training, financing, book-keeping, legal advising, market research and design

\textsuperscript{204}Weiss (1988) stated that the linkages are closely related to externalities and Little (1982) argues that linkages can only be logically distinct from pecuniary externalities. Externalities and linkages-effects are very inter-related concepts.

\textsuperscript{205}Hirschman (1958) further defines backward linkage per productive branch as the ratio of the total value of purchases from other branches to the value of total production, and forward linkage as the ratio of the value of sales to other branches to the value of total demand (namely interdependence ratios).

\textsuperscript{206}If government-controlled financial institutions have been unwilling to lend to small borrowers for reasons related to risk and transaction costs rather than rent seeking, a liberalized banking system dominated by privately owned financial institutions, would operate differently.

\textsuperscript{207}"A migration of people is evident from state enterprise, to private big business, to small and medium-size firms (or directly from state enterprises to small-and medium-size firms) and then a recycling among the lower firm size distribution" (Amsden, A H., 1991, ‘Big Business and Urban Congestion in Taiwan: the Origins of Small Enterprise and Regionally Decentralized Industry’, \textit{World Development}, Vol. 9 (9): 1127).

\textsuperscript{208}Visser, Eernt-Jan, (1996), \textit{Local Sources of Competitiveness Spatial Clustering and Organization Dynamics in Small-Scale Clothing in Lima, Peru}, Tinbergen Institute Research Series, University of Amsterdam
Entrepreneurial Networks and Small Business Development

services. Lateral linkages incorporate producers who sell to the same market segment (e.g. competitors). By contrast, diagonal linkages include producers who do not compete directly due to product differentiation and/or market segmentation. Producers link either directly or through subcontracting (see figure 8.1). According to Visser (1996), subcontracting linkages emerge when a producer decides to outsource part of the transformation process to other firms.

Figure 8.1: Overview of Firm-level Linkages

8.2.2 Inter-firm relationships

In this regard, a linkage is defined as any transaction, which takes place between two firms. It usually implies a continual relationship involving recurrent transactions. The term ‘inter-firm linkage’ is traditionally used to encompass all possible forms of economic relationships between firms operating within an economy (Wong 1991, 1992).

Types of inter-firm linkages:
(a) Contractual arrangements

Inter-firm linkages can be divided into different forms of contractual arrangements in accordance with the degree of control one party has over the other. A typical classification is as follows (Williamson 1975a, Casson 1987, Wong 1991):

* Outright equity control (parent 100% subsidiary)
* Joint venture (majority, 50-50 or minority)
* Industrial co-operation agreement
* Licensing and franchising
* ‘Arms length’ market relationship.
  - ‘spot’ market transaction

The ‘shitauke’ subcontracting system of Japan can be said to be an intermediary from supplier-buyer contractual arrangement that is largely market transaction in nature, but is nonetheless characterized by long-term, stable relationship (Aoki 1988)
(b) Economic roles:

* Direct vertical backward linkages (buyer-induced); or
* Direct vertical forward linkages (supplier-induced)

(c) Interaction of contractual forms and roles.

Figure 8.2

Inter-organizational Relations

The vertical backward linkage relationships involve essentially arms-length market transaction between a large buyer and a SME supplier (subcontracting linkages are possible within these relationships). Any one of the contractual arrangements can be combined with either economic role (sellers, buyers) to produce a matrix of different linkage forms and subcontracting (buyer firm procuring supplies from suppliers through market transactions). One of the focal areas of this study is sub-contracting linkage. The next section of this chapter will deal with subcontracting linkages with a view to broaden the understanding on various types of subcontracting linkages.

8. 2. 3. Sub-contracting Linkage

As already pointed out above, sub-contracting is one type of inter-firm linkage. It has been viewed by many as a necessary component of industrial development, particularly in small-scale firms. Subcontracting means to enter into, to make or to let out a subordinate contract under which the supply of materials, services, or labor is let out to or accepted by
Entrepreneurial Networks and Small Business Development


Although some writers prefer to use the term subcontracting in a more narrow sense to denote a specialized form of backward linkage, whereby the subcontractors largely provide labor services in processing raw materials given out by the buyer firm, we chose to use the term in a broader sense to encompass a wide range of forms of backward linkages. However, a more accurate definition cannot be used here since most subcontracting relations among the small enterprises, especially in developing countries like Sri Lanka, are informal and unwritten agreements, and further, therefore, the accurate concept of subcontracting was not defined in the questionnaire. Instead of trying to adopt an accurate definition, we discussed with respondents about their product-sale links. Nevertheless, this does not imply that subcontracting means simply a market transaction. Market transaction can be taken place at any time and any where without pre-arrangements or without pre-order. But subcontracting arrangements (transactions) always take place according to pre-orders and pre-arrangements (Voeten 1993, Watanabe 1974, Wong 1991). Both formal and informal subcontracting contacts are taken into consideration in this study. It does not matter whether the prime contractor is either a wholesaler or retailer on the one hand or a producer on the other hand. The former is defined (Dicken 1992, Watanabe 1974) as commercial subcontracting and the latter as industrial subcontracting. Therefore, the broad distinction can be made between industrial subcontracting and commercial subcontracting. Industrial sub-contracting can be further subdivided into three types (i.e. specialty sub-contracting, cost-saving sub-contracting and complementary or intermittent sub-contracting) according to the motivation of the principal firm.209

Commercial sub-contracting involves the manufacturing of a finished product by a subcontractor to the principal’s specifications. The subcontractor does not play a part in marketing. The product is sold under the principal’s brand name. Sit et al. (1991) mentions that this kind of subcontracting is efficient as it leads to a better use of resources.

209 The principal firm refers to the firm that offers subcontracts.
Chapter Eight: Subcontracting Activities vs Inter-Organizational Linkage

Table 8.1

Elements of the Subcontracting Relationship

1. Technical aspects of productions:
   (a) Industrial subcontracting
       1. Subcontracting processes.
       2. Subcontracting components.
   (b) Commercial subcontracting
       1. Subcontracting whole products.

2. Nature of the principal firm:
   (a) Producer firms (both industrial and commercial subcontracting)
   (b) Retailing/wholesaling (commercial subcontracting)

3. Type of subcontracting (motivation of principal firm)
   (a) Specialty subcontracting.
   (b) Cost-saving subcontracting.
   (c) Complementary or intermittent subcontracting.

4. Types of relationship between principal and subcontractor:
   (a) Long-term, short-term, or single batch.
   (b) Principal providing some or all materials or components.
   (c) Principal providing detailed design or specification.
   (d) Principal providing finance (e.g.: loans or grants)
   (e) Principal providing machinery and equipment.
   (f) Principal providing technical, general assistance and advice
   (g) Principal being invariably responsible for all marketing arrangements.

5. Geographical scale involved:
   (a) Within border (domestic) subcontracting.
   (b) Cross-border (international) subcontracting.


As noted above, according to the motivation of the principal firm, industrial subcontracting can further be divided (Dicken 1992) into three types: specialty, cost-saving and complementary sub-contracting. Specialty subcontracting involves the carrying out, often on a long-term or even a permanent basis, of specialized functions which the principal chooses not to perform itself but for which the subcontractor has special skills and equipment. This is a type of monopolistic or oligopolistic subcontracting. However, the primary reason for resorting to this type of subcontracting is that subcontractors specialize more in a given type of production than the contractor (the principal). This type of subcontracting most probably takes place among the small firms because of their lack of skilled staff for various fields. For instance, they cannot recruit a person for a specific field, which is a very important part of the production line but the production cost of it is less than the unit labor cost.\(^1\) This is specialty subcontracting, on

\(^1\) \(S(AC)_X < P(W/Q)_X\). \(S(AC)\) stands for Average Cost when \(X\) is produced by the subcontractor. \(P(W/Q)\) is Unit Labor Cost when \(X\) is produced by the principal company.
Entrepreneurial Networks and Small Business Development

the other hand and cost saving subcontracting as well. Cost saving subcontracting is self-explanatory.  

It is based upon differences in production costs between principal and subcontractor for certain processes or products. If \( P(\text{LAC}) > S(\text{LAC}) \), this type of subcontracting exists. (Where \( P(\text{LAC}) \) is the long-run cost function of the principal firm and \( S(\text{LAC}) \) is the Long-run cost function of the sub-contracting firm). Complementary or intermittent subcontracting is a means adopted by principal firms to cope with occasional surges in demand without expanding their own production capacity (Dicken 1992: 216).

The international subcontracting can be divided into; (1) direct international subcontracting and (2) indirect international subcontracting (Michalet, 1980). However, previous research (see Hovi 1994: 361- 372) found that very few small subcontractors were directly involved in international subcontracting due to some internal as well as external barriers such as government policies, high transaction costs, lack of information, lack of suitable product, lack of foreign market connections, higher risks, etc.

However, most of the small entrepreneurs in developing countries like Sri Lanka are engaged in so-called ‘slave-trade’ subcontracts. In such cases, subcontractors offer low prices by taking unfair advantage of their workers. The term of payment of these types of businesses is obviously not standardized. Cash is the most common form of payment. In addition, the mode of transaction is unsophisticated. Formal and written contracts can be rarely found among the transactions. Neither do contractors nor subcontractors worry about high standards of production or work hazards. Much of their work is unreported in an attempt to escape from paying taxes. Without in-depth interviews, these types of subcontract linkages can not be identified.

Now it is time to turn our discussion toward Sri Lanka.

8. 3. General Characteristics of Subcontracting Activities: Sri Lanka

As pointed out in the other studies (Lakshman, et al. 1991, 1994a, Dias 1991, Osmani 1987) on small scale enterprises in Sri Lanka, the industrial structure of the island has a long way to go to build up a standard inter-firm network system. It has a number of reasons. For example, although it is expected to develop subcontracting linkages from large-scale firms in export-processing zones, effective linkages with local small firms are very limited largely due to, as Dias (1991) pointed out, the tariff-free imports of raw material, parts and components. Besides, Lakshman et al. (1994a) argued that there is a

\[211 \text{... because the word ‘cost saving’ defines itself.}\]

\[212 \text{We visited the entrepreneurs twice. It helps us to gather accurate and reliable information. Further, we did not use the word ‘subcontract’ as it sounds very technical to the respondents. Instead of using this technical term, we discussed their sale procedures with them. These discussions helped us to identify subcontract arrangements.}\]
strong sense of individualism operating among the industrialists which appears to discourage the development of any extensive subcontracting practices. They further argue that the sector has not achieved the level of development required for the emergence of successful subcontracting works.

Lakshman et al. (1994a) found that only 15 per cent has received/offered sub-contracts from/to other firms. In our case, table 8.2 shows that out of total sample, 37.3 per cent of small firms (113 firms in our sample) received/offered subcontracting from/to other firms. 34.7 per cent of small firms receives subcontracts from other firms, while 8.9 per cent of firms offers subcontracts to other firms. If we leave out the producers in the Dahmbadeniya Export Production Village (DEPV), since all of the producers in the village engaged in subcontracting activities, the total sub-contracts (receiving and offering) arrangements are 27.5 per cent (83 firms). About 90 per cent of products of producers in this village are subcontracting work. This subcontract system is similar, albeit not developed, to the Japanese-style hierarchical subcontracting system. However, the producers are controlled by the company. The types as well as the amounts of the products are given by one company.

<table>
<thead>
<tr>
<th>Table 8.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subcontracting Engagement</td>
</tr>
<tr>
<td>RSB (Receiving SB)</td>
</tr>
<tr>
<td>Without DEPV</td>
</tr>
<tr>
<td>Without any estates</td>
</tr>
<tr>
<td>Total Sample</td>
</tr>
</tbody>
</table>

Note: RSB = Receiving Subcontracting
OSB = offering Subcontracting

The majority of the firms in our sample engage in production of coir & fiber (23.6 per cent), leather, textile & wearing apparel (20.8 per cent), and wood & wood products (19.4

213 We interviewed 325 small entrepreneurs in the Kurunegala district, Sri Lanka. 22 of them were rejected at the editing stage of the data. Therefore, 303 small firms (observations) were used for the calculation.

214 See Chapter 2, Section 2.25. Some producers in the DEPV has been included in our sample.

215 This type of Japanese business group is called the Keiretsu. Within this system, a thousand of small and medium-size firms supply goods and services to a few large firms, the Keiretsu firms, on a long-term non-contractual basis under conditions generally favorable to the Keiretsu firms. Taiwan ‘Satellite Assembly System’ is also similar system. The Satellite assembly systems in Taiwan consist of independently owned small, medium-sized and a few large firms joined together to manufacture products for the export market. These assembly systems typically work with local and foreign buyers, who give the specifications for the products needed. Network organizations put together the needed firms to produce the product in the amount required (see Miwa 1994).

216 The Company was originally created by the Export Development Board (EDB) in Sri Lanka.
per cent). These figures are without DEPV. All of the producers in the Village are engaged in subcontracting activities (reed & rush ware). Table 8.3 displays the details.

Table 8.3  
**Subcontracting Arrangements & their Sectoral Distribution.**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Sample</th>
<th>Without DEPV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSB</td>
<td>RSB</td>
</tr>
<tr>
<td>1. Food, beverage &amp; tobacco</td>
<td>7.4</td>
<td>6.7</td>
</tr>
<tr>
<td>2. Leather, textile &amp; wearing apparel</td>
<td>22.2</td>
<td>13.3</td>
</tr>
<tr>
<td>3. Wood &amp; wood products, furniture</td>
<td>22.2</td>
<td>10.5</td>
</tr>
<tr>
<td>4. Paper, paper products &amp; printing</td>
<td>3.7</td>
<td>2.9</td>
</tr>
<tr>
<td>5. Chemical, petroleum, &amp; rubber</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Metal products, machinery &amp; equipment</td>
<td>3.7</td>
<td>2.9</td>
</tr>
<tr>
<td>8. Coir &amp; fiber</td>
<td>11.1</td>
<td>16.2</td>
</tr>
<tr>
<td>9. Craft item (DEPV) Reed &amp; Rush ware</td>
<td>-</td>
<td>39.0</td>
</tr>
<tr>
<td>10. Others</td>
<td>14.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

However, it is not always necessary for subcontracting relations to take place between a large contracting firm and a small subcontractor. Subcontracting also goes on between large firms and between small firms, and sometimes the contractor may even be a small firm and the large firm the subcontractor. In our case, about 83 per cent of subcontracting activities takes place among the small firms. If we consider without DEPV, the figure is 71.7 per cent (Table 8.4. No. B) although Sit et al. (1991)\(^\text{217}\) report that most of the subcontracts are generally offered by large firms. However, when we consider the total sample including DEPV producers, only 15 per cent of the respondents reported to have received subcontracts from large firms.

\(^\text{217}\) They also mentioned that some small firms also let out subcontracts to other firms because of their limited production capacity and labor resources.
Table 8.4

**Pattern of Subcontracts**

<table>
<thead>
<tr>
<th>Category</th>
<th>Without DEPV</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. No of subcontracting partners (firms)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>53.1%</td>
<td>71.4%</td>
</tr>
<tr>
<td>2</td>
<td>12.5%</td>
<td>07.6%</td>
</tr>
<tr>
<td>3</td>
<td>25.0%</td>
<td>15.6%</td>
</tr>
<tr>
<td>4</td>
<td>09.4%</td>
<td>05.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100% (83 firms)</td>
<td>100% (113 firms)</td>
</tr>
<tr>
<td><strong>B. Nature of these (partners) firms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other small firms</td>
<td>71.7%</td>
<td>83.2%</td>
</tr>
<tr>
<td>Large scale firms</td>
<td>25.0%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Government body</td>
<td>3.3%</td>
<td>2.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100% (83 firms)</td>
<td>100% (113 firms)</td>
</tr>
<tr>
<td><strong>C. Nature of the arrangements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>90.0%</td>
<td>69.0%</td>
</tr>
<tr>
<td>Indirect</td>
<td>10.0%</td>
<td>35.4%</td>
</tr>
<tr>
<td><strong>D. Subcontracts as % of total sales</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 25</td>
<td>45.3%</td>
<td>27.6%</td>
</tr>
<tr>
<td>25-50</td>
<td>31.3%</td>
<td>16.0%</td>
</tr>
<tr>
<td>50-75</td>
<td>6.3%</td>
<td>4.8%</td>
</tr>
<tr>
<td>75-100</td>
<td>17.2%</td>
<td>48.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100% (83 firms)</td>
<td>100% (113 firms)</td>
</tr>
<tr>
<td><strong>E. Geographical Location of the subcontract transactions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td>61.7%</td>
<td>69.0%</td>
</tr>
<tr>
<td>National</td>
<td>38.3%</td>
<td>35.4%</td>
</tr>
<tr>
<td><strong>F. Types of Assistance provided by the contractors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>12.6%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Materials</td>
<td>7.3%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Technical guidance</td>
<td>4.2%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Financial assist.</td>
<td>7.6%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Training</td>
<td>1.1%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Machinery &amp; equi.</td>
<td>-</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>G. Total number of firms engaging in subcontracting</strong></td>
<td>83</td>
<td>113</td>
</tr>
</tbody>
</table>

Meanwhile, most of the subcontracting arrangements in Sri Lanka are direct orders (one-to-one relationships) and mostly *ad-hoc* arrangements. In addition, arrangements are informal (no written agreements) rather than formal. For instance, only 15.5 per cent has formal written agreements. The arrangements take place among the entrepreneurs, who can trust each other or the so-called *network members*. The survey reveals that 90 per cent of the small subcontractors received their orders directly from contractors (Table 8.4, No C). There are no middlemen interventions. Furthermore, it is interesting to note (in Table 8.4, No A) that about 53 per cent of firms receiving subcontracts depends on one contractor. This figure is higher (71.4 per cent) when the total sample is taken into account because DEPV is included and all of the producers in the village depend on only one company (Table 8.4). If we take into consideration the sample without DEPV, negotiation is the major price decision tool. By contrast, out of the total sample, in many cases, the parent company decides on the prices. These differences are, of course, due to

---

218 This figure is not out of the total sample, It is based on the total number of subcontractors in the total sample. Only 37.3 per cent of the respondents engaged in subcontracting activities.

219 The company was formed by its shareholding producers and the EDB.
the DEPV since the company decides on the prices in this village. The producers do not have power to decide on the prices due to the monopolistic power of the company.

In addition, as mentioned above, the producers in the DEPV are totally dependent on the subcontract linkages. As Figure 8.3 shows, the category of ‘75 - 100 per cent of total sales’ was recorded 48.6 per cent because all DEPV producers are included in this calculation. We can see the difference when we compare these figures with the figures in the sample without DEPV (see table 8.4 - 3rd and 4th columns).

Direct cross-border subcontracting is based on internal and external factors of the firm such as quality of products, production capacity, labor skill, marketing experiences, personal contacts, language skills, etc. - which scarcely exists among small enterprises in Sri Lanka. Although there are some cross-border subcontracting activities, those are not direct contracts. The contracts come through some intermediate organizations, which would be a supporting agency or another firm. The Company at the Dambadeniya Export Producers’ Village is an example. In most cases, however, the intermediate firms are located in Colombo, the capital of the island. Sometimes, the role is played by some government institutes/agencies such as Industrial Development Board (IDB), the Department of Small Industries, and the National Youth Services Council. Michalet (1980) defined those as indirect subcontracting.

---

220 About 95 per cent of their sales are subcontracting orders.
The main reasons for the small enterprises entering into the subcontracting business are summarized in Table 8.5. The most popular reason is the easy materials supply. The argument is that raw materials can be obtained without delay by subcontracting and in the long term, this is, of course, one of the cheapest ways of obtaining raw material. 74.4 per cent of small subcontractors agreed on this. Technical assistance and increasing sales are the second and the third reasons respectively. In particular, most small enterprises receive subcontracts from other firms because of the special skill. Dicken (1992) explains these as specialty subcontracting, on the other hand, cost-saving subcontracting exists as well. However, due to the special skills, small firms have monopolistic power.

More than 75 per cent of subcontractors are satisfied about their current subcontracting relations. However, more than half percent is very keen on future subcontracting arrangements, even though they face some difficulties with the current arrangements. Their major problem is unstable orders. For example, about 45 per cent were dissatisfied with the instability of incoming orders over time. This figure is relatively smaller (only 28.6 per cent) if we consider the total sample including the subcontract producers in the DEPV. Entrepreneurs are also concerned with the quality, because quality is an essential base of typical subcontracting relationships, and profits. Almost 19 per cent of the subcontractors in the sample complained about the high quality demanded by the contractors. 12.5 per cent claimed about the lower profitability in the subcontracting business (see Table 8.6). However, as Lakshman et al. (1994a) also pointed out product quality is one of the elements that often gets ignored by the small industries. According to Lakshman et al. (1994a), quality testing is mostly done manually and mainly carried out by the employees of the firm. Meanwhile, about 8 per cent of small subcontracting firms

---

Table 8.5

<table>
<thead>
<tr>
<th>Reasons for Receiving Subcontracts</th>
<th>Without DEPV</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Easy Materials Supply</td>
<td>69.8%</td>
<td>74.4%</td>
</tr>
<tr>
<td>2. Technical Assistance</td>
<td>27.0%</td>
<td>25.3%</td>
</tr>
<tr>
<td>3. Sales increase</td>
<td>25.4%</td>
<td>17.2%</td>
</tr>
<tr>
<td>4. Benefits of mutual co-operation</td>
<td>19.0%</td>
<td>13.1%</td>
</tr>
<tr>
<td>5. Request from parent company</td>
<td>11.1%</td>
<td>7.1%</td>
</tr>
<tr>
<td>6. Stable market</td>
<td>4.8%</td>
<td>3.0%</td>
</tr>
<tr>
<td>7. Diversification of products</td>
<td>1.6%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

---

221 However, these are from small-scale (enterprises) subcontractors point of view. For this study, we interviewed only small-scale entrepreneurs. A similar identification has been done by Lakshman et al. (1991).

222 For example, in Zimbabwe, as small enterprises capable of delivering high quality products at reasonable prices, small producers are strong in subcontracting at retail levels (see Voeten 1993: 10–16)
Entrepreneurial Networks and Small Business Development

complained about the changing in design and specification of orders. 6.3 per cent criticized the delay of the financial arrangements. Table 8.6 presents these figures.

Table 8.6

**Difficulties in Subcontracting Business from the Perspective of Small Enterprises**

<table>
<thead>
<tr>
<th>Difficulties</th>
<th>Without DEPV (%)</th>
<th>Total Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unstable Ordering pattern</td>
<td>45.3</td>
<td>28.6</td>
</tr>
<tr>
<td>2. Strict quality requirement</td>
<td>18.8</td>
<td>21.9</td>
</tr>
<tr>
<td>3. Not profitable</td>
<td>12.5</td>
<td>10.5</td>
</tr>
<tr>
<td>4. Changing in design &amp; specification</td>
<td>07.8</td>
<td>13.3</td>
</tr>
<tr>
<td>5. Financial delay</td>
<td>06.3</td>
<td>03.8</td>
</tr>
<tr>
<td>6. High cost</td>
<td>03.1</td>
<td>13.3</td>
</tr>
</tbody>
</table>

As discussed above, the major problem that small subcontracting firms often face is unstable ordering patterns. We found two directions of this problem: irregular orders and unstable quantity. Table 8.7 shows how these two inter-related problems influence small subcontracting firms. When we take into consideration the sample without the entrepreneurs in DEPV, only 18.8 per cent of small subcontracting firms have stable quantity as well as regular orders. Therefore, unsuitability and irregularity of orders is one of the major problems (see Table 8.7).

Table 8.7

**Regularity and Stability of Subcontract Orders**

<table>
<thead>
<tr>
<th></th>
<th>Without DEPV (%)</th>
<th>Total Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stable quantity &amp; regular orders</td>
<td>18.8</td>
<td>11.4</td>
</tr>
<tr>
<td>2. Stable quantity &amp; irregular orders</td>
<td>03.1</td>
<td>01.9</td>
</tr>
<tr>
<td>3. Unstable quantity &amp; regular orders</td>
<td>20.3</td>
<td>51.4</td>
</tr>
<tr>
<td>4. Unstable quantity &amp; irregular orders</td>
<td>37.8</td>
<td>35.2</td>
</tr>
</tbody>
</table>

Relationships between the contractor and the subcontractor are also discussed in the literature (see for example, Esposito and Storto, 1994; Monsted, 1994; Sit et al., 1991). Those relationships are just not only the commercial but also the co-operative and social. Sit et al. (1991) found very close relationships between contractor and subcontractors in Macau. For example, contractors sometimes provide some or all materials or components, detailed design or specification, finance (for example, loans or grants), machinery and equipment, and technical, general assistance and advice. In our case, the assistance, which is provided by the contractors, is very poor. Table 8.4 (item F) shows that the major assistance given is in marketing. The second important assistance area is providing raw material. However, in most of the cases, the relationships in term of providing some assistance by the contractors are hardly found, which means, in other words, that these are
not ‘dependent subcontracting’, linkages though the arrangements depend on entrepreneurial network linkages. The next section of the discussion will analyze the impact of formation of the entrepreneurial networks on subcontracting linkages.

### 8.4. Network Formation and Subcontract Linkages

Lack of information is one of the major problems for subcontract arrangements (Dias 1991, Hovi 1994, ILO 1995). As the UNIDO report (1974) argues, even in the industrial countries, it is often difficult to find out which small firms are able to carry out subcontracting orders. Managers of large firms consult directors and trade publication, place advertisements in papers, consult professional associations and sometimes competitors. The UNIDO report (1974) pointed out that it was mainly because of inadequacy of information. The UNIDO further reports that some firms arrange exhibitions of parts and components for subcontracting and economic guidance.

As we argued in chapter 6, network formation elements such as membership of professional associations, discussions with relatives and friends, external consultations, attending seminars, and participating in trade fairs, help entrepreneurs not only to exchange their ideas and experiences but also to develop new business opportunities. For instance, one of the business opportunities entrepreneurs can achieve through their networks is subcontracting activities. New subcontract opportunities can be identified through discussions with others. External consultations, seminars, trade fairs, and membership of professional associations are the accesses for these kinds of discussions.

When subcontract linkages take place, a mutually well-developed inter-firm network is extremely important for small firms because, as already argued in Chapter 3, inter-firm networks help to reduce economic uncertainty. As argued, where there are weak ties, there is uncertainty. If there is uncertainty, ‘nonappropriable quasi-rent’ is relevant there. Non-appropriable quasi-rent is the quasi-rent that is lost when a trading partner terminates the contract. For example, suppose that a producer, who asks his subcontractor to reduce prices, threatens to break off the trading relationship; the subcontractor would have no choice but to give in to this demand if he entirely depends on the subcontract work.

On the other hand, previous studies (Andersson and Hovi 1992, Pratten 1991) also highlighted the fact that small enterprise subcontractors have to utilize their resources in production and development and in relationship management as well. Building relationships with other firms and organizations is very important for the present business practice because, for example, (Blenker and Christensen 1995, Deardorff and Djankov

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Entrepreneurial Networks and Small Business Development

2000, Voeten 1993) the small enterprise subcontractors accumulate knowledge from past cooperative experience and their relatives and friends. Sit et al. (1991) analyzed the subcontracting relationships in Macau and found a very close relationship among the firms, which goes beyond business relationships, such as friends. Monsted (1994) and others (Esposito and Storto 1994) underlined the importance of informal relationships between entrepreneurs or technicians of the various subcontractors. Therefore, we also argue that:

There is a positive relationship between network formation and subcontracting relations.

As we have identified six network formation elements in Chapter 6, this research hypothesis can be more formally organized as six testable hypotheses: the small firm’s subcontracting involvement is positively related to;

- 8. a. Membership of any professional association (MEM)
- 8. b. Discussion with relatives (DR)
- 8. c. Discussion with friends (FRI)
- 8. d. External consultants (EXCON)
- 8. e. Attending seminars (SEM)
- 8. f. Participating in trade fairs (TF)

8. 5. 1. Data and Methodology

We are going to test these hypotheses using data from our sample survey (see Appendix A of the questionnaire). The subcontracting arrangements among the small enterprises in Sri Lanka are often informal and unwritten. Out of the total number 303 of small enterprises in the sample, only 37.3 per cent of the enterprises (113 enterprises) are engaged in the subcontracting activities. The dependent variable is whether a firm was engaged in subcontracting relations or not. The independent variables are the elements of the entrepreneurial network formation. The relationship between the dependent variables and the independent variables is presented in the following diagram (Figure 8.4).

---


225 See Chapter 5, for more information about sampling, data collection, and the basic characteristics about the sample data.
8.5.2. Variable

In this section we define the dependent and independent variables in the model that we estimate.

Dependent Variable:

The dependent variable is small enterprises' subcontracting linkages. It is dichotomous; whether a small enterprise has subcontracting relations or not (yes = 1, no = 0). We found that 37.3 per cent of the respondents dealt with subcontracting activities either receiving subcontracting orders or offering subcontracting work (see Table 8.2 in section 8.3). According to the existing empirical literature, subcontracting is one of the major activities in industrial networks. For example, Perrow (1992) discusses the highly successful subcontracting model in Japan. In addition, there are a number of successful subcontracting networks (for example, Jarillo 1993).

Independent variable:

Following Chapter 6, we chose six independent variables, which are entrepreneurial network formation elements. All of the independent variables are dichotomic. Table 8.8

---

lists the independent variables used in the chapter, and indicates how they were operationalized.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operationalizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Membership of any professional association (MEM)</td>
<td>Membership (yes = 1, no = 0)</td>
</tr>
<tr>
<td>b. Discussion with relatives (DR)</td>
<td>Whether they had discussions with relatives about the business during past three months (yes = 1, no = 0)</td>
</tr>
<tr>
<td>c. Discussion with friends (FRI)</td>
<td>Whether they had discussions with friend about the business during past three months (yes = 1, no = 0)</td>
</tr>
<tr>
<td>d. External consultants (EXCON)</td>
<td>Whether they had used external consultants the last year (yes = 1, no = 0)</td>
</tr>
<tr>
<td>e. Attending seminars (SEM)</td>
<td>Whether they had attended seminars or training programs the last year (yes = 1, no = 0)</td>
</tr>
<tr>
<td>f. Participating in trade fairs (TF)</td>
<td>Whether they had participated in external trade fairs the last year (yes = 1, no = 0)</td>
</tr>
</tbody>
</table>

8. 5. 3. Analysis

Data were analyzed using Univariate Logistic Regression Model (ULRM), as the dependent variable is bivariate. Logistic analysis is one of the most widely used statistical techniques for analyzing binary dependent variables. Further, since the observations are individuals, the parameters of the logistic model were estimated using maximum likelihood estimation procedure. Then for the purpose of interoperation, we calculated probabilities (see section 5.2.7.1 in chapter 5), as logistic ratios themselves are difficult to understand.

8. 6. Results

Table 8.9 reports the means, standard deviations, and correlation matrix for the subcontract linkages and network variables. All of the correlation coefficients, except the correlation between social network and supporting network (r = 0.084, p = 0.146), are statistically significant. The direction of the hypothesized relationships is positive as is expected in the bivariate relationships.

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227 For the detail, refer section 5.2.7.1 in chapter 5 of this study.

Chapter Eight: Subcontracting Activities vs Inter-Organizational Linkage

Table 8.9

Means, Standard Deviation, and Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Subcontract linkage</td>
<td>0.37</td>
<td>0.48</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Inter-firm network</td>
<td>0.80</td>
<td>0.40</td>
<td>0.222*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Supporting network</td>
<td>0.83</td>
<td>0.38</td>
<td>0.242*</td>
<td>0.138**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Social network</td>
<td>0.75</td>
<td>0.43</td>
<td>0.158*</td>
<td>0.126**</td>
<td>0.084</td>
<td>1</td>
</tr>
</tbody>
</table>

*a Friend network is used as a proxy

*p < 0.01, two-tailed test

**p < 0.05, two-tailed test

The estimated regression results on the relationship between these network elements and subcontract linkages are presented in Model 8.1. To interpret the results of this model, let us start with the coefficients in the model. All individual coefficients except the coefficient of the ‘membership’ (MEM) variable are significant, and have the expected positive sign. Each coefficient depicts the change in the predicted logit as a result of a unit change in the corresponding explanatory variable, all other things being equal. However, the model recorded rather lower rate of $R^2$ (Nagelkerke $R^2 = 0.163$). It does not mean that the model predicts poor results since in general this type of binary dependent variable model is not likely to produce an $R^2$ close to 1 (see Morrison, 1972).

\[
\text{SBC} = -1.9726 - 0.0043 \text{MEM} + 0.8751 \text{DR} + 0.4656 \text{FRI} + 0.7498 \text{EXCON} + 0.5618 \text{SEM} + 0.6721 \text{TF} \\
(-5.87)* (-0.015) (2.65)* (1.79)*** (2.71)* (2.04)* (2.34)*
\]

Nagelkerke $R^2 = 0.163$  p value for $\chi^2 = 0.0000$  N = 303

(Model 8.1)

Since the logit ratios themselves are very difficult to understand, we estimated the predicted probabilities (Table 8.10).

Table 8.10

Predicted Probabilities of the Logit model of Network Elements on Subcontract Relations

<table>
<thead>
<tr>
<th>Network elements</th>
<th>Subcontract Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>8.a. Membership (MEM)</td>
<td>0.499</td>
</tr>
<tr>
<td>8.b. Discussion with relatives (DR)</td>
<td>0.71*</td>
</tr>
<tr>
<td>8.c. Discussion with friends (FRI)</td>
<td>0.61***</td>
</tr>
<tr>
<td>8.d. External consultations (EXCON)</td>
<td>0.68*</td>
</tr>
<tr>
<td>8.e. Seminar (SEM)</td>
<td>0.64*</td>
</tr>
<tr>
<td>8.f. Trade Faire (TF)</td>
<td>0.66*</td>
</tr>
</tbody>
</table>

Note:  * Significant p value (p) < 0.01  
*** Significant p value (p) < 0.10

\(229\) Nagelkerke $R^2$ is akin to the $R^2$ in a linear regression models, in spite of the fact that the variation in a logistic model is defined in different way: Nagelkerke $R^2 = (R^2_{\text{in a linear regression model}}) / (R^2_{\text{MAX in a linear regression model}})$. $R^2_{\text{MAX}}$ in a linear regression model $= 1 - [L(0)]^{1/N}$ where L(0) is the likelihood for the model with only a constant, and N is the sample size.
The predicted probabilities displayed in table 8.10 show that an entrepreneur who is engaged in network formation is likely to have subcontracting relations ($\text{Prob.} > 0.50$). For example, if an entrepreneur discusses his business with friends (FRI), he has 0.61 likelihood of becoming involved in subcontracting (see table 8.10). Moreover, there is also a significantly higher probability ($\text{prob.} = 0.71$) that entrepreneurs who discuss their business matters with relatives have more possibility of having subcontracting linkages than entrepreneurs who do not undertake such discussions. Consulting with external agencies (EXCON) also increases the subcontracting arrangements ($\text{prob.} = 0.68$). Attending seminars (SEM) also significantly raises the likelihood ($\text{prob.} = 0.64$) of establishing subcontracting linkages. Finally, there is also significantly higher probability ($\text{prob.} = 0.66$) that entrepreneurs participating in trade fairs (TF) have higher subcontracting linkages than non-participants.

However, as 90 percent of small enterprises inside industrial or exports estates are engaged in subcontracting activities, it is interesting to study the impact of the network formation elements on subcontracting arrangement in such estates. In addition to the regression estimations for the total sample (model 8.1), we also estimate two regression lines for the firms inside such estates (model 8.2) and for the firms outside such estates (model 8.3) respectively. Model 8.2 represents subcontracting arrangements in such estates, while model 8.3 shows the subcontracting arrangements outside such estates (see Table 8.11).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 8.2. SC (Only Estates)</th>
<th>Model 8.3. SC (without Estates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEM</td>
<td>-.020</td>
<td>-.200</td>
</tr>
<tr>
<td>DR</td>
<td>.802</td>
<td>.178</td>
</tr>
<tr>
<td>FRI</td>
<td>.936</td>
<td>.257</td>
</tr>
<tr>
<td>EXCON</td>
<td>-.100</td>
<td>.647**</td>
</tr>
<tr>
<td>SEM</td>
<td>-1.069</td>
<td>.827**</td>
</tr>
<tr>
<td>TF</td>
<td>.909</td>
<td>.360</td>
</tr>
<tr>
<td>Intercept</td>
<td>.462</td>
<td>-1.831*</td>
</tr>
</tbody>
</table>

Nagelkerke $R^2$ | .163 | .095 |
Log likelihood   | -54.609 | -258.149 |
Model chi-squared | 6.742 ((p value = .345) | 16.078 (p-value = .013) |
N                 | 63 | 240 |

Note:  
* Significant p value (p) < 0.01  
** Significant p value (p) < 0.05  
*** Significant p value (p) < 0.10

None of the coefficients of the model 8.2 (sub-set for estates firms) is statistically significant, while only the coefficients on EXCON, and SEM of the model 8.3 (sub-set for
outside firms) are statistically significant (see table 8.11). One reason for the lack of significance of the model 8.2 could be that these estates run within a specific system. For example, in Dahmbadeniya Export Production Village, one company gives orders for the producers. The company was formed by its shareholding producers (the small producers are inside the estate) and the Export Development Board. The system itself creates network linkages. Thus, entrepreneurs do not need to put specific effort to form their networks.

Then, the question is what could be the impact of sub-contracting on business performance. Model 8.4 and model 8.5, estimate the direct impact of subcontracting on business performance in terms of profitability and sale respectively.

<table>
<thead>
<tr>
<th>Performance (financial profitability) = - 0.089 + 0.472SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0.473) (1.975)***</td>
</tr>
<tr>
<td>Negelkerke $R^2 = 0.017$; $\div 2 = 3.907$ p-value for $\div 2 = 0.048$; N = 303</td>
</tr>
</tbody>
</table>

*Note: t-values are in parentheses*** Statistically significant at 10 % level. (Model 8.4)

<table>
<thead>
<tr>
<th>Performance (sale) = - 0.0918 + 0.407SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0.478) (1.697)***</td>
</tr>
<tr>
<td>Negelkerke $R^2 = 0.013$; $\div 2 = 2.747$ p-value for $\div 2 = 0.098$; N = 282</td>
</tr>
</tbody>
</table>

*Note: t-values are in parentheses*** Statistically significant at 10 % level. (Model 8.5)

Both models are statistically significant (model 8.4, p-value for $\div 2 = 0.048$, and model 8.5 p-value for $\div 2 = 0.098$). The coefficients on ‘subcontracting (SBC)’ are also significant and positive. This implies that if a firm has SBC, the firm is significantly more likely to be in the growth league. Consequently, the next question will be what is the interactive impact of network formation and SBC on business performance.

Before examining the interactive impact of network formation and SBC on business performance, the study also tests the impact of SBC on market expansion. Table 8.12 (Model 8.6) display multinomiallogit estimates of market expansion equation. As already noted, the dependent variable in this estimation is three categories: regional market (baseline or comparison category for market expansion), national market, and international market. The model is highly statistically significant (Model $\div 2 = 101.986$; p-value for $\div 2 = 0.000$; Negelkerke $R^2 = 0.367$). The results of the model predict that the impact of subcontracting on market
Entrepreneurial Networks and Small Business Development

expansion is positive. In other word, entrepreneurs who take part in subcontracting works are more likely to have national and international market opportunities.

Table 8.12
Multinomial Logit Estimates of Market Expansion

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 8.6: Market Expansion</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National</td>
<td>International</td>
<td></td>
</tr>
<tr>
<td>Subcontracting</td>
<td>1.509*</td>
<td>3.860*</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.153*</td>
<td>-3.657*</td>
<td></td>
</tr>
<tr>
<td>-2 likelihood</td>
<td>119.471</td>
<td>101.986 (p-value for ÷2 = 0.000)</td>
<td></td>
</tr>
<tr>
<td>Negelkerke R²</td>
<td>0.367</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: t-values are in parentheses; N = 287
*a Baseline (comparison category) is regional market
*p-value < 0.001

Finally, we estimate the interactive effects of network formation and SBC on business performance. Table 8.13 presents the predicted probability of the logit models (Table 8.14 in Appendix 8A displays the logit estimation for performance and market expansion).

Table 8.13
Estimated Probability of Logit Models: Network Formation, Subcontracting, and Business Performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Performance</th>
<th>Market Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Profitability</td>
<td>Sale</td>
</tr>
<tr>
<td></td>
<td>Subcontracting (SBC)</td>
<td>Subcontracting (SBC)</td>
</tr>
<tr>
<td>MEM</td>
<td>0.41</td>
<td>0.48</td>
</tr>
<tr>
<td>DR</td>
<td>0.63</td>
<td>0.67</td>
</tr>
<tr>
<td>FRI</td>
<td>0.55</td>
<td>0.59***</td>
</tr>
<tr>
<td>EXCON</td>
<td>0.68</td>
<td>0.67</td>
</tr>
<tr>
<td>SEM</td>
<td>0.053</td>
<td>0.55</td>
</tr>
<tr>
<td>TF</td>
<td>0.049</td>
<td>0.44</td>
</tr>
</tbody>
</table>

Note: * Significant p value (p) < 0.01
      *** Significant p value (p) < 0.10

The results are unable to provide a strong argument on the interactive effect of network formation and SBC on business performance (in terms of profitability and sale) because most of the coefficients are statistically insignificant (see table 8.14 in Appendix 8A). One of the reasons for the lack of significance could be the time gap between when these events actually took place and their actual and ultimate impact on business performance. For example, trade fairs help to identify potential subcontractors, but the final impact of this process on business performance is not immediate. Data collection at one point in time or one-shot (cross-sectional studies) is not sufficient for this situation. Data should be gathered at different points of time. In order to examine the reaction and results, one
should conduct ‘longitudinal studies’. Such longitudinal studies often take more time and effort than cross-sectional studies like this. However, well-planned longitudinal studies could help to identify cause-effect relationships.

Nevertheless, trade fairs directly impact on market expansion through subcontracting. Entrepreneurs who take part in trade fairs and have subcontracting works have more probability to enter national (prob. 0.94; p-value < 0.01) and international markets (prob. 0.98; p-value < 0.01). The interactive effect of attending seminars and subcontracting on market expansion is also positive and significant (see table 8.14). Therefore, there is a significantly higher probability that entrepreneurs who attend seminars and have subcontracting works widen their markets. The results also indicate a positive significant interactive effect of ‘discussion with friend’ (FRI) and SBC on market expansion. Accordingly, this results confirm that small firms use their informal network relationships through subcontracting deals to overcome barriers to exporting and also to identify export opportunities. Table 8.13 displays the predicted probability of the logit models.

8.7. Discussion and Conclusion

Basically, however, the systematic subcontracting relationships have not yet been developed within small enterprises in Sri Lanka. Instead, this study found that in a broader sense, there are various types of subcontract linkages among the small enterprises. Most of the existing subcontracts are unsteady and irregular relationships, and are among friends. Systematic subcontracting still has not developed in Sri Lanka, mainly, according to Lakshman et al. (1994a), because of lack of confidence in the ability of the small enterprises to carry out work reliably.

In this study, we have expected a positive relationship between entrepreneurial network formation and subcontracting arrangements. The data generally supported our hypotheses. Therefore, the findings do affirm positive relationships between network formation and subcontracting linkages, which implies that once an entrepreneur builds up his networks, he has more opportunities for subcontract arrangements. In other words, if one can manage to develop a good personal relationship with the relevant decision maker he has a good chance of winning business deals controlled by this person. Besides, we discovered that if one has a good relationship with somebody in the relevant department or office, he also has a good chance of receiving business deals handled by that office. It is stressed that informal personal network is a very important factor in order to deal with business activities in Sri Lanka. There are some evidence from developed countries like

230 When the main interest is in describing or assessing change or development over time, some form of LONGITUDINAL RESEARCH is the method of choice’ (Robson 1993: 50)

231 Relevant decision maker means the person who controls the relevant matter such as subcontracting.
Japan as well. According to Lohr (1982: 17), ‘‘Friendships and long-standing personal relationships affect business connections everywhere. But that seems especially true in Japan… The after-hours sessions in the bars and nightclubs are where the vital personal contacts are established and matured slowly. Once these ties are set, they are not easily undone…. buying and selling to and from each other based on decades-old relationships rather than economic competitiveness….’. Elsewhere, therefore, as Pratten (1991) argued, small enterprise subcontractors have to concentrate their resources in production and development as well as in relationship management. Nevertheless, entrepreneurial network formation is one of the necessary conditions, but not a sufficient condition, to promote subcontracting activities among the small enterprises since some other factors such as technology, quality products, etc are also vital important.

Who can promote subcontracting linkages and who can help small enterprises to establish their networks?

Supporting actors such as the government institutes, NGOs, etc can play an influential role to establish effective and systematic linkages. Exploring Sri Lankan experiences, Dias (1991) stated that most small enterprises are not able to develop linkage patterns without institutional support. However, we found that it is also very difficult to get institutional support without a good personal relationship. In Sri Lanka, there are a large number of public as well as private sector organizations (Attanayake 1993, Dias 1991, ILO 1995, Lakshman et al. 1994a) that are involved in promoting small enterprises. However, their results are far behind the expectation. On the one hand, an effective co-ordination system needs to be established. On the other hand, the managerial, technological and financial capabilities of small enterprises also need to be improved in order to develop an effective subcontracting system.

Since subcontracting is an aspect of economic growth, in most countries the governments play an important role in promoting subcontracting, but hardly in Sri Lanka. However, subcontracting is generally facilitated, as larger and small firms are located near each other. Of course, this is the concept of industrial estates (Amin 1989a, Piore and Sabel 1984, Storper and Scott 1989). The concept of industrial estates is also a major instrument of promoting subcontracting. This should also be integrated with regional development. For example, subcontracting linkages in Italy and Germany are fashioned in this manner. However, most of the cases in developing countries pointed out that it would be very difficult to establish such ‘special’ industrial estates. These developing countries, generally, give priority to establish ‘general-purpose’ estates. Subcontractor cluster is

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232 For example, Allesch (1993) stress an urgent need for public-private framework.

233 In general purpose industrial estates, entrepreneurs can start any type of company. It does not matter whether a new firm is related with other firms in the estate.
an ideal example for such *special industrial estates*. As Pedersen (1992, 1999) explained the clusters are based on a narrow vertical and horizontal specialization, both of individual enterprises and the cluster as a whole. Further, most of the enterprises of these clusters are dependent on and linked as subcontractors to one or a few large enterprises. In addition, government can also provide some fiscal and other incentives to contracting and subcontracting firms to improve relationships between them.

It is very clear that larger enterprises also have to play a bigger role on subcontracting linkages. For example, *Nestle* company in Sri Lanka has organized the supply of milk from more than 14,000 registered farmers in different districts. *Siemens* in India is another example: the company has over 1,000 suppliers, mostly small enterprises (see Voeten, 1993). More precisely, the experience in most developed countries indicates that many large firms are very helpful to their small subcontractors though subcontracting can take place between companies of different sizes (large and large, large and small, small and small). In addition to large-scale enterprises, particularly foreign companies are interested in linkage activities when they attempt to start operations in less developed countries. The reasons are not only financial and commercial, but also cultural and other factors (for example, see Bjorkman and Kock in the case of China, 1995). Therefore, these firms establish linkages with local firms for various necessary services and resources. Subcontracting is one of the best ways for acquiring necessary resources (Halbach 1990, Miwa 1994, Rasiah 1994, Sit *et al*. 1991, Watanabe 1974, Wong 1991). *Subcontracting* is also associated with a reduction in variable costs (Deardorff and Djankov 2000, Dicken 1992, Sitki *et al*. 1999). However, we found that the foreign companies usually establish linkages with domestic large-scale enterprises because small enterprises in developing countries do not have enough capacity to establish direct contacts and also are not capable of dealing with foreign companies directly. Therefore, local supporting agencies, government as well as non-governmental, should organize network formation activities such as seminars, trade fairs, etc. Unfortunately, these network formation elements are still not popular among the small enterprises in Sri Lanka (see Chapter 6).

There are some other special instruments of promoting subcontracting activities as well. One of the popular instruments is *‘subcontracting exchange’*, which provides a number of services such as providing information, bringing together contractors and potential subcontractors. The exchange also provides technical assistance apart from the normal functions, particularly in developing countries. Seminars, trade fairs and exhibitions can be organized by the subcontracting exchange. In Sri Lanka, a sub-contracting Exchange

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234 For example, Western Companies like to work with Chinese companies when they start their business in China because of language barriers and other cultural reasons. (see Bjorkman, I., and Kock, S., 1995, ‘Social Relationships and Business Networks: The Case of Western Companies in China’, *International Business Review*, Vo. 4, pp. 519–535).
(SCX) was established in 1981 under a project financed by the World Bank (see section 2.2.5 in chapter of this study). ‘The objective of the function of the SCX is to intervene between buyers and suppliers who have not been able to establish sub-contracting due to many problems,…’.

However, according to the committee report in 1984, which examined the effectiveness of the Exchange, the activities of the Exchange had been limited mainly due to lack of managerial and technical capabilities of small firms. Further, the large buyers also prefer to deal directly with known and trusted suppliers (Halbach 1990, Osmani 1987).

To sum up, this chapter has analyzed network activities (subcontracting), which is one of the major components of enterprise network. The purpose of this chapter has been to study the impact of entrepreneurial network formation on subcontracting activities. While some small firms are engaged in subcontracting work, some are not. We hardly found formal and written subcontracting arrangements among the small enterprises in Sri Lanka. Instead, we found most of the subcontracting agreements are informal and unwritten, and also most of them are dependent on one contractor. Moreover, these activities carry out among the close network actors such as friends and relatives. Firms engage in subcontracting activities for various reasons. One of the major reasons for SBC arrangements is that firms can get resources easily and continually through SBC. We found that the impact of the entrepreneurial network formation elements on subcontracting engagements is positive. Small firms use their network relationships to overcome barriers to exporting and also to identify new market opportunities. Nevertheless, before generalizing these results on to other countries, we recommend further comparative researches on this issue.

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236 Eccles’ own empirical study of residential construction in Massachusetts also shows that not only subcontracting relationships are long-term in nature but also it is very rare for a contractor employing more than two or three subcontractors in a given trade,… (Eccles 1981: 350).
### Appendix 8A

#### Table 8.14
Logit Estimates: Network Formation, Subcontracting, and Business performance

<table>
<thead>
<tr>
<th>Network formation elements</th>
<th>Performance</th>
<th>Market Expansion</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Profitability</td>
<td>Sale</td>
<td>National</td>
<td>International</td>
<td>Subcontracting</td>
<td>Subcontracting</td>
<td>Subcontracting</td>
<td>Subcontracting</td>
</tr>
<tr>
<td>MEM</td>
<td>Subcontracting</td>
<td>-0.3683</td>
<td>-0.0554</td>
<td>-0.1771</td>
<td>0.2379</td>
<td>(1.066)</td>
<td>(0.947)</td>
<td>(0.332)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.982)</td>
<td>(0.891)</td>
<td>(0.174)</td>
<td>(0.568)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td></td>
<td>0.5359</td>
<td>0.6909</td>
<td>0.0987</td>
<td>-0.3693</td>
<td>(0.685)</td>
<td>(0.891)</td>
<td>(0.174)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.982)</td>
<td>(0.891)</td>
<td>(0.174)</td>
<td>(0.568)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRI</td>
<td></td>
<td>0.2161</td>
<td>0.3795***</td>
<td>0.2943</td>
<td>1.5833*</td>
<td>(0.685)</td>
<td>(1.689)</td>
<td>(0.573)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.891)</td>
<td>(1.272)</td>
<td>(1.591)</td>
<td>(2.23)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXCON</td>
<td></td>
<td>0.7979</td>
<td>0.7260</td>
<td>-0.8306</td>
<td>-0.1489</td>
<td>(1.21)</td>
<td>(1.272)</td>
<td>(0.223)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.21)</td>
<td>(1.272)</td>
<td>(1.591)</td>
<td>(0.223)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEM</td>
<td></td>
<td>0.1208</td>
<td>0.1972</td>
<td>0.2855***</td>
<td>0.5196***</td>
<td>(0.345)</td>
<td>(0.542)</td>
<td>(1.682)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.345)</td>
<td>(0.542)</td>
<td>(1.682)</td>
<td>(1.790)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TF</td>
<td></td>
<td>-0.0249</td>
<td>-0.2434</td>
<td>2.8780*</td>
<td>4.1007*</td>
<td>(0.045)</td>
<td>(0.384)</td>
<td>(2.462)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.045)</td>
<td>(0.384)</td>
<td>(2.462)</td>
<td>(3.192)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td></td>
<td>0.013</td>
<td>0.019</td>
<td>0.023</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>÷2</strong></td>
<td></td>
<td>65.921</td>
<td>68.361</td>
<td>75.880</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(p-value for ÷2 )</td>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td></td>
<td>303</td>
<td>282</td>
<td>287</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: t-values are in parentheses.
* Statistically significant at 1 % level.
*** Statistically significant at 10 % level.
Chapter Nine

Networks, Resources, and Small Business Growth

9. 1. Introduction

As we have already seen in chapter 4, the overall network model comprises three components: 1) network of actors, 2) network of activities, and 3) network of resources. The basic categories of variable therefore are identified as actors, activities and resources (Beije and Groenewegen 1992, Hakansson and Johanson 1988). The networks of actors and activities have been already analyzed in the previous chapters. This chapter will be an analysis of the network of resources (use of external resources, see Jarillo 1989) on small enterprise growth. What is the impact of the ‘sub’ network on the growth of small enterprises?

Resources are critical for every firm because whenever and wherever firms perform, they need resources. However, the problem is that no single firm itself has every resource it requires, (Duijnhouwer 1994) and thus they have to be acquired from external actors such as suppliers, banks, government agencies, relatives, friends, etc. These resources can be ‘bought’ resources or ‘gratis’ resources. Although bought resources could be obtained without close and embedded relationships with other actors (market transaction: relationships are arm’s length), gratis resources or supporting services are unable to be obtained without such relationships. For example, if firms have money, they can buy the ‘bought’ resources, but not the gratis resources. Consequently, as this study is about ‘networks’, we focus here only on supporting or gratis resources such as money, information and other non-material supports.

In brief, the specific questions are: is there a correlation between the entrepreneurial networks and receiving these resources; is there an impact of these supporting resources on the performances of small enterprises; and, furthermore, are there interactive effects of the networks of actors and the networks of resources on the business performance. There are either very few or no studies available on these issues. This chapter, therefore, attempts to fill this gap in contemporary literature by examining the relationship between the entrepreneurial networks, the supporting resources (money, information, and other


238 Our overall network contains three sub networks: network of actors; network of activities; and network of resources. All of them are interrelated.
non-material support), and performances of small enterprises. Nevertheless, some argues that contacts with external actors are important for an entrepreneur in channeling different resources to the firm (Curran et al. 1993, Falemo 1989, Jarillo 1989). We can, therefore, expect that the more network relations any enterprise has, the more support the firm will receive from outside actors. Furthermore, in general, the organizations and the people such as government, supporting agencies and policy makers, who deal with small enterprise development, expect that the support services help to make some differences to the performances of small enterprises. These arguments are based on the two basic premises of social network theory (see chapter 3).

This chapter is organized in the following manner. In section 9.2, the study reviews the existing literature relevant to formulating testable hypotheses for the forthcoming discussion. It will be followed by definitions and the analytical framework. Section 9.4 presents the data, variables and the method of the data analysis. Section 9.5 presents the empirical results, and then section 9.6 discusses the results. Finally, a conclusion will be presented. It should be noted that, in this chapter, the focus of the discussion is only on the supporting resources.

9.2 Literature

In any event, resources are critical and important for any kind of enterprise. According to Hakansson and Johanson (1988) and others, as also already mentioned in chapter 3, when a firm is active, it needs resources (see chapter 3). As one actor does not have all the resources (Duijnhouwer 1994, Joyce et al. 1995), actors exchange resources (Beije and Groenewegen 1992, Hakansson 1987, Hellgren and Stjernberg 1987). Firms also develop resources by using other resources. However, as mentioned, most of the necessary resources to small firms come from other actors (‘outsiders’). In this way, when a firm performs activities, it gradually develops its own networks. According to the social network theory, as noted in chapter 3, networking is a system by which entrepreneurs can tap resources that are external to them. The network system would therefore be a major compensation for a small firm’s lack of its own resources (Anderson et al. 1994, Borch and Huse 1993, Gibb 1993, Joyce et al. 1995, Sengerberger et al. 1991, Steier and Greenwood 2000, Uzzi 1999). It provides a wider array of resources and offers greater potential for the future of the firm.

Uzzi (1997) pointed out that network ties link actors in multiple ways: as business partners, friends, agents, mentors, providing a means by which resources from one

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239 The support and resources that receive through the entrepreneurial networks.

240 Actors means the members of the networks (see Chapter 3). ‘Actor’ is the best term when we discuss networks because members of networks include individuals as well as organizations.
relationship can be engaged for another. These are external actors. The external networks of entrepreneurs\(^{241}\) have different functions (Ferland et al. 1996, Jarillo 1989, Paulsson 1987, Staber 1996a). For example, the external networks help to find new sources of resources (Cromie et al. 1994, Joyce et al. 1995). The external networks are also a way of getting information, which is the most important function of the networks (Aydalot 1988, Brown and Butler 1993, Curran et al. 1993, Falemo 1989, Kallinkos 1995, Rosenfeld 1996, Salancik 1995, Weick 1991). As Monsted (1994) and others (Baker 1990, Barr 2000, Jackson and Wolinsky 1996, Johannisson 1986) pointed out, the firms with many informal contacts were better off with regard to access to information. In addition, they are also used to complete resources (Brown and Butler 1993, Falemo 1989). Accordingly, the external networks are important in channeling resources and the necessary information and in competing with other firms. Moreover, since small enterprises do not spring up and expand in isolation (Mazzonis 1989), networks are necessary. Meanwhile, Johannisson (1986, 1987b, 1988, 1989) also stresses that the entrepreneurial external networks are a real source of resources. In particular, new entrepreneurs depend on their personal networks. Johannisson puts it this way: “… the new entrepreneur becomes dependent upon his personal network as a supplement to his own business resources” (Johannisson 1988: 84). Falemo (1989) further emphasizes that the interaction between a manager and an external person is based on the exchange of information and resources. These networks increase an actor's capacity to access resources (Belotti 1995, Falemo 1989, Hellgren and Stjernberg 1987, Jarillo 1988, Johannisson 1987b, 1989, Joyce et al. 1995, Staber 1996a) because networking is a method that entrepreneurs use to get access to external resources such as information, money and other support\(^{242}\) (Birley 1985, Brown and Butler 1993, Burt 1992, Galaskiewicz and Marsden 1978, Jarillo 1989, Larson 1992, Steier and Greenwood 2000, Tichy 1981).

As Galaskiewicz and Marsden (1978) argued, there are three types of resources provided by actors in the networks; information, money, and moral support. Similarly, according to Kallinkos (1995), networks have been conceived as resource-flows, information-flows, and webs of significations. According to Tichy (1981) four type of resources can be accessed through networks; information, goods and services, emotional support, and political influence. However, Falemo (1989) notes that the main part of the resources, which were channeled by external networks, was immaterial.

\(^{241}\) Once analyzing small businesses, the main composer is the entrepreneur. Accordingly, the study uses the entrepreneur’s personal networks instead of the firm’s networks. The entrepreneur’s personal network is not different from the firm’s network when one analyzes small businesses.

\(^{242}\) ‘Entrepreneurial networks function as conduits for information, provide access to resources without incurring the costs of vertical integration, …’ (Steier and Greenwood 2000:163).
Do different types of network provide different kinds of resources? Some researchers (Aldrich and Zimmer 1986, Grabher 1993a, 1993b, Ozcan 1995) suggest that particularly social networks provide information, financial support, and various kinds of material and non-material support for new entrepreneurs. Meanwhile, others, like Birley (1985), suggest that both the informal networks (family members, friends, etc) and the formal networks (banks, other firms, etc) provide information, money and other resources to the entrepreneurs. Accordingly, family members and friends are not only a source of information and advice (Aldrich and Zimmer 1986, Baines and Wheelock 1998, Birley 1985, Butler and Hansen 1991) but also a source of initial capital (Huck et al. 1999, Ozcan 1995, Steier and Greenwood 1995, 2000, Timmons 1994). According to Goodman (1989) in small firms in Italian industrial districts, the family and the community provide necessary resources. Consequently, supporting networks provide advice, information and capital (Belotti 1995, Curran and Blackburn 1993, Curran et al. 1993). However, the network literature (Cromie et al. 1994, Ebers and Grandori 1997, Holmlund and Kock 1998, Jarillo 1989, Miner et al. 1990, Uzzi 1999) often suggests that, in spite of fact that different types of networks provide different kinds of resource and support (see chapter 7), linkages ensure higher and more stable flows of resources.

As noted above, developed networks can be one way for a manager/owner to channel resources to the firm (Brown and Butler 1993, Falemo 1989, Jarillo 1989). Uzzi (1997), further, argued that the networks generate Pareto improvements, promoting reallocation of resources that makes at least one party better off without making anyone else worse off. In economies characterized by complex non-market social structures, informal networks in particular play a major role in the efficient allocation of scarce resources (Boorman and Levitt 1981, 1982). Meanwhile, resource buffering - one of the basic ideas of entrepreneurial networks - provided by inter-organizational linkages is especially relevant during periods of exogenous shock. Miner et al. (1990) stated that an organization might be buffered by being directly allied to another organization that could and would supply such tangible resources as money, people, machines, information, technology, products, and services. These linkages provide extra resources that affect business growth in several ways (Birley 1985, Jarillo 1989, Johannisson 1990b, Ostgaard and Birley 1996). Larson (1991) highlights the fact that the small enterprise benefits from network relations in various ways. Firstly, the network relationships help to mobilize resources quickly. Secondly, they also help on minimizing costs such as transaction costs since negotiations, bargaining, and written agreements are unnecessary among the network actors as they can trust each other. For example, Johanson and Mattsson (1987) noted “… The firm gets

243 It is common in community ties of social networks (see Wellman and Wortley, (1990), ‘Different Strokes from Different Folks: Community Ties and Social Support’, American Journal of Sociology, Vol. 96, pp. 558-88. “… get different types of support from different network members”, p. 583.

244 If it is impossible to make anyone better off without making someone else worse off, it is called Pareto efficiency. Pareto efficient outcomes can in principle be implemented through the market mechanism.
Entrepreneurial Networks and Small Business Development

access to these external resources through its network positions. ... Such relationships may be significant to the participants. They may reduce cost of exchange and production;...” (Johanson and Mattsson 1987: 35). Granovetter (1985) also argued that entrepreneurs/managers use their informal networks to overcome the uncertainty distrust that often harm market exchanges. In this respect too, entrepreneurial networks are a means of reducing transaction costs (Eyiah 2001, Granovetter 1985, Johanson and Mattsson 1987). Thirdly, Dubini and Aldrich (1991) argue networking contributes to business effectiveness. In this respect too, entrepreneurial networks are a means of reducing transaction costs (Eyiah 2001, Granovetter 1985, Johanson and Mattsson 1987). In general, the external resources received through external network relationships are very helpful for the development of products and for the expansion of markets (Belotti 1995, Borg 1991, Falemo 1989, Jarillo 1989). In particular, as Brown and Butler (1993) suggest, the types of information, which are provided by the networks, are necessary not only to identify entrepreneurial opportunities that warrant founding a business, but also to ensure the success of the business. Entrepreneurs’ ultimate success depends therefore on how successful they are in obtaining adequate resources. Their access to capital is a particularly important issue because small business owners almost always face liquidity constraints (Huck et al. 1999). Informal funding sources are the most popular among the small enterprises (Huck et al. 1999, Ozcan 1995, Timmons 1994). The ultimate argument is that the successes of small enterprises are dependent on not only the amount of resources they received but also the way these enterprises receive these resources.

9. 3. Analytical Framework and Hypotheses

In order to obtain a better understanding of the analytical framework of this chapter, the discussion in this section gives emphasis to definitions of resources and networks before the formal discussion of the analytical framework itself starts.

The existing literature describes and defines resources in various ways (Dubois and Hakansson 1997, Falemo 1989, Galaskiewicz and Marsden 1978, Hakansson 1993). Hakansson (1993) identified two types of resources: (a) internal resources of which the firm has a hierarchical control; and (b) external resources which the company needs but are controlled by external actors. We focus on the second type of resource in this study. It is also generally argued that resources are important to individual firms (Galaskiewicz and Marsden 1978, Perrow 1970) and, particularly for small enterprises; most of the resources coming from external actors.

External resources or services can be put into two sub categories, namely ‘bought’ services and the ‘gratis or supporting’ services. The bought resource, as Falemo (1989) defines, means that there exists a form of economic agreement between the firm and

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the external actors. On the other hand, gratis services take place without economic agreements between these two parties. Mostly, the gratis resources are free supporting services. These services are provided by the external actors for the purpose of supporting a particular firm. The patterns of the gratis resource flow are either symmetrical or multiplex. When a flow of a resource is bi-directional it is called a symmetry pattern. For example, a flow of a resource (for example resource ‘X’) in one direction (for example: toward the firm ‘A’) is associated with a flow of the same resource (say ‘X’) in the opposite direction. The multiplex pattern is that the flows of different resources (for example resources X, Y, Z, etc) in the same direction are associated with each other (See Galaskiewicz and Marsden 1978).246 In this sense, resources like money, information and moral supports are likely to be a symmetry pattern.

In this chapter, the discussion focuses in particular on the gratis/supporting resources. We take into consideration three kinds of resources: money, information, and other non-material supports. In the case of a small enterprise sector, money or finance is especially important because, traditionally, it is a major supporting instrument for the small enterprise sector. A number of supporting agencies including government agencies provides financial supports for the development of the small business sector in developing countries.

Then, this study introduces three types of entrepreneurial networks (Figure 9.1): social networks, supporting networks, and inter-firm networks (refer chapter 4). Social networks consist of actors such as family members, friends, and acquaintances. While supporting networks consist of supporting agencies such as banks, government agencies and NGOs, inter-firm networks include other enterprises both large and small. In this way, actors of the supporting networks and the inter-firm networks are generally considered as organizations. Therefore, we identified both together as ‘organizational networks’.

Figure 9.1 depicts these three types of networks. These networks are very important in describing the channeling of resources. In other words, firms use these relationships in order to gain access to the resources, which are important to their performance. The networks must be able to channel not only resources but also influence. In this model therefore we, like others, expect that the three networks will provide more resources either in the form of gratis or bought resources to the enterprises. We further expect that there will be a positive relationship between receiving more resources and performance in small firms, because small enterprises can achieve the complementary skills and resources that are essential for competitiveness and survival in the market through entrepreneurial networks - social, support, and inter-firm (Brown and Butler 1993, Duijhouwer 1994, Easton 1992, Gibb 1993, Humphrey and Schmitz 1996, Lim 1994). Therefore, the first hypothesis of this discussion is that:

Hypothesis: There is a significant positive relationship between the entrepreneurial networks (social networks, supporting networks, and inter-firm networks) and the small enterprises receiving gratis services (money, information, and other non-material support).  

(9.1)
Although Figure 9.1 displays two types of resources/services: bought resources and gratis/support resources, this chapter is only concerned with gratis resources. The study expects a positive correlation between the gratis resources and small firm performances.

Figure 9.2: Cyclical Behavior: Networks, Resources, and Performance

Figure 9.2 shows the cyclic behavior of network formation, resources and performances. As mentioned above, entrepreneurial networks help to provide more resources for firms. Subsequently, more resources help to record higher performances. The enhanced performances again motivate network formation. In developing countries, a number of supporting programs also provides various supporting services to small businesses. Traditionally, these supporting programs have concentrated on providing more and more resources to the small enterprises. This model in this chapter encourages two directions of support that are provided by the small firm development supporting programs (See Figure 8.2). One direction is the formation of entrepreneurial networks. The other is the providing more resources to small firms; the conventional direction of support.

Therefore, we can posit the following hypothesis:

Hypothesis: The interactive impacts of the networks of actors and networks of resources on the performances of small enterprises are positive. (9.2)

Table 9.1
Expected Relationships:
The Interactive Effects of Actors and Resources on Performance

<table>
<thead>
<tr>
<th></th>
<th>Performances</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Money</td>
<td>Information</td>
<td>Other non-material</td>
</tr>
<tr>
<td>Social Networks</td>
<td>+, Prob. &gt; 0.50</td>
<td>+, Prob. &gt; 0.50</td>
<td>+, Prob. &gt; 0.50</td>
</tr>
<tr>
<td>Support Networks</td>
<td>+, Prob. &gt; 0.50</td>
<td>+, Prob. &gt; 0.50</td>
<td>+, Prob. &gt; 0.50</td>
</tr>
<tr>
<td>Inter-firm Networks</td>
<td>+, Prob. &gt; 0.50</td>
<td>+, Prob. &gt; 0.50</td>
<td>+, Prob. &gt; 0.50</td>
</tr>
</tbody>
</table>

In Sri Lanka, a number of agencies are working on this path (see ILO, 1995; Lakshman et al., 1994a)
However, we further posit that:

Hypothesis: *There is no significant difference between the performance of small enterprises that receive financial support from formal sources and similar small enterprises without such supports.*

\[ H_0: \mu_{\text{small enterprises that receive financial support from formal sources}} = \mu_{\text{small enterprises without such support}} \]
\[ H_1: \mu_{\text{small enterprises that receive financial support from formal sources}} \neq \mu_{\text{small enterprises without such support}} \]

(9.3)

9.4 Methodology and Data

9.4.1 Variables

We analyze our own data set.\(^{248}\) Table 9.2 lists the variables used in this chapter, and indicates how they were operationalized. (Further details about the measurements and the data, refer chapter 5)

<table>
<thead>
<tr>
<th>Key</th>
<th>Variable</th>
<th>Operationalizing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables: Business Performance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gr_Fin1</td>
<td>Growth in finance</td>
<td>1 if growth, 0 otherwise (not growth)</td>
</tr>
<tr>
<td>Sale1</td>
<td>Growth in Sales</td>
<td>1 if growth, 0 otherwise (not growth)</td>
</tr>
<tr>
<td><strong>Variables: Networks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Networks</td>
<td>Network density</td>
<td></td>
</tr>
<tr>
<td>Support Networks</td>
<td>Network density</td>
<td></td>
</tr>
<tr>
<td>Inter-firm Networks</td>
<td>Network density</td>
<td></td>
</tr>
<tr>
<td>Organizational Networks</td>
<td>Network density</td>
<td></td>
</tr>
<tr>
<td><strong>Variables: Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td>Financial assistance given by the external actors (yes/no)</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>Information provided by the other actors (yes/no)</td>
<td></td>
</tr>
<tr>
<td>Other non-material support</td>
<td>Non-material support (advice, encouragement, etc) (yes/no)</td>
<td></td>
</tr>
<tr>
<td><strong>Variables: Entrepreneur-related</strong></td>
<td>(has already been explained in chapter 5)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male = 1, Female = 0</td>
<td></td>
</tr>
<tr>
<td>Age (logarithm)</td>
<td>Years, 1, 2, 3, …</td>
<td></td>
</tr>
<tr>
<td>Place of Birth</td>
<td>Urban = 1, Rural = 0</td>
<td></td>
</tr>
<tr>
<td>Educational level</td>
<td>&gt;G.C.E. Advance Level = 1, &lt; G.C.E. Advance Level = 0,</td>
<td></td>
</tr>
<tr>
<td>Parents’ business</td>
<td>If parents has owned business = 1, otherwise = 0</td>
<td></td>
</tr>
<tr>
<td>Business experience</td>
<td>(Same field) Years 1, 2, 3, …</td>
<td></td>
</tr>
<tr>
<td>Pre-training</td>
<td>Yes = 1, No = 0</td>
<td></td>
</tr>
<tr>
<td><strong>Variables: Enterprise-related</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business life-time (logarithm)</td>
<td>Years</td>
<td></td>
</tr>
<tr>
<td>Business Location</td>
<td>Industrial Estate (parks) = 1, otherwise = 0</td>
<td></td>
</tr>
</tbody>
</table>

\(^{248}\) See Chapter 5 for further information about the sample survey, and the basic characteristic of the data and variables.
When examining the hypotheses, we can identify two types of dependent variables, namely resources and performance of small enterprises. Consequently, there are three types of resource: money, information, and other non-material supports. All of them are dummy variables: for example, whether financial support is received or not (1 = if receive, 0 = otherwise). These three types of resources are used as dependent variables for the first hypothesis (9.1). In addition, two performance measures are used as dependent variables for the second (9.2) and the third hypotheses (9.3) because business performances have been measured in two ways in the study: performance in sales, and performance in financial term. Therefore, there are five dependent variables: financial supports, information, other non-material supports, growth in sales, and growth in financial term.

With regard to the first hypothesis (9.1), there are three independent variables: social networks, supporting networks, and inter-firm networks. For the correlation measures, the study uses network densities: the density of social networks, the density of support networks, and the density of inter-firm networks. In the case of probability analysis, we used networks as dummy variables: dummy (social) 1 = if the entrepreneur has social network relations (yes), 0 = otherwise (no), dummy (supporting) 1 = if the entrepreneur has support network relations (yes), 0 = otherwise (no), dummy (inter-firm) 1 = if the entrepreneur has inter-firm network relations (yes), 0 = otherwise (no). With regard to the third hypothesis (9.2), money, information, and other non-material support are taken into consideration as independent variables. Regarding the second hypothesis (9.3), we consider only financial support from formal sources as an independent variable. The formal sources include banks (state or private), other financial institutes, NGOs, government institutes, and other formal organizations.

**Control Variables**
As already mentioned, before testing the impact of the supporting resources, it is important to ensure that the potential effect of the other factors is minimized. Therefore, several other variables are statistically controlled in the estimations. Previous researches (for

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**Table:**

<table>
<thead>
<tr>
<th>Business Activities S₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing = 1, otherwise = 0</td>
</tr>
<tr>
<td>Services = 1, otherwise = 0</td>
</tr>
<tr>
<td>Family workers Z₁</td>
</tr>
<tr>
<td>Yes = 1, No = 0</td>
</tr>
<tr>
<td>Employees Z₂</td>
</tr>
<tr>
<td>&lt; 3 = 1, otherwise = 0</td>
</tr>
<tr>
<td>4- 25 = 1, otherwise = 0</td>
</tr>
<tr>
<td>Market location ML₄</td>
</tr>
<tr>
<td>Within the district = 1, otherwise = 0</td>
</tr>
<tr>
<td>Outside the district, but within the country =1, otherwise =0</td>
</tr>
</tbody>
</table>

---

249 Similar identification has been done by Wellman and Wortley in 1990. They also used multiple logistic regressions.

250 Density of the network is measured as the proportion of ties presented out of all possible ties (see section 7.3.2 in chapter 7)
example, Baum and Mezias 1993) have also suggested several organizational control variables that affect growth. Section 5.2.7.2 in chapter 5 have explained these control variables, and the way how they are operationalized for this study.

9. 4. 2. Data Analysis

In addition to partial correlation statistical techniques, Logit regressions were also used to test the first and second hypotheses as our dependent variables are qualitative, dichotomic and categorical (see section 5.2.7.1 in chapter 5 for the form of the model). In this model, both dichotomic and polytomic variables can be included (Haberman 1978, Hagenaars 1990, Maddala 1983). The maximum likelihood method was used to estimate the logit coefficients (Agresti 1990, Maddala 1983, Pindyck and Rubinfeld 1991).

However, it is hard to interpret the logit coefficients themselves. Most people (for example, Mukherjee et al. 1998), therefore, work out odds ratios and probabilities (refer section 5.2.7.1 in chapter 5).

The third hypothesis (9.3) is about the differences between two or more groups. In this type of situation, Sarder et al., (1997) and others (see also Hair et al. 1995) propose that the most appropriate test is Multivariate Analysis of Variance (MANOVA). The results of these tests are presented below.

9. 5. Results

9. 5.1. Network Resources and Entrepreneurial Networks

The results of the analyses of the relationships between the entrepreneurial networks and the elements of gratis networks are presented in Table 9.2 (Partial correlation matrix between networks of actors and resources). As predicted, each correlation is positive except three relationships (social networks and technology $r = -0.0562$, p-value = 0.344; inter-firm networks and money from formal sources $r = -0.0109$, p-value = 0.854; and inter-firm networks and technology $r = -0.0044$, p-value = 0.940). Out of 28 partial correlation coefficients in Table 9.3, 17 (9 coefficients at 1 % level of significance, 4 at 5 %, and another 4 at 10 % level of significance) correlation coefficients are statistically significant.

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251 Refer section 5.2.7. in Chapter 5, for further details about logit model and measurement techniques.

252 However, these negative correlation coefficients are not statistically significant.
Table 9.3  
Partial Correlation between Networks of Actors (density) and Resources

<table>
<thead>
<tr>
<th></th>
<th>Social Networks</th>
<th>Supporting Networks</th>
<th>Inter-firm Networks</th>
<th>Organizational Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money from Formal sources</td>
<td>0.0127</td>
<td>0.3944*</td>
<td>-0.0109</td>
<td>0.2833*</td>
</tr>
<tr>
<td></td>
<td>(0.831)</td>
<td>(0.000)</td>
<td>(0.854)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Money from informal sources</td>
<td>0.2105*</td>
<td>0.1292**</td>
<td>0.0049</td>
<td>0.0988***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.029)</td>
<td>(0.934)</td>
<td>(0.095)</td>
</tr>
<tr>
<td>Money from any sources</td>
<td>0.0598</td>
<td>0.1823*</td>
<td>0.0006</td>
<td>0.1352**</td>
</tr>
<tr>
<td></td>
<td>(0.314)</td>
<td>(0.002)</td>
<td>(0.991)</td>
<td>(0.022)</td>
</tr>
<tr>
<td>Technology</td>
<td>-0.0562</td>
<td>0.0706***</td>
<td>-0.0044</td>
<td>0.0482</td>
</tr>
<tr>
<td></td>
<td>(0.344)</td>
<td>(0.064)</td>
<td>(0.940)</td>
<td>(0.417)</td>
</tr>
<tr>
<td></td>
<td>0.1061***</td>
<td>0.0644</td>
<td>0.0586</td>
<td>0.0817</td>
</tr>
<tr>
<td></td>
<td>(0.073)</td>
<td>(0.278)</td>
<td>(0.232)</td>
<td>(0.168)</td>
</tr>
<tr>
<td>Labor Training</td>
<td>0.2056*</td>
<td>0.1712*</td>
<td>0.1093***</td>
<td>0.1913*</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.004)</td>
<td>(0.065)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Market Information</td>
<td>0.1670*</td>
<td>0.1362**</td>
<td>0.1518**</td>
<td>0.1896*</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.021)</td>
<td>(0.010)</td>
<td>(0.001)</td>
</tr>
</tbody>
</table>

Note:  
(i) N = 284  
(ii) Significant p-values are in parentheses for 2-tail test.  
* Significant p-value (p) < 0.01, statistically significant at 1 % level.  
** Significant p-value (p) < 0.05, statistically significant at 5 % level.  
*** Significant p-value (p) < 0.10, statistically significant at 10 % level.

Appendix 9A presents the results of logit models. Overall significance of the estimates of the models is fairly high. We estimated seven different models each representing different types of resources. Money from formal sources (model 9.1), from informal sources (model 9.2), and from any sources (model 9.3) explain nearly 36, 39 and 17 per cent of their respective explanatory variables respectively. The results concerning the financial resources and network relations (models 9.1, 9.2 and 9.3 in Appendix 9A) generally support our first hypothesis (9.1). In the regression equation in model 9.1, financial supports from formal sources, supporting networks \( t = 6.261, p\text{-value} < 0.01 \) are statistically significant, while social networks \( t = 0.055 \) and organizational networks \( t = 1.055 \) are not statistically significant.

Probability\(^\text{253}\) measures are reported in Table 9.4. With regard to supporting networks (see Table 9.4), all probability measures are statistically highly significant \( p\text{-value} < 0.01 \). Likewise, in the case of the other non-material supports, each individual coefficient is statistically significant. However, neither of the other coefficients for social networks and inter-firm networks are statistically significant (see Table 9.4).

\(^{253}\) Refer section 5.2.7.1 in chapter 5 for the method of estimations of logit probability.
Entrepreneurial Networks and Small Business Development

Table 9.4
Predicted Probability of the Logit Model of Networks of Resources on Actors’ Networks

<table>
<thead>
<tr>
<th>Networks</th>
<th>Finance from formal</th>
<th>Finance from any</th>
<th>Information</th>
<th>other non-material support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Social</td>
<td>0.34</td>
<td>0.66</td>
<td>0.57</td>
<td>0.43</td>
</tr>
<tr>
<td>Supporting</td>
<td>0.95*</td>
<td>0.05*</td>
<td>0.70*</td>
<td>0.30*</td>
</tr>
<tr>
<td>Inter-firm</td>
<td>0.54</td>
<td>0.46</td>
<td>0.46</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Note: \( N = 303 \)

* Significant p-value (p) < 0.01, statistically significant at 1 % level.
** Significant p-value (p) < 0.05, statistically significant at 5 % level.
*** Significant p-value (p) < 0.10, statistically significant at 10 % level.

The results reported in Table 9.4 indicate that the small entrepreneurs, who have supporting network relations, are more likely to receive financial support from formal sources (probability of 0.95, p-value < 0.01). The probability of the similar entrepreneurs receiving finance from any sources is 0.70 (p-value < 0.01). With regard to resource in the form of information, the small entrepreneurs with supporting network relations are significantly likely to obtain more information (probability of 0.77, p-value < 0.01). In the case of ‘other non-material support’, the last column (other non-material) of the Table 9.3 shows that the probabilities of having non-material supports are significantly higher when small entrepreneurs have entrepreneurial networks (social = 0.77, supporting = 0.74, and inter-firm = 0.73).

Table 9.5
Partial Correlation between Supports Resources and Performance

<table>
<thead>
<tr>
<th>Resources</th>
<th>Performance</th>
<th>Gr_Fin1</th>
<th>Gr_Sale1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money</td>
<td>0.0761</td>
<td>(0.273)</td>
<td>0.1251***</td>
</tr>
<tr>
<td>Information</td>
<td>0.1495**</td>
<td>(0.031)</td>
<td>0.0843</td>
</tr>
<tr>
<td>Other non-material support</td>
<td>0.0453</td>
<td>(0.515)</td>
<td>0.0387</td>
</tr>
</tbody>
</table>

Note: \( (i) N = 207 \)

(ii) Significant p-values are in the parentheses for 2-tail test.

** Significant p-value (p) < 0.05, statistically significant at 5 % level.
*** Significant p-value (p) < 0.10, statistically significant at 10 % level.

The partial correlation between supports resources and firm performance, controlling for network actors, presents in Table 9.5. The results indicate that the relationship between network resources and business performance is also positive. However, only few relationships (Gr_Fin1 and Information, and Gr_Sale1 and Money) are statistically significant (see Table 9.5)
9. 5.2. Interactive Effects of Networks and Resources on Performance

Hypothesis 9.2 (the interactive impacts of the networks of actors and networks of resources on the performances of small enterprises are positive) is tested using logit model of networks of actors, networks of resources and firm performance. The predicted probability of the logit model is presented in Table 9.6. The probability indicates that entrepreneurs who maintain social networks and have financial support from any sources are significantly more likely to run growth-oriented firms (probability of 0.98, and p-value < 0.01). Similarly, the enterprises which have support networks and financial support tend significantly more to become members of growth-oriented groups (probability of 0.90, and p-value < 0.05). The other interesting results given in the probabilities are that the interactive effect of inter-firm networks and information on the business performance (the probability of being a growth-oriented firm is 0.95, and p-value < 0.10), and the interactive effect of inter-firm networks and other non-material supports on the business performance (probability of 0.96, and p-value < 0.05).

Table 9.6
Estimated Probability of Logit Model:
Networks of Actors, Networks of Resources, and Growth

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Performance: Growth in Financial Term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Money</td>
</tr>
<tr>
<td>Social Networks</td>
<td>0.98*</td>
</tr>
<tr>
<td>Support Networks</td>
<td>0.90**</td>
</tr>
<tr>
<td>Inter-firm Networks</td>
<td>0.10</td>
</tr>
</tbody>
</table>

Note: N = 303
* Significant p-value (p) < 0.01, statistically significant at 1 % level.
** Significant p-value (p) < 0.05, statistically significant at 5 % level.
*** Significant p-value (p) < 0.10, statistically significant at 10 % level.

Table 9.6 reports the results of testing the hypothesis 9.3, which is about the relationship between performance of the small enterprises and receiving financial support from formal sources. The hypothesis (9.3) is tested in different ways. As table 9.2 shows, the performances have been measured in terms of financial and sales (growth = 1, otherwise (neutral and no growth) = 0). The ways in which the variables were operationalized were discussed in section 9.4.2. According to the MANOVA results in Table 9.7, in general our hypothesis (9.3) is confirmed, which means that there is no significant difference between the performance of small enterprises receiving financial support services from formal sources and similar small enterprises receiving no such support.

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254 As the p-values are greater than 0.05.
### Table 9.7

**Financial Assistance from Formal Sources and Business Performance**

<table>
<thead>
<tr>
<th>Performance variable</th>
<th>Financial Assistance from formal Sources</th>
<th>F-value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assisted</td>
<td>0.62</td>
<td>4.681</td>
<td>0.031**</td>
</tr>
<tr>
<td>Not Assisted</td>
<td>0.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Gr_Fin1**

**Gr_Sale1**

---

However, when the results are analyzed with the first performance measure, which is the growth in finance (1 = growth or 0 = balance and no growth), the hypothesis is not confirmed.255 In this case, the null hypothesis is rejected ($H_0$; $\mu_{(\text{small enterprises that receive financial support from formal sources})} = \mu_{(\text{small enterprises without such support})}$) since the $p$-value is 0.031 ($p$-value = 0.031 < level of significance = 0.05). Therefore, there is a highly significant difference between the performance (in the case of growth in financial term) of small enterprises receiving financial support services from formal sources and similar small enterprises receiving no such support.

### 9. 6. Discussion

As is expected by Hypothesis 9.1 and also reported in previous studies (Galaskiewicz and Marsden 1978), the correlation between support/gratis resources (money, information and other non-material supports) and the entrepreneurial networks is positive. In general our findings are consistent with others findings. The existing network literature (see for example, Aldrich and Zimmer 1986, Brown and Butler 1993, Curran et al. 1993, Duijnhouwer 1994, Falemo 1989, Galaskiewicz and Marsden 1978, Grabher 1993b, Johanson and Mattsson 1987, Ozcan 1995) suggests that the entrepreneurial networks (social, support, or inter-firm networks) are capable of providing resources to small firms, which cannot be obtained as an isolated body itself. In other words, the entrepreneurial network is like an opportunity set (Brown and Butler 1993, Butler and Hansen 1991). For example, the actors of the social networks provide financial supports, information and other non-material support as well (Aldrich and Zimmer 1986, Grabher 1993b, Greve 1995, Ozcan 1995, Weick 1991). Inter-organizational networks also furnish these resources to small enterprises (Butler and Hansen 1991, Holmlund and Kock 1998, Huggins 1998, Johanson and Mattsson 1987, Joyce et al. 1995, Rosenfeld 1996, Van Dijk 1996). However, Joyce et al. (1995) suggest that resource barriers are best overcome by developing networks selectively. In our case, though all relations are positive as expected, two coefficients of correlation are not statistically significant. These are the correlation

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255 If we decided at 5 % level of significance.
between money support and social networks \( (r = 0.0626, p = 0.340) \), and the correlation between money support and inter-firm networks \( (r = 0.0640, p = 0.330) \).

Hypothesis 9.2 further expected a positive interactive impact of networks of actors and resources on the performance of small enterprises. As expected, it is positive, and thus found that a firm with network relations and external resources is more likely to belong to the growth group. The findings highlight the fact that resources are not enough for the performance of small enterprises in developing countries. In addition, network relationships with other parties such as relatives, friends, supporting organizations and other firms are very important because they provide not only resources but also the necessary influence and encouragement for the small firms. These relationships also help to provide the necessary resources with minimum transaction costs. As argued in chapter 3, market governance imposes higher transaction costs on the producers in general and the small producers in particular because these small producers have a lack of bargaining power if they do not have network relationships with others. The results of the hypothesis 9.2 are consistent with the hypothesis 9.3. We attempt to demonstrate that outside support such as providing money (as traditional small enterprise supporting programs do) is not enough for the performance of small enterprises in LDCs.

As predicted by Hypothesis 9.3, the small enterprises receiving financial support from the formal sources report significantly higher growth in finance. With regard to growth in sales, we are unable to make such a conclusion, because although the mean value of the financial assisted group reported higher than that of the non-assisted group, it is not significantly acceptable. Most of the entrepreneurs sought financial support for recovering their business rather than expansion. The other reason is the time gap between the receiving financial support and obtaining the results from the new projects, which means that although the money was invested in a new project, it takes some time to get the benefits. We asked the respondents about financial support for the last two years. On the other hand, we found that the firms receiving such a support reported a significantly higher growth in financial term, because the respondents used this money as their own when they calculated their financial performance. However, this is not the right way to do the accounting, but these entrepreneurs hardly ever use the proper system or any system of bookkeeping. In most cases, they do not keep their accounts. They have no book recording about the exchanges that are taking place. On the other hand, most of the entrepreneurs use this money on day-to-day businesses instead of investing in a new project.

In general, for the entrepreneurs with network relations as well as for those who receive resources/support from the outside such as money, information, and other non-material

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256 Also see Lakshman et al. 1994a: 123.
Entrepreneurial Networks and Small Business Development

support, the probability of such entrepreneurs being in the high growth group is significantly higher. Previous studies also suggest that firms, particularly small firms, involved in networks are better able to gather information quickly about loan deals, new technology, and to access the necessary resources. Therefore, these findings suggest that small enterprise supporting agencies focus their programs on not only providing funding and other facilities, but also furnishing facilities to build up network relationships because networking addresses the supply-side as well as the demand-side issues.

9.7. Conclusion

The research findings suggest that the entrepreneurial networks provide more resources for the firms. Social networks in particular provide more information and other non-material support. Organizational networks, especially the supporting networks, provide financial support (see Table 9.4). However, the results of the study do not suggest that financial support provided by the formal sources help to improve the performances of the small enterprises (see section 9.5.2). This is slightly contradictory in view of findings of the others (for example, Sarder et al. 1997). One reason for the apparent difference might be the way small enterprises handle this money in Sri Lanka. However, we believe that this framework helps to understand how small entrepreneurs mobilize the support they need in order to maintain successful business ventures.

The results further show that the entrepreneurs who have better network relations, as well as those who obtain resources/support from outsiders through the entrepreneurial networks, significantly reported higher probability of success in their businesses. These findings, however, indicate that providing outside resources and support are not enough for the development of small enterprises in developing countries. In addition, entrepreneurs’ network relationships with other actors such as relatives, friends, supporting organizations and other firms are very important because small firms obtain resources as well as influence, guidance, encouragement and trust through these relationships. All of these are very important for small enterprises because they do not have enough resources and experience. Strong networks guarantee a steady supply of relevant information, support and resources. Thus, the findings of this chapter highlight the fact that an interactive effect of networks of actors and resources on the performances of small enterprises is positive.

An another important feature of an entrepreneur's network is that the different types of networks are reservoirs of potential support. These reservoirs vary in the nature of the support possibilities, depending upon the experience and capabilities of the contacts. These contacts were not sources of finance and information alone, but, potentially, of managerial and business advice and of political influence. Earlier, citing Galaskiewicz and Marsden (1978) and Tichy (1981) we noticed that there are at least four resources
that might be accessed through networks, of which information is one. Networking allows newly small firms to enlarge their scope of action, economize on time, and to gain access to more resources effectively and efficiently. Networking offer people a powerful tool in their own personal development and in the development of their businesses.

The findings give a clear message for entrepreneurs, policy makers and supporting institutions. They should focus their attention and programs not only on providing increasing resources (supply-driven) but also on providing more facilities and effort in ‘networking’ because, by definition, these firms have limited resources (Ernst 1997, Joyce et al. 1995) and thus small firms do not expand in isolation (Mazzonis 1989). The major problem of a small firm is loneliness (Sengenberger and Pyke 1992). Small firms need to work together with other firms and public institutes to overcome the problem of loneliness (Holmstrom 1998) and of lack of resources (Holmlund and Kock 1998, Joyce et al. 1995, Staber 1996). External actors in small firms cannot therefore be neglected when one discusses small firms and their development (Duijnhouwer 1994, Donckels and Lambrecht 1995). Entrepreneurs maintain regular relationships with their external actors for the purpose of getting resources and information. These relations are of high significance both in order to obtain external resources such as important information, finance, etc and to influence on decisions of managers/owners. In brief, networking is one of the best solutions though it may not be a magic solution.

Several limitations should be noted when interpreting the results of this chapter. More importantly, most of the entrepreneurs involved do not maintain regular accounts. The other limitation, which is also a part of irregular and/or of lack of bookkeeping, is the time gap between receiving financial support and recording the performance.

Network building is an investment: it takes time, money and effort. For instance, in addition to attending workshops and trade fairs, formal meetings and seminars, small entrepreneurs spend time drinking tea and other beverages, exchanging information with different people to find their partners, contractors, intermediaries and clients. Therefore, the problem is the opportunity costs though Borch and Huse (1993) point out that informal networks are cheap to maintain. However, the costs of maintenance in a firm-centered network vary according to various factors such as the nature of relationships, network size,

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258 According to Cromie et al., (1994), the greater the number of contacts available to an entrepreneur the greater are the chances of him/her acquiring the information and other resources (s)he needs at the minimum possible cost. However, the flow of immaterial resources is dominant in resource channeling (Falemo 1989).

259 Network ties are dual valued, parameterized with both a benefit and a cost. In addition to the direct benefits and costs, network ties provide indirect benefits and costs (see Hummon 2000)
stability, etc (See Benassi 1995). Benassi (1995) suggests that the level of the dynamics and the cost of maintenance are two critical measurements for capturing some of the characteristics of networks. Therefore, it is interesting to measure the opportunity costs of building and of maintenance networks, and to evaluate its benefits. Moreover, utility maximization is one obvious mechanism for analyzing the economic rational choices of network actors (see Jackson and Wolinsky 1996). Since this is beyond the scope of this thesis, we leave this question for others, who deal with research in the field of entrepreneurial networks.
### Table 9.8

**Estimated Logit Models of Networks of Resources on Actors’ Networks**

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Model 9.1</th>
<th>Model 9.2</th>
<th>Model 9.3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Finance from Formal Sources</td>
<td>Finance from informal sources</td>
<td>Finance from Any Sources</td>
</tr>
<tr>
<td>Social Networks</td>
<td>0.0428 (0.055)</td>
<td>3.5108* (3.576)</td>
<td>0.7455 (1.026)</td>
</tr>
<tr>
<td>Supporting Networks</td>
<td>5.9216* (6.261)</td>
<td>1.8028*** (1.850)</td>
<td>2.3712* (3.081)</td>
</tr>
<tr>
<td>Inter-firm networks</td>
<td>0.7062 (1.055)</td>
<td>0.4485 (0.584)</td>
<td>0.2537 (0.430)</td>
</tr>
<tr>
<td><strong>Entrepreneur-related Variable:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1.6643* (3.319)</td>
<td>0.7522 (1.502)</td>
<td>0.7206*** (1.718)</td>
</tr>
<tr>
<td>Age</td>
<td>0.0266*** (1.694)</td>
<td>-0.0379*** (1.944)</td>
<td>-0.0111 (0.730)</td>
</tr>
<tr>
<td>Place of Birth</td>
<td>-0.0010 (0.003)</td>
<td>0.4382 (0.921)</td>
<td>0.1861 (0.546)</td>
</tr>
<tr>
<td>Level of Education</td>
<td>0.0875 (0.260)</td>
<td>-0.4129 (0.995)</td>
<td>0.3655 (1.154)</td>
</tr>
<tr>
<td>Parents’ Business</td>
<td>-0.3575 (0.952)</td>
<td>-0.5480 (1.25)</td>
<td>0.3219 (0.987)</td>
</tr>
<tr>
<td>Business Experience</td>
<td>0.0187*** (1.67)</td>
<td>-0.0193 (0.781)</td>
<td>0.0421*** (1.949)</td>
</tr>
<tr>
<td>Pre-Training</td>
<td>0.0296 (0.073)</td>
<td>-0.5550 (1.157)</td>
<td>-0.3141 (0.830)</td>
</tr>
<tr>
<td>Business life-time</td>
<td>-0.0435*** (1.650)</td>
<td>0.0003 (0.010)</td>
<td>-0.0201 (0.736)</td>
</tr>
<tr>
<td>Business location</td>
<td>-0.3522 (0.651)</td>
<td>-1.4057* (2.585)</td>
<td>-0.8337*** (1.843)</td>
</tr>
<tr>
<td>Business Activities</td>
<td>-0.0531 (0.132)</td>
<td>0.2211 (0.440)</td>
<td>0.2549 (0.679)</td>
</tr>
<tr>
<td>Family Employees</td>
<td>-0.0683 (0.195)</td>
<td>0.0550 (0.124)</td>
<td>-0.1109 (0.342)</td>
</tr>
<tr>
<td>No. of Employees</td>
<td>-0.3652 (0.841)</td>
<td>-0.4098 (0.732)</td>
<td>0.2482 (0.619)</td>
</tr>
<tr>
<td>Market Location</td>
<td>-0.1932 (0.455)</td>
<td>0.3692 (0.696)</td>
<td>0.4248 (1.074)</td>
</tr>
<tr>
<td></td>
<td>0.0132 (0.026)</td>
<td>0.9823*** (1.777)</td>
<td>-0.5265 (1.108)</td>
</tr>
<tr>
<td></td>
<td>0.2300 (0.534)</td>
<td>0.4308 (0.773)</td>
<td>-0.6332 (1.4505)</td>
</tr>
<tr>
<td>Intercept</td>
<td>-3.3827* (2.963)</td>
<td>1.1593 (0.919)</td>
<td>-0.3348 (0.335)</td>
</tr>
</tbody>
</table>

**Note:** t-values are in parentheses.

* Significant p-value (p) < 0.01, statistically significant at 1 % level.

** Significant p-value (p) < 0.05, statistically significant at 5 % level.

*** Significant p-value (p) < 0.10, statistically significant at 10 % level.
## Appendix 9A: Table 9.8 (Continued….)

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>Model 9.4</th>
<th>Model 9.5</th>
<th>Model 9.6</th>
<th>Model 9.7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technology</td>
<td>Labor Training</td>
<td>Market Information</td>
<td>Nonmaterial supports</td>
<td></td>
</tr>
<tr>
<td>Social Networks</td>
<td>-0.9441 (1.1995)</td>
<td>1.5063*** (1.825)</td>
<td>3.1805* (3.401)</td>
<td>2.8130* (2.772)</td>
<td></td>
</tr>
<tr>
<td>Supporting Networks</td>
<td>1.0502*** (1.8621)</td>
<td>0.7007 (0.855)</td>
<td>2.5626* (3.394)</td>
<td>2.1600** (2.000)</td>
<td></td>
</tr>
<tr>
<td>Inter-firm networks</td>
<td>0.0764 (0.199)</td>
<td>0.6123 (0.917)</td>
<td>0.8749 (1.159)</td>
<td>1.7525** (2.139)</td>
<td></td>
</tr>
</tbody>
</table>

### Entrepreneur-related Variable:

<table>
<thead>
<tr>
<th>Value</th>
<th>Model 9.4</th>
<th>Model 9.5</th>
<th>Model 9.6</th>
<th>Model 9.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-1.3339* (2.990)</td>
<td>-1.7760* (3.744)</td>
<td>-1.4182** (2.020)</td>
<td>-0.4398 (0.664)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.0132 (0.795)</td>
<td>0.0017 (0.101)</td>
<td>0.0079 (0.420)</td>
<td>-0.0394** (2.041)</td>
</tr>
<tr>
<td>Place of Birth</td>
<td>0.1630*** (1.721)</td>
<td>0.0075 (0.020)</td>
<td>0.1668 (0.393)</td>
<td>-0.1197 (0.273)</td>
</tr>
<tr>
<td>Level of Education</td>
<td>0.2871 (0.879)</td>
<td>-0.6765*** (1.952)</td>
<td>-0.1868 (0.496)</td>
<td>0.6325 (1.356)</td>
</tr>
<tr>
<td>Parents’ Business</td>
<td>1.1617* (2.941)</td>
<td>-0.2345 (0.627)</td>
<td>0.2190 (0.530)</td>
<td>0.0754 (0.176)</td>
</tr>
<tr>
<td>Business Experience</td>
<td>0.0389*** (1.776)</td>
<td>0.0183 (0.796)</td>
<td>0.0121 (0.457)</td>
<td>0.0197 (0.727)</td>
</tr>
<tr>
<td>Pre-Training</td>
<td>0.5207 (1.344)</td>
<td>-0.3605 (0.874)</td>
<td>-0.341 (0.726)</td>
<td>0.8849 (1.405)</td>
</tr>
</tbody>
</table>

### Enterprise-related factors:

<table>
<thead>
<tr>
<th>Value</th>
<th>Model 9.4</th>
<th>Model 9.5</th>
<th>Model 9.6</th>
<th>Model 9.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business life-time</td>
<td>0.0341 (1.249)</td>
<td>0.0561*** (1.858)</td>
<td>0.0057 (0.169)</td>
<td>-0.0027 (0.083)</td>
</tr>
<tr>
<td>Business location</td>
<td>0.5354 (1.076)</td>
<td>-0.3309 (0.611)</td>
<td>0.6629 (0.834)</td>
<td>1.6180 (1.537)</td>
</tr>
<tr>
<td>Business Activities</td>
<td>1.0283* (2.628)</td>
<td>0.0424 (0.103)</td>
<td>-0.2139 (0.460)</td>
<td>-0.0481 (0.102)</td>
</tr>
<tr>
<td>Family Employees</td>
<td>0.3219 (1.132)</td>
<td>1.7095* (5.723)</td>
<td>0.4540 (1.352)</td>
<td>0.2708 (0.748)</td>
</tr>
<tr>
<td>No. of Employees</td>
<td>0.1363 (0.3125)</td>
<td>0.1631 (0.359)</td>
<td>0.2969 (0.609)</td>
<td>0.0506 (0.010)</td>
</tr>
<tr>
<td>Market Location</td>
<td>-0.6778 (1.361)</td>
<td>0.1390 (0.266)</td>
<td>-0.4712 (0.73)</td>
<td>-0.3511 (0.462)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.5826 (0.539)</td>
<td>-0.9427 (0.838)</td>
<td>0.3171 (0.233)</td>
<td>0.8229 (0.576)</td>
</tr>
</tbody>
</table>

Note: (a) t-values are in parentheses; (b) Number of observation = 302
* Significant p-value (p) < 0.01, statistically significant at 1 % level.
** Significant p-value (p) < 0.05, statistically significant at 5 % level.
*** Significant p-value (p) < 0.10, statistically significant at 10 % level.
Chapter Ten

Summary and Conclusion,
Findings, Limitations, Recommendations/Policy Implications,
and Future Research Directions

10.1. Introduction

In this final chapter of this thesis, research findings, recommendations, policy implications, limitations of the study and future research directions will be discussed. The chapter proceeds as follows. Section 10.2 of this chapter presents a brief summary of each chapter. In section 10.3, we will highlight the general findings. Section 10.4 discusses the limitations. Recommendations including policy implications and research agenda for further research will be presented in section 10.5. Finally, section 10.6 concludes the study.

10.2. Summary

The primary focus of this thesis on entrepreneurial networks has been to ask questions such as, ‘why’, ‘what’, and ‘how’. The ‘why’ question focuses on understanding the reasons why entrepreneurs develop and maintain their network relationships. The ‘what’ question has been asked in order to understand the networks’ linkages, and the impact of the entrepreneurial networks on business performances. ‘How’ questions were related to network formation; how entrepreneurs form and maintain their networks; how the entrepreneurial networks changes with firm’s life cycle; and how they utilize these networks in business performance. We have linked all of these elements to business performance. To find out answers for these questions, we conducted our field survey in Sri Lanka. Sri Lanka is a small developing country, in South Asia. In recent years, the country has introduced a number of promotional programs in order to promote small and medium enterprises. In addition to the government promotional programs, non-government organizations have also provided various promotion facilities for development of the sector. Nevertheless, the system has not been properly utilized due to lack of co-ordination among the supporting institutes. Why do small entrepreneurs not utilize these services and facilities properly? This background forced me to study the small business development in Sri Lanka on the context of entrepreneurial informal networks. The entrepreneurial informal networks were defined in this study as entrepreneurs’ personal relationships with external actors or outsiders. The external actors or outsiders can be individuals, firms or organizations. The study argued that these relationships help small entrepreneurs to obtain necessary support and resources efficiently and effectively. Thus, the main objective of this study has been to investigate, analyze the role and the impact of entrepreneurial informal networks on small business growth.

The purpose of chapter three of this thesis was to review the network theme in small enterprise studies. It found that in the literature the concept of small business networks had mainly been used in four ways: in relation to the nature of small firm economics and local development; technological innovation and managerial changes; marketing and international business; and entrepreneurship and social networks. We hardly found any
single general theory of networking in small firms. Instead of that we found various theoretical perspectives on some specific issues related to networks and networking.

Chapter 3 has two parts. The first part of the chapter attempted to briefly examine the most relevant theories in the field of small business networking. In this regard, we reviewed transaction cost approach, resource dependency approach, social network approach and the Swedish network model. According to the TCA, market mechanism is the perfect and the preferred method of transacting and most efficient, but under conditions of uncertainty and small number bargaining, transaction costs rise and firms will look for alternatives to the market. We argue in this thesis that informal entrepreneurial linkages help to reduce transaction costs. Consequently, small entrepreneurs develop close relationships with external actors. According to the RDA, on the other hand, firms tend to start networking because of resource dependency. As a firm itself does not have all the necessary resources to do business, it is very important to find ways of ensuring a smooth and predictable flow of resources. In such an environment, RDA suggests that inter-firm linkages are very important. To build up such inter-firm linkages, entrepreneurs and managers use their personal relationships. In addition, according to SNA, social network relationships help small entrepreneurs in different ways such as in gathering information, canvassing and looking for customers and suppliers, and some psychological significance. The basic argument of the SNA to small business development is that the entrepreneurial process involves the gathering of scarce resources from the environment and the scarce resources are generally obtained via the entrepreneur’s personal network. Entrepreneurs therefore develop and maintain networks due to lack of resources. In the third chapter, we also reviewed SNM. The SNM has a better structure for analyzing network relationships. It discusses how actors, resources, and activities are linked. Finally, we identified potential syntheses between the theories in order to develop our conceptual framework.

The second part of the chapter has reviewed some relevant empirical studies in the field of entrepreneurial networks and small business development. The discussion found three major types of empirical studies related to ours; namely, (1) enterprise formation and entrepreneurial networks, (2.1) on-going business and entrepreneurial networks, (2.2) network formation and small business growth, and (3) dynamic nature of entrepreneurial networks. The whole argument was that, since gaining access to necessary resources becomes the first entrepreneurial problem, small entrepreneurs gather the necessary resources from outsiders through their personal networks. In this regard, in the start-up phase, their social networks play a vital role for new entrepreneurs. The social networks provide initial capital, influence and encouragement as well. It is indeed an entrepreneurial opportunity set. Entrepreneurs in established firms basically face the problems of necessary resources and market share. According to existing literature, networking is the way to overcome these problems. In this regard, in addition to
entrepreneurial social networks, inter-organizational networks also play a very important role in successful business activities. All of these networks are, therefore, important determinants of small business competitiveness and development, and networking thus appears to have been an important element in small firm growth. With regard to the dynamic nature of entrepreneurial networks, the existing literature (Birley and Cromie 1988, Butler and Hansen 1991, Chu 1996) argues that entrepreneurs develop different types of networks in different phases of a firm because the problems, demands and requirements of a firm are different in each phase. In this regard, it was argued that the social network of entrepreneurs was more important at the early or initial stages of a firm. A large social network ensures an entrepreneur a larger opportunity set, which finally ensures more and reliable support and resources. For an on-going business firm, inter-organizational networks are more important because firms attempt to reduce the firms’ risk of failure, and to gain advantages not obtainable in isolation. However, we found that most of the empirical studies on entrepreneurial networks of small enterprises have been conducted in developed countries. Consequently, the chapter indicates the importance of such study in the context of developing countries.

**Chapter four** was devoted to the conceptual framework for the study. Networking has been defined in the study as a long-term contact between small business owner-managers and external persons, business firms or other organizations. Accordingly, the study analyzed entrepreneurial external networks and focused on individual business development. Our conceptual framework was basically derived from organizational, social network and marketing perspectives. The integrated approach provides an appropriate framework for understanding firms as embedded actors in business networks: to understand organizational behavior, one must understand how the organization relates to other social actors in its environment. Our framework has consisted of three categories of elements: (1) networks of actors, (2) networks of activities, and (3) networks of resources, and has explained how these three types of elements interrelate with each other and how they impact on an individual firm's performance. Three separate empirical chapters were devoted to test the impact of these three categories of elements on an individual firm's performance, while another chapter was devoted to testing the impact of network formation on the performance of small firms. Findings, conclusions, and recommendations of this study have been primarily based on two basic premises of social network theory: first, the entrepreneurial process involves the gathering of scarce resources from the environment, and second, resources are usually obtained through the entrepreneur’s personal network. The major rationale of our framework was that small firms, being small, need support and resources from outside. Obtaining resources from outside through the market mechanism is theoretically efficient, but in practical terms, market transactions are costly due to market failure in general and, in particular, to the small firms' weak bargaining power in the market. Firms, therefore, look for various alternatives to the market. In developed countries, firms often become integrated. While
joint ventures and strategic alliances are common in developed countries, in developing countries, small firms in particular use different techniques to overcome their inherited problems such as lack of resources and higher transaction costs in the market. Their main weapon is the informal entrepreneurial relationship, which lies between the hierarchy and the market. This study defined such relationships as external entrepreneurial networks. Small entrepreneurs use these relationships to gather necessary resources, to find markets, and also to get external support. Accordingly, our conceptual framework argued that small firms are better off if they had better external network relationships.

Chapter five of this thesis dealt with the research methodology. The chapter was subdivided into two parts. The first part included research paradigm, research validity and reliability, the survey method, the sampling method, the method of data gathering, measurements of variables, and the method of data analysis of the study. The second part examined the general characteristics of the survey findings, which included personal profile of small entrepreneurs, general profile of the small enterprises, and entrepreneurial networks. Our research has mainly been of an exploratory nature and we used survey research to examine the impact of networking on small business growth. The survey used face-to-face personal interviews with a well-prepared 14 pages questionnaire. Due to the methodological and practical difficulties of conducting a countrywide survey, our sample was selected from one particular district (Kurunegala) in Sri Lanka. In addition, researchers argued that the technique helped in controlling factors such as cultural and social differences. The results were analyzed using SPSS and TSP statistical computer packages. In addition to descriptive measurements, multiple ordinary least square regression models and the multivariate technique of logit were used to test the hypothesized relationships. Logistic analysis is one of the most widely used statistical techniques for analyzing binary dependent variables. As indicated in the second part of the chapter, the enterprises of the sample comprised the following characteristics:

- Basic characteristics of entrepreneurs:
  a. Male oriented.
  b. Rural oriented.
  c. Average age of entrepreneurs; 39 years.
  d. Good formal education
  e. Poor formal technical education.
- Basic characteristics of the enterprises:
  a. Mainly manufacturing.
  b. Average age of the firms; 8 years.
  c. Single ownership
  d. Major market location; within the district
- Entrepreneurial Networks: Social networks oriented.
Chapter six of this thesis analyzed the impact of network formation on the growth of a small enterprise, using our primary survey data. As we argued in chapter six, networks do not emerge overnight and without any effort. Entrepreneurial networks develop through attending seminars, participating in trade fairs, with the help of external consultants, discussions with relatives and friends, etc (Aldrich and Whetter 1981, Donckels and Lambrecht 1995, Szarka 1990). The network formation stimulates growth of small firms. Logistic analyses were used to test this hypothesis. The results of this chapter suggested that network formation positively influence the growth of a small business, particularly through contact with national and international entrepreneurs. However, we were unable to find positive impact of external consultancy on business performance of small firms. Although membership of professional associations and discussion with friends had a positive impact on the growth of small firms, these two network formation elements did not indicate a positive impact on market expansion. The major reason is that in general small enterprises employ external consultants mainly if the firms face some problem. We found therefore that external consultancies with lags (lag effect) have positively influenced on business performances. Nevertheless, as this study identified, participating in trade fairs, attending seminars, and external consults are poorly recognized as network formation elements among the rural small enterprises in developing countries such as Sri Lanka (see Table 6.2). The chapter, therefore, recommended the importance of an outside system (institute) to organize such network formation activities. Small entrepreneurs can develop their network relationships with other entrepreneurs through participating in those activities (membership of professional associations or groups, attending seminars, participating in trade fairs, external consultants, discussion with relatives and friends). These network relationships help small entrepreneurs to obtain necessary resources and efficiently support and find new market opportunities. Networking is important in stimulating entrepreneurial behavior. The success of small venture often depends on an entrepreneur’s ability to establish a network of supportive relationships. Entrepreneurs’ ability to establish a better network of supportive relationships depends on several entrepreneur - and enterprise-related factors such as gender, education, firms' location etc.

Chapter seven basically dealt with the network actors. The chapter evaluated the importance of different network actors in different phases of a firm. The network evaluation model presented by Bulter and Hansen (1991) guided us through these different networks in the different phases of a firm. Three different types of network i.e. social networks, business-focused networks, and inter-organizational strategic networks, deal with the three different phases of a business, i.e. the business opportunity identification phase, the business start-up phase and the on-going phases. As expected, we found that social networks are more important during the initial stage of a firm. The networks have a significant impact on the business start-up process. Meanwhile, we also found that both social networks and inter-organizational networks expanded overtime, but the degree of expansion in the inter-organizational network is greater than that of social networks. An
established firm usually deals with demand and supply-related problems and requirements. Consequently, established firms develop their relationships with other firms. In this regard, firms link with each other through subcontracting activities. Inter-firms linkages therefore are most important for an on-going business firm (Table 7.2). In this study, we were scarcely able to identify the role of business-focused network-actors such as accountants and lawyers in the start-up phase, though bankers did play a role. In this regard, we found that the activities of the business-focused networks are mainly carried out by relatives, since the initial capital is the most important requirement for a new small business entrepreneur in Sri Lanka and the initial capital comes mainly from family members and banks. Finally, we found that the other small firms play a major role in inter-organizational networks. However, in general most important network members for small firms are the entrepreneurs’ relatives. This is mainly due to cultural factors, i.e. the extended family system on Sri Lanka. Unlike Western, Sri Lankan families represented networks of people joined together by specific sets of familial relationships. Sri Lankans are collectivists and group-dominated. This cultural and social structure vividly explains why social networks are more important for the development of small enterprises.

Chapter eight has analyzed subcontracting activities, which is one of the major components of the enterprise network. The purpose of this chapter was to examine the main characteristics of subcontracting activities in Sri Lanka and to study the impact of network formation on the subcontracting activities. In order to achieve a better understanding of the nature of subcontracting relationships, we first gave an overview of the nature of various business linkages and inter-organizational relationships particularly relevant to small-scale enterprises. Then we examined the main characteristics of the subcontracting activities in Sri Lanka, using data from our sample. Finally, we analyzed the impact of networks on subcontracting arrangements. In this exercise, we found hardly any formal and written subcontracting arrangements among the small enterprises in Sri Lanka; instead, we found the arrangements are informal and unwritten, and most of them were dependent on one contractor. There were also direct orders and ad-hoc arrangements. We also found that most subcontracting work took place with small firms. Moreover, these activities were carried out with close network actors such as friends and relatives. This study could hardly found that small enterprises in Sri Lanka involved in subcontracting works with large and/or foreign firms. The study also hardly found any direct cross-border (international) subcontracting among the small firms. Small firms receive subcontracting work due to their special skill, low product costs and production flexibility. In addition, the study indicated that firms, however, need good and close relationships with others (contractors) in order to obtain their subcontracting orders. Therefore, as expected, we found that the impact of entrepreneurial network formation activities such as discussions with relatives and friends, external consultations, attending seminars and participation in trade fairs on subcontracting engagements is positive. This kind of activity helps small entrepreneurs to exchange their ideas, to form their network
relationship and then to develop new business opportunities such as subcontracting. Regular subcontracting orders provided numerous benefits to small firms including stable material supply and stable markets. The results, finally, indicated that the interactive effect of network formation and subcontracting on business performance is positive and significant.

Chapter nine of this thesis examined the impact of the entrepreneurial external resources (money, technology, labor training, information and other non-material supports) on small business growth, and argued that entrepreneurial personal networks had an impact on the growth of a small enterprise through the support of the external resources. This chapter argued that small firms obtained various benefits from the network relations. Firstly, network relationships help to mobilize resources quickly and efficiently. Secondly, they helped to minimize transaction costs because negotiations, bargaining and written agreements are not important among the network actors. Thirdly, networking contributes to business effectiveness. The questions we posed in chapter nine were the following: is there a correlation between the entrepreneurial networks and receiving these resources; further is there an impact of the supporting resources (i.e. gratis resources) on the performances of small enterprises; and are there interactive effects of the networks of actors and the networks of resources on business performance. Resources are very important for any kind of enterprises. But most of resources, particularly for small enterprises, come from outside actors, which we call ‘external resources’, as a single actor does not have all of the resources fully at its disposal. The study found that the entrepreneurs who had better network relations as well as those who received resources/supports from outside such as money, information and other non-material support significantly reported higher probability of success in their businesses. The results of the chapter have further indicated that the small enterprises that received financial support from formal sources such as banks, other financial institutions and any other government agencies reported significantly higher growth in finance, but not in sales. The reason for the lack of significance, we found, was that the small enterprises have not used the money for new projects, but the money has mostly been used for business recovery. On the other hand, the respondents have also used this money as their own in calculating their financial results. It was the part of irregularity and lack of bookkeeping.

The purpose of the final chapter (ten) is to present general findings, limitations, theoretical and policy implications of this study.

10.3. General Findings of the Study

In the literature on networking, it is argued that many aspects of life can be better understood if they are looked at from network perspective. The network approach presented here illustrates how entrepreneurs transform their informal and personal
network relations and networking activities into inter-organizational network relations and activities, and how these informal network relationships influence business successes and performance. The analysis was carried out in the light of an important argument of social network approach that economic relationships are embedded in the social settings; thus, business relationships cannot only be better understood in organizational, economic and market contexts.

In terms of the study's findings, we found that building contacts and linkages were the fundamental factors in determining the success of any firm. Small firms in particular, being small and also lonely, face a number of difficulties such as lack of capital, market opportunities, and resources. As a result, these firms have tendency to link with other firms and organizations locally, sometimes, inter-regionally or globally. The study strongly indicated that network formation through developing contacts with other entrepreneurs improved business performances. Other significant network formation elements identified in this study were attending seminars, participating in trade fairs, external consultancy, memberships of professional associations, and discussions with relatives and friends. However, the study further investigated that some network formation elements such as attending seminars, participating in trade fairs, and external consultancy, in spite of the fact of their significant and positive influence on network formation in general, are not widely used by the small enterprises, particularly small rural enterprises, in Sri Lanka. It is also interesting to note that some entrepreneur- and enterprise-related factors, particularly gender, education, and firms’ location, have a significant impact on network formation.

The study also found that the extent of entrepreneurs’ personal relationships were crucial for a successful business start-up. Such relationships within the context of social networks were increasingly important particularly during the initial stage of a firm. Networking have a significant impact on the business start-up process. Before dealing with business, entrepreneurs have to learn about each other and about their behavior, which is a considerable social exchange process. Over time, the social relations extend to business relations: social bonds become business bonds. We found that business relationships such as subcontracting deals, demand and supply contacts, etc started with social relationships. It was clear that the development of good social relationships was usually seen as a prerequisite for business-oriented relationships.

Further, the study has illustrated the ways in which entrepreneurs transform their informal personal networks and networking activities into inter-organizational networks. However, the role of business-focused network actors such as accountants, lawyers, etc is insignificant except for formal institutions like banks.
Instead, we found that the activities of the business-focused network, that basically are supposed to be conducted by professionals like lawyers and accountants, are mostly carried out by relatives, given the fact that the initial capital is the most important need for a new small business entrepreneur in Sri Lanka. The main sources of the initial capital are the entrepreneurs’ personal funding and family members. The third source of the initial capital is bank finance. This suggests that it is worth developing some ways of combining the flexibility, efficiency and informational advantages of informal networks with the ability of the formal sector such as banks to mobilize finance.

As a result of the study, we further found that, in the on-going business phase, social networks as well as inter-organizational networks were important for small businesses. Regular social network relations are necessary even in the on-going phase of a small firm because firms should show their loyalty to their partners on the one hand, and, on the other, small firms in Sri Lanka, in particular, very rarely use the expertise of lawyers and accountants, etc. Within the entrepreneurial social networks, actors are aware of each other to a great extent. Such a deep and growing awareness of mutual interests among the actors is considered very important in successfully striking business deals, because most business linkages among the small enterprises are created in the context of informal relations. For example, this study found that subcontracting partners were identified by attending seminars, participating in trade fairs, external consultations and discussions with relatives and friends. In this regard, business deals come through social relationships; thus, businesses (business deals) come first and then visibility.

In a nutshell, the study found that entrepreneurial informal network relationships play a very important role in the success of small enterprises. These types of social network relations are identified in this study as an opportunity set, particularly in the entrepreneurial phase and in the business start-up phases of a small enterprise. These social network relations are necessary even in the on-going phase of a small firm because the social bonds become business bonds and, further, most of the business linkages among the small enterprises are based on trust developed through social exchange. The existing social networks influence subsequent inter-organizational relations. Social networks and inter-organizational networks both expand over time because, unlike formal networks such as alliance and joint venture, informal networks are mainly based on trust developed through social exchanges (Johannisson 1988). However, the degree of expansion in the inter-organizational networks is greater than that of social networks. The study highlights the importance of informal personal linkages in each phase of a small firm with regard to obtaining important resources such as information, finance etc, and to influence decisions of small entrepreneurs.

Since Sri Lanka is collective and group-dominated society, we found that in general density, frequency, and centrality of entrepreneurial networks in Sri Lanka are high, which
provide access to opportunities and resources and also increase the likelihood of the opportunity for the entrepreneurs to obtain the necessary resources and support.

Table 10.1
Summary of Networks of Entrepreneurs in Sri Lanka

<table>
<thead>
<tr>
<th>Phases of Entrepreneurial Development</th>
<th>Phase I Pre-start-up or entrepreneurial phase</th>
<th>Phase II Start-up Phase</th>
<th>Phase III On-going phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important Networks</td>
<td>Social networks</td>
<td>Business-focused network, but social network is strong</td>
<td>Inter-firm network</td>
</tr>
<tr>
<td>Influential member groups</td>
<td>Family/relatives, Friends</td>
<td>Family/relatives, Friends, Buyers/suppliers, Supporting agencies</td>
<td>Small firms, Relatives, Friends, Government agencies</td>
</tr>
<tr>
<td>Relational Form</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Frequency</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Density</td>
<td>High</td>
<td>(Close/Distant)</td>
<td>(Distant)</td>
</tr>
<tr>
<td>Relational Content</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication relation</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Transaction relation</td>
<td>Medium/Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Instrumental relation</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Sentiment relation</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td>Opportunity identification</td>
<td>Business formation</td>
<td>Linkages firm to other organizations</td>
</tr>
</tbody>
</table>

No doubt, resources are very important for any kinds of enterprises. Small enterprises in particular have a lack of resources and business experience. The study found that entrepreneurial network relationships provide better access to outside resources and support. Small entrepreneurs obtain external resources and support effectively, efficiently and regularly through their personal networks. Chapter nine of the study further found that the entrepreneurs who have better network relations, as well as those who obtain resources/support from outsiders through the entrepreneurial networks, significantly reported higher probability of success in their businesses. This study also indicated that providing outside resources and support are not enough for the development of small enterprises in developing countries. In addition, entrepreneurs’ network relationships with other actors such as relatives, friends, supporting organizations and other firms are very important because small firms obtain resources as well as influence, guidance, encouragement and trust through these relationships. All of these are very important for small enterprises because they do not have enough resources and experience. Thus, the findings of chapter nine highlighted the fact that an interactive effect of networks of actors and resources on the performances of small enterprises is positive.

As regards the activities of networks, the study found most of the subcontracting arrangements in Sri Lanka are informal and unwritten, and also most of them were dependent on one contractor. Meanwhile, these subcontracting activities were frequently carried out among the closest network actors such as friends and relatives. We found that the impact of the entrepreneurial network
formation on subcontracting engagements was positive. New subcontracting opportunities are identified through discussions with others. External consultations, seminars, trade fairs, and membership of professional associations provide ample opportunities for this kind of discussion. When subcontracting linkages take place, mutually well-developed inter-firm networks are extremely important. In other words, this means that building relationships with other firms and organizations is very important for existing business practice because, for example, (Blenker and Christensen, 1995) the small enterprise subcontractors accumulate knowledge from the past co-operative experience. Rich networking skills significantly ease the process of starting new subcontracting arrangements and of maintaining existing subcontracting successfully. The results also indicated that networking through subcontracting activities stimulates business performance of small enterprises.

The important question is who encourage or guide small business owners to form and develop their networks. Supporting actors such as the government agencies, non-government organizations (NGOs), etc can play an influential role in establishing effective and systematic linkages. In exploring Sri Lankan experience, the study found that most small enterprises were unable to develop linkages with other firms without personal and institutional support. Personal relations are important in most spheres of the Sri Lankan society. Foreign companies usually establish their linkages with large-scale domestic firms.

10.4. Limitation of the Study

All research studies have some limitations: this study is no exception: As we have emphasized several times in this thesis, the analysis of the data, interpretations of the findings and the conclusions of the research were subject to a number of limitations. In this section of the chapter, the limitations of this study are identified. As far as methodology is concerned, measurement of variables and subjective bias of the data are the major limitations of this research field, particularly in less developed countries like Sri Lanka. It is hard to differentiate business matters from family matters in such a family-bound social cultural environment. The situation is exacerbated as it is a study about small business and entrepreneurial personal informal networks. In addition, as the focus of this study has been on the focal entrepreneur and the entrepreneur’s networks, there was no attempt to capture the total networking activities going on in the enterprises as a whole. We only interviewed the firm’s owner. In addition to the entrepreneur (owner), other employees also are engaged in networking activities. There are, therefore, inevitable limitations involved in the measurement of networking activities.

In addition, several other limitations should also be noted when interpreting the results of this study. As noted in chapter eight, most of the entrepreneurs of the small enterprises do not maintain regular accounts. It has affected our findings and conclusion in several ways. For example, in our analysis of business performances, we used different measures to
estimate the business performance of small enterprises. In the literature, many different variables and methods have also been used to measure the business performances. It will therefore be necessary, in future studies, to formulate a standard method to measure the business performance of small enterprises in developing countries.

Sri Lanka is also a country with an ongoing war in the Northern and Eastern parts of the country, which also affect the whole economy. This situation has affected our study in two ways. In the sample selection process, on the one hand, we ignored the war zone areas for security reasons. On the other hand, the impact of the ongoing war on business in general and small businesses in particular is very serious.

Finally, as this study is basically case study research, the general limitations pertaining to case study research apply here. Therefore, one must be careful in generalizing from the findings of this study to other countries, since these findings are specific to the Sri Lankan setting.

10.5. Recommendation and Implications

Section 10.5.1 deals with policy recommendations and implications of this study, while in section 10.5.2. research agenda for further studies will be presented.

10.5.1. Policy Recommendations and Implications

The entrepreneurial network approach advanced here suggests that business relationships cannot be viewed solely in formal organizational, economic, or market contexts. It is prudent therefore for policymakers, small entrepreneurs, donors and others whose prime object is to develop small business enterprises in developing countries to use a network formation approach in addition to their traditional supporting approach.

As this study indicated, the main source of finance and other support is relatives and friends, that is, social networks. However, it is also found that a number of government as well as non-government organizations have been set up to facilitate small-scale enterprise sectors in Sri Lanka. In this regard, the study recommends that the parties concerned such as policymakers should look into the ways in which the informal sources of finance and other resources should be effectively combined with the formal sources such as banks. It helps to increase the flexibility, efficiency and effectiveness of the mobility of capital and other resources in developing countries like Sri Lanka.

Meanwhile, we found that foreign companies usually establish linkages with domestic large-scale enterprises because small enterprises in developing countries like Sri Lanka do not have enough capacity to establish direct contacts and also are not capable of dealing
Entrepreneurial Networks and Small Business Development

with foreign companies directly. The study therefore strongly recommends that government, non-government, and other local supporting agencies should organize network formation activities such as seminars, trade fairs etc in order to increase the small entrepreneurs’ ability to establish efficient networking. However, the results generated by such organizations are far behind the expectation largely due to lack of co-ordination among the promoting institutes themselves. The findings of this study, therefore, strongly recommend that the role and co-ordination among themselves of the central and local government, and other local interest groups including various non-government organizations (NGOs) needs to be strengthened for a better networking which is the base for small business development. In addition, at the same time, such organizations should be able to encourage individual entrepreneurs to build up their own entrepreneurial networks because it was evident that personal relations are vitally important in Sri Lanka business society. Government can also play a key role in providing necessary infrastructure aimed at fostering cooperation between firms. Supporting agencies can organize programs to train effective community entrepreneurs because Cromie et al. (1994) and others argued that such effective community entrepreneurs can help to create linkages between the personal contact networks of individual entrepreneurs and to develop networks which expand the business entrepreneurs’ capacity to gain an access to more and reliable information and acquire resources.

Subcontracting is an important aspect of economic growth and thus the governments in most countries play an important role in promoting subcontracting activities. However, in the case of Sri Lanka such a role by government is yet to be developed. Subcontracting is generally facilitated, as larger and small firms are located near each other. The concept of industrial estates is also a major instrument that would promote subcontracting. For example, subcontracting linkages are extensive in Italy and Germany. However, in most developing countries it would be very difficult to establish such ‘special’ industrial estates as found in Italy and Germany. Subcontractor clusters are an ideal example for such special industrial estates. The clusters are based on a narrow vertical and horizontal specialization, both of individual enterprises and the cluster as a whole. Further, most of the enterprises in these clusters are dependent on and linked as subcontractors to one or a few large enterprises. Past experiences in other countries like Italy and Germany reveal that some of these estates or districts developed without government intervention, while others like India received significant government assistance. In that sense, in the case of countries like Sri Lanka, the study strongly believes that the government assistance would be advantageous in order to improve the underdeveloped infrastructural facilities by way of providing special or dedicated industrial estates which is the base of subcontracting and networking.

Finally, these findings give a clear message for entrepreneurs and policymakers as well as for the supporting institutions. Over the past ten years, small business development has
been a key area of donor support for the developing economies. The major vehicle for delivering this support has been local/regional centers. This traditional support system has emphasized providing more software (for example, training and consulting) and hardware supports (for example, loan) for small enterprises. They should focus their attention and programs not only on providing increasing resources but also on providing more facilities and efforts on ‘networking’ (for example, a self-help support network for SMEs, see Macrae, 1995), because particularly small firms do not expand in isolation and furthermore by definition these firms have a lack of resources. Networking is, therefore, one of the solutions even though it is not a magic solution, because through established network relationships firms gain not only an access to external resources but also encouragement and influence as well. It has been identified in chapter nine that the interactive effects of actors of networks and resources stimulate growth, but not the resources alone. Therefore, entrepreneurial development programs should not only encourage entrepreneurial vocations and attitudes, but also should provide support for entrepreneurs in establishing and developing effective relations with external actors. Government and other supporting agencies can organize seminars, trade fairs, etc. The network relations can strengthen their market and technology competence. Further, it also allows them to collect better and more appropriate information to focus better on their business ideas. People who are thinking of beginning their own firm should also be aware of the critical importance to develop a network of people they can turn to for a new way to examine an issue, for expanded knowledge, and for additional supports. Though entrepreneurs make their own decisions and create their own business, they do within the context of working with other people. In brief, networking allows small firms to enlarge their scope of action, economize on time, and to gain access to more resources effectively and efficiently. Networks offer business people a powerful tool in their own personal development and in the development of their businesses. Researchers should also intensely consider enterprise- and entrepreneur-related factors when studying networking small businesses. Finally, we, therefore, strongly believe that the results of the study have significant policy implications.

10.5.2. Further Directions of Research

The study presented up to now has delineated several key issues, both at the enterprise level and the network level, which need to be clarified by future research. In this section, several issues and directions for future research are identified.

This study is about entrepreneurial networks and small business development in Sri Lanka. There are some conclusions from the study. The question is now how to generalize these findings. Even though some researchers assumed their findings about a single country to be generalizable to situations in other countries, these results cannot be generalized as a world phenomenon. The socio-economic structure and the other institutional setup differ
from country to country. For example, a small firm in the Netherlands or the US is not identical with a small firm in Sri Lanka or in India. However, there is no strong reason to believe that the significance of entrepreneurial informal networks is restricted to the Sri Lankan small enterprises. The importance of such networks in other countries has been noted by other scholars (for example, Aldrich et al., 1987 in North Carolina; Birley in Indiana; Bryson et al., 1993 in the U. K; Butler and Hansen in Washington; Chu, 1996 for Chinese entrepreneurs in Hong Kong and Canada; Donckels and Lambrecht, 1995, 1996, 1997 in Belgium; Falemo, 1989 in the North of Sweden), but little comparative work has been conducted. Therefore, comparative studies particularly among developing countries are necessary in order to understand these cultural and geographical variations of entrepreneurial networks.

Further research also needs to investigate differences between large metropolitan centers and rural areas in terms of small business networks in developing countries.

As we have argued network building is an investment, but it takes time, money and effort. It is expensive and time-consuming; *time and other resources are required to maintain these informal relationships* (Visser, 1996, p. 26). For instance, in addition to attending workshops and trade fairs, formal meeting and seminars, small entrepreneurs spend time drinking tea and other beverages, exchanging information with different people in order to find their partners, contractors, intermediaries and clients. However, the costs of maintenance in a firm-centered network vary according to various factors such as the nature of relationships, network size, stability, etc (Benassi, 1995). Therefore, although informal networks are cheap to maintain (Borch and Huse, 1993), the issue is the opportunity cost. Benassi (1995) suggests that the level of dynamics and the cost of maintenance are two critical measures for capturing some of the characteristics of networks. Therefore, it is interesting to measure the opportunity costs of building and of maintenance networks, and to evaluate its benefits. Since it is beyond the scope of this thesis, we leave this question for future research.

Nevertheless, network formation is also not an easy exercise. Entrepreneurs need special communication skills, in particular when developing network relationships with formal bodies such as government department/agencies, non-government agencies, and other private firms. The quality of the network is also highly dependent upon personal characteristics (Aldrich et al., 1989; Johannisson, 1988, 1996). Who can form and maintain dynamic, effective and efficient networks? In addition, the quality of entrepreneurship is also dependent upon entrepreneurs’ personal attributes (Amit et al., 1996; Van Praag, 1995). When studying networking and small businesses, future research should not only consider entrepreneur-related factors, but also take into account enterprise-related characteristics. For example, the results of the study show that education, gender, and firms’ location always have a significant impact on network
formation. Thus, further research on the impact of entrepreneur- and enterprise-related characteristics would deepen our understanding of entrepreneurial informal network relationships.

Throughout the world, the earliest markets developed around the gates of temples and other places, where people gathered for religious events or festivals. These gatherings created markets. Now we live in a high-tech world. Today’s markets are therefore more diverse, functional, and efficient, but they are similar to those in early markets in which they often require a gathering of people to operate. Nowadays E-commerce businesses are mushrooming throughout the world but it is still not popular even among the large-scale enterprises in Sri Lanka. Nevertheless, this might be the future option, particularly business-to-business (B2B) e-commerce in the areas like subcontracting. Because of the Internet (high-technology), there is no space for information barriers, no space for transaction costs, and no barriers to entry (The Economist, April, 2000). Small firms can now easily enter into a global market. What is the role of informal networks in this high-tech century? Future research should be conducted in this direction as well.

From a methodological point of view, it is difficult to say without a longitudinal study, what the causal relationships between business performances, network formation, and receiving support services are. Obviously, some argue that small enterprises ask and receive external support services due to their business failure. For instance, without a longitudinal study, establishing the performance of firms before they receive external assistance such as financial and other gratis resources, it is difficult to clearly establish whether the better performance is due to the direct effects of these support services. Therefore, from a methodological point of view, there are limitations in cross-sectional quantitative research designs. Cross-sectional studies such as this cannot determine causal relationships. Longitudinal and experimental studies would provide such information.

It is also obvious that our measures of networks are very crude. Mostly we used dichotomic and categorical variables. Furthermore, measurement of the ‘amount’ of information or some non-material support is notably difficult. Given this set of measurement problems, we feel that our reliance on binary measurement is a justified expedient. We shall nevertheless have to leave such measurement problems as future issue. Future research should be conducted in the field of developing proper measurement as well.

In addition, findings in this study are based on managers’ (owners) own reports in surveys and interviews. This produces certain restrictions such as positive response bias, an inaccurate memory, etc. Therefore, obtaining converging measures from others within the business, interviewing employees, using production and personnel records, and performing participation studies would yield additional detail and useful information.
10.6. Conclusion

The purpose of the study has been to analyze the role and impact of entrepreneurial networks on small business development. However, the concept of networks and network analysis cannot easily be explained due to, on the one hand, an array of different definitions of network found in the literature and, on the other hand, network analysis has been used in different areas of studies by different researchers in different perspectives. In this study, networking has been seen as an effective vehicle for obtaining necessary resources for small enterprises from the outsiders or external environment. The study found that small entrepreneurs who maintain regular relationships with external actors are more likely to be successful in their respective businesses because such relationships provide a constant and reliable source of resources and effective influence on firms. These external relationships are identified as entrepreneurial networks in this study.

This thesis is different from the other studies in the field of small business networking in four ways. First, current studies largely focus on formal business networks such as alliance. In contrast, the focus of this study is on the entrepreneurial informal network relationships in a less developed country. Second, most current studies are largely focused on the experiences of developed countries (for example, Birley 1985 (USA), Bryson et al., 1993 (UK), Curran et al., 1993 (UK); Goodman, and Bamford, (1990), (Italy); Shaw, 1991 (UK). Therefore, there was a gap in our understanding of small business networks in developing countries. In particular, small business networks in Sri Lanka have not been studied. Third, our approach also differs from others in respect of the unit of analysis. For example, the industrial estate (holistic approach) has been widely used in the field of small business development in developing countries. This study has employed an individualistic approach (the ego-center) to study small business development within the context of entrepreneurial networks. Fourth, entrepreneurial networks are always regarded as advantageous for small business success. Apart from various case studies, however, a critical approach was need ed in the network analysis in order to assess the importance of networks for small business performance. This study has filled this gap. We believe that this approach is necessary for advancing research on the field of entrepreneurial informal networks beyond general descriptions of the advantages of networks of single case studies.

In this regard, the thesis contributes to network studies in four ways. Firstly, the study analyzed entrepreneurial informal network relationships. Secondly, the recent studies in this area are largely focused on the experiences of developed countries. A very few or no such a study has been available in the field of entrepreneurial networks in developing countries, particularly in South Asia. This study focused on small business networks in Sri Lanka, a less developed country in South Asia. Thirdly, the study used survey research approach to test a number of hypotheses. Fourthly, the study evaluated the importance of different types of networks in different phases of entrepreneurship. Overall,
this study contributes to the literature by showing how small firms use network relationships to overcome their barriers to exporting, and to identify new market opportunities, and finally to perform their business successfully.

The findings of this study will without doubt be useful to the policymakers, business community, researchers, public institutions, financial organizations, donors and supporting organizations of small firms, and social workers particularly in Sri Lanka and the other countries as well.

To sum up, there are some conclusions from the study, but the major conclusion is that entrepreneurial networking can create a successful small firm sector by helping to overcome the lack of resources, the managerial and professional weakness of small firms within a broader supportive external environment. Owing to a lack of resources, small enterprises always need to maintain contacts with their external actors to obtain necessary resources. The actors of social networks and supporting networks are very important for small enterprises particularly in developing countries such as Sri Lanka. Before a new entrepreneur starts his venture, his social network relationships work as an opportunity set. Then gradually the entrepreneur develops his network relationships with supporting agencies and other firms as well. The study emphasizes the fact that, in order to really succeed in business, small business entrepreneurs must use their own personal networks as well as the inter-organizational networks. To reach the conclusion, we analyzed informal networks of small enterprises in Sri Lanka. We also believe that the results have significant policy implications. This empirical study has further recommended the need for more in-depth comparative studies before generalizing the results. Hence, there is an obvious need for more such empirical research as well as model building and theoretical study.
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---------. (2001), ‘The Impact of Entrepreneurial Networks On Subcontracting Activities: The Case Of Small Enterprises In Sri Lanka’, paper has been accepted for the presentation at the forthcoming 5th Annual European Network on Industrial Policy (EUNIP) to be held in Vienna, Austria, November 29-December 1, 2001. [http://www.eunip.com]


Entrepreneurial Networks and Small Business Development


References


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References


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References


Appendix A

Questionnaire

Survey of Entrepreneurial Networks and Small Enterprise Development

Date of interview: _________________________________________________________________
Name of respondent: ----------------------------------Location: Industrial Estate/General
Address of enterprise: __________________________________________________________
Main Product: _________________________________________________________________
Activity: Manufacturing/ Services/ Trade

1. The current business situation (circle appropriate number)
   1. No plans to start a business
   2. Thinking about and planning to start a business
   3. Recently started a business (less than six months)
   4. Have run a business (more than six months)

A. Personal Data:

2. Sex: 1 Male. 2. Female

3. Present Age: -------(Year)

4. Birthplace: a) Rural b) Urban

5. Education Level:

   1  Did not go to school
   2  Primary school (< O/L)
   3  O/L pass
   4  A/L pass
   5  Degree (First Degree)
   6  High Degree

6. Technological/Technical/Craft skills (TCS) and Management and Administration skills (MAS) obtained from:

<table>
<thead>
<tr>
<th></th>
<th>TCS</th>
<th>MAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td></td>
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<tr>
<td>Technical collge</td>
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<tr>
<td>Former job</td>
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<tr>
<td>Family tradition</td>
<td></td>
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<tr>
<td>Relatives</td>
<td></td>
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<tr>
<td>Friends</td>
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<tr>
<td>Self study/on the job</td>
<td></td>
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<tr>
<td>Others (specify)</td>
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</tbody>
</table>

7. Father’s Occupation: a) Paid worker b). Own Business c) No job
   If answer is (b), please specify type __________________________

8. Mother’s Occupation: a) Paid worker b). Own Business c) No job
   If answer is (b), please specify type __________________________

260 Face-to-face interviews were conducted.
Appendix A: Questionnaire: Survey of Entrepreneurial Networks and Small Enterprise Development

B. General:

9. In which year was your business started or inherited: In 19....

10a. Is this the first income earning activity? a). Yes b). No
10b. If not, What was your prior occupation?

1  Owner of another firm
2  Worker in a small firm (workers less than 50)
3  Worker in a large firm (workers more than 50)
4  Worker in the public sector
5  Other (specify)

10c. Reasons for setting up present business? (Select only three and numbered them from most important to less)

a) Failure to find another job
b) Interest and background knowledge
c) Advice from relatives/friend/others
d) Advice from bankers
e) Family tradition/inheritance
f) Good business partner
g) Attracted by government incentives
h) other (specify)

11. How many years business experience do you have in this field? -------------- (Years)

12a. Did you start the business alone, or together with partners?

(a). started alone. (b). started with partner(s) (c). Others (Specify)
If (c) could you briefly describe your kind of business----------------------------------------

12b. Now, what kind of business do you run now?

(a). A one-man business (b). A partnership (c). Something else
If (c) could you briefly describe your kind of business----------------------------------------

C. Use of Networking:

13a. Before you started this business, did you contact anyone for advice (information about your business, ideas, but not money or any other material supports) on how to get your business started or did you discuss your business ideas with any one? [Yes/No]

13b. If yes: who did you contact for advice on how to get your business started, and of how much importance they were to you? (On this list various sources of advice are described).

<table>
<thead>
<tr>
<th>Source</th>
<th>Very Great</th>
<th>Great</th>
<th>Some</th>
<th>Little</th>
<th>No</th>
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<tr>
<td>a)</td>
<td>Family members</td>
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<td>b)</td>
<td>Friends</td>
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<td>c)</td>
<td>Acquaintance (teachers, professional etc.)</td>
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<tr>
<td>d)</td>
<td>Government agent/agencies</td>
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<td>e)</td>
<td>NGOs</td>
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<td>f)</td>
<td>Large firms</td>
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<td>g)</td>
<td>Small firms</td>
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<td>h)</td>
<td>Banks/Finance</td>
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<td>i)</td>
<td>Chamber of commerce/Other societies</td>
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<td>j)</td>
<td>Other (Specify)</td>
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</table>
14. Think about the **start-up stage** of your business, who was important for you at this stage in overcoming your problems (financial, finding a location, legal and other matters etc., and how important they were for you:

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<th></th>
<th>Very Great</th>
<th>Great</th>
<th>Some</th>
<th>Little</th>
<th>No help</th>
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<tr>
<td>a) Family members</td>
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<td>b) Friends</td>
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<tr>
<td>c) Acquaintances (teachers, professional etc.)</td>
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<td>d) Government agent/agencies</td>
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<td>e) NGOs</td>
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<td>f) Large firms</td>
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<td>g) Small firms</td>
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<td>h) Banks/Finance</td>
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<td>i) Chamber of commerce/Other societies</td>
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<td>j) Other (Specify)</td>
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15. Now, you are **running your own business**, who are the important people and organizations for this stage, and how much?

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<tr>
<th></th>
<th>Very Great</th>
<th>Great</th>
<th>Some</th>
<th>Little</th>
<th>No help</th>
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<tbody>
<tr>
<td>a) Family members</td>
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<tr>
<td>b) Friends</td>
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<td>c) Acquaintances (teachers, professional etc.)</td>
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<tr>
<td>d) Government agent/agencies</td>
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<td>e) NGOs</td>
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<td>f) Large firms</td>
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<td>g) Small firms</td>
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<td>i) Chamber of commerce/Other societies</td>
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<td>j) Other (Specify)</td>
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16. How do you think, the following person and organizations were importance for each step of your business (the steps are given in column 3, 4 & 5)?

(Select and tick any whoever helped you for each phase/step, then rank the most important three (3) e.g. 1 for very great, 2 for great and 3 for some importance)

<table>
<thead>
<tr>
<th></th>
<th>1. For your business identification (skill training &amp; about business opportunity)</th>
<th>2. For initial capital &amp; other material e.g.: money building, place</th>
<th>3. in running your business (Now - money shortage, subcontracting, technology, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Family members</td>
<td>Tick</td>
<td>Rank</td>
<td>Tick</td>
</tr>
<tr>
<td>b) Friends</td>
<td>TICK</td>
<td>Rank</td>
<td>Tick</td>
</tr>
<tr>
<td>c) Acquaintances (e.g: teachers, etc.)</td>
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<tr>
<td>d) Government agent/agencies</td>
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<td>e) NGOs</td>
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<td>g) Small firms</td>
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<td>h) Banks/Finance</td>
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<td>i) Chamber of commerce/Other societies</td>
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<td>j) Other (Specify)</td>
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</table>


Appendix A: Questionnaire: Survey of Entrepreneurial Networks and Small Enterprise Development

D. Use of Network in General

17. With how many people would you estimate you have discussed aspects of starting or running your own business? -------- (people)

18. How many hours per week do you spend developing contacts with whom you can discuss business matters? -------- (Hours)

19a. With whom you feel especially willing or able to discuss your ideas for a new business or your ideas for running your current business. (Use initials, the following questions will ask to fill in more details about their primary network) (name only most importance five (5) people)

<table>
<thead>
<tr>
<th>Person</th>
<th>Initials</th>
<th>Relationship bet. You &amp; him*</th>
<th>How many time per week do you discuss business matters? (hrs)</th>
<th>How get them? O= Own contact R= referred by third person</th>
<th>Is third person listed in column 1? (Give number)</th>
<th>Relationship bet. you &amp; third person *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A B C D E F</td>
<td>O R</td>
<td>1 2 3 4 5</td>
<td>A B C D E F</td>
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<td>2</td>
<td>A B C D E F</td>
<td>O R</td>
<td>1 2 3 4 5</td>
<td>A B C D E F</td>
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<tr>
<td>3</td>
<td>A B C D E F</td>
<td>O R</td>
<td>1 2 3 4 5</td>
<td>A B C D E F</td>
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<td>4</td>
<td>A B C D E F</td>
<td>O R</td>
<td>1 2 3 4 5</td>
<td>A B C D E F</td>
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<tr>
<td>5</td>
<td>A B C D E F</td>
<td>O R</td>
<td>1 2 3 4 5</td>
<td>A B C D E F</td>
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</tbody>
</table>

(* relationships may be (A) family member, (B) friends, (C) Acquaintance (e.g. your teachers), (D) belong to a firm (small or large), (E) belong to supporting institutions (e.g. Government agents/agencies, banks, NGOs), F) others (specify)

19b. Are you a member of any kind of professional association such as chamber of commerce. Yes/No ................. (how many)

E. Structure, ownership and Firm-level Linkages

20. Please name the people with whom you were interacting most during the past three month period to secure the business information and the resources that were important to your business.

Tick | How many members (in general to discuss your business matters)

| a) Family members |
| b) Friends |
| c) Acquaintances (teachers & professional) |
| d) SSEs |
| e) LSEs |
| f) Government Agents/agencies |
| g) NGOs |
| h) banks/financing institutes |
| i) Chamber of Commerce/other societies |
| i) Others (Specify) |

21. How many family/relatives members do you have to discuss important business matters? _____
22. How many friends do you have to discuss day to day business matters? _____
23. In general, how much time per week do you spend with them to discuss your business matters? ______(hrs)
24a. Did you ask any external consultants about your business in last year? Yes/No
24b. If yes, how many times? _______
Entrepreneurial Networks and Small Business Development

25a. Did you attend any seminar (related to your business) in last year?  Yes/No
25b. If yes, how many times? ___________

26a. Did you attend any trade fairs Last year (national or international)?  Yes/ No
26b. If yes, how many trade fairs did you attend? ___________

27a. Do you have regular business contacts with other entrepreneurs? Yes/No
27b. If yes, those are in (Answers can be more than one)
   a). Within this industrial estate (only for industrial estate)
   b). Only same district
   c). Outside the district but within the province
   d). Outside the province but within the country
   e). Abroad

28a. Before starting to work in this business, did you get any technical education or training in a school, training centre, college, institute or university?  a) Yes  b). No
28b. After starting to work in this business, did you receive any technical training in a training centre?
   a. Yes  b. No.

29. Does any family member work in your business?
   a. Yes  b. No

31a. Do you have any relationships with your family and relative regarding your business? Yes/No
31b. What types of supports did you receive from them:

<table>
<thead>
<tr>
<th>Types of Supports</th>
<th>Very Great</th>
<th>Great</th>
<th>Some</th>
<th>Little</th>
<th>No help</th>
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<td>a) Financial</td>
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<td>b) Technology</td>
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<td>i) Others (Specify)</td>
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</table>

32a. Do you have any relationships with your friends regarding your business? Yes/No
32b. What types of supports did you receive from them:

<table>
<thead>
<tr>
<th>Types of Supports</th>
<th>Very Great</th>
<th>Great</th>
<th>Some</th>
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<th>No help</th>
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</tbody>
</table>

33a. Do you have any relationships with Acquaintances, (e.g. teachers, not your friends but you know them and they know you) regarding your business? Yes/No
Appendix A: Questionnaire: Survey of Entrepreneurial Networks and Small Enterprise Development

33b. What types of supports did you receive from them:

<table>
<thead>
<tr>
<th></th>
<th>Very Great</th>
<th>Great</th>
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</table>

34a. Do you have any relationships with LSEs regarding to your business matters? Yes/No

34b. What types of supports did you receive from them:

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<tr>
<th></th>
<th>Very Great</th>
<th>Great</th>
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35a. Do you have any type of links with SSEs regarding your business? Yes/No

35b. What types of supports did you receive from them:

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<th></th>
<th>Very Great</th>
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36a. Do you have any type of links with government agencies/agents about your business? Yes/No

36b. What types of supports did you receive from them:

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Entrepreneurial Networks and Small Business Development

37a. Do you have any type of links with NGOs about your business matters? Yes/No
37b. What types of supports did you receive from them:

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38a. Do you have any type of links with banks/financing institutes about your business? Yes/No
38b. What types of supports did you receive from them:

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<th>Very Great</th>
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<td>i) Others (Specify)</td>
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39a. Do you know your major competitors? a). Yes b). No
39b. Do you have any links with them? a). Yes b). No

40. Your workers are from: (Answers can be more than one)
   a) within your village or area. [ ]
   b) outside the area but within your district. [ ]
   c) outside the district but within your province. [ ]
   d) Outside your province [ ]
   e) From abroad. [ ]

41. What do you regard as the principal market for your main product group?
   a) For the industrial estate (only for industrial estate firms) [ ]
   b) This village/Town [ ]
   c) The district [ ]
   d) The province [ ]
   e) The national economy [ ]
   f) The international economy [ ]

42. From where do you get raw material for your products?
   a) From this industrial estate [ ]
   b) Within this Village [ ]
   c) Within this district [ ]
   d) Within this province [ ]
   e) Within the county [ ]
   f) Import material [ ]

43. Did you find it difficult to obtain financial support for starting your business? [Yes/No]
44a. Do you face any financial problem in running your business [Yes/No]
44b. If yes, who give financial support? (see list 6.1L)

Could you indicate with a tick any source which applied to you?
Now could you please rank in order of importance three (3) the various alternatives, using the numbers on the right of the listed sources (write the number)

Sources of funds (Rank from the most importance to less importance (1, 2, 3,))

<table>
<thead>
<tr>
<th>Sources Initial capital</th>
<th>Last Year immediate needs</th>
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<tbody>
<tr>
<td></td>
<td>Tick any</td>
</tr>
<tr>
<td>a) Own funds</td>
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<td>b) Family members</td>
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<td>c) other relatives</td>
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</tr>
<tr>
<td>d) Friends</td>
<td></td>
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<tr>
<td>e) Govt. financial In.</td>
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<tr>
<td>i) Commercial Bank</td>
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<tr>
<td>ii) Non commercial bank</td>
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<tr>
<td>f) Private financial Ins.</td>
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</tr>
<tr>
<td>i) Commercial Banks</td>
<td></td>
</tr>
<tr>
<td>ii) Non-commercial banks</td>
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<td>g) Private non-bank</td>
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<tr>
<td>h) NGOs</td>
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<tr>
<td>i) individual money lenders</td>
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<tr>
<td>j) others (specify)</td>
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</table>

30. If you received financial support from any formal sources in last year, how much money did you get?
-------------------------- (Rs.)

45a. How frequency do you meet and talk to other entrepreneurs who are in same fields?
Within a month  Never  Rarely  Regularly  Very Frequency
45b. What are the subjects of these conversations?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Subjects</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Marketing matter</td>
</tr>
<tr>
<td>2</td>
<td>Raw materials</td>
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<td>3</td>
<td>Products process</td>
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<td>4</td>
<td>Technology</td>
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<tr>
<td>5</td>
<td>Contracting (Sub)</td>
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<tr>
<td>6</td>
<td>Financing</td>
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<tr>
<td>7</td>
<td>other (specify)</td>
</tr>
</tbody>
</table>

46a. How frequency do you meet and talk to other entrepreneurs who are not in same fields?
Within a month  Never  Rarely  Regularly  Very Frequency
46b. What are the subjects of these conversations?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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Entrepreneurial Networks and Small Business Development

47. If yes, which of the following ones do you contract? (Rank three items (3) according to your priority)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item</th>
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<tbody>
<tr>
<td>1</td>
<td>Maintenance of machinery &amp; equipment</td>
</tr>
<tr>
<td>2</td>
<td>Repair of machinery &amp; equipment</td>
</tr>
<tr>
<td>3</td>
<td>Consultancies – Marketing</td>
</tr>
<tr>
<td>4</td>
<td>New technology</td>
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<tr>
<td>5</td>
<td>Financing</td>
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<td>6</td>
<td>Legal advice</td>
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<td>7</td>
<td>Other</td>
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<tr>
<td>8</td>
<td>Training/ education</td>
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<td>9</td>
<td>Others (specify)</td>
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</tbody>
</table>

48a. Have you at anytime employed/hired any person with working experiences in an another company

Yes/No

48b. If yes, he was:
1. In this industrial estate (only industrial estate enterprise)
2. within the district
3. outside the district, but within the province
4. outside the province, but within the country
5. abroad

F. Network Benefits

49a. Do you have any types of regular links with other firms?  

A) Yes  

b) No

49b. If Yes, What are them?
1. Subcontracting
2. Technology
3. Transport
4. Advice/information
5. Exporting
6. Others (Specify)

49c. Do you have any formal agreement with other organizations?

A) Yes  

b) No

1. Joint venture
2. Licensing
3. Industrial co-operation agreement.
4). ‘longer-term’ recurrent contractual supplier-buyer relationships
9). Others (Specify)

(If yes, ask the following question)

49d. What kind of benefits/outcomes did you get from them?

<table>
<thead>
<tr>
<th>Benefit/Outcome</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Improved your firm’s financial performance (e.g. sales, Profits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Improved your firm’s operational performance (e.g. product quality, new product introductions)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Generated new ideas for products or processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Improved your management skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Changed the way you organized work or people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Added personnel to your business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Accessed new equipment or production processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Accessed new techniques or skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Accessed new contacts or suppliers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A: Questionnaire: Survey of Entrepreneurial Networks and Small Enterprise Development

10. Accessed new markets for your business
11. Jointly marketed products or services with network member firms
12. Jointly designed or developed new products with network member firm
14. Jointly produced a product or service with network member firms
15. Shared specialty services or technologies with network member firms
16. Discussed common problems with network member firms
17. Increased your interactions with competitions with network membership
18. Viewed competitors as potential resources for your business
19. Became a customer of network member firms
20. Became a supplier to network member firms
21. Referred jobs to network member firms
22. Subcontracted jobs with network member firms
23. Clarified your understanding of your firm’s competitive capabilities
24. Gained ’trade secrets’ from competitors in the network membership
25. ‘Bought into’ or accepted concept of co-operation among firms (even competitors) through a network.
26. Increased your firm’s credibility through association with the network

G) Employment, Labour Cost and Performance

50. What is the average employment in the firm?

<table>
<thead>
<tr>
<th>No. of total workers (including owner)</th>
<th>Initially</th>
<th>1995</th>
<th>1997 (Last Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Full time workers? (Including owner)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

51. What has been the final destination of your products in 1995 and 1997 (last year)?

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>This industrial estate</td>
<td>%</td>
</tr>
<tr>
<td>2</td>
<td>District</td>
<td>%</td>
</tr>
<tr>
<td>3</td>
<td>Provincial</td>
<td>%</td>
</tr>
<tr>
<td>4</td>
<td>National</td>
<td>%</td>
</tr>
<tr>
<td>5</td>
<td>Export Market</td>
<td>%</td>
</tr>
</tbody>
</table>

52. To what type of customers did you sell these products? (Please indicate their importance in terms of the share in total sales)

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Final Consumer</td>
</tr>
<tr>
<td>2</td>
<td>Retail agents</td>
</tr>
<tr>
<td>3</td>
<td>Whole sale agents</td>
</tr>
<tr>
<td>4</td>
<td>Export agents</td>
</tr>
<tr>
<td>5</td>
<td>Subcontractor</td>
</tr>
<tr>
<td>6</td>
<td>others (specify)</td>
</tr>
</tbody>
</table>

53. The amount of sales of your main products in last three years (specify unit e.g.: Kg)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pr. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr. 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
54a. What do you think of past progress of your firm (overall)?
   a) Made a progress  b) Stayed about the same level  c) fell down.
54b. What do you think of present overall position of your firm (overall)?
   a) Growing   b) No changes  c) falling down
54c. What do you think of future overall prospects of your firm (overall)?
   a) very good  b) fair  c) Unstable
55a. How do you evaluate the present sales performance of your firm?
   a) Excellent b) very good c) good  d) fair  e) poor.
55b. How do you view your future sales prospects at present?
   a) Excellent b) very good c) good  d) fair  e) unstable
55c. What was the approximate size of your business in terms of total assets (book value), when you started?
56a. What is the approximate size of your business today in terms of total assets (book value)?
56b. What were the financial results last year (1997)?
   a) Losses  b) balance  c) Profitable  d) large profit

H. SUBCONTRACTING ACTIVITY

57a. Has your firm been engaged in subcontracting?
   A) Yes
   A1) Offer subcontracting
   A2) Receive subcontracting
   B) No
57b. If the answer for (A1) is no, why don’t you offer subcontracts?
   a. It is not familiar for us
   b. Too expensive
   c. No quality
   d. Other (specify)
57c. If the answer for (B2) is No, what are the reasons?

A1 Offer (If the answer for a1 is Yes, continue this section)
58a. Why do you engage in the subcontracting of these operations?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do not have the appropriate equipment/machinery/low capacity</td>
</tr>
<tr>
<td>2</td>
<td>Subcontracting is cheaper</td>
</tr>
<tr>
<td>3</td>
<td>Subcontracting yields a better quality.</td>
</tr>
<tr>
<td>4</td>
<td>Due to time constraints.</td>
</tr>
<tr>
<td>5</td>
<td>Due to their specific skills/equipment</td>
</tr>
<tr>
<td>6</td>
<td>Labour cost/shortage</td>
</tr>
<tr>
<td>7</td>
<td>Cost savings</td>
</tr>
<tr>
<td>8</td>
<td>Other (specify reasons)</td>
</tr>
</tbody>
</table>

58b. What type of product is covered by subcontract:
   1) input (specify)-----
   2) Final product (specify)-----

A2 Receive
59. If you receive sub-contracts, what are your main reasons? (select the most important three(3) and rank them)

<table>
<thead>
<tr>
<th>Tick</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Stable market</td>
</tr>
<tr>
<td>b)</td>
<td>Sales increase</td>
</tr>
<tr>
<td>c)</td>
<td>Easy materials supply</td>
</tr>
<tr>
<td>d)</td>
<td>Diversification of products</td>
</tr>
<tr>
<td>e)</td>
<td>Technical assistance</td>
</tr>
</tbody>
</table>
60. How many subcontracting counterparts do you have?-----
Please indicate the following details of the subcontracts:

<table>
<thead>
<tr>
<th>Percentage of total sales</th>
<th>0 %</th>
<th>&lt; 25 %</th>
<th>&lt; 50 %</th>
<th>&lt; 75 %</th>
<th>100 %</th>
</tr>
</thead>
</table>

61. From whom give you subcontracting: (if more than one rank them from most importance to less)

1. Other small firms
2. Large firms
3. Government agencies/department
4. Others (specify)

62. You receive the orders directly from them or through other org./person

1. Directly from the principle firm
2. Through other organization/person
3. Other (specify)

63. What is the geographical distance of your orders (some time more than one answer, so tick all of them)

1. This industrial estate (only for Industrial estate)
2. Within the district
3. Provincial council
4. National
5. International

64. What kind of assistance do you receive or expect from counterparts?

<table>
<thead>
<tr>
<th>Choose any</th>
<th>Rank (only for three)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Supply of raw materials</td>
<td></td>
</tr>
<tr>
<td>b) Technical guidance</td>
<td></td>
</tr>
<tr>
<td>c) Financial assistance</td>
<td></td>
</tr>
<tr>
<td>d) Supply of equipment</td>
<td></td>
</tr>
<tr>
<td>e) Marketing</td>
<td></td>
</tr>
<tr>
<td>f) Training</td>
<td></td>
</tr>
<tr>
<td>g) Others (specify)</td>
<td></td>
</tr>
</tbody>
</table>

A3 SC. General

65. What are the transaction terms and conditions of the subcontracts:

a) Do you have any written agreement? Yes/No
   ii) How is prise decided?
      a) Bidding
      b) Negotiation
      c) Parent company’s decision
      d) Own decision
      e) Others (Specify)
   iii) Quality control
      a) very strict
      b) Strict
      c) not strict
      d) no check
   iv) % of products supplier, rejected by counterpart? (Average of last year)
Entrepreneurial Networks and Small Business Development

v) Conditions about delivery dates imposed by counterpart:
   a) Very Strict  
   b) Strict  
   c) not strict

vi) Have you ever lost a subcontract due to non-compliance with delivery dates? Yes/No

vii) Are orders from counterparts regular or stable?
   a) Regular and stable
   b) Regular but not stable in quantity
   c) Stable in quantity, but irregular
   d) Irregular and unstable

viii) What do you think that the reason for your company is given subcontracting by your counterpart? (Answers can be more than one)
   a) Cheap price
   b) Good quality and design
   c) Delivery efficiency
   d) Personal relations
   e) Your special skill
   f) Lack of capacity of principle firm
   e) Others (Specify)

ix) What are the major difficulties with subcontracts?
   a) Strict quality requirements
   b) Strict delivery requirements
   c) Not profitable
   d) Lot of changes in design and specification
   e) High cost
   f) Unstable orders
   g) Others (specify)

65b. Are you satisfied with the present subcontracting relations?

| a) Completely satisfied | b) satisfied | c) some what dissatisfied | d) completely dissatisfied | e) no ideas |

66a. What is your outlook on prospects of subcontracting?
   a) Bright  
   b) Moderate  
   c) Not bright

66b. What are your plans for future transactions?
   a) Intend to expand  
   b) Maintain present level  
   c) Intend to reduce  
   d) No ideas

I Industrial Estate

67a. Do you have any types of relationships with other enterprises within the industrial estate?
   Yes/No

67b. If yes, what kinds of relationship do you have with them? (Tick them)

   a) Just only social (Association/ club etc.)
   b) Exchange technology
   c) Labour Exchange
   d) Subcontracting (Receiving/Offer)
   e) You buy raw martial from them
   f) You sale your products to them
   g) Others (Specify)

68. Expect the above relationships, what are the other benefits which you get as you are in this industrial estate?

1  Common infrastructure facilities
2  Exchange information and ideas
3  Others (specify)
Appendix B

Map 1:
*Sri Lanka, Districts Distribution*
Appendix C

Map 2

Small Firms Distribution in Kurunegala District
Nederlands Samenvatting

(Dutch Summary)

Het zou onmogelijk zijn geweest dit onderzoeksproject te realiseren zonder de medewerking van de geinterviewde ondernemers. Als eerste wil ik hen dan ook danken voor hun tijd en moeite. Ik zou hen graag willen aanmoedigen een ondersteunend netwerk op te zetten; op deze manier kan een win-win situatie ontstaan voor alle betrokken partijen.

In dit proefschrift wordt getracht om het ondernemers-gedrag van kleine bedrijven in ontwikkelingslanden te beschrijven, waarbij wordt uitgegaan van het samenspel met andere zakenpartners in hun omgeving. Zo is er vastgesteld, dat het opzetten van een effectief netwerk van ondernemers de bedrijfsresultaten van de kleine ondernemingen positief beïnvloedt. De belangrijkste onderdelen van een dergelijk netwerk, zoals die naar voren kwamen in het onderhavig onderzoek, zijn: bijwonen van seminars, deelname aan beurzen, externe advisering, lidmaatschap van beroeporganisaties en het voeren van discussies met zowel familieleden als vrienden. Echter, hoewel het belang en de positieve invloed van een aantal van deze onderdelen volledig wordt onderkend (o.a. bijwonen van seminars, deelname aan beurzen en externe advisering), worden ze niet vaak in de alledaagse praktijk van Sri Lanka toegepast.

Netwerken kunnen bijdragen tot het ontstaan van een succesvolle kleine bedrijven sector, doordat een dergelijk brede ondersteunende omgeving helpt om gebrek aan hulpbronnen en zwakke kanten van management te boven te komen.
ECIS Dissertation Series


PROPOSITIONS

Entrepreneurial Networks and Small Business Development: The Case of Small Enterprises in Sri Lanka

S. P. Premaratne

2002

1. Gaining access to required resources is considered the first entrepreneurial problem, while the expansion of the market is the second major problem faced by small enterprises (This dissertation, Chapter 3).

2. Small firms are able to compete successfully with larger firms through the use of a variety of personal contacts, associates and business contacts (This dissertation, Chapter 3).

3. Before doing business, entrepreneurs have to have a clear view on each other’s behavior and personality (This dissertation, Chapter 7).

4. A person with a high need to achieve will take every chance to build up and develop his/her networks (This dissertation, Chapter 7).

5. Personal trust is a very important concept in small businesses, especially in developing countries. (This dissertation, Chapter 3)

6. Informal networks play a major role in the efficient allocation of scarce resources. Entrepreneurs’ ultimate success depends on how successful they are in obtaining adequate resources (This dissertation, Chapter 9).

7. We should think globally and act locally (Mahatma Gandi)

8. You can do everything yourself- with enough time, money and luck. Nevertheless, all three are in short supply (Ohmae)