JYVÄSKYLÄ STUDIES IN BUSINESS AND ECONOMICS
145

Víctor Pérez Centeno

Entrepreneurial Networking of Small Businesses in Latin-America

The Case of Villa el Salvador in Peru

JYVÄSKYLÄN YLIOPISTO

JYVÄSKYLÄ STUDIES IN BUSINESS AND ECONOMICS 145

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Esitetään Jyväskylän yliopiston kauppakorkeakoulun suostumuksella
julkisesti tarkastettavaksi yliopiston vanhassa juhlasalissa S212,
maaliskuun 13. päivänä 2014 kello 12.

Academic dissertation to be publicly discussed, by permission of
the Jyväskylä University School of Business and Economics,
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UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2014

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Editors
Tuomo Takala
Jyväskylä University School of Business and Economics
Pekka Olsbo, Ville Korkiakangas
Publishing Unit, University Library of Jyväskylä

Cover photo by Víctor Pérez Centeno.

URN:ISBN:978-951-39-5626-4
ISBN 978-951-39-5626-4 (PDF)

ISBN 978-951-39-5625-7 (nid.)
ISSN 1457-1986

Jyväskylä University Printing House, Jyväskylä 2014

ABSTRACT

Pérez Centeno, Víctor
Entrepreneurial Networking of Small Businesses in Latin-America: The case of Villa el Salvador in Peru
Jyväskylä: University of Jyväskylä, 2014, 201 p.
(Jyväskylä Studies in Business and Economics
ISSN 1457-1986; 145)
ISBN 978-951-39-5625-7 (nid.)
ISBN 978-951-39-5626-4 (PDF)

This investigation explores how the individual founding entrepreneurs of a tranche of small firms located in the Industrial Park of Villa el Salvador in Peru build their personal networks. In doing so, the study has revealed similarities and differences between the network-building processes of innovative and less-innovative firms. The thesis used a qualitative case-study approach. Data was collected via open-ended interviews with the founding entrepreneurs of 35 small firms in the field. Supplementary data was also obtained via direct observations made during the interviews and a study of the firms' own documentation. The field work took place between August and September 2009 and encompassed eight innovative and 27 less-innovative small firms from the furniture, metal-mechanics and footwear sectors.

The study reveals a new three-phase descriptive model of how the entrepreneurs in the Industrial Park of Villa el Salvador (IPVS) build their networks. The phase of Forced Gestation reveals that in addition to securing support from their family, innovative entrepreneurs are more inclined to network with large customers (weak ties) to 'take advantage of a business opportunity', while less-innovative entrepreneurs are particularly motivated to network with family members (strong ties) to 'overcome financial difficulties'. The phase of Network Birth shows the entrepreneurs' inclination to formalize their partnerships with a written contract. Once the relationship is formalized, innovative entrepreneurs tend to explore new cooperative opportunities with business partners (weak ties). However, less-innovative entrepreneurs focus on exploiting existing ties with family members (strong ties). Lastly, instead of entering into a phase of Network Crystallization as suggested in the literature, all the firms in the IPVS went through a phase of Strategic Stagnation resulting from a high level of lack of trust in public support institutions, banks and other entrepreneurs. This phase prevents the entrepreneurs from moving away from networks based on strong ties (family members) towards networks based on weak ties, such as other business partners (suppliers, banks) and institutional partners (government and scientific support organizations). This, in turn, inhibits firms from further developing their businesses and generating innovation.

The study points up the pervasive influence of incompetence and even corruption among government-run institutions, banks, and the entrepreneurs themselves. Taken together, these factors inhibit firms from networking efficiently. Finally, based on the findings, the thesis recommends that the studied firms should reduce their excessive dependence on strong ties, as such ties are less likely to boost growth and innovation. They should balance and diversify their networking efforts by utilising more weak ties, as these ties are more likely to boost innovation.

Keywords: clusters, developing economies, industrial parks, networks and networking, Peru and small enterprises.

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ACKNOWLEDGEMENTS

I owe my deepest gratitude to PhD. Professor Matti Koiranen, my excellent supervisor at the University of Jyväskylä School of Business and Economics. His academic expertise and personal support have motivated me to complete the doctoral process. During long lonely nights, his encouraging messages gave me the energy and inspiration to carry on.

My in-depth appreciation to PhD. Professor Isabel Botero and PhD. Professor Gonzalo Gomez Betancourt for their invaluable contribution to the reviewing of the manuscript. I would also like to thank PhD. Professor Francesco Chirico for being my opponent.

My special acknowledgement also goes to PhD. Professor Asko Miettinen, PhD. Professor Bengt-Åke Lundvall, PhD. Professor Pierre-Andre Julien, PhD. Professor Philippe Regnier, Eduardo Tarrago, Carlos Ferraro, Johana Suhonen, Pekka Peltonen, Adrian Benfield and the Municipality of Villa el Salvador. This thesis could only be completed thanks to a generous grant from Yksityis-yrittäjäin Säätiö. I would like to dedicate this study to my grandparents, Pedro and Felipa; my parents, Víctor Zacarias and Catalina Edelmira; my sister Katherina and my beloved family, Olguita, Ivancito and Sabrinita.

Jyväskylä 1.1.2014
Víctor Pérez Centeno

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1 INTRODUCTION

This chapter introduces the main topic and highlights the contribution this thesis makes towards filling the gap in the current research into the theme of entrepreneurial networking (regarded in this thesis as the network building process). The first section describes the historical background to the emergence of the Industrial Park of Villa el Salvador in Peru (IPVS). The second section highlights the lack of research into the way small firms in developing countries build their networks. It also highlights the value of this thesis in asserting that an exploration of the network-building process among small firms in Peru (both innovative and less-innovative) has revealed a rich seam of new field-based evidence on the topic which may at least empower the firms in this study to improve their network-building efforts. The third section synthesizes the objectives and research questions. The fourth section provides a set of key definitions used in this study. Finally, the fifth section summarizes the main points of each chapter in the thesis.

1.1 Background

In the mid-eighties, most Latin-American economies underwent restructuring. In the case of Peru, this meant a remarkable change in policy direction after the eighties, which had been marked by debt default (86% of long- and medium-term debt stock unserviced), deep recession, astronomic hyperinflation (7,650 percent in 1990) and a downturn of 7.3% in productivity (Abugattas, 1998). Following its own timetable, Peru implemented the so-called New Economic Model (NEM) (Pisani & Pagán, 2004). The NEM measures dismantled the protectionist policies of the 1970s, which were rooted in the import-substitution model of industrialization and were largely dependent on the private sector as a catalyst and growth engine for wealth generation.

The NEM eliminated protectionism in foreign trade, privatized state enterprises, simplified the tax structure and liberalized the labour and financial markets (Fairlie, 2003). The stated objectives of the programme were to change

the state-dominated economy into a market-oriented economy, overcome the economic chaos, eliminate hyperinflation, re-integrate the country into the international financial system, end terrorism and set the stage for Peru's sustained economic growth (Gonzales de Olarte, 1998).

In terms of fiscal reform, the government liberalized the interest and exchange rates, cut out state intervention in credit allocation, established a private pension system and improved banking regulations. In the legal arena, the government regulated property rights and land transactions, and removed price controls and state monopolies. In terms of social welfare, the government created the National Fund for Compensation and Social Development (FONCODES) to provide food and health care for the poor (Sueyoshi, 2001).

The reforms succeeded. Peru's hyperinflation fell from 7,650 percent in 1990 to 139 percent in 1991 and eventually stabilised at 3.7 percent in 1999. The annual growth in GDP reached 6.4 percent, the country's international currency reserves increased from minus $150 million to plus $8.4 billion and exports grew by 107 per cent (Pasco-Font, 2000).

Among the successful reforms, it was the liberalization of trade that had the strongest impact on small firms. The reform of trading regulations made the economy more competitive, which in turn impacted on the performance of small firms, who had to make dramatic changes to their business models and practices in order to accommodate these reforms. The NEM measures exposed small firms to competition with international enterprises which were superior in scale, technology and commercialization channels (Jiménez, Aguilar, & Kapsoli, 1998).

Fierce price competition, along with intense publicity on TV, cable networks and the internet forged new consumer habits in Peru, which boosted the consumption of imported products at the expense of those traditionally manufactured by small, local firms. Massive and cheaper imports significantly reduced the market share of small domestically-based enterprises in many areas of commerce, including the textiles, footwear, metal-working, furniture and plastics sectors, on which the industrial Park of Villa el Salvador (IPVS) was based (Jiménez et al., 1998).

In spite of the above, small firms did not experience a generalized drop in production, employment and productivity (Peres & Stumpo, 2002). Instead, the small firms in Peru coalesced into eleven recognisable industrial clusters (MTPE, 2005; Porter, 1995). These were: the cluster of Villa el Salvador (metalworking, furniture and footwear sectors); the cluster of Gamarra (textiles sector); the cluster of Cusco (tourism sector); the cluster of Mantaro Valley (craftsmanship); the cluster of El Porvenir (footwear sector); the cluster of Chimbote (fishing sector); the cluster of Tacna (agro-industry sector); the cluster of Yanacocha (mining sector); the cluster of Bambamarca (dairy sector); the cluster of Sur Andino (textile and ceramics sectors); and the cluster of Arequipa (textile sector) (Porter, 1995).

During this period, several national laws enacted in the eighties to enhance the development of small firms helped create at least three industrial

parks: the industrial park of Villa el Salvador (IPVS), the industrial park of Comas in Lima, and the Industrial park of Ilo in the city of Moquegua (Tolentino, 2001).

It is generally accepted that it was the collective commitment of the local populace of Villa el Salvador which was influential in establishing a specific area designated to promoting manufacturing-based businesses and job opportunities in the city. This area would later be named and known as the Industrial Park of Villa el Salvador (Benavides & La Rosa, 2000). The park was officially created in 1987, and its primary objective was to promote and develop small manufacturing firms.

There is no specific research to confirm the connection between the NEM measures and the rise of these clusters of small firms in Peru, but it is generally assumed that these clusters emerged as an act of survival due to the prevailing conditions of poverty[1] and the lack of more formal employment[2] (Tello, 2008).

The Industrial Park of Villa el Salvador (IPVS) is not only the most dynamic cluster in the country (Kuramoto, 2001) but it is also an ambitious long-term project (probably unique in Peru) which concentrated a variety of different initiatives into promoting industry-based small firms, thereby reducing urban poverty (Benavides & La Rosa, 2000).

Academics have defined industrial parks and clusters in various ways. A cluster has been defined as the dynamic socio-economic process of forming a production structure that has a constant interaction between agents in a specific geographical area (MTPE, 2005). An industrial park has been defined slightly differently, being 'an area reserved for the undertaking of productive activities at a micro, small and medium scale, with necessary infrastructure, equipment and common services' (MTPE, 2012). Nevertheless, in this study the definition of an industrial park is considered to be equivalent to that of a cluster (Proexpansión, 2004).

IPVS (the industrial park of Villa el Salvador) has been variously described as a multi-productive cluster, an inter-related cluster or a cluster-based industrial park (MTPE, 2005). Among other types of clusters, an 'inter-related cluster[3]', has been described as 'a cluster which is not yet fully self-sufficient but has so far managed to achieve some degree of technical sophistication and integration in its productive relationships' (MTPE, 2005).

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1 Poverty increased from 41% in 1985 to 53% in 1995 (Jiménez et al., 1998).

2 From 1991 to 1997 the official rate of permanent employment decreased from 36% to 18% (Jiménez et al., 1998).

3 Remaining types of clusters include: Incipient Clusters (type I), characterised by scarce productive/commercial relations, lack of technological development, insufficient internal demand, embryonic institutional development; Articulated Clusters (type II), which feature commercial articulation, lack of technological improvement, basic demand, basic institutional development; Inter-related Cluster (type III already defined) and; Self-Sufficient Clusters featuring full productive integration, technological innovation, sophisticated demand, institutional and organizational development, cooperation and competition (Proexpansión, 2004).

Whatever we may call it, the objective of this investigation is to understand the network building process in thirty-five small firms operating within the confines of the Industrial Park of Villa el Salvador (IPVS).

1.2 Research Motive

The motivation for this research is that although there has been some theoretical research into the types of networks used by firms throughout the entrepreneurial process (both in Latin-America and, to some degree, Peru), the nitty gritty details of the processes that trigger the formation of these networks are lacking. The theoretical approaches to how firms create and develop their networks do not adequately describe this phenomenon in practice; at least, not in developing economies. The harsh reality of extreme poverty in which small firm entrepreneurs have to operate in many developing economies around the world has seldom been studied. If the actual process of how small firms develop their networks in an economically and politically deprived environment could be described in the entrepreneurs' own terms, such research might help their firms to further improve their network-building efforts and eventually their firms' growth and innovation.

In spite of the increasing interest and the rapid expansion of entrepreneurship in Latin-American countries (Tiffin, 2004), virtually all the literature on entrepreneurship comes from Europe and the United States (Kantis, Ishida, & Komori, 2002). The entrepreneurship phenomenon is a relatively new research area in Latin-American economies and has been defined as being 'in [its] embryonic phase' (Kantis et al., 2002). There is no doubt that demand for further research into the area is growing in the academic world (Gennero de Rearte & Liseras, 2001; Kantis, Angelelli, & Gatto, 2001; Motta & Roitter, 1999; Reynolds, Hay, Bygrave, Camp, & Autio, 2001; Souza, 2001).

Although there has been much research in developed economies into the key factors that influence the birth and early development of small firms, scant research has been carried out in less developed economies, such as in Latin America, and more specifically, Peru. For example, in Peru there are no reliable statistics on the number of firms that enter and exit the market annually. The weakness (and in some cases complete lack) of public strategies for entrepreneurial development in the majority of Latin American countries is due, at least in part, to this lack of research (Kantis et al., 2002). Furthermore, despite the considerable attention that networks have received from academics in developed economies, there are significant gaps in our knowledge and understanding of the processes and dynamics of small firm networks in less developed countries (Blackburn, Curran, & Jarvis, 1991; Coviello, 2005; Curran, Jarvis, Blackburn, & Black, 1993; Fletcher, 2002; Hoang & Antoncic, 2003).

In Peru, statistical evidence about entrepreneurship is confined to two sources. The first one is an annual country-wide report, the Global Entrepreneurship Monitor (hereafter referred to as the GEM survey). This

attempts to assess the entrepreneurial process[4] in terms of three stages: the inception of the entrepreneurial venture (nascent entrepreneur), company start-up (new entrepreneur) and the early development of the firm (established entrepreneur) (Xavier et al., 2013). The 2011 GEM survey identifies the typical Peruvian entrepreneur as a 36-year-old person operating in the services sector for the local market, largely dependent on the financial support of his/her family, somewhat innovative (in terms of introducing new combinations of products or accessing new markets) and almost twice as likely to be driven by opportunity as by necessity (Xavier et al., 2013). Tellingly, the study identifies three major obstacles to the development of entrepreneurship in Peru: the lack of any political will to consider entrepreneurship as a priority on the national agenda, the lack of access to finance, and the lack of entrepreneurship education at all levels (Xavier et al., 2013).

The GEM report is a valiant effort to study the level of entrepreneurship inside and across developing countries, and it is a useful resource for gathering basic statistics, i.e. 'how many' (e.g. how many firms network, how many firms innovate, etc.?). However, the GEM report does not address the question of 'how'. For example, how exactly do firms network, or how do they develop innovative practices? In a developing economy like Peru's, statistics such as those produced by the GEM survey are not able to explore and capture the actual manifestation of the network-building process in small firms. This is the primary objective of this thesis.

Although it is a very useful resource (and will be frequently referred to in this thesis) the GEM[5] survey in Peru only provides aggregated percentages based on predetermined closed questions. It is a good tool for measuring the behaviour of individuals with respect to starting and managing a business at the grassroots level, but it is not adequate to explore specific procedural phenomena such as the small firm's network-building processes.

Another limitation of the GEM is that it defines 'networking' as access to advice and back-up from educated and qualified experts. However, in Peru, the generally accepted view of networking, (particularly among small firms) primarily means access to monetary resources (funding), whereas access to non-monetary resources (information, technology, etc.) is often regarded as a secondary consideration. Another weakness of the GEM survey is that it is based on random interviews with individuals, rather than with the actual entrepreneurs. Among other things, this prevents drawing a clear distinction

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4 The first stage comprises the birth of entrepreneurial motivation, where the business idea is identified and the business plan developed. Thereafter, start-up involves the final decision to create the enterprise. While the entrepreneur's actions and ventures in respect of the process begin in the preceding stage, it is here that resources must be gathered and organised and tangible and intangible assets placed at risk. Then, during the early development of the enterprise, the entrepreneur must address the often turbulent challenges of management during the first years, when the venture, as well as his or her own management capacity, will be tested in the market (Xavier, Kelley, Kew, Herrington, & Vorderwülbecke, 2013).

5 The GEM Peru 2011 survey is based on a national face-to-face interview with 2,010 individuals between 18 and 64 years old.

between 'opportunity' and 'necessity' entrepreneurs. Another problem with the GEM survey is that it regards innovation from the limited perspective of a mature customer in a mature and stable economy. It tries to measure innovation in concrete terms, such as 'patents applied for' etc. Although this thesis does not focus specifically on measuring innovation, it does explore the small firms' network-building process in terms of their innovative vs less-innovative characteristics in a qualitative and context-aware way.

The other relevant literature on entrepreneurship and networking in Peru comes from two studies which cover a number of Latin-American countries, although not specifically Peru (Kantis, Angelelli, & Koenig, 2005; Kantis et al., 2002). Using descriptive statistics, these studies assess the relevance of networks in each of three stages of the entrepreneurial process: the inception of the entrepreneurial venture (networks as channels for the identification of opportunities), company start-up (networks as channels for accessing non-monetary resources) and the early development of the firm (networks as supporters of the firm's development).

These studies are helpful, but once again they measure networking in very concrete terms, and are based on the research conventions of mature and developed countries. Nevertheless, they do reveal some useful statistics about the entrepreneurial activity in Peru. For example, in the phase of inception, both previous work experience and contact networks help entrepreneurs to find opportunities on which to base their businesses (70%). The studies also show that the more innovative entrepreneurs identify opportunities more thoroughly than the less-innovative ones, using more diverse sources of information, such as trade fairs and trade journals. Furthermore, such entrepreneurs have a wider network of contacts, which include a greater number of non-family, business connections. In contrast, less innovative entrepreneurs tend to interact with a more limited circle of contacts, generally in their immediate social circle of friends and family (Kantis et al., 2002).

The current literature on entrepreneurial networking in Latin America and Peru appears to confirm other accepted theories, too. For example, during the phase of company start-up, prior work experience and higher education are the factors that facilitate access to, and the use of, those resources needed to get the business started. The networks used by the innovative entrepreneurs are more extensive than those used by the less-innovative ones and play an important role in access to intangible resources, such as information and technology (Kantis et al., 2005; Kantis et al., 2002).

In Peru too, during the early development of a new enterprise, innovative entrepreneurs tend to make more use of networks than the less-innovative ones in terms of acquiring business-related information, broadening the client and supplier base, and hiring workers etc. Naturally, the make-up of these networks tends to vary once the company begins operations. At this stage, much depends on the personal characteristics of the entrepreneur himself. Nevertheless, in Peru, at this stage, suppliers and clients begin to play a more important role than friends and family (Kantis & Angelelli, 2005; Kantis et al., 2002).

Kantis et al's study also identifies the types of networks entrepreneurs use as they move through the entrepreneurial process. However, due to its quantitative nature, the Kantis study fails to capture what goes on behind the scenes. In other words, the existing approaches to how firms build networks do not adequately describe the reality of the network-building process in small firms in undeveloped and relatively unstable economies such as Peru's.

Any attempt to study entrepreneurial networking must refer to the two major studies[6] of (Larson, 1992) and (Kock & Galkina, 2008). These provide valuable empirical evidence about entrepreneurial networking procedures in Europe.

Larson (1992) first used an exploratory ethnographic study to understand the processes by which seven highly cooperative inter-firm[7] alliances were built and preserved. This investigation found three phases in which networks develop. The first phase is characterized by the preconditions for the exchange based on personal reputation, prior relations and the firm's reputation. The second phase features the conditions needed to build mutual economic advantage and the third phase features integration and control.

Kock and Galkina (2008) undertook a multi-case study of how members of entrepreneurial teams in Finland and Russia proactively and purposefully used their formal and informal relationships for networking. The authors of this study also concluded that network development consists of three stages: conception, which features the activation of existing relations; commercialization, which features the creation of new contacts, and; growth, which features the evolution of the network (Kock & Galkina, 2008).

These studies improve our understanding of the network-building process in developed economies, but they do not adequately describe the network-building process of small firms operating in developing countries like Peru, with their distinctive business environments[8] (Xu, 2011), their own cultural factors (Brusco et al., 1996) and the different definitions of a small firm. For example, the so called high-growth small firms used in the study of Larson and Starr (1993) have turnovers of at least $10 million, which is equivalent to the turnover of a large firm in the Peruvian context, (according to Peruvian regulations, a small firm should not earn more than $2.3 million) (Villarán, 2010). Similarly, Kock and Galkina (2008) based their study on interviews with teams of founding members of firms in Finland and Russia. This, again, differs from the Peruvian entrepreneurial context, which is mostly characterized by individual entrepreneurs (Serida, Morales, & Nakamatsu, 2012) who prefer to maintain personal control of their business (Kantis et al., 2002). Furthermore,

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6 Furthermore, at the theoretical level there are three models that touch upon the network building process, to wit: the network model of organization formation (Larson & Starr, 1993), the evolution of firm networks: from emergence to early growth of the firm (Hite & Hesterly, 2001) and, the entrepreneurial network development: trusting in the process (Smith & Lohrke, 2008).

7 These firms had revenues of at least $ 10 million and revenue growth of 20%.

8 For instance in terms of labour flexibility, corruption, property rights, legal system, access to finance among others (Xu, 2011).

none of the existing studies have analysed and compared the networking-building process between innovative and less-innovative firms.

This study addresses these gaps by exploring the network-building process of small firms in the industrial park of Villa el Salvador in Peru (IPVS). The thesis is significant for two reasons. First of all, for the first time it provides a new and rich seam of information about how innovative and less-innovative small firms network in Peru. In addition, the findings on how innovative and less-innovative small firms actually network may help the less-innovative small firms to identify their networking weaknesses, and the innovative small firms to accelerate their innovation efforts. The next section expands on the specific objectives of the study.

1.3 Objectives and Research Questions

The primary objective of this study is to understand the network-building process in twenty-seven innovative and eight less-innovative small firms operating in the IPVS from the entrepreneurs' perspective. The firms belong to the sectors of metal-mechanics (15 firms), furniture (14 firms) and footwear (6 firms). To achieve the primary objective, the study encompasses three interconnected sub-objectives: it explores the network-building process among innovative and less innovative small firms; it identifies the major similarities and/or differences between innovative and less-innovative small firms during the network-building process; and it identifies the major obstacles faced by small firms during the network-building process in this particular context. The major objectives and research questions are summarized in Table 1.

TABLE 1 Research Objectives of the Study

Major Research Objective	Major Research Question
Understand the network-building process of innovative and less-innovative small firms operating in the industrial park of Villa el Salvador	How does the network-building process take place in innovative and less-innovative small firms operating in the industrial park of Villa el Salvador?
Research Sub- Objectives	Research Sub- Questions
Explore the network-building process among innovative small firms	How do innovative small firms' network?
Explore the network-building process among less-innovative small firms	How do less-innovative small firms network?
Identify similarities and/or differences between innovative and less-innovative small firms during the network-building process	What, if any, are the similarities and/or differences between innovative and less-innovative small firms during the network-building process?
Identify the major obstacles faced by small firms during the network-building process	What are the major obstacles faced by small firms during the network-building process?

1.4 Key Definitions

In order to better understand this analysis of the network-building process, the following definitions have been used in this study.

A small firm is an enterprise which employs between one and one hundred employees, whose total annual turnover does not exceed $6.1 million Peruvian new soles (around $2.3 million) (Legislative regulation 1086).

Innovation is the implementation of a new or significantly improved product (goods or services), process, marketing method, new organisational method in business practices, workplace organisation or external relations either in the international market, domestic market or in the company itself (OECD/Eurostat, 2005).

An innovative firm is a small firm which has introduced at least one new or improved product (goods or services), process, marketing or organizational method (OECD/Eurostat, 2005).

A less-innovative firm is a small firm which has not been able to introduce any new or improved product (goods or services), processes, marketing or organizational methods.

An entrepreneur is an individual who carries out entrepreneurial initiatives (Schumpeter, 1934) often resulting in the formation of new firms (Gartner, 1988; Ruef, 2002) or the rejuvenation and improved performance of established firms (Covin & Slevin, 1991; Lumpkin & Dess, 1996; Wiklund, 1998; Zahra, 1991). In this study the entrepreneur is the founder and/or current manager of a small firm.

An innovative entrepreneur is a highly-educated middle class individual (primarily university graduates) with prior work experience in another company in a similar sector. Such entrepreneurs are usually motivated by a desire for personal fulfilment and the opportunity to apply their knowledge and to improve their personal income. These entrepreneurs display a higher level of interaction with their business contacts (weak ties) and are better connected and more opportunistic than less-innovative entrepreneurs (Kantis & Angelelli, 2005). Dynamic, opportunistic or innovative entrepreneurs focus to a great extent on high value-added capacity, growth potential, job creation and economic modernization (firm's growth) (Kantis & Angelelli, 2005). This study regards the concepts of 'dynamic entrepreneur', ‘opportunity entrepreneur’ and 'innovative entrepreneur' as equivalent.

Strong ties are characterized as dense, frequent contacts, usually long term, reciprocal and involving a strong degree of trust and emotional closeness (Coleman, 1988), as well as the reciprocity involved between participating actors (Marsden & Campbell, 1984). Strong ties imply less efficient transmission processes because a large number of actors in the strong-tie network also know each other, as well as knowing the focal actor (Granovetter, 1973, 1995) so they tend to offer redundant sources of information or resources (Ruef, 2002). Typical strong ties come from informal social networks such as family and friends (De Jong & Hulsink, 2012; Kantis et al., 2005; Ruef, 2002).

Weak ties are different to strong ties in that they are sparse, transient and normally involve little emotional intensity (Burt, 2009; Granovetter, 1973; Uzzi, 1997). They entail less investment in time and intimacy than with an array of social acquaintances (Ruef, 2002). Weak ties are regarded as more important in spreading information or resources because they tend to serve as bridges between otherwise disconnected social groups (Granovetter, 1995). Typical weak ties are suppliers, customers, banks/accountants (business networks) (De Jong & Hulsink, 2012; Kantis & Angelelli, 2005) and technical support organizations such as government support organizations, herein referred to as institutional networks (De Jong & Hulsink, 2012; Kantis & Angelelli, 2005).

A network is the collaborative formal or informal relationship generated between the entrepreneur and his social contacts/partners (friends and family), business contacts/partners (suppliers, clients) and/or institutional contacts/partners (support agencies) in order to access monetary resources (funding) or non-monetary resources (information and technology). The terms network, tie, relationship, contact and partner are regarded as interchangeable.

An entrepreneurial network is the total sum of relationships in which an entrepreneur participates, and which provide an important resource for his or her activities (Dodd & Patra, 2002). It is also known as a 'personal network' or 'ego network'.

Entrepreneurial networking is the process through which a collaborative formal or informal relationship between the entrepreneur and his social, business and/or institutional contacts is created. This study particularly focuses on the networking-building process between the entrepreneur and his most relevant partners. The terms entrepreneurial networking, network-building or network-building process are regarded as interchangeable.

Process is based on the theory of the business life-cycle, and "depicts the process of change in an entity as progressing through a necessary sequence of stages. An institutional, natural, or logical program prescribes the specific contents of these stages" (Van de Ven & Poole, 1995).

Trust is regarded as 'the extent to which a person is confident in, and willing to act on the basis of, the words, actions, and decisions of another subject' (McAllister, 1995). A more general definition is that trust is 'the degree of confidence one feels when thinking of a relationship with a third party' (Rempel & Holmes, 1986).

Affective trust is the emotional or social aspect of trust (Hite, 2005). Affective trust develops when individuals emotionally invest in relationships, resulting in genuine concern for a partner's welfare and a belief in the relationship's intrinsic virtue (McAllister, 1995). In this study, relationships based on affective trust or personal trust are those with strong-tie partners such as family and friends.

Cognitive trust is the rational or economic aspect of trust (Lewis & Weigert, 1985), or social trust (Hite, 2005). Cognitive trust occurs when a person makes a conscious decision to trust based upon the best knowledge he or she has (McAllister, 1995). In this study, relationships based on cognitive trust are those with weak-tie partners such as customers, suppliers, banks, science organizations and public/governmental support organizations.

Institutional trust is the trust in the institutional environment (social, cultural, political and organizational), which includes formal organizations, sanctioning mechanisms (such as the implementation of legal processes), and informal codes and values (Welter & Smallbone, 2006). For the purposes of this study the term 'institutional trust' refers particularly to trust in public support organizations, banks and entrepreneurs. This study regards the concepts of 'lack of trust in institutions' and 'institutional distrust' as being interchangeable. Furthermore, this study equates the entrepreneur's ability to network (entrepreneur's network-building process) with the firm's ability to network (firm's network-building process). This is illustrated in more detail in Section 6.2.2.

1.5 Outline of Chapters

Table 2 outlines the rationale and sequence of the nine chapters in this thesis. It also highlights the relationships between the chapters, and the major results achieved in each of them.

TABLE 2 Outline of Chapters

Chapter	Output
Chapter 1: Introduction	Introduces the study, establishes the research gap and the major objectives of the study.
Chapter 2: The Latin American And Peruvian Context	Following on from Chapter 1, this chapter analyses the available evidence about small firms' networking in Latin-America and Peru.
Chapter 3: The Case of Villa el Salvador	This chapter specifies the case of Villa el Salvador in Peru. It describes its genesis, characterises the small firms in the IPVS and identifies the major obstacles that inhibit the firms' growth.
Chapter 4: Theoretical Framework	This chapter deals with the theoretical foundations of the three pillars of the thesis: cluster-based industrial parks, innovation in small firms and entrepreneurial networking.
Chapter 5: Initial Model Approach to Firm's Entrepreneurial Networking	Based on chapter 4, this chapter assesses six existing approaches to the study of network building and elaborates on the initial model which provided the approach to small firms' entrepreneurial networking used as a framework of reference for this research.
Chapter 6: Methodology	Based on chapters 1 and 5, this chapter describes the appropriateness of using a qualitative paradigm for the research, and develops a case research methodology.
Chapter 7: Results	Based on chapters 1, 5 and 6, this chapter presents the major results of the study.
Chapter 8: Discussion	This chapter discusses the findings of the research in the light of current theories about entrepreneurship.
Chapter 9: Conclusions	Based on chapters 7 and 8, this chapter summarises the major conclusions that can be drawn from the results of the study.

Source: Víctor Pérez Centeno (2012)

1.6 Summary of Chapter 1

This main purpose of this chapter was to introduce the topic of the study, highlight the research gap which the thesis addresses, and establish the major research objectives. The background section introduced the main topic of the study by summarizing the most relevant free market policies (the so-called NEM measures) introduced during the 1990s in Peru. This section stated that, in parallel with the implementation of the NEM measures and the introduction of several laws aimed at enhancing the development of small firms, eleven new clusters emerged in the cities of Lima, Huancayo, Trujillo, Ancash, Arequipa, Puno, Cusco, Cajamarca and Tacna, and at least three industrial parks were born. One of these is the cluster of Villa el Salvador, which hosts the industrial park in question.

The second section unveiled a number of important research gaps which show that, in Peru, studies into entrepreneurial networking in particular, and entrepreneurship in general, are at best limited to the identification of the types of networks used across the entrepreneurial process. One of the identified research gaps is the lack of a comprehensive, qualitative study that explores and compares the 'how' of the network-building process among innovative and less-innovative small firms operating in a developing country like Peru. This section also stressed the fact that the absence of evidence about how small firms network in Peru restricts a comprehensive understanding of this process, which in turn prevents small firms from strengthening their network building efforts and ultimately their capacity for growth and innovation.

The section dealing with the research questions and objectives defined an understanding of the network-building process in twenty-seven innovative and eight less-innovative small firms operating in the IPVS as its primary objective. To attain the primary objective, the study focuses on three interlinked sub-objectives: it explores the network-building process among innovative and less-innovative small firms; it identifies the major similarities and/or differences between innovative and less-innovative small firms during the network-building process; and it identifies the major obstacles faced by small firms during the network-building process.

Finally, this chapter highlighted the significance of this study in that it is the first qualitative investigation that explores and compares network-building among innovative and less-innovative small firms in a developing country.

The last two sections provided a set of key definitions and an overview of the nine chapters which comprise this thesis. The next chapter concentrates on the existing evidence about small firms' networking in Latin-America and Peru.

2 THE LATIN AMERICAN AND PERUVIAN CONTEXT

The aim of this chapter is to provide a comprehensive summary of the available evidence about entrepreneurial networking in both Latin-America and, more specifically, Peru. The first section concentrates on entrepreneurship studies carried out in Latin-American countries, of which Peru forms a part. The second section looks at the available evidence from studies of entrepreneurship undertaken at a national level, i.e., in Peru itself. Since this study also deals with innovative small firms, the last section reviews the evidence about the present status of small firms' innovation in Peru.

2.1 Research into Entrepreneurial Networking in Latin-America

For much of the 20th century, Latin America was regarded as an economic backwater. Those days are over. Increasingly, this market of 550 million people is getting the respectful attention it deserves. In some respects, there has never been a better time to launch or grow a business in Latin America (Turley, 2010). Trade relationships have multiplied and financial institutions have become much more stable, yet there is still enormous potential for economic development.

Nevertheless, Latin American entrepreneurs still have to contend with a number of obstacles which limit their development, not least of which is the weakness of their business networks[9] (Turley, 2010). Latin-American economies need to transform their typically low value-added ventures aimed at local markets into strong, innovative, globally-competitive networked firms (Amorós, Fernández, & Tapia, 2012).

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9 Smaller launch teams, limited availability of subcontracting services and limited availability of financing (Turley, 2010).

Although entrepreneurship and networking processes are hot topics in the academic world, relevant studies in the region are scarce (Kantis et al., 2002). As mentioned above, one major generic entrepreneurship study in the region is the Global Entrepreneurship Monitor (GEM), which analyses the level of entrepreneurship in a wide range of countries (there were 69 in the 2012 report). Thirteen Latin American countries were covered in the 2012 GEM report, including Peru.

The primary measure of entrepreneurship used by the GEM is the Total Early-stage Entrepreneurial Activity Index (TEA), which gauges the level of dynamic entrepreneurial activity in an economy by comparing the incidence of start-up businesses (nascent entrepreneurs) and new firms (up to 3.5 years old) with the adult population (i.e. individuals aged 18–64 years).

This report[10] shows that the highest TEA level, on average, can be found in Sub-Saharan Africa (with Zambia the highest at 41%). In the Latin America/Caribbean regions, the top three positions for entrepreneurship go to Chile (23%), Peru (20%) and Colombia (20%) (Xavier et al., 2013). However, the authors do point out that, at least to some extent, the development levels are associated with particular patterns in the level and type of entrepreneurial activity. Thus, in economies with low per capita GDP, the TEA index indicates a higher rate of entrepreneurship but a correspondingly higher proportion of this is necessity-driven. Conversely, economies with a relatively high GDP have lower levels of entrepreneurship, although a higher proportion of these entrepreneurs are opportunity-driven (Xavier et al., 2013). In other words, a high TEA rate does not necessarily reflect the quality of the entrepreneurial activity. For instance, in the case of Peru it only indicates that at least one in five adults aged between 18 and 94 years is about to start an entrepreneurial activity or has already started one within a maximum period of 3.5 years, but it does not attempt to characterise the entrepreneurial activity.

Nevertheless, the 2012 GEM survey does reveal a number of statistics about entrepreneurship in developing economies, not all of which are complementary. For instance, the study shows that in 2012 entrepreneurs in Latin-America were on average 2 times more likely to be driven by an improvement opportunity[11] than a necessity-driven one. The only exception was Ecuador, which had more necessity-driven than opportunity-driven entrepreneurs (Xavier et al., 2013). This kind of statistic is revealing, because it is generally accepted there is a link between opportunity-driven entrepreneurship and successful innovation (Dyer, Gregersen, & Christensen, 2008). Although there has been virtually no research in Latin America

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10 Each participating economy conducts a survey of a random representative sample of at least 2,000 adults (aged 18 – 64 years).

11 The GEM study also makes the distinction between different types of entrepreneurship and how these contribute to economic growth and job creation. Individuals who start businesses in response to a lack of other options for earning an income are deemed to be necessity entrepreneurs, while those who start businesses with the intention of exploiting an opportunity are identified (Xavier et al., 2013) as opportunity entrepreneurs. The latter may include individuals who aim to maintain or improve their income, or to enhance their independence (Xavier et al., 2013).

specifically concerned with entrepreneurial networking, one comparative analysis carried out in East Asia and Latin America assessed the role networking[12] plays in the entrepreneurial process (Kantis et al., 2005). It analysed networks as channels to seize business opportunities (the firm's inception), networks as channels to access and use non-monetary resources (the firm's start-up stage), and networks as channels to help the first moments in the life of the company (the firm's early development) (Kantis et al., 2005; Kantis et al., 2002).

Business connections such as suppliers and clients, and social connections such as friends, family and acquaintances were the resources most frequently mentioned by the interviewees (Kantis et al., 2005; Kantis et al., 2002). The study reveals that, during the firms' inception, in 70% of cases both prior work experience and contact networks helped entrepreneurs to find opportunities on which to base their business (Kantis et al., 2005; Kantis et al., 2002). It also revealed, perhaps unsurprisingly, that what Kantis calls dynamic entrepreneurs (innovative entrepreneurs in this thesis) are more prevalent in the knowledge-based sector than in the more traditional manufacturing sectors. It also showed that such entrepreneurs 'identify business opportunities more thoroughly using more diverse sources of information' (Kantis et al., 2005; Kantis et al., 2002). This study also revealed that such entrepreneurs gained relevant information through a variety of activities, some of which are as conventional as visiting trade fairs and reading professional journals. The key point, however, is that innovative and dynamic entrepreneurs focus on high value-added capacity, growth potential, job creation and economic modernization (Kantis et al., 2005).

The study also showed that knowledge-based entrepreneurs made greater use of information on the internet and in specialized publications than did those entrepreneurs in the more traditional sectors. Sources that provide free access to information tend to be more valuable to this kind of firm (Kantis et al., 2005; Kantis et al., 2002). Furthermore, with the exception of Costa Rica, the network of contacts of the more successful companies included a greater number of business associates (non-social contacts) and similar connections, which will henceforth be characterised as 'weak ties'. Typically, such 'weak-tie' network contacts include other small firm entrepreneurs, the executives of large companies and, in some countries, academics and other professional experts, especially among knowledge-based companies (Kantis et al., 2005; Kantis et al., 2002). The founders of less-innovative firms, on the other hand, tend to interact with a more limited circle of contacts, generally derived from their immediate social circle (friends and family) referred to in this thesis as 'strong ties' (Kantis et al., 2005; Kantis et al., 2002).

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12 For ease of interpretation the literature reviewed in the case of Latin-America and Peru considers three types of networks, contacts or networking. A social network is defined as any contact or network between the entrepreneur and his/her family, friends and acquaintances; a commercial or production network is defined as any contact or network between the entrepreneur and his suppliers or clients and; an institutional network is defined as any contact or network between the entrepreneur and institutions for supporting businesses, business associations and universities (Kantis et al., 2005; Kantis et al., 2002).

Kantis et al's study (2002) also revealed that, during the start-up phase, prior work experience and higher education were the factors that facilitated access to, and the use of, resources necessary for getting the business under way, and that both technical knowledge and the contacts made in these environments contribute to the success of small-firm networking in all three stages of the entrepreneurial process (Kantis et al., 2005; Kantis et al., 2002). Such networks play a more important role in gaining access to intangible resources (information and technology) than in gaining access to other, more tangible physical resources (raw materials, installations, equipment).

Significantly, Peruvian and Mexican entrepreneurs made more use of their social connections than did the entrepreneurs in other Latin American countries. However, Mexican entrepreneurs were also slightly different in that they frequently mentioned the role of civil institutions as providers of access to information (Kantis et al., 2005; Kantis et al., 2002). Institutional support was quite common in certain regions of Mexico where the chambers of commerce are very active. In other countries in the region, especially in Argentina and Brazil, such institutions played a more limited role (Kantis et al., 2005; Kantis et al., 2002).

Nevertheless, what is clear is that regardless of whether they had innovative or less-innovative businesses, were operating in metropolitan areas or small towns, or engaged in conventional or knowledge-based activities, nearly all entrepreneurs utilized their networks to access resources. However, in some countries, the innovative entrepreneurs and those with knowledge-based businesses benefited more often from their networks than those in the conventional manufacturing sector (Kantis et al., 2005; Kantis et al., 2002).

In those countries where there are significant differences between different types of entrepreneurs, the founders of innovative and knowledge-based businesses make greater use of networks. They use these networks to gain access to information and, to a lesser extent, to technology (Kantis et al., 2005; Kantis et al., 2002).

In Peru, Mexico and Brazil, for example, the dynamic companies characteristically made greater use of their business contacts for gathering information, especially from regional suppliers. Also, in order to access technology, knowledge-based entrepreneurs in Brazil, Mexico, and Costa Rica relied more on suppliers than did those entrepreneurs operating in the more conventional manufacturing sectors (Kantis et al., 2002). Furthermore, in Brazil and Mexico, greater use was made of information provided by public institutions, especially universities. In Argentina and Costa Rica, on the other hand, very few entrepreneurs mentioned institutional support for business in the knowledge-based sector (Kantis et al., 2005; Kantis et al., 2002). This all goes to show that, regardless of the context, it is an entrepreneur's support networks which play a fundamental role in the success or failure of a business, especially in terms of access to non-financial resources.

Kantis et al (2002) point out further evidence which seems to suggest that the type of network which entrepreneurs utilise has an effect on their success.

For example, with the exception of Costa Rica (where support networks seem to be less effective), most entrepreneurs indicated that they had interacted with non-social contacts during the firm's early development phase. Entrepreneurs with more innovative businesses tended to make more use of extended networks than the less-innovative ones. In general, these entrepreneurs emphasized the contribution made by such networks in acquiring business-related information, broadening the client and supplier base, and even in hiring workers (Kantis et al., 2002).

The structure of the networks tends to vary once the company has begun operations. At this stage, suppliers and clients (weak ties) begin to play a more important role than friends and family (strong ties). The role of the former is particularly evident among innovative entrepreneurs in large cities. Almost half of the entrepreneurs emphasized the support of suppliers and clients, while barely 1 in 5 identified the contribution made by their most immediate social circle (Kantis et al., 2005; Kantis et al., 2002).

As one of the so-called BRIC economies, Brazil has recently been identified as one of the most important and rapidly developing economies in the world. It is therefore significant that the support of commercial networks was emphasized more by the Brazilian entrepreneurs than by the entrepreneurs in other countries. This finding, along with other more broadly-based information obtained from the study, confirms that in Brazil the productive sector is better organised, and favours the emergence and development of new companies, particularly in the rural areas studied (Kantis et al., 2002).

Institutional support networks, as mentioned above, also played an important role in certain regions of Mexico, where the chambers of commerce were particularly active. One in two of the innovative entrepreneurs located in these regions made reference to the contribution of such institutions, clearly indicating that the regionally-based institutional environment in Mexico is conducive to the development of new businesses (Kantis et al., 2005; Kantis et al., 2002). There may well be lessons to be learned from this, but that would be an area for further research and is beyond the scope of this thesis.

Kantis and Angelelli (2005) studied the key factors affecting the emergence of new, knowledge-based firms in Latin-American countries (Argentina, Brazil, Peru, Mexico, Costa Rica, Chile and El Salvador). Based on data from 200 new firms in the knowledge-based sector (software, telematics, internet-based services) and 437 in the more conventional manufacturing sectors (furniture, metal products and foodstuffs) this study concluded that the majority of entrepreneurs had benefited from the support of their business contacts, especially with regard to access to information and technology. However, support for access to physical resources such as production facilities, materials and equipment, was very limited.

The principal nodes of access to physical resources were acquaintances, friends and colleagues, i.e. strong ties in social networks. The importance of commercial contacts (especially suppliers/clients from the same region) was generally limited to access to technology (Kantis & Angelelli, 2005). Institutional

networks played a less significant role than social and commercial networks, and were generally confined to access to information. This is in spite of the fact that one of the aspects that distinguishes the networks of knowledge-based entrepreneurs in developed economies is that they are more closely linked to institutions such as universities than the entrepreneurs in the more conventional manufacturing sectors. Latin American universities do not seem to be as effective in supporting entrepreneurship as the universities in other regions of the world, where academic research is a key factor in technological development (Kantis & Angelelli, 2005).

An analysis[13] of the effect that an entrepreneur's individual and social relationships had on the likelihood of creating an early-internationalizing firm in Latin-America (Federico, Kantis, Rialp, & Rialp, 2009) indicated that Latin-American entrepreneurs need to develop larger and more professionally-focused external networks in order to better cope with the unfavourable business environment in which they have to operate. Such external networking would help these entrepreneurs to gain a competitive advantage over other firms (Federico, Kantis, Rialp, et al., 2009).

A quantitative study entitled 'Developing Entrepreneurship: Experience in Latin-America and Worldwide' (Kantis et al., 2005) contains two relevant chapters. One deals with innovative enterprises in Latin America and is based[14] on information about 1,000 entrepreneurs in Argentina, Brazil, Chile, Costa Rica, El Salvador, Mexico and Peru. The other deals with the entrepreneurial process and highlights the main differences between Latin-America, East Asia, and Southern Europe (Italy and Spain) (Kantis et al., 2005).

This study characterised innovative entrepreneurs as being relatively young (on average 36-37 years old), highly educated (mostly in engineering followed by economics) middle-class males. It also identified Chileans and Peruvians as being more highly educated than average, (seven in ten are university graduates, whereas the regional average is six). Naturally, a university[15] education contributes to the acquisition of technical knowledge, especially for the more innovative entrepreneurs (Kantis et al., 2005).

The three main reasons that entrepreneurs give for starting up a new business are generally positive: the desire for personal fulfilment; the wish to apply one's prior knowledge; and, the desire to improve one's personal income. Peruvian entrepreneurs also felt they were contributing to society. The more negative motivational factors cited by many so-called 'necessity-driven'

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13 Based on data from 1700 entrepreneurs from Latin America (Argentina, Brazil, Peru, Mexico, Costa Rica, el Salvador and Chile), South-East Asia (Japan, Korea, Singapore and Taiwan).

14 Based on information obtained through surveys administered to 2,000 founders of young businesses from Singapore, Korea, Taiwan, Japan (East.-Asian) and Argentina, Brazil, Costa Rica, Mexico and Peru (Latin-America).

15 Using the same data a study on the determinants of the emergence of highly dynamic new firms confirms that Latin-American entrepreneurs with a college or university degree have a greater chance of creating a dynamic firm that those who do not meet this condition (Kantis, Federico, Altube, Diaz, & Mendez Lazarte, 2007).

entrepreneurs, such as being unemployed or not having a high level of education, were less common among innovative entrepreneurs.

The main 'incubation context' for the more innovative entrepreneurs was their previous work experience. Nearly all the more innovative entrepreneurs identified the firms where they had previously worked as being their most important source of learning (Kantis et al., 2005).

Another distinction between innovative and less-innovative entrepreneurs is that the former use a greater variety of sources than the latter. Innovative entrepreneurs especially use their own capital, but they also make more intensive use of other sources. This enables them to avoid the constraints on access to bank financing. For example, innovative entrepreneurs frequently tap into their suppliers for such help, and/or they purchase second-hand equipment (Kantis et al., 2005). Venture capital and loans from government institutions are still only a marginal financial resource in Latin America, even for dynamic entrepreneurs (Kantis et al., 2005).

The same study also suggests that entrepreneurs use their networks in different ways during the three different stages in the process of creating an enterprise: inception (networks are used to identify opportunities), start-up (networks are used to access resources) and early-development (networks are used to help with management challenges) (Kantis et al., 2005).

It seems clear that for entrepreneurs in Latin-America, the use of networks for identifying opportunities and accessing resources is more important than it is for access to managerial expertise. Another distinguishing characteristic is the relatively greater reliance that Latin-American entrepreneurs place on their immediate social circle, such as family and friends. However, another characteristic of Latin-American entrepreneurs is the greater influence of large firms among their business contacts (weak ties), especially among the more dynamic[16] entrepreneurs (Kantis et al., 2005). This analysis also revealed that a firm's networks in Latin-America are less stable than those in Italy and Asia, reflecting the fact that they have fewer 'weak ties' in their networks (Kantis et al., 2005).

In this context, Federico, Kantis and Rabetino (2009) assessed the factors which determine growth in young companies using data from a survey of 1,143 entrepreneurs from 13 countries[17], Peru included. This study showed that in unfavourable business environments, such as Latin America, the growth of young companies is closely linked to the individual characteristics of the entrepreneurs themselves, and their personal networks (both social and professional) (Federico, Kantis, & Rabetino, 2009).

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16 A dynamic enterprise is defined as one that has grown to a size of at least 15 and no more than 300 employees whereas a less dynamic enterprise is made up of new enterprises with a maximum of 10 employees (Kantis et al., 2005).

17 Argentina, Brazil, Mexico, Peru, Costa Rica, el Salvador, Chile (Latin-America), Japan, Taiwan, South Korea and Singapore (East Asia) and Spain and Italy (Mediterranean Europe).(Federico, Kantis, & Rabetino, 2009).

Segura, Greene, Kantis and Rabetino (2009) looked at small firms in Argentina, Brazil, Chile and Peru in order to evaluate[18] how quickly they were established and the speed of their growth. They found that firms founded by entrepreneurs who had previously been unemployed (necessity-driven entrepreneurs) were established more quickly than other firms, but at the same time they had a slower growth rate. However, the support of an entrepreneur's personal network positively influences both the speed of a new enterprise's creation and its growth (Segura, Greene, Kantis, & Rabetino, 2009). For the opportunity-driven entrepreneurs, although informal support networks[19] (family, friends) were significant, it appears that the connections with more formal sources of support speed up the process of growing a new enterprise. In other words, those entrepreneurs who were supported by bankers or corporate executives were more likely to grow their firms quickly (Segura et al., 2009).

2.2 Evidence of Entrepreneurial Networking in Peru

The previous section presented the evidence gained from entrepreneurship studies carried out at the regional level. This section deals with the few remaining relevant findings from research into the topic of entrepreneurship in Peru.

In Peru, research into entrepreneurial networking is limited, and research into how the firms actually create and use their networks is virtually non-existent. Currently the only available research report specifically aimed at entrepreneurship in Peru is the GEM survey. The last national study for Peru, published in 2011, revealed a number of findings in terms of the type of entrepreneur (opportunity-driven or necessity-driven), the mechanisms used for financing, the degree of innovation in terms of new products introduced to the market, and the major obstacles faced by the entrepreneurs. The GEM survey shows that in Peru, 'opportunity entrepreneurs' outnumber 'necessity entrepreneurs' by two to one. This statistic is interesting because it is at odds with the situation of the small firms in this study, of whom the overwhelming majority are 'necessity entrepreneurs'. According to this study, and in the opinion of local experts, only 10 out of 2,273 firms in the IPVS could be regarded as in any way innovative (opportunity-entrepreneurs). Therefore, despite what the GEM survey may indicate for Peru as a whole, in the industrial cluster studied in this research, 'necessity entrepreneurs' outnumber 'opportunity entrepreneurs' by 227 to one.

The GEM survey also shows that 66% of the financial support needed during the entrepreneurial process is provided by informal investors[20] and

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18 Based on interviews to 647 entrepreneurs from Argentina, Brazil, Chile and Peru.

19 Formal networks based on professional ties and informal networks based on interpersonal relationships (Birley, 1985).

20 For the GEM, an informal investor is anyone who has provided funds for the implementation of a foreign business in the past three years (not including stock

direct family members, while the remaining 34% comes from: other family (13%), co-workers (4%), and friends (17%) (Serida et al., 2012). This statistic does indeed accord with the results of this study, which clearly shows that the entrepreneurs in the IPVS still rely mainly on their close personal networks to fund their businesses.

The GEM survey (2011) also suggests that there is a link between opportunity entrepreneurship and a higher level of education. The statistics show that almost 50% of opportunity entrepreneurs had completed at least some sort of post-secondary education, while only about 30% of necessity entrepreneurs had achieved the same level (Serida et al., 2012).

This fact is not exactly consistent with the situation for the entrepreneurs in the IPVS. For instance, a recent survey carried out by the Peruvian Ministry of Labour, (the MTPE survey) reveals that 21.3% of entrepreneurs in the IPVS have had a university education (often business administration and accounting) (MTPE, 2012). Despite this, there are only ten innovative firms led by opportunity entrepreneurs in the IPVS, meaning only 0.4% of the firms in the park are in any way run by opportunity-driven entrepreneurs (MTPE, 2012). If a high level of education were such a decisive factor, there should be a higher proportion of opportunity-driven entrepreneurs and innovative firms in the park.

Furthermore, the MTPE survey showed that only 34% of entrepreneurs introduced new products for unexplored potential markets, only 5% of entrepreneurs invested in technology driven sectors and 72% used technology which was more than five years old (Serida et al., 2012).

Based on the opinion of 64 national experts, this study indicates that the most significant obstacle to successful entrepreneurship is the weakness of government support policies for both opportunity and necessity entrepreneurs. These experts stated that there was no political will to place entrepreneurship as a priority on the national agenda. This lack of political will to improve the situation for entrepreneurs is reflected in the high level of corruption in both state institutions and in the private sector. The lack of transparency in contract procurement procedures has given rise to a culture of informality which inhibits the chances of budding entrepreneurs building new and competitive businesses. A further obstacle for new enterprises is the lack of access to finance. There is no formal state apparatus in place to provide seed capital for budding entrepreneurs, and small firms have great difficulty in gaining access to external credit (bank finance). The third element that limits entrepreneurship, according to this study, is the lack of education in successful entrepreneurship at all levels. The experts who contributed to the study pointed out that the current education system is based on theoretical learning, but fails to develop practical entrepreneurial skills (Serida et al., 2012).

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purchases, transactions on the stock exchange, shopping or investment in bonds or mutual funds).

2.3 Evidence of Innovation in Peruvian Firms

This section summarises the latest evidence concerning the level and type of innovation in small firms in Peru. It is clear from all the current literature on the topic that Peru has no sound model to promote innovation nationwide. As Diaz and Kuramoto, (2010, 132) point out, the lack of an integrated policy and strategic vision has resulted in only a few very weak initiatives to promote innovation in Peru. In some fields related to technology, science and production, Sagasti (2003, 10) has stated that such initiatives have 'scarcely been implemented'.

An alternative view holds that although Peru does have a policy and structure for promoting innovation that is relatively complete in terms of organizational presence, in terms of functional implementation it is completely ineffective (Díaz & Kuramoto, 2010). Sagasti (2003, 10) lists six criteria that can be used to characterise the development of innovation in Peru: knowledge generation; business innovation; innovation services; institutions and public policy; physical infrastructure; and, the socio-cultural and political context.

In terms of knowledge generation, there are simply not enough high-level research centres in universities and other private and public research institutions. Furthermore, many of the research centres that do exist fail to meet international standards for the quality of their research. Those few research institutions which have earned international recognition are generally isolated from the productive sector (Sagasti & Kuramoto, 2003). A prime metric which reflects the low level of knowledge generation is the very modest public expenditure on Research and Development as a percentage of GDP. In their 2010 study, Diaz and Kuramoto estimated this to be US$240 million, which amounts to a mere 0.15% of Peru's GDP (Díaz & Kuramoto, 2010). Compare this with recent figures from the Academy of Finland, which show that the Finnish R&D investment in 2011 was 3.73% of its GDP, 29 times higher than that of Peru.

From the business perspective, there are only a very limited number of small firms in the productive and service sectors which innovate on a continual and systematic basis (Sagasti & Kuramoto, 2003). Small firms only account for 2% of the total value of exports (Villarán, 2010), in addition to which, only 1.8% of small firms undertake any sort of activity related to technology or innovation (Díaz & Kuramoto, 2010).

With regard to innovation services, there are a few public and private organizations which provide services for small firms (information, technical norms, managerial support, environmental management, financial advice, etc.). The public sector runs eight, specialized, technical institutes which are meant to service specific industrial sectors, such as textiles, leather and wood. However, these Centres of Technological Innovation (CITES) have little influence on the private sector or among academic institutions (Sagasti & Kuramoto, 2003). In addition to the CITES, there is the National Institute for the Defence of the

Competence and Intellectual Property Protection (INDECOPI), which handles the national system for patents and intellectual property rights.

This lack of structured support for small firm entrepreneurs has led to the development of a number of unplanned industrial parks. Rather than being areas for the generation and diffusion of innovation, these unplanned clusters are merely recipes for shoddy imitation and adaptation (Sagasti & Kuramoto, 2003).

With regard to institutions and public policies, those state-funded institutions which do deal with policies related to technology and innovation are very weak and do not have the necessary political, financial and human resources needed to promote the creation of a national innovation system. In addition to this, those public institutions which are indirectly linked to technology and innovation do not seem to be aware of the relevance of the topic and display no interest in it (Sagasti & Kuramoto, 2003). Equally important is the fact that government policies aimed at supporting small firms have always played second fiddle to other public policies (Villarán, 2010). This is reflected in the shortage of economic and human resources allocated to the promotion of entrepreneurship in comparison with other sectors (Villarán, 2010). The most important institution that provides support to small firms is the Ministry of Labour and Employment Promotion, which allocates a mere eight million US dollars annually and employs a staff of 60 personnel to cover all the services for this sector (Villarán, 2010). Therefore, it seems clear that public institutions which promote entrepreneurship and networking get very few resources in terms of funding and personnel (Villarán, 2010).

As with many developing economies, another problem facing small business entrepreneurs in Peru is that the country's physical infrastructure is very limited. This also makes it difficult to generate and promote innovation. As Sagasti (2003, 13) has pointed out, the road network is inefficient, the port operations are slow and expensive, the airports are in urgent need of upgrading, telecommunications are expensive in comparison to other countries in the region, and even the water supply is scarce and of low quality.

Finally, from the socio-cultural and political perspective it is the same story. Very few organizations actually help to create a favourable environment for technology and innovation. The National Council of Science and Technology (CONCYTEC) is the only public organization that has made any attempt to promote science and technology. Indeed, there are very few civil or social organizations which foster technology and innovation, and their isolated efforts rarely receive any support from the government.

This panorama of inefficiency illustrates that it is essential that the relevant authorities understand that the basis for competitiveness is innovation (Díaz & Kuramoto, 2010). It is indisputable that the government should play a greater role in supporting a national system of innovation for small business entrepreneurs (Sagasti & Kuramoto, 2003), and in enhancing the services for business development, entrepreneurship and networking. Without this commitment at the government level, the problems of duality and inefficiency

in the productive and business structures of the country are bound to continue (Villarán, 2010).

2.4 Summary of Chapter 2

This chapter presented the background to entrepreneurship in Latin America and Peru in three sections: evidence of firms' networking in Latin America; evidence of entrepreneurial networking in Peru and evidence of the level of innovation in small firms in Peru.

The first section reviewed the recent literature on networking in firms throughout Latin America. In summary, the section underlined four lessons that can be learned about entrepreneurship in the region.

First, research into entrepreneurial activity in Latin-America has mainly focused on making quantitative comparisons of the entrepreneurial process based on the rate of Total Early-stage Entrepreneurial Activity, (TEA) (Xavier et al., 2013) and the type of network used in the entrepreneurial process (Kantis et al., 2002).

Second, as many researchers have confirmed (Federico, Kantis, & Rabetino, 2009; Kantis & Angelelli, 2005; Kantis et al., 2005; Kantis et al., 2002; Segura et al., 2009), networks play a vital role during the entrepreneurial process. They facilitate the identification of opportunities (inception), access to monetary and non-monetary resources (start-up) and, inevitably, they facilitate a firm's growth (early development of the firm).

The third factor that becomes clear from the current literature on the topic is that innovative firms use a broader combination of networks (social networks, business networks and institutional networks) than less-innovative firms, which are mostly limited to the support provided by immediate social networks such as family and friends (Kantis et al., 2005; Kantis et al., 2002). During the inception phase, innovative entrepreneurs identify opportunities using more diverse sources of information and a greater number of colleagues and business connections, including large firms. During start-up, innovative entrepreneurs make more extensive use of business connections (suppliers and clients) to access intangible resources (information and, to a lesser extent, technology) than those used by less innovative entrepreneurs (Kantis et al., 2005; Kantis et al., 2002).

During the early development phase, an innovative entrepreneur's suppliers and clients begin to play a more important role than friends and family. Innovative entrepreneurs also continue to use more business connections than less-innovative entrepreneurs during this phase, particularly in terms of acquiring business information, broadening their client and supplier base and hiring workers (Kantis et al., 2005; Kantis et al., 2002). The fourth point is that business networks in Latin-America are less stable than their equivalents in, for example, East-Asia (Kantis et al., 2005).

What is also clear from the existing literature on the topic, and is one of the prime motives behind the research carried out for this thesis, is that previous research has only been able to identify the types of networks used throughout the entrepreneurial process, but it has failed to explore the actual processes and practices by which firms build their networks.

The second section of this chapter reviewed the existing literature on small-firm networking at the national level, i.e. in Peru. If nothing else, this section illustrates the fact that research into entrepreneurship in Peru is insufficient, and does not deal with how firms network. The GEM country-wide report shows that Peruvian entrepreneurs are mainly funded by close family members, and it also confirms that opportunity-driven entrepreneurs have a higher level of education than necessity-entrepreneurs (Serida et al., 2012), both of which facts accord with the findings of this study. However, the GEM survey also shows that twice as many Peruvian entrepreneurs are opportunity-driven than are necessity-driven (Serida et al., 2012). This statistic is in stark contrast to the situation in the IPVS, where less than 0.5% of the entrepreneurs were opportunity-driven. These findings help to illustrate the context of entrepreneurship in Peru, but, as stated above, the research cannot illustrate how firms actually go about building a network. Nevertheless, taken together, the statistical research does give a somewhat broader understanding of the current state of entrepreneurship in Peru.

Because the research carried out for this thesis distinguishes between innovative and less-innovative firms, the third section in this chapter reviewed and summarised the evidence about the level of innovation among small firms in Peru. This section showed that attempts to be innovative, among all firms in Latin America in general, and among small firms in Peru in particular, suffer from the fact that although these countries may have national policies and structures for promoting innovation, in terms of functional implementation these policies and structures are completely ineffective (Díaz & Kuramoto, 2010). Sagasti and others have pointed out (Díaz & Kuramoto, 2010; Sagasti & Kuramoto, 2003; Villarán, 2010) that those few institutions which are supposed to deal with policies related to technology and innovation are very weak and do not have the necessary financial and human resources to carry out their task. In Peru, there have only been a small number of very weak initiatives, scarcely implemented in some fields, related to technology, science and production (Díaz & Kuramoto, 2010; Sagasti & Kuramoto, 2003). The notable lack of innovation revealed in this study of the IPVS may well be linked to the scarcity of high-level research centres in universities and public and private institutions.

Finally, this study clearly indicates that there are very few firms in the productive and service sectors which innovate on a continuous and systematic basis. Indeed, in Peru there are a number of unplanned industrial parks which, rather than becoming areas for the generation and diffusion of innovation, have become recipes for imitation and adaptation.

All the evidence clearly suggests that the government should play a greater role in supporting a national system of innovation that supports and

enhances the innovation efforts of their entrepreneurs (Sagasti & Kuramoto, 2003; Villarán, 2010).

So far, this thesis has covered the evidence from existing research on entrepreneurship, entrepreneurial networking and innovation in Latin-America (at the regional level) and in Peru (the national level). The next chapter focuses on the particular subject of this research, the Industrial Park of Villa el Salvador (the local level).

3 THE INDUSTRIAL PARK OF VILLA EL SALVADOR

The primary objective of this chapter is to provide a balanced picture of the local conditions prevailing in the industrial park of Villa el Salvador. This chapter is divided into two sections. The first section describes the origins of the district of Villa el Salvador and the circumstances that gave rise to the emergence of the industrial park. The second section defines the development status of the park and concentrates on describing the main characteristics of the firms in the park, particularly in terms of the entrepreneurs and employees who run and work in these businesses. This section also describes some of the major obstacles that inhibit the growth of the firms in the park.

3.1 The Origins of the Industrial Park of Villa el Salvador

At this point, we must gratefully acknowledge the contribution of Benavides and La Rosa (2005), who have written a comprehensive and informative study of the history of the industrial park of Villa el Salvador.

It all began forty-three years ago. At that time, the pressure for land in urban areas was high; so high that in April, 1971, four thousand families of Andean origin invaded private land in the zone of Pamplona, to the south of Lima. Though the invaders were ejected, in May 1971 they were relocated to a countryside area called “Pampas de Lurín”. The Pampas de Lurín is a desert area twenty-five kilometres south of Lima. It was in this desolate area that the district of Villa el Salvador would later emerge (Franco, 1993). This period, specifically from 1971 to 1975, has been referred to as the 'planning period' because it was during this time that the collective commitment of the local population was stimulated to establish a specific area to promote industry-driven firms and job opportunities. This area would later be named and known as Villa el Salvador (Benavides & La Rosa, 2000).

It was not until 1981 that Villa el Salvador was granted the status of a municipality, and two years later, in June 1983, Villa el Salvador was formally established as a district. Tolentino (2001) has maintained that several national laws, enacted in 1980, 1982 and 1985, enhanced the development of small firms in Peru and served to facilitate the creation of the industrial park[21] of Villa el Salvador. One result of the 1982 legislation was the creation of the so-called 'Special Project of the Industrial Park of the South Zone'. This measure provided the legal basis for the establishment of the industrial park of Villa el Salvador (Benavides & La Rosa, 2000).

Between 1975 and 1985 the park was characterized by organizational instability and scant signs of progress. For instance, 160 hectares originally allocated to the industrial park were reallocated for two housing programmes; the supervision of the industrial zone was transferred from the Housing Ministry to the Ministry of Industry; and, the priorities for the development of the park were redirected towards high-tech, export-oriented industries. Furthermore, delays in the installation of basic utilities such as water and electricity, along with the growing economic crisis, put potential investors off the park, and brought the initiative to a standstill. This period in the history of the park is known as the 'stagnation period' (Benavides & La Rosa, 2000).

The park's subsequent recovery and regeneration occurred between 1986 and 1991. In 1987, the Autonomous Authority for Industrial Parks was created (AAPICS). It was this authority which initiated the institutionalization of the industrial park of Villa el Salvador. The government was the principal financier, with a grant of US$6.44 million, primarily allocated for infrastructure. This was supplemented by a contribution of US$2.34 million from various international agencies in the form of technical assistance.

During this time, the local political leaders of the district of Villa el Salvador combined forces with existing local business associations in order to revitalize the project and recover the original philosophy behind the industrial park, which was to nurture industry-driven firms. It was largely due to the efforts of Michael Azcueta, a former mayor of the district of Villa el Salvador, and the technical assistance provided by experts from the United Nations Industrial Development Organization (UNIDO) that the park was reorganized, redesigned and refinanced at this time (Benavides and La Rosa, 2000, 6).

The various areas of the park were then divided into seven industrial sectors, namely; wood furniture, metal furniture, smelting, textiles, footwear, craftsmanship and food. The association of small firms of Villa el Salvador (APEMIVES) was also reorganized into sectors. During this phase, UNIDO developed and oversaw the implementation of so-called 'maquicentros' (manufacturing centres) for each of the seven industrial activities. As of 1991, five of these maquicentros (textiles, footwear, wood furniture, metal working and smelting) were equipped with modern machinery. Furthermore, the Centre for Productive Development and the Centre for Sales and Exhibitions were

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21 The industrial park of Comas in Lima, and the Industrial park of Ilo in the city of Moquegua also emerged as a result of these laws but never took off (Tolentino, 2001).

created. All in all, these measures enabled the park to progressively increase the speed of its development until 1991 (Benavides & La Rosa, 2000).

From 1991 to 1995 the situation in the park again became unstable. This was largely due to a number of political conflicts in the leadership of APEMIVES and chronic organizational instability inside AAPICS, the Autonomous Authority for the Industrial Park (Benavides & La Rosa, 2000). The lack of any rigorously professional criteria for appointing qualified AAPICS directors led the AAPICS management to place the destiny of the industrial park in the hands of the incumbent mayors of the district, who were not able to fulfil the task. This organizational disorder resulted in the Ministry of Industries cancelling its support for the industrial park (Benavides & La Rosa, 2000). Also, the climate of political violence and terrorism in the area surrounding the park drove many entrepreneurs to abandon not only the park itself, but the entire district of Villa el Salvador (Benavides & La Rosa, 2000).

The following years marked the second recovery of the industrial park of Villa el Salvador, which can be said to have continued until 2005. Michel Azcueta was re-elected as mayor, and he became the driving force behind the reactivation and consolidation of the park. He supported the expansion of a comprehensive, ten-year integrated development plan that paved the way for the park's development until 2005, and ultimately influenced the second recovery. A significant element of this plan was the adoption of a number of measures to improve the level of entrepreneurship in both the park and the district as a whole. It was also during this period that the Centre for Business Development was created (Benavides & La Rosa, 2000).

Although there are no academic studies giving a comprehensive account of the park's development for the period 2005-2014, there are some recent data which shed some light on its present situation. For example, Peru maintains a Micro and Small Enterprises National Registry (REMYPE), but a comparison between the REMYPE figures and a recent study commissioned by the Ministry of Labour (MTPE, 2012) reveals that 91.2% of the park's firms are unregistered, i.e. they do not even show up on the Peruvian government's registry of small enterprises.

This serves to illustrate how difficult it can be to get current and accurate information about the Industrial Park of Villa el Salvador. For instance, the fact that 91.2% of the park's firms are unregistered means that the overwhelming majority of the park's firms are not entitled to the employment benefits, tax deductions, access to health insurance and pension system which the government regulations covering small firms stipulate. They are, quite simply, off the page.

Another significant statistic is that 64% of the firms are now involved in purely commercial activities. This conflicts with the original mandate and objectives of the park, which is the promotion of industry-driven firms. Furthermore, the statistics from the Ministry of Labour (MTPE, 2012)) reveal that 86% of the firms in the park have received no training or advice from either government or non-governmental organisations; 45.4% of the park's firms keep

very informal bookkeeping records (mainly informal notes), 86% of the firms in the park do not use the internet, less than 1% have a business website and less than 2% use specialized software for production. These statistics illustrate the huge disadvantages faced by the park's firms due to their extremely limited use of modern information technology. It all adds up to them being "less competitive in an increasingly globalised environment" (MTPE, 2012).

So, with most firms in the park operating outside the social security system, many firms undertaking informal bookkeeping and most firms having no access to the internet, the data from the MTPE report (2012) clearly indicates that the firms in the park are operating under unfavourable conditions. This might well illustrate the seemingly inexorable transition of the firms in the park from being industrially-driven to becoming commercially-driven (MTPE, 2012). The next section focuses more closely on the actual situation of the smalls firms operating within the boundaries of the industrial park of Villa el Salvador.

3.2 An Overview of the Small Firms in the Industrial Park of Villa el Salvador

The industrial park of Villa el Salvador is located in the district[22] of Villa el Salvador on the outskirts of Lima and it is currently characterized in terms of its level of development as an 'inter-related cluster'[23] (Proexpansión, 2004).

There are 2,273 firms located in the park (MTPE, 2012), which has an area of 3.8 square kilometres (Benavides & La Rosa, 2000). The average size of the firms can be deduced from the fact that according to the MTPE report (2012) the firms only generate 4,856 jobs[24]. Based on interviews with 298 firms located in the park, belonging to the sectors of commerce (122 firms), industry (133 firms) and services (43 firms), the MTPE report does make some attempt to characterize these firms. The report covers the firms' business sectors, the economic situation of the entrepreneurs and the employees, and also some of the factors that inhibit the firms' growth (MTPE, 2012).

Business Sectors

According to the 2012 MTPE report, the activities of the firms in the park can be divided into three economic sectors: commerce (64%), industry (29.4%) and services (6.6%). This shows that the industrial park is no longer an area devoted to manufacturing; instead it has become dominated by commerce. This is despite the fact that the legislation under which the industrial park was

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22 The district of Villa el Salvador gathers a population of 367,436 inhabitants in an area of 35.4 square kilometres, it host 11,000 firms that generate approximately 25,000 jobs (PDES, 1998) or around 50,000 direct and indirect jobs (Tolentino, 2001).

23 See the features of an 'inter-related cluster' in Section 1.1

24 Tolentino (2001) estimates 3,000 firms operating in the park with 15,000 direct and 15,000 indirect jobs generated.

initially established stated that the objective of the park was to promote the establishment and development of industrial small firms (MTPE, 2012).

The Firms

Using factors such as the number of employees (between 1 and 10) and annual sales figures, the MTPE survey categorises the firms in the park into three types: survival firms, promotion or growth-driven firms, and long development firms. Survival firms have annual sales of 12 UIT[25] (around 12,300 euros), promotion firms have annual sales of up to 60 UIT (around 61,500 euros) and long-term development firms have annual sales of up to 532,000 nuevos soles (around 154,000 euros). According to this definition, 24.2% can be classified as 'survival firms', 59.4% are 'promotion firms', and 16.4% are 'long-term development firms (MTPE, 2012). This means that at least 393 firms in the IPVS are functioning under survival conditions (MTPE, 2012). Although this survey does not provide any further criteria to differentiate between survival, growth and long-term development firms, the fact that a quarter of the firms in the park are barely surviving (with average monthly sales of only 1,000 euros) leads the authors of the report to conclude that such firms would 'require a set of tailor-made support measures' (MTPE, 2012).

The Firms' Net Income

According to official statistics, nearly seven out of ten firms in the park have a monthly net income of between 1,000 and 5,000 Peruvian nuevos soles (68% of the firms). This is, on average, 2,474 Peruvian nuevos soles per month (around 716 Euros), which, in the view of the survey, allows for a certain level of accumulation (MTPE, 2012). With 23% of the firms having a monthly income of less than 1,000 nuevos soles (around 289 euros per month), this leaves only 9% of the firms with a monthly income of over 5,000 nuevos soles (around 1446 euros per month). The average income for these firms is 10,910 nuevos soles (around 3154 euros per month) (MTPE, 2012).

When the net income is assessed by sectors of activity, the highest monthly average income is produced by the industry-driven firms with 3,140 nuevos soles per month (around 908 euros). This is followed by the commercial sector, with 2,730 nuevos soles per month (around 789 euros) and finally, the services sector, with an average monthly income of 2,000 nuevos soles (around 578 euros). The study also highlights that these earnings might be affected by high fixed costs, specifically rent, as 80% of the firms in the park are located in rented premises (MTPE, 2012).

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25 This is a reference value used by the national tax authority. 1 UIT=3700 nuevos soles (around 1070 euros).

The Employees

Taking into account the entrepreneurs themselves, and members of their families (paid and unpaid) the vast majority of the firms (84.8%) only have 1 to 4 workers and only 15.2% of the firms have 5 or more workers. In terms of education, 69% of the park's workforce only have either primary or secondary education (MTPE, 2012). The average worker has a monthly income of 662 (females) to 790 nuevos soles (males). This converts to around 230 euros per month (MTPE, 2012). Furthermore, 70% of the workers do not have an employment contract (MTPE, 2012), which means that the majority of the employees are not covered by the social security system. Only three out of ten employees are in a pension scheme and have health insurance (MTPE, 2012).

The Entrepreneurs

This survey classifies the entrepreneurs of the park in terms of their age, gender, education, and motivation to start their businesses. More than half of the entrepreneurs are over 45 years old, 33.5% are between 35 and 44 years old and only 15.1% of the entrepreneurs are under 35 years of age. In terms of gender, the report reveals that 64.3% of the entrepreneurs are male and 35.7% are female (MTPE, 2012).

The entrepreneurs' educational level is important in determining the degree to which the firms consolidate their business as time goes by (OSEL, 2011); the higher the educational level of the entrepreneur, the greater the likelihood of the firm's survival and growth (Yamada, 2009). The MTPE survey reveals that 9.6% of the entrepreneurs have only had a basic primary education, 46.7% of them have completed their secondary education, 22.4% of them have some form of tertiary non-university education (technical colleges and the like) and 21.3% have had a university education (often business administration and accounting) (MTPE, 2012).

Regarding the entrepreneurs' motivation for starting their businesses, 26.9% of the entrepreneurs stated that their main motivation was their prior work experience, 26.9% cited a desire to be independent, 19% could not find a job, 14.8% wanted to continue the family business and 0.9% stated other reasons. Only 11.5% of entrepreneurs claimed to be motivated by the expectation of a high income (MTPE, 2012). These results are in contrast to those obtained for Lima as a whole, where 84.8% of firms said that the reason they were prompted to start a business was the desire to be independent (INEI, 2010).

Limiting Factors

The entrepreneurs think that the main factors that limit business growth in the industrial park are: the lack of access to credit (23.1%); lack of access to new markets (22.5%); lack of market information (18.3%); excessive bureaucracy (14%); and the lack of proper training (14.2%) (MTPE, 2012). These results are not surprising and correspond with other studies related to the situation of small firms in general in the country (Villarán, 2008, 2010).

3.3 Summary of Chapter 3

This chapter has reviewed the socio-economic context in which the firms in the industrial park of Villa el Salvador are operating. The first section dealt with the history of the industrial park and the second section presented a statistical characterization of the small firms in the Industrial Park of Villa el Salvador (Proexpansión, 2004).

The first section provided a brief description of the beginnings of the industrial park. Based on recent information derived from a survey commissioned by the Ministry of Labour, this section revealed that most of the firms in the park are engaged in commercial activities (MTPE, 2012) and are not registered in the Micro and Small Enterprises National Registry (REMYPE) (MTPE, 2012). The fact that most of the firms are not registered with REMYPE reveals the importance of looking closely at any government statistics and comparing them with other sources. However, as far as they go, the MTPE figures do appear to be accurate, and if so, they reveal that the majority of firms have not received any training or advice from either government or non-governmental organisations, do not use software for industrial purposes and do not have a business website, or even use the internet. In addition, at least half of the firms fail to maintain adequate bookkeeping records (MTPE, 2012). This section thus highlights the fact that most of the firms in the park seem to be operating under unfavourable conditions, and that there is a progressive transition from industrially-oriented firms to commercially-oriented firms (MTPE, 2012).

The second section looked at the current status of the small firms in the industrial park in more detail. The statistics confirmed the fact that the number of commercial firms is increasing at the expense of the number of industrial-driven firms (MTPE, 2012). At least a quarter of the firms are functioning under survival conditions with an average income of 716 Euros per month (MTPE, 2012). Most of the firms are run by entrepreneurs with only a basic secondary education and most of them have a growing number of underpaid employees without formal labour contracts, post-secondary education or access to social security (MTPE, 2012). In the opinion of the survey's authors, this bleak scenario calls for special support measures to address the problems faced by the small firms in the park (MTPE, 2012).

4 THEORETICAL FRAMEWORK

This chapter presents the theoretical foundations of the thesis in three sections. The first section characterizes an industrial park as a cluster, or more specifically as a cluster-based industrial park. The second section highlights the contribution of small firms to innovation, focusing on the inputs of six types of partners: suppliers, customers, family and friends, banks and accountants, science, and government. Lastly, the third section concentrates on the definition and significance of entrepreneurial networking. This section also serves as a preface to Chapter 5, which elaborates an initial model approach to the study carried out for this thesis based on existing the firms' network-building approaches.

4.1 Cluster-based Industrial Parks

This section aims to outline the theory behind the development of both clusters and industrial parks. The thesis is based on the idea that since an industrial park is to some extent merely a cluster of small firms, an industrial park may be regarded as a cluster (MTPE, 2005), or more specifically as a cluster-based industrial park (Monga, 2011). Thus, in this section the concepts of industrial park, cluster and cluster-based industrial park are regarded as equivalent (Monga, 2011; MTPE, 2005).

A cluster-based industrial park is defined as an area of land set aside for industrial development. It is "a community of businesses that collaborate with each other and with the local community to efficiently share resources such as information, materials, infrastructure and natural habitat" (Lambert & Boons, 2002). Cluster-based industrial parks have been hailed as the new holy grail of economic development and are regarded as an effective tool for developing competitive industries and generating employment (Monga, 2011). They have had proven success in developed economies such as Australia, Sweden, Germany, Switzerland, Japan, the United Kingdom and the United States. More

recently, their success in the Asian 'tiger economies' such as Korea and Taiwan, has led other developing countries, e.g. Mauritius, to launch similar initiatives (Monga, 2011).

The evidence indicates that cluster-based industrial parks encourage[26] innovation, novel technologies and knowledge sharing (Lambert & Boons, 2002); especially the so-called 'formal and innovative clusters' (UNCTAD, 1998), 'mature clusters' (Schmitz & Nadvi, 1999) and/or 'self-sufficient clusters' (Proexpansión, 2004) prevalent in developed countries. These particular types of clusters tend to be more innovative because their firms tend to be centred on knowledge-intensive activities, and they have the capacity to introduce technological innovations, and to design new products and processes and bring them quickly to market (UNCTAD, 1998). They also have the capacity to keep pace with global competition through continuous innovation in all their business functions. This frequently enables firms in such clusters to be global players with very high export ratios (UNCTAD, 1998). Examples of this type of cluster include technology parks and EPZs,[27] both of which are local clusters that result from technology and export policies. Often known as 'Technopoles', these sites are aimed at establishing spatial agglomerations of high-tech firms and organizations, ranging from large, technological research hubs to small, regional science parks or incubator centres (UNCTAD, 1998).

In developing countries, the predominant forms of clustering are so-called 'informal clusters', 'less-innovative clusters' (UNCTAD), 'incipient clusters' (Proexpansión, 2004; Schmitz & Nadvi, 1999) and/or 'survival clusters' (Altenburg, 2001). These clusters[28] generally contain small- and micro-enterprises whose technological level is low relative to the industrial frontier. Their workers have low skills, and little or no continuous learning takes place for the sustained upgrading of these skills. Although the low barriers to entry may lead to changes in the cluster over time in terms of the number of firms

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26 Industrial parks also increase the opportunities for networking between firms and between the industrial park and its community. Much research has shown that they offer greater economies of scale, and increased capacity with respect to the resources and skills-base that can be tapped into (Pellenbarg, 2002). Lambert and Boons (2002) emphasise the "equitable enhancement of human resources for businesses and the local community" and Roberts talks of the "synergies and economic benefits due to shared access to information, networks, suppliers, distributors, markets, resources and support systems" (Lambert & Boons, 2002; Roberts, 2004). In addition, "industrial parks facilitate growth in absolute production capacities, technical efficiencies, flows and synergies" (Korhonen, 2001; Korhonen & Snäkin, 2005) and thus attract new businesses by providing an integrated infrastructure in one location as they "reduce the per-business expense of that infrastructure and separate land for industrial use from urban areas" (Pellenbarg, 2002).

27 Export Processing Zones. The EPZ encompasses different types of zones e.g. free-trade zones, duty-free zones, special economic zones (UNCTAD, 1998)

28 Other typologies of clusters include: 'Incipient' clusters and 'mature clusters' (Schmitz & Nadvi, 1999); 'Survival clusters', 'advanced mass production clusters' and 'clusters of transnational corporations' (Altenburg, 2001); Incipient Clusters (type I); Articulated Clusters (type II), Inter-related Cluster (type III) and; Self-Sufficient Clusters (Proexpansión, 2004); Informal clusters, Organized clusters, Innovative clusters, Technology parks and incubators, Export processing zones (UNCTAD, 1998).

and supporting institutions located there, this does not necessarily reflect a positive dynamic, particularly with regard to the upgrading of management skills; the introduction of new processing technology, machinery and equipment; improvements in product quality and product diversification; or, the development of exports. Furthermore, the nature of coordination and networking among firms located in informal clusters tends to be low, and is characterized by a limited growth perspective, cut-throat competition, little trust and little information-sharing (UNCTAD, 1998).

Although the conditions which foster the clustering of firms in a particular geographical area are still not fully understood, geographical factors, historical events and institutional frameworks have been identified as being closely connected to cluster development. The geographical factors presuppose that transport costs, production costs and regional demand can induce firms to concentrate in one specific site (Krugman, 1997). Historical events mean that the attraction of a location often has its origins in past events. The best known example is, perhaps, Silicon Valley in California, where the development of a cluster of computer firms was strongly influenced by the concentration of computer scientists in the area (Saxenian, 1985). Once the clustering process has begun, it is often maintained by its historical path-dependence and by being possibly locked in a certain specialization pattern (Antonelli, 1997).

Institutional frameworks provide the legal, political, and social structures that formalise the rules for human interaction. Institutional frameworks have formal and informal structures. Formal structures include political and legal frameworks, such as constitutions, bills of rights, courts and organizations for resolving social conflicts. Informal structures embrace cultural norms, attitudes, and generally accepted informal procedures for governing social interactions. Institutional frameworks affect the costs of business transactions by impacting on the time, effort and, notably, the degree of uncertainty associated with business activities. The characteristics of institutional frameworks are largely path-determined by historical developments (North, 1990).

Brusco (1996, 178) suggests that a cluster-based industrial park can be characterized[29] by three elements: the productive base, the undertaking of competitive/cooperative practices, and the existence of cultural factors. A cluster's productive base typically comprises a number of small firms, usually with less than twenty employees, several medium-size firms and a few large companies. The proportion of small, medium and large companies varies considerably from cluster to cluster. The overall size of a cluster ranges from 5,000 to 50,000 workers, including employees and autonomous workers. Typically, in a cluster, companies operate inside a relatively small geographical area and a vertically integrated sector (Brusco et al., 1996).

The relationships among a cluster's firms are marked by the presence of strong elements of competition and co-operation. Companies implementing a similar process, or manufacturing a similar product, engage in lively competition over price, quality, and delivery and turn-around times. A frequent

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29 Other cluster characteristics include adaptability and flexibility (Scott, 1988).

form of cooperation is straightforward friendliness. It is common to borrow one another's tools or source raw materials from each other if they are not immediately available elsewhere on the market. Often, in order to fulfil a large or urgent order, one firm may appeal for the cooperation of one of their competitors. This may involve a formal or informal agreement. This form of cooperation enables individual companies to accept, on occasion, orders beyond their normal capacity. Cooperation can also involve many companies requiring an agent to act as coordinator, much as happens with so-called consortiums. Small businesses routinely form consortiums[30] in order to access new technologies and markets (Brusco et al., 1996).

Furthermore, clusters share identifiable cultural characteristics which are derived from local traditions and history. In particular, two characteristics that have an immediate impact on production costs are reputation and credibility. In successful clusters, firms pay great attention to their credibility and reputation, so the occurrences of swindles and frauds are rare. Firms are aware that credibility and reputation have a high economic value and are the basis of their success (Brusco et al., 1996).

Alongside government regulations, there is a second set of rules that arise from the community to which the firms belong. These rules are shared by everyone and carry a series of sanctions; anyone who breaks these rules may be excluded from the community. Such local customs may be changed slowly by legislation, but the local system of rules will usually survive as long as it is useful. These community-based rules will last until a crisis prompts people to violate them, thereby rendering them ineffective and unreliable. The local rules based on credibility and reputation are unique to each cluster, area or region (Brusco et al., 1996).

The most substantial factors that contribute to the success of a cluster are: the financial wherewithal (Chiu & Yong, 2004); active cooperation and networking between the firms themselves, and between the firms and local government; active participation from the stakeholders[31] (Heeres et al., 2004); the presence of large firms as a 'magnet' to attract other enterprises; the geographical proximity of the firms; the inclusion of firms with complementary needs; sound financial planning (Pellenbarg, 2002); mutual trust among the stakeholders; and support organizations which are not in direct competition with each other (Veeken, 1998). Other success factors include the existence of comprehensive management skills, sound information about the companies' profiles, resource streams, employees, future plans and markets (Pellenbarg, 2002).

Cluster-based industrial parks do have some limitations. One major constraint is their fragility and vulnerability to one of the main enterprises leaving or looking elsewhere for their materials and products, which would

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30 The most typical consortiums are purchasing consortiums, credit consortiums and trade associations (Brusco et al., 1996).

31 Public sector, representatives from local companies, labour, community, environmental organizations and industry (Heeres, Vermeulen, & Walle, 2004).

affect the functioning of the entire chain (Tudor, Adam, & Bates, 2007). Clusters are also affected by the political climate, in addition to which there are no guarantees that the demand for a specific product will remain constant over time. Socio-economic changes over time mean that industrial processes and inputs and outputs also change, and industrial parks are often too small and vulnerable to fluctuations to be self-sustaining (Sterr & Ott, 2004).

Although cluster-based industrial parks may share a geographical space, the businesses are essentially separate entities, with dissimilar management structures and staff. Hence, their internal cultures may vary and the manner in which staff relate and communicate with each other can even differ within one organization, let alone between different companies (Zhu & Cote, 2004). Other limitations have to do with the difficulty of measuring an industrial park's performance, the existence of unclear roles for associated public bodies, a lack of technology and know-how, and inadequate management systems and practices. In a way, every industrial park is unique due to variations in social, economic, cultural and ecological circumstances (Korhonen, 2001).

In summary, this section conceptualizes industrial parks as clusters (MTPE, 2005) or, more specifically, cluster-based industrial parks (Monga, 2011). This theoretical overview applies to the small firms in this study, which are self-contained in a cluster-based industrial park (Monga, 2011; MTPE, 2005). This section draws five conclusions about industrial parks.

Firstly, the clustering of firms is favoured by three conditions: geographical factors (Krugman, 1997), historical events (Antonelli, 1997; Saxenian, 1985) and institutional frameworks (North, 1990).

Secondly, clusters usually have three characteristics: a productive base led by a majority of small firms; the undertaking of competitive-cooperative practices, and; the existence of cultural factors which are derived from local traditions and history and which are based on credibility and reputation (Brusco et al., 1996).

Thirdly, clusters are fragile. One of the main enterprises may leave (Tudor et al., 2007), or they may be affected by the political climate (Sterr & Ott, 2004). Their internal cultures may vary (Sterr & Ott, 2004), their performance is difficult to measure, the associated public bodies may have unclear roles and, among other things, they may lack technology, know-how and adequate management (Korhonen, 2001).

The fourth conclusion is that clusters contribute to the development of competitive industries and employment (Monga, 2011). In particular, 'mature clusters' (Nadvi & Barrientos, 2004) or the so-called 'self-sufficient' clusters (Proexpansión, 2004), encourage innovation, novel technologies and knowledge sharing (Pellenbarg, 2002) leading to economic gains and the enhancement of human resources for businesses and the local community (Lambert & Boons, 2002) and growth in absolute production capacities (Korhonen & Snäkin, 2005).

The fifth and final conclusion is that the evidence regarding a cluster's creation and characteristics is only referential. Due to the wide variety of clusters, there is no fixed set of characteristics which describe the formation of

all clusters. Therefore, any description of a cluster has to take into account its own unique and particular features.

The next section focuses on the contribution that networking makes to innovation in small firms.

4.2 Innovation in Small Firms

This section emphasises the importance and contribution of small firms to innovation. Particularly, it reviews the recent literature that confirms the link between networking and the degree of innovation in small firms, and it examines the innovation input of six types of external networks: suppliers, customers, family and friends, banks and accountants, science, and government.

It is generally agreed among academic researchers that innovation contributes to economic growth (Verspagen, 2005) and that the importance of small firms in generating technological innovations and growth is increasing (Acs & Audretsch, 1990; Verspagen, 2005). Small firms comprise 99% of all firms in the OECD group of advanced economies and they contribute between 50% and 75% of all the added value. In Latin-America small firms account for 99% of businesses and employ 67% of employees (OECD/ECLAC, 2013). They are a critical component in the national economies of their home countries and are often the source of new products and other innovations (Mazzarol & Reboud, 2011; Verspagen, 2005). They are increasingly being recognised as the progenitors of high technology in fields such as biotechnology and genomics and software advances (Von Tunzelmann & Acha, 2005).

One advantage of small firms is that, not having complex management structures, they can respond quickly to technological change (Verspagen, 2005). It has also been found that the influence of the manager or owner as a potential innovator is stronger in small businesses than it is in large ones (Riedle, 1989). Lööf & Andersson (2012) conducted a major long-term study in Sweden based on 160,000 observations of small manufacturing firms from 2000 to 2006. This study revealed that small firms differ from large ones in a number of ways (not just in size). For example, innovation in small firms is not so dependent on internal financial resources. In small firms, the degree of innovation depends more on the individual skills of the workforce than it does in larger firms.

Furthermore, small businesses are more innovative if they are affiliated to a domestically-owned multinational enterprise, as a small firm's innovation is closely linked to its ability to engage in international trade and exports. Finally, and perhaps surprisingly, the researchers concluded that, 'there is no statistically significant evidence that their proximity to metropolitan areas, or their presence in a specialized cluster, increases the innovativeness of small firms' (Lööf & Andersson, 2012).

Other research suggests that, on average, small firms do not innovate as much as their larger counterparts and those that do tend to be "gazelles" (fast

growing new firms) often in the high-technology sectors (Mazzarol & Reboud, 2011). Innovation in more traditional small firms is more complex than that of large firms (Edwards, Delbridge, & Munday, 2005), and the barriers to innovation in small firms are mismatched (Gray, 2006). Small firms lack the financial clout to undertake the kind of investments in new technologies required for radical change (Barclay & Porter, 2005), and they also have limited personnel and a lack of information (Riedle, 1989). Hence, innovation in small firms is hampered by resource constraints, so they cannot invest much money in a new idea, and instead they need to network in order to get the resources they need. Therefore, 'innovation in small firms has to transcend the boundaries of the firm' (Acs & Audretsch, 1990; Nooteboom, 1994).

In general the innovation literature suggests that a small firm's networks can be characterized in terms of volume (how many partners were involved), types of partners (e.g. relatives, customers, suppliers, banks and government institutions) and the roles of their partners in the innovation e.g. as a source of inspiration, providing finance, manpower, knowledge, etc. (Elfring & Hulsink, 2003; Freel, 2003).

In particular the evidence shows that small firms utilise their networks in order to initiate and implement innovations, so a small firm's ability to innovate is closely linked to its ability to network. Furthermore, small firms rely on a variety of network partners in various roles in order to initiate and implement innovations (De Jong & Hulsink, 2012).

Previous innovation studies have already identified various types of actors that may be involved. These can be informal contacts (friends and relatives), direct business contacts (customers, competitors, suppliers) or relatively remote actors such as advisors, universities and government organizations that do not necessarily engage in the small firms' daily business.

Regarding informal contacts, the literature on innovative start-ups in particular identifies such actors as being important (De Jong & Hulsink, 2010). Informal contacts may, for example, be important sources of manpower or finance (Ruef, 2002; Shane, 2003). As for direct business contacts, Pavitt's (1984) early classification identified suppliers and customers as the main sources of innovation, and follow-up classifications have also referred to these partner types (De Jong & Marsili, 2006; Evangelista, 2000). In the innovation literature, customers have been shown to be a 'custom source' of innovation, especially in small firms (Rothwell, 1991). As for suppliers, Rothwell (1991) identified these as a very common source of 'industrial inputs', including many useful technical inputs such as machines, equipment or manpower.

These studies are also consistent in distinguishing universities and other public research organizations as potential sources of innovation (De Jong & Hulsink, 2010). Pavitt (1984) regarded some industries as being 'science-based', indicating that scientific knowledge is among the main sources of opportunity identification and exploitation. This source is also frequently found in updated versions of the typology (Castellaccia, 2008; Evangelista, 2000). In this context, a

vast and still growing literature stresses the importance of university linkages for innovation, also in small firms (Elfring & Hulsink, 2003).

Other relevant network partners for small firms include advisors, such as consultants and engineers, financial institutions, intermediaries such as industry associations, and government organizations that may act as a resource for innovation, subsidies or permits (De Jong & Hulsink, 2010). The literature on innovation has, for example, identified advisors, financiers, intermediaries and governments as influential actors (C. Freeman, 1995; Nelson, 1993).

More recent evidence on the input of networks to small firms' innovation comes from De Jong and Hulsink (2012). Drawing on survey data of 594 innovations in Dutch small firms, they identified six types of networks (partners) that promote innovation in small firms: informal (relatives and friends), supplier-based, customer-based, bank/accountant-based, science-based and government-based networks. Their research showed that most innovations in small firms are developed with the support or input of external partners, i.e. weak ties[32]. Innovative small firms make more use of weak-tie networks, which are more effective than strong-tie ones in terms of their impact on technological innovation among small firms (Julien, Andriambeloson, & Ramangalahy, 2004).

Only nine percent of the innovations did not involve any networking, which supports Van de Ven's (1986) earlier claim that innovation does not exist in a vacuum. The statistical evidence shows that on average, at least 2.5 other partners made some sort of contribution to innovations in small firms.

Supplier-based innovation (38%) was the most common model for producing incremental innovation without any outside influence. In these cases, on average only one partner made a contribution to the innovation. This kind of innovation is characterized by low volume networking, mostly with a single supplier of, for example, IT or capital goods. Such innovations tend to be new to the firm, yet may build on their existing competences. They are developed by firms with fewer internal capabilities, i.e. firms which are less likely to maintain innovation strategies and to employ specialized innovation workers (Van de Ven, 1986).

With science-based innovations[33], in addition to partners such as universities and public research institutions, other partners such as suppliers and customers were found to be frequent contributors. A relatively large number of parties are involved in this type of innovation, (4.2 on average) implying that science-based innovations represent a more complex and voluminous type of networking (De Jong & Hulsink, 2010, 2012).

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32 Weak ties favour innovation because they are said to be more efficient in spreading information, new knowledge, and resources and because they tend to serve as better bridges between otherwise disconnected social groups (Granovetter, 1973, 1995). The argument in favour of sparse and weak ties is that in frequent and intense interaction between many actors, in a dense structure (strong ties), much of the information circulating in the system is redundant (Gisling & Nooteboom, 2004).

33 Involve contributions by relatively "remote" partners like universities and public research organizations. Such innovations seem to draw on scientific knowledge as a source of innovation (De Jong & Hulsink, 2012).

Government-based[34] innovations are the least common, as only 7% of the reported innovations were classified as such. Moreover, this type of innovation involved the highest number of network partners (4.9), so the innovation requires a number of actors in a variety of roles. As with science-based innovations, government-based innovations are marked by voluminous and complex networking behaviour (De Jong & Hulsink, 2012) and often involve a high proportion of directed ties and bridging ties.

Informally-based innovations accounted for 15 percent of the innovations in small firms (De Jong & Hulsink, 2012). Obviously, such innovations rely greatly on strong ties such as personal friends and relatives for manpower, feedback or advice, and other resources including money and capital goods. Although this is a significant minority, informal contacts are not as important for innovation as they are for the initial start-up of a firm (De Jong & Hulsink, 2012).

As for the bank/accountant-based[35] innovations, their main contribution to innovation in small firms is not actually financial. Only 36% of the innovations relied on external networks for finance. Interestingly, their main contribution to innovation is in the form of feedback and advice (84%). The findings show that financial advisors can be important contributors to the innovation process, especially when small firms expand their networks in order to innovate. Such networks are also marked by a high presence of directed ties and bridging ties. It appears that when developing innovations, small firms try out new combinations, bringing together previously unconnected parties, and they rely on some of the close partners in their network for financial expertise, in order to think through any long-term financial implications (De Jong & Hulsink, 2012).

Customer-based[36] innovations are by far the most important type. In 99% of cases this type of partner was mentioned as a direct trigger for identifying the opportunity for innovation. They often provide home-made models for new machines or other devices, which are then adapted and further improved by the innovating firm (Von Hippel, 2009). Examples include major business-to-business customers asking for products with new specifications, or the needs of early adopters that firms regard as opportunities for innovation (De Jong & Hulsink, 2012).

Hence, the contribution of networking to a small firm's degree of innovation may thus be characterized in terms of six areas.

First, there is volume, i.e. the number of partners that contribute to the innovation. Previous research has shown that the volume of networking is linked to the number of new products and the share of new product revenues (Freel, 2003; Oerlemans, Meeus, & Boekema, 1998; Tether, 2002).

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34 Includes government bodies that may provide (for example) subsidies or permits, but also a great deal of others partners are involved for multiple purposes (De Jong & Hulsink, 2012).

35 Marked by a high presence of financial service provides and/or financial advisors, i.e. banks and accountants (De Jong & Hulsink, 2012).

36 Marked by customer involvement as a source of opportunity (Von Hippel, 2009).

Second, there are the actors. Studies of innovation in small businesses have identified various types of actors that may be involved. These can be informal contacts (friends and relatives), direct business contacts (customers, competitors, suppliers, bank and accountants), or more remote actors, such as consultant engineers, universities and government organizations, who are not necessarily part of the small firm's everyday work environment.

Informal contacts are important contributors to the innovation process and may, for example, provide (free) manpower or finance (Ruef, 2002). As for direct business contacts, Pavitt's (1984) early classification identified suppliers and customers as a major source of innovation. Customers, in particular, are a major source of innovation for small firms (Rothwell, 1991). In fact, they are increasingly regarded as not only potential sources of inspiration, but also as parties that may also develop their own innovations which producers can then adopt (Von Hippel, 2009).

In addition, small firms may collaborate with competitors on an innovation. The reasons for such an unlikely partnership include the desire to manage the risks of the innovation, perceived mutual benefit if the firms serve clearly separate markets, or the need to team up with each other against larger competitors (Gomes-Casseres, 1997). Banks and accountants can also be valuable sources of advice and, of course, finance for innovation (De Jong & Hulsink, 2010, 2012).

Universities and public research organizations have also been identified as potential sources of innovation (De Jong & Hulsink, 2010). There is a great deal of literature which stresses the importance of links to universities for innovation, and this applies equally well to small firms (Elfring & Hulsink, 2003).

Other relevant networking partners include technical advisors, such as consultants and engineers, and intermediaries, such as industry associations and government institutes (De Jong & Hulsink, 2012). The literature on innovation systems has consistently identified advisors, intermediaries and governments as influential factors in innovation (C. Freeman, 1995; Nelson, 1993).

The third factor regarding innovation in small firms is the fact that innovative small firms tend to actively involve their network partners for a variety of purposes. In this context, external partners have been identified as being important providers of knowledge, finance and capital goods (Burt, 2009; Elfring & Hulsink, 2003). They may also be sources of inspiration, in that they may enable the identification of innovative business opportunities, or they may provide support for the implementation of the innovation. In summary, network partners can fulfil various roles, including inspiration, providing advice or feedback and contributing to the development of innovations by supplying know-how, finance or physical resources (De Jong & Hulsink, 2010, 2012).

Fourthly, networks can be described in terms of the dyadic relationships or ties between the firm and each of its partners. This literature emerged at the level of individuals (Granovetter, 1973; Scott, 1991) but also has been expanded to analyses of innovation networking at the firm level (Freel & De Jong, 2009; Lechner, Dowling, & Welpe, 2006).

The strength of individual ties is thus at the core of the debate on networking benefits (Lechner et al., 2006; Uzzi, 1997), and ties can be categorised as either 'strong' or 'weak'. Strong ties are characterized by frequent contact, are usually long term, reciprocal, and involve a high degree of trust and emotional closeness. In contrast, weak ties are transient and normally involve little emotional intensity. Broadly speaking, innovators need a broad network of weak ties to get ideas for innovations, and strong ties to mobilize the support needed to implement the ideas (Uzzi, 1997).

Fifth, the small firm's capacity to innovate can be described in terms of the 'directedness' of its network ties. A directed tie precedes a social relationship as it "involves unilateral monitoring of discourse and activities on the part of other actors" (Ruef, 2002). Examples of a directed tie would be the supply of machinery by specialized suppliers, collaborating with representatives from public research organizations to access scientific knowledge and consulting with engineers for their contributions to new product development projects.

For small firms, directed ties are usually 'weak' ties and are primarily aimed at innovation (De Jong & Hulsink, 2012). Ruef (2002) studied start-up businesses and found that those which relied exclusively on strong ties (family members and/or friends) were less innovative than those which included weak ties (business contacts). The most innovation-friendly type of networking contacts were development teams. Such teams do not need any prior relationships as they are formed proactively for a specific purpose. Ruef (2002) also found that when business ideas were inspired by public debate in the general media or specialized trade press (ties directed toward discourse), entrepreneurs were more likely to provide high self-ratings for innovation, and to apply for patents and/or trademarks.

Sixth, the contribution of networking to a small firm's degree of innovation can also be characterized by the presence of bridging ties, where small firms connect 'previously unconnected others' (Hargadon & Sutton, 1997). Research suggests that such 'bridging ties' stimulate better opportunities to initiate and implement innovations. In their research on product design firms, Hargadon and Sutton (1997) concluded that the position a firm holds in a network has an effect on the benefits it gains from the network. A central position in a network enables a firm to bridge gaps in the flow of information between various actors. Similarly, McEvily and Zaheer (1999) also found a positive correlation between bridging ties and innovation (McEvily & Zaheer, 1999). In contrast, firms that are badly positioned in their network face a 'liability of unconnectedness', which inhibits access to valuable knowledge and strategic partners (Powell, Koput, & Smith-Doerr, 1996).

All in all, there are two main conclusions that can be drawn from this section. First, there is increasing evidence of the importance of small firms in generating technological innovation and growth (Acs & Audretsch, 1990).

Second, there is past and recent evidence that there are at least six types of external networks which play a significant role in promoting innovation in small firms: supplier-based, customer-based, informal-based, bank/accountant-based, science-based and government-based innovations (De Jong & Hulsink, 2012). Of these, suppliers and customers are regarded as the main sources of innovation (De Jong & Marsili, 2006; Evangelista, 2000).

Supplier-based innovation is the most prevalent and is characterized by low-volume networking, mostly by a single supplier of IT or capital goods. Science-based innovations may involve other partners besides universities and public research institutes, such as suppliers and customers (De Jong & Hulsink, 2012). Government-based innovations are the least common and are marked by voluminous and complex networking behaviour (De Jong & Hulsink, 2012). Informally-based innovations draw heavily on strong ties such as personal friends and relatives, who mostly provide manpower, feedback or advice, but also money and capital goods (De Jong & Hulsink, 2012). Bank/accountant-based innovations show that financial advisors can be important contributors to the innovation process, especially when small firms expand their networks in order to innovate (De Jong & Hulsink, 2012). Customer-based innovations often act as a direct trigger to identify opportunities to innovate (De Jong & Hulsink, 2012).

Having reviewed the evidence that links networking to a small firm's capacity to be innovative, the next section moves on to the core topic of this thesis: entrepreneurial networking.

4.3 Entrepreneurial Networking

This section provides an outline of the core topic of this study, entrepreneurial networking[37] in terms of its definition, theoretical orientation and significance. Further details on the specific approaches to network-building have been included in Chapter 5.

The entrepreneurship literature has changed from viewing entrepreneurs as autonomous and rational decision-makers towards viewing them as being embedded in their social networks (Aldrich & Zimmer, 1986; Hoang & Antoncic, 2003; O'Donnell, Gilmore, Cummins, & Carson, 2001). Recognition of the importance of social networks has developed since the mid-eighties (Klyver & Hindle, 2007) as a reaction against the former atomistic and under-socialized view of the entrepreneur (Brockhaus, 1982; Brockhaus & Hortwitz, 1986). In this context, the entrepreneurial network approach assumes that the people with whom the entrepreneurs interact affect their endeavours because of the various resources that the different relationships provide (Klyver & Hindle, 2007). This approach sees entrepreneurship in a social and institutional context, and research is aimed at finding an approach to the study of entrepreneurs which encompasses the range of relevant factors spanning the transition from autonomous, independent entrepreneur to a socially embedded one (Araujo & Easton, 1996; Hoang & Antoncic, 2003; O'Donnell et al., 2001).

Therefore, although the study of entrepreneurial networking has highlighted the role of an individual's actions in identifying opportunities and mobilizing resources (Shane & Venkataraman, 2000), it also focuses on the relationships of individual entrepreneurs with other individuals and organizations (Anderson & Miller, 2003). It is now generally accepted that the actual process of establishing and maintaining relationships is closely linked to the dynamic side of their formation, i.e. how the focal actor goes about building the network (Johannisson, 2000; E. Shaw & Conway, 2000).

More specifically, entrepreneurial networking can be conceptualized as 'the process through which a collaborative formal or informal relationship between the entrepreneur and his social, business and/or institutional contacts is created'.

Within the same perspective, a 'network' is defined as 'the collaborative formal or informal relationship generated between the entrepreneur and his social contacts (friends and family), business contacts (suppliers, clients) and/or institutional contacts (support agencies) in order to access monetary (funding) or non-monetary resources (information and technology)'.

It is clear that all entrepreneurs depend on their contacts (Rauf & Mitra, 2011). These contacts, also known as partners or ties can provide the conduits, bridges and pathways through which the firm can access external opportunities (Rauf & Mitra, 2011), knowledge (Hansen, 2002), ideas and information

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37 Note that for the purposes of this study the term 'entrepreneurial networking' and 'network building process' are regarded as equivalent. See Section 1.4.

(Vivarelli, 2004), opportunities and access to valued resources such as funding, customers, and collaborators (Elfring & Hulsink, 2003), and, in doing so, facilitate the successful emergence of the firm and its subsequent growth and performance (Rauf & Mitra, 2011). These ties can also influence the extent to which opportunities and resources can be identified, accessed, mobilized and exploited (Chea, 2008). These ties, taken altogether, constitute the 'entrepreneurial network' which is also referred to as the entrepreneur's personal[38] network (Rauf & Mitra, 2011) or "ego network" (Jack & Anderson, 2002; Rauf & Mitra).

There is a bewildering range of possible ties between entrepreneurs and suppliers, customers, banks, public or private organizations, chambers of commerce, professional associations, family members and friends (Madill, Haines, & Riding, 2004), other entrepreneurs, external consultants and other agents or potential partners (Donkels & Lambrecht, 1997). However, for this thesis, it is De Jong and Hulsink's (2012) six[39] types of partners detailed in section 4.2 and the (Granovetter, 1994) concept of strong and weak ties defined in section 1.4 which seem most appropriate.

This being so, the significance of entrepreneurial networking, as compared to traditional organizational forms based on hierarchy or the market, lies in its capacity to pursue individual and shared goals through cooperation, gradual agreement, expectation, trust and commitment (Mønsted, 2010). Entrepreneurial networking is also essential for innovation (Streb, 2003) and competitiveness (Ahuja, 2000). It fosters the development and diffusion of innovations within and across firms and industries (Erickson & Jacoby, 2003) determining not only knowledge access and innovation diffusion, but also the degree to which innovative work practices are learned (Erickson & Jacoby, 2003). It intensifies knowledge transfer and the early adoption of innovations, and it promotes social interaction, trust and reciprocity (Almeida & Kogut, 1999).

It is indisputable that the degree of success or failure of a new firm is proportional to the networks that the founder (in this thesis, the small firm entrepreneur) develops and exploits (Carsrud & Johnson, 1989). Firms who do not cooperate with others and do not formally or informally exchange knowledge limit their know-how base, and thereby restrict their ability to enter into exchange relationships (B. Shaw, 1998).

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38 A personal network comprises all the members with whom the entrepreneur (the focal actor) has a direct relationship (Rauf & Mitra, 2011).

39 Relatives and friends, suppliers, customers, bank/accountants, science and government support organizations.

4.4 Summary of Chapter 4

This chapter focused on the theoretical framework of the thesis. The first section conceptualized industrial parks as cluster-based (Monga, 2011) and drew five conclusions about industrial parks. Firstly, the clustering of firms is favoured by three conditions: geographical factors (Krugman, 1997), historical events (Antonelli, 1997; Saxenian, 1985) and institutional frameworks (North, 1990).

Secondly, clusters commonly have three characteristics: a productive base led by a majority of small firms; the undertaking of competitive-cooperative practices, and; the existence of cultural factors which are derived from local traditions and history, and on which a firm's credibility and reputation are based (Brusco et al., 1996).

Thirdly, clusters are vulnerable to one of the main enterprises leaving (Tudor et al., 2007). They may also be affected by the political climate (Sterr & Ott, 2004), their internal cultures may vary (Sterr & Ott, 2004), their performance is difficult to measure, the associated public bodies may have unclear roles and, among other things, they may lack technology, know-how and adequate management (Korhonen, 2001).

Fourthly, clusters contribute to the development of competitive industries and employment (Monga, 2011), innovation, novel technologies and knowledge sharing (Pellenbarg, 2002).

The fifth conclusion is that the theory about the genesis of clusters and their characteristics is only referential. Due to the wide variety of clusters, there is no fixed set of characteristics and factors applicable to all clusters. Therefore, any description of a cluster has to take into account its own unique features.

The second section touched upon the contribution of small firms to innovation. Two conclusions may be drawn from this section. First, from a global perspective small firms are important generators of technological innovation (Acs & Audretsch, 1990). Second, there are at least six types of external networks which promote innovation in small firms, the most important of which are suppliers and customers (De Jong & Marsili, 2006; Evangelista, 2000).

The third section outlined the concept of entrepreneurial networking in terms of its definition, theoretical orientation and significance. This section has two main conclusions.

Firstly, research into entrepreneurial networking highlights the role of the individual in identifying opportunities and mobilizing resources (Shane & Venkataraman, 2000).

Secondly, entrepreneurial networking can be conceptualized as 'the process through which a collaborative formal or informal relationship between the entrepreneur and his social, business and/or institutional contacts is created'.

The next chapter develops an initial model approach to the study of entrepreneurial network building used in this thesis.

5 INITIAL MODEL APPROACH TO ENTREPRENEURIAL NETWORKING

The 'a priori construction of a framework' is a necessary condition for the collection of coherent and reproducible observational data (Christenson, 1976; Eisenhardt, 1989).

In light of the above, this chapter develops an initial model approach for the study of a firm's network-building process based on six existing approaches[40]: the organizational formation approach, the identity-based approach, the trust-based approach, the network-dyads approach, the strong and weak ties approach, and, the resource-dependency approach.

These approaches encompass the most reliable and relevant existing academic evidence regarding firms' network-building. They are relevant to this study because they provide prior empirical evidence and theoretical analysis of the network-building process among firms, allowing the development of the initial model approach to networking used in this study. They thus enhance the research base and sharpen the focus of this study and facilitate the attainment of the thesis's research objectives.

In other words, there is no need to reinvent the wheel. Constructing an initial model approach based on reliable prior evidence not only allows the researcher to take advantage of existing evidence but also provides a yardstick by which the findings can be analysed.

The initial model approach developed in this chapter distils the major inputs of each of the above mentioned approaches into six propositions. These propositions divide the existing evidence on the network-building process into three stages: inception, start-up and early development.

Given the fact that these approaches differ according to the type of firm studied, the methodology used, and the firm's stage of development, the 6 propositions have been modified to reflect the most relevant common aspects of the network building process in each of the approaches.

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40 The organizational formation approach, the identity-based approach, the trust-based approach are theoretical models.

In this sense, the initial model approach developed here serves only as an initial framework of reference for the findings of this study. Therefore, the first section of this chapter introduces the main theoretical features of existing approaches to the study of network building, while the second section integrates these approaches into the initial model approach for the study of network building carried out for this thesis.

5.1 Existing Network-Building Approaches

This section describes the core features of the six established approaches to the theory of network-building.

The organizational formation approach asserts that networks follow a three-stage sequence of development characterized by distinctive changes in the content of the relationship and the governance mechanisms which manage the relationship (Larson & Starr, 1993).

The first stage centres on identifying the contacts that will provide critical resources to begin the venture, particularly the utilisation of ties with family, friends, and existing business contacts. During this stage, potential new contacts are identified and existing contacts are tapped for the venture (Larson & Starr, 1993). In the second stage, the exchange relations become more multiplex, so that relations that began for instrumental reasons become imbued with a social or affective component, while ties that were previously strictly non-instrumental are leveraged for economic advantage. In addition, the governance relationships for the basis of the exchange shift from quid pro quo to trust, and concern about maintaining one's reputation (Larson & Starr, 1993).

In the third stage, the relationships become yet more complex and are characterized by more and higher-quality information exchange between the partners. A critical mass of relationships is established and, more significantly, the continued interaction between actors becomes routine. Ties can be characterized as inter-organizational relationships when the direct involvement of the individuals that played a role in their formation is no longer needed to sustain the relationships. The successful outcome of these phases constitutes the crystallization of an individual organizational network, characterized by high levels of stability and predictability (Larson & Starr, 1993).

The identity-based approach argues that a firm's networks evolve from being identity-based to being more calculative-based as the firm evolves from emergence to early growth (Hite & Hesterly, 2001). This evolution occurs because identity and calculative-based networks have different relative advantages in meeting the resource challenges of availability, access and uncertainty.

Identity-based networks have already been defined as ego-centric networks, i.e. they have a high proportion of ties where some type of personal or social identification with the other actor motivates or influences economic actions (Uzzi, 1996). Identity-based networks suggest that the identities of the

network ties, i.e. the individuals involved, matter more than the specific economic functions or resources that this tie can provide to a firm. The majority of dyadic ties stem from pre-existing relationships with social, family or long-held contacts, and are heavily composed of strong, embedded ties within a network high in closure and cohesion (Walker, Kogut, & Shan, 1997). However, identity-based networks tend to be smaller, less diverse, and more path-dependent than calculative networks. As a result, an identity-based network is less likely to possess the breadth of resources a firm may need to meet the increasing requirements of early growth.

Calculative networks involve a larger and more diverse set of purposefully functional or work-based ties, which reflect a firm's growing ability to proactively manage the network, rather than simply accepting the constraints of path dependence offered by the former, identity-based network ties (Hite & Hesterly, 2001).

The concept behind calculative networks proposes that the potential purposes and functions of the network ties are more important than the identity of the ties. Calculative networks are characterized by a greater number of weak ties, and are less redundant, i.e. they are sparser but better able to bridge structural holes (Burt, 2009).

The shift from an identity-based network to a more calculative network arises from the firm's need to acquire resources for growth, which generates changes in the firm's network in three specific dimensions (Hite & Hesterly, 2001). These changes are: a shift from predominantly embedded ties to a balance of embedded and arm's-length relations; from networks that emphasize cohesion to those that exploit structural holes; and from a more path-dependent network to a more intentionally-managed one (Hite & Hesterly, 2001).

The trust-based approach argues that a network's development evolves from relations based on affective[41] trust (during the emergence of the firm) to relations based on cognitive[42] trust during the firm's early growth. This model divides the network-building process into three stages: essential dyadic (interpersonal) exchanges; dyadic socio-economic exchanges and organizational exchanges (Smith & Lohrke, 2008).

During the stage of essential dyadic exchanges, entrepreneurs evaluate and map their current network ties (Low & MacMillan, 1988), erect a narrow network of strong ties from previously established relations (Steier & Greenwood, 1999) and often turn first to family and friends for the required resources (Larson, 1992).

The social support gained from these strong ties is mainly due to the high frequency of contact, strong emotional intensity, high intimacy, and the mutual

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41 Scholars refer to the emotional or social relations side of trust as affective or personal trust (Hite, 2005). Affective trusts develops when individuals emotionally invest in relationships, resulting in genuine concern for a partner's welfare and a belief in the relationship's intrinsic virtue (McAllister, 1995).

42 Researchers label the rational or economic dimension of trust as cognitive (Lewis & Weigert, 1985) or social trust (Hite, 2005). Cognitive trust occurs when a person makes a conscious decision to trust based upon the best knowledge he or she has (McAllister, 1995).

trust arising from frequent interaction (Granovetter, 1973). At this stage, the entrepreneur determines who receives trust, and to what degree. This is based on the mutual history of past dealings, which may have occurred either inside or outside a business setting. Therefore, the entrepreneur's network is trimmed back so that it once again consists of strong ties that the entrepreneur can rely on.

These relationships are, by their very nature, based on high levels of trust and they provide more emotional support than weaker ties (Levin & Cross, 2004). Hence, the trust that exists at this stage is primarily based on the affective aspect, which is high with family and friends (Lewis & Weigert, 1985). Accordingly, at this stage the entrepreneur relies more heavily on relationships based on affective rather than cognitive trust in order to secure resources (Smith & Lohrke, 2008).

At the stage of dyadic socio-economic exchanges, entrepreneurs continue to select and expand their networks, often shifting away from ties based primarily on affective trust, and towards using their limited exchange relations as vehicles for new venture growth (Birley, 1985). A type of 'social contracting' develops, whereby the entrepreneur implicitly trades social commitments, usually in the form of favours and obligations, for resources (Starr & MacMillan, 1990). The relationship thus involves increasingly intertwined social and business exchanges, as the parties build, test and refine a complex social and economic contract, seeking mutual economic advantage (Larson & Starr, 1993). Once economic interaction has been established, the additional interaction improves the ease and quality of the relationship (Hite, 2005).

As the entrepreneur's primary network of family and friends learn more about the new venture, and as the entrepreneur proactively expands his or her network, an increasing number of secondary group ties (e.g. bankers, lawyers and accountants) may enter the venture network. Thus, the network's structure evolves to include an increasing number of weak ties (Larson & Starr, 1993). These weak ties benefit the entrepreneur because they are more likely to provide non-redundant information than the strong ties. In addition, they may offer more effective means for economic support and access to market outlets (Burt, 2009).

The increasing familiarity between all the network ties at this stage also breeds trust (Gulati, 1995), assuming that the exchange partners do not do anything that abuses that trust. At this stage, however, the trust becomes more cognitive in nature, and this develops further as the partner's competence becomes apparent and exchange relationships crystallize (Hite, 2005). This trust reduces the uncertainty that repayment will take place in the future, paving the way for the exchanges to move from arms-length relations to close collaborations between exchanges (Larson, 1992). This, in turn, facilitates the acquisition of critical resources needed for the new venture. These exchanges based on cognitive trust also develop some affective component, as this arises naturally from continuous positive interactions (Hite, 2005). This suggests that,

in this phase, entrepreneurs place the same reliance on cognitive relationships as they do on those based on affective trust.

At the level of organizational exchanges, the ties between the entrepreneur himself and the set of essential business relationships are no longer solely interpersonal, but are based on repeated institutional-level exchange cycles between organizations seeking mutual economic gain (J. Katz & Gartner, 1988). It is the formal organization created by the new venture, rather than the one created by the individual entrepreneur that now forms and defines the trust boundaries for the relationships with critical resource providers (Baier, 1986). Cognitive trust further develops as the network structure evolves to include more weak ties, whose previous history of arm's-length transactions increases each party's knowledge of the other's competencies and provides evidence of trustworthiness.

It is worth noting, however, that these organizational exchanges still exist within a social context, implying that an element of affective trust is still a necessary condition for the relationship. Nevertheless, at this stage entrepreneurs exhibit greater reliance on relationships based on cognitive than affective trust (Lewis & Weigert, 1985).

The strong and weak ties approach identifies the types of networks used by the entrepreneur throughout the three stages of the entrepreneurial process (Kantis et al., 2005; Kantis et al., 2002). During inception, both prior work experience and established networks help entrepreneurs to identify business opportunities. At this stage of the network-building process, dynamic entrepreneurs[43] identify opportunities more thoroughly using more diverse sources of information than less dynamic ones, who tend to interact with a more limited circle of contacts in their immediate social circle (Kantis et al., 2005; Kantis et al., 2002). As this study will confirm, this can impact negatively on the future development of their networks.

During the phase of company start-up, prior work experience and higher education were the factors that facilitated access to and the use of resources necessary for getting under way. The networks used by dynamic entrepreneurs are more extensive than those used by the less dynamic ones, and play an important role in access to intangible resources (information and technology). During the early development of the firm, dynamic entrepreneurs make use of their more diverse networks in order to acquire business-related information, broaden the client and supplier base, or even to hire workers.

However, once the company has begun operations, the make-up of these networks tends to vary. For example, suppliers and clients begin to play a more important role than friends and family, particularly for more dynamic entrepreneurs in large cities. In more rural areas, however, family and friends continue to play a more important role, although still not usually as important as that of suppliers and clients (Kantis et al., 2005; Kantis et al., 2002).

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43 In this study 'dynamic entrepreneurs' are also regarded as 'innovative entrepreneurs'. See definition in section 1.4

The network-dyads approach[44] elaborates on network building between two actors (firms). Based on a case study of four high-growth firms, this approach contends that the development of a network-dyad consists of three phases. In the first phase, personal relationships and established reputations reduce uncertainty and enhance early cooperation between the organizations. The second phase establishes the conditions necessary to build the relationship. Mutual economic advantage plays an important role as the partners establish rules, procedures and expectations for the relationship. In the third phase, the partner organizations became operationally and strategically more tightly integrated. Effective control and coordination are achieved through the regulatory influence of moral obligations, trust, and concern for preserving reputations (Larson, 1992).

Lastly, there is **the resource-dependence**[45] **approach.** This states that there are three clear phases of development in network building: conception, commercialization and growth. These phases correspond to three channels for obtaining resources: mobilization, acquisition, and development (Kock & Galkina, 2008).

The conception phase is dominated by strong social relationships, typically with parents, friends and former business partners (Butler & Hansen, 1991). Although an entrepreneur acts purposefully with a business idea in mind, he does not create relationships from nothing; he merely activates existing relationships in a new way for his entrepreneurial goals. These relationships are relatively informal because the business has not yet been established, and there are no contractual agreements between the parties (Kock & Galkina, 2008).

During the commercialization phase, the entrepreneur continues to use the activated relationships to ensure a smooth start-up, as these relationships can produce the first clients, or starting capital. However, a firm needs a more extensive network for further growth (Lechner & Dowling, 2003), so the founders of the business begin to search for new clients, investors or business partners that will help the business to develop (Nijkamp, 2003). This phase distinguishes the figure of a 'network champion', i.e. the actor who is the most active and successful in establishing new contacts (Clarysse & Moray, 2004).

During the growth phase, many useful business contacts have already been formed through recommendations from existing partners, so there is less need for an active and purposeful search for them (Bloch and Jackson, 2007). The new firm has been operating for some time and has 'earned' a positive image, so the firm's network itself starts working for growth. This phenomenon is known as the 'evolution of an entrepreneurial network'. Obviously, the role of

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44 This model is based on a case study of four US high-growth firms with 10 million dollar revenues and an annual growth of 20%. There were two manufacturing firms (high-tech computer and support products), one distribution company (telephone distributor) and a clothing firm (retail and catalogue sales).

45 This approach is based on a study of entrepreneurial teams (between two to five founders per firm) in four Finnish and three Russian small firms in various industries (average of thirty employees).

the entrepreneur is less decisive, because the network starts to evolve independently (Kock & Galkina, 2008).

5.2 Integrating the Six Approaches to Entrepreneurial Networking

This section integrates the six network-building approaches into one initial model approach for this study. This initial approach follows the three stages of the entrepreneurial process: inception, start-up and early-development (Xavier et al., 2013). These are used as a referential framework for the initial model approach outlined below, and are supported by the work of, for instance, Kantis (2002), Kock and Galkina (2008) and Hite and Hesterly (2001). Although the network building process does not necessarily follow the same path as the development of the enterprise, the three stages are here used to organize the initial model approach in a comprehensive and logical manner.

Therefore, the network building process is linked to the phases of inception, start-up and early-development, and each of these phases is condensed into two propositions which highlight the key features of the network-building process and act as reference points for the findings of this investigation.

Inception
In this phase, the network relationships are quite informal and there are no contractual agreements between the parties (Kock & Galkina, 2008). The entrepreneur determines who receives trust based on past dealings. The entrepreneur's network is trimmed back so that it consists of strong ties based on high levels of affective trust. This can be summarised in the two following propositions.

Proposition 1
In the inception stage, entrepreneurs will concentrate on identifying the contacts that will provide critical resources. To do this, they construct a narrow network of strong informal ties from previously established personal relationships, such as family, friends and business contacts. In this stage, there are no contractual agreements between the parties as the relationships are based on high levels of affective trust.

Proposition 2
In the inception stage, innovative entrepreneurs tend to have more balanced networks (strong and weak ties) than less-innovative entrepreneurs, and they will use them more efficiently.

Start-up
Entrepreneurs gradually expand their networks, often shifting away from ties based primarily on affective trust towards using their limited exchange relations as vehicles for growth (Birley, 1985). As the entrepreneur's initial network of family and friends expands, it encompasses an increasing number of weak ties (e.g. bankers, lawyers and accountants). These weak ties are useful because they are more likely to provide non-redundant information than the strong ties (Burt, 2009). Entrepreneurs also begin to search for new contacts that will help the business to develop further (Kock & Galkina, 2008; Nijkamp, 2003). While mutual economic advantage plays a role, control in the nascent exchange structure is the result of the incremental growth of trust (Larson, 1992).

There is more cognitive trust at this stage, which develops further as the partners' qualities become apparent and exchange relationships crystallize (Hite, 2005). This reduces the degree of uncertainty, paving the way for the exchanges to move from arms-length relations to close collaborations between exchanges (Larson, 1992). This, in turn, facilitates the acquisition of critical resources needed for the new venture.

These exchanges, based on cognitive trust, also develop some affective component, which arises naturally from the continuous positive interactions (Hite, 2005). In this second phase of the entrepreneurial process, entrepreneurs rely as much on relationships based on cognitive trust as they did on affective trust in the first phase. In this phase, the networks used by dynamic entrepreneurs are more extensive than those used by the less dynamic ones and they play an important role in access to intangible resources such as information and technology (Kantis et al., 2002). This can be summarised in the two following propositions.

Proposition 3
In the start-up stage, **e**ntrepreneurs will continue to select and expand their networks to include more weak ties (bankers, lawyers and accountants). In this stage, entrepreneurs will place the same reliance on relationships based on cognitive trust as they do on those based on affective trust.

Proposition 4
In the start-up stage, entrepreneurs will use their networks of strong and weak ties to access both monetary and non-monetary resources. In this stage, innovative entrepreneurs, who have more work experience and a better education, will make more extensive use of business connections than the less innovative entrepreneurs.

Early development

In this phase, the networks become operationally and strategically more tightly integrated. Effective control and coordination are achieved, and opportunism is avoided through the regulatory effect of moral obligations, trust, and concern for preserving reputations (Larson, 1992). The network becomes more closely integrated and continued interaction between the actors becomes routine. The role of the individual entrepreneur is less decisive, because the network starts to evolve independently (Kock & Galkina, 2008).

In this phase, innovative entrepreneurs make more use of networks than less-innovative ones. The network has more weak ties, so the entrepreneur relies less on relationships based on affective trust, and the structure of the exchange dyad shifts from the personal to the organizational. However, these organizational exchanges still occur within a social context, so there is still an element of affective trust (Lewis & Weigert, 1985).

Once these three phases are complete, this constitutes the crystallization of an individual organizational network, which is characterized by a high level of stability and predictability (Larson & Starr, 1993). This gives rise to the final two propositions of this thesis.

Proposition 5

In the early development stage, effective control and coordination will be achieved, and opportunism avoided, through the regulatory effect of moral obligations, trust, and concern for preserving reputations. In this stage, the role of the individual entrepreneur will be less decisive because the network starts to evolve independently. The entrepreneur will rely more on relationships based on cognitive than affective trust.

Proposition 6

In the early development stage, entrepreneurs will use their networks to deal with the firm's management challenges. Business networks will play a vital role because, as the firm's problems become more specific, entrepreneurs will require greater interaction with other business players. In this stage, innovative entrepreneurs will continue using more business connections than less innovative entrepreneurs to acquire information, broaden their client and supplier base, and to hire workers.

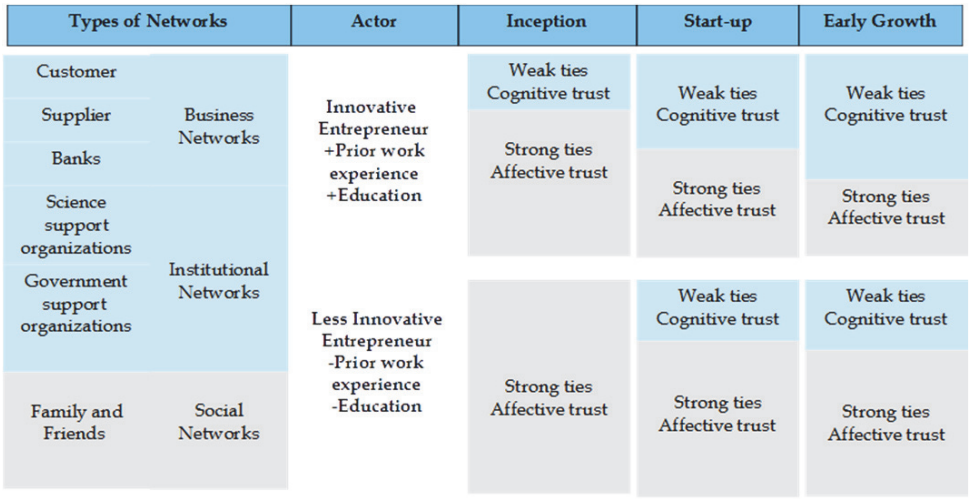
5.3 The Initial Model Approach to Entrepreneurial Networking

Based on the propositions stated above, the resulting initial model approach to entrepreneurial networking for this study is in essence based on the three phases of the entrepreneurial process: inception, start-up and early growth; and the entrepreneurs' use of different combinations of both strong ties (based on affective trust) and weak ties (based on cognitive trust) across the process.

Note that the classification between strong and weak ties shown in Figure 1 is based on the definition of strong and weak ties provided in Section 1.4.

This characterization regards business networks (customers, supplier, banks) and institutional networks (science support organizations, government support organizations) as typical weak ties, whereas social networks (family and friends) are considered as typical strong ties (Granovetter, 1973, 1995; Kantis & Angelelli, 2005; Ruef, 2002). Figure 1 sums up the propositions for the initial model approach used in this thesis.

FIGURE 1 Initial Model Approach to Entrepreneurial Networking



Source: Víctor Pérez Centeno (2012)

5.4 Summary of Chapter 5

This chapter stated that there are six approaches to the process of network formation. These are: the organizational formation approach, the identity-based approach, the trust-based approach, the network-dyads approach, the strong and weak ties approach, and the resource-dependency approach.

The organizational formation **approach** suggests that a network is developed over the three stages necessary to secure the critical monetary and non-monetary resources needed to start a business. These stages are: a focus on essential dyads, converting dyadic ties to socio-economic exchanges, and layering exchanges with multiple exchange processes (Larson & Starr, 1993).

The **identity-based approach** also argues that the network development experiences three shifts: from primarily socially-embedded ties to a balance of embedded and arm's-length relations (the first shift), from networks that emphasize cohesion to those that exploit structural holes (second shift), and from a more path-dependent to a more intentionally managed network (third shift) (Hite & Hesterly, 2001).

The **strong and weak ties approach** reveals that entrepreneurs use more strong ties during the firm's inception, and as the firm transits to early development, entrepreneurs use fewer strong ties and more weak ties (Kantis et al., 2002).

The **trust-based approach** also claims that the entrepreneurs' reliance on exchange relationships based on affective and cognitive trust vary as the entrepreneur moves through the network development process. It moves from being more affective-trust driven during the firm's inception phase to more cognitive-trust driven during the early development of the firm (Smith & Lohrke, 2008).

The **network-dyad approach** proposes a three-stage process of network formation that highlights the importance of reputation, trust, reciprocity and mutual interdependence. The preconditions for the exchange are based on reputation and prior relations (first stage); the conditions for building the exchange are based on mutual economic advantage over a trial period (second stage); while, in the third stage, the exchange matures into operational and strategic integration and control (Larson, 1992).

The **resource-dependency approach** proposes that network creation corresponds to the flow of resources needed: the activation of existing relations (mobilization of resources), the creation of new contacts (acquisition of resources) and the evolution of the network (development of resources) (Kock & Galkina, 2008).

One clear conclusion to be drawn from the above is that the types of networks vary according to the stage of the entrepreneurial process (inception, start-up and early development). These stages are reflected by a shift from:

- strong to weak ties (Kantis et al., 2002)

- affective to cognitive trust (Smith & Lohrke, 2008)
- identity-based to calculative networks (Hite & Hesterly, 2001), mobilization to development of resources (Kock & Galkina, 2008) and,
- setting pre-conditions for the exchange to network integration and control (Larson, 1992).

However, perhaps the most important conclusion to be drawn from the above is that an analysis of these models identifies two essential findings that exist across all the proposed processes of network formation:

- the presence and influence of strong and weak ties, and;
- the progressive interplay of affective and cognitive trust.

It is the evolution of these two factors that forms the basis for the initial model approach proposed in this thesis, and serves as a reference point for the findings of this study.

6 METHODOLOGY

6.1 Choosing a research paradigm

This research aims to understand the network-building process in twenty-seven innovative and eight less-innovative small firms operating in the IPVS from the entrepreneurs' perspective. However, there are significant gaps in our knowledge and understanding of the contents, processes and dynamics of small-firm networks (Blackburn et al., 1991; Coviello, 2005; Curran et al., 1993; Fletcher, 2002; Hoang & Antoncic, 2003; O'Donnell, 2004).

While much research has been undertaken to discover the structure of small firm networks and their effects (Borgatti & Foster, 2003), less is known about the interactional or process dimensions (Araujo & Easton, 1996; DiMaggio, 1992). This may be due to the fact that the structural dimensions of a network are amenable to quantitative methods, so these have tended to dominate small firm research (Harland, 1996). However, the understanding of networks proffered by such quantitative methods is limited and, in some cases, confusing (Blackburn et al., 1991). As Blackburn et al. (1990) point out: 'diagrams of the links between the member of a network specifying the number of links between members, the ways in which they cluster etc., are at best symbolic representations of actual relations' (Blackburn et al., 1991).

In light of the drawbacks and limitations of quantitative methodologies for research of this kind, this study adopted a qualitative research paradigm. Qualitative methods focus on dynamic processes with the aim of explaining, rather than predicting, phenomena (Leavy, 1994). Qualitative research aims to understand things rather than measure them (Gordon & Langmaid, 1988).

A qualitative methodology is justified because in attempting to understand the nature of networking in small firms the researcher is in fact investigating the social as opposed to the physical world. The social world involves real-life experiences, so to treat the respondents as unemotional entities ignores their ability to reflect on problems and act upon their own individual perceptions (Robson, 2002). This research sought to investigate how

individual small firm entrepreneurs' build their networks, and inherent in this was the need to investigate their behaviour. As such, the researcher wished to gain access to socially constructed knowledge. This presented a challenge, as the subjects of the study were asked to reflect upon the knowledge that subconsciously guides their actions, something they rarely do, or even acknowledge, by themselves (Riley, 1996).

In a qualitative paradigm, knowledge must be revealed by observing the subjects while they go about their everyday lives, or through allowing the subjects to tell their life stories in their own words through recollections of particular situations (Corbin & Strauss, 1990; Riley, 1996). Therefore, a qualitative paradigm is an appropriate methodology for gathering and analysing such stories (Denzin & Lincoln, 2005).

Research into networks should concentrate more on theory building than theory verification (Bonoma, 1985; Borch & Arthur, 1995; Churchill & Lewis, 1986; Tsoukas, 1989), and qualitative research allows for theory building as a result of empirical insights (Carson, Gilmore, Perry, & Gronhaug, 2001). It lets findings unfold, cascade and emerge (Yin, 2008), permits researchers to get close to the participants, to penetrate their internal logic and interpret their subjective understanding of reality (E. Shaw, 1999). It allows small firms to be viewed in their entirety (Bygrave, 1989), encourages the development of practical and theoretical understanding and the generation of new and alternative theories and concepts (Bygrave, 1989). Table 5 in Appendix 1 summarizes the salient features of a qualitative research paradigm for this thesis.

6.2 Procedure

Having decided on a qualitative research paradigm, the next challenge was to identify an appropriate research method for the thesis. After reviewing several alternatives, the case-study method was selected.

A case study investigates a contemporary phenomenon within its real-life context, one in which the boundaries between the phenomenon and its context are not clearly evident, and for which multiple sources of evidence are used (Yin, 2008). A case study is particularly advantageous when a 'how' or 'why' question is being asked about a series of events over which the investigator has little or no control (Yin, 2008).

Thus, the reasons for selecting a case study as a suitable methodology for this thesis fulfilled three criteria: the type of research question posed; the extent of control the investigator would have over the actual behavioural events, and; the degree of focus on contemporary events (Yin, 2008). As stated earlier, the research question of this investigation is concerned with 'how' networking occurs in innovative and less-innovative small firms.

A case study is also appropriate for studies in which the investigator has little or no control over the behavioural events, but only requires access to the

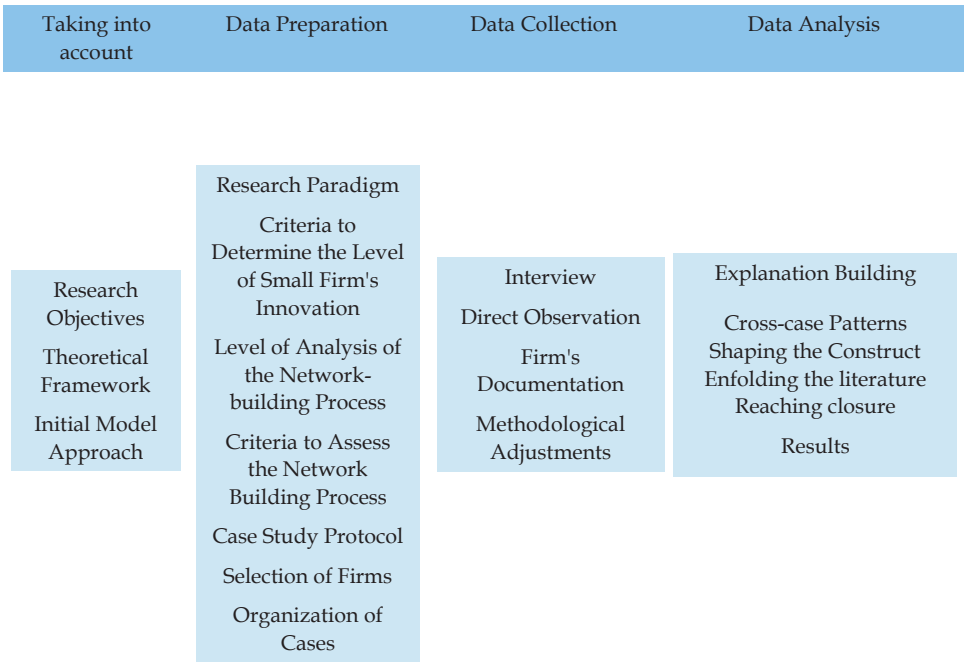
events themselves (Yin, 2008). Since this thesis concentrates on 'how' a specific process takes place, independently of the investigator's intervention, little or no control is needed over its occurrence, unlike in experimental research, which must use controlled variables.

A case study is also appropriate for examining contemporary events (Yin, 2008), and this research does indeed deal with an existing, live phenomenon which is in a state of constant evolution, and whose major actors (the entrepreneurs) are still accessible.

Therefore, the methodology used here is based on the case-study research methodology proposed by Yin (2008) and involves three stages: data preparation, data collection and data analysis. The summary of the applied case-study research methodology is illustrated in Figure 2, below.

However, before proceeding to the stage of data preparation (Section 6.3), we must first specify the criteria used to determine the level of innovation in the small firms selected for the study (Sub-Section 6.2.1), the level of analysis of the network-building process used in this study (Sub-Section 6.2.2), as well as the criteria for assessing the network-building process (Sub-Section 6.2.3).

FIGURE 2 Summary of the Applied Case Study Research Methodology



Source: Based on (Yin, 2008)

6.2.1 Criteria for Determining the Level of Innovation in Small Firms

The level of innovation of the firms in this study was assessed in two ways. Firstly, it was categorized according to the recommendations of the Oslo

Manual (OECD/Eurostat, 2005). This classification was carried out by the Peruvian Ministry of Production, who provided an initial list of a hundred firms and later refined it down to a list of fifty pre-selected firms, which included 25 firms categorized as innovative and 25 firms categorized as less-innovative.

The Oslo Manual states that a firm may be considered innovative if it introduces at least one new or significantly improved product (goods or service), process, new marketing method, or a new organizational method in business practices, workplace organization or external relations (OECD/Eurostat, 2005). The manual states that the minimum requirement for an innovation is that the product[46], process[47], and/or marketing[48] or organizational[49] method must be new or improved to the firm (OECD/Eurostat, 2005). Thus a small firm was considered innovative by the experts at the Ministry of Production if it had introduced at least one new or improved product, process, marketing method or organizational method which was new to the firm.

The second assessment of the firms' level of innovation was carried out by the author. The aim was either to confirm or deny the level of innovation in the firms according to the criteria of the Oslo manual, and to introduce an optional innovation indicator (in this case the number of skilled staff involved) suited to the context of innovation in the small firms participating in this study (Miettinen, 2006; Miettinen & Hine, 2006). This assessment took place in the field and was independent of the statistical data on the firms provided by the Peruvian Ministry of Production. This categorisation of the firms into innovative and less-innovative was based on the primary evidence gathered by the researcher and was applied to the final list of thirty-five firms who participated in the study, 20 firms categorized as innovative and 15 firms categorized as less-innovative.

To place this optional innovation indicator in perspective, it may be useful to summarise Miettinen's argument. Miettinen (2006) states that since existing innovation indicators are mostly modelled upon the innovative efforts of large firms, it might be relevant to consider three other indicators to assess the degree of a small firm's innovation: input indicators, output indicators and impact indicators.

The input indicators refer to the sources of innovation generated inside the firm. The most substantial input indicators are the time and funds allocated to a specific innovation, although the number of skilled staff involved in the innovation could also figure in an analysis of input indicators (Miettinen, 2006). The output indicators assess the concrete after-effects of an innovation effort in

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46 Product innovation: the introduction of a good or service that is new or substantially improved (OECD/Eurostat, 2005).

47 Process innovation: the introduction of a new or significantly improved production or delivery method (OECD/Eurostat, 2005).

48 Marketing innovation: the implementation of a new marketing method involving significant changes in product design or packaging, product promotion or pricing (OECD/Eurostat, 2005).

49 Organizational innovation: involves the creation or alteration of business practices, workplace organization, or external relations(OECD/Eurostat, 2005).

terms of the acquired know-how, the number of commercialized inventions and the adoption of new technology or organizational structures in a firm. New products and services or improvements to existing products or services, for instance, belong to the category of output indicators (Miettinen, 2006). Lastly, the impact indicators emphasize the qualitative outcome of an innovation (Miettinen, 2006). The most conventional impact indicators are concerned with internal management systems that encourage innovation, and the presence of an organizational structure for innovation management (Miettinen, 2006).

As stated above, the optional indicator of innovation chosen for this study was the number of workers (including the entrepreneur himself) who had skills utilised in the innovation (Miettinen, 2006). There were two reasons for introducing this parameter. Firstly, it is consistent with the current literature, which claims that entrepreneurs from innovative small firms tend to possess a higher educational level than entrepreneurs from less innovative small firms (Kantis et al., 2005; Kantis et al., 2002; Xavier et al., 2013). Secondly, the input nature of this parameter supplemented the Oslo definition, which largely relies on output indicators, i.e. new or improved products, processes, marketing methods or organizational methods.

Thus a firm was confirmed as innovative if it fulfilled at least one criterion for innovation established by the Oslo manual or had one or more workers with an advanced education in a technological or business-related field (engineering, business administration, accountancy and the like). So, a firm fulfilling at least one condition of the Oslo manual but lacking a minimum of one staff or entrepreneur in possession of a university education was still confirmed as innovative.

So, five parameters were used to categorize the level of innovation in the small firms in the park. Four of these parameters came from the Oslo manual and one was based on Miettinen (2006). These parameters were as follows: the number of new products[50](OECD/Eurostat, 2005); the number of improvements[51] to existing products (OECD/Eurostat, 2005); the number of commercialized[52] inventions (OECD/Eurostat, 2005), the number of patents [53](OECD/Eurostat, 2005) and the number of staff[54] in possession of skills useful in innovation (Miettinen, 2006; Miettinen & Hine, 2006).

Out of 20 firms initially regarded as innovative, only eight firms were confirmed as innovative after the second, field-based assessment. Five of these firms were from the sector of metal-mechanics, two from the furniture sector and one from the footwear sector, and they had an average annual turnover of 481,000 euros. Interestingly, all eight firms also fulfilled the optional innovation parameter. Table 9 in Appendix 6 gives more information on Miettinen's

50 At least one new product.
51 At least one improvement to an existing product.
52 At least one commercialized invention.
53 At least one patent.
54 At least one staff with advanced education in a technological or business-related field.

summary of small firm's innovation indicators (2006). Table 3 summarizes the list of innovative firms.

TABLE 3 List of Innovative Firms

Firms	Status	Business Sector	New products	Improvement in existing products	Inventions	Patents	Skilled staff
Acrimetal	Innovative	Metalmechanics	No	Yes	0	0	2
JJ Metales	Innovative	Metalmechanics	1	Yes	1	1	3
CNC Industrial	Innovative	Metalmechanics	1	Yes	1	0	4
Transcontinetal del Comercio	Innovative	Metalmechanics	1	Yes	1	0	1
Vibramatic	Innovative	Metalmechanics	3	Yes	3	0	2
Muebles Hoches	Innovative	Furniture	No	Yes	No	0	1
Muebles Maldonado	Innovative	Furniture	No	Yes	No	0	1
NM Dakota	Innovative	Footwear	No	Yes	No	0	1 external

Source: Víctor Pérez Centeno (2012)

The remaining 27 firms in the study were categorized as less-innovative, and had an average annual turnover of 61,000 euros (eight times less than the innovative firms). Thirteen of these firms were from the furniture sector, eight from the footwear sector and six from the metal-mechanics sector. These firms did not fulfil any of the innovation parameters and did not have staff in possession of skills useful to innovation. Table 4 summarizes the list of less-innovative firms.

TABLE 4 List of Less Innovative Firms

Firms	Status	Business Sector	New products	Improvement in existing products	Inventions	Patents	Skilled staff
Jovitsa	No innovative	Metalmechanics	No	No	No	0	No
Transformaciones electromecanicas	No innovative	Metalmechanics	No	No	No	0	No
Leonar	No innovative	Metalmechanis	No	No	No	0	No
Mallqui	No innovative	Metalmechanis	No	No	No	0	No
Trimat	No innovative	Metalmechanics	No	No	No	0	No
Metal Comsa	No innovative	Metalmechanics	No	No	No	0	No
Virgen Asunta	No innovative	Furniture	No	No	No	0	No
Orihuela	No innovative	Furniture	No	No	No	0	No
Carpinteria Valencia	No innovative	Furniture	No	No	No	0	No
Mueble San Pedro	No innovative	Furniture	No	No	No	0	No
Carpinteria Salvatierra	No innovative	Furniture	No	No	No	0	No
Expocarpio	No innovative	Furniture	No	No	No	0	No
Expoferia Industrial	No innovative	Furniture	No	No	No	0	No
Creaciones Katherine	No innovative	Furniture	No	No	No	0	No
Muebles Jordi	No innovative	Furniture	No	No	No	0	No
Carpitendria Edima	No innovative	Furniture	No	No	No	0	No
Muebles Gavamon	No innovative	Furniture	No	No	No	0	No
Evaristo More Navarro	No innovative	Furniture	No	No	No	0	No
ARM Feria del Mueble	No innovative	Furniture	No	No	No	0	No
Calzatura Lugama	No innovative	Footwear	No	No	No	0	No
Cueros Ferrer	No innovative	Footwear	No	No	No	0	No
Industria del Cuero Perez	No innovative	Footwear	No	No	No	0	No
Creaciones Linda	No innovative	Footwear	No	No	No	0	No
Calzatura Yosnel	No innovative	Footwear	No	No	No	0	No
Calzatura Raffines	No innovative	Footwear	No	No	No	0	No
Franco Collection	No innovative	Footwear	No	No	No	0	No
Flower Shoes	No innovative	Footwear	No	No	No	0	No

Source: Víctor Pérez Centeno (2012)

6.2.2 Level of Analysis of the Network-building Process

In order to determine a suitable level of analysis for the network-building process, this study considered the four levels of network analysis proposed by Ritter and Gemüden (2003), according to which a network can be analysed on the individual level, the team level, the organizational level and the level of a cluster of organizations (Provan, Fish, & Sydow, 2007; Ritter & Gemünden, 2003).

At the individual level, the role and impact of the individuals are analysed. At the team level, specific groups of actors are in charge of 'doing something' across or within a relationship. At the organizational level, there are also teams of individuals acting on behalf of the organization, but the distinction between this and the team level is that an organization draws on a wider pool of people. Finally, at the cluster level, firms link up with others to compete against other clusters or consortia of organizations, in which case it is no longer a battle of organizations against organizations, but between networks (Araujo & Brito, 1997). Since this study focuses primarily on the role of the entrepreneur during the network-building process, the individual level of networking analysis has been adopted as the most appropriate level.

Due to the fact that in this study the individual entrepreneur is nearly always the founder and manager of the small firm, there is an extremely close correspondence between the networking role of the entrepreneur and that of the firm (Hite & Hesterly, 2001). In other words, the networking role of the entrepreneur is directly and intimately intertwined with the firm's network (Davidsson & Wiklund, 2001; Voros, 2007).

The literature argues that this is not unusual in network research, where micro- and macro-approaches can be very similar, both theoretically and methodologically (Borgatti & Foster, 2003; N. Katz & Lazer, 2003). Small business entrepreneurs acting in the role of resource coordinators and agents for a firm (Bhide, 2000; Kirzner, 1973) often bring their personal networks to the firm as their most valuable asset for providing the resources necessary for the successful emergence of the firm (Aldrich, Rosen, & Woodward, 1987; Hite, 2005; Larson & Starr, 1993; Saxenian, 1990). Thus, the ego-network of the entrepreneur is virtually synonymous with the firm's network, as the firm's network ties initially existed on an interpersonal level (Bhide, 2000; Zaheer, McEvily, & Perrone, 1998). For the above-mentioned reasons, the results of this study, although based on research at the individual level, may be regarded as being applicable to both the entrepreneurs themselves, and the firms.

6.2.3 Criteria for Assessing the Network-building Process

As defined in Chapter 1, 'the network-building process' is regarded in this study as the process through which a collaborative formal or informal relationship between the entrepreneur and his social, business and/or institutional contacts is created. Hence, the networking building process is assessed from the perspective of the entrepreneur (Rauf & Mitra, 2011). As the entrepreneur is usually the founder and/or manager of the small firm, the analysis of the network-building process in this study involved the interplay of two dimensions.

The first dimension of the analysis took place during the field work in three steps.

Firstly, the entrepreneurs from the thirty-five firms were asked to choose one partner who, in their opinion, had significantly contributed to the introduction of a new or improved product, process, and/or organizational or marketing method (OECD/Eurostat, 2005).

Secondly, the chosen partners were classified according to De Jong and Hulsink's (2012) six types of innovation networking partners: suppliers, customers, banks/accountants, informal (social networks), science-based and government support organizations.

Thirdly, an open-ended interview was conducted with each of the thirty-five entrepreneurs to explore 'how' these relationships (networks) with the chosen partner developed. This information was organized according to the three stages of the entrepreneurial process: inception, start-up and early development (Kantis et al., 2005; Kantis et al., 2002). These stages provided three signposts for an ordered analysis of the network building process: inception explored the history of the network; start-up explored the product/service exchanged, and; development explored the present situation of the network. The questionnaire on which the interviews were based is shown in Appendix 9.

The collected data was analysed and the networking process between the innovative and less-innovative firms was compared.

The second dimension of the analysis was based on the propositions arising from the initial model approach described in Chapter 5. These were only used as an initial framework of reference for the results obtained from the field work. In other words, the progression through the entrepreneurial process from strong to weak ties and from relationships based on affective trust to those based on cognitive trust was only used as a reference for the actual results obtained from the field interviews, no more than that.

All in all, an articulation of these two dimensions underpinned the main results of this study. It allowed for a more accurate analysis of the network building process and added empirical grounding for the emerging model (Eisenhardt, 1989). A summary of these dimensions can be found in Figure 8, Appendix 5. Moreover, the partners identified by both innovative and less-innovative firms can be found in Table 6 (Appendix 2) and Table 7 (Appendix 3) respectively.

6.3 Data preparation

In any case-study, the researcher must be adaptive and flexible, and must regard previously unencountered situations as opportunities, yet retain a firm grasp of the issues being studied, and be unbiased by preconceived notions (Yin, 2008) when preparing for the specific study at hand.

In this case, the preparation included three strands: a thorough understanding of accepted qualitative research methods; a review of a variety of qualitative research alternatives; and a readiness to 'learn by doing', i.e. a willingness to become 'immersed' in the field under study (Yin, 2008), and thus to enhance the theoretical understanding of the research domain and methodology. Furthermore, the researcher developed a summarized case-study protocol which included an overview of the case study, field procedures, case-study questions and preliminary guidance for developing the study report. Appendix 7 summarizes the case study protocol.

The final step, before proceeding to data collection, was to select the final tranche of firms to be studied.

The process of selecting which firms should be included in the study was begun, simply enough, by obtaining a directory of the firms actually operating in the park at that time. The original directory, supplied by the Office of Economic Development of the Municipality of Villa el Salvador, listed a total of 1,340 small firms operating in the park. Despite the exploratory nature of this research, any study demands a focus on specifics. Therefore, it was necessary to reduce the number of firms in order to conduct a feasible analysis of the network-building process. Therefore, this study concentrated on the three most relevant sectors in the park, which were metal-mechanics (203 firms), furniture (278 firms) and footwear (75 firms).

This left 556 firms, still too high a number for a case-study research project with only one researcher. It was at this point that the Ministry of Production came into play,[55] as their experts were able to pare down the list to a hundred firms by taking into account two criteria: the selected firms had to be small firms[56] and they had to be categorized as either innovative or less-innovative firms, these being what Kathleen Eisenhardt has defined as 'polar' types (1989).

This was highly useful in filtering the firms, and using the definitions for innovation laid down in the Oslo Manual (OECD/Eurostat, 2005), the Ministry of Production[57]produced a preliminary short-list of one hundred firms.

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55 Guidance was also dispensed by key experts from the Peruvian Exporter's Association (ADEX), the Peruvian Export Promotion Agency (PROMPEX), the Small Businesses Association of Villa el Salvador (APEMIVES), the Commission for the SMEs Promotion (PROMPYME) and the Municipality of Villa el Salvador.

56 These firms fall within the definition of a small firm: enterprises which employs between one and hundred employees and whose total annual turnover does not exceed $6.1 million Peruvian new soles (around $2.3 million) (Legislative decree 1086).

57 Guidance was also dispensed by key experts from the Peruvian Exporter's Association (ADEX), the Peruvian Export Promotion Agency (PROMPEX), the Small

This list provided diverse information about the firms, including their names, sectors, the names of the entrepreneurs, their addresses and the level[58] of innovation. By focusing strictly on the sectors of metal-mechanics, footwear and furniture, and applying the criterion of theoretical sampling (a list that includes both innovative and less-innovative small firms) the list was finally reduced to fifty firms: 25 categorized as innovative and 25 categorized as less-innovative.

The fifty firms on this new list were then each contacted by phone to assess their willingness to participate in the study. Thirty-five of the firms were willing to participate in the study (20 innovative firms and 15 less-innovative ones) so this was the final tranche of small firms chosen for the study. Table 8 in Appendix 4 summarizes the firms who participated in the study.

6.3.1 The Group Cases

Since thirty-five separate cases – one per entrepreneur- would be confusing if analysed individually, the firms were organized into 'group cases' (Yin, 2008) in order to assess their network-building process more efficiently.

To this end, the firms were grouped according to two factors: their status of innovation and their business sector. So the firms were grouped into six group cases based on their business sector (metal-mechanics, furniture and footwear) and their level of innovation (innovative and less-innovative).

Group cases have many methodological strengths. They provide a strong base for theory building (Yin, 2008), enable comparisons that clarify whether an emerging finding is simply idiosyncratic to a single case or consistently replicated by several cases (Eisenhardt, 1991), create more robust theory because the propositions are more deeply grounded in valid empirical evidence (Eisenhardt, 1991), and enable broader exploration of research questions and theoretical elaboration (Eisenhardt, 1989).

Cases 1 and 2 consisted of firms in the metal-mechanics sector; five innovative and six less-innovative. Cases 3 and 4 consisted of firms belonging to the furniture sector; two innovative and thirteen less-innovative ones. As for the footwear sector, unfortunately, there was only one innovative footwear firm (Case 5) but there were eight less-innovative ones (Case 6).

The presence of more than one firm from the same sector and same innovation status in five of the six group cases allowed a consistent replication

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Businesses Association of Villa el Salvador (APEMIVES), the Commission for the SMEs Promotion (PROMPYME) and the Municipality of Villa el Salvador.

58 The experts from the Ministry of Production short-listed firms as innovative and less innovative based on the definition of innovation by the Oslo manual (OECD/Eurostat, 2005) which regards innovation as the implementation of a new or significantly improved product (good or service), process, marketing method, new organisational method in business practices, workplace organisation or external relations either to the international market, domestic market or to the company itself (OECD/Eurostat, 2005). In consequence, they considered a firm as innovative if it introduced at least one new or improved product, process, marketing or organizational method.

of the findings (Yin, 2008), which supported the external validity of the study. Once a finding has been replicated, the results might be relevant for a much larger number of similar cases, even though no further replications have actually been performed (Yin, 2008).

The six cases together comprised thirty-five interviewees. Thirty-one of the interviewees were founding entrepreneurs and also managers of their firms. Three of the interviewees were second generation family members (JJ Metales, Muebles Hoches and Calzatura Raffines), and one of the interviewees was the firm's marketing manager (NM Dakota).

The following abbreviations are used when talking about the results: Innovative Furniture Firm [Ifu], Less-Innovative Furniture Firm [Lifu], Innovative Footwear Firm [Ifo], Less-Innovative Footwear Firm [Lifo], Innovative Metal-mechanics Firm [Ime], Less Innovative Metal-mechanics Firm [Lime]. The stage was now set for the all-important 'data collection' phase. The key features of each of the six group cases can be found in Appendix 8.

6.4 Data Collection

The data collection took place between August and September 2009 in the Industrial Park of Villa el Salvador. Three principles were followed during the data collection process: the use of multiple sources of evidence, i.e. interviews, direct observations and documentation; the creation of a case-study data base; and an effort for maintaining a chain of evidence (Yin, 2008).

A total of thirty-five open-ended interviews were conducted on the firms' premises during working hours; one interview per firm. Thirty-one of the thirty-five firms in this study were still run by their founding entrepreneurs, 3 by second generation managers and 1 by the firm's marketing manager.

The interviews lasted about 45 minutes on average, and were tape-recorded. The interviews were based on a questionnaire. However, rather than asking the interviewees to fill out the questionnaire, it was instead only used as guide to direct this organic, self-developmental exploration of the networking process.

As any field researcher will know, conducting and recording 35 in-depth, open-ended interviews involves a considerable amount of work. The interviews were aimed at exploring how these small firm entrepreneurs networked with their most relevant partners[59] (De Jong & Hulsink, 2012), so the entrepreneurs were asked to reveal their most relevant partner, after which the interview focused on exploring 'how' these relationships developed. Further explanation on how the network-building process was explored has already been described earlier in section 6.2.3, and the actual questions used are presented in Appendix 9.

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[59] Suppliers, customers, informal, bank/accountant, science and or government support organizations (De Jong & Hulsink, 2012).

During the interviews it became clear that several firms had been wrongly categorised as innovative, so these firms were reclassified as the interviews progressed. Only eight out of the initial twenty supposedly innovative firms could be classified as innovative, so the final list of firms in the study only has eight innovative firms and twenty-seven less innovative firms.

When, an investigator makes a personal visit to the case study site he has the opportunity to make direct observations (Yin, 2008). Such observations can be of great value, as the researcher can actually observe what the entrepreneurs do, instead of merely relying on what they say they do (Bøllingtoft, 2005).

Direct observations can also provide a different angle on the answers to the questions, and help the researcher understand 'how' and 'why' something occurred, rather than just 'what' occurred. For instance, information about the entrepreneurs was also gathered from their behaviour, body language, tone of voice, general appearance and demeanour. These direct observations also revealed much about the state of the premises, the type and condition of the technology used, the employees' conditions, the environs of the business premises, etc. All of this contributed towards an accurate assessment of their level of education which is closely linked to entrepreneurs who utilise their networks efficiently (Kantis et al., 2005; Kantis et al., 2002).

It is accepted that to have more than one observer making direct observations considerably increases the reliability of the observational evidence (Yin, 2008), so the investigator was accompanied by a lay observer during all the interviews.

Another useful tactic is to take photographs on site, as these help to convey important characteristics to outside observers (Dabbs, 1982). Consequently, in order to maintain Yin's 'chain of evidence' (Yin, 2008) photographs were taken of all of the entrepreneurs and their premises, and observational notes were written down after all the interviews, all of which have been stored in the study's database.

This data collection was enhanced by the use of the firms' own documentation. This documentation generally took the form of internal reviews, news-clippings, the firms' own brochures, videos and even articles which had appeared in the mass media and on the internet. This additional source of information was useful in identifying further evidence of the entrepreneurs' network-building efforts, particularly with public and private support institutions, universities and the like.

The methodology was further reinforced with four methodological adjustments, aimed at adapting the research method to the traditional, local, cultural norms of small firms in Peru. The first adjustment was that the interviews were conducted in the presence of an impartial observer who knew and understood the local conditions. The second was the use of colloquial language, which encouraged maximum openness from the interviewees. The third adjustment consisted of deliberately stopping the recording at the end of the formal interview, but before ending the conversation and leaving the premises. The fourth was that the firms were visited without arranging an

appointment, i.e. 'cold calling'. These methodological adjustments are significant as they reveal much about the type of people and the environment in which the study was conducted. They are described in more detail below, as they are important factors in understanding the value of this research.

The impartial observer assisted the investigator during the interviews and gave analytical guidance, as he had an academic background in economics, as well as experience of local working practices. This not only legitimised the serious nature of the interviews but also minimized the high level of distrust that the park's entrepreneurs often bear towards 'outsiders'. It also provided a degree of personal safety for the investigator, as the local conditions of poverty and the consequent distrust of authority can make the park a dangerous place for strangers.

The issue of personal safety is relevant to an investigative study in this environment, and may well be one of the reasons why so little field research has been carried out in the park before. The park is located in an area where anything can happen. The area is not well protected by the police and the mood of many of the entrepreneurs working there can change quickly at any moment. There is an atmosphere of pervasive tension, which can easily explode into violence. This atmosphere of suspicion and distrust is illustrated by the fact that in many cases, the entrepreneurs requested to see the investigators' IDs and reviewed them carefully before agreeing to conduct the interviews. Considering the high level of institutional distrust revealed by the interviewees' testimonies (see Chapter 7), these incidents illustrate the suspicious atmosphere in which the entrepreneurs operate, and the threatening conditions under which the study was conducted.

The use of 'colloquial language' during the interviews turned out to be a 'must'. Initially, the interviews were conducted in a formal manner, using rather formal, academic language which could be characterised as the Peruvian equivalent to 'BBC English'. However, this intimidated the interviewees and made them reluctant to open up and elaborate on their answers. It was only by reverting to the local patois that the investigator was able to overcome this difficulty, and it is something that future investigators should take note of. The use of colloquial language is an important communication strategy, and it certainly worked in this case.

It became apparent that the respondents were willing to talk much more freely after they saw that the tape recording had stopped. The taping of the interviews, although vital in preserving the integrity of the study, inhibited the interviewees from telling any stories which they felt might be compromising for themselves if they were revealed to 'the authorities'. Once they saw that the recording had stopped, they felt free to share more personal and revealing anecdotes about their lives, so the researcher learned to stop the recording after the first, formal set of questions had been asked, and to make sure the entrepreneurs saw that the recording had stopped. Then the researcher asked a further set of prepared questions in a casual manner, which, although not on tape, revealed much valuable information about the entrepreneurs' lives.

The decision not to make appointments before visiting the firms was essentially a pragmatic adjustment. When trying to arrange appointments by phone, the entrepreneurs were always `too busy' or `doing something', and never had time to fix an appointment. So, instead of expending a lot of time and energy trying to pre-arrange visits, the investigator found that it was better simply to drop in on the interviewees unexpectedly. The entrepreneurs were usually on the premises and, they were nearly always willing to carry out the interview once the interviewer was there in person.

One unforeseen consequence of the 'cold-calling' approach was that, since the entrepreneurs did not expect the visit, they had not prepared themselves or the premises in order to create a good impression, (as people will often do – not only in Peru). Thus, the direct observations were able to capture the everyday reality of the businesses' operations in their natural state. Furthermore, the entrepreneurs' testimonies were more spontaneous, and therefore more honest and accurate.

These four methodological adjustments fine-tuned the data collection process and adapted it to local conditions. The adjusted methodology encouraged the entrepreneurs to reveal more accurate data about both themselves and the topic of this study, i.e. 'how' networking takes place among small firms in Peru. Once all the data had been collected, an audio data base containing the testimonies of the interviewees was assembled, and the study was ready to move on to the next stage, data analysis.

6.5 Data Analysis

Data analysis consists of examining, categorizing or recombining the evidence. As Yin (2008) has pointed out, analysing case-study evidence is especially difficult because the strategies and techniques have not been well defined in the past. One methodology recommends two alternative strategies: utilising theoretical propositions or developing a case description (Yin, 2008).

This study benefited from both of the above-mentioned strategies. They guided and enhanced the attainment of the research objectives through developing an initial model approach consisting of six propositions (Section 5.2) and facilitated the analysis of the results by organizing the firms into six 'group cases' (Yin, 2008). The details of the group cases have been described in Sub-Section 6.3.1

Furthermore, the three dominant modes of analysis for a case study: pattern matching, time-series analysis and explanation building (Yin, 2008) were also considered. The explanation-building mode – which is also a form of pattern matching - was selected since it allowed the data to be analysed by building a narrative description of the networking process. Although explanation-building has not been well documented in operational terms, one of its most important characteristics for the purposes of this research is that the final explanation is a result of a series of iterations (Yin, 2008).

The data was analysed combining two elements. The first is the logic of qualitative content analysis as defined by Patton (2002), which states that "[it] is any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings" (Patton, 2002). The second element consists of the five steps for data analysis suggested by Eisenhardt (1989), which are defined below.

Eisenhardt's five steps for analysing the data obtained from field work are: searching for cross-case patterns, shaping the construct, enfolding the literature, reaching closure, and thesis completion.

The search for cross-case patterns consisted of selecting categories or dimensions, and then looking for similarities within a group, or patterns emerging from inter-group differences (Eisenhardt, 1989). The idea behind cross-case search strategies is to force investigators to go beyond their initial impressions by looking at the data from different perspectives. These tactics improve the likelihood of developing an accurate and reliable theory which most closely fits with the data. Cross-case searching also enhances the probability that the investigators will draw novel conclusions from the data (Eisenhardt, 1989)

The categories for such an analysis may be suggested by the research problem, by the existing literature, or the researcher can simply choose the dimensions for data analysis according to his own precepts (Eisenhardt, 1989). In this study, the dimensions for the data analysis were based on the research questions described in Chapter 1, which means the categories were based mostly on the assessment and comparison of pairs of group cases belonging to different innovation status but same business sector. For instance, innovative firms from the furniture sector vs less-innovative firms from the furniture sector; innovative firms from the footwear sector vs less innovative firms from the furniture sector, and; innovative firms from the metal-mechanics sector vs less-innovative firms from the metal-mechanics sector.

A second tactic used to establish cross-case patterns was to select pairs of group cases - this time group cases belonging to different business sector but same innovation status - and then to list the similarities and differences between each pair. For instance, innovative firms from furniture sector vs innovative firms from footwear sector; innovative firms from footwear sector vs innovative firms from metal mechanics sector, less innovative firms from furniture sector vs less innovative firms from footwear sector, less innovative firms from footwear sector vs less innovative firms from metal mechanics sector.

Looking for differences between apparently similar cases, or similarities in seemingly dissimilar cases, can force the researcher to move away from simplistic, preconceived frames of reference (Eisenhardt, 1989). The result of these counter-intuitive comparisons can be new categories and concepts which the researchers had not anticipated (Eisenhardt, 1989).

A third tactic was to divide the data by data source. In this study, the three sources of data came from interviews, direct observation and the firms'

documentation. When a pattern from one data source is corroborated by the evidence from another, the finding is stronger and better grounded (Eisenhardt, 1989). When evidence conflicts, the researcher can sometimes reconcile the evidence through deeper probing into the reason for the differences (Eisenhardt, 1989).

In applying the cross-case tactics described above, tentative themes, concepts, and possible relationships between variables begin to emerge (Eisenhardt, 1989). So, the next step of this iterative process was to compare the emergent framework with the evidence from each case in order to assess how well (or poorly) it fitted with the data (Eisenhardt, 1989). In this kind of study, researchers constantly compare theory and data, iterating toward the theory which most closely fits the data (Eisenhardt, 1989). A close fit is important to building good theory because it takes advantage of the new insights yielded by the data and leads towards an empirically valid theory (Eisenhardt, 1989). Furthermore, the initial model approach developed in Section 5.2 helped substantially, and served as point of reference for the emerging framework arising from the evidence yielded by the different cases. By accumulating evidence from diverse sources, the study converged into a single, well defined construct (Eisenhardt, 1989).

The process of verifying the constructs was done using replication, i.e., treating a series of cases as a series of experiments, with each case serving to confirm or disconfirm the patterns emerging from the previous cases (Yin, 2008). In replication logic, cases which confirm emergent patterns enhance confidence in their validity. Cases which disconfirm the patterns often provide an opportunity to review and refine the initial theory (Eisenhardt, 1989). In this phase, data was analysed based on five replications (Case 1), six replications (Case 2), two replications (Case 3), thirteen replications (Case 4), one replication (Case 5) and eight replications (Case 6).

Enfolding the literature means relating the emergent concepts with the extant literature; an essential feature of theory building in case studies (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). This step involved asking, 'what is this similar to, what does it contradict, and why?' The key to this process laid in the thorough analysis of the relevant range of literature on entrepreneurial networking, as outlined in Chapter 5, specifically Sub-Section 5.1, which includes research which ultimately conflicts with the findings of this study.

Examining literature which conflicts with the emergent theory is important because the juxtaposition of conflicting results forces researchers into a more creative, frame-breaking mode of thinking than they might otherwise be able to achieve (Eisenhardt, 1989). The result can be a deeper insight into both the emergent theory and the conflicting literature (Eisenhardt, 1989).

The literature with similar findings is important as well, because it ties together underlying similarities in seemingly unrelated phenomena (Eisenhardt, 1989). The resulting theory has stronger internal validity, wider

generalizability, and higher concept-level findings, and is therefore more valid (Eisenhardt, 1989).

The above may all seem very theoretical, as indeed it is. However, the researcher found that linking the data from the field-work to the theories espoused in the literature was particularly relevant in this study (Eisenhardt, 1989). The fact that both conflicting and similar empirical and theoretical evidence on network-building was regarded in the initial model approach developed in section 5.3 substantially helped this part of the analysis.

The fourth step was reaching closure, i.e. when to stop iterating between theory and data. In this study the analysis stopped once the researcher realized that the incremental improvements in its quality had become minimal (Eisenhardt, 1989). This is also known as theoretical saturation. The literature says that researchers should stop adding cases when theoretical saturation is reached (Eisenhardt, 1989). When the results of the iterations stop producing new evidence, the process can be regarded as complete (Yin, 2008). Theoretical saturation is quite similar to ending the revision of a manuscript.

Reasons for reaching closure also included time and funding constraints as the funds available for this study were very limited. On this topic, the literature indicates that, in practice, theoretical saturation often combines with pragmatic considerations such as time and money to determine the point at which data collection ends. In fact, it is not uncommon for researchers to plan the number of cases in advance (Eisenhardt, 1989). This analysis resulted in the identification of 25 categories summarized in five major themes: forced gestation, network birth, strategic stagnation, obstacles faced by firms during network building and level of firm's innovation according to their major partners.

The product of the study was a new conceptual framework, a descriptive model of the network-building process in innovative and less-innovative small firms in the IPVS, and this is presented in Chapter 7 and discussed in Chapter 8. The literature emphasises that a final product of building theory from case studies may be concepts, cf Mintzberg and Waters' deliberate and emergent strategies (1982), a conceptual framework, cf Harris & Sutton's framework of bankruptcy (1986), or propositions, cf Eisenhardt and Bourgeois' mid-range theory of politics in high velocity environments (1988).

Finally, once the data analysis was complete, the resulting data was compiled into this thesis.

6.6 A Critical Appraisal of the Methodology and the Data

Although case studies are an established form of empirical enquiry, many researchers disdain the strategy. Both single and multiple-case studies have been viewed as a less desirable form of enquiry than controlled experiments or surveys (Yin, 2008).

One major concern with case studies has always been with the lack of rigour in case-study research. Too often, the case-study investigator has been sloppy and has allowed equivocal or biased views to influence the findings and conclusions. Therefore, it is essential that the case-study investigator works hard to avoid falling into this trap. On the other hand, it should be remembered that the investigator's bias can affect the results of other types of research, too, such as the conduct of controlled research experiments, (Rosenthal, 1976) and research strategies involving the design of questionnaires for surveys (Sudman & Bradburn, 1982). The problems are the same in all types of research, although perhaps with case-study research they have been less frequently documented and addressed by the investigator.

Another common concern with case studies is that they provide very little basis for scientific generalization (Yin, 2008). The short answer to this is that case studies can be generalised to make theoretical propositions, rather than to describe populations or universes. In this sense, the case study does not represent a sample, so the investigator's goal is to expand and generalize his theory (analytic generalization) rather than to enumerate frequencies (statistical generalization).

A third frequent complaint about case studies is that they take too long and result in massive, unreadable documents (Yin, 2008). This may be true, given the way case studies have been done in the past, but this is not necessarily the way case studies need to be done in the future. Critics of case studies often confuse a research methodology using a case-study strategy with a specific method of data collection, such as ethnography or participatory observation. Ethnographic studies usually require long periods of time in the field and emphasize detailed, observational evidence. Participatory-observation, in contrast, may not require the same length of time, but it still assumes a hefty investment in fieldwork. Nevertheless, a case study is a valid form of enquiry that does not depend solely on ethnographic or participant-observer data. One could even do a valid and high quality case study without leaving the library and the telephone, depending upon the topic being studied. Aware of these three criticisms of case studies, great care was taken to preserve the methodological integrity of this study, and to make sure that the research fulfilled all the mainstream criteria used to assess the quality of case-study research, i.e. the four pillars of any research study: construct validity, internal validity, external validity and reliability.

Construct validity is concerned with using appropriate operational measures to realise the construct. In a qualitative study of this nature, there are three elements that enhance construct validity: the use of multiple sources of evidence, an established chain of evidence, and the elaboration of the case study protocol. The construct validity of this thesis was thus enhanced through the use of multiple sources of evidence (firm's documents, open-ended interviews and direct observation), the maintenance of a chain of evidence (e.g. direct observations made together with another observer immediately after the

interviews, consisting largely of tape recordings, photographs and notes) and the development of a summarized case-study protocol.

The external validity defines the domain in which the study's findings can be generalized. No generalization is automatic. Instead, a theory must be tested through replications of the findings in a second or even third case. Once such replications have been made, the results might be relevant for a much larger number of similar cases, even though no further replications have actually been performed (Yin, 2008). The external validity of this investigation was strengthened by aiming at an analytical generalization[60] of the results, based not on only one or two replications, but up to five replications in Case 1, six replications in Case 2, two replications in Case 3, thirteen replications in Case 4, one replication in Case 5 and eight replications in Case 6.

Reliability means that the operational procedures of a study, such as the data collection procedures, can be repeated to produce the same results. The goal of reliability is to minimize any errors and biases in the study resulting from factors unique to the research in question (Yin, 2008). Reliability can be improved through the proper documentation of the procedures followed in the study, and this was achieved by elaborating a case-study protocol and building an audio and photographic database of the interviewed firms.

Lastly, regarding internal validity, Yin (2008) claims that it is a concern for causal studies, where an investigator is trying to determine whether event x led to event y (Yin, 2008). Internal validity was achieved through the use of explanation building, as already described in the data analysis section above. Note, however, that this study is primarily focused on the network building process itself, not in the causal relationships that may arise as a result of it. Despite the customary criticisms and the common constraints which apply to any research, care was taken to ensure that the methodology used for this research was followed in a consistent manner. Table 16 in Appendix 10 summarises the four tests used to assess the quality of this study.

6.7 Summary of Chapter 6

This chapter described the research methodology. The first section reconciled the use of the qualitative research paradigm with the core objectives of this thesis. The second section identified the case study as the most appropriate research method for the investigation and it also set three methodological boundaries. First, the criteria for determining the level of innovation in a small firm were taken from the Oslo Manual. Second, the approach to analysing the network-building process in this study focused on the entrepreneurs as individuals. Thirdly, the assessment of the network-building process took into account the interaction of two dimensions. The first dimension took place

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60 In analytical generalization the investigator is striving to generalize a particular set of results to some broader theory (Yin, 2008).

during the field work and was based on the entrepreneur's testimony on how they build their network. The second dimension was based on the propositions arising from the initial model approach described in Chapter 5. The articulation of these two dimensions allowed for a more accurate analysis of the network-building process (Eisenhardt, 1989).

Section three centred on the data preparation. The data preparation demanded a thorough understanding of accepted qualitative research methods; a review of qualitative research alternatives, and; a readiness to 'learn by doing', i.e. a willingness to become 'immersed' in the field under study (Yin, 2008). This section also covered the selection of the firms for the study. Thirty-five firms from the sectors of metal-mechanics, furniture and footwear were selected and grouped into six cases taking into account two factors: their status of innovation and their business sector.

Section four dealt with the data collection. There were thirty-five open-ended interviews, during which the level of innovation in the firms was verified. Only eight out of the initial twenty supposedly innovative firms proved to be classifiable as innovative. Additional information was also collected from direct observation and from the firms' own documentation. The data collection was enhanced by four methodological adjustments aimed at adapting the research method to the local conditions. These were: the presence of an impartial observer; the use of colloquial language; stopping the recording before the end of the interview, and; 'cold calling' on the firms.

Section five focused on the five steps of data analysis: searching for cross-case patterns, shaping the construct, enfolding the literature, reaching closure and thesis completion. Essentially, these steps involved recombining the evidence in an iterative fashion until theoretical saturation was reached (Eisenhardt, 1989). The other reasons for closure included time and funding constraints.

Lastly, the sixth section dealt with three common criticisms levelled at the case-study research method, i.e. the lack of academic rigour, the limited basis for scientific generalization, and the fact that case studies are time-consuming and result in massive, unreadable documents. These issues were compensated for in this thesis from three perspectives: construct validity, external validity and reliability. The overall conclusion of this chapter is that, despite the limitations (which may be applied to any research method), research cannot be carried out without using some methodology, and it is the job of the researcher to adapt his/her methodology to the research environment and deal with the interfering factors in a controlled and consistent manner. The next chapter reveals the findings of the study, and presents them in an accessible fashion.

7 RESULTS

This chapter addresses the major research objectives of this study specified in Chapter 2. Since the study was based on a specific number of small firms located in the IPVS, the results are interpretative by nature. The primary objective was to understand the network-building process in 27 innovative and 8 less-innovative small firms operating in the IPVS. This task involved focusing on three inter-related research sub-objectives: exploring the network-building process among innovative and less-innovative small firms; identifying the major similarities and/or differences between innovative and less innovative small firms during the network-building process, and; identifying the major obstacles faced by small firms during the network-building process.

The study encompassed 27 less innovative and 8 innovative firms in the metal-mechanics (15 firms), footwear (6) and furniture sectors (14). To facilitate the data analysis, the firms were organized into six group cases (Sub-section 6.3.1). The study focused on exploring the network-building process from the perspective of the small firm entrepreneurs' networking with their most relevant chosen partners. These came from the 6 partner categories of customers, suppliers, banks/accountants, informal, scientific and government institutions (De Jong & Hulsink, 2012).

The selection of extreme cases and polar types - innovative vs less innovative small firms - made the process more transparently observable (Eisenhardt, 1989) as the aim was to highlight the similarities and differences during the network-building process, rather than to establish a relationship between networking and innovation in small firms. The case study analysis (Yin, 2008) was enhanced thanks to the initial model approach to network building developed in Chapter 5. This served as an initial framework of reference which provided a firmer empirical grounding for the results (Eisenhardt, 1989). The results are discussed in Chapter 8.

With regard to the presentation of the results, the literature suggests that in multiple-case studies, the individual case studies need not always be presented as separate chapters or sections (Yin, 2008). Rather, a chapter of results should be devoted to summarizing the outcome of the cross-case

analysis, and information from the individual cases should be dispersed throughout this chapter (Yin, 2008). The individual cases in a multiple-case study serve only as the database for the study, and may only be used for the cross case analysis (Yin, 2008).

Therefore, the purpose of this chapter is not to portray any single one of these cases, but rather to synthesize the lessons from all cases (Yin, 2008). This synthesis is organized around the three phases that characterize the network-building process. Under each phase the author draws appropriate examples from the firms as being typical of one or other of the six group cases set in section 6.3.1. (Yin, 2008).

This chapter has four sections. The first section summarizes the results about the network-building process. The second section focuses on the differences between the networking processes of innovative and less-innovative firms, while the third section provides evidence of the obstacles presented by government support institutions, banks, and other entrepreneurs in the network building process. The final section focuses on the existing level of the small firms' innovation in terms of their existing networking partners.

The key elements of the respondents' testimonies are translated into English, but the relevant extracts are also included verbatim in the original Spanish. These original Spanish extracts are presented in italics in order to allow the reader direct access to the original data source. It is worth noting that the interviewees used a Peruvian-Spanish dialect, so some of the expressions included in the testimonies are not grammatically correct (but they were kept intact to maintain fidelity). The statements are sometimes difficult to understand, even for a native Spanish speaker. To deal with this issue, explanatory words have been used in brackets, in order to clarify the sense of the opinions within the context in which they were expressed.

Six abbreviations have been used to represent the group cases: Innovative Furniture Firm [Ifu], Less-Innovative Furniture Firm [Lifu], Innovative Footwear Firm [Ifo], Less-Innovative Footwear Firm [Lifo]), Innovative Metal-mechanics Firm [Ime), Less Innovative Metal-mechanics Firm [Lime]. It is now time to look at the results.

7.1 Results of the Study of the Network Building Process

Based on the analysis of the entrepreneurs' testimonies, both on and off the record, and the investigators' observations during the field work, a new model has emerged to address the research objectives set out in Section 1.3, these being to understand the network-building process in innovative and less-innovative small firms operating in the IPVS, to identify the major similarities and/or differences between innovative and less-innovative small firms during the network-building process and to identify the obstacles faced by these firms during the network-building process.

This model reveals three distinct phases that describe the network-building process among innovative and less-innovative small firms in the IPVS: Forced Gestation, Network Birth, and Strategic Stagnation. These three phases emerged from the analysis of the collected data, as described in Chapter 6. The major results of the network-building process have been condensed into this new three-phase descriptive model in order to be able to transmit the key features of this process in an organized manner. Though this study did not focus on investigating sectorial differences across the small firm's network building processes, it can be said that the data that served to explore the network-building process among the less-innovative firms[61] is mainly derived from the sectors of footwear and furniture, whereas among innovative firms[62], most of the relevant data came from the metal-mechanics firms.

Presenting the network-building process in the three-phase framework does not imply that any of the three phases is independent of the others. The aim is to deliver the results of the investigation in a manner that summarizes the most relevant facts of this investigation in the most understandable and objective manner.

It is also relevant to state again that the three phases of the network-building process used in the initial model approach in Chapter 5 (inception, start-up, and early development) only served as theoretical points of reference to this study. They had to be adjusted to better reflect the results of the emergent model. Furthermore, care was taken to reflect the most relevant features of the network-building process among innovative and less-innovative firms in each phase, so the names merely serve to highlight the major network-building driver in each phase.

In a nutshell, the phase of **Forced Gestation** in this study describes the origins of the network, particularly the factors that motivated the entrepreneurs to start networking, as well as the resource providers they first approached to meet their initial needs. Although the entrepreneurs in this study were driven to network for different reasons, the less-innovative entrepreneurs usually started networking in response to difficult situations, whereas the innovative

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61 Eight out of nine footwear firms were less innovative. 13 out of 15 furniture firms were less innovative.

62 Six out of 11 metal-mechanic firms were innovative.

entrepreneurs began networking as soon as they realized that their business had the possibility to grow. In other words, innovative firms were more inclined to network to exploit a business opportunity[63] (Casson, 1982), whereas less-innovative firms were more inclined to network when driven to it by adverse circumstances. Thus far, the results of this study echo those of most previous research.

Once the initial motivation to network had been set in motion, the entrepreneurs naturally turned to resources that could provide assistance for their immediate needs. They resorted to either strong[64] or weak ties, depending on whom they perceived as being best able to satisfy their initial requirements. In this study, strong ties are defined as members of the entrepreneur's inner circle, (family members, relatives and close friends) whereas weak ties are contacts from outside the entrepreneur's inner circle (another firm, a bank, a consultancy, business associations, public support institutions, etc.). In general, the less-innovative entrepreneurs approached strong ties whereas the innovative firms approached weak ties. Tellingly, the less-innovative entrepreneurs mainly searched for funding and manpower resources, whereas the innovative entrepreneurs focused on finding buyers. A summary of the key features of the phase of Forced Gestation can be found in Table 14, Appendix 11.

The phase of **Network Birth** describes the beginning of a network, and the types of relationships that entrepreneurs develop. This phase also brings to light whom the entrepreneurs approach in order to expand their network. The phase of Network Birth takes place when firms confirm the basis of their interaction with their initial sources of assistance, through both formal and informal mechanisms of exchange. A formal mechanism of exchange implies that the required degree of cooperation is formalized through the use of a written document or agreement, while an informal mechanism of exchange is often based on a verbal agreement and is driven by the mutual expectation of a positive outcome (Kock & Galkina, 2008).

This phase is also characterized by the strong inclination of both innovative and less-innovative firms to cement their relationships with formal written agreements. As will be seen from the testimonies, most of the entrepreneurs in this study described numerous instances of deception which had put them off informal agreements. A summary of the key features of the phase of Network Birth can be found in Table 18, Appendix 12.

During this phase, the firms focus on exploring and/or exploiting their network relationships. Exploration refers to the search for new opportunities outside the entrepreneur's inner circle, while exploitation refers to the further use of existing resources within the entrepreneur's inner circle, and is usually

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63 In this study a business opportunity or entrepreneurial opportunity is understood as a situation in which new goods or services can be introduced and sold at a higher price than their costs of production (Casson, 1982); in other words, the search for entrepreneurial opportunities is driven by a profit motive.

64 See the regarded definition of strong and weak ties for the purposes of this study in Section 1.4.

related to the firm's survival (March, 1991). On the whole, innovative firms were more inclined towards exploration, while the less-innovative ones were more inclined towards the exploitation of their existing network of partners (based largely on strong ties with informal partners such as family members). Finally, once the firms in the IPVS had been through the Network Birth phase, fixed the nature of their exchanges, and begun accessing the resources they needed either by exploration (innovative firms) or exploitation (less innovative firms), the firms seemed to enter into the stage of Strategic Stagnation**.**

The phase of Strategic Stagnation describes what eventually happened to the networking initiatives undertaken by the firms in this study. This phase establishes that it is the entrepreneurs' pervasive lack of trust, especially with respect to public support organizations and banks, but also of other entrepreneurs, which are the common factors which seemed to induce network stagnation among both the innovative and less-innovative firms alike. In other words, it is a lack of trust that has inhibited the firms in this study from achieving more sophisticated networks, a stage known in the literature as 'network crystallization[65]'. The substitution of 'network crystallization' with 'network stagnation' most clearly illustrates the difference between the networking process described in this study, and the generally accepted theories about the network-building process in the current literature. The stagnation appears to involve the interplay of two types of phenomena: one is the innovative firms' failure to implement long-term strategic partnerships and the less-innovative firms' inability to transit from operational[66] to strategic partnerships. A summary of the features of the phase of Strategic Stagnation can be found in Table 19, Appendix 13. Figure 3 outlines the three phases of the new model of network-building arising from this study, with reference to currently accepted theory.

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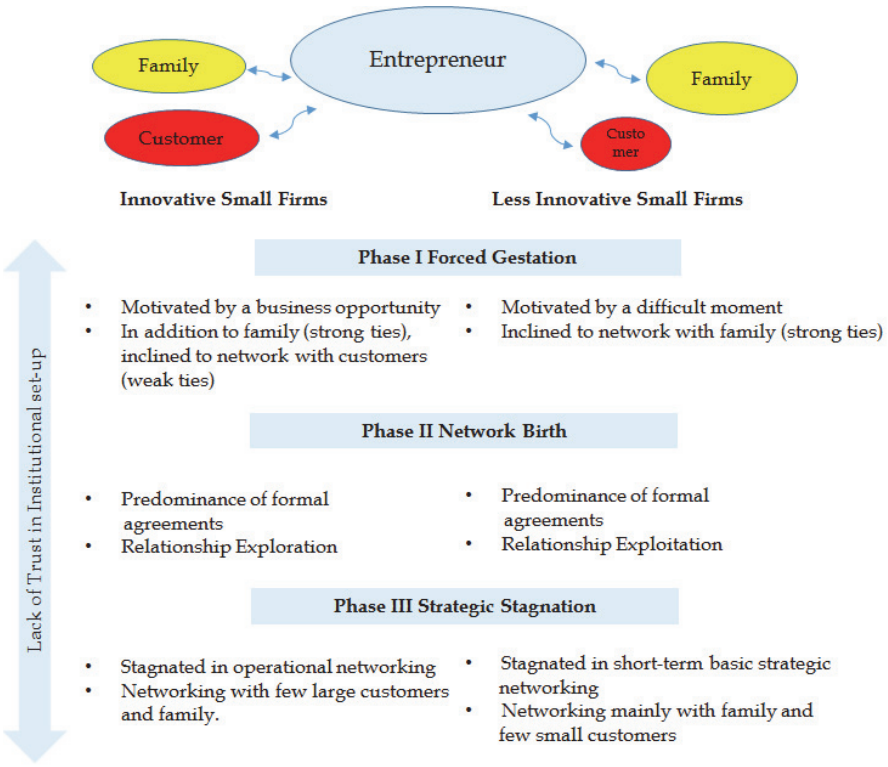
65 The stage of 'Network Crystallization' is used as per existing approaches to signal successful network-building, meaning the crystallization of stable, committed, revenue-generating, inter-organizational exchange relationships which extend beyond the earlier idiosyncratic and personalized relationships of the entrepreneur (Larson & Starr, 1993).

66 Operational networking refers to networking initiatives meant to satisfy the firm's immediate needs, often related to ensuring the firm's survival (Larson, 1992). strategic networking, on the other hand, refers to more consistent initiatives aimed at enhancing the firm's growth (Larson, 1992).

FIGURE 3 Phases of the New Model of Network Building



Source: Víctor Pérez Centeno, 2012

7.2 The Differences during the Network-Building Process between Innovative and Less-innovative Firms.

This section details the major differences found between innovative and less-innovative firms during the three phases of the network-building process used in this study: Forced Gestation (Sub-Section 7.2.1), Network Birth (Sub-Section 7.2.2) and Strategic Stagnation (Sub-Section 7.2.3).

7.2.1 Evidence of the Differences Found in the Phase of Forced Gestation

Innovative firms are more inclined to network to exploit a business opportunity.

The innovative entrepreneurs were more inclined to network to seize a business opportunity as they seemed to realize that their businesses had more chance of growing through networking with contacts from outside the park (usually bulk purchasers). The testimonies show that the innovative entrepreneurs are proactive in identifying, approaching and networking with firms which they think can improve their business performance. For instance, an [Ime] stated that he had three major national firms as his current partners: "*Nuestros socios más importantes son Wong*[67]*, Metro*[68]*, Esso*[69]".

The data also reveals the innovative entrepreneurs were proactive in networking with large firms. For instance, one [Ime] said that he visited a newly-established branch of a major national chain of shops as soon as they opened, and had been supplying them on a regular basis ever since. He also claimed that it was the success of this relationship that had stimulated his firm to continue innovating: "*Visitamos Wong*[70] *cuando abrieron su segunda tienda. Ellos convocaron a una licitación para comprar maquinas para hornear pollos... nosotros ganamos....a partir de allí continuamos, el pedido de Wong (nos estimula) a (continuar) innovando*". Another [Ime] told me that he personally visited the plant of a major office-supplies firm, checked out the production process to see what parts of the process could be automated and made an immediate proposal to the manager: "*Voy a la planta de producción de Faber Castell, veo el proceso productivo y (le digo) al gerente: te puedo hacer una máquina que automatiza este proceso, (ellos) dicen perfecto adelante. Esta es la forma en que trabajamos*".

Their networking process told of persistence, too. One [Ifo] described having had to wait for four months before a major shop would respond to her proposal, "*En el caso de Saga, Totus, Ripley todo es por correo....paso cuatro meses para que me pueda responder el correo y constatar la mercadería....el día que abrí el correo dije huy aleluya....pero con Saga hasta ahora no puedo, ni con Ripley*". Another [Ifo] said it took her three years to establish a partnership with a major shoe

67 A major national shop
68 A major national shop
69 An international oil company with a branch in Peru
70 A major national shop

distributor: "*Con Thailer paso igual, no nos querían atender tres años….. La última campaña tuve suerte y me atendió el comprador me dijo ven y probamos*."

Less-innovative firms are more inclined to network when driven to it by circumstances.

Unlike innovative firms, who were more focused on networking to exploit a business opportunity, less-innovative firms seemed to be more motivated to network in response to adverse circumstances, usually because they were in danger of going broke. The testimonies show that the stimulus to network often emerged when the entrepreneurs found themselves without a job and without any money in their pockets.

For instance, a [Lifu] said that he set up on his own after he lost his job, and admitted that if he hadn't been fired unexpectedly (and without notice) he might have continued working as an employee, "*La empresa quebró el quedó en la calle y decidió independizarse por completo. Más que por decisión propia fue por coyuntura de trabajo, entonces empezamos a trabajar en mi casa".* A [Lifo] described making his way to Lima from a small town, in order to look for a job. After 3 months, and finding himself penniless, he took the advice of a friend and began making children's shoes "*Vine a Lima de Jauja.....Soy autodidacta, trate de encontrar trabajo durante tres meses, pero no pasó nada. Un día me di cuenta que mis recursos económicos se agotaron y le pedí la ayuda a un amigo. Le dije que no tenía dinero y me dio la idea de hacer zapatos para niños.....empecé (entonces) mi empresa (zapatería) con cero capital y un poco de crédito*".

In the same vein, another [Lifo] said that after being fired, his friends and neighbours' pressured him to use his skills to repair, produce and sell shoes to them: *"De la fábrica me sacaron. No había con que pagar, reducción de personal. Entonces como yo sabía (hacer zapatos) compre mi cuerito tenía platita ahorrada. Con eso compré, arreglar ese zapatito así, como ya sabía todo, lo hice para vender a los vecinos en el barrio"*. A [Lime] described his realization that, despite having been a worker for twenty years, he could be fired at any time and nobody would re-employ him at his age. Thus, encouraged by his sons, he commenced producing at home: "*Yo estaba trabajando en una empresa 20 años mas o menos....(pienso) quien me va a dar trabajo de repente me botan; mejor ahora antes que pase el tiempo en mi casa empece a trabajar poquito a poco".*

Innovative firms' inclination to network with weak ties.

The testimonies show the innovative firms' inclination to network with customers as these partners would allow these firms to increase their sales, and also to upgrade their professional skills. The data suggests that the 'ideal partner' for an innovative firm is a 'large firm' such as a major national chain of shops. The data also indicated that to a certain extent these entrepreneurs are proactive in networking with public support institutions.

For instance, an illustration of the determination needed to establish such contacts comes from an [Ime] who described how his brother managed to meet

the owner of a major national shopping chain, and despite an initial rejection, persisted until he got his first order: "*Mi hermano se reunió con el dueño de Wong… le dijo que no compraría porque los precios eran muy caros. Mi hermano le dijo mire usted es Peruano, nosotros somos Peruanos, tenemos que ayudarnos. Si usted me pide vender los maniquíes a la mitad de precio yo tengo que pagar a mi gente menos, tengo que explotarlos y producir un producto de menor calidad....Ayúdeme y usted vera. El Sr. Wong dijo: Esta bien, háganos ciento veinte maniquíes*".

Another [Ime] gained a significant business advantage through his participation in a business fair organized in the park by the municipality. He describes how he had to be very persistent in order to be allowed to demonstrate his product at the fair, and how he ended up addressing all the participants: "*Vi un panel anunciando premiaciones del año....Pucha....le digo al tipo a cargo del concurso ¿oye compadrito y porque no me han invitado a este concurso?. Yo tengo el mejor producto le dije. Me dijo que no era posible.....me dijo compadrito lo que pasa es que este concurso no es de ahora....insistí, le dije que debería entender que soy una persona que viene a participar en la feria. No entre al concurso pero si me dieron una oportunidad.....me llamaron de la municipalidad, querían que participe dirigiendo unas palabras a los participantes. Pucha.. Que complicado para mí, nunca había hablado nada. Al principio no acepte pero me dijo, usted hable de su producto, ya pues acepte. Y cuando quiere que hable le dije, me dijo en media hora, pasu..... ni estaba preparado. Como es el destino ha...también la oportunidad.....Empecé a prepararme, ya había escrito en un papel....Agarre, lo rompí (el papel). (Decidió hablar) Lo que se me sale de la cabeza lo diré... Así fue, ese fue el trampolín (el inicio)*".

An [Ime] suggested that his affiliation with two major business associations (one private and the other public) permitted him to benefit from specialized training abroad: "*Si no viajas no conoces, yo he estado en Alemania, Italia, Argentina, Venezuela, Brasil, Colombia, Ecuador, Las Vegas (América), Rusia asistiendo a ferias y buscando nuevos mercados. Allí tú haces contactos. Algunas veces PROMPEX ayuda parcialmente, con la mitad (de los costos) del pasaje aéreo. COPEI también da alguna ayuda financiera*".

Nevertheless, the data acknowledges that innovative entrepreneurs also accessed strong ties to meet some of their needs. For instance, an [Ifu] told me that his cousin lent him a machine and arranged for him to get a small place in the park: "*Uno de los familiares que el tenia le dice porque no te vienes a Villa el Salvador. Ahí puedes trabajar yo tengo mi maquina te puedo alquilar te puedo prestar. Nos hemos venido pues a Villa el Salvador con mi hijo en el vientre y mi otra niña. Llegamos acá nos instalamos, mi primo nos cedió un espacio pequeñito para solamente poner una cama*". Furthermore, an [Ime] confessed to having been supported by his uncle when he got his plot in the park: "*Menos mal que nosotros tuvimos un tío que nos apoyó acá un poco, en la zona urbana, nos apoyó un poco a darnos un poco de espacio, y pudieron darnos el terreno por eso*".

Less-innovative firms' inclination to use strong ties.

When less-innovative entrepreneurs are in difficulty (usually financial) they are more inclined to network with strong ties such as family members, relatives

and friends. Typical resources furnished by such contacts include informal loans, guarantees, manpower, references and help in getting a plot in the park, etc.

The data indicates that the entrepreneurs place a high value on their families' support for their businesses. For instance, a [Lifo] stated that the close union in his family allowed his firm to continue operating in the market:*"La unidad de la familia es importante...nos ha permitido continuar en el sector (porque) otros productores ya han dejado la industria"*. Another [Lifu] admitted to getting financial support from his brother in order to buy a machine: *"Con una máquina (mi hermano) me apoyo si, después el resto corrió a cuenta mía"*. A [Lifo] said his brother aided him with some funding and manpower: *"(Mis esposo) tenía esa decisión de crear su taller de reparaciones....buscamos un terreno asociados con el hermano y del capital que teníamos (compramos) una maquina....su hermano no tanto con dinero apoyo pero con mano de obra"*. A [Lifo] stated that he only secured a loan thanks to a guarantee given by a relative*: "Obtuve un préstamo gracias a la garantía de un familiar"*.

Friends were also often mentioned by less-innovative entrepreneurs as sources of support. For instance, a [Lime] stated that his friends helped him to get a piece of land in the park: *"Felizmente hemos logrado tener amigos aquí y (ellos) me han ayudado a lograr el terreno"*. A [Lifo] emphasized the importance of friendship in saying how a former work colleague (and friend) assisted him to close a deal with a large buyer: *"Tengo un ex-compañero de trabajo que entro a trabajar como guardián (en la empresa contratante)....Siempre esta cosa así funciona....siempre cuenta la amistad"*.

To a certain extent, the evidence also reveals that less-innovative entrepreneurs do appreciate the importance of weak ties, particularly small customers. For example, a [Lifo] said that entrepreneurs must look outside the park to find new opportunities:*"Nadie va a venir a ti con una orden de mil pares de zapatos....uno tiene que salir y buscar las oportunidades"*. However, only a few of these entrepreneurs seemed willing to give it a try. In one instance, a [Lime] enlisted the help of two engineers to maximize his chances of winning public tenders: *"Busque a un miembro del consorcio que sea ingeniero, y después a otro ingeniero de la Universidad Ricardo Palma con ellos formamos dos micro-empresas. Ellos elaboraban los expedientes, nosotros teníamos la parte práctica.... nos presentamos y comenzamos a ganar"*. In another instance, a [Lifo], aware of a potential business opportunity, screwed up his courage and approached a major shoe distributor: *"Sabíamos que Bata*[71] *tenía muchos proveedores....así que decidimos visitarlos y ver nuestras posibilidades de trabajar (para ellos)"*. The major differences encountered in the phase of Forced Gestation are summarized in Figure 4.

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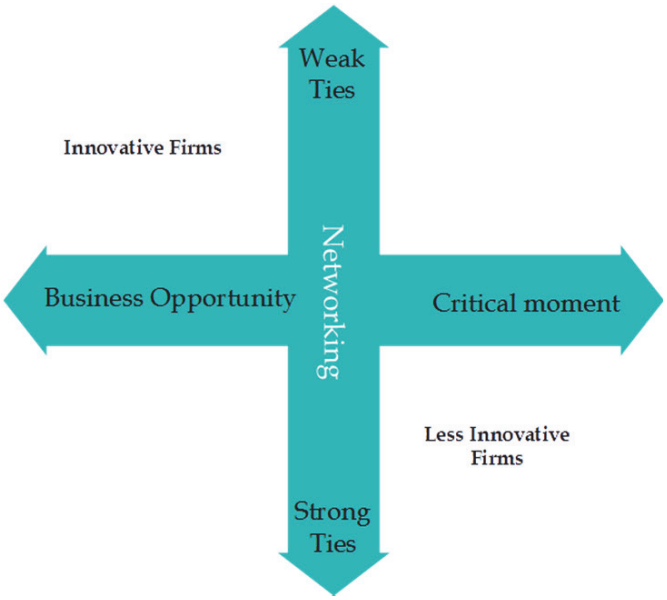
71 Major national shoes retailer

FIGURE 4 Key Differences found in the Phase of Forced Gestation



Source: Víctor Pérez Centeno, 2012

7.2.2 Differences found in the phase of Birth

Innovative firms inclined to network via formal relationships.

The testimonies indicate clearly that innovative firms are more inclined to formalize their relationships with weak ties in the form of written agreements (legally binding contracts). In this regard, the entrepreneurs shared various stories of verbal agreements which involved some form of deception. It was clear that the innovative entrepreneurs' negative experiences of verbal agreements had made them quite distrustful of basing a partnership on informal exchanges. The testimonies contained many stories of the innovative entrepreneurs' negative experiences of verbal agreements, usually involving numerous deceptions. A typical case is that of an [Ime], who said he had been deceived by two fake sellers with whom he entered into a verbal agreement. The sellers promised to promote his products for Mother's Day, and simply took various samples away with them, but never returned: "*Vinieron dos vendedores que habían trabajado para Comodoy*[72]*. (Ellos) estaban buscando fabricantes que supieran de 'fierros' (trabajo con metal). 'Pucha compadre'….ellos nos necesitaban y nosotros los necesitábamos. Hicimos un acuerdo (oral) y nos tomó cuatro meses hacer las muestras (para la venta)....ellos tomaron las muestras e indicaron que las venderían en el día de la Madre....se llevaron las muestras y hasta el día de hoy los estamos esperando.....nunca los volvimos a ver...desaparecieron del mapa ¡Sonamos!*".

Consequently, innovative entrepreneurs regard a written contract (formal relationship) as being necessary and beneficial for both parties to the agreement. For instance, one [Ifu] said that he makes a written contract to assure mutual compliance in terms of quality, due fulfilment and product guarantee: "*Se hace un contrato al año porque date cuenta si voy a hacer de palabra ellos también tienen que asegurarse su mercadería, la calidad, el cumplimiento, ósea la garantía del producto. Por ejemplo si a Elektra se le malogra un producto yo tengo que reponerlo en dos días*".

Less-innovative firms also inclined to network under formal agreements.

The data shows that less-innovative entrepreneurs also preferred to base their relationships on a formal, (usually written) contract or agreement. For instance, a [Lifo] stated that he uses written agreements to confirm the obligations of his partners: "*Ellos (sus compradores) vienen hacen un contrato y obviamente te hacen un adelanto, no todo, una cantidad, y una vez que ya esta se supone que es contra-entrega*". A [Lifu] said that every public tender in which he participates is enforced by a written contract: "*Toda licitación (en la que participo) es por medio de documentos (contratos)....todo es contra-entrega*". A [Lifu] declared that every order in his firm is processed under a written contract: "*Tu vienes por ejemplo, quiero que me hagas un ropero...yo hago un contrato todo madera todo pino, luego un adelanto, cien soles pongamos*".

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72 A major national furniture producer and retailer

A [Lifu] stated that he also uses written agreements with orders generated by large firms: "*Para empresas grandes sí, tengo un contrato especial (con) Antamina*[73] *en el que yo me comprometo a cumplir todos los requisitos el trabajo, porque, si hay una falla regresa, si se pasa la fecha te cortan el monto, te castigan*". A [Lime] said that he had to sign a written agreement in order to get a family loan: "*Siempre le ha tenido que firmar (a su familiar) un recibo de cuanto le está prestando y en qué tiempo lo va devolver, tampoco así no más*".

As with the innovative entrepreneurs, the less-innovative entrepreneurs' testimonies show that many of them had been victims of scams when relying on verbal agreements (informal relationships). A typical story is that of a [Lifu], who described being conned by a swindler who pretended to be a buyer for a large firm. He placed an order for some bags and left without paying: "*Un tipo me llamo y me dijo que había mirado nuestros productos en el periódico....me indico que era parte de una cadena de empresas y quería comprar nuestros productos para su aniversario....hizo un pedido de maletas e insistió que si tenía otros productos estaría interesado en verlos.....prepare el pedido sintiendo que algo no estaba bien....llegue a su oficina y entregue el pedido....le pedí el pago...me dijo que su secretaria no estaba. Me pidió regresar al día siguiente....regrese con una rara sensación. Toque la puerta y nadie abrió.....fui a la policía y me di cuenta que el estafador era un arrendatario que se había ido el día anterior... no seguí el caso, porque estos (temas judiciales) toma mucho tiempo y yo estaba muy ocupado con otros pedidos*".

In a few cases, despite their numerous disappointments, the less-innovative entrepreneurs still often relied on semi-formal agreements, but only with those partners (often buyers with a good compliance record) who were well known to the entrepreneurs. For instance, a [Lifu] suggested that she had no problem making informal, verbal agreements with partners whom she knew well: "*Con ellos (sus clientes conocidos) así prácticamente de palabra. Como nos conocemos, ellos confiaron en nosotros también….hasta ahora no he tenido ningún problema*". Another [Lifu] stated that she was in the process of producing a second order (under a semi-formal contract) for a buyer who had already paid 50% in advance. She appeared to trust him because it was the second time they had worked together: "*Estoy haciendo para un señor que vive en Estados Unidos, el señor ha comprado su segundo departamento en Miraflores. En diciembre amoblé su departamento, ya le entregaron otro departamento y lo estoy amoblando, me deja pagado la mitad...yo confió porque es la segunda vez que voy a amoblar*".

Innovative firms inclined towards relationship exploration.

During the phase of Network Birth, firms focus on either exploring or exploiting the relationships initiated in the phase of Forced Gestation. As stated above, the data shows that innovative firms are more inclined to explore their relationships with weak ties, meaning that they put a lot of effort into following up networking opportunities that could facilitate the growth of their firms. In

73 Antamina is a major mining company in Peru

addition to the search for large-scale customers, these entrepreneurs – at a much lower level - also networked with the municipality and business associations.

Indeed, the testimonies reveal that innovative entrepreneurs were eager to be proactive, and to do whatever was necessary to boost the growth of their firms. For instance, an [Ime] described how he single-handedly mobilized the support of the local municipality to participate in a trade fair (despite not having a finished product or any workers). His persistence inspired two major TV networks to give the story national coverage, which in the end helped his firm to take off on a national scale: "*Le sugerí a mi socio la idea de participar en la feria (organizada por la municipalidad) con nuestra carrocería de moto pero él dijo que no, ni siquiera (habíamos) probado el producto.....Estábamos quemando nuestros últimos cartuchos...los periodistas vinieron cuando (aquí) no había nada....era miércoles y me dijeron que querían hacer un microondas desde nuestra planta, pero no teníamos nada, teníamos maquinaria pero no trabajadores, no teníamos motos, local vacío...tuvimos que preparar aun circo...llame a Mavila y les pedí prestado la moto de muestra que produjimos para ellos....en dos horas el personal de Mavila trajo la moto de prueba, más otra moto más material publicitario.... (la transmisión) salió veinte para las ocho (de la mañana), salió todo compadre perfecto...se vio como una inmensa planta de fabricación...la siguiente semana el canal 5 no se quiso quedar atrás y vino hacernos un microondas. Dos microondas en menos de un mes compadre...la gente creía que nosotros habíamos pagado a los canales. Esos patas tienen plata decían.....eso cambio nuestras vidas. No nos costó ni un sol....Ese día compadre nos llamaron de todo el Perú....de ahí ya pues nos hemos hecho ya.... felizmente..... ¡esperamos una oportunidad y de ahí la aprovechamos!*

Innovative entrepreneurs also explored and benefited from their affiliation with existing business associations. For example, an [Ime] stated that due to his membership of a national exporters' association, he could travel abroad and participate in various trade missions: "*Conozco como trece países....ganamos becas a Ecuador y Uruguay y el resto lo hemos hecho por nuestra cuenta pero en misiones comerciales con ADEX*[74]*, he sido el presidente de PymeAdex*[75]*".*

On the other hand, the data also reflects the fact that innovative entrepreneurs exploited their existing relationships with strong ties, such as family members, in order to obtain some needed resources (usually help related to the firm's daily operations). For instance, an [Ifu] said that his son assists him with the production duties and his daughter helps manage the firm: "*Mi hijo se encarga de la producción…mi hija me ayuda en controlar lo que es el negocio*". An [Ime] stated that the tasks of logistics, marketing and management systems are shared among his three brothers: "*Somos tres hermanos. Uno se encarga de la logística, sistemas e intranet, el otro de la ingeniería industrial y producción y el otro de marketing*".

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74 Association of Peruvian Exporters
75 SMEs promotion chapter of ADEX

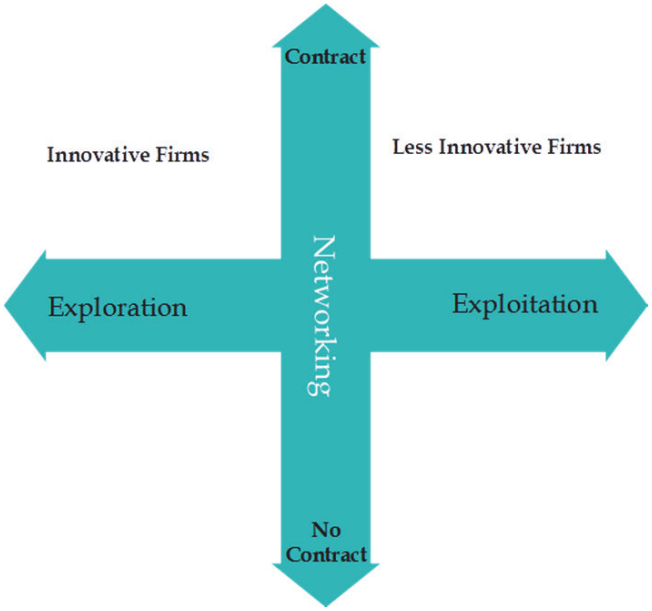
Less-innovative firms inclined towards exploitation of existing relationships.

The evidence indicates that the less-innovative firms were more inclined to exploit their relationships with family and friends (strong ties) for help with the daily operations of the firm, such as help with the accounting, management, logistics, marketing, sales, production, design, manpower, borrowing equipment, etc. It also became clear that less-innovative entrepreneurs often used family members simply because they could not afford the salary of a new worker.

For instance, a [Lime] said he was working with his son because he was unable to hire a new worker: *"Estoy trabajando todavía con mi hijo, no puedo contratar operarios porque hay que tener trabajo para poder mantenerlos"*. Another [Lime] described how his fifteen-year-old son helps him with the computerized tasks in the firm: *"Tengo un hijo de quince años que me ayuda bastante, él es quien maneja la computadora...lo que me falta acá es una ayuda, yo tengo un montón de trabajo"*. A [Lifu] stated that his son is in charge of the firm's designs: *"Mi hijo se dedica al taller, sacando los modelos"*. A [Lifo]'s daughter takes care of the sales: *"Mi hijita es la que vende"*. A [Lime]'s wife said that she helps her husband in the firm's daily operations: *"Yo y mi esposo (estamos) trabajando los dos solos"*. A [Lifo] shared the tasks of marketing and production among his brothers: *"Uno de mis hermanos se encarga de ventas viajando a provincias, otro está a cargo de la planta, otro cose, mis otros hermanos ayudan ocasionalmente"*. Another [Lifo] said he was exporting to Alaska with the assistance of a relative who was living in the USA: *"Por medio de un familiar estamos exportando (indirectamente) a Alaska"*. A [Lifo] stated that his father lent him a machine: *"Inicialmente lo hacemos con la maquinaria de mi papá, después ya cada uno, ya compre mi máquina, poco a poco me compre una"*.

Naturally, the less-innovative entrepreneurs consistently exploited their relationships with friends. For instance, a [Lifu] revealed that a friend helped her find a production space in the park: *"Yo le comentaba a la señora que quería abrir mi tallercito y que quería un local donde hacerlo...ya pues (ella dijo) tengo ahí al fondo (un espacio) está libre....ahí comencé hacer muebles"*. The major differences encountered in the phase of Network Birth are summarized in Figure 5.

FIGURE 5 Key Differences found in the Phase of Network Birth



Source: Víctor Pérez Centeno, 2012

7.2.3 Differences found in the phase of Strategic Stagnation

Innovative firms stagnated in basic strategic networking activities.

As has been shown, innovative firms are more inclined to network strategically mainly with large customers and to a lesser extent with business associations and public institutions, but the evidence reveals that these attempts were sporadic, rudimentary and driven by short-term objectives.

Nonetheless, such initiatives meet several objectives including: applied research, joint ISO 9000 certification, the use of foreign consultants, technical assistance in a product's design, and programming machinery. The testimonies indicate that the innovative entrepreneurs think this exchange is beneficial because it upgrades their knowledge-base and enhances the growth of their firms. For instance, an [Ime] enumerated two clear benefits of such a relationship with a professional organization, one being the firm's growth and the other, the improvement in the ability of his firm to utilize new skills: *"Dos beneficios, uno es el crecimiento de la empresa, dos la capacitación que ellos mismos te dan. No te asesoran (pero) el dialogo que hiciste con ellos hace que tú crezcas"*.

Further testimonies reveal that innovative entrepreneurs were able to forge strategic links with public and private organizations and that they recognized the benefits of such exchanges. For instance, an [Ifu] described how three firms in the park coordinated the implementation of a joint ISO 9001 certification with a public institution, a bank and a Colombian consulting firm, costing the firms only 10% of the total cost of the certification: *"Con INDECOPI, el Banco Ínter-Americano de Desarrollo, una consultora de Colombia y tres empresas del parque estamos coordinando (gestionar la certificación) ISO 9001 pagando solo el 10% del precio total...todos nos beneficiaremos"*. An [Ime] revealed that, thanks to his affiliation to an SMEs' association, his firm benefited from the visit of three European engineers who assisted in the programming of one his machines: *"Gracias a COPEI (nos beneficiamos con la visita) de tres ingenieros senior, dos Holandeses y un Alemán. COPEI nos facilitó a los ingenieros y nosotros contribuimos con la alimentación....pudimos programar una de nuestras máquinas, mejorar nuestras técnicas de soldadura y acabado"*. An [Ifo] said that his partner (a major shoe distributor) supplies digitally-scanned shoe designs for their use: *"Bata, si ellos nos dan (el diseño de calzado) en computadora, en una hoja escaneada"*.

An [Ime] described working together with the National Institute of Agricultural Research on the technological development of a breeding device for the Peruvian guinea pig. He emphasized that, ultimately, both breeders and manufacturers benefit from the scheme because they gain access to new products: *"Complementamos con el Instituto Nacional de Investigación Agraria. (Ellos) se encargan de hacer los estudios de la crianza del cuy.....porque a nivel mundial no está tecnificada la crianza del cuy,.... (hacen) los estudios con nosotros por un tema de presupuesto....no les cobramos nada....no somos los que patentan sin embargo ayudamos que eso se pueda concretar. Al final el beneficiado son los productores.....y también los fabricantes porque van a poder acceder a nuevos productos para la venta"*.

Less-innovative firms stagnated in operational networking activities.

The evidence indicates that less innovative firms tend to satisfy their operational needs by networking with strong ties such as family members and friends but failed to transit into the implementation of strategic partnerships. Typical operational tasks include assistance with the administration of the firm, borrowing machines, financing, sharing rent, and even sharing communal tasks such as street cleaning, public safety, and landscaping.

These entrepreneurs managed their operational needs with the support of family members and friends. For instance, a [Lifo] stated he was assisted by his daughter in the firm's management: *"Mi hija me está ayudando....ella ya está empezando; como se llama para (la) administración (del negocio)"*. A [Lifu] referred to buying machines and working hand-in-hand with his brother: *"Me vine para acá y compre mis maquinas trabando poco a poco con mi hermano"*. A [Lifu]'s wife described how her husband's friends lent him the machines he needed. *"Él se tuvo que prestar maquinas de sus compañeros, porque este terreno solamente estaba exclusivo para los que eran carpinteros"*, while yet another [Lifu] revealed that a friend of her husband arranged space for him to build the plant: *"Mi esposo tenía un amigo que es dueño de acá del local... fuimos hablarle y dijo ya construyan lo esencial"*.

A [Lime] said that a close friend of her husband gave them a long-term, interest-free loan of 5,000 soles to buy machinery: "*Son amigos íntimos de mi esposo, al contarle que es lo que tenía pensado producir... el (decidió) darle un dinero a cero intereses a largo plazo...el préstamo (fue de) 5000 soles...ese dinero hacía bastante para producir...porque queríamos comprar las máquinas*". A [Lifu] described sharing the rental costs of his production premises with a fellow entrepreneur: "*Estamos trabajando dos ahorita, la parte de adelante la alquila el, (la) otra yo, 500...500 hay que hacerlo por los costos*". A [Lifu] mentioned that local entrepreneurs cooperate to finance the cleaning, safety and planting of trees in their street: "*Entre todos contratamos un personal que nos limpia esta cuadra....aparte contratamos a seis vigilantes que les pagamos semanal. A los señores que limpian los carros les damos su uniforme para que se vean más presentables, esos arbolitos que usted ve ha sido en coordinación con los otros dueños*".

In addition to their operational networking, the study reveals that less-innovative firms often try to implement strategic networking initiatives through the establishment of consortiums but usually fail in the attempt. The evidence reveals that such consortiums are usually set up to respond to large orders. Specifically, one [Lifo] said that consortiums are only activated when large orders come in: *"Los consorcios se activan solo cuando tenemos pedidos grandes. Cuando tenemos un pedido de 10,000 pares o más nos juntamos y afrontamos juntos el desafió"*. The entrepreneurs also stressed that the key factor for a consortium's failure or success is mutual trust among its members. For example, a [Lime] stated very precisely that consortiums only work if the consortium's members trust each other: *"Los consorcios si funcionan, si todos aportan lo que es necesario, si hay una confianza entre todos"*. In this regard, the testimonies also indicate that many attempts to form consortiums have failed.

The different values, cultural backgrounds and principles of a consortium's members can result in a consortium breaking up. A [Lifo] described how an order for 20,000 pairs of shoes triggered the formation of a five-member consortium to fulfil the order. However, it failed because of the members' different values, principles and cultures, which provoked endless power struggles that led to its dissolution: *"Platanitos hizo un pedido de 20,000 pares de zapatos...cinco productores nos unimos...todos queríamos lo mismo: dinero y progreso, pero me di cuenta que teníamos diferentes valores, principios, cultura.....esto produjo peleas entre nosotros.....Aquel que hablaba más fuerte imponía sus puntos de vista. Todos se insultaban para controlar el grupo. Expresiones como 'te faltan huevos' o ' yo si valgo y tú no' eran usuales....el tipo que domino el grupo nos condujo al uso de una maquina sin el conocimiento necesario... (Ello) resulto que la mayor parte del cuero se arruinara ¡No funciono!"*.

The lack of shared standards of quality also erodes a consortium's chances of success. A [Lifu] revealed that a consignment of school-desks was rejected because the wood supplied by one member of the consortium had not been dried properly: *"Las carpetas rebotaron porque los ingenieros del ministerio (revisaron) el secado de la madera y no estaba al grado que ellos querían"*. The same [Lifu] revealed that another consortium contract to produce doors suffered a big financial loss because some of the doors were manufactured with low quality materials and delivered late: "*Con la Marina....no sé cuántas puertas eran.....el que puso las puertas fue un problema, no sé si lo hizo por ahorrar costos o porque el personal no estaba calificado. Le dijeron maestro usted ha colocado mal los marcos y en su delante una persona de la marina....la tiro al suelo, la abrió y era un cascarón... allí también perdieron una buena cantidad de dinero porque se pasaron de la fecha y a raíz del problema (de la puerta)"*.

Furthermore, the transgressions of individual members of a consortium can also prevent its success. For instance, a [Lime] said that because the other consortium members failed to pay back their share of a bank loan, she had to pay the whole debt herself: *"En el primer consorcio han sacado plata de Scotia Bank. Los otros señores (otros miembros del consorcio) pagaron (solo) dos letras.... no dieron más plata yo (tuve) que afrontar todo sola.....de lo que debía 12,000 soles me duplicaron....he pagado 26000 soles de intereses"*. The same [Lime] stated that a member of another consortium took all the money for a consortium contract and did not pay her rightful share: *"En otro consorcio hicimos licitación para el penal de Sarita Colonia (como) me faltaba plata entramos con otro señor más. Como no nos dio (su socio) toda la plata, (y) el horno no se avanzaba....me preste 3000 dólares (para) acabar el horno. (Hasta ahora) este señor no me ha devuelto un centavo, todito se lo ha cobrado y nos ha dejado colgados....había hecho el contrato sin que mi esposo lo revise.....todo perdí, no gane lo que es nada..."*. In a similar vein, a [Lifu] said that another consortium member cashed in 90,000 soles from a contract and fled to another city: "*Nos habíamos juntado cuatro, teníamos ya la plata, hasta que un desgraciado se fue a Cajamarca con toda la plata. Se la tiro toda la plata. 90,000 soles"*.

The employees' sense of professional responsibility can also affect a consortium's performance. A [Lifu] complained that some of his consortium's workers drink too much at the weekend and simply do not come to work: *"Dos*

fines de semana (los trabajadores) se toman su cerveza, el lunes no vienen, o se ponen a jugar pelota, y cosas así". The evidence suggests that the many difficulties of working in a consortium put firms off being involved in the mechanism. For example, in describing yet another failed attempt to form a consortium, a [Lifu] described how everybody involved tried to save their own skin and the unfortunate entrepreneur who remained in the consortium had to carry the can for the others: *"Al final cada uno trata de salvar el pellejo y para mala suerte el que continúa va a tener que tratar de disimular"*. A [Lifu] professed to being highly disappointed with consortiums, saying that it was better to work alone, even with only a little capital: "*Ya no quiero saber nada de consorcios..... mejor trabajo solo con el poco capital que tenemos"*.

Besides consortiums, less-innovative entrepreneurs also looked for strategic networking opportunities individually, but they faced obstacles here, too. For instance, a [Lifo] stated that it was difficult to network with large firms because they don't pay for ninety days, and his firm does not have the financial resources to wait such a long time for payment:*"Es muy difícil para nosotros asociarnos con empresas grandes como Saga Falabella, Ripley, etc....ellos pagan tres meses después...nuestra situación (financiera) no puede resistir ese tiempo"*. The same difficulty exists with public institutions, too. For instance, a [Lifo] said that his major difficulty in working with publicly-funded institutions also lies in the fact that they only pay after ninety days: *"Mi mayor dificultad de trabajar con instituciones públicas es que pagan a noventa días….los más pequeños tenemos que subsidiar a los más grandes"*.

Innovative firms distrust the existing institutional setting.

The evidence suggests that innovative entrepreneurs are highly suspicious of the existing institutional set-up, and it seems that this lack of trust in institutions or simply 'institutional distrust', is another factor that causes their networking initiatives to stagnate, and discourages them from pursuing more regular and in-depth strategic networking. For the purposes of this study, institutional trust refers to trust in the institutional environment (social, cultural, political and organizational), which includes formal organizations, sanctioning mechanisms (such as the implementation of legal processes), and informal codes and values (Welter & Smallbone, 2006).

Perhaps surprisingly, innovative entrepreneurs in particular expressed a high level of lack of trust in the political system. For instance, an [Ime] claimed that a former president personally promised him that he would buy 1,000 units of a special device the entrepreneur had invented to combat a cholera epidemic, but the president never returned: "*En los noventa la epidemia de cólera atacó el país, (así que) se me ocurrió una solución: una bomba manual para extraer agua menos contaminada de los pozos....la idea era tan buena que recibí la visita del presidente Fujimori.....en persona me dijo que sería bueno producir 1000 bombas y entregarlos a las zonas afectadas. Prometió volver.... nadie regresó y el gobierno nunca (me) compro nada*".

Another [Ime] said that although many politicians had visited the park, (and he named names) all their promises of help for the firms in the park never came to anything: "*Muchos políticos vienen aquí, Toledo*[76]*, Rey Rey*[77]*, Waisman*[78]*. Todos prometen todo el tiempo ayudar a las empresas, nunca sucedió*". An [Ifu] said that the mayor only shows up during elections, and that all politicians behave like that*: "Al alcalde se le ve solamente cuando hay elección. Todos los políticos son así*".

The entrepreneurs also expressed their high distrust of the pervasive socio-cultural atmosphere in the park. In checking the researcher's credentials, an [Ifu] revealed that such is the atmosphere of high distrust that for five soles people (criminal elements) would do anything: "*Acá ahora hasta por cinco soles nos están....la delincuencia.* An [Ifu] remarked that, regrettably, people in the country have a lot of skills, but these are generally negative rather than positive: "*Lamentablemente vivimos en el Perú donde la gente tiene mucha habilidad pero para las cosas negativas. Nada para lo positivo*".

Less-innovative firms' distrust of the existing institutional setting.

The less-innovative firms also seemed to stagnate in their (mainly operational) networking initiatives and seemed unable to initiate strategic networking activities. Their testimonies also suggest that the stagnation is connected to the entrepreneurs' lack of trust of the existing institutional set-up. The entrepreneurs continually confided dramatic stories of deception which seemed to justify their distrust. The scope of institutional distrust is broad in the case of less-innovative entrepreneurs and encompasses public institutions, private institutions (banks), business associations, other entrepreneurs in the park, and even their own customers and workers.

Despite the above, the data clearly shows that the entrepreneurs recognize the importance of trust in business. As a [Lime] stated, without trust nobody can work: "*Si no hay confianza nadie puede trabajar*". Nevertheless, the evidence indicates the existence of a pervasive sense of institutional distrust. For example, a [Lime] said ominously that in his experience one must not trust anyone in the park: "*En Villa el Salvador hay mucha gente desconfiada. Y también uno mismo no debe confiar porque ya tengo experiencia*". A [Lifu] told a similar tale when he suggested that other entrepreneurs are likely to deceive people to take their money: "*Tengo bastante desconfianza por lo que yo he visto, lamentablemente nosotros los peruanos acá cada uno agarra la plata, se la gasta y después entregamos como podamos y por culpa de uno se perjudican todos*".

The data reveals that the constant stream of unfulfilled promises from high government officials and politicians has undermined the entrepreneurs' trust in political institutions. For example, a [Lime] suggested that politicians are very concerned about ordinary people during elections, but after the

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76 Alejandro Toledo is a former President of Peru
77 Rafael Rey is a former minister
78 David Waisman is a former Vice-President of Peru

elections nobody remembers them: *"Para eso no más (en las elecciones), pero después quien se acuerda de nosotros"*. A [Lifu] stated that politicians (he named a former prime minister and a minister) only show up in electoral campaigns in order to make empty promises: "*En las campañas (los políticos) vienen, te abrazan y todo.... ya los conocemos. Siempre tenemos visitas que nos prometen...algunos vienen que vamos hacer tal cosa, vamos hacer publicidad por un ratito. En esta galería vino Jorge del Castillo*[79]*, ha sido padrino todavía de aquí. Hace poquito vino Pedro Pablo Kutczynski*[80]*"*.

Furthermore, the lack of transparency in public procurement procedures exacerbates this atmosphere of distrust in public institutions. A [Lime] complained that their share of a tender contract was unfairly distributed to other firms without their knowledge: *"Participamos en una licitación de 120 módulos de computo en Piura...ganamos cuatro empresas y no nos comunican. Como no pudimos asistir el día de la repartición se lo repartieron a las tres empresas nuestra parte, ese era un error....no podían repartirlo"*.

The misleading advertising campaigns carried out by banks have damaged the entrepreneurs' trust in financial institutions. For instance, a [Lifu] described how he deposited 36,000 soles in a bank. The bank official assured him that in a year his savings would increase by 25%, to 45,000 soles. However, it turned out that the contract stated a maturation time of two years instead of one. When he realized the deception he wanted to cancel the agreement, but to cancel it he had to pay a penalty of 1,000 soles. He admitted to being very well deceived by this bank, whom he termed as 'rats': *"había vendido un terreno a 36,000 soles y una chica (del Banco) me dijo que (depositado como ahorro) en un año ganaría (más intereses) 45,000 soles..... (pero) leí el contrato y decía 695 días, entonces le dije señorita porque a puesto 695 días, ósea dos años, dije no señorita sabe que lo voy anular. Me dijo ya firmé, si quieres que te devuelva la plata en un mes y todavía (tuve que) pagar mil soles (de penalidad). Pucha me hicieron bien ha, a veces uno no tiene mucho conocimiento en los prestamos....una rata son"*.

Transgressions committed by other entrepreneurs in the park also contributed to distrust in the prevailing socio-cultural codes of conduct. For instance, a [Lifu] said that in his association there are good people, who want to contribute, but there are also those who are there to steal. He denounced the theft of a gift of machinery by members of the association: *"Hay personas que quieren trabajar pero en la asociación es un poco difícil, no los entienden, otros son más vivos, confían una cosa, se lo tiran la plata..... Nosotros teníamos unas maquinarias que nos han donado. Eso se lo han robado, al final ha quedado en nada"*. A [Lifu] revealed various complaints about entrepreneurs accused of misappropriating money from contracts: "*Cuantas veces han venido quejas acá que de un buen contrato pum… ¡Fuga! (empresarios del parque) se llevaban ciento cincuenta mil y desaparecían. Se está maleando el parque"*. A [Lime] revealed her distrust of her own friend, also a park entrepreneur, suggesting that he would eventually copy her products, and produce and export them for himself: "*Tengo mi amigo que exporta hasta Italia*

79 Former Peruvian Prime Minister
80 Former Peruvian Prime Minister

y España....nos vamos de paseo a Lunahuana y comentamos lo que hacemos. Le digo porque no me invitas, (yo tengo) jarros hermosos, una tetera hermosa que a ese cliente le puede gustar, entre los dos lo sacamos, tu tus (cuadros) y yo mis (ollas). No se da maestro. De repente yo le doy la olla él se lo copia lo va hacer la olla y el solo lo va a exportar".

A [Lifu] stated that many entrepreneurs in the park do not value their customers and will, for example, pass off synthetic materials as leather: "*Muchos empresarios en el parque no valoran al cliente. Le venden materiales sintéticos como si se tratara de cuero. Deben decir la verdad".* A [Lime] told me that a Bolivian exporter recognized the quality of the park products, but criticized the Peruvians for spoiling the finished product by cutting too many corners: "*Había un boliviano exportador de piscos. Le pregunte una opinión del parque y me dijo, si acá hay un buen producto. Pero el detalle del peruano es que por querer ahorrar un sol lo malogra toditito".* A [Lime] described joining a consortium, and to raise his share of the funds he mortgaged his house. However, most of the other members of the consortium did not want to do this, and he wondered how he could trust them if they did not trust him: "*Empezamos un consorcio de ocho personas...hipoteque mi local para la carta fianza, una segunda persona también lo hizo. Pero los demás no han querido. Como podía confiar si ellos no me confían. Si yo ya le dado todo..... Al final quedamos dos".*

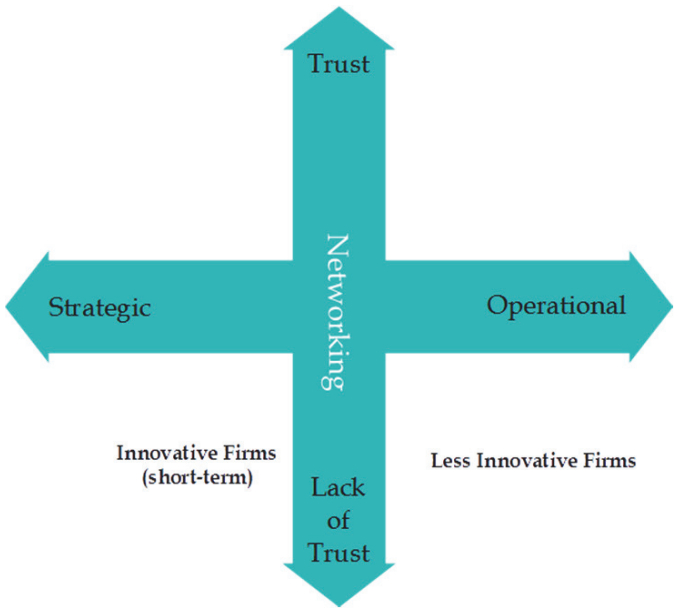
The criminal conduct of swindlers posing as customers also weakened trust in the socio-cultural codes of conduct. For example, a [Lifu] described how a conman posed as a buyer for the national soccer team and swindled him out of forty-eight leather jackets: "*Recibí una llamada de un (supuesto) encargado de compras de la selección de fútbol....pidió comprar cuarenta y ocho chaquetas. Me dio dos días para entregar el pedido.....mi esposa le dio las chaquetas y le pidió el dinero.....él pidió que lo esperemos un momento. Después de tres minutos mi esposa decidió entrar en la Videna.... (pero) el estafador ya había escapado (por otra puerta).....el precio de cada chaqueta de cuero era 150 dólares. Esto puso nuestro negocio hacia abajo.....tuvimos que seguir adelante. Ahora (ya) soy más cuidadoso*". A [Lifo] said that buyers often bounce cheques when paying for goods: "*Cuando (los compradores) nos han debido bastante, hasta cheque te dan y no tienen ni fondos y cuando vas a cobrar dejan a la chica y perdemos".*

Moreover, this atmosphere of lack of trust in the existing socio-cultural codes of conduct is often reinforced by the firms' workers. For example, a [Lifu] complained that while she is in the plant, her own sellers take advantage of their position for their own personal profit, secretly closing contracts and redirecting orders to other places. She said that it is hard to make progress this way: "*Tengo varios vendedores que ya tienen sus estantes. Mientras tú estás en tu taller ellos hacen de las suyas. Hacen contratos por lo bajo, mandan hacer a otro lado y en seis meses ya tienen su estante. Te tienen atada, es una banda.... no te dejan surgir....no puedes avanzar".*

A [Lifu] revealed that although some sellers are responsible traders, others are only looking for ways to deceive: "*Todos (los vendedores) no son irresponsables, hay gente que si quiere, ama su trabajo.....otros están viendo de qué manera estafarte*".

The major differences encountered in the phase of Strategic Stagnation are summarized in Figure 6.

FIGURE 6 Key Differences found in the Phase of Strategic Stagnation



Source: Víctor Pérez Centeno, 2012

7.3 Major Obstacles Faced by Small Firms during Network-building

The previous section highlighted the major role of customers and family members during the network-building process in both innovative and less-innovative firms. This section particularly focuses on the major obstacles faced by small firms while network-building, i.e. how public support institutions (Sub-Section 7.3.1) and banks (Sub-Section 7.3.2) prevent networking among the studied firms. This section also reveals the entrepreneurs' personal weaknesses (Sub-Section 7.3.3), which also inhibit them from developing healthy network-building.

7.3.1 Inhibiting Role of Public Support Institutions

The interviews indicate that both the government and the municipal authority of Villa el Salvador do not support the firms' network-building efforts. There seem to be two main reasons for this. Firstly, both the innovative and less-innovative entrepreneurs seem to have lost trust in the word of government officials and politicians. Secondly, the entrepreneurs complain that the limited government assistance is distributed based on an entrepreneur's political affinities rather than on the firm's growth or innovation potential. In addition, in the opinion of the interviewees, government and public administrative procedures are highly bureaucratic.

A firm's ability to network is affected by national and local government - particularly through their public support institutions, officials and political figures. The testimonies repeatedly show that these institutions failed to provide the small firm entrepreneurs with a reasonable and stable climate of transparency and honesty with respect to their given promises, administrative procedures, allocation of available assistance and the like. The entrepreneurs insinuated repeatedly that this situation provoked a loss of trust in these institutions, radically diminished their interest in interacting with these entities (also known as weak ties) and directed their network-building efforts at the only remaining source of assistance available to them: relatives and friends (known as strong ties). This distortion is present during the three phases of network-building and illustrates to a great extent the small firm's network-building stagnation.

Lack of support from public support institutions (government and municipalities).

The entrepreneurs expressed disappointment at the lack of support from the government, i.e. public support institutions. Indeed, the entrepreneurs see the government as hindering their firms' growth. This perception can be described on two levels. First of all, the efforts made by the government do not seem to address the real needs of the firms. The entrepreneurs constantly emphasized

their need for further financial assistance and complained of unfair tax regimes, excessive interest rates, unrealistic and bureaucratic procurement requirements and laws that restrict their attempts to get more favourable loans abroad, etc.
Secondly, and perhaps more importantly, there is the political dimension. The entrepreneurs in the park seem to have lost trust in the word of government officials, who often come to the park, make numerous promises and do not deliver. Moreover, the fact that the entrepreneurs are given or denied governmental assistance according to their political affinity further increases the entrepreneurs' sense of distrust in the existing political system.

There is much testimonial evidence to illustrate the entrepreneurs' belief that the government is not supportive of the firms in the park. An [Ime] stated baldly that if firms wait for government help, it will never happen: *"Si esperamos la ayuda del gobierno ¡Pucha!"*. A [Lifo] stated that he had applied for financial support from the government, Congress, and the Ministry of Production. He got a lot of promises but nothing was done. Even though he was president of the footwear association, as he put it himself, his voice 'had no echo': *"(Hemos) pedido apoyo financiero al gobierno, al congreso, al ministerio de la producción. (Nos) dicen que harán algo, pero no hacen nada....aun como presidente de la asociación de zapateros nuestra voz no tiene eco. No somos tomados en cuenta"*.

The entrepreneurs are also convinced that the government actually hinders the growth of their firms. An [Ifu] had no doubt that, rather than helping the firms, the government put a number of obstacles in their way: *"El gobierno influye que te abstengas a crecer. En vez de apoyar te pone un sin número de trabas"*. One of those obstacles, frequently mentioned by the entrepreneurs, was the issue of taxation. A [Lime] stated that the government was only good for one thing, taxation: *"El gobierno solo es bueno para cobrar impuestos, no nos apoyan en nada"*.

The 'retention tax' aroused a lot of criticism. An [Ifu] summarized the problem by saying that any time he sells to a big firm, he has to pay the so-called 'retention tax'. The problem with this is that although he might have to wait 30 days before he is paid, the state has already claimed the 'retention' tax immediately: *"Cuando tú le vendes a una empresa grande hay un impuesto que se llama de retención y eso es malo.....A mí me pagan (en) 30 días pero el (estado) ya prácticamente cobró la retención....el estado está de cabeza"*.

The entrepreneurs also encountered many legal obstacles. For example, a [Lime] described how the Ministry of Economy refused a guarantee that would have allowed the park's firms to obtain loans from the governments of Italy and Korea under very favorable conditions. The reason given was that it was against the law. *"Yo conversaba con el presidente del parque industrial, ellos habían conversado con el gobierno Italiano, Coreano.....ellos dijeron perfecto te prestamos al 4 % de interés anual pero necesitamos que el gobierno les avalé.....Kutczynski mando a su asesor y él dijo: no pueden tener ese dinero porque hay una ley que les impide traer dinero.....ósea hay una ley en la que no podemos crecer"*.

Unrealistic and bureaucratic public procurement procedures were the source of much complaint from the entrepreneurs. An [Ifu_1] described a public procurement contract for 500 school desks which would have been very

profitable. However, the tender only allowed a two-day deadline for delivery of the bid. This was, as he pointed out, impossible for a small firm like his to achieve: "*Dicen vamos a necesitar 500 carpetas a precio alto 140 soles, cuando en realidad una carpeta esta 90 soles, (indican) tiempo de entrega dos días. ¡Puta madre! date cuenta dos días....la estructura de costos la voy hacer en un día, compra dos días, van a traer los materiales al tercer día, mientras que yo habilite las 500 carpetas, ¡pero (la licitación) ya ha salido en dos días!*".

The entrepreneurs' loss of confidence in the political system is the result of numerous mistakes made by the same politicians who have made the laws. A [Lifu] echoed the opinion of many other entrepreneurs when he said that ministers visit the park, promise 'thousands of things' and then forget all about it: "*Viene una ministra inaugura la feria y ofrece mil cosas pero no, se olvidan. Solo ese día inauguran y después desaparecen ya no sabes nada.* An [Ifu$_1$] touched on the problem of political patronization when he stated that the Aprista party works only for its own political supporters: "*Acá el gobierno de Alan García trabaja solamente para el grupo Aprista*".

Ultimately, despite all their complaints, the entrepreneurs did want help from the government, especially financial assistance and lower interest rates. One [Lifu] hoped that the government would support the park's firms by coming to the park and assessing the needs of the firms one by one: "*El gobierno debe apoyarnos, directamente evaluar venir de tienda en tienda, no quedarse solo en las ferias*". A [Lifo] wished that the government would assist in regulating the exorbitant interest rates charged by local banks. For instance, one local bank charges up to 35% interest per month, and obviously this prevents the firms from growing: "*Necesitamos apoyo del gobierno. (Por ejemplo) El banco de crédito tiene una tasa de interés muy alta. Los intereses por mes son de 30%, 35% se lo comen todo, do nos permite crecer*".

Lack of support from the Municipality of Villa el Salvador.

The interviews also revealed that the firms do not regard the municipality as a reliable partner. One of the reasons is because firms do not get adequate support from the municipality of Villa el Salvador. Rather the opposite, in fact. Many of the entrepreneurs furiously and repeatedly stated that, instead of facilitating the development of firms, the municipality hindered it. Their testimonies focused on two issues. The first is the municipality's administrative procedures (licenses, permits, fees, etc.), which are highly bureaucratic, time-consuming and ill-adjusted to the requirements of the small firms in the park. Secondly, the municipality seems incapable of providing the basic services for the park, such as public safety, lighting and proper street-cleaning. Entrepreneurs also identified the mayor of the district as part of this chain of bureaucratic obstacles.

In fact, not one entrepreneur had anything to say in favour of the municipality. A [Lifu] stated that they got no support from the municipal authorities, and added colourfully 'if the mayor could take an entrepreneur's eyes out, he would do it': "*Acá no hay ningún apoyo del gobierno (municipal). Si el*

alcalde te pudiera sacar los ojos, te los saca corazón". Another [Lifu] said much the same thing, when he said that all the municipality gives them is obstacles: *"La municipalidad no nos ayuda, más bien nos pone más trabas".*

As stated above, the municipal obstacles which arouse the most anger among the entrepreneurs are of a bureaucratic nature. A [Lime] stated graphically that 'the municipality has made war on us, instead of helping us'. He revealed that, even after eight years, one of the development centres built in the park still cannot get a title to its property: "S*e han construidos varios centros con cooperación técnica acá. Uno de ellos es el centro de desarrollo productivo donde estuve como gerente ocho años…....hasta hoy día no tenemos el título de propiedad.....No hay esa voluntad....Ósea nos hacen la guerra en vez de apoyar".* A [Lime] told of his direct confrontation with the mayor because of the many barriers imposed on the firms: *"Tuvimos que pelear con Michelito Azcueta*[81] *porque nos metía trabas por todos lados. Hasta hoy día sigue lo mismo. Pero si usted me pregunta a mí en que nos apoyó para mí en nada".*

The entrepreneurs also criticized the municipality for being unable to fulfil their minimum responsibilities as a local authority. In this regard, a [Lifu] complained that the municipality does not maintain the streets, there are no parking spaces, and the general public (potential customers) have already realized this: *"Si hasta ahora no arregla las calles. La gente se ha dado cuenta, los mismos compradores. Aquí en el parque no se puede (uno) ni cuadrar. Le hemos dicho al consejo, el consejo no puede pues".*

The entrepreneurs themselves have to do many of the tasks that should be performed by the municipality. A [Lifo] described how they regularly have to remove flood water from two bridges so that customers can gain access to the park, all because the municipality seems incapable of action: *"Tenemos problemas en los puentes que se llenan de agua y la municipalidad no nos ayuda. Nos organizamos, contratamos alguien y sacamos el agua para que los clientes puedan entrar".*

Public institutions engaged in dishonest practices.

Public institutions in general, and public support institutions in particular, are also not seen as trustworthy partners for the firms. The entrepreneurs' testimonies strongly imply that there are a number of dishonest practices in public institutions. According to the entrepreneurs, this corruption takes various forms, some of which have already been alluded to in other contexts. The governmental apparatus is highly politicized and unfairly favours those who are politically affiliated to it. The municipalities allocate land and property titles secretly. Bribery is a common practice used to guarantee public procurement contracts. There are corrupt officers in local government who are only interested in stealing money from the public sector. Even the mayor of the district is said to have benefited from donations meant to aid the firms in the park.

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81 Michel Azcueta is a former major of the district of Villa el Salvador

The entrepreneurs recognize that the highly partisan and institutionalized political system in Peru means that the government favours those firms who share the same political ideology. A [Lifu] stressed that everything is politicized. He said, for instance, that this president's government only works with a particular business group: *"Todo está politizado.... el gobierno de Alan García solo trabaja para el grupo prisma"*. A [Lime] suggested that major deals are only distributed between the 'big players': *"Acá (el gobierno) no nos van a dejar crecer, entre 'grandazos' no más arreglan a su manera"*.

Regarding the widely-held belief that the municipality is involved in corrupt practices, a [Lime] said he had tried to buy a 5,000m^2 plot from the municipality, but the municipality had already secretly granted it to a local church: "*Hemos comprado la feria que es un local de 5,000 metros a la municipalidad y hasta ahora no nos dan el título de propiedad.....sin que nosotros sepamos.... se lo dieron en concesión a la iglesia....ya tenían incluso título en registros públicos.....todo por lo bajo.....Nos sacamos la mugre para dar trabajo, crearnos nuestro propio trabajo y el estado en vez de apoyar*".

There are also statements which indicate that the former mayor of the district is considered dishonest. A [Lime] stated that the former mayor controls ten non-governmental associations which receive grants meant for the park, but these funds have never reached the firms: "*Michel Azcueta tiene como diez ONGs... (que) canalizan dinero para capacitación. Pero la ayuda no nos llega. Le estoy hablando lo que he visto, no me gusta este tipo de atropellos....pide plata y no se adonde lo lleva*". A [Lime] claimed that the mayor has made a living from donations obtained on the firms' behalf: "*Michel Azqueta para mi es una persona que ha vivido de pedir colaboración a nombre nuestro*".

The entrepreneurs are convinced that many local government officials are only interested in stealing from the state. An [Ifu] maintained that local government officers do not know anything. He said that they are solely interested in stealing money from the public sector: "*Visito las oficinas del gobierno regional junto con un economista para decirles cómo invertir su dinero, porque estos tipos no saben nada, ellos solo están interesados en robar el dinero del sector público*".

Regarding the lack of transparency in public procurement procedures, an [Ifo] said he had participated in some public procurement tenders, but that there was too simply much corruption involved: "*Inicialmente se trabajó con licitaciones hace tres años pero ahí hay mucho amarre. Bueno de diez dos podemos ganar*".

7.3.2 The inhibiting role of banks.

Networking with banks is recognized as having an important influence on a small firm's ability to innovate (De Jong & Hulsink, 2012). The evidence in this study indicates that the banks also hindered the small firms' network-building possibilities due to a combination of two factors. Firstly, the entrepreneurs alluded to numerous dishonest bank practices which further reduced their trust in these institutions. Secondly, the entrepreneurs (mostly from less-innovative

firms) tended not to use banks because of their high interest rates. The interviewees also revealed that dishonest practices are also carried out by other private institutions, such as local business associations in the park.

In plain English, the firms' capacity to network was inhibited by private institutions - particularly banks and local business associations – because, as with the public institutions, the private institutions failed to create and nurture a climate of transparency and honesty in their daily procedures among the small firm entrepreneurs in the park, e.g. in the allocation of loans, loan campaigns, the distribution of available assistance, etc. The entrepreneurs implied that this situation triggered a loss of trust, substantially minimized their interest in interacting with these entities (weak ties) and, time and again, propelled their network-building efforts towards relatives and friends (strong ties). This bias is prevalent and helps to illustrate the small firms' network-building stagnation.

Banks and other private institutions engaged in dishonest practices

The entrepreneurs' testimonies strongly suggest that there are also a number of dishonest practices in private institutions. According to the testimonies, this corruption also involves local business associations and private banks. The entrepreneurs claimed that local business associations usually distribute favours to a closed circle of board members, whereas private banks, among other dishonest practices, cheat the entrepreneurs by advertising false interest rates.

In the view of the entrepreneurs, the business associations in the park have also become a platform for the benefit of a select number of board members. A [Lifu] stated that it is always the same two or three board members who profit from the association's actions. The rest of the members remain forgotten: "*Solo dos o tres personas siempre se benefician, es la directiva de APEMIVES dos o tres personitas son las que se llevan todo y el resto estamos olvidados*".

There is also a generalized distrust of the private banks, who are also engaged in dubious practices. Among the many stories about deceptive advertising, a [Lime] mentioned signing a loan agreement with a private bank which openly advertised a monthly interest rate of 2.4%. However, in reality she was obliged pay 5.7%. She only discovered the real interest rate when she read the microscopic font at the bottom of the agreement, which was only readable with a magnifying glass: "*En Scotiabank pagamos 2.4% (sin embargo en realidad) hemos pagado algo de 5.7% (mensual). Cuando firmamos estábamos ilusionados (pero vimos que el verdadero interés estaba) en esas letras tan chiquititas que hay que ustedes pueden leer con lupa, ahí estaba (la trampa). Eso ya es viveza, el gobierno esas cosas debe arreglar, tanta gente que llora en el banco. Que podemos decir son banco. Ya les había firmado que iba hacer a pagar no más todo*".

Lack of motivation to use banks.

All the firms exhibited a tendency to rely on their own savings instead of applying to the banks for loans. It is clear that the main reason for this is that the banks charge too high levels of interest. Those very few entrepreneurs that do use the banks admitted to having agreed on extremely high interest rates; 63% per year in one case. They only used the banks as a last resort when they had no other available source of finance.

For instance, a [Lifu] declared that he would never work with a bank: *"Con bancos para nada, cuantos bancos han venido aquí"*. An [Ime] explained that he didn't work with the banks because of their high interest rates: *"Nos otros no trabajamos con bancos (porque) ellos tienen altos intereses"*. In the same vein, an [Ifu] stated that, while in America a firm can get a loan at 4% interest per year, in Peru the interest on an equivalent loan is 40%: *"Mira USA te da el 4% anual en préstamos (en Perú) es el 40 % (anual), 3% mensual"*.

This reluctance to work with banks forces the firms to be self-financing and rely on their own savings. A [Lifu] described having bought his machines using his own savings: *"No, no, propio, nada de eso (préstamos bancario). Así nomás trabajando día y noche junte mi plata y comencé a comprar todo"* and another [Lifu] said he did it 'the old way', i.e. by using his own savings: *"Nosotros lo hacemos a la antigua, juntamos el dinero y compramos"*.

Although very few entrepreneurs work with banks, a [Lime] said he was financed by the so-called "cajas municipales[82]" because these institutions charge less interest than the banks: *"Nosotros estamos trabajando con la Caja Raíz.....El interés es un poco bajo, a comparación del banco de crédito, es bastante la diferencia"*. As stated above, one [Lifu] who did use a local bank paid 'killing interest' of up to 63% per year. He stressed that he had no other option: *"Empecé trabajando con el banco del trabajo, los intereses me mataban pero era la única entidad que confió en mí, nadie me quería dar. Era la única manera para conseguir un crédito.....He llegado a pagar 63 % en el banco del trabajo, ahora están al 20% anual"*. Finally, another [Lifu] said that he only ever approaches a bank to get a letter of guarantee in order to participate in a public procurement: *"Solo usamos los bancos cuando participamos en licitaciones, (porque en este caso) necesitamos una carta de garantía (que generalmente es otorgada por un banco)"*.

7.3.3 The Inhibiting Role of Entrepreneurs

The firms' capacity to network was also constrained by the shortcomings of their own founding entrepreneurs. According to the data, both the innovative and the less-innovative entrepreneurs were unanimous in recognizing that a lack of unity and reciprocity among the entrepreneurs in the IPVS, and the entrepreneurs' own involvement in numerous dishonest practices greatly reduced the level of mutual trust among them, and isolated and constrained their network-building initiatives. Yet another reason why they all felt

82 Cajas Municipales are local banks funded by the municipalities

compelled to focus their network-building efforts on relatives and friends (strong ties).

Furthermore, based on the evidence it can be assumed that the loss of trust in public support institutions and banks described above also encouraged the entrepreneurs' perception that they were 'alone against the world', and the survival mechanism they turned to as a consequence of this was their innermost circle (family), thus further constraining their network-building options.

Lack of unity among the entrepreneurs.

The park's entrepreneurs are by no means united; each firm is literally on its own. The testimonies indicate that this is because the entrepreneurs do not share the same 'way of thinking'. All the interviewed entrepreneurs touched upon this issue, although they expressed it in different ways. The entrepreneurs are well aware that if they continue working on an individual basis and do not work together, because of the tremendous price competition from major national shops, among other reasons, they face the danger of complete collapse. They all wanted to 'join forces' but stated that there was no institutionalised framework which they could trust to facilitate this process.

An [Ifu] alleged that, unfortunately, Peruvians are a disunited people: "*Lamentablemente los peruanos somos gente desunida, yo te digo porque he trabajado fuera en el extranjero once años en Venezuela y Chile*". A [Lime] told me that it is hard to join forces in the park because there is no sense of unity among the entrepreneurs, everyone is on their own, 'all drawing water for their own mill' as he put it: "*Es muy difícil juntar esfuerzos en el parque, no hay unión entre nosotros, todos están en lo suyo, todos jalan agua para su molino*".

The major problem is that the entrepreneurs are close-minded people who are difficult to work with; i.e. they just cannot agree on anything: "*¡Es una olla de grillos hermano! Además con gente cerrada compadre no puedes trabajar. La desventaja es (que) acá, no todos piensan igual....pero hay otros que no pues, otros que han sido micros, siguen siendo micros y morirán siendo micros (micro-empresarios)*". A [Lifu] noted that entrepreneurs only share greetings, nothing else. Firms work on their own: "*Cada quien trabaja por su cuenta. Acá en el parque solo hay saludos no más a cada persona, a cada socio*". An [Ime] pointed out that although it is essential for the firms in the park to combine their resources, there is no single mechanism through which they can do it: "*Tenemos que eslabonarnos. Pero no hay quien lo haga, al final todo queda en intentos*". Another [Ime] remarked that if the firms could all work together, they would be a formidable force and could achieve many things: "*Si se unen todos como empresarios hacemos una sola fuerza, podemos reclamar, podemos hacer muchas cosas*".

Lack of reciprocity among the entrepreneurs.

The entrepreneurs lack reciprocity among themselves. The boundaries of the park, instead of serving as a parameter to bond the firms together, seem to mean nothing to the entrepreneurs. Indeed, most of the entrepreneurs see the park as some sort of 'war zone' where there are no true friends. Even small-scale marketing initiatives, such as an attempt to promote a single street in the park, have failed because there is always one entrepreneur who cannot afford the required contribution.

The study revealed a degree of individualism and selfishness that seems to drive the entrepreneurs to only look after their own interests. To put it bluntly, if an entrepreneur had to betray his own partner in order to secure an order, he would most probably do so. For example, a [Lifu] told me that the park is not like a residential urban area where one may have, 'a friend, a neighbour. No. In the park, everyone takes care of their own things. Here, there are no friends': *"Aquí no es como en zona urbana por ejemplo, tu amigo tu vecino, no acá no, acá (el parque) cada quien se ocupa en sus cosas, acá no hay amigos"*.

Considering the origins of the park, and the hardship that all the entrepreneurs had endured in order to start up their businesses, it was intriguing to learn that the entrepreneurs see the park as a place where no friendships can be formed. However, other testimonies confirmed this perception. A [Lime] mentioned a joint marketing visit that some of the park's firms had made to Ecuador. The idea was to sell as a group, and the agreed price was twelve nuevos soles per belt. They found a potential buyer, and success was within their grasp. However, one of their group made an under-the-table offer to the buyer at seven nuevos soles per belt. The buyer was shocked, and wondered, as the interviewee put it, 'What kind of an organization is this?': *"Una vez visite Ecuador y (un comprador) se interesó en comprar correas. La idea era de vender como grupo. El precio como grupo era de doce nuevos soles por correa. Pero alguien (otro miembro del propio grupo) debajo de la mesa ofreció la correa a siete soles. El comprador se quejó, que es esto dijo ¡que clase de organización es esta!"*.

This lack of reciprocity has also occurred between members of the same family. A [Lifo] regretted abandoning his brothers' business. He had left the firm, bought a van and begun another business on his own. He now considers this action his biggest mistake and thinks that it was the reason the firm had not made any progress: *"No debí abandonar a mis hermanos en el negocio. En aquel tiempo deje la empresa, compre una combi e inicie otro negocio (de transporte). Pienso que esa es la razón por la que la empresa no progreso. Es uno de los errores que pienso cometí"*.

In the absence of any mutual reciprocity between the entrepreneurs in the park, the majority of initiatives that required cooperative involvement from the firms have failed. Nevertheless, a few entrepreneurs have attempted cooperative initiatives on their own, mostly in the form of marketing campaigns. In the case of the 'street promotion' initiative mentioned below, a [Lifu] said it failed because some entrepreneurs did not want to pay their share

of the cost, so the other entrepreneurs who had been willing to pay refused to do so, too: *"Hemos querido hacer una publicidad para esta cuadra, pero hay unos que quieren y otros que no. El que quiere pagar dice porque voy a pagar si él no quiere pagar. Es la idea que tienen todavía"*.

An [Ifu] stated that the park does not have any publicity, so her own individual marketing campaign for her firm promotes the park too, because the name of the park appears in her campaign literature. This attracts customers to the park, and everyone benefits. However, she said that the other entrepreneurs show no reciprocal gratitude, because if a customer asked for the address of her business, people would not give it: *"El parque industrial no tiene publicidad. Mire y la gente es tan ingrata que nuestra empresa es la que se encarga de hacer la publicidad hacia el parque industrial. Porque no solamente sale nuestra empresa, dice también Parque industrial Villa el Salvador. Entonces eso va jalar a todos los clientes, se benefician. Pero cuando un cliente viene ¿Ud. Cree que le dicen donde está ubicado nuestra empresa? No le dicen"*.

The entrepreneurs' engagement in dishonest practices

There seem to be two aspects to this. First of all, as all the entrepreneurs are convinced that everybody else in the park is trying to take advantage of each other, they prefer to be the ones who are taking advantage, rather than the one who is being taken advantage of. More tellingly, the evidence from this study clearly indicates that dishonest practices are part of the everyday working life in the park.

For instance, the interviews reveal that many entrepreneurs intentionally use their positions in the park's business associations for their own personal benefit. They commonly commit bribery to win public procurement contracts and cover up for the dishonest practices of the public authorities in exchange for financial inducements. They cheat their customers with low quality products, and frequently scam their own park colleagues; and, of course, they are all capable of stealing common utilities such as electricity, even if they don't admit it.

The belief that everybody is trying to take advantage of each other is pervasive and appears in nearly all the testimonies. A [Lifu] stated that, regrettably, the Peruvians are 'pepe el vivo'[83]; 'a bunch of chancers' would be the English equivalent: *"Lamentablemente nosotros los peruanos somos 'pepe el vivo'"*. A [Lime], describing the extent of opportunism in the park, said it is a place where the 'clever' live off the work of the 'silly':*"Aquí hay viveza, mucha viveza en el parque....el tonto trabaja con su sudor sale adelante, mientras el vivo, vive de la gente, vive del tonto que hay... el más vivo se lo come al más débil"*.

Regarding those entrepreneurs who use their positions in the local business associations for their own individual benefit, this practice does indeed seem to be widespread. A [Lime] was convinced that some associations' leaders

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83 'Pepe el vivo' is a colloquial expression that denotes a highly opportunistic behaviour.

used their positions for personal gain: *"Yo conozco otros dirigentes que han entrado después que yo.....el sí uso el cargo para su beneficio personal"*. Another [Lime], on the same topic, said that, for instance, the metal-mechanics association obtained several million soles, but nobody knew what had happened to those funds. *"Un dirigente entra (y) se aprovecha...metal mecánica no más, no sé cuántos millones han dado a todos los gremios, pero lamentablemente esa plata se lo han cobrado y no sabemos nada....* A [Lifo] stated that his association's president covertly shared big orders among his closest friends, while the other producers were not invited to compete: *"Cuando (un) comprador hace un pedido grande, este es compartido entre el presidente de la asociación y sus amigos más cercanos, ósea los productores de calidad no son invitados"*.

As for using bribery to win public procurement contracts, a [Lime] revealed that this practice was almost institutionalized, and that large firms routinely offer bribes of 10% of the value of the contract: *"Los que ganan ahora yo sé que rompen la mano. Lo hace la gran empresa generalmente pagan 10%"*.

Covering up for the dubious practices of the public authorities in exchange for economic benefits is also common. A [Lime] suggested that about twenty firms secretly got money from donations obtained by the former mayor. He had no doubt that the mayor did it to 'shut their mouths': *"Será veinte empresas (que se benefician), todas las donaciones vienen para ellos, pero para el resto no viene nada. Michael Azcueta, (cuando) era alcalde donaciones cantidades había ¿Dónde están? Para que les calle la boca pues les ha dado"*.

The fact that entrepreneurs cheat customers is probably not confined to Peru, but many entrepreneurs do see this as a particularly Peruvian characteristic. A [Lime] argued that because Peruvians like the easy life and good earnings, they cheat customers by using shoddy materials and low quality products: *"Al peruano le gusta lo fácil.....hacer poco esfuerzo y ganar bien ... (por eso) malogran hasta los materiales. Malogran y estafan (con sus) productos, para que se lo lleven (los clientes). Mientras tengamos esa mentalidad, no van a salir las cosas"*. A [Lifo] said that many firms produce low-quality shoes for clients, who of course, never return, or if they do, it is only to complain: *"Debemos producir un zapato como su fuera para nosotros. Hoy en día se producen zapatos para que los clientes no regresen nunca y si retornan es para quejarse. Estos valores (de calidad) son ausentes en la gente"*.

There are numerous instances of the park's entrepreneurs scamming each other. One such tale is told by a [Lime] who said that a partner secretly cashed in the entire payment for a joint contract but paid nothing to his partners: *"Orihuela se ha cobrado todita la plata y nos ha dejado colgados....utilidades había, si no que al señor no le dio la gana de darnos un céntimo, por eso tengo la mala experiencia de los consorcios....perdí todo, no gane lo que es nada"*. And finally, a [Lime] openly confessed to having (had to) steal electricity to feed her machines: *"Teníamos que robar un poco de luz, para poder alimentar nuestras máquinas"*.

The entrepreneurs' survival-driven persistence (Peruvian 'sisu')

Despite all the difficulties that the park's firms have faced, the entrepreneurs have always persisted in their endeavours. They all display a commendable 'never say die' attitude. However, this persistence seems to be a survival mechanism, in that the entrepreneurs (mostly from less-innovative firms) often displayed enormous persistence only as a mechanism to assure their firm's survival. Such persistence was rarely used as a tool for network-building.

The interviews reveal four closely interlinked factors that seem to contribute to this attitude of survival-driven persistence. First of all, there is the entrepreneurs' belief that, in business, they must be 'strong', or to use their own word, they must be 'machos' in hard times. This may be closely connected to the second factor, which is that the entrepreneurs interviewed in this study take their inspiration from the role-models set by their parents Thirdly, all the entrepreneurs were driven by a deep concern for the welfare of their families, and finally, and perhaps as an inevitable result of the previous three factors, the entrepreneurs all displayed a 'natural' inclination to work.

The importance of being 'macho' was constantly remarked upon by the entrepreneurs, almost as if being an entrepreneur, i.e. taking responsibility for one's own success, was a badge of honour. An [Ifu] underlined that doing business in Peru is only for the 'machos', i.e. the brave ones; those who are ready to take risks for their country, their family and their children:*"Hacer negocios en el Perú es para machos, para los bravos, tomar el riesgo por tu país, por tu familia, por tus hijos"*. An [Ifu] spoke for many when he said that an entrepreneur must be strong, it is no good getting demoralized or giving way. 'Life continues and one has to go on because every day one has to eat, to pay wages': "*Uno tiene que ser fuerte, que me gano yo derrumbando. Si la vida continua, todos los días hay que comer, al personal hay que pagarle y si no trabajo de donde va a salir ¿Si yo me desmoralizo, de donde cae?"*.

The concern for the welfare of their families also fuels the entrepreneur's persistence to keep going and work harder. The idea of life as a battle is clearly reflected in the words the interviewees use. For instance, a [Lifo] stressed that 'the battle is constant' and 'one should not be dismayed'. He goes on, 'there is no time to rest', and working hard for the family is a necessity, not a choice: *"La lucha es constante, nosotros no desmayamos, no hay tiempo para descansar, no tenemos otra opción, trabajamos duro para continuar creciendo por nuestros hijos"*.

The entrepreneurs' gutsy attitude is deeply instilled in them all, and they have a natural instinct to work. A [Lifu] told me that the entrepreneurs in the park are eager to work, and when there is something to be done, they are ready to work through the night to do it: *"Acá hay muchas ganas de trabajar, que sueño ni que sueño....acá la gente cuando hay trabajo se amanece"*.

Table 21 in Appendix 15 summarizes the initiating roles of government (public support institutions), banks and entrepreneurs. Table 22 in Appendix 16 accounts for other factors that influenced the network building process among the studied firms.

7.4 Existing Level of the Firms' Innovation According to their Existing Major Partners

Although not the primary objective of this thesis, this section reveals the state of innovation in the firms, taking into account the fact that the most supportive partners of innovative firms were generally large customers (weak ties) and the most supportive partners of the less-innovative firms were mostly family members (strong ties). The testimonies in this section suggest that the contribution of family members is mainly aimed at helping the less-innovative firms to survive, but not to innovate. Likewise, it also indicates that the contribution of the large customer partners may have some influence on the incremental innovation efforts of innovative firms, although this is not enough to boost a higher level of innovation. In this light, this section provides evidence about the firms' low level of incremental innovation, the firms' inability to produce original designs, the firms' lack of modern equipment and technology and, since the literature has consistently highlighted the entrepreneurs' level of education as being related to innovative firms (Kantis et al., 2005; Kantis et al., 2002), the entrepreneurs' low level of education.

7.4.1 Low-level firm's incremental innovation

The assessment of the level of innovation among the firms highlighted three points. The first was that out of the thirty-five interviewed firms, only eight could be regarded as being in any way innovative. The second point was that, among those eight 'innovative' firms, none was engaged in a radical[84] innovative product or production process. Instead, they concentrated on incremental[85] innovation, i.e. they only improved their existing products and/or production processes. The third point was that the remaining twenty-seven less-innovative firms were characterized by their imitative products.

It is worth emphasizing that when selecting the firms for this study, all the firms in the park that could reasonably be described as innovative were initially included. In the final analysis, however, out of the 1,043 firms in the park, only eight firms could be regarded as being incrementally innovative to some degree, which emphasizes the exceedingly low level of innovation in the park. Apart from these firms, none of the interviews or observations made during this study revealed a single firm with a product idea that could potentially become radical in the near future. The relevant features of the eight firms in the park that could be described as incrementally innovative are summarized below.

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84 Radical innovations are fundamental changes that represent revolutionary changes in technology (Dewar & Dutton, 1986).

85 Incremental innovation is defined as other changes in products and processes like changes which are ''insignificant,'' minor, or do not involve a sufficient degree of novelty (OECD/Eurostat, 2005).

Five of the innovative firms belong to the metal-mechanics sector. The first [Ime] improved, produced and patented an ecological chicken grill, tailor-made for the Peruvian market. The second [Ime] improved two machines for domestic use: a mill to recycle plastic and a manual pump to extract groundwater. The third [Ime] designed and produced a breeding device for native Peruvian guinea pigs. The fourth [Ime] designed and produced a motorbike, ('a moto-taxi) tailor-made for the transport needs of Peruvians, and the fifth [Ime] used fiberglass to improve the design and production of mannequins.

Another innovative firm belonged to the footwear sector, and this [Ifo] was the only one in the park that had introduced continuous improvements in its production of shoes. One of these improvements was to do with the redistribution of shoe-assembly tasks among the most skilled shoe-makers. Finally, the remaining two [Ifus] only displayed continuous improvements in the sense that they produced original, (non-copied) designs.

7.4.2 Firm's Inability to produce original designs

Copying and imitation are common practices in the park, especially among the less-innovative firms. Entrepreneurs tend to copy or imitate product designs because it is cheaper and less risky. Firms reproduce copied designs from a variety of sources, such as the internet and catalogues from major national and international shopping chains.

The process of copying usually involves slight modifications to the original design, and the entrepreneur, the employees, the client, and a variety of free-lance designers actively participate in this. Entrepreneurs revealed the existence of an informal one-stop market named 'Caqueta' which provides tailor-made services for copying any model for just ten 'nuevos soles' (around three euros). All the entrepreneurs said that there is no sense in making original designs or in patenting them because patenting is expensive and, ironically, that original designs can easily be pirated.

Indeed, a [Lifo] said that there is no creativity in the park, people just go to the internet and copy: *"No hay creatividad, todos van al Internet y copian"*. Smaller firms, in particular, get the latest catalogue from a major shop and, assisted by an independent designer, they reproduce the models they want: "*Los más pequeños (nos) conseguimos el ultimo catálogo de Saga y vamos a el diseñador para obtener los modelos"*. A [Lime] explained that it is better to copy models from the catalogue of a national shop, because these models are already being promoted in the market: *"Los modelos de Saga ya están marketeados*".

There is some degree of incremental innovation in the firms' designs, in that the copying process involves slight adjustments, and usually involves active interaction between the entrepreneur, the employees and the clients. In this regard, a [Lifo] stated that she never copies the models entirely, but always makes slight changes to them: *"Más o menos veo el modelo.....No lo hacemos igualito, por ejemplo yo le veo un modelo ya lo trasforme.....ya le puse algunas*

cositas.....". In this sense, there is something creative in the process, although whether it is legal or not is open to question.

This practice of copying designs is common among the innovative firms, too. An [Ime] told me that they ask their clients the brand and origin of the wanted machine, then check it out on the internet, prepare a preliminary sketch for the client's feedback and then they produce the prototype. If it still needs improvements, then they make them: "*Preguntamos donde (el cliente) ha visto la máquina, la marca y el origen, (de allí) vamos al Internet para encontrar la máquina, luego preguntamos un diseño preliminar sobre como el cliente quiere la maquina..... después hacemos el prototipo y lo presentamos. Si es necesario mejorar, lo mejoramos*".

Once again, as another [Ime] said, there is no incentive to produce original designs because they can so easily be copied: "*Si tú tienes la patente te copian igualito. Creo que sale pagando 2,400 soles, para que tener una patente que cualquiera al otro día (la van a copiar), le van a mover medio centímetro para acá, le van a dar vuelta. No es muy buena inversión*".

7.4.3 Firms' lack of modern equipment and technology

The firms operate with outdated equipment of an intermediate level of technology. During the interviews, some of the entrepreneurs revealed that they were still using thirty-year-old machines with inadequate production capacity, often with self-made replacement parts made of wood. In this situation, the firms seem destined to produce only for the local market.

It is worth emphasizing that most of the firms do aspire to update their equipment, the level of their technology, and their level of innovation. An [Ime] recognized the fact that if his firm is unable to innovate it will collapse: *"Tenemos un área de desarrollo....que estamos potenciando para poder sacar un producto diferente....tengo que hacerlo hermano porque si no innovo me voy a ir abajo"*. A [Lifo] told me that the first thing the firms need is technological innovation and to reorganize their machines so as to be able to export to America: *"Lo primero que todo, necesitamos innovación tecnológica, organizar mis maquinas y exportar a los Estados Unidos... es la aspiración de todo empresario (del parque)"*.

But the evidence points to the fact that the firms are limited in their growth aspirations because they have outdated equipment. A [Lifo] told me that his machines are old and need to be updated: *"Mis máquinas ya están viejitas, tengo que renovarlas"*. An [Ime] confessed that most of the firms possess second-hand machines of middle technology: *"La mayor parte de empresas tiene máquinas de segunda de tecnología mediana, no de tecnología de punta"*. A [Lifu] stressed the fact that he only had wooden machines, not even one of which was modern: *"Tenemos maquinas del tiempo de Atahualpa, maquinas de madera, hasta ahorita no tenemos una maquina buena de punta"*. The same [Lifo] confessed to having had to produce wooden replacement parts to keep his machines working: "*Hasta las piezas de madera lo hemos hecho, todo de madera*".

Only two firms seemed to have managed to renew their equipment. An [Ime] said he owned one of only four laser-cutting machines in the country: *"Solo cuatro empresas tienen esta máquina (computarizada para cortar láser) en el*

Perú". Another [Ime] said he had invested 150,000 dollars in a new numeric control system and a cutting machine.

7.4.4 The Entrepreneurs' low level of education

Throughout the interviews, the entrepreneurs all recognized the importance of education and openly confessed to their own lack of it. Only three of the entrepreneurs in this study hold a university degree (one industrial engineer, one mechanics engineer and one accountant). In terms of educational qualifications, the rest of the respondents consisted of: six entrepreneurs with unfinished university studies, eleven entrepreneurs holding non-university education, twelve entrepreneurs who had completed secondary education, three entrepreneurs who had only completed primary education.

In terms of training and education, the interviews highlighted three interlinked issues: the first is the firms' pressing need for training opportunities in specialized areas such as electronics and IT; the second is the lack of an educational infrastructure inside the district that can cope with this growing demand and the third is the local inhabitants' lack of financial resources to upgrade their educational skills outside the boundaries of Villa el Salvador.

A [Lifo] stressed the importance of education as a critical factor for a firm to progress, to innovate, and to create new designs: *"La gente piensa que tal como están ahora es suficiente para progresar. No es así. Solo progresaremos cuando obtengamos más conocimiento. Si soy conformista con lo que tengo fracasaré. Para tener más ordenes (de compra) debemos innovar"*. In this regard, an [Ifu] stated that the government does not promote education and neither does it provide the tools the firms need to grow: *"El estado no capacita, no fomenta, no da las armas y herramientas necesarias para que el micro empresario crezca"*.

In fact, when assessing the available educational opportunities in the district of Villa el Salvador, an [Ime_5] pointed out that nobody can study in Villa el Salvador, simply because the people in the district cannot afford an education anyway, so they can only ever expect to get jobs as untrained assistants. "*En Villa el Salvador nadie puede ir a estudiar porque la gente no tiene dinero para pagar (su educación) por lo que permanece en el parque para solo obtener trabajo como asistentes*".

Whatever the reasons behind the low level of education among the entrepreneurs, the plain fact is that, as an [Ifu] said, the entrepreneurs do not upgrade their technical skills and very few hold professional qualification*: "Acá el micro empresario no se capacita. Somos pocos los que somos profesionales"*. A [Lime] argued that most entrepreneurs have not completed their secondary education, and this means they are unable to prepare for technically demanding projects: *"La mayoría no tienen secundaria completa, (por lo que) no son capaces de elaborar un expediente técnico"*.

One obvious consequence of this lack of education among the entrepreneurs was pointed out by an [Ime_5] who said that when a firm buys modern machinery, there is no-one qualified to operate it. Compared to a more affluent district of Lima, such as 'Los Olivos', Villa el Salvador simply does not

have the infrastructure to offer specialized training in areas such electronics or IT. The irony is that these are precisely the skills that are needed by the firms in the park, and precisely the areas in which employment opportunities may arise: *"Cuando una empresa compra una maquina moderna requiere personal especializado. (En el parque) no hay (personal capacitado), nadie se ocupa de esta (necesidad). Nadie enseña electrónica, computación, etc."*. Table 20 in Appendix 14 summarizes the key innovation features found in the small firms in the IPVS.

7.5 Summary of Chapter 7

The results of the study were divided into four sections. The first section summarized the features of a new model which describes the network-building process of both innovative and less innovative small firms in the IPVS. This new model suggests that small firms build their networks through three phases: Forced Gestation, Network Birth, and Strategic Stagnation.

The second section highlighted the major differences between innovative and less-innovative firms in the network-building process. For instance, during the phase of Forced Gestation, innovative entrepreneurs networked more with large customers and were driven by the possibility of exploiting a business opportunity. The less-innovative entrepreneurs tended to network with family members and were usually driven by financial necessity.

During the phase of Network Birth, all the entrepreneurs preferred formal mechanisms of exchange, usually a written contract, as most had learned from experience that verbal contracts were easily broken. Finally, in the phase of Strategic Stagnation, innovative entrepreneurs were able to initiate elementary strategic partnerships but were unable to develop them. The less-innovative entrepreneurs favoured operational partnership initiatives in the form of the so-called 'consortiums', but these failed because of the different values, cultural backgrounds and principles of the consortium's members. This section mainly reveals the entrepreneurs' deep lack of trust in institutions as an essential factor in the stagnation of their network-building efforts.

Section three concentrated on the obstacles faced by firms during network-building. It enlarged upon the background to the high level of lack of trust by describing the role of government (public support institutions), banks and the entrepreneurs themselves in the ultimate failure of the network-building process. Most of the entrepreneurs do not trust government officials and politicians, and complained that government assistance was distributed on the basis of their political affinities, rather than on their potential for growth or innovation. As for the banks, the entrepreneurs did not use them because of their high interest rates and dishonest bank practices. Furthermore, the entrepreneurs often cheated each other, which further constrained any possibility of network-building with each other. Other factors which have a negative influence on the network-building process include the precarious state

of the less innovative firms, their lack of financial resources, as well as tax evasion and other dubious practices.

The fourth section showed that the innovative firms in the IPVS were at best operating under a low-level of incremental innovation. This fact is demonstrated by the firms' inability to produce original designs, their lack of modern equipment and technology and the entrepreneurs' low level of education. The following chapter discusses the major theoretical and practical implications of this study.

8 DISCUSSION

The objective of this chapter is to describe how the results from this study answer the research questions and replicate prior research. This chapter consists of five sections. The first section sums up the results in terms of the research objectives set in Chapter 2. The second section presents the theoretical implications of the findings taking into account the propositions of the initial model approach described in Chapter 7. The third section describes the practical implications of the study. The fourth section describes the strengths and limitations of a case study research and the fifth section suggests a number of areas for future research.

8.1 Reflection on Results vs Objectives

The entrepreneurs' unvarnished testimonies reveal just how pervasive the 'lack of trust' in institutions is – particularly public support institutions, banks and between the entrepreneurs themselves - and how this inhibits small firms' efficient network building in the IPVS.

The primary objective of this thesis, 'to understand the network-building process in innovative and less-innovative small firms operating in the industrial park of Villa el Salvador from the entrepreneur's perspective was realized through an exploration of the network-building process among the eight innovative and twenty-seven less-innovative small firms (Research Question 1). The study identifies the major similarities and/or differences between innovative and less-innovative small firms during the network-building process (Research Question 2); and the major obstacles faced by small firms during the network-building process (Research Question 3).

Research Question 1: How does the network-building process take place in innovative and less-innovative small firms operating in the industrial park of Villa el Salvador?

This outcome constitutes the core achievement of this thesis. It is highly relevant not only because it is the first attempt to assess the network-building process among small firms hosted in an industrial park in a developing country (Peru), but also because it assesses how this process takes place among innovative and less-innovative firms, the characteristics of which have not been studied before.

In a nutshell, the study reveals that the network-building among the small firms in the IPVS takes place in three phases: the phase of Forced Gestation, the phase of Network Birth and the phase of Strategic Stagnation.

The phase of Forced Gestation, the first stage in the development of the network, is characterized by the genesis of the network. The entrepreneurs seek out partners to satisfy their needs. As might have been expected, the innovative firms made greater use of weak ties (cognitive trust-driven) such as customers, while the less-innovative firms relied more heavily on strong ties (affective trust-driven) such as family. There was also a basic difference between the innovative and less-innovative entrepreneurs' motivation to network. The innovative entrepreneurs were more likely to exploit a business opportunity, whereas the less-innovative entrepreneurs were more likely to network in response to a critical moment in their lives, such as losing one's job or being made redundant. The former are referred to as 'opportunity-driven' entrepreneurs, while the latter are 'necessity-driven' ones.

The phase of Network Birth begins once the initial partners have been identified and approached. In this phase, firms formalize their relationship and set up mechanisms to channel needed resources, either by exploitation (less innovative firms) or exploration (innovative firms) of resources.

Both the innovative and less-innovative entrepreneurs in this study formalized the relationships with written agreements (contracts) to assure mutual compliance, quality, due fulfilment and product guarantee. All the entrepreneurs distrust informal mechanisms of exchange such as verbal agreements because in the past they had been victims of numerous scams. Finally, once the firms have formalized their relationship and established their mechanisms of exchange (either through exploration or exploitation), the firms enter the phase of Strategic Stagnation.

The phase of Strategic Stagnation is key to this research. It shows how all the participating firms in the study fail to improve their networks beyond the level achieved during the phase of Network Birth. The less-innovative firms are incapable of transitioning from operational to strategic networking initiatives, while the innovative firms get stuck in their short-term elementary strategic networking activities. The main reason found for this stagnation is a lack of trust, particularly in the institutional setting (public support institutions, banks) but also due to a lack of mutual trust among the entrepreneurs.

Research Question 2 What, if any, are the similarities and/or differences between innovative and less-innovative small firms during the network-building process?

This outcome is equally important for this study, because it is the first attempt to define and compare the similarities and/or differences between innovative and less-innovative small firms during each of the three established phases in the network-building process.

In particular, during the phase of **Forced Gestation**, the results show that the main difference between the networking efforts of innovative and less-innovative entrepreneurs was one of degree, rather than polarized opposites. For example, the tendency to turn to a family member (strong tie) for help was common to both innovative and less-innovative firms. Nevertheless, the innovative entrepreneurs were more inclined to seek out the support of weak ties than the less-innovative ones. In addition, the results also show that innovative entrepreneurs had a better education and more work experience than less-innovative ones.

During the phase of **Network Birth,** innovative entrepreneurs were more inclined to explore their networks primarily with large customers to increase their sales. Such weak-tie partnerships are regarded as cognitive trust-driven. Some of the innovative entrepreneurs also explored weak ties with the local municipality and local business associations in order to secure access to trade fairs, media coverage and specialized training.

In contrast, less innovative firms were inclined to exploit their partnerships with traditional contacts, usually close family (affective-trust driven) to get financial support and assistance for a variety of operational business tasks, such as accounting, management, logistics, marketing and sales, production, design, manpower and equipment lending. The results also suggest that entrepreneurs sometimes solicited the support of their families simply because they couldn't afford to pay for the costs of new employees.

During the phase of **Strategic Stagnation,** both the innovative and the less-innovative firms fail to make progress in their networking endeavours. The innovative entrepreneurs' networking activities get paralyzed in rudimentary and short-term strategic networking initiatives. Only four out of the eight innovative entrepreneurs established short-term strategic networking ties with business associations and public support institutions. These ties were established in order to benefit from applied research projects, joint ISO 9000 certification programs, the utilization of foreign consultants, technical assistance in product design, and machinery programming. However, the evidence from the study suggests that these efforts are not enough to boost the firm's modest level of incremental innovation to a higher level of innovation.

On the other hand, less-innovative firms kept channelling their operational needs through the support of family members (affective-trust driven) which was limited to financial assistance and the loan of machines, equipment and manpower. These firms did sometimes attempt to progress from operational to strategic networking initiatives via the creation of various

production consortiums. However, these initiatives failed because of the dishonest practices of many of the entrepreneurs involved in the consortia.

Since all the firms' networking efforts are frozen in this phase, the phase of Strategic Stagnation is the last phase of the network building process of the firms of the industrial park of Villa el Salvador, regardless of the firm's level of innovation.

Research Question 3: What are the major obstacles faced by small firms during the network-building process?

This is relevant to this study because by identifying the obstacles that inhibit network-building among the small firms in the IPVS, it is possible to provide new evidence that may help at least the small firm entrepreneurs participating in this study to build their networks in a more efficient and productive fashion.

The common factor behind the stagnation of the firms' networking efforts during the three phases of network-building seems to be the lack of trust, particularly in the institutional setting. The results suggest that this pervasive lack of trust has four dimensions: political institutions (entrepreneurs do not trust the government and politicians), public institutions (entrepreneurs do not trust public support institutions), private institutions (entrepreneurs do not trust banks) and social-cultural codes of conduct (entrepreneurs do not trust each other).

The results indicate that this pervasive distrust compels the firms to form partnerships with strong rather than weak ties during the phase of Forced Gestation. Consequently, they focus on the exploitation of strong ties rather than the exploration of new weak ties during the phase of Network Birth, which makes the less innovative firms incapable of transitioning from operational to strategic networking initiatives and the innovative firms get stuck in short-term elementary strategic networking activities. This results in the firms becoming isolated and thus unable to develop successful strategic partnerships.

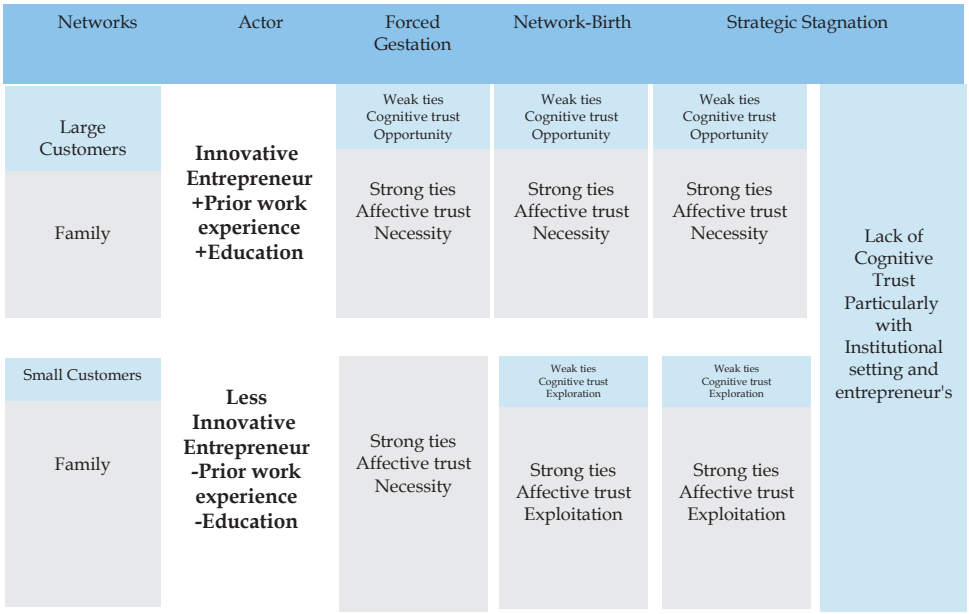
Interestingly, during the phase of Strategic Stagnation, although, the innovative entrepreneurs focused on weak tie partnerships and the less-innovative entrepreneurs on strong tie partnerships, there was no great difference in the success of the partnerships. The results suggest that the innovative entrepreneurs failed to consolidate their strategic networking efforts because they were unable to involve more of the types of partners whom the literature has identified as being known to boost innovation (suppliers, government and science support institutions). The less-innovative entrepreneurs remained less innovative because they were incapable of breaking their dependence on the support of family members.

In addition to the specified features of the phases of Forced Gestation, Network Birth and Strategic Stagnation, this study also highlights certain characteristics of the firms which limit their network-building.

The first of these is that most firms in the park are operating in precarious financial and legal circumstances. They are under constant pressure for funding, and often cannot afford to buy raw materials. They are forced to

operate with small profit margins (imposed by their wholesale buyers) and produce barely enough to cover their costs. This all increases the less-innovative firms' inclination to continue networking with family members (affective-trust driven) as the easiest and fastest solution for their survival needs.
Another factor is the entrepreneurs' mutual distrust. They feel that the park is a 'war zone' where there are no true friends. This, and the other entrepreneurs' eagerness to commit bribery, cheat customers and betray their own partners if necessary also contributes to the lack of trust among entrepreneurs, and thus reinforces the stagnation in the firms' networking. Figure 7 summarizes the key features of the three phases of the emerging new model of network-building.

FIGURE 7 Features of the New Model of Network Building



Source: Víctor Pérez Centeno (2012)

8.2 Theoretical Implications

The study unveils a number of theoretical outcomes worthy of further study. In particular, it reveals: a) the emergence of a three-phase model which describes the network-building process among studied small firms from a new perspective; b) the identification of the issue of 'lack of trust' in public support institutions, banks and the entrepreneurs themselves (present in all three phases) as a major inhibitor to small firms' successful network-building; c) the inclination of innovative entrepreneurs to network primarily with weak ties (large customers) driven by the desire to seize a business opportunity, as opposed to the propensity of the less-innovative entrepreneurs to network

primarily with strong ties (family) through force of circumstances (phase of Forced Gestation); d) the marked distrust that all the firms had to oral agreements and the resultant propensity of innovative firms to explore new relationships with weak ties (usually large customers) as opposed to the less-innovative firms tendency to exploit their existing relations with strong ties (family) during the phase of Network Birth, and; e) the pervasive influence of the generalized 'lack of trust' which seems to inhibit all the firms from developing their networking initiatives during the phase of Strategic Stagnation.

Taken together, the study provides a comprehensive understanding of the network-building process among the small firms in the IPVS and enriches the theoretical background of the existing literature with practical, field-based evidence.

Although this study was carried out in one small, poor, industrial park in Peru, the conditions under which these firms network, and the issues and concerns which drive their behaviour, might be familiar to many researchers in other developing economies all over the world.

The following section focuses on how the above results replicate prior research with regard to the six propositions outlined in the initial model approach developed in Chapter 7. In order to better reflect the results of this study the initial phases of inception, start-up and early development described in the initial model approach have been replaced with the terms Forced Gestation, Network Birth and Strategic Stagnation. There are two reasons for this. First of all, these terms better reflect the context in which the evidence was gathered. Although the previous terms for the three phases in the creation of a new business were a good starting point, they fail to adequately describe the process of entrepreneurial networking among the small firms in this study. Secondly, this study focuses on the network creation process, rather than the stages involved in creating a new business. As will be shown below, Propositions 1, 2 and 4 seem to accord with the findings of earlier research, Propositions 3 and 6 are partially fulfilled, whereas Propositions 5 deviate from the predicted findings. This being so, the theoretical implications of the analysis of the results of this study for each of the three phases in network-building are presented below.

Phase of Forced Gestation

The key features of the Forced Gestation phase are to a great extent in line with Propositions 1 and 2.

Proposition 1: in line with this proposition, the results of this investigation indicate that in this phase the entrepreneurs indeed concentrated on identifying the contacts - although with different motivations and needs - that provided them with critical resources. Consequently, they created a narrow network of strong informal ties from previously established personal relations, mostly comprised of family in the less-innovative firms and by both family and large

customers in innovative firms. At this stage, contractual arrangements are not an issue and the presence of a high level of affective trust is limited to those who hold the status of a strong tie partner, mainly family members.

Proposition 2: in accord with this proposition, the results of the study suggest that innovative entrepreneurs identified opportunities more thoroughly than less innovative entrepreneurs using more diverse sources of information and a relatively greater variety of business connections, particularly local business associations. The results are in agreement with the fact that in this phase, less-innovative entrepreneurs interacted with a very limited circle of contacts, mainly family members.

The results of the study indicate that, during the phase of Forced Gestation, the entrepreneurs did indeed engage in networking to access critical resources (Hite & Hesterly, 2001; Kantis et al., 2002; Kock & Galkina, 2008; Larson, 1992; Smith & Lohrke, 2008). However, there was some variety in the types of partners the entrepreneurs approached, and their motivations for this seemed to derive from the different levels of trust they had in these potential partners.

Despite the small number of firms in this study which could be described as innovative, the difference between the innovative entrepreneurs and the less-innovative ones is that the innovative entrepreneurs were more likely to secure needed resources by approaching weak 'non-traditional' ties, which are by definition cognitive trust-driven (Smith & Lohrke, 2008). As such ties are outside the normal social circle of family and friends, this allowed the innovative entrepreneurs access to a greater variety of opportunities and information channels, not normally available through strong 'traditional' ties (Aldrich & Carter, 2004). Granovetter (1994) and De Jong and Hulsink (2008) have defined customers as a type of weak[86] tie, and as such they are cognitive trust-driven relationships (Smith & Lohrke, 2008). The typical non-traditional contacts approached by these entrepreneurs were large-scale customers.

Nevertheless, even though the innovative entrepreneurs in this study were more inclined to network with weak ties (customers and other non-traditional contacts), they also made use of traditional contacts or strong ties (mainly family). This resulted in a more balanced network consisting of both weak and strong ties (Uzzi, 1997). In this phase, research has shown that a greater spectrum of weak ties (business connections and large firms) in addition to the traditional strong ties (family) allows innovative entrepreneurs to identify business opportunities more thoroughly.

This study also indicates that the innovative entrepreneurs are motivated to network by a perceived business opportunity (Angelelli, Llisterri, Kantis, & Tejerina, 2006), and, consequently, to gain access to commercial resources which will help them achieve their aims (Ahuja, 2000). A business opportunity

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86 Also known as weak signals (Julien, 2005), calculative-based networks (Hite & Hesterly, 2001), cognitive trust-based networks (Smith & Lohrke, 2008), calculative trust networks (Williamson, 1993), etc.

is regarded in the literature as an 'entrepreneurial opportunity', i.e. a situation in which new goods or services can be introduced and sold at a higher price than their costs of production (Casson, 1982); in other words, the profit motive.

The first priority of most (if not all) entrepreneurs is to increase their sales. However, the innovative ones understand that the best way to achieve this is by seeking partnerships with large-scale customers, which also allows them access to expertise and market information (J. Freeman, 1999). The literature shows that customers are usually involved as a source of opportunity (De Jong & Hulsink, 2012), and in this study the large customers targeted by the innovative entrepreneurs were indeed seen as an avenue to exploit a sales opportunity (rather than as sources of innovation) (Von Hippel, 2009). The financial benefits to be gained by forming partnerships with large customers clearly provide an opportunity to increase sales. The influence of these factors on the network formation process are described in Chapter 7.

The emphasis on 'opportunity-seeking' as a motivational factor for networking among innovative entrepreneurs has been defined as 'opportunity entrepreneurship' (Angelelli et al., 2006). Opportunity entrepreneurs are viewed as entrepreneurs who start their businesses in order to pursue an opportunity (Reynolds et al., 2005), or to take advantage of a unique market opportunity (Reynolds, Bygrave, Autio, & Hay, 2002); once again, the profit motive. This, perhaps obvious fact is confirmed by the results of this study, in that all the innovative entrepreneurs displayed an eagerness to network any time they saw an opportunity to increase their sales, i.e. to make a profit.

Unlike the innovators, the less-innovative entrepreneurs were usually motivated to network by one simple thing; they had no other choice. Block and Wagner (2006, 6) have managed to categorize this into three types of difficulties: either they were made redundant, they were fired or their place of work closed down. The less-innovative entrepreneurs faced at least one of these conditions before being motivated to seek a partner for their enterprise.

Both Llisterri et al. (2006, 2) and Block and Wagner (2006, 6) talk about 'necessity entrepreneurs', who are people who were in paid employment before, but were either laid off or had their place of work closed. As Reynolds et al. (2002) put it, “a necessity entrepreneur is someone who becomes an entrepreneur because it is the best option available”. Based on the evidence of this study, it is clear that seeking a partner was not only the best, but often the only alternative available to the interviewed entrepreneurs in the IPVS.

Llisterri et al. (2006, 2) emphasizes the low level of education of ‘necessity’ entrepreneurs. The literature consistently suggests a connection between the entrepreneur's level of education and the performance of his/her firm (Kantis & Angelelli, 2005; Kantis et al., 2005; Kantis et al., 2007; Kantis et al., 2002). This study confirms that the level of education among innovative entrepreneurs was higher than that of the less-innovative entrepreneurs (most of whom only had a secondary education).

If you are poorly educated and broke, there is not much chance of a bank or any other profit-making enterprise giving you a loan. Therefore, even if these

necessity entrepreneurs are motivated to network, they inevitably approach what Birley (1987) and Larson and Starr (1993, 6) have described as 'pre-existing contacts (family) in search of critical resources'. As Starr and Macmillan (1990) have clearly shown, family and friends are not only the most valuable and low-cost channel for critical resources but they are also a way to avoid 'opportunism and uncertainty' (Aldrich & Carter, 2004), i.e. you can trust your family and friends. Many other researchers have come to the same conclusion (Aldrich & Zimmer, 1986; Smith & Lohrke, 2008; Zimmer & Aldrich, 1987).

It is clear that in this phase, the less-innovative entrepreneurs, i.e. those driven by necessity, sought to network with family because they were looking for long-term and reliable relationships that 'encompass implicit reciprocity, affective trust' (Smith & Lohrke, 2008), offer 'emotional closeness, and are mutually beneficial' (Aldrich & Carter, 2004), i.e. relationships which embody the concept of strong ties.[87]

In the environment in which the entrepreneurs in this study operate, there is no trust in public institutions. Because of the documented and endemic corruption revealed in the respondents' testimonies, budding entrepreneurs have no other choice than to trust that their families will not betray them. This behaviour, known as 'personal[88] trust' (Williamson, 1993) is also known as 'affective trust' (Smith & Lohrke, 2008) and is unavoidable in these circumstances. Nevertheless, such a networking strategy inevitably leads to the phase of Strategic Stagnation described in this thesis.

All in all, the results of the phase of Network Gestation described in this study add to our understanding the motivations which drive the innovative and less-innovative entrepreneurs to seek out a particular partnership. The study of this phase makes clear that, driven by a business opportunity (increased sales) innovative entrepreneurs were more inclined to seek the support of weak ties (cognitive trust-driven) while the less innovative entrepreneurs were usually forced by a critical situation (financial problems) to seek the support of strong ties such as family (affective trust-driven).

Previous research has established that both of these types of trust are not mutually exclusive, because both are likely to exist at some level in every instance of trust (Lewis and Weigert, 1985). The research has shown, however, that either type of trust may be more prominent in particular stages of a relationship (Lewicki and Bunker, 1996). This study confirms that the interplay of these types of trust seems not to be mutually exclusive, but relationships based on cognitive trust are more common among innovative entrepreneurs while relationships based on affective trust are more common among the less-innovative entrepreneurs.

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87 Identity-based networks (Hite & Hesterly, 2001), affective trust-based networks (Smith & Lohrke, 2008), personal networks (Williamson, 1993), etc.

88 Personal trust assumes that the partner will not behave in a way that is detrimental to the relationship even when there are not written or explicit rules set out. These means that theses relations are governed by norms, values and codes inherent in a business environment and or a wider society (Welter & Smallbone, 2006). Personal trust gains importance in environments where institutional trust is lacking and the normative framework is unstable (Radaev, 2005).

Phase of Network Birth

The major findings of the Network Birth phase are mostly in line with Propositions 3 and 4.

Proposition 3: partially in line with this proposition, the results of this study indicate that the **e**ntrepreneurs – particularly the innovative ones – continued their efforts to select and expand their networks to include more weak ties, though rarely with bankers, lawyers and accountants. Moreover, the entrepreneurs placed greater reliance on partnerships based on affective trust (family members). The literature suggests that at this stage the budding entrepreneur will place equal reliance on both strong and weak-tie relationships, but this was not quite what happened. This phase also saw the formalization of the entrepreneur's relationships.

Proposition 4: the results of this research correspond with this proposition in the sense that entrepreneurs, especially the innovative entrepreneurs, used their strong and weak tie partners to access both monetary (increased sales) and non-monetary (information) resources more efficiently. Furthermore, the innovative entrepreneurs turned out to have a higher level of education and more work experience than their less innovative peers, which possibly assisted them in making more extensive use of their business connections.

The evidence suggests that in this stage, the firms preferred to formalize their relationships with written agreements in order to ensure their partners' compliance. This accords with the research of both Frankel et al. (1996) and Kock and Galkina (2008, 4) who claim that a written contract provide firms with 'stability and a lower level of risk' (Frankel & Whipple, 1996). Choi and Hartley, (1996) make the same point when they state that, 'By making a written contract, entrepreneurs ensured mutual compliance in terms or quality, fulfilment and product guarantee.'

Once the innovative entrepreneurs in this study had defined their parameters of governance they proceeded to expand their relationships with non-traditional contacts, in order to both increase their sales and acquire new knowledge from non-monetary resources, such as the local municipal authorities and business associations (Gupta, Smith, & Shalley, 2006). This is known as 'exploration' (March, 1991). Through exploration, these firms gained access to new knowledge and resources, from a variety of resources such as trade fairs, media coverage and specialized training.

The less-innovative entrepreneurs would also have preferred to network using formal agreements (Frankel & Whipple, 1996), especially with their minor partners (small customers), in order to ensure their partners' good behaviour (Kock & Galkina, 2008). It is also evident that once the less-innovative firms had fixed their mechanism of governance, they only concentrated on strengthening their existing relationships with traditional contacts (mainly family). In other words, these firms focused on the use of old knowledge (Gupta et al., 2006), i.e.

they relied on what March (1991, 71) has called 'exploitation' of existing partners' resources.

True, this 'exploitation' of existing resources can be effective. Many of these firms utilized the available financial resources and knowledge from family in a variety of productive ways to develop their firm's operational procedures, such as accounting, management, logistics, marketing and sales, production, design, manpower and borrowing equipment (non-monetary resources) (Kantis et al., 2005; Kantis et al., 2002). However, such practices do not extend their opportunities to innovate and grow. In effect, the literature confirms that only a minority of the innovations in small firms are supported by strong ties such as family and friends, and their contribution to innovation is not as dominant as the contribution of suppliers, customers and universities (De Jong & Hulsink, 2012). Clearly, in this phase the contribution of family members was mainly aimed at assisting the less-innovative firms to survive.

The testimonies clearly show that, through bitter experience, both the innovative and less-innovative entrepreneurs preferred formal written contracts because they were distrustful of informal mechanisms of governance such as verbal agreements. Nearly all the entrepreneurs had tried relying on verbal agreements, but they had all been the victims of numerous scams. Zahra et al., (2006, 547) have defined the concept of an excess of relational[89] trust, or 'over-trust'[90]. This precisely describes the case of the entrepreneurs in this study, who all got scammed simply because they seemed to trust the other party to the agreement far beyond what would be considered 'acceptable limits' as defined in the literature.

The fact that the entrepreneurs in this study seemed to 'trust their partners too much' (Zahra et al., 2006), may inevitably led to what Granovetter (1985) has termed 'malfeasant' behaviour. This means that the entrepreneurs are unable to predict the future development of a business relationship because they were unable to assess the intentions of the other party and the nature of the relationship (Goel & Karri, 2006).

We are dealing with people here, and the entrepreneurs in this study are nothing if they are not human. Perhaps they chose not to predict the future, because this would have involved 'confronting situations where objective risk assessments were not possible' (Goel & Karri, 2006), i.e. who is a real friend? The fact that the entrepreneurs were over-focused on increasing their sales at all costs may have activated the button of 'over-trust', causing them to make serious errors of judgment (Zahra et al., 2006) through naivety, ignorance or cognitive immaturity (Deutsch, 1977).

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89 Relational trust is based on the social interaction that take place between two or more individuals. Where relational trusts prevails people become more interested in maintaining their social interactions while de-emphasizing potential losses or gains. When relational trust becomes excessive, existing power centres are likely to favour ideas from familiar sources that they already know, value and trust. Sources that are not familiar are likely to be overlooked, ignored or even suppressed (Zahra, Yavuz, & Ucbasaran, 2006).

90 Entrepreneurs tend to trust more than what is warranted by a particular decision or situation (Goel & Karri, 2006).

In other words, the entrepreneurs tended to ignore evidence that ran counter to their previous assumptions of trustworthiness (Nooteboom, 2002). It seems clear from the testimonies that the entrepreneurs could have avoided the scams which were pulled on them, but their poverty and desperation to sell their products blinded them. Such are the benefits of hindsight.

Proposition 3 also predicts the same reliance on relationships based on cognitive trust as on those based on affective trust (Smith & Lohrke, 2008). However, the results of this study show that, in the Network Birth phase, this ideal state of equilibrium between strong ties and weak ties did not take place. There is no single explanation for this. Nevertheless, it can be said that the innovative entrepreneurs focused more on exploring weak ties partnerships, whereas the less innovative entrepreneurs concentrated on exploiting their family partnerships. In both cases, this might be explained by an excess of trust or 'over-trust' (Zahra et al., 2006) which eventually leads to a 'lack of trust' because of the experience of being repeatedly scammed and cheated. This inevitably leads the less innovative entrepreneurs to concentrate on strengthening their family partnerships.

Furthermore the results suggest that both the entrepreneurs' education level (already touched upon in the phase of Forced Gestation) and their prior work experience seemed to be greater among the innovative than among the less-innovative entrepreneurs. This is also in line with the literature, which generally argues that both an entrepreneur's education and prior work experience are linked to firms with a higher level of performance, so-called dynamic firms (Kantis et al., 2005; Kantis et al., 2002).

This phase also brings to light how the lack of trust in institutions becomes a major inhibitor within the network creation process. This last element is key, because it appears to be the decisive factor causing the stagnation of the firms' networking efforts.

Phase of Strategic Stagnation

Proposition 5: The results of the study do not accord with this proposition, basically because effective control and coordination was not achieved. In addition, the regulatory effects of moral obligations, trust, and concern for preserving reputations were not sufficient to prevent opportunistic behaviour. Indeed, in practice none of these mechanisms seemed to matter to the majority of entrepreneurs. Furthermore, contrary to this proposition, the role of the individual entrepreneur is still dominant, and his/her networking efforts stagnate in operational and short-term strategic partnerships based more on affective than cognitive trust.

Proposition 6: The results of this research only partially accord with this proposition. For instance, the entrepreneurs seemed unable to use their networks to deal with the firm's management challenges, since most of them were instead focused either on selling or surviving. The relatively better access to business networks did play some beneficial role among the innovative entrepreneurs, but not to the predicted extent. Although there was evidence that the innovative entrepreneurs did indeed continue using more business connections than the less-innovative entrepreneurs in order to broaden their client base, these efforts were not enough to overcome the stagnation of their network-building efforts.

The evidence from this study indicates that in the IPVS in Peru, this third phase does not fit with the established theory of network building. In most prior research this third phase should be one of 'Network Crystallization', but this clearly did not take place among the firms in this study. Instead, this third phase was characterized by a state of stagnation due to a lack of trust, principally in the institutional setting, e.g. public support institutions and banks, and indeed between the entrepreneurs themselves. This led to the stagnation of the firms' networking initiatives, with the less-innovative firms being stuck in their (largely operational) networking initiatives, and the innovative firms being unable to expand their nascent strategic networking initiatives. In fact, the leading role of relationships based on cognitive trust which should have occurred in this phase was only minimally fulfilled by some of the innovative firms, and did not occur at all among the less-innovative firms.

The data from this study reveals that the innovative entrepreneurs had established a few 'relationships of a strategic nature' (Larson, 1992). These were mostly with large customers and, to a lesser degree, with business associations and public support institutions. However, none of these strategic efforts were able to boost the firms to higher levels of innovation.

Larson, (1992) has described the concept of strategic integration as a long term collaboration carrying the possibility of significant and positive impact on the competitive position of the company through the improvement of old products or the development of new products, innovations and quality improvements. This did not happen. The reason for this seems to be the constant and pervasive lack of trust, the reasons for which have already been identified in the phase of Forced Gestation, and characterized in the phase of Network Birth.

The level of operational networking is key to the concept of 'operational integration' defined in Proposition 5. This states that firms are operationally integrated when they are able to enhance their communication and connect the administrative apparatus of each firm in the network (Larson, 1992). In this study, however, the testimonies clearly reveal that the entrepreneurs used networking to relieve their operational needs, but there is no evidence to indicate that they linked their administrative apparatus with that of their

partners. Thus, in this case the less-innovative entrepreneurs only achieved operational networking, not operational integration.

This over-reliance on operational networking highlighted the less-innovative firms' dependence on resources available through strong ties high in affective trust (Kantis et al., 2005; Kantis et al., 2002). This resulted in 'high redundancy' (circulation of repeated information) and support 'habitus' (Burt, 2004). These factors prevented the firms from developing new 'fruitful exchange relationships' (B. Shaw, 1998) or from forming partnerships with weak ties. Their lack of networking initiatives with weak ties in this phase merely succeeded in confirming their survival status. This finding is consistent with previous research, which shows that strong ties have a positive impact on business survival, but a much smaller impact on sales growth (Brüderl & Preisendörfer, 1998) and innovation (De Jong & Hulsink, 2012).

This study does show that the less-innovative firms had attempted to carry out strategic networking through the formation of consortiums (Brusco et al., 1996). However, these consortia failed because of what the literature terms as 'cultural factors' (Brusco et al., 1996; Jones, Hesterly, & Borgatti, 1997). Such cultural factors are described as a secondary set of rules that derive from the community to which all the companies belong (Brusco et al., 1996). The theory suggests that whoever breaks these rules will be excluded from the community and can no longer work within it (Brusco et al., 1996). Interestingly, this study revealed that although the entrepreneurs all endorsed the concepts of more trust and honesty, in practice they confessed that even these basic rules were broken constantly by many of the entrepreneurs in the park (even themselves) and there did not appear to be any consequences for the transgressors. This is surely another indicator of the importance of robust institutional mechanisms for extending the networking process, which are so clearly lacking in the case of the industrial park of Villa El Salvador.

The second reason for the failure of the strategic networking efforts of both innovative and less-innovative firms has to do with the high level of 'institutional distrust' (Welter & Smallbone, 2006; Williamson, 1993), which affected the depth and richness of the firms' exchanges (Hite, 2003) and ultimately provoked the stagnation of the firms' networking processes.

As the evidence from the entrepreneurs' testimonies clearly shows, their institutional distrust may have two explanations. The first is what Zahra et al. (2006, 547) have described as an excess of 'relational trust', also referred to by Williamson (1993) as 'personal' trust. The park's entrepreneurs were, in layman's terms, simply too naïve and trusting, which of course resulted in them being scammed[91]. Of course, in theory there is no reason for the entrepreneurs to associate their being cheated by a 'friend' or a partner with the institutionalized networking mechanisms. If (as their testimonies show) they get scammed by an associate, or just a passing conman, that is not the fault of

[91] Entrepreneurs entered into new relationships with some degree of trust and a single betrayal made them more perceptive and wary (Neergaard & Ulhøi, 2006) and ultimately very distrustful.

the municipality, or the government. But, as this study has revealed, people are not always logical. Especially when they are operating in an environment where poverty is rife and crime is commonplace. Naturally, if there were a well-organized institutional framework for networking in place, (as there is in Europe, for example) this would compensate for the risk of getting scammed. It would provide channels through which an aggrieved party can get justice, i.e. through the business associations, the police, or even the courts.

However, the testimonies of the entrepreneurs in this study clearly show that the institutional business framework in Peru, (and in most developing countries) does not function well. Williamson, (1993) emphasizes the importance of the political system, the public institutions and the financial entities in defining codes of conduct. Unfortunately, the entrepreneurs' testimonies clearly reveal that there is endemic corruption in the public sector, government, municipality, public procurement institutions and banks in Peru, so there is no institutional framework in which they can trust. Hence, their exceptionally deep distrust of authority.

In terms of their innovativeness, this ingrained institutional distrust may well be one of the factors that compels the firms to limit themselves to only generating incremental changes (Zahra, 1991). This is manifest in the fact that not one of the firms in the study actually showed any signs of a promising radical innovation. This aspect of 'innovation isolation' faced by these firms is also corroborated by the literature, which suggests that firms that exclude customers, suppliers, government and science institutions and banks from their networks reduce their innovation possibilities (De Jong & Hulsink, 2012). This is exactly what has happened to the firms in this study.

In sum, the solidification of successful network-building phases such as 'early development' (Kantis & Angelelli, 2005) or 'network crystallization[92]' (Larson & Starr, 1993) described in the existing literature, did not take place among the firms in this study. Instead, this study reveals that in this phase, a 'lack of trust' appears to be the 'stagnation' factor that inhibits less-innovative firms transitioning from operational to strategic networking, and prevents the innovative firms from developing their short-term elementary strategic initiatives. Thus, in this study, 'network crystallization' is better described by the term 'Strategic Stagnation'.

In essence, the data from this study highlights the importance of relationships with weak tie partners (cognitive trust-driven) as natural conduits for a small firm's growth and innovation. Of course, such relationships must be used in a combined manner (using only customer-based contacts was not enough to boost the innovative firms to a higher level of innovation).

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[92] Network Crystallization' is a theoretical phase referred by existing approaches to signal a successful network-building, in terms of a stable, committed, revenue-generating, inter-organizational exchange relationships which extend beyond the earlier idiosyncratic and personalized relationships of the entrepreneur (Larson & Starr, 1993).

The study also highlights the relevance of 'institutional trust' as a necessary condition for the implementation of a successful partnership. As Welter and Smallbone (2006, 466) have stated, institutional trust allows for the use of 'anonymous sources' in business relationships. There must be institutionalised mechanisms, such as legal safeguards, which an entrepreneur can resort to if a business relationship goes wrong. Institutional trust also guarantees stability and predictability in the institutional context, and legitimizes formal institutions by institutionalizing social norms and values (Welter & Smallbone, 2006). The malfunctioning of these legal safeguards in Peru (Villarán, 2010) exacerbates the stagnation of the small firms' networking. If nothing else, the results of this study show that small firms in the IPVS are in need of some adjustments to their networking patterns, if the objectives of their networking are the search for growth and innovation.

8.3 Practical Implications

The three phases of the network-building process among innovative and less-innovative firms described in this study reveal that it is the 'lack of trust' in institutions that compels firms to concentrate on networking with strong-tie partners. Such networks do improve a less-innovative firm's chances of survival, but they seem to do little to encourage growth and innovation.

The repeated testimonial evidence from the entrepreneurs in this study clearly shows that they do not trust public support institutions, contract procurement procedures, the judicial system, banks, politicians, government officials or even each other, and it is this pervasive lack of trust which differentiates their networking efforts from those entrepreneurs in other, more developed economies.

Previous research has clearly shown that relationships based on cognitive trust-driven partners, such as customers, suppliers, banks and institutional partners (Kantis et al., 2005; Kantis et al., 2002; Smith & Lohrke, 2008), and science and government support organizations (De Jong & Hulsink, 2012), is a vital element in a small firm's ability to innovate (De Jong & Hulsink, 2012). However, it is precisely these types of partners that are missing in the network structures of the studied firms.

Therefore, based on the results of this study, there are five areas of network building that need to be focused on by the small firm entrepreneurs in the IPVS. These are as follows.

Firstly, the government must instigate an educational campaign to make the entrepreneurs aware of the nature and importance of business networks. As the firms transit from the phase of Forced Gestation to the phase of Network Birth they should be encouraged to gradually reduce their excessive dependence on strong ties and balance their networking efforts by involving more weak ties, which are by their very nature more driven by cognitive trust. This does not mean that the support of strong family ties should be discarded,

i.e. there is no need to chuck out the baby with the bathwater, but it does imply that the firms should proactively form partnerships with large-scale customers, for instance. Unfortunately, at present, only a few of the innovative firms in this study showed any signs of doing this. In addition, they all need to network more effectively with other possible partners such as suppliers, banks, technical institutions (research centers, universities) and government support institutions. The firms must be aware that the success of their innovation efforts is proportional to the increasing involvement of weak ties (cognitive trust-driven) which may also furnish them with non-monetary resources such as information and technology.

Second, it is vital to rebuild trust between the entrepreneurs in the IPVS so that they can take advantage of the possibility of networking with each other, forming consortia, etc. Therefore, an open-ended pilot program should be implemented aimed at formally promoting efficient network-building; especially between firms and outside partners (weak ties). This program would need to be backed up with an enforceable code of conduct, including a system of public rewards for those entrepreneurs who succeed in promoting network-building. There would also need to be a system of sanctions and penalties for those entrepreneurs who participate in the program but behave in a dishonest manner. This program could be jointly supported by the municipality, local business associations and even local church representatives, who could form a committee to monitor adherence of all stakeholders to the code of conduct. In a strongly catholic country like Peru, the last bastion of hope for honesty still rests with the local church.

Thirdly, the entrepreneurs need to regain their trust in politicians and government officials, which means that the government has to create a climate of transparency and honesty in order to facilitate small firms' network-building with public institutions. The best way to achieve this, however, would be from the bottom up, rather than the top down. The entrepreneurs could create a local task force to foster awareness-building among local politicians of the relevance and benefits of 'being honest'. This task-force would operate through the medium of training seminars, discussion forums, media campaigns, databases of the histories of local politicians, and a system of public recognition for honest politicians. Such an initiative would be entirely in line with the original objectives laid down in the 1980s for the development of the IPVS, and with the aspirations of the park's founders. This task force might be led by representatives of the park associations, the municipal authorities of Villa el Salvador, the major political parties, social organizations, and once again, representatives of the local church. It should be emphasized again that in a strongly religious country such as Catholic Peru, the church is one of the few public institutions which still retains the faith and trust of its citizens.

Some tentative steps have already been taken in this regard. Regulatory actions have recently been initiated by the National Elections Office (ONPE) to monitor the veracity of the personal information and financial resources provided by politicians. However, this is only a first step. The testimonies of the

entrepreneurs in this study clearly show the deep level of institutional distrust, and the best way to combat this is through accountability and transparency. There needs to be a concrete initiative to monitor the ethical behavior of politicians. Furthermore, such an initiative must be controlled by people in whom small entrepreneurs, such as the ones in this study, can trust.

Fourth, to rebuild the entrepreneurs' trust in banks, public procurement authorities, and other related support institutions, the small firms of the park have to re-examine the need to increase and leverage their interaction with these entities. Therefore, a special service to address small firm's complaints could be created within the framework of the National Institute for the Defense of Competition and the Protection of Intellectual Property (INDECOPI). This would need to be an independent and highly-specialized public agency in charge of market promotion and protection of consumers' rights.

This is not an entirely new idea, but this study highlights how vital this is for the firms in the IPVS. Presently, the INDECOPI service does deal with the complaints from the general public, but this service only disseminates general information for consumers, and is already severely overstretched by the 1,500 complaints per month that it receives. At present, any complaint about dubious process made by one of the small firms in this study would be put on the waiting list of the complaints service, and would have to wait months before it is even acknowledged.

The small firms in this study clearly need a tailor-made service to deal with their complaints. This would have to accelerate the investigation of abuses committed by banks and other institutions. This would increase the small firm entrepreneurs' trust in the legal apparatus, and prompt them to initiate further interaction and network-building with these entities.

According to figures supplied by INDECOPI, 6,048 complaints out of 17,086 filed during the period July 2010 and August 2011 were concerned with the fraudulent activities of banks and other financial institutions. Therefore, a further initiative could be that the small firms could seek an agreement with the Association of Banks of Peru (ASBANK), through which designated personnel in each bank would be devoted to dealing with such complaints on the spot. Although ASBANK does have a Financial Ombudsman, this is a general service for all financial customers without distinction, in addition to which, it can only be approached thirty days after the alleged malpractice.

Fifth, the innovative entrepreneurs of the park have to be made aware that by establishing only sporadic and occasional short-term strategic partnerships, they are substantially limiting the efficiency of their network building efforts. Instead they should aim for building long-term strategic partnerships, particularly with weak ties, who according to the literature are capable of nurturing small firm's innovation. The relevant weak ties are: suppliers, customers, banks and science-based and government support organizations (De Jong & Hulsink, 2012). Of these, it is the small firms' suppliers and customers who are regarded as the main sources of innovation (De Jong & Marsili, 2006; Evangelista, 2000).

8.4 Strengths and Limitations of this Study

The adoption of any research approach and the use of all methods of collecting and analyzing data necessarily involve 'trade-offs' (Patton, 1990, 2002). The findings presented here demonstrate that the adoption of a qualitative research paradigm and using a case-study methodology was both useful and necessary. The investigator was able to get close enough to the firms to penetrate their realities and uncover vital evidence for understanding 'how' firms network (Yin, 2008). This practical, field-based study has three particular strengths.

One strength is that this is the first study carried out in a developing country that aims to understand how a tranche of founding entrepreneurs from innovative and less-innovative small firms in an industrial park build their networks. The research is original in that it constitutes a first step towards a better understanding of the network-building process among innovative and less-innovative small firms. It attempts to isolate the major similarities and/or differences between these firms during the network-building process and defines some of the major obstacles that such small firms faced during the network-building process.

A second strength is that a study of this nature generates the possibility of finding new theoretical avenues to explore in any future study of the network building process. Such a theoretical avenue did indeed materialize from this investigation with the emergence of a new model to describe how both innovative and less innovative small firms located in the IPVS network. Although it has been suggested that theory building from case studies is limited by the investigator's preconceptions, in fact, just the opposite is true. The constant juxtaposition of conflicting realities tends to "unfreeze" the researcher's thinking, and so the process has the potential to generate theories with less researcher bias than theories built from incremental studies or armchair, axiomatic deduction (Eisenhardt, 1989; Eisenhardt & Graebner, 2007).

The third strength is that this was a field-based qualitative study of real people in real-life situations. As such, the resultant model in this study is likely to be empirically valid because the research process with a case study is intimately tied with the evidence. This increases the likelihood that the resultant model will be consistent with empirical observation. In well executed case research, investigators must respond to the data right from the outset of the research (Eisenhardt, 1989). This closeness can lead to an intimate sense of things, "how they feel, smell, seem" (Mintzberg, 1979). This intimate interaction with actual evidence often produces theory which closely mirrors reality (Eisenhardt, 1989).

Nevertheless, in common with any research project, the applied method was constrained by the method chosen (E. Shaw, 1999). There are four general limitations to the study which, although they do not invalidate the key findings of the investigation, are worthy of note.

First, the detailed understanding of small-firm network-building on which this research focused required that the raw data had to be the experiences and perceptions of their founding entrepreneurs involved in the process. In collecting such data, it is possible that, despite the methodological procedures, the respondents were not always truthful (Yin, 2008). Their testimonies may have differed from the 'real story' for a number of intended or unintended reasons, such as a fear of sharing confidential or compromising information, a desire to please the investigator by only revealing what is convenient, or simply forgetting to mention some vital element of a story, etc. However, the vibrancy and consistency of the testimonies gathered from the wide range of firms interviewed over three sectors indicates a high degree of veracity.

Secondly, although a conscious effort was made to maintain an objective and unbiased stance throughout the research process, it is always possible that the results might be skewed by traces of the investigator's personal and idiosyncratic bias (Yin, 2008). However, the fact that the interviews were conducted and the direct observations were made in the company of an impartial (but not unprofessional) observer helped to counterbalance any such bias. The support of this secondary investigator was an important factor governing the validity and reliability of this study.

Third, the small firms' network-building processes revealed in this study were extracted primarily from the testimonies provided by their founding entrepreneurs during the interview process, so the notion of time and changes to their network-building process over time was explored relying on the entrepreneur's own subjective memory of how things happened. The ideal strategy probably would have been to explore the network building process over different time-periods or by personally observing it on a daily basis over a longer period of time. However, neither of these two alternatives were possible for two reasons: limited financial resources and the deep lack of trust of the entrepreneurs, which extended to outside researchers. The presence of a 'fly-on-the-wall' observer on their premises, or repeated visits over a long period of time would have immediately put them in 'defense mode' and would have compromised the quality of the data. Such investigative procedures would probably be more suitable for large firms, or for firms in developed countries where entrepreneurs are more open-minded and there are more formal institutional structures to foster trust in authority, or outsiders.

In the present context of the small firms in the IPVS, the applied approach can be regarded as the most appropriate one. The strengths of this method of data collection outweighed its shortcomings because the interviews used the 'cold calling' approach which caught the entrepreneurs off guard, leaving them no opportunity to hide the raw reality of their daily working practices or to make up or embellish their accounts of their network-building experiences. The more intensive focus on a few firms which might be the ideal method in a case study, was positively compensated for by widening the number of firms interviewed and adjusting to the reality of the local context of working life in Peru.

Fourth, the extent to which the findings from this research can be generalized to a wider population of small firms might well be constrained (Yin, 2008). As the aim of this research was to generate a substantive understanding, rather than to test the validity and reliability of a hypothesis deduced from previous research, the resultant findings cannot be 'statistically generalized' to a wider population of small firms. Nevertheless, this study was not aimed at achieving a 'statistical generalization', but rather an 'analytical' one. As stated above, there are inherent limitations to every research approach, and it is the job of the researchers themselves to learn how to deal with them.

8.5 Areas for Future Research

One of the most relevant findings of this investigation, apart from its specific characterization of the network-building process among innovative and less-innovative small firms in the IPVS, is the so-called 'lack of trust'. This seems to be the invisible force that makes firms network primarily with strong ties, such as family members, and thus limits the firms to their current survival mode. The lack of trust stagnates firm's network-building efforts and prevents the firms from accessing resources that are generally only available from other types of partners (weak ties) who are better-equipped to support their growth and innovation efforts.

There is still a lack of empirical evidence from process-oriented studies, which would allow a researcher to capture in more detail how 'trust' evolves during the network-building process, particularly affective and cognitive trust. This opens up a range of intriguing research opportunities. In fact, this study has highlighted three lines of investigation which may increase our understanding of the influence, evolution and implications of the issue of trust within the small firm's network-building efforts.

First of all, more process-oriented investigations on trust-development and trust-breaking behavior during a small firm's network-building process are needed, especially in developing economies. Such research would shed more light on the positive and negative effects that trust (and the lack of it) has on small firms' network-building. This line of investigation could also focus on the role of trust in public/private support institutions within the network-building process in micro-firms in developing countries.

Second, there is an associated need for a combination of qualitative/quantitative research aimed at assessing how relationships based on affective and cognitive trust evolve among small firms as they develop their networks. What are the signposts and stages which signal the evolution of affective and cognitive trust between different types of potential network partners, such as suppliers, science and government support organizations during a small firm's network-building process?.

Third, more local and context-bound investigations, such as this one, are needed in other developing economies. These studies could later be collated

and used as the basis for a comprehensive international comparative analysis of network development among small firms, which could be used to verify, enrich and expand the findings from this study. For instance, more studies that seek to compare the network building process between different types of entrepreneurs. For example, between among innovative and less-innovative firms at the individual level, the team level, the organizational level and the level of a cluster of organizations. Further research in these areas is undoubtedly justified to allow a greater understanding of how small firms build their networks and how, and to what extent, they are able to enhance their chances to innovate and grow by doing so.

8.6 Summary of Chapter 8

This chapter analyzed the results of the study from five perspectives. The first section reflected on the obtained results vs the research objectives set out in Chapter 2. The primary objective of this thesis was 'to understand the network-building process in innovative and less-innovative small firms operating in the industrial park of Villa el Salvador'. This was accomplished through an exploration of the network-building process among eight innovative and twenty-seven less-innovative small firms. The major similarities and/or differences between innovative and less-innovative small firms during the network-building process were identified, as were the major obstacles faced by the small firms' during the network-building process.

This section introduced a variant model to describe the network-building process among the studied firms, which consists of three stages: Forced Gestation, Network Birth and Strategic Stagnation. It showed that the phase of Strategic Stagnation is caused by the entrepreneurs' lack of trust in government-run institutions, banks, and between the entrepreneurs themselves. This is the factor which seems to be behind the firms' subsequent network-building stagnation.

The section on the theoretical implications discusses the findings in relation to the initial model approach developed in Chapter 5. In a nutshell, Propositions 1, 2 and 4 seem to be in line with previous research, Propositions 3 and 6 are partially fulfilled whereas Proposition 5 deviates from the predicted findings for two reasons. First of all, with regard to Proposition 3, the small firms in this investigation placed a higher reliance on their partnerships based on affective trust (family) than they did their partnerships based on cognitive trust, which contradicts the outcome predicted in the literature. Second, with regard to Proposition 5, the small firms in this study could not achieve strategic partnerships mainly because of the existence of a generalized 'lack of trust'.

Third, with regard to Proposition 6, small firms failed to increase and balance their network-building efforts with weak tie partners as they transited from the stage of Forced Gestation to Network Birth. This, in turn, led all the firms to the phase of Strategic Stagnation. Nearly all the firms in this study were

mainly inclined to network with strong ties, although there was some effort among the innovative firms to network with weak ties (mostly existing large customers). This was primarily due to the 'lack of trust' issue. Finally, although the existing literature does not offer any explicit comparison between the networking-building process of innovative and less-innovative small firms, this does not explain why a 'crystalized network' did not materialize for any of the firms in this study. This study certainly indicates that it is not the level of innovation which led to the Strategic Stagnation described here, but rather a generalized lack of trust which affects both innovative and less-innovative firms alike.

Based on the results, the third section on practical implications presents five specific recommendations addressed to participating entrepreneurs in the study and aimed at expanding their firms' capacity for network-building: a) the firms should be made aware of the importance of reducing their excessive dependence on affective trust-driven strong ties and develop more balanced networks by involving more cognitive trust-driven weak ties; b) to rebuild trust among entrepreneurs, so that they reconsider the possibility of networking with each other, an open-ended pilot program should be implemented aimed at formally promoting networking; especially between firms and outside partners (weak tie partners); c) to regain trust in politicians and government officials and to promote the climate of transparency and honesty necessary to facilitate network-building, the entrepreneurs should create a local task force to foster awareness-building among local politicians of the relevance and benefits of 'being honest'; d) to restore the entrepreneurs' trust in banks, public procurement authorities and other institutions, a special service is needed to address small firms' complaints about dishonest practices, and; e) the entrepreneurs in the park should aim at building long-term strategic partnerships, particularly with weak-tie network partners who, according to the literature, are capable of nurturing small firms' innovation and growth. Such partners would include suppliers, customers, banks, science-based and government support organizations (De Jong & Hulsink, 2012).

The fourth section highlights the major strengths and limitations of the study, and the fifth section of this chapter recommends the need for further studies that analyze and compare the role of relationships based on affective trust as compared to those based on cognitive trust within the network building process, as well as its influence on growth and innovation, particularly among small firms and entrepreneurs in developing countries.

9 CONCLUSIONS

This thesis studied the network-building process among small firms operating in the industrial park of Villa el Salvador in Peru from the entrepreneurs' perspective. It resulted in the emergence of a new descriptive model which complements traditional approaches to our understanding of the network-building process among small firms in developing economies. It includes new evidence on the major obstacles faced by these firms throughout the network building process. It clearly reveals that 'lack of trust' is a major network-building inhibitor and that the small firms' excessive inclination to network with strong-tie partners (family) is the key factor behind the stagnation of their network-building efforts.

The study also compared the network building process among innovative and less-innovative small firms in the park, and identified the key similarities and differences displayed by these firms during the three stages of the network-building process. Although this thesis did not specifically aim to establish a link between network-building and a small firm's level of innovation, the results do seem to suggest the existence of such a link. The evidence from some of the innovative small firms in the study shows that they tended to develop their networks with more weak-tie partners.

The results of this study are interpretative by nature and as stated in Section 6.6, are primarily aimed at expanding our understanding of the small firms' network-building process in relation to current theory (analytic generalization) rather than to enumerate frequencies and the like (statistical generalization) (Yin, 2008).

Hence, the conclusions shared in this chapter are generalizable to a theory of the phenomenon being studied (network-building) and not to some defined population that has been sampled (Yin, 2008). As such, it can be said that the results of this study contribute to the general theory of network-building/entrepreneurial networking, which may have much wider applicability than the particular case studied (Yin, 2008). Furthermore, the practical recommendations described in Section 8.3 are specifically aimed at those small firm entrepreneurs who participated in this study.

It is also relevant to highlight that the initial model approach developed in Chapter 5 acted as a useful and necessary reference framework for this study and greatly facilitated the accomplishment of the research objectives set out in Chapter 2.

Below are the main conclusions, which have been organized according to the three research objectives of this thesis.

Research objective 1 explored the network-building process among innovative and less-innovative small firms.

This thesis has provided first-hand insight into the network-building process of eight innovative and 27 less-innovative small firms located in the industrial park of Villa el Salvador in Peru. The analysis of the data establishes that although the studied firms in the IPVS build their networks in different ways, they all fail to expand their networks adequately. The results of the study are reflected in a descriptive model of how small firms build their networks. This model proposes three stages in a firm's network formation: Forced Gestation, Network Birth and Strategic Stagnation. This model is illustrated and summarized in Section 8.1.

The findings of this thesis reveal a new three-phase model that describes the network-building process in both innovative and less-innovative firms in the industrial park of Villa el Salvador. During the initial phase (Forced Gestation) most entrepreneurs are driven by circumstances to begin networking with informal partners (family). Once they have formalized their partnership with a formal agreement, they proceed to the phase of Network Birth, which is characterized by the exploration of weak ties (in the case of innovative firms) and the exploitation of existing strong ties (in the case of less innovative firms). Additionally, during the phase of Strategic Stagnation, the entrepreneurs get bogged down in the development of their networks because they fail to establish enough partnerships based on cognitive trust (weak tie partners). There is also a lack of trust in the institutional set-up, particularly with respect to public support institutions, banks and the entrepreneurs themselves. This prevents the entrepreneurs from developing their networks with more growth and innovation-driven partnerships. The summary of the emerging model that describes the network-building process in both innovative and less-innovative firms in the IPVS can be found in Section 7.1. A graphic presentation of this model is shown in Figure 7 (Section 8.1).

Research objective 2 identified the major similarities and/or differences between innovative and less-innovative small firms during the network-building process.

This thesis has identified and described the similarities and/or differences faced by innovative and less-innovative small firms during the phases of Forced Gestation, Network Birth and Strategic Stagnation. A summary of the major similarities and/or differences found between innovative and less-innovative small firms during the network-building process is given in Section 8.1

During the initial phase of Forced Gestation, innovative entrepreneurs were inclined to network primarily with weak ties (large customers) and were driven by the desire to seize a business opportunity. However, less innovative entrepreneurs were inclined to network primarily with strong ties (family) and were driven by necessity (loss of job, broke etc.).

During the phase of Network Birth, both innovative and less-innovative entrepreneurs formalized their relationships with written agreements. Both types of entrepreneurs were distrustful of informal mechanisms of exchange such as oral agreements because they had been victims of numerous scams. Once they formalized their partnerships, innovative firms were inclined to explore new relationships with weak ties (usually large customers) to secure access to trade fairs, media coverage and training. Less-innovative firms were more inclined to exploit their existing relations with strong ties (family members) to obtain assistance in their firm's daily duties, such as accounting, management, logistics, marketing and sales, production, design, manpower and borrowing and lending equipment.

During the phase of Strategic Stagnation, all the firms seemed to be incapable of furthering their network-building efforts. The less-innovative firms got stuck in their operational initiatives with family partners, while the innovative firms got stuck in their short-term elementary strategic initiatives with large-scale customers. The reason behind the stagnation seems to be a 'lack of trust', particularly with regard to public support institutions, banks and other entrepreneurs. The less-innovative firms were unsuccessful in transitioning from operational to strategic networking via the creation of consortiums, as these usually failed because of the gross misconduct of the consortium's members, thus compounding the pervasive atmosphere of distrust which affected the development of all the firms in the IPVS.

Research objective 3 identified the major obstacles faced by small firms during the network-building process.

This thesis has assessed the major obstacles faced by small firms when building their networks. In addition to the role played by the lack of trust in the institutional setting, it has highlighted the absence of any significant role for science organizations (universities) and suppliers, as well as the inhibiting role of public support organizations, banks, and the individual entrepreneurs themselves within the network-building process of the studied firms. A summary of the obstacles faced by small firms during the networks-building process is detailed in Section 8.1.

During all three phases, the lack of trust in the institutional setting, seemed to be the major factor that inhibited the small-firms' efficient network-building efforts. This lack of trust is manifested in four ways. The entrepreneurs do not trust themselves, their partners, their banks, their politicians or their public support organizations. It is this deep atmosphere of distrust that forces firms to limit their partnerships to strong ties (family). This isolates the firms and prevents them from enlisting the support of weak ties such as public support institutions, suppliers, science organizations, and banks, all of which are necessary to allow the firms to expand their networks successfully.

Besides networking with informal partners (less-innovative firms) and customers (innovative firms), the firms simply did not interact with other weak-tie partners (identified in the literature as suppliers, banks, science and government support organizations). This further limited their network-building efforts. It appears, from the evidence, that the entrepreneurs in this study may well be justified in their institutional distrust. Both the government and the municipality of Villa el Salvador are known for their corrupt practices, highly bureaucratic procedures, and the fact that what limited available assistance there is depends on an individual entrepreneur's political affinities. Banks were understandably distrusted because of their persistent use of dishonest practices, which were here exemplified by the banks cheating the entrepreneurs through the advertising of false interest rates, etc. Other private institutions, such as local business associations, limited their activities to the occasional organization of fairs and networking meetings, but they also behaved dishonestly in that they distributed favours to a closed circle of co-conspiratorial members of their governing boards. Support from local universities (science support organizations) was practically non-existent.

There are specific factors about the firms themselves which also negatively affected the firms' network building efforts. Financially, most firms operated in a precarious state and were under constant financial pressure, often even struggling to find the funds to buy raw materials. They all seemed to be desperately short of working capital to cover their short-term funding needs,

and due to the low profit margins imposed by monopolistic wholesale customers, many of them earned barely enough to cover their overheads. Legally, most firms were not registered in the national registry of small firms, so they didn't provide receipts, they evaded taxes, and many of them lived on the business premises. These factors also played on the less innovative firms' inclination to prefer networking with informal partners (family) as the easiest and fastest solution for their survival needs.

The entrepreneurs' individualism also inhibited them from network-building inside the premises of the park. For example, most of the entrepreneurs were disunited, unreciprocal and dishonest. The majority of initiatives that required cooperative involvement failed because of the entrepreneurs' mutual distrust. They are aware that if they do not join forces their businesses may collapse, but they do not collaborate with each other because they see the park as a 'war zone' in which there are no true friends. Dishonest practices are part of everyday life in the park. For instance, the testimonies revealed that many entrepreneurs commit bribery to win public procurement contracts and cheat their customers with low quality products. Their persistence (Peruvian 'sisu') would seem to be a saving grace, but in fact it only serves to ensure their firms' survival, but not to lead to progress and expansion.

The study highlights five practical initiatives which would stimulate efficient network-building, at least among the small firms that participated in this study.

a) In order to avoid the phase of Strategic Stagnation, the less-innovative firms should reduce their excessive dependence on strong ties as they transit from the phase of Forced Gestation to the phase of Network Birth and Strategic Stagnation. Although strong ties are rich in affective trust, they are less likely to boost innovation. In other words, the firms should balance and diversify their networking efforts by involving more weak ties (cognitive trust-driven), which are more likely to boost growth and innovation.

b) It is vital for the entrepreneurs to regain trust among each other, as this would open up the opportunity to re-activate network-building with their peers. To this end, an open-ended pilot program should be implemented aimed at formally promoting efficient network-building; especially between the park's firms and outside partners (weak tie partners).

c) It is also necessary to restore the park's entrepreneurs' trust in politicians and government officials. A climate of transparency and honesty is essential to nurture a small firm's network-building efforts. One way of achieving this is for the entrepreneurs to create a local task force to foster awareness-building among local politicians of the relevance and benefits of 'being honest'.

d) to revive the entrepreneurs' trust in banks, public procurement authorities and other public institutions, so that they will increase their firms' interaction with these bodies, a special service to address small firms' complaints about dishonest practices could be created within the framework of

the National Institute for the Defence of Competition and the Protection of Intellectual Property (INDECOPI).

e) At present, the innovative small firm entrepreneurs do establish occasional short-term strategic partnerships with weak-ties, but the fact that the partnerships are only occasional and short-term constrains the efficiency of their network building efforts. The firms have to be encouraged to build long-term strategic networks, particularly with weak-tie partners. The literature has consistently shown that such partnerships, with suppliers, customers, banks, science and government support organizations, are essential for nurturing small firm's innovation and growth (De Jong & Hulsink, 2012).

The thesis also highlights the lack of innovation among the firms in the park. Only eight of the thirty-five firms in the study were in any way innovative (even then, only incrementally so) which, considering the park has a population of more 2,273 firms, is a very low level of innovation. The less-innovative firms' strong-tie network partnerships seemed to have no influence on their ability to innovate. Even the innovative small firms, who did show signs of developing weak-tie partnerships, gained little input with regard to their innovation efforts. There is also some evidence to link the lack of innovation with the low level of education as all twenty-seven less-innovative firms are led by entrepreneurs with only a secondary level of education.

SUMMARY IN FINNISH

Tämä tutkimus tarkasteli Perun Villa el Salvadorin teollisuusalueen (Industrial Park of Villa el Salvador, IPVS) innovatiivisten ja vähemmän innovatiivisten pienyrittäjien verkostoitumista. Tutkimuksessa havaittiin sekä samanlaisuuksia että eroja innovatiivisten ja vähemmän innovatiivisten pienten yritysten verkostoitumisprosessissa. Tulosten pohjalta tutkimuksessa esitetään joitakin suosituksia pienten innovatiivisten yritysten verkostoitumisen parantamiseksi.

Tutkimuksen metodologinen viitekehys on laadullinen tapaustutkimus. Empiirinen aineisto koostuu 35 pienyrityksen perustajien haastatteluista (avoimet kysymykset) sekä yritysten asiakirjoista ja haastattelujen aikana tehdyistä havainnoista. Haastattelut tehtiin vuoden 2009 elokuun ja syyskuun aikana. Tutkimuksessa tarkastelluista yrityksistä 27 on vähemmän innovatiivisia ja kahdeksan innovatiivisia pienyrityksiä, jotka toimivat huonekalu-, metalli- ja jalkineteollisuuden alalla.

Tulokset kertovat, että IPVS:n yrittäjät muodostivat verkostoja kolmivaiheisessa prosessissa. Ensimmäinen, *pakollisen kehittymisen* vaihe osoittaa, että innovatiiviset yrittäjät olivat halukkaita verkostoitumaan erityisesti suurten asiakkaiden (heikot siteet) kanssa ”hyötyäkseen liiketoimintamahdollisuudesta”, kun taas vähemmän innovatiiviset yrittäjät olivat halukkaita verkostoitumaan erityisesti perheenjäsenten (vahvat siteet) kanssa ”selvitäkseen taloudellisista vaikeuksista”. Toinen, *syntymän* vaihe, osoittaa, että yrittäjät pyrkivät tekemään kumppanuussuhteista virallisia kirjallisilla sopimuksilla. Suhteen virallistamisen jälkeen innovatiiviset yrittäjät pyrkivät kartoittamaan uusia, heikkoihin siteisiin perustuvia yhteistyömahdollisuuksia (liiketoimintakumppaneiden, ensisijaisesti asiakkaiden kanssa), kun taas vähemmän innovatiiviset yrittäjät keskittyivät hyödyntämään olemassa olevia perhesuhteita (vahvat siteet). Lopuksi, sen sijaan että yritykset siirtyisivät verkostojen kiteytymisen vaiheeseen, kuten alan tutkimuskirjallisuudessa esitetään, kaikki IPVS:n yritykset kävivät läpi *strategisen stagnaation* vaiheen. Kyseisen vaiheen synnyttää vahva institutionaalinen epäluottamus, joka estää yrittäjiä siirtymästä vahvoihin siteisiin ja tunnevaltaiseen luottamukseen (perhesiteet) perustuvista verkostoista kohti heikkoihin siteisiin ja kognitiiviseen luottamukseen perustuviin verkostoihin liiketoimintakumppaneiden (alihankkijat, asiakkaat, pankit) ja institutionaalisten kumppaneiden (hallinto ja tieteelliset organisaatiot) kanssa. Tämä estää yrityksiä kehittämästä edelleen liiketoimintaansa ja innovatiivisia käytäntöjä.

Johtopäätös on, että innovatiivisen verkostoitumisen lisäämiseksi yritysten tulisi vähentää riippuvuuttaan vahvoista siteistä, jotka tuovat tunnevaltaista luottamusta mutta eivät välttämättä edistä innovatiivisuutta. Yritysten tulisi tasapainottaa verkostoitumistaan lisäämällä heikkoja siteitä, jotka perustuvat kognitiiviselle luottamukselle ja lisäävät vahvoja siteitä todennäköisemmin innovaatioita.

Tutkimus esittelee lisäksi neljää käytännön hanketta, jotka lisäisivät tarkasteltujen pienten yritysten innovatiivista verkostoitumista. Ensinnäkin, yri-

tysten tulisi vähentää riippuvuuttaan vahvoista siteistä ja keskittyä heikkojen siteiden kehittämiseen. Toiseksi, yrittäjien välisen kognitiivisen luottamuksen lisäämiseksi tulisi toteuttaa erityisesti yritysten ja ulkopuolisten kumppaneiden välistä innovatiivista verkostoitumista edistävä pilottiohjelma. Kolmanneksi, poliitikkoihin ja hallinnon virkamiehiin kohdistuvan kognitiivisen luottamuksen lisäämiseksi yrittäjien tulisi luoda paikallinen työryhmä, joka edistäisi"rehellisyyden ja avoimuuden" tärkeyttä ja hyötyjä koskevan tietoisuuden kasvattamista paikallisten poliitikkojen keskuudessa. Neljänneksi, yrittäjien luottamuksen lisäämiseksi pankkeihin, julkishallinnon ja muihin instituutioihin voitaisiin kansallisen kilpailuviranomaisen (INDECOPI) alaisuuteen luoda pienten yritysten valituksia käsittelevä taho.

Avainsanat: Kehittyvät taloudet, klusterit Perú, pienyritykset, teollisuuspuistot, verkosto, verkottuminen.

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APPENDICES

Appendix 1

TABLE 5 Major Features of a Qualitative Research Paradigm

Criteria	Quantitative Paradigm A Positivist Approach	Qualitative Paradigm An Anti-positivist Approach
Researcher's perspective	Researcher's comfort with these assumptions: Ontological: reality is objective and singular, apart from the researcher Epistemological: value-free and unbiased Axiological: value-free and unbiased Rhetorical: formal, based on set definitions, impersonal voice, use of accepted quantitative words Methodological: deductive process	Researcher's comfort with these assumptions: Ontological: reality is subjective and diverse, as seen by participants in a study Epistemological: researcher interacts with what is being researched Axiological: value-laden and biased Rhetorical: informal, evolving decisions, personal voice, accepting qualitative words Methodological: inductive process
Nature of the Problem	Previously studied by other researchers so that there is a body of literature, known variables, and existing theories	Exploratory research; the variables are unknown and there may not be a theoretical basis for the study

Source: Lincoln & Guba (1988)

Appendix 2

TABLE 6 Type of Partners Identified by Innovative Firms

Firms	Status	Business Sector	Type Of Partner	Size of Partner	Name of main Partners
Acrimetal	Innovative	Metalmechanics	Customer	Large	Topi Top, Metro, Saga Falabella, Wong, Ripley
JJ Metales	Innovative	Metalmechanics	Customer	Large	Wong, Metro, Esso, Several Ministries
CNC Industrial	Innovative	Metalmechanics	Customer	Large	Mavila. Suzuki, Italica, Keeway, Bajaj, Zongshen
Transcontinetal del Comercio	Innovative	Metalmechanics	Customer, Family (father)	Medium	Agropecuaria Chavin, Cora
Vibramatic	Innovative	Metalmechanics	Customer	Large	Faber Castell, Mobil, Procter&Gamble, Cocacola, Pinturas Tekno, Laboratorio Hersil
Muebles Hoches	Innovative	Furniture	Customer, Supplier	Large	La Curacao, Elektra, Carsa, Tottus, Sider Peru, Supremesa
Muebles Maldonado	Innovative	Furniture	Family (wife)	Small	End Users
NM Dakota	Innovative	Footwear	Customer	Large	Tottus, Bata, Hush Puppies Shoes, John Holden

Source: Víctor Pérez Centeno (2012)

Appendix 3

TABLE 7 Type of Partners Identified by Less Innovative Firms

Firms	Status	Business Sector	Type Of Partner	Size of Partner	Name Of Main Partners
Jovitsa	No innovative	Metalmechanics	Customer, Family (brother And Wife)		Several Universities, Casinos, Municipalities, Gastronomic Institutes
Transformaciones electromecanicas	No innovative	Metalmechanics	Customer, Family (son)	Small	End User
Leonar	No innovative	Metalmechanis	Customer, Family (wife)	Small	End Users
Mallqui	No innovative	Metalmechanis	Customer, Family (father)	Small	End Users
Trimat	No innovative	Metalmechanics	Buyer, Sons	Medium	End Users, Ministry Of Education, Win Peru
Metal Comsa	No innovative	Metalmechanics	Customer	Medium	Maquiservis, Ibm Maquinarias, Inorbert
Virgen Asunta	No innovative	Furniture	Customer, Family (husband)	Small	End Users
Orihuela	No innovative	Furniture	Customer	Small	Public Sector, Parlament
Carpinteria Valencia	No innovative	Furniture	Customer, Family (father)	Small	End Users, Small Retailers
Mueble San Pedro	No innovative	Furniture	Customer	Small	Small Retailers
Carpinteria Salvatierra	No innovative	Furniture	Family (three Brothers)	Small	Small Retailers
Expocarpio	No innovative	Furniture	Customer, Family (wife)	Small	Small Retailers
Expoferia Industrial	No innovative	Furniture	Gallery	Small	Tenants
Creaciones Katherine	No innovative	Furniture	Customer, Family (wife)	Small	Small Retailers
Muebles Jordi	No innovative	Furniture	Customer, Family (brother)	Small	Small Retailers
Carpitendria Edima	No innovative	Furniture	Customer, Family (wife)	Small	Small Retailers
Muebles Gavamon	No innovative	Furniture	Customer	Small	End Users
Evaristo More Navarro	No innovative	Furniture	Customer, Family (wife)	Medium	End User, Elektra
ARM Feria del Mueble	No innovative	Furniture	Customer	Small	End Users
Calzatura Lugama	No innovative	Footwear	Customer	Medium	Platanitos Boutique, Gamarra, Foncodes, Creaciones Ojeda
Cueros Ferrer	No innovative	Footwear	Customer, Family (wife)	Medium	Public Sector, Shoes Lions, Calimod
Industria del Cuero Perez	No innovative	Footwear	Buyer	Medium	Grupo Santo Domingo, Laboratorios Hersil
Creaciones Linda	No innovative	Footwear	Customer, Family (wife)	Small	Local Shops In Lima In Miraflores And Jiron De La Union Street
Calzatura Yosnel	No innovative	Footwear	Customer	Medium	Corello, Bruno Ferrini
Calzatura Raffines	No innovative	Footwear	Customer, Family (brothers)	Medium	Bata, Platanitos Boutique, Public Sector
Franco Collection	No innovative	Footwear	Customer, Family (wife)	Large	Telefonica
Flower Shoes	No innovative	Footwear	Customer	Small	Small Retailers

Source: Víctor Pérez Centeno (2012)

Appendix 4

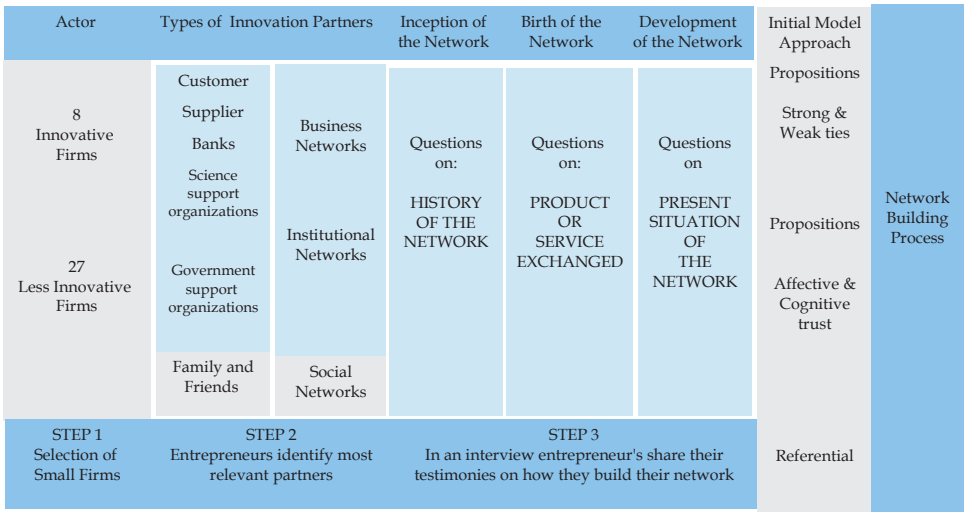
TABLE 8 Participating Firms in the Study

Firms	Status	Founding Year	Number of Employees	Line of Business
Acrimetal	Innovative	1988	38	Metalmechanics
JJ Metales	Innovative	1994	20	Metalmechanics
CNC Industrial	Innovative	1999	60	Metalmechanics
Transcontinetal del Comercio	Innovative	1990	21	Metalmechanics
Vibramatic	Innovative	1990	15	Metalmechanics
Jovitsa	Less Innovative	1989	15	Metalmechanics
Transformaciones electromecanicas	Less Innovative	2001	2	Metalmechanics
Leonar	Less Innovative	1984	4	Metalmechanis
Mallqui	Less Innovative	2000	10	Metalmechanis
Trimat	Less Innovative	1989	22	Metalmechanics
Metal Comsa	Less Innovative	1995	3	Metalmechanics
Muebles Hoches	Innovative	1989	30	Furniture
Muebles Maldonado	Innovative	1999	90	Furniture
Virgen Asunta	Less Innovative	1999	3	Furniture
Orihuela	Less Innovative	1990	8	Furniture
Carpinteria Valencia	Less Innovative	1983	13	Furniture
Mueble San Pedro	Less Innovative	1971	14	Furniture
Carpinteria Salvatierra	Less Innovative	1998	Variable	Furniture
Expocarpio	Less Innovative	1993	10	Furniture
Expoferia Industrial	Less Innovative	1989	3	Furniture
Creaciones Katherine	Less Innovative	1999	4	Furniture
Muebles Jordi	Less Innovative	2002	4	Furniture
Carpitendria Edima	Less Innovative	2006	20	Furniture
Muebles Gavamon	Less Innovative	1977	4	Furniture
Evaristo More Navarro	Less Innovative	2007	8	Furniture
ARM Feria del Mueble	Less Innovative	1997	14	Furniture
Calzatura Lugama	Less Innovative	1993	4	Footwear
NM Dakota	Innovative	1984	22	Footwear
Cueros Ferrer	Less Innovative	1990	7	Footwear
Industria del Cuero Perez	Less Innovative	1985	6	Footwear
Creaciones Linda	Less Innovative	1989	5	Footwear
Calzatura Yosnel	Less Innovative	2003	5	Footwear
Calzatura Raffines	Less Innovative	1985	10	Footwear
Franco Collection	Less Innovative	1995	3	Footwear
Flower Shoes	Less Innovative	1992	7	Footwear

Source: Víctor Pérez Centeno (2012)

Appendix 5

FIGURE 8 Criteria for Assessing the Network Building Process



Source: Víctor Pérez Centeno (2012)

Appendix 6

TABLE 9 Summary of Small Firm's Innovation Indicators

Items	Internal	External
Input	R&D personnel R&D expenditure Proportion of time staff actually spend on the innovation process Staff possession of skills useful in innovation	Relational forms used in the innovation effort (customer feedback, customer investment, etc)
Output	Major new products or services Improvements in existing products or services New production or service methods Number of new methods over a time period New products from initiated ideas Proportion of firm's turnover coming from recently launched products or services	New customers suppliers over a time period
Impact	Advanced management techniques Innovation speed (time for development at each stage) Percentage of staff who are classified as creative Proportion of staff involved in product/process/non-technological innovations Major elements of organizational structure	Communication techniques used (frequency/effectiveness) Number, type, longevity, fruitfulness of collaborations Where innovations emerge from Mode of innovation generation: market pull or technology push Technology adoption and adaptation versus internal generation.

Source: Miettinen (2006)

Appendix 7

Summarized Case Study Research Protocol

I Purpose of the Study

Explore the network-building process among innovative small firms
Explore the network-building process among less-innovative small firms
Identify similarities or dissimilarities between innovative and less-innovative small firms during the network-building process
Identify the major obstacles faced by small firms during the network-building process

II Field Procedures

Initial Scheduling of Field Visit

The field visit set to take place between August and September 2009 in the premises of the Industrial Park of Villa el Salvador in coordination with the Municipality of Villa el Salvador.
Determination of persons to be Interviewed and other sources of information
Preliminary coordination's aimed to the selection of most appropriate firms to the study set prior field visit with Municipality of Villa el Salvador and Ministry of Production. Furthermore assure cooperation of Municipality of Villa el Salvador to facilitate interviews with selected firms.

Training

In-depth revision of prior training on qualitative research methods prior field visit.

III Case Study Protocol and Questions (see questions in separate appendix)

Multiple Case Design

Each group case organized in terms of sector and level of innovation
To facilitate the analysis, a group case may be formed by more than one firm who operates in the same sector and is either innovative or less innovative. Or by a firm that simply shares the condition of innovative or less innovative.

Unit of Analysis

Founding entrepreneurs from selected small firms

Level of Network Analysis

Individual

Criteria to assess the network building process

Step 1 Selection of no more than 50 small firms both innovative and less innovative.
Step 2 Small firm's entrepreneurs identify their most relevant partners

Step 3 Small firm's entrepreneurs share their testimonies on how the network was created with their identified partner.

Criteria to determine degree of innovation in selected firms
At least one of the first fourth
Number of new products
Number of improvements in existing products
Number of commercialized inventions
Number of patents
Number of staff in possession of skills useful in innovation (optional)

Key constructs
Approaches to firms' network formation.
Referential propositions based on an initial model approach developed taking into account six studies:
Entrepreneurial network development: Trusting in the process (Smith & Lohrke, 2008)
Entrepreneurial network creation: Using formal and informal relations of entrepreneurial team members in Russia and Finland (Kock & Galkina, 2008)
The entrepreneurial process in Latin-America (Kantis et al., 2005; Kantis et al., 2002)
The evolution of firm networks: From emergency to early growth of the firm (Hite & Hesterly, 2001)
A Network model of organizational formation (Larson & Starr, 1993)
Network dyad in entrepreneurial settings: A study of the governance of exchange relationships (Larson, 1992)

Sample Selection
Theoretical sample based on:
Degree of innovation
Within the boundaries of the definition of an small firm
Located inside the industrial park of Villa el Salvador and
Willingness to participate

Use of Multiple Sources of Evidence
Open ended interviews to entrepreneurs of selected small firms
Firm's documentation: public written reports, news clippings, firms own brochures and other articles available in mass media and internet
Direct observation during interview process

IV. Analysis Plan and Thesis

Explanation Building (pattern matching)
Look data in different ways (i.e. innovative firms versus less innovative firms, innovative firms versus chosen partner, less innovative firm versus chosen partner, etc.).
Look similarities and dissimilarities between pairs of group cases
Look data by source (interviews, observation and firm's documentation)
Link to prior research/theory in connection to the elaborated initial model approach (point of theoretical saturation).
Discuss emerging data with existing theory.
Stop the analysis once it is realized that the incremental improvements in the quality of the analysis becomes minimal.

Proposed Outline of Thesis
Introduction to study objectives and scope
Summary
Comparative analysis of innovative and less innovative firms
Interpretation and discussion of results
Conclusions

Appendix 8

Key Features of Formed Group Cases

Cases 1 and 2

Case 1, (innovative metal-mechanics firms) contained the highest concentration of innovative firms (5) in one sector. These firms were founded between 1988 and 1999, and had an average of 31 employees. Four of them were run by their founding entrepreneurs and one was led by a second generation family member.
The major innovations of these firms were: JJ Metales produced and patented an ecological chicken grill for the Peruvian market; Vibramatic improved two machines for domestic use, one being a mill to recycle plastic and the other being a manual pump to extract groundwater; Transcontinental del Comercio designed and produced a breeding device for native Peruvian guinea pigs; CNC Industrial designed and produced a vehicle ('moto-taxi') tailor-made for the transport needs of Peruvians and; Acrimetal, used fibreglass to improve the design and production of mannequins. Table 10 highlights innovative firms belonging to the Metal-mechanics sector grouped under Case 1.

TABLE 10 Case 1: Innovative Firms – Metal-mechanics Sector [Ime]

Firms	Status	Founding Year	Number of Employees	Line of Business
Acrimetal	Innovative	1988	38	Metalmechanics
JJ Metales	Innovative	1994	20	Metalmechanics
CNC Industrial	Innovative	1999	60	Metalmechanics
Transcontinetal del Comercio	Innovative	1990	21	Metalmechanics
Vibramatic	Innovative	1990	15	Metalmechanics

Source: Víctor Pérez Centeno (2012)

Case 2 consisted of six less-innovative firms from the metal-mechanics sector. These firms were founded between 1984 and 2001, had an average of 11 employees, and were all led by their founding entrepreneurs. Table 11 highlights the less innovative firms belonging to the Metal-mechanics sector grouped under Case 2.

TABLE 11 Case 2: Less Innovative Firms – Metal-mechanics Sector [Lime]

Firms	Status	Founding Year	Number of Employees	Line of Business
Jovitsa	Less Innovative	1989	15	Metalmechanics
Transformaciones electromecanicas	Less Innovative	2001	2	Metalmechanics
Leonar	Less Innovative	1984	4	Metalmechanis
Mallqui	Less Innovative	2000	10	Metalmechanis
Trimat	Less Innovative	1989	22	Metalmechanics
Metal Comsa	Less Innovative	1995	3	Metalmechanics

Source: Víctor Pérez Centeno (2012)

Cases 3 and 4

Case 3 consisted of two innovative firms from the furniture sector founded in 1988 and 1999 with an average of 60 employees. These two firms, Muebles Hoches and Muebles Maldonado were the only companies in the park who displayed continuous improvements in the furniture business. Both produced original designs. One was run by its founding entrepreneur and the other by a second generation family member. Table 12 summarizes the innovative firms belonging to the Furniture sector grouped under Case 3.

TABLE 12 Case 3: Innovative Firms – Furniture Sector [Ifu]

Firms	Status	Founding Year	Number of Employees	Line of Business
Muebles Hoches	Innovative	1989	30	Furniture
Muebles Maldonado	Innovative	1999	90	Furniture

Source: Víctor Pérez Centeno (2012)

Case 4 consisted of thirteen less-innovative firms from the furniture sector. These firms were founded between 1971 and 2007, employed an average of eight persons and were led by their founding entrepreneurs. Table 13 summarizes the less innovative firms belonging to the Furniture sector grouped under Case 4.

TABLE 13 Case 4: Less Innovative Firms – Furniture Sector [Lifu]

Firms	Status	Founding Year	Number of Employees	Line of Business
Virgen Asunta	Less Innovative	1999	3	Furniture
Orihuela	Less Innovative	1990	8	Furniture
Carpinteria Valencia	Less Innovative	1983	13	Furniture
Mueble San Pedro	Less Innovative	1971	14	Furniture
Carpinteria Salvatierra	Less Innovative	1998	Variable	Furniture
Expocarpio	Less Innovative	1993	10	Furniture
Expoferia Industrial	Less Innovative	1989	3	Furniture
Creaciones Katherine	Less Innovative	1999	4	Furniture
Muebles Jordi	Less Innovative	2002	4	Furniture
Carpitendria Edima	Less Innovative	2006	20	Furniture
Muebles Gavamon	Less Innovative	1977	4	Furniture
Evaristo More Navarro	Less Innovative	2007	8	Furniture
ARM Feria del Mueble	Less Innovative	1997	14	Furniture

Source: Víctor Pérez Centeno (2012)

Cases 5 and 6

There was only one firm in Case 5, NM Dakota. This was an innovative firm from the footwear sector with 22 employees, founded in 1984 and still run by its founding entrepreneur, (although the interviewee was the marketing manager). This was the only firm in the footwear sector that had introduced continuous improvements in its production of shoes. One of these improvements involved the redistribution of shoe-assembly tasks among the most skilled shoe-makers. Table 14 highlights the innovative firms belonging to the Footwear sector grouped under Case 5.

TABLE 14 Case5: Innovative Firms – Footwear Sector [Ifo]

Firms	Status	Founding Year	Number of Employees	Line of Business
NM Dakota	Innovative	1984	22	Footwear

Source: Víctor Pérez Centeno (2012)

Case 6 consisted of eight less-innovative firms from the footwear sector. They were founded between 1985 and 2003, employed an average of 6 persons, and most were run by their founding entrepreneurs. Table 15 highlights the less innovative firms belonging to the Footwear sector grouped under Case 6.

TABLE 15 Case 6: Less Innovative Firms - Footwear Sector [Lifo]

Firms	Status	Founding Year	Number of Employees	Line of Business
Calzatura Lugama	Less Innovative	1993	4	Footwear
Cueros Ferrer	Less Innovative	1990	7	Footwear
Industria del Cuero Perez	Less Innovative	1985	6	Footwear
Creaciones Linda	Less Innovative	1989	5	Footwear
Calzatura Yosnel	Less Innovative	2003	5	Footwear
Calzatura Raffines	Less Innovative	1985	10	Footwear
Franco Collection	Less Innovative	1995	3	Footwear
Flower Shoes	Less Innovative	1992	7	Footwear

Source: Víctor Pérez Centeno (2012)

Appendix 9

Interview Questionnaire

The following questions were used during the interviews. They were used as a guide to gather factual information and generate discussion. The first set of questions resulted in general information on the company, including its history, products sold, markets, and general competitive environment. The second set of questions elicited data on the history of the network. The third set of questions focused on the product and/or service exchanged. The fourth set of questions concentrated on the present situation of the network

Background
Company
Name
Title
Position in the organization
Business description
When was the company founded?
What has your revenue growth rate been over the last five years?
What are the company's products/services?
In what markets and industries does the firm participate?

History of the network
What is your most relevant partner (s)? Please name it.
How did this relationship first begin? And why?
How did you hear about your partner?
What factors caused you to enter into the partnership?
Is there, or was there ever, a written contract?
How important was the partnership to your business?
Describe the exchange as it began and any important stages in its evolution.

Product/service exchanged
What kind of product/service were you looking for?
What is the product or service exchanged in the partnership?
How important is the exchange to your business?

Present situation of the network
How important is the relationship to the company?
How would you describe the benefits you get from this arrangement?
Has it helped you to grow, innovate?
Do you see the partnership as a long-term commitment?
What problems have you faced during the partnership?
What factors do you think inhibit firm's networking?
Please any other input you consider relevant

Appendix 10

TABLE 16 Criteria to Assess the Quality of a Case-Study Research

Tests	**Case Study tactic**	**Phase of Research**
Construct Validity	Use of multiple resources of evidence such as: Documentation, e.g. news clippings and articles inform the mass media, formal prior studies, leaflets, pictures, annual reports. Open-ended interviews with the selected 35 firms Direct observation of the firms before, during and after interviews. Effort to maintain a chain of evidence	Data Collection
Internal Validity	Explanation building (pattern matching)	Data analysis
External Validity	Analytical generalization Use of replication 13 Less Innovative Furniture Firms Eight Less Innovative Footwear Firms Six Less Innovative Metal-mechanics Firms Two Innovative Furniture Firms One Innovative Footwear Firm Five Innovative Metal-mechanic Firms	Research Design
Reliability	Summarized case study protocol Audio-data base	Data Collection

Source: Víctor Pérez Centeno (2012)

Appendix 11

TABLE 17 Key Features of the Phase of Forced Gestation

Less-innovative Firms	**Innovative Firms**
Partners Customers (small in size) and Informal partners (Family)	Partners Customers (large in size) and Informal partners (Family)
Motivated by a difficult moment: Financial difficulty Fired No cash in their pockets Predominance of strong ties: Family members (sons, brothers, daughters & wife) Relatives Friends Product or service sought: Family loans Guarantees Manpower References Help to get a plot in the park, etc.	Motivated by business opportunities: Opportunity for growth Proactive attitude Large firms (i.e. buyers) Predominance of weak ties: Large firms (i.e. major national shops) Public support institutions (i.e. Local municipality and business associations) Product or service sought: Purchase orders Exposure Know-how & expertise

Source: Víctor Pérez Centeno, 2012

Appendix 12

TABLE 18 Key Features of the Phase of Network Birth

Less Innovative Firms	**Innovative Firms**
Inclined to network under a formal relation Preference of written contracts Delivery against full payment Semi-formal agreements with 'well known partners' Victims of successive scams Exploitation of existing partners Help with accounting, management, logistics Marketing and sales Production & Design Manpower & Equipment lending	Inclined to network under a formal relation Written agreement necessary Mutual compliance Quality Due fulfilment Product guarantee Bad experience with oral agreements Exploration of new partners Product samples Access to trade fairs Media coverage Specialized training

Source: Víctor Pérez Centeno, 2012

Appendix 13

TABLE 19 Key Features of the Phase of Strategic Stagnation

Less Innovative Firms	**Innovative Firms**
Stagnated on operational networking Assistance with: The administration of the firm Lending and borrowing equipment Financing (interest-free loans) Rent-sharing Street cleaning Public safety Trees planting Failure to establish strategic networking via consortiums due to: Different values, principles and culture Low quality work Misconduct of consortium members Distrust of the institutional setting due to: Distrust of the political system Distrust of public public procurement procedures Distrust of private institutions (cf misleading advertising campaigns by private banks) Distrust of existing social-cultural codes of conduct (wrong-doings of park entrepreneurs, misconduct of customers).	Stagnated on basic strategic networking Assistance with: Applied research Joint ISO 9000 certification Facilitation of foreign consultants Technical assistance in product design and machinery programming Periodic quality assessment Distrust of Institutional setting due to: Distrust of the political system (Former presidents, prime ministers, ministers, majors, etc). Distrust of existing social-cultural codes of conduct (a generalized belief that 'it's 'every man for himself').

Source: Víctor Pérez Centeno, 2012

Appendix 14

TABLE 20 Key Innovation Features of Firms

Less Innovative Firms	**Innovative Firms**
Low Level of Incremental Innovation	
27 firms focused on product's imitation and no signs of incremental innovation efforts.	Eight firms regarded as being in any way innovative (incremental). Metal-mechanics sector (5 firms), footwear sector (1 firm), furniture sector (2 firms).
Inability to Produce Original Designs	
Firms copy or imitate products because it is cheaper and less risky. No sense in making original designs or in patenting them because patenting is expensive and original designs can easily be pirated.	Imitation is common also at the level of copying of industrial designs.
Lack of Modern Equipment and Technology	
Using thirty-year-old machines with inadequate production capacity, often with self-made replacement parts made of wood.	Firms operate with outdated equipment of an intermediate level of technology. Only two metal-mechanic firms renewed their equipment.
Entrepreneur level of Education	
Most entrepreneurs hold an low education level ranging from primary education (3), secondary education (12), non-university education (9) and unfinished university studies (3) Firms' pressing need for training opportunities in specialized areas such as electronics and IT Local inhabitants' lack of financial resources to upgrade their educational skills outside the boundaries of Villa el Salvador.	3 entrepreneurs hold a university degree, 3 entrepreneurs hold unfinished university studies, 2 possessed non-university education.

Source: Víctor Pérez Centeno, 2012

Appendix 15

TABLE 21 Inhibiting Roles of Public Support Institutions, Banks and Entrepreneurs to Network-Building

Less Innovative Firms	Innovative Firms
Role of Government (public support institutions)	
Lack of government and municipality support to boost firm's networking and innovation Corruption Lack of government control on high interests rates No trust in the word of government officials and politicians Limited available assistance given based on political affinities Highly bureaucratic procedures, including public procurement procedures	
Role of Banks	
Lack of banks' support for firm's innovation efforts Low level of trust in private banks due to banks' use of dishonest practices: cheating the entrepreneurs by advertising false interest rates, etc. Very low use of banks due to high interest rates (up to 63% per year) Other private institutions such as local business associations distribute favours to a closed circle of board members	
Role of Entrepreneurs	
Entrepreneurs are by no means united; each firm is literally on its own. Entrepreneurs see the park as 'war zone' where there are no true friends. Entrepreneurs believe that everybody is trying to take advantage of each other If an entrepreneur had to betray his own partner in order to secure an order, he would do so. Majority of initiatives that required cooperative involvement from the firms have failed. Entrepreneurs are aware that if they do not join forces they may collapse But there is not any institution that may help to facilitate this process. There are no friends in the park, everybody is on his own Dishonest practices are part of the everyday business practices in the park. Entrepreneurs use their positions in the park's business associations for their own personal benefit. Entrepreneurs commit bribery to win public procurement contracts Entrepreneurs cheat their customers with low quality products Entrepreneurs frequently scam their own park colleagues. Entrepreneurs are persistent but only used it to assure their firm's survival	

Source: Víctor Pérez Centeno, 2012

Appendix 16

TABLE 22 Key Features of Other Factors Influencing the Network Building Process

Less Innovative Firms	**Innovative Firms**
Firms operating in Precarious State	
Less-innovative firms are operating in a very precarious state. Firms are under constant pressure, producing barely enough to cover their costs. Small profit margins imposed by wholesale buyers prevent firms from growing.	
Firms' Lack of Financial Resources	
Firms do not even have the funds needed to buy raw materials. Firms are desperately short of working capital to cover their short-term funding needs. Few banks willing to provide affordable and accessible loans to the firms in the park.	
Firms operating informally	
Most firms do not have an official business ID. Firms evade taxes, do not provide receipts, live on the business premises.	

Source: Víctor Pérez Centeno, 2012