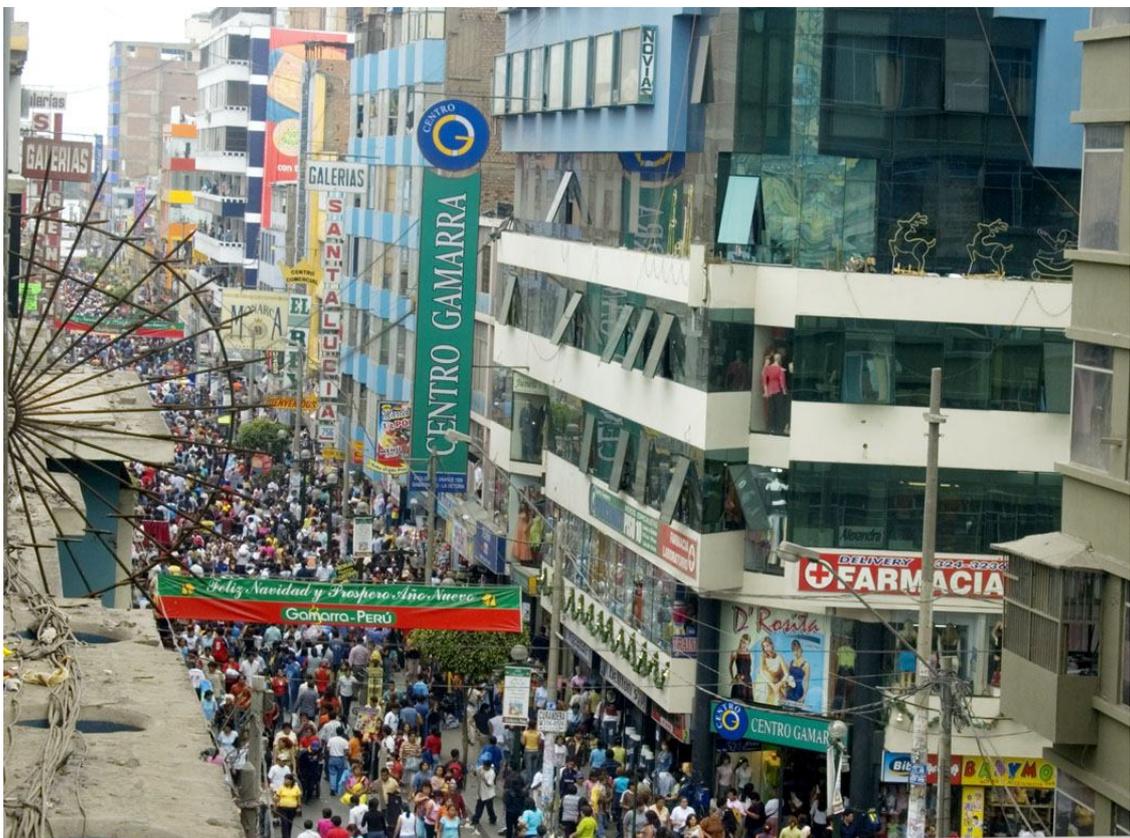


# Copying Or Co-operating?



Inter-firm relations in a garment agglomeration in  
Lima, Peru



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Inter-firm relations in a garment agglomeration in Lima, Peru

Master thesis Economic Geography

Faculty of Geosciences, Utrecht University



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## **Preface**

The present document is my master thesis, which addresses the level of coordination within a group of garment producers in Lima, Peru. This thesis is written as partial fulfillment for the master degree in the Master Economic Geography at Utrecht University.

First, I would like to thank all respondents for their hospitality and for granting an interview. Furthermore, I would also like to thank my supervisor, Leo van Grunsven, for the assistance and advice during the project, and my former supervisor, Evert-Jan Visser, for providing me with all the information I needed before my arrival and during my stay in Lima.

I would also like to thank Francisco Dumler and Benigno Sánchez, for providing a working place, but most of all for a place to stay and for the opportunity to make friends in Lima. Despite the effort and time I needed to complete my thesis, it was an incredible and unforgettable experience, and I therefore consider myself lucky being able to do it. Not only being in Lima, but also while travelling in Peru, Chili and Argentina.

Finally, I thank my family, especially my parents, and friends, because they always provided moral, social and financial support.

Frank Keukens,

Utrecht, January 2010

## Summary

The purpose of this study is to determine the quality of governance between firms (and other actors) in an agglomeration of garment firms (Gamarra) in Lima, Peru. Agglomerations and clusters can be found all around the world, both in developed and developing countries. In developing countries, these agglomerations can play an important role in the generation of employment, higher incomes and dynamic development in the concerned regions or cities. Therefore, this study could contribute to the development of firms in the Gamarra district and may even contribute to the development of Peru in general.

Peru is characterized by a tumultuous development; politically, economically, as well as socially. The political unrest is one of the reasons for Peru's late industrialization, comparing it to other countries of comparable size in Latin America. From 1940 onwards, there was a considerable expansion of the industrial sector, especially during the Second World War. The Gamarra district started growing in the '50s and by 2007 was home to more than 20.000 firms. Garment producers represent about 21 percent of all firms in Gamarra, whereas traders account for about 72 percent.

Various governance forms are identified in this study, e.g.: market, hierarchic and network. These governance forms differ in, amongst others, the degree of explicit coordination and power asymmetry among firms. The quality of governance depends on several factors. This study focuses on four variables, which are known to contribute to this quality, namely; trust, leader firms, intermediaries and solutions to collective action problems (CAPs). For each variable, the influence on transactions costs and scope of coordination is determined, which together determine the quality of governance.

To gain more knowledge about the firms and developments in the Gamarra district, previous studies were analyzed. The results of these studies indicated that the performance of firms in Gamarra exceeds that of the firms not located within the boundaries of the district. The results also indicated that firms in Gamarra are able to benefit from the effects, which are yielded by simply being located close to other related firms. However, these studies also find that these so-called 'agglomeration advantages' are mainly passive (transactional advantages) and almost never dynamic (e.g. knowledge exchange). Many problems exist regarding innovation, internationalization, infrastructure and (private-public) co-operation. This follow-up study provides insight knowledge concerning the coordination in Gamarra, and may therefore contribute to the solution of these problems.

A survey was undertaken in the summer of 2009, using interviews that administered questionnaires covering the important aspects. Respondents were selected using the snowball method. In other words, a group of academic experts were asked to indicate other experts, which were able to provide the in-depth knowledge needed in this study.

As was expected, the results indicate that the important variables lack presence and influence in Gamarra. Trust and leader firms exist on small-scale, but are unable to induce intensive co-operation or positive externalities to other firms, which encounter many problems. On the one hand, basic problems exist, referring to e.g.; the infrastructure, cleanliness and safety in the district.

On the other hand, problems in Gamarra have a more complex nature referring to the lack of intensive (public-private) interactions, quality of products and, related, the export of these products to international markets. However, opportunities may be found in successful producing communities, the commercialization of the district and the role of the municipality, among others.

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## Introduction

This study will focus on different aspects of development in the garment (clothing) industry in Peru. The aim of this research is to determine the governance structure and the quality of governance of the *agglomeration* of garment firms in the Gamarra district, Lima, Peru. Additionally, existing data (of Visser et al., 2009) is used to determine the performance of these firms. A relation between the quality of governance and the performance of firms may be found. Previous research in the area (Visser 1996, 1999 and 2009; among others) and research concerning governance (Visser and De Langen 2006; De Langen 2004; De Langen and Visser 2005; Nooteboom 2002; among others) indicate the importance of this topic. In this research, governance should be interpreted as the coordination of related economic activities.

In an ideal situation, governance facilitates the development of the firms and is a product of the collective action of a wide range of actors involved in the coordination process, e.g. firms, public organizations, associations and other private entities. Although collective participation is needed to establish a high quality of coordination, some actors and factors have an extra important role. For example, trust, leader firms, intermediaries and factors contributing to the solution of collective action problems (From now on: CAPs). To determine the quality of coordination, the presence and influence of these factors is of significant importance in this research.

The Gamarra district is characterized as an agglomeration of related economic activity. Many examples of agglomerations in developed countries exist, e.g. Silicon Valley in the United States, the fashion industry in Italy, financial services in London and the horticulture industry in the western part of the Netherlands.

In addition, there are also examples in developing countries, e.g. the Chilean wine industry (Visser and De Langen, 2006) the footwear industry in India (Knorrington 1999), the Sinos Valley in Brazil (Schmitz 1999) and the surgical instruments industry in Pakistan (Nadvi 1999).

These agglomerations differ in their performance. At one end are the industries that show little dynamism and seem unable to innovate. At the other end are the dynamic industries that show an increase in competitiveness and access to international markets. These dynamic industries may also be defined as so-called *clusters*, more thoroughly discussed in chapter 2.

Giuliani (2005) states that the dynamic growth of agglomerations depends on the capacity of firms to absorb external knowledge and diffuse it into the local knowledge system. Concerning the dynamism of Gamarra, Giuliani (2005) defines the absorptive capacity of the agglomeration as being basic and categorizes it as static. This implies that there is no relevant growth observed over time. Schmitz and Nadvi (1999) also identify different stages of industrialization, which influences the process of growth. Especially in the early stage agglomeration effects are relevant, and facilitate the development of small enterprises. Mature industries include more medium and large enterprises, and are more concerned with the competitiveness in the global market. As such, the stage of industrialization is of prime importance for the Gamarra district.

### **Social and scientific relevance**

The concentration of enterprises can contribute to regional and urban economic growth in developing countries (Van Dijk and Sverrisson 2003). It can facilitate private sector growth resulting in; more employment, higher incomes and the dynamic development in the concerned regions or cities. Marked differences between industries and individual enterprises exist among developing countries. Gamarra is not performing well, comparing it to other agglomerations in Latin America (Giuliani et al. 2007). Therefore, this research could be of significant importance for the development or survival of firms in the Gamarra district. Because the development of these firms is related to the economic development of Peru, this research could give useful insights regarding the development of Peru. Furthermore, there has been very little research on the development of firms in districts like the Gamarra district, Peru (Tello and Tavera 2008). In line with Giuliani, Visser (1996, 1999 and 2009) found that the Gamarra district is not growing in performance; rather it is sustaining or even declining. This problem is discussed further in chapter three of this study. Therefore, further research concerning the governance in Gamarra could be of significant importance. This research could lead to possible solutions, concerning (public-private) cooperation and coordination.

This research may also be a useful addition to the existing literature or knowledge concerning clusters or agglomerations in developing countries. Studies that compare various agglomerations Latin America exist (e.g. Giuliani et al. 2007; and Altenburg and Meyer-Stamer 1999). As well as case studies concerning joint action (e.g. Schmitz 1999) and coordination (e.g. Visser and De Langen 2006) in well performing agglomerations in Latin America. What lacks is a study concerning joint action and coordination in a poorer performing district in the developing world. "Poorer performing" doesn't necessarily indicate a bad performance as Visser et al. (2009) mentioned but it does indicate that there are certain problems regarding joint action, coordination, innovation, education and internationalization. The methodology used in this research (comparable to the methodology used in Visser and De Langen 2006) could also be used in other researches concerning agglomerations or concentrations of small and medium enterprises (From now on: SMEs) in developing countries. Therefore, it can give more insight in the topic of inter-firm relations in developing countries, and might act as a guideline for further research.

### **The research**

In this research, the choice is made to focus on producers of garments (clothing) in the Gamarra district, because this research is a follow-up study on research done by Visser, which is concerned with the performance of garment firms in Gamarra. This research has the following main question:

#### **What is the quality of governance in Gamarra and how does the performance of garment producers relate to it?**

To simplify answering the main question above, various sub-questions are used. These sub-questions relate to the performance of firms in Gamarra (using existing literature), cluster characteristics, governance form, possibilities to improve the development of

firms and the important variables that determine the quality of coordination. Elucidations for these sub-questions are included in other chapters throughout this study, although the sub-questions are already taken up in this section:

**Sub-question 1:** *What is the performance of firms in the Gamarra district?*

**Sub-question 2:** *Can the Gamarra district be defined as a cluster?*

**Sub-question 3:** *What form of governance is present in Gamarra, and what are its characteristics?*

**Sub-question 4:** *What is the level of trust in Gamarra, and how does it influence the inter-firm relations?*

**Sub-question 5:** *What is the influence of leader firms in Gamarra, and how do these influence the inter-firm relations?*

**Sub-question 6:** *What is the influence of intermediaries in Gamarra, and how does it influence the inter-firm relations?*

**Sub-question 7:** *Which CAPs (collective action problems) are relevant for the Gamarra district and what contributes to the solution of these CAPs?*

**Sub-question 8:** *What possibilities are there for improving the quality of the governance in the Gamarra district?*

As was mentioned previously, the purpose of this research is to continue on the research done by Visser (in 1993, 1996 and 2009). On the other hand this research will give new insights on the quality of governance in Gamarra, relating the performance of firms to it. Furthermore, the research could lead to possible solutions or initiatives to enhance the quality of governance in Gamarra.

This research consists of two parts. First, the results of various cross-sectional studies done by Visser are explored by using existing literature (Visser 1996; and Visser et al. 2009). These could give further insights in the development of the Gamarra district in the period of 1993 to 2007. Different performance indicators are introduced which were assessed by Visser. Furthermore, other dynamic developments related to the transacting and transforming behavior of firms in Gamarra are reviewed.

The data obtained in the 15 year period (1993-2007) is used as a basis for this study. The performance indicators of firms in Gamarra in combination with other results of earlier studies make it valuable to investigate the processes at hand in more detail. There is little consensus among academics concerning the performance of firms and development of the district in general. This is reflected in the work of Visser, who finds both positive performance results and negative results regarding inter-firm relations.

## **Methodology**

The research consists of a survey among a group of experts active in different relevant areas. Interviews were conducted using a semi-structured questionnaire, which assessed the coordination among firms and other actors. These were conducted in the summer of 2009 from May to August, in Lima, Peru. A snowball method was used to select the respondents. Twenty-three respondents were interviewed in face-to-face settings and one interview was sent by e-mail. To complement the specific group of respondents, 4 interviews conducted in 2008 were used additionally. Both the performance indicators (Visser et al. 2009) and the qualitative results concerning the governance in Gamarra are used to answer the research question.

The interviews were designed to determine the presence and influence of important variables, important themes and factors in the development of Gamarra; factors which contribute to solving CAPs and opportunities for the future development of the district. These aspects are covered in the, previously introduced, questionnaire. The data is then analyzed using SPSS and combined with qualitative results (additional information given by experts).

## **Bookmarker**

This thesis is structured as follows. First, the context in which the research is conducted is explored. This will include both the economic and political development of Peru in the period of 1950 till now. Here, the characteristics, processes, policies and supporting institutions that influence the development of the Gamarra district are addressed.

Second, the theoretical framework is assessed. Characteristics of agglomerations (and clusters) are assessed, relating it to e.g. transaction costs, collective advantages and knowledge exchange between firms. Furthermore, the issue of governance is assessed. A distinction is made between various forms of governance, including: market, network and hierarchical forms. These forms of governance are individually discussed by identifying their characteristics such as the distribution of decision making power and the level of explicit coordination. The variables that determine the quality of governance and which are of key importance in this research are addressed in detail, describing their characteristics individually.

Third, the development of Gamarra in the period of 1993 to 2007 is explored. The research of Visser et al. (2009) is used to assess the evolution of the performance, as well as the transacting and transforming behaviour of firms in this period. Furthermore, additional literature concerning the development and performance of firms in Gamarra is briefly reviewed.

Fourth, the conceptualization includes the typology which is used as framework in this research. The hypotheses are also introduced in this chapter.

The fifth chapter is concerned with the methodology used in the research. This chapter reviews the methods of research, the design of the questionnaire and the methods of analysis.

Sixth, on the basis of the results learned from chapter five, the data obtained in the survey is analyzed. The results are assessed in three sections: general information, factors & themes which determine the development of Gamarra and the analysis of the variables which determine the quality of governance.

The last chapter, the conclusion, aims at answering the main- and sub-questions. Moreover, the recommendations, introduced in chapter 6, are reviewed to find possible solutions to the problems faced by the firms in the district.

## **1 Gamarra and the Peruvian context**

This chapter highlights the context of this research. First, it explores the development of Peru since the '50s. Different processes and movements, economically as well as political, shaped the country. The exploration of these processes could give useful insights into the development of the Gamarra district. Second, the industrial development of urban areas in Peru is explored. Relevant policies and supporting institutions for the development of firms in Gamarra are reviewed. Third, the characteristics of Gamarra and the processes which shaped it are discussed. This section includes a thorough description of the district assessing the location, history and business environment.

### **1.1 The development of Peru**

Peru is characterized by a tumultuous development during the last 60 years. The '50s and the beginning of the '60s are characterized by an export-led development. This development resulted in a stable economic growth, but was concentrated in two sectors: the mining industry and export agriculture. At the time, the Peruvian economy was relatively open, although political pressures increased to protect the manufacturing sector. Until the '50s the government wasn't heavily involved in the economy.

From 1963 the government started interfering, by stimulating the Peruvian industry with more comprehensive import substitution policies. These policies consisted of the protection of domestic industry on the one hand, through the high import tariffs and non-tariff barriers. On the other hand through subsidies, by applying low interest rates, taxes and exchange rates. The government also invested in infrastructure, housing, health, and education (Visser 1996). These policies resulted in the growth of the domestic industry, which started producing more. In the '60s, the average economic growth was 5.3 percent a year (le Grand 1998). Another result of these developments was a massive wave of direct foreign investment in manufacturing, peaking between 1960 and 1966 (Thorp 1991).

The period of 1968 to 1985 was characterized by a military regime. The economy went through a great change, after the military forces ceased power in 1968. The new Velasco-government set for a new socialistic course which was favorable in certain ways, e.g.; the restructuring of the country. However, the results on macro-economic level weren't good; the yearly economic growth and agricultural production decreased and the foreign debt increased dramatically.

The governments of general Bermúdez (from 1975) and Belaúnde (from 1980) tried to reduce the power of the government. However, the influence of the government increased until 1985. The governmental period of Belaúnde (1980 to 1985), was a disaster in multiple ways. The rise of the guerilla movement 'Sendero Luminoso', climate related set-backs in 1983 and the debt crisis in 1981, resulted in an average decrease of the GDP of 0.5 percent a year. The GDP per capita fell back to the level of the '70s.

Loan, subsidy, and price control policies were introduced by García in 1985. The goal of these policies was to reactivate the import substitution of the '60s. The government tried

to stimulate the demand of domestic products and services, and utilize the unused production capacity in the industrial sector.

The GDP increased with 10.1 percent in 1986, but García also induced a break-up of Peru with the International Monetary Fund (IMF), which eventually induced an economic decrease. The induced policies resulted in a decrease in tax incomes and a related increase of the inflation. Furthermore, the business community lost its confidence in the government. At the end of 1989 Peru was almost bankrupt, not only economically, but also socially, political and morally. The intention was to regulate the economy from a strong state, but it resulted in a total breakdown of the state (le Grand 1998).

Fujimore ceased power in 1990, and induced the so-called Fujishock in August of the same year. This meant the cancelling of subsidies, and a drastic increase in cost price of public services. The goal of this intervention was to decrease the inflation, increase tax incomes, a drastic restructuring and thinning of the civil services, the privatization of almost all the state enterprises and a recovery of the relation with the IMF and the World Bank.

From 1990 the macroeconomic policy environment required that producers reduced their dependence on the domestic markets and start competing with foreign competitors (Visser 1999). As a result the inflation decreased and 200.000 officials lost their job between 1990 and 1993. If still working, they earned 10 percent of what they did in 1981. Other results were the increase of foreign investments and an increase in tax incomes. From 1993 the economy grew, comparable to the 'Asian Tigers' (Taiwan, Singapore, South Korea and Hong Kong, which experienced a rapid economic growth due to industrializations).

The growth rate decreased in 1995, which is said to be related to a decrease in popularity of Fujimore. Especially poor population groups suffered due to the economic policies. Approximately 45 percent of the population lived under the poverty level. The policies in 1996 were a little more concerned with the poorest population groups. Fujimore was President until 2000, and in the period of 2000 to 2001 the country was governed by a caretaker administration, which was necessary because various conflicts made Fujimori abandon Peru in 2000.

In 2001 President Toledo implemented an economic recovery program, to revive an economy that had stagnated from 1998. He took measures to revive the privatization program and to attract investments. In 2002, the IMF approved an arrangement with Peru to support the government's plans for economic recovery and a lowered rate of inflation. Since 2006 Alan Garcia is president of Peru. He is expected to build on the economic success of his predecessor and pay more attention to the concerns of the poor, who have benefited little from the country's economic growth.

## **1.2 Industrial and institutional developments**

To gain more knowledge about the development of Peru (and Lima), the industrial and institutional developments of the country are explored. This section is included to form a bridge between the processes on macro-level (section 1.1) and micro-level (section 1.3). First, the process of industrialization in urban areas in Peru is explored. Second, policy

developments and supporting institutions, which are important for the development of SMEs and agglomerations (or clusters) in general, are assessed.

### **1.2.1 Industrialization**

Although the work of Cabieses is a little outdated it could still be interesting in exploring the development of (industry in) Peru. Cabieses et al. (1982) characterizes the Peruvian economy as having three key sectors which are badly integrated among each other; the traditional and non-traditional export sector, the domestic industrial sector and the agro sector. Especially the metropolitan area of Lima is important in Peru. In 1977, a third of the country's population was concentrated in Metropolitan Lima. In 1993, this number decreased slightly, whereas 28.4% of the population lived in the metropolitan area of Lima by then (INEI 2009). Moreover, the greatest part of the GDP is produced in Lima, more than three-fifths of the total number of industrial establishments, the number of manufacturing workers, the gross value of industrial production and the value added are concentrated in Lima (Cabieses et al. 1982).

The Peruvian industrialization process is characterized by various phases. The "early industrialization" in Peru developed in the last decade of the last century and covers the period until 1920. A number of exceptional conditions were at the foundation of this process (Cabieses et al. 1982):

- An increase in demand on the internal market as a result of increasing export income.
- The drop in the rate of exchange which provided some protection for the industry against imports, and guaranteed a reasonable profit rate.
- The additional protection to industry produced by the customs duties necessary to increase State income and finance State expenditures.
- The presence of investment capital with Peruvian and immigrant property owners.
- The favorable investment climate created as a result of the settlement of the foreign debt through the Grace Contract in 1890.

Between 1900 and 1930, large monopolies in the mining and agro sector were set up, under the control of US capital. From 1940 onwards, there was a considerable expansion of the industrial sector, especially during the Second World War. Exports did not increase spectacularly during the first phase of industrialization, explaining in part the increase in importance of import-substituting industrialization (Cabieses et al. 1982).

By 1950, industrialization had made less headway in Peru than in other South American economies of comparable size (Thorp and Bertram 1978). From 1947 to 1962 the export sector expanded considerably, however. This growth was the result of an expansion of direct foreign investment in the country, especially by United States companies, and only began to expand more rapidly after the Law on Industrial Promotion came into effect in 1959 (Cabieses et al. 1982).

This process was stimulated by the belief that industrialization was essential in order to expand employment and sustain economic growth (Thorp and Bertram 1978). In contrary to other countries in Latin America, the Peruvian Promotion Law was exceptional in its generosity and lack of selectivity benefiting to all sectors.

The expansion period of the export sector came to an end due to decreasing export prices, the stagnation in mining production capacity and the beginning of the crisis in the fishing industry. Industry became the most dynamic sector in the economy, showing high growth rates. The first automobile assembly plants were installed in 1964. The country entered the second phase of import-substituting industrialization and consolidated during the military regime. The industrial expansion in the '60s was supported by the impressive boom in exports during the previous period, especially towards the end of the fifties (Cabieses et al. 1982).

By then, the characteristics of the industrial structure were: an assembly industry depending almost entirely on imported inputs; control of this industry by foreign capital; limited utilization of labor due to the high technological level of said industry; a rather inflexible import structure; the necessary development of the export sector in order to finance capital and intermediate goods for this industry; production of goods which did not satisfy the basic needs of the population of the country but rather the requirements of the higher income groups; industry centralized in Lima and in the case of those industries located in the different regions, very little connection amongst them. Industry experienced further growth after the crisis of 1967 to 1969 and developed unquestionably into the most dynamic sector in the economy (Cabieses et al. 1982).

Although Gamarra is the number one agglomeration in Peru (number of firms), there are many other examples of agglomerations or industrial districts in the country. Some examples of these agglomerations are: the furniture industry in Villa El Salvador (Lima), handicrafts in Petit-Thoars (Lima), the shoe industry in Trujillo, metal mechanics in Juliaca and Puno, tourism in Cusco, the wine industry in Ica and the textile industry in Puno and Arequipa.

### **1.2.2 Policy developments and supporting institutions**

During the '50s and '60s the government didn't have much control over the economy and its share in ownership structure was insignificant (Cabieses et al. 1982). However, from 1968 onwards it played an increasingly important role in the economy, and a large public sector has developed for the production of goods and services.

The following section shortly reviews some of the policies and important public or private organizations which played and/or still play a role in the development of the district of Gamarra. This is done by reviewing literature by Tello and Tavera (2008) and Villaran (2007), where the former is more concerned with the public interventions in general and the latter is more focused on the influence of various organizations, mostly found for the development of SMEs.

Tello and Tavera (2008) focused on so-called "productive development policies" (PDPs) and cluster development in various areas in Peru, such as the district of Gamarra. The following interesting developments are mentioned.

Under the supervision of Márquez (Fujimore's Vice president) during the 1990s, there was a direct intervention by political authorities with close connections to the world of SME associations. He organized various consortia of garment producers in the Gamarra district, with the purpose of exporting their output. Some firms managed to do so, but

once political support came to an end (as Fujimori's regime itself), they didn't survive. In 1997 the government issued a decree creating the Small Business and Microenterprise development Commission (PROMPYME), with the objective of improving SMEs access to markets. As was PROMPEX, the agency devoted to export promotion (Tello and Tavera 2009).

A new approach was put forward in the Toledo regime (2001-2006), focusing on employment generation through SME development policies. For the Gamarra district a specific object of the "Development of Business Networks" (executed by PROMPYME) was to create cooperative business networks, with the purpose to strengthen the dynamics for collective efficiency within the agglomeration and to optimize market access for member enterprises.

Unfortunately however, the project at large (in Gamarra) was unable to meet one of the main expectations from the part of the firms, particularly the smaller ones, namely to enhance local governance and improve access to basic services, including security (Tello and Tavera 2008). When PROMPYME was shut down, the project came to an end.

A second program that has supported the development of agglomerations in the country has aimed at the organization of the Centers for Technological Innovation (CITEs). The objective of this program is to enhance SME competitiveness through innovation and increasing productivity, as well as to provide information for the competitive development of the different stages of production of the national industry (Tello and Tavera 2008).

The "Cluster Promotion Program" serves to support the establishment of a joint public-private working mechanism with national coverage. Its purpose is to foster more competitive SME performance through inter-firm linkages and cooperation between firms and supporting institutions, and to promote public-private cooperation in the field of production development policies. However, this program is more geared towards strengthening agro industrial production chains instead of territorial clusters of SMEs in urban areas (Tello and Tavera 2008).

More recently the government launched the program "Gamarra exporta", which created an information centre to provide SMEs in this cluster with valuable information on fashion trends and the best practices in marketing as well as manufacturing (Tello and Tavera 2008).

However, Tello and Tavera wonder whether cluster (or agglomeration) development can be promoted at all in a country like Peru. Moreover, public investments are low and therefore it is not surprising that most of the programs (mentioned above) have been funded by external donors, often with active involvement of NGO's. In Peru, these supposedly specific development policies have been included in a more general set of public policies in support of SMEs (Tello and Tavera 2008). There is no evidence, so far, of deliberate efforts to streamline the process of decentralization, regional development, and state reform, particularly in the realm of social policies. One of the main flaws of these support programs is that they failed to involve all appropriate actors, particularly

regional and local governments, universities and representative producer associations (Tello and Tavera 2008)

This chapter concludes with some additional information by Villaran (2007), analyzing the world of the small firm. Some examples are given of certain institutions which are concerned with the development of SMEs in Peru:

First, COPEME ‘Consortia de Organizaciones Privadas de Promoción al Desarrollo de la Micro y Pequeña Empresa’, which is a civil organization that promotes the development the SME sector at local, regional and national level. Some of its objectives are coordinating with the state and the local government, facilitate international cooperation and joint action among associates and promote the development of knowledge, new products and business technologies. COPEME is not actively involved in projects in Gamarra at the moment, however (Villaran 2007).

Second, SENATI ‘Servicio Nacional de Adiestramiento en Trabajo Industrial’, which is an organization involved in labor education and training. This organization assists entrepreneurs in improving the competitiveness of their firms by offering a wide variety of training programs (Villaran 2007).

Finally, Swiss contact, works in Latin America, Asia, Africa and Eastern Europe This organization contributes to the generation of working places, pursuing gender equity and respect for the environment (Villaran 2007).

### **1.3 The Gamarra district**

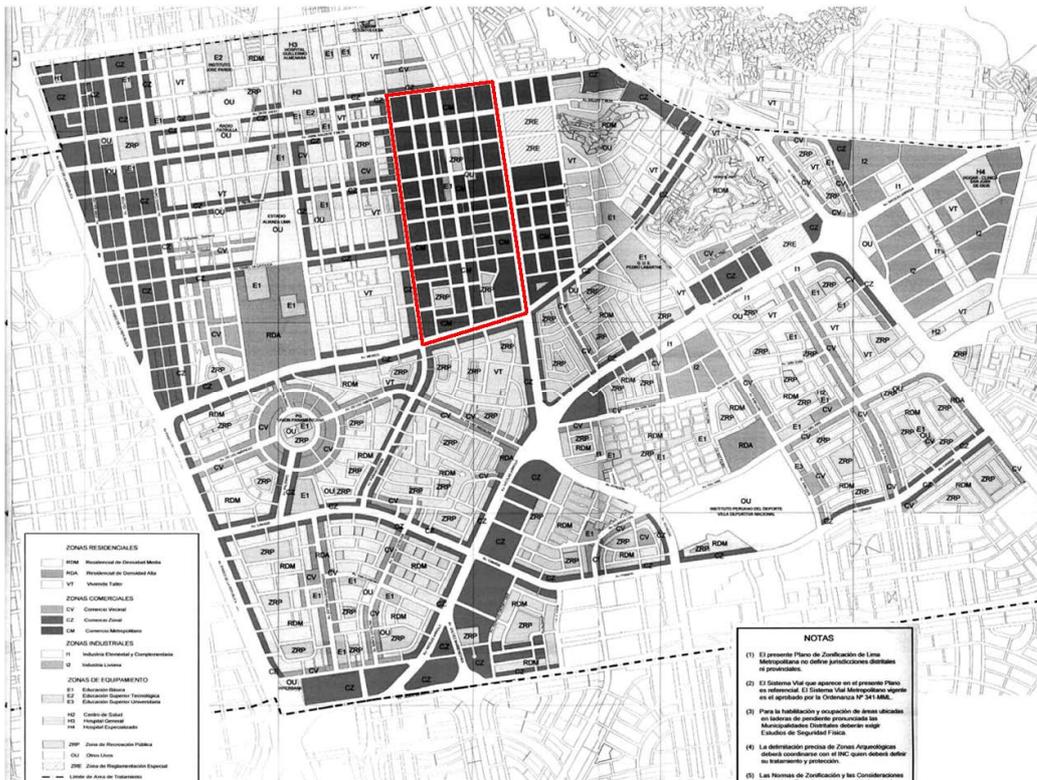
The Gamarra district is located in Lima, Peru (figure 1.1). It is Lima’s commercial textile center, and located in La Victoria, one of the 43 municipal districts of Lima (Visser 1999). La Victoria has a long experience in different industrial activities: textiles and clothing, metalworking, automobile repair services, woodworking and several final consumer products. At the moment La Victoria is characterized by the presence of different areas of activity (production, trade and services): garment agglomeration Gamarra, a wholesale market, various retail markets, various car sales & services, interprovincial transport services, financial services and medicine related services (Ministerio de Trabajo y Promoción del Empleo 2008). The Gamarra district comprises 60 housing blocks (Ponce Monteza 1994; in Visser 1999) and it took 40 years to achieve its size in 1999 (figure 1.2).

**Figure 1.1:** Map of Peru (left) and a map of La Victoria in Lima (right)



Source: University of Texas Libraries 2009 and Google-maps 2009

**Figure 1.2:** Overview of the Victoria district where the boundaries of the Gamarra district are indicated with red lines



Source: Ministerio de Trabajo y Promoción del Empleo 2008

The Gamarra district has passed through four stages of development (Bird 2005; and Ponce Monteza 1994). The first stage dates to before 1972 when small merchants, mostly migrants from the Central and Southern Andes, concentrated to produce and sell fabrics and clothes. The second stage is characterized by a growth in the number of firms through group organization, which provided the area with basic infrastructure and an opportunity to expand to national markets. In this phase the businesses concentrated and continued to streamline their production chain. The third phase was characterized by consolidation. Entrepreneurs had to defend their businesses against the hyperinflation and political violence in Peru during the late '80s and early '90s. At the same time they had to improve their competitiveness through training and technology. After these difficulties Gamarra got back on its feet and introduced new technologies, financing and the search for international markets.

The data for the number of firms in Gamarra is variable. On the one hand, Visser (1999) uses an estimate of 6.800 firms which were active in the area in 1993. On the other hand, Visser mentions another estimate (also for 1993), which estimated that the total number of firms was 8.000, generating a total annual turnover of 800 million US dollars. Bird (2005) states that the area is home to 10.000 small businesses, generating 500 million US dollars per year. The question is whether this is estimation rather than determination. Finally, Visser et al. (2009) determines that in 2007, the cluster comprised a total number of 20.393 firms involved in clothing and related activities. Thus, implying an annual growth rate of 6 to 7.5 percent over 15 year's time. Garment producers represent about 21 percent of all firms in Gamarra, whereas traders account for about 72 percent. This implies that the main activity in the area is trade.

The performance of firms assessed by Visser (1996 and 2009) is determined in chapter three of this study; therefore the following sub-question is introduced:

**Sub-question 1:** *What is the performance of firms in the Gamarra district?*

## 2 Concentration processes and inter-firm relations

This chapter explores the literature, which is important for this study. First, the concentration processes of firms are assessed, which are at work in such an environment and the definitions of such concentrations are explored. The focus of this study is on firms, therefore the relation between the development of firms and “the aggregate” is discussed. Second, the literature on governance, or inter-firm relations, is explored. The characteristics, which determine the coordination form, will be explored and discussed. Furthermore, the quality of coordination is assessed, which is determined by various factors.

### 2.1 Agglomerations

One can find agglomerations of firms everywhere, and they may form “spontaneously”. The spatial concentration of firms can be the result of the presence of natural resources, well-developed infrastructure or a large multinational cooperation, for example. A certain region could be better suitable for inter-firm cooperation; this can be related to the institutional environment. But as Klepper (2001) states, geographical concentration of firms in a certain region can also be the result of an evolutionary path dependent process based on coincidence.

Gordon and McCann (2000) distinguish three ideal-typical models of processes which may underlie spatial concentrations of related activities: agglomerations, complexes and social networks. Whereas agglomerations are solely based on geographical proximity, complexes are characterized by stable relations among firms, and social networks are comprised of strong interpersonal relationships where inter-firm interactions may be stronger than their intra-firm counterparts.

The literature concerning the spatial concentration of firms elaborates on the *cluster* concept. Therefore, the next section assesses this concept and defines the conditions which characterize a cluster, comparing it to an agglomeration.

De Langen (2004, p. 10) defines a cluster as follows:

*“A population of geographically concentrated and mutually related business units, associations and public (-private) organizations centered around a distinctive economic specialization.”*

In line with the definition above, Visser and De Langen (2006) describe a cluster developing through the long term process of the geographical concentration of firms in related industries and chains. The concept of a cluster differs from a network in the sense that clustered firms may, but need not, cooperate with one another (Visser 2000). Whereas networks are characterized by firms which cooperate, but need not, be geographically concentrated.

Recent work of Visser (2008a) explores the existing theory regarding the above concepts and defines the complementarity of clusters and networks. It especially identifies the differences in competence and governance effects between the two.

The definition of a cluster by Visser (2008a, p. 11) is as follows:

*“Clustering refers to a process of spatial concentration of business and/or other organizations involved in a core as well as vertically and diagonally related activities, which is based on local interactions between actors and/or factors that enhance the number of firms and/or employment at a faster rate in the cluster than elsewhere, and which may, but need not involve knowledge exchange in network settings.”*

This definition takes different problems regarding clusters and networks into account. The first issue is that not all spatial concentration processes are clusters, the second that not all clusters are based on networks or networking behavior, the third that not all networks (local or regional) develop in clusters, and finally that networks may develop beyond local or regional borders (Visser 2008a).

One effect of the clustering of firms is the lowering of transaction costs, which are the costs which rise when one is transacting under uncertainty (Nooteboom 2002). These costs occur during three phases: contact, contract and control. The uncertainty exists because different actors or firms have to make specific investments, where the partners may behave in opportunistic ways. In an agglomeration, transaction costs are lowered in two ways. First, the high density of related economic activities facilitates the screening and selection of business partners. Second, the proximity of actors or firms facilitates the monitoring and enforcement of contracts (Visser 1999).

Besides the lowering of transaction costs, more dynamic advantages arise in a clustering environment. In contrary to networks, clusters differ in the way learning takes place. A high level of information transparency is reached in the cluster, due to spatial and physical proximity, a high density of related economic activity, and cognitive proximity. Cognitive proximity implies a common level of knowledge among different actors, which can learn from each other (Boschma 2005). This results in an evolutionary learning process characterized by a certain level of variety, monitoring, comparison, selection and imitation. Clustering mitigates the problems of information asymmetry and transaction costs but the problem of cognitive lock-in rises. Cognitive lock-in implies that new technologies or market opportunities are overlooked (Boschma 2005).

Marshall (1920; in: Schmitz and Nadvi 1999) stated that a range of localized external economies are generated in an agglomeration of firms in similar or related activities. These external economies lowered costs of clustered producers. Collective efficiency is the competitive advantage derived from local external economies and joint action. The combination of both active cooperation and external economies defines the degree of collective efficiency of a cluster and its potential for fostering SME upgrading (Giuliani et al. 2007).

The clustering of firms can also enhance collective learning, the territorial counterpart of learning within firms, being a vehicle for temporal and spatial knowledge transmission (Capello 1999). It is collective because it persists over time and is transferred by other agents in interactive processes. The stable linkages between suppliers and customers in a cluster generate a transfer of codified and tacit knowledge which accumulates over time.

A cluster is often characterized by a high degree of specialization, which leads to a high level of cognitive distance. At the one hand the novelty value of relations increases with cognitive distance, but on the other hand the mutual understanding decreases with cognitive distance. Firms should find an optimal cognitive distance for effective learning and innovation to take place. Next to an optimal cognitive distance is the optimal duration of relationships for learning: long enough to reach a level of mutual understanding, but not so long to lose the novelty value of the relation.

The major knowledge activities differ per cluster. In growing and vibrant clusters the main process is exploring new knowledge, which requires open, frequent but short-lived interactions. Mature clusters are often characterized by exploiting existing knowledge, which requires well-defined, infrequent but more long-term interactions.

A cluster is characterized by a horizontal, vertical and diagonal dimension (Maskell 2001). The horizontal dimension consists of firms with similar capabilities that carry out similar activities. This dimension mostly includes competitors, which are engaged in the learning process through watching, discussing and comparing dissimilar solutions. Because competitors don't need to cooperate and suppliers and customers do, most relationships in the cluster will be along the vertical dimension. This dimension is characterized by firms linked through input-output relations. The co-location of the related firms makes it easier for them to coordinate and to bridge communication gaps. Finally, the diagonal dimension is comprised of relationships between firms and so-called third parties. These public or private institutes can be universities, governmental bodies, knowledge institutes and other organizations.

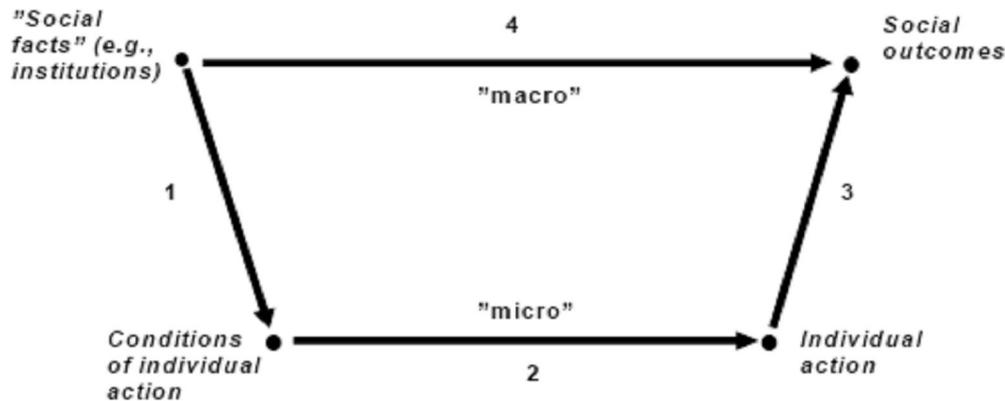
Maskell (2001) mentions that the cluster's growth can be explained by three different processes. First, the advantages of getting better access to the local knowledge base will attract existing firms, located elsewhere, to the cluster. Second, the cluster attracts entrepreneurs due to its dominant position. And finally, new firms arise in the cluster by spin-offs, which are new businesses started up by former employees of successful firms in the cluster.

The question is whether the definitions of Visser (2008a) and De Langen (2004) can be used to describe the Gamarra district, in other words; is the Gamarra district a cluster? Therefore, the following sub-question is formulated:

**Sub-question 2:** *Can the Gamarra district be defined as a cluster?*

### **2.1.1 Relation individual and aggregate level**

The previous section described the development and processes of an agglomeration of firms on macro level. In other words, the development of the aggregate of firms. Whereas the focus in this study is on the individual firms and not on the district in general. Therefore, the individual actions need to be related to the outcomes on aggregate level. The Coleman diagram (Coleman 1990; in: Foss 2006) can be used to explain this relation (figure 2.1).

**Figure 2.1:** A general model of social science explanation

Source: Foss 2006

The so-called “boat of Coleman” (due to its shape) relates the macro-level to the micro-level. The macro-level represents the aggregate whilst the micro-level the individual. The North-Eastern node (“social facts”) can be substituted for “governance mechanisms”. Governance mechanisms can be institutions as well as various (private) actors, which may have a coordinating role in the district. These governance mechanisms (on macro-level) influence the conditions of individual action (e.g. of firms) at the South-Eastern node. This leads these individuals to take certain (collective) decisions (individual action) situated at the South-Western node. Finally, this individual action, when aggregated, leads to certain (favourable) organizational outcomes (North-Western node).

As Foss (2006) argues, there are no conceivable mechanisms that directly relate the “social facts” (governance mechanisms) to the “social outcomes” (organizational outcomes), such as competitive advantage. Therefore, one needs to assess the micro-level (e.g. firm-level) to find certain outcomes at macro-level. This study relates the conditions of actions and decisions of firms in Gamarra to the perceived governance mechanisms (institutions) and organizational outcomes on aggregate level (quality of governance).

## 2.2 Inter-firm relations

De Langen (2004) identifies both the governance and structure of an agglomeration as influencing the performance (figure 2.2). Governance is defined as (Williamson 2000; in: Visser and De Langen 2006, p. 180):

*“An effort to craft order, thereby to mitigate conflict and realize mutual gains.”*

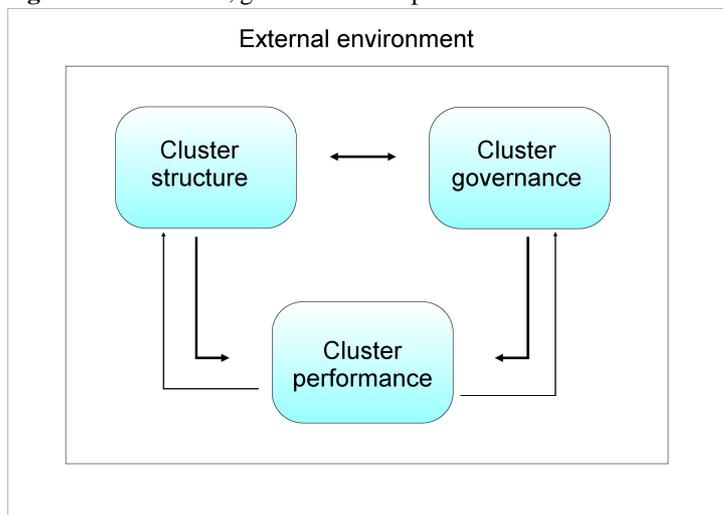
Governance can be seen as the coordination of economic activity, and can be both based on non-market as market relationships between the different actors in a certain area. These actors create certain institutions which apply in the agglomeration of firms. Institutions guide the behavior of the different actors, and are (relatively) stable and not subject to free choice (Nooteboom 2002).

In essence, governance is some kind of steering of activities (Humphrey and Schmitz 2000). The goal of coordination can be to decrease transaction costs or to stimulate cooperation and is influenced by the governance structure, i.e. the distribution of decision-making powers across firms (De Propris 2001). This governance structure can differ

greatly among different industries; the decision-making power can be evenly distributed between firms or distributed among a few (large) firms. De Propriis (2001) also identifies other factors which can influence the inter-firm relations; the inter-firm production relationship, the local labour market and the socio-cultural context.

Participants in innovation and other networks have to learn to cooperate. Individual actors need to have shared, long-term, dynamic interests, not just individual, short-term, static gains. The governance and structure of the district are independent, and can influence each other. Both governance and structure influence the performance of the firms in the area. This basic framework by De Langen (2004) focuses on the cluster (figure 2.2).

**Figure 2.2:** Structure, governance and performance of clusters



Source: based on De Langen 2004

The following section considers the importance of governance. Governance is not only about reducing transaction costs, but also to stimulate joint action and knowledge sharing in network settings. Nooteboom (2002) argues that the purpose of governance is reducing relational risk. Relational risk arises when firms are related to one another. Nooteboom (2002) identifies two kinds of relational risk: the risk of dependence ('hold-up') and the risk of loss of knowledge ('spillover'). When one is dependent on a partner, risks of dependence can arise. One can take an opportunistic advantage of this dependence and take a greater share in added value.

The second risk is that of the loss of knowledge, or spillover. Of course, the whole point of knowledge flows between partners is utilizing complementary sources of knowledge. But one has to consider the trade-off between risks and benefits of knowledge flows. The competitive position of a firm can be negatively affected when knowledge, concerning core competencies, spills over to competitors.

Visser (2008b) identifies a third risk: the risk of conservatism. Conservatism is a lack of supply-chain awareness among the actors involved and is related to their partiality and self-centeredness. It negatively affects the perception of the future benefits of transactions.

Regarding knowledge sharing, the knowledge governance approach (KGA) could give some useful insights (Foss 2006). This approach is concerned with how the deployment of governance mechanisms influences knowledge processes, such as sharing, retaining and creating knowledge. Foss (2006) states that theorists usually explain either a macro-level phenomenon, such as a firm-level outcome, or a correlation between macro-phenomena, e.g. a relation between capabilities and competitive advantage (for further details see Foss 2006). Foss (2006) focuses on the level of individual employees and their motivation.

The KGA is unique in accounting the micro mechanisms that link governance mechanisms and knowledge processes. A firm is capable in accessing the motivation of employees, which can result in the strengthening of personal relationships. It addresses issues such as the kinds of incentives that work best for certain knowledge processes and what combinations of governance mechanisms are best suited for knowledge sharing. Especially in the Gamarra district, which mainly consists of small and micro enterprises, this approach can be useful. If knowledge sharing is important it will probably be highly influenced by individuals and involve the micro mechanisms Foss elaborates on.

### 2.2.1 Different forms of inter-firm relations

Still, governance is a rather broad concept. The task is to assess the different forms of inter-firm relations. First, the different forms of governance are indicated with the help of different studies (Humphrey and Schmitz 2000; Williamson 1996; Jessop 1998; and Gereffi et al. 2005). Second, the characteristics of these different forms will be elaborated on. It will focus itself on the specific contract law, the distribution of decision-making power, the adaptation to changing circumstances and the coordination in the value chain determined by Gereffi et al. (2005). Furthermore, a distinction is made between public, private and public-private governance.

Humphrey and Schmitz (2000) identify four types of coordination of economic activities. The first type is *market* based; it solely consists of arm's-length relationships. Humphrey and Schmitz (2000) identify three other types of coordination, which are forms of coordination based on non-market relationships. A *network* structure implies that coordination is equal among firms that share their competencies within the chain. In this case, the governance is symmetrically distributed among the firms.

The two other forms of coordination are asymmetric; a *quasi-hierarchic* structure involves relationships in which one is subordinated to the other. The leader in the chain defines the rules to which the rest of the actors have to comply. This structure is usually present when one firm is subcontracting activities to other firms.

*Hierarchy* implies that a firm is owned by an external firm. Williamson (1996) shares this perception of governance, with the only exception that network and quasi-hierarchic forms of governance are taken together, being a *hybrid* form.

Jessop (1998) also identifies three modes of coordination. First, the *anarchy of exchange*, which refers to market based relationships. Second, the *self-organizing heterarchy* refers to coordination within networks. Finally, Jessop identifies *organizational hierarchy*, which is in line with both Humphrey and Schmitz (2000) and Williamson (1996).

Gereffi et al. (2005) identify five different modes of governance and characterizes these in terms of the complexity of transactions, the codifiability of information and the capabilities of suppliers in the value chain. The conceptual model, developed by Gereffi et al., is especially interesting concerning the role of the leader firm in relation to the suppliers in the value chain. The hybrid form of Williamson (1996) is categorized in three different coordination modes along the value chain of firms by Gereffi et al.: *modular*, *relational* and *captive*. The different perceptions are summarized in table 2.1 below.

**Table 2.1:** Forms of inter-firm relationships

<b>Humphrey &amp; Schmitz</b>	<b>Williamson</b>	<b>Jessop</b>	<b>Gereffi et al.</b>
Market	Market	Anarchy of exchange	Markets
Network	Hybrid	Self-organizing heterarchy	Modular Relational Captive
Quasi-hierarchic hierarchic	Hierarchic	Organizational hierarchy	Hierarchy

Sources: Williamson 1996; Humphrey & Schmitz 2000; Jessop 1998; and Gereffi et al. 2005

The characterization of Humphrey and Schmitz (2005) is used in this research. However, due to the similarity of the other forms (table 2.1), the work of Williamson (1996), Jessop (1998) and Gereffi et al. (2005) is useful as well. If there is a difference in performance between the different modes of governance, the critical attributes that characterize these modes must be assessed.

#### *Market*

The market mode of governance is characterized by high-powered incentives, little administrative control, and a legal rules contract law regime (Williamson 2005). Williamson (1996) describes the contract law as being a classic contract law; this means that the different parties bear no dependency relation to each other. There is also a lack of leadership among the actors. This mode of governance is poorly suited to effect cooperative adaptations, producers and consumers respond independently to changing circumstances.

Thus, the market governance structure is based on more formal contacts (true the use of contracts and legal rules), little control and cooperation, and geared towards high-powered incentives. Each party goes its own way and there is no interest in the continuity of relationships (Williamson 2005). Gereffi et al. (2005) state that an essential point of market coordination is that the costs of switching to new partners are low for both parties. Moreover, product specifications are relatively simple, transactions are easily codified and suppliers have the capability to make the products in question with little input from buyers.

#### *Hierarchy*

The hierarchic mode uses low-powered incentives, considerable administrative control, and a more informal law regime (*forbearance*, in: Williamson 1996), where the different

parties appeal unresolved disputes to the hierarchy for a decision. In a hierarchic structure contracts between the “leader” and its “subordinates” (e.g. a supplier) define the coordination. Firms will be forced to develop and manufacture products in-house. Direct administrative control is exerted by headquarters over subordinates (Gereffi et al. 2005). This structure is based on more informal agreements, more control and it works well in coordinated adaptation respects when required by changing circumstances. Disturbances in the relationships (e.g. concerning contracts) between the different parties are resolved internally. Coordination under hierarchy is also characterized by unified ownership, vertical integration, the relationships include (many) specific investments and hazards are estimated low. One solution to the problems of dependence and spillover is to prevent the risks from arising. This means that one should not engage in specific investments that give rise to the risk of dependence, or do not give information that may be traded to spillover. Nooteboom (2002) calls this *evasion*, which implies a direct control of actions. A hierarchic structure is characterized by a high degree of control; this means that this governance instrument is most likely to occur in hierarchic circumstances.

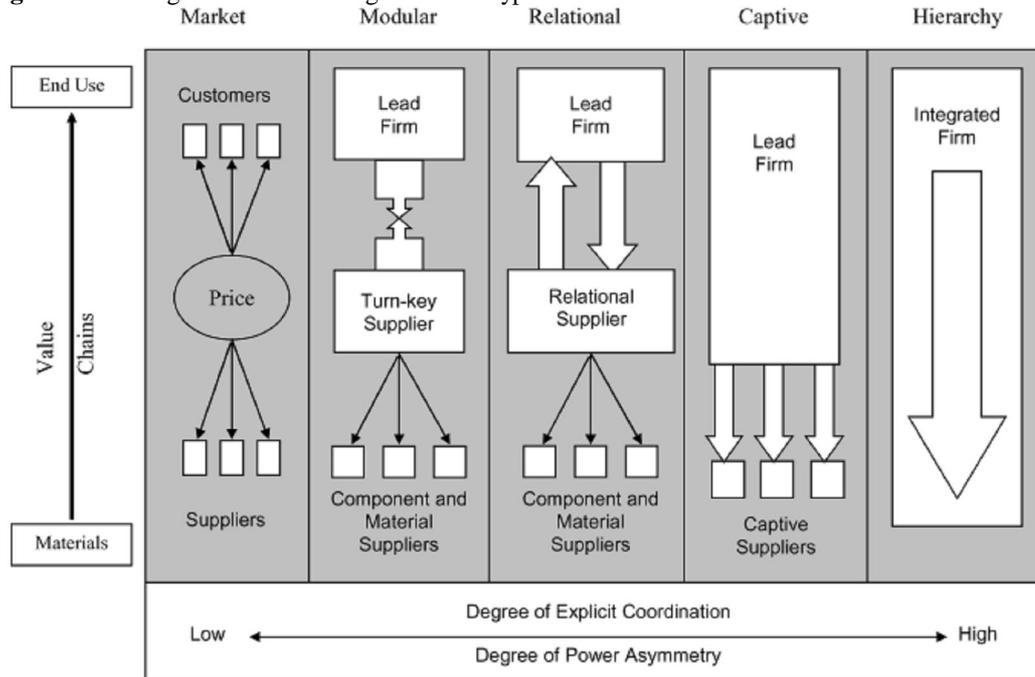
Another instrument to reduce the risks of dependence and spillover is the use of *obligational contracting*, which reduces ‘opportunities for opportunism’, it entails trust in the legal infrastructure. These formal contracts are enforced by being monitored and decrease the possibilities for opportunistic behaviour. The importance of obligational contracting lies in its content and not whether there is a contract.

Obligational contracting can occur in all three modes of governance, but is more likely to occur in a hierarchic setting due to the considerable administrative control. Finally, *compensation* (the use of safeguards, such as contracts and hostages) can be part of the solution of relational risks in hierarchic form of governance (Visser 2008b).

#### *Network and quasi-hierarchic*

The network and quasi-hierarchic (or hybrid) modes have characteristics which are in between the two modes described above. The contract law in these regimes is the neoclassical contract law, where the parties maintain autonomy but contract is mediated by an elastic contracting mechanism (Williamson 1996). Jessop (1998) mainly focuses on these modes of governance (*heterarchic governance*). In these hybrid forms adaptation to changing circumstances can be both independently as cooperative. Coordination is characterized by complex interactions between buyers and sellers, which often create mutual dependence and high levels of asset specificity (Gereffi et al. 2005).

A relational form of coordination is achieved through a close dialogue between more or less equal partners. Frequent face-to-face interaction induces an exchange of tacit knowledge (Gereffi et al. 2005). In a quasi-hierarchic form, power is exerted directly by lead firms on suppliers. Suppliers receive detailed instructions and are transactionally dependent on much larger buyers. Suppliers are frequently confined to a narrow range of tasks and are dependent on the lead firm for complementary activities. Therefore, the subordinate is less likely to exit the relation (Gereffi et al. 2005). Gereffi et al. developed a conceptual model that describes the relations in the value chain, which is displayed in figure 2.3 below.

**Figure 2.3:** Five global value chain governance types

Source: Gereffi et al. 2005

As illustrated in figure 2.3, three hybrid governance forms are identified, namely; modular, relational and captive. The relational governance type can be compared with the earlier introduced network form. This type is characterized by complex interactions between buyers and sellers, which often create mutual dependence.

A lower degree of explicit coordination and power asymmetry are characteristics of the *modular* governance form.

The value chain is split up in various modules, where suppliers make products to a customer's specifications. Finally, the captive form describes a 'state of being imprisoned'. Figure 2.3 makes clear that in the captive form, the lead controls a mayor part of the value chain; there is a high degree of monitoring and control by the lead firm. The suppliers are dependent on the lead firm for complementary activities such as design, logistics, component purchasing, and process technology upgrading (Gereffi et al. 2005). The reliance in *relational contracting* is based on several sources; norms, values, advantage, bonding and routinization. Relational contracting contains a certain degree of loyalty, which may be based on ethics, friendship, empathy, or kinship. Relational contracting is cheaper than contract, is more flexible, and it is in the actor's own interest whether to comply with agreements. A network structure of governance (or heterarchy) is based on reflexive rationality, which means that there is a continued commitment to dialogue to generate and exchange more information and solidarity among actors. Thus, relational contracting is most likely to occur in network form of governance.

Visser (2008b) also finds multiple solutions to the different problems of relational risk (risk of dependence, spillover and conservatism). The risk of dependence can be reduced by *balancing* (both parties are made evenly vulnerable to behavioural risks). Balancing

seems most likely to occur in a network structure; because it functions best when the different actors have a certain dependency among each other.

*Public-private governance*

The different forms of governance discussed above are mainly private forms of governance, which means that the firms are coordinating the collective action. When the government is unable or unwilling to provide support (“lawlessness”), private ordering should mitigate conflict and realize mutual gains from trade (Williamson 2005). Besides private governance, public governance and private-public governance are two other forms (Humphrey and Schmitz, 2000). Public governance is characterized by a great influence of local and regional government agencies. In this case, the coordination is executed by the use of various governmental instruments to stimulate the development of the district (e.g. by stimulating the development of SMEs, the specific industry or promote the external environment). Private-public governance is based on local and regional policy networks, which form by the interaction of firms and governmental agencies.

Especially interesting is the case in which private-public governance can be observed. Underhill (2003) identifies both the movement believing that coordination is clearly split up in public (state) and private (market), as the movement that argues that the public and private are clearly connected. Respectively, these are called the *state - market dichotomy* and the *state - market condominium*.

The state - market dichotomy states that democratic practice never succeeded in penetrating the private domain of the market, and indeed it was often part of the argument that is shall not. In contrary, the state - market condominium indicates that states and markets exist in antipathy to each other. The interaction of states and markets, where there is constant conflict between the two.

Bendor and Mookherjee (1987) also indicated that the real choice is not between anarchy (a state of lawlessness and therefore solely private influence) and the state but between different form of dual control (hybrid solutions), therefore indicating that a mix of public and private governance suits best for collective action (especially in large groups). A hierarchical decomposition of problems is identified, which is more stable than a decentralized structure (private) and often secures more cooperation than the centralized structure (public).

Giuliani et al. (2007) combines different forms of governance with the multiple agglomeration industries in Latin America. Gamarra is characterized as having a market based coordination form. This research could determine whether Gamarra is indeed characterized by this form of governance.

The former leads to the following sub-question:

**Sub-question 3:** *What form of governance is present in Gamarra, and what are its characteristics?*

### 2.2.2 The quality of governance

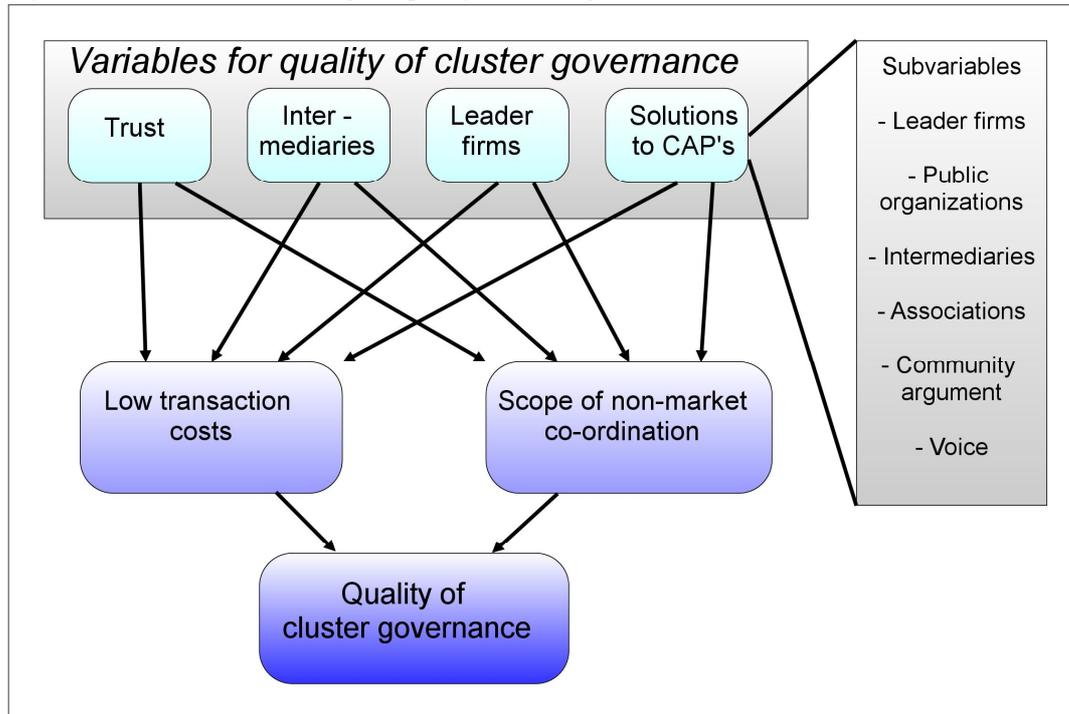
The quality of governance is determined by the way in which different forms of governance and the structure of governance result in the development of the district, which is a result of the actions of individual firms (see section 2.1.1). The following section combines the different characteristics which determine the form of governance from the previous section with key variables which influence these characteristics: trust, leader firms, collective action regimes (solutions to CAPs) and intermediaries. The question is whether these variables influence the structure of coordination and if so; in what way. The next question is whether the performance of firms in the agglomeration is enhanced by the governance form. In this way the quality of the governance and the variables which influence it can be determined. In what way do leader firms and trust define the distribution of coordination in an agglomeration? Do the firms perform better in symmetric or asymmetric conditions?

Visser (2008a) states that governance problems are better solved in a cluster in comparison to a network. The presence of intermediaries contributes to the solution of governance problems, which assist in the management of the risks of dependence and unwanted spillovers. Furthermore, the presence of trust, innovative entrepreneurs, leader firms, business associations and public organizations, enhance the effectiveness of governance. According to De Langen (2004), the quality of governance is based on the level of transaction costs and the scope of coordination (figure 2.4).

De Langen argues that a high quality of governance is reached when the scope of coordination is non-market. If coordination is non-market, the actors are more focused on interacting through joint actions and the sharing of knowledge. There is more attention for cooperative adaptation when the scope of coordination is on network (Williamson 2005). In other words, De Langen assumes that a higher quality of governance is reached when the governance form is hybrid or hierarchic. De Langen (2004) identifies the, previously introduced, variables as influencing the scope of coordination and the level of transaction costs and indirectly determining the quality of governance.

The model of de Langen (2004) also includes a number of sub-variables which influence the solutions to CAPs. It is important to determine in what way these variables influence the quality of governance.

**Figure 2.4:** Variables influencing the quality of cluster governance



Source: based on De Langen 2004 (in: Visser and De Langen, 2006)

The following section briefly considers the variables that influence the quality of governance.

### Trust

Nooteboom (2002, p. 48) defines trust as follows:

*“‘Real’ trust, or trust in the strong sense is an expectation that things or people will not fail us, or the neglect or lack of awareness of the possibility of failure, even if there are perceived opportunities and incentives for it.”*

The level of trust therefore influences the level of transaction costs. If the level of trust is high, (average) transaction costs are relatively low; because the costs for monitoring and specifying contracts are low (de Langen 2004). A high level of trust also reduces uncertainty and the risk of opportunistic behavior. This means that the scope of coordination is beyond price (non-market).

The purpose of governance is to reduce relational risks. By enabling relations in economies and organizations, and by reducing transaction costs, trust reduces relational risks. Trust doesn't operate on its own but in combinations with other instruments of governance (Nooteboom 2002). Among these instruments are contracts, mutual dependence and intermediaries. Trust can act as a substitute or a precondition for detailed contracts. This might be necessary because detailed contracting can set a relation off on a

basis of mistrust, and may frustrate the building of trust. A contract can be complementary to trust as well, e.g. to act as an aid to memory or a record of conclusions.

Trust can act as a precondition for a contract, because one may require trust before setting up a contract. When a relation is build on mutual dependence, the balance of dependence may have to be supplemented by trust. This balance may be disrupted by a change of technology, a difference between partners in their rate of learning, or the appearance of new possibilities for partnership (Nooteboom 2002). Partners can rely on each other not to exit as soon as the balance of dependence is disrupted, but to try to restore the balance, by mutual investment or help.

Trust also has its limits; people are loyal only within certain boundaries, which might be subjected to pressures for survival. Nooteboom (2002) also analyses whether trust and governance are spatially embedded. Intensive local interaction might be needed to develop a basis for mutual understanding or absorptive capacity. A trust-based culture does not only depend on the historical and social context but it necessitates a governance structure based on mutual complementarity, reciprocity and interdependence (De Propris 2001).

A high level of trust is likely to be present in a district where transactions are based on non-market relationships. Thus, it is likely that a network (or hybrid) form of governance is characterized by a high level of trust. The level of trust is assumed to be significantly lower in a hierarchic or quasi-hierarchic setting, because subordination of (leader) firms to others exists. Finally, trust is probably nearly absent in a market structure, because there is a lack of dependency between actors.

The previous section leads to the following sub-question:

**Sub-question 4:** *What is the level of trust in Gamarra, and how does it influence the inter-firm relations?*

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### **Leader firms**

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De Langen (2004, p. 59) defines leader firms as follows:

*“Leader firms are firms that have – due to their size, market position, knowledge and entrepreneurial skills – the ability and incentive to make investments with positive externalities for other firms in the cluster.”*

The essence of leader firms is the creation of positive externalities for other firms. This means that the investments of one firm, lead to positive external effects which are accessible for other firms in the network or district (De Langen and Nijdam 2003). The most important effects which are created lie in the areas of innovation, internationalization and the labour market. The creation of positive externalities is two-sided. At the one hand, the externalities are an unintended result of the investments of the

leader firm. On the other hand, the externalities arise from strategic decisions of the leader firm, which are intended to improve the network. These externalities also have positive effects for the leader firm, because the performance of suppliers increases (De Langen and Nijdam 2003).

However, it can be more favorable for the leader firm to solely invest in international contacts (*global pipelines*) to enhance its competitiveness on international markets. If this is the case, the relationship between the leader firm and the local firms can be one sided. The leader firm takes advantage of the services of the local firms, whereas the local firms can't take advantage of the presence of the leader firm, which might be involved in international networks, has a higher knowledge base and might control the market. Thus, it is the question whether a leader firm is willing to cooperate with its local partners.

Albino et al. (1999) investigate the role of the leader firm concerning the knowledge transfer and inter-firm relationships in industrial districts. Besides the importance of the leader firm for the development of the district and its suppliers they also stress the importance of the suppliers for the leader firm. In this view, the leader firm strongly relies on other firms to reach high levels of competitiveness. A high level of interdependence between the leader firm and its suppliers makes the customer-supplier relationships uncertain. Therefore, the importance of coordination is stressed. Moreover, the survival of an industrial district seems related to its internationalization and the growth of a leader firm, indicating the importance of the leader firm for its surrounding.

The role of the leader firm in a network setting, if at all present, is probably to create positive externalities for other firms. This form of governance is characterized by consensus and the building of mutual understanding. In other words, there is a symmetric distribution of decision-making power.

Leader firms are more likely to exploit local firms when the distribution of decision-making power is asymmetrical, which is the case in a quasi-hierarchic form of governance. It is assumed that leader firms gain influence in a more hierarchic situation (hierarchy). In a market based governance structure, cooperation between leader firms and local firms might be totally absent.

When a Leader firms is willing to invest it can improve coordination of innovation networks, coordinate internationalization of other firms, co-invest to improve the infrastructure for training, education and knowledge exchange, and improve the organizational infrastructure in the industry. Due to the investments of the leader firm coordination costs are reduced and the scope is beyond price. Besides investments, leader firms have a strategic insight, which reduces risk perceptions and transaction costs (Visser and De Langen 2006). The size of a firm doesn't influence its leader capabilities, small firms can also behave as leader firms and multinationals are not necessarily locally embedded (De Langen 2004).

Regarding to leader firms, the following sub-question is formulated.

**Sub-question 5:** *What is the influence of leader firms in Gamarra, and how does it influence the inter-firm relations?*

## Intermediaries

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Intermediaries can be specialized R&D institutes, training centers, consultancy firms, information brokers or business associations, among others. Visser and De Langen (2006) mention the fact that intermediaries may diffuse information and act as brokers in inter-firm coalitions. Intermediaries can bridge gaps between different exchange partners, reducing the searching costs (De Langen 2004). Nooteboom (2002) identifies different roles for intermediaries in the governance of inter-firm relations.

Various important roles are considered. First, the role of an intermediary is to control spillover. This means that the intermediary makes sure that knowledge does not flow beyond where it is intended. Second, the intermediary can act as a governance instrument at its own. When transaction costs are low or infrequent, an intermediary can govern these transaction costs. For the intermediary to judge effectively and fairly, it must have the trust of all actors included in the transaction. Third, the role is to act as an intermediary in the building of trust. Especially in the first phases of a relationship, an intermediary can eliminate misunderstanding. To ensure that the cooperation is successful, the building of a trust relation is import. Moreover, an intermediary can have a role in the timely and least destructive ending of relation.

The intermediary can offer valuable services in eliminating misunderstanding and preventing damaging battles of divorce. Intermediaries stimulate knowledge sharing, assist in transactions and control spillover risks. Therefore, the influence of an intermediary is most likely to be high in network settings. Intermediaries are not likely to play a big role in a hierarchic governance form. Due to the control of the leader over the subordinate, there is little room for an intermediary to influence this process. This is probably also the case for a market based governance form. Firms may easily switch to other partners, because the switching costs are low.

Therefore, it is unlikely for an intermediary to play an influential role; because intermediaries are especially effective in guiding the transaction process and the creation of trust between different partners (or firms). The role of the intermediary becomes minor when firms are not interacting.

The following sub-question is formulated in this matter:

**Sub-question 6:** *What is the influence of intermediaries in Gamarra, and how does it influence the inter-firm relations?*

## Solutions to CAPs

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CAPs can arise as a result of free-riding. It can also be a result of a lack of leadership and high transaction costs associated with inter-firm cooperation (Visser and De Langen 2006). The performance of an agglomeration where collective action develops - CAPs are solved - is better than one where CAPs remain unsolved (De Langen 2004). It is not

surprising that a governance structure characterized by a high degree of cooperation is more capable in solving CAPs.

Thus, it is assumed that a collective action regime is more likely to occur in a network form of governance. The presence leader firms and intermediaries can also contribute to the solution of these CAPs. Leader firms have an important role in contributing to these solutions. Because of the important position in the district, relatively many advantages of the investments will apply to the leader firms. Leader firms have an incentive to bring all involved actors together and find solutions to the problems (De Langen and Nijdam 2003). Therefore, quasi-hierarchic or hierarchic governance forms are likely to be characterized by some sort of collective action regime.

*Voice* and *community argument* also contribute to the solution of CAPs (see figure 2.4). Hirschman (1970, p. 30) defines voice as follows:

*“Any attempt at all to change, rather than to escape from, an objectionable state of affairs, whether through individual or collective petition to the management directly in charge, through appeal to a higher authority with the intention of forcing a change in management, or through various types of actions and protests, including those that are meant to mobilize public opinion.”*

Voice can be seen as the opposite of *exit*, which describes the situation where a firm chooses for ‘desertion’ instead of ‘articulation’. In exit, one walks out when dissatisfied, avoiding argument. In voice, one reports dissatisfaction, asks for an explanation, and asks for help to ‘work things out’ (Nooteboom 2002).

De Langen (2004) describes voice as being important because public associations face only limited ‘selection pressure’ and as a consequence, adaptation is more likely when firms use their voice. As adaptation improves the quality of governance, voice adds to this quality. But exit can also be a reaction of last resort after voice has failed (Hirschman 1970). According to Williamson (1976), exit adaptations are usually taken by parties acting independently. However, for voice to be effective, generally requires collective action.

A community argument gives a higher willingness to invest in the ‘community’, and is thus more likely to result in better solutions to CAPs. According to Taylor and Singleton (1993), a community should have four main characteristics. First, there has to be a stability of relations. In other words, the members of the group believe that their relations with one another are durable. Second, a community is characterized by multiplex relations, interacting on several fronts. Third, relations are direct so that the group is autonomous; independent of external interference or regulation. Fourth, the members in the group share beliefs and preferences.

A collective action regime is not likely to exist in a market based governance form. Simply because collective action is mostly absent in this governance form.

To identify which CAPs are significant in Gamarra, the following sub-question is formulated:

**Sub-question 7:** *Which CAPs (collective action problems) are relevant for the Gamarra district and what contributes to the solution of these CAPs?*

And the final sub-question assesses whether there are initiatives or policies for improving the quality of governance:

**Sub-question 8:**

*What possibilities are there for improving the quality of the governance in the Gamarra district?*

### **3 Gamarra before 2009**

This chapter is included to describe the development of Gamarra over the past 15 years (Visser 1996 and 2009) and considers earlier literature concerning the development of Gamarra. Subsequently, the summarizing of the results of these studies is of significance importance in understanding the development of Gamarra.

First, the development of Gamarra before 1993 is briefly considered. To find out what the effect of different policies was on the performance of firms (Visser 1996). Second, the results of the research of Visser in 2007 (Visser et al. 2009) is introduced and used to analyze the development of Gamarra in the period of 1993-2007. The focus is not only on the evolution of performance of firms but three other aspects are considered as well. Namely, the transformation behavior of firms, the transacting behavior of firms and the clustering advantages through time which are identified by Visser. Third, the diversification of export is shortly considered using data of the Peruvian Ministry of Work (Ministerio de Trabajo y Promoción del Empleo 2008) and Visser et al. (2009). Fourth, other (contradicting) findings regarding the development of Gamarra by other scientists are assessed.

#### **3.1 Effect of policies on development Gamarra**

Visser (1996) analyzed whether the different policies (e.g. import substitution) affected the performance of firms in Gamarra and Peru as a whole. The manufacturing sector became increasingly dependent on the import-substitution policies, due to the small size of the domestic market, the continuing high dependence on imported capital and intermediate goods, insufficient upgrading of technical processes and the quality of products, and stagnating productivity. There was a growth of productivity (in terms of the monthly average of gross sales per worker) in this sector (however, decreasing) until 1981. In 1981, the decline set in. After 1983 there was a small recovery, but the crisis of 1988-1990 induced a fall. In 1994, the manufacturing sector grew at a rate of 17.1 per cent, but was still hardly equaled the 1980 score. The irregular performance of manufacturing during 1980s is explained by the dependence upon protection and incentives. Structural imbalances within manufacturing have been pertinent.

#### **3.2 Development garment firms over 15 years**

Visser et al. (2009) identifies whether there has been an evolution in Gamarra in terms of performance (in the period 1993 to 2007), the behavior of firms, and the strength of different agglomeration advantages in Gamarra. Firstly, the number of firms, involved in clothing and related activities, which comprise the district has grown significantly. An overall increase of 150 to 200 percent was observed in 15 years time (Visser et al. 2009). Before analyzing the results of the research of Visser, the methodology which is used is reviewed.

##### **3.2.1 Methodology**

In 2007, a cross-section survey of clothing SMEs was undertaken, comparing clustered firms with dispersed producers operating elsewhere in the city of Lima. This data was contrasted with the results of identical analyses in 1993 and 1994 (Visser 1996 and

1999). The group of dispersed producers which was chosen consists of the firms from high-income areas. In 1993, there were four control groups used: the high-income area, low-income area and producers located in La Victoria outside the borders of Gamarra. The producers in high-income areas were chosen as control group because of the good and seemingly improving sales performance of firms in this group, and the relatively dynamic (production and marketing) behavior of some firms in these areas. The firms in the high-income areas proved to be the most challenging control group.

A similar survey was used in July and August of 2008. To select the respondents a two-stage sampling method has been applied. For the Gamarra sub-sample, a register of the municipal district of La Victoria was used which contains data on all firms located in the Gamarra cluster (Visser et al. 2009). A random sample of 125 firms was drawn, of which 69% responded. For the control group, a register of the Peruvian Ministry of Production (PRODUCE) was used. In this case, a random sample of 100 firms was drawn, of which 70% responded (Visser et al. 2009).

The questionnaire which was used in 2008 contained identical questions as in 1993. Therefore, it is possible to grasp the trend in performance, firm behavior and whether or a clustering process was underway in Gamarra. Survey questions focused on firm performance, the perceived advantages of clustering, inter-firm linkages and the external organization of business processes (Visser et al. 2009).

However, there needs to be caution in interpreting and comparing the data collected in 1993 and 2008. One cannot speak of a longitudinal sample, because the sample in 1993 is not the same as the sample in 2008. In other words, other firms were questioned in the survey in 2008. This was necessary, due to the fact that the district of Gamarra expanded rapidly over the past 15 years. This dynamic process is characterized by a constant flow of firms entering and exiting the district. Moreover, firms which were outside Gamarra in 1993 may now be located within the boundaries of the district due to its expansion. Therefore, bias and sample effects need to be kept in mind when analyzing the differences between the two samples.

### **3.2.2 Performance**

Visser identifies five indicators which describe the evolution of performance of firms in the district: employment size, firm growth, the monthly average of gross sales per worker, the average of monthly pay per worker and the use of family labor. For all five indicators, data is available of 1993 as well as 2007.

#### *Employment size of firms by location*

The employment size is expressed as percentage of the total and given in categories, where 1-4 workers indicate micro firms and 5-9 & 10-19 workers different categories of small firms. The survey results are given in table 3.1.

**Table 3.1:** Employment size of firms by location (in % of row totals) in 1993 and 2007

Year/location	1-4 workers	5-9 workers	10-19 workers
<b>2007</b>			
Clustered	<b>50</b>	31	14
Dispersed	<b>71</b>	13	6
Sample	<b>60</b>	23	10
<b>1993</b>			
Clustered	25	<b>54</b>	13
Dispersed	<b>33</b>	23	27
Sample	<b>38</b>	37	16

Source: Visser et al. 2009

Micro firms have become more important in Gamarra. In 1993, 54 percent of the firms were in the small firm (5-9 workers) category. In 2007, the mayor part (50 percent) of firms is in the micro (1-4 workers) category. Both in 1993 as 2007, the largest part of the dispersed firms is in the micro-size category. However, in 2007 this percentage (71) is much larger than in 1993 (33 percent).

Thus, both in Gamarra as in high-income areas the average firm size has decreased. Therefore, Visser asks the question whether or not firms have been cutting employment. He concludes that this is not the case, but that high levels of firm entry (start-ups and spin-offs) may decrease the average firm size, as newcomers tend to be small. Moreover, firms in Gamarra are becoming smaller due to the limited workspace available (especially for producing firms) and the high rents in the area. Therefore, mature clothing firms migrate to other areas or the relocation of these firms from elsewhere towards Gamarra is constrained. It might be that the difference between the two years is due to a sample effect. The sample in 2008 could have contained more starting businesses as the sample in 1993, and therefore contains more small firms.

#### *Firm growth*

The majority of the firms established in Gamarra as well as in high-income areas expands employment, while at the same time the employment size of firms is decreasing. On average, firms in the sample have been adding 0.64 workplaces a year. Only a few firms in the Gamarra sample failed to grow, but a relatively high number of dispersed producers have been cutting on employment instead of adding workplaces.

The mean of the clustered group is 0.88 workplaces a year over the average lifetime of firms, whereas 0.4 workplaces are added in the control group. Thus, the firms which choose to stay in Gamarra generally manage to grow. Usually, this is until a certain size is reached when it is not profitable to keep producing in Gamarra and the choice is made to migrate to other (cheaper) areas in Lima.

#### *Average monthly gross sales per worker*

Perceived to be the best (possible) performance indicator, the average of monthly gross sales per worker is calculated. “*Best possible*”, because the net value added or the volume-productivity per worker is a “*waste of time*” (Visser 1996, p. 121); because small firms usually do not keep books.

Table 3.2 shows the average monthly gross sales per worker for 1993, 1994 and 2007. Moreover, the significance is calculated to find out whether the difference between the clustered and dispersed producers is significant.

**Table 3.2:** Average monthly gross sales per worker in 2007, 1994 and 1993 by location

Location	Observations	Mean	SD	Sign.
<b>2007</b>				
Clustered	85	983	747	0
Dispersed (high-income)	63	557	368	
<b>1994</b>				
Clustered	19	837	428	0,03
Dispersed (high-income)	17	529	406	
<b>1993</b>				
Clustered	23	1148	852	0,001
Dispersed (high-income)	28	510	354	
Idem (low-income)	31	660	777	
Idem (elsewhere La Victoria)	17	380	346	

Source: Visser et al. 2009

In all years (1993, 1994 and 2007) the difference between this clustered firms and control group is significant. What can be observed is that the difference between clustered and dispersed producers has become smaller over the years (1993 to 2007). Moreover, the difference between firms across the two groups in 2007 is small and not significant (Visser et al. 2009).

However, this result only holds when all firms in the two groups are compared. A very skewed distribution of sales performance is found, especially in the control group. In this group a number of firms are doing extremely well, selling at high prices in export markets. This increases the groups mean and blurring the sight of what is happening to most firms in the two groups, including the location effect.

Visser therefore excluded these extreme values (one in Gamarra and seven in the control group), and found that the difference is large and significant in that case. Subsequently, Visser assesses whether this fact makes the firms in Gamarra better off. The monthly average of gross sales per worker was 1140 US Dollars in 1993, while in 2007 this average was 983 US Dollars. The number is lower, and falls even further when correcting for inflation and exchange rate fluctuations (Visser et al. 2009). Especially, when the high rents in the Gamarra district are also included.

The results above might make it interesting to include the size of firms in the equation. Table 3.3 shows the average monthly gross sales per worker in 1993 and 2007.

However, this time it includes both size and location. Micro firms (1-4 workers); small firms (5-9 & 10-19 firms) and medium firms (20-99 workers) are included in the analysis.

**Table 3.3:** Average monthly gross sales per worker in 1993 and 2007, by size and location

Location	size (no. of workers)				t/ $\chi^2$	sign.	sales/size correlation	sign.
	1 to 4	5 to 9	10 to 19	20 to 99				
<b>2007</b>								
Clustered	983	897	1107	1168	0,30	0,82	0,05	0,63
SD	817	509	969	694				
n	43	26	12	4				
Dispersed	520	685	661	640	0,62	0,60	-0,02	0,86
SD	394	260	314	271				
n	47	7	4	5				
<b>1993</b>								
Clustered	949	1286	935	1229	0,98	0,80	0,12	0,30
SD	930	961	473	641				
n	6	12	3	2				
Dispersed	414	301	781	596	8,91	0,07	0,18	0,19
SD	243	171	495	322				
n	9	7	7	7				

Source: Visser et al. (2009: 19)

Only for micro firms the difference in average gross sales between the clustered firms and the control group is significant (Visser et al. 2009). The comparison of the means of the other size classes does not yield significant results, due to the lower numbers of observations in those categories (table 3.3). However, most of the firms are in the micro size category and therefore

Visser argues that agglomeration effects have a positive effect on the performance of firms (Visser et al. 2009). It can be interpreted that micro and small firms are able to enhance their sales performance. In the control group the opposite is true, were bigger firms are better off. This is especially the case for the low-income areas and the firms in La Victoria outside Gamarra (Visser et al. 2009). Visser found that the group of firms in high-income areas was a special case, because of the poor performance of a number of medium-sized firms which were restructuring at the time (Visser 1999).

#### *The monthly average of pay per worker*

In 1993, the monthly average pay per worker in Gamarra was 30 percent higher than elsewhere in the city of Lima. 1993 findings should be interpreted with caution though, due to high standard deviations, the influence of firm-size on worker's pay, and the fact that working days are usually longer in Gamarra (Visser 1999).

In 2007, Visser finds again that workers in the cluster earn more than workers in the control group. The workers earn approximately 45 percent (164 against 236 US Dollars) more than employees in the high-income areas. The standard deviations are still high (156 for the firms in Gamarra and 99 for the control group). This time, the difference is statistically significant. So, location (in Gamarra) still matters for worker's pay, although this relation may be obscured by the factors mentioned above.

#### *Use of family labor*

In 1993, family labor was least important in Gamarra and high-income areas compared to low-income areas and firms operating elsewhere in the La Victoria district (Visser et al. 2009). Family labor was relatively often unpaid in the high-income areas, whereas unpaid family labor was rare in Gamarra. The firms in Gamarra used least family labor, and if so it

was unpaid. In 2007, the difference between the firms in Gamarra and the control group (high-income areas) is still not significant. And in both samples the relatives get paid when working in the firm.

### **3.2.3 Transformation, transacting and clustering**

Thus, the evidence shows that the performance gap observed in 1993 can still be observed in 2007. All the indicators resulted in favor of the firms situated in Gamarra. It is therefore interesting to analyze the processes, underway in the area, in more detail. Besides the performance, Visser (2009) also analyzed the transformation behavior, transacting behavior and the clustering (term used by Visser) advantages over time. The findings of Visser are assessed below.

#### *Transformation behavior*

In 1993, most producers in Gamarra subcontracted one activity, usually a finishing operation. Subcontracting of upstream activities in the production chain almost never occurred. In contrary, in the control groups, some firms were very active in terms of (managing) subcontracting networks (Visser 1996 and 1999; in: Visser et al. 2009). The situation changed somewhat in 2007. Nowadays, producers in Gamarra subcontract about three activities, but this still usually refers to finishing activities (e.g. printing, embroidery, colouring, buttonholing and fixing, ironing and packing). The difference between producers in Gamarra and in the control group is not significant, however (Visser et al. 2009). Where hardly any firm doesn't outsource in Gamarra, one third of the firms in the control group abstains from outsourcing. However, in the control group 26 percent of firms outsource 6 or more activities (against 13 percent in Gamarra).

At time of peak demand, one third of producers in Gamarra involve in, so-called, capacity contracting; where firms subcontract any demand above the level of minimum expected demand in which is invested internally. Visser also finds that both in 1993 as in 2007 co-operation in networks is rare in Gamarra. In 2007, two-thirds of respondents claimed that inter-firm co-operation had become more important, however. There is also a difference with the control group, where fewer firms involve in joint actions, collective investments, or knowledge exchange with competitors (13% in Gamarra against 6% in the control group). The same holds regarding diagonal linkages with firms in other sectors. Dispersed firms are never involved in these linkages, whereas in Gamarra 6 percent reported to do so. Although these differences between the firms in Gamarra and the control group exist, specialization, subcontracting and inter-firm co-operation at the level of the transformation process is still rather limited (Visser et al. 2009).

#### *Transacting behavior*

Visser also focuses on the upstream and downstream linkages of producers in Gamarra and the control group. In 1993, information spillovers advantages were enjoyed by producers in Gamarra in two ways: the products of competitors (the products are more or less 'on the street') and the behavior of competitors (true direct observation). New ideas quickly become public on local scale. In 2007, producers in Gamarra still rely to a large extent on the local environment to obtain information to know what to produce. Moreover, in this local environment producers in Gamarra have a greater number and

variety of clients they have contact with than producers in the control group. Strikingly, only producers in the control group have access to external (international) information sources (e.g. in North America, Europe and Asia). Another interesting finding is that vertical market contacts are more important for both clustered and dispersed producers than diagonal linkages with consultancy firms, NGOs, semi-public and/or public institutes.

When looking at the markets which the firms attend, producers in Gamarra manage to sell more on the Peruvian countryside (24 against 3 percent), and also to neighboring countries (Ecuador, Chile and Bolivia) and other countries in Latin America. However, some producers in the control group managed to integrate in global value chains of sophisticated buyers in distant markets, whereas producers in Gamarra are not integrated in such global value chains.

Concerning upstream transactions, wholesalers are the most important source of cloth input in Gamarra, while retailers are more important in the control group. The number of firms in Gamarra which maintain direct relation with cloth manufacturers is higher than in the control group (25 against 15 percent). This enhanced vertical co-operation may contribute to the sustained competitive advantage of producers in Gamarra over dispersed ones (Visser et al. 2009).

#### *Clustering advantages through time*

Finally, Visser analyses whether there has been an evolution in terms of clustering advantages in Gamarra over the 15 year period. Visser concludes that passive and cost-related advantages at the level of transacting activities, not so much transformation and/or innovation activities were largely responsible for the observed performance gap in 1993 between firms in Gamarra and dispersed producers.

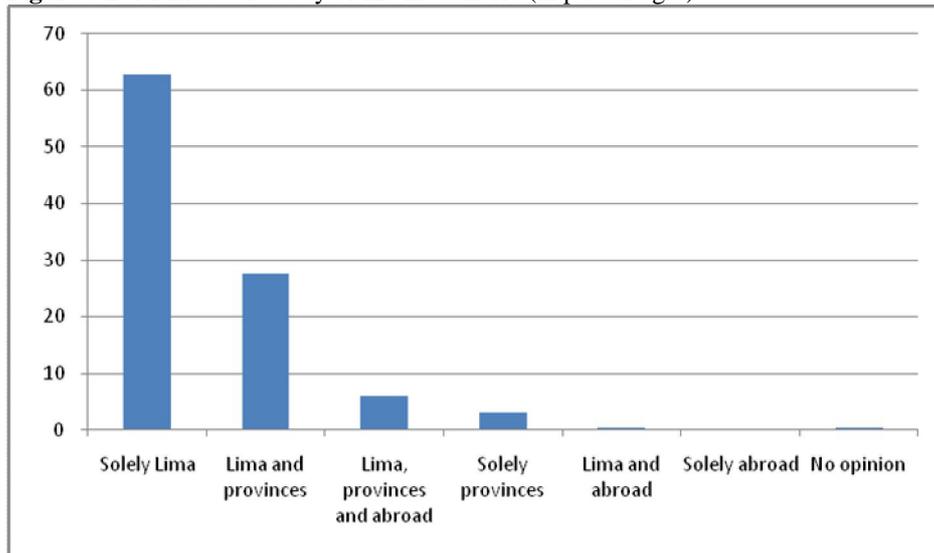
Clustering advantages concerning the transformation and innovation processes seem to be limited, whereas those at the level of transacting inputs, services and output seem to be significant. This leads to the conclusion that the district of Gamarra is not in transition from one to another type of clustering process (Visser et al. 2009). However, over the period 1993-2007 there has been an increase in public-private and private-public co-operation, but these are still characterized by certain frictions. Furthermore, the concentration process at hand mainly yields static (cost-related) advantages that are due to the mere co-location of firms, not co-operation among them.

### **3.3 Export**

After 1970, Peru diversified its export sector (Visser 1996). However, the performance of the export sector as a whole has been poor. The relative growth of manufactured exports has in part been to a boom in non-traditional exports during 1976-80. The main problem of the Peruvian manufacturing sector lies in the field of productivity, quality and design. Therefore, the sector has not improved its capacity to compete in international markets. Peru is not an important player in the world trade. The share of the Peruvian clothing industry in world trade decreased between 1990 and 1992. Neither import-substitution nor the later export promotion policies substantially enhanced manufacturing exports with a high degree of processing.

According to the Ministry of work and the promotion of work, only 6.4 % of the firms export (figure 3.1). The first, second and fourth bar in the graph below show the percentage of SMEs which solely produce for the internal market. The third bar represents the percentage of SMEs which produce for the local, provincial and external market (6.1%). Whereas the fifth bar shows the firms which produce for the local and external market (0.4%). No firms exist which solely produce for the external market.

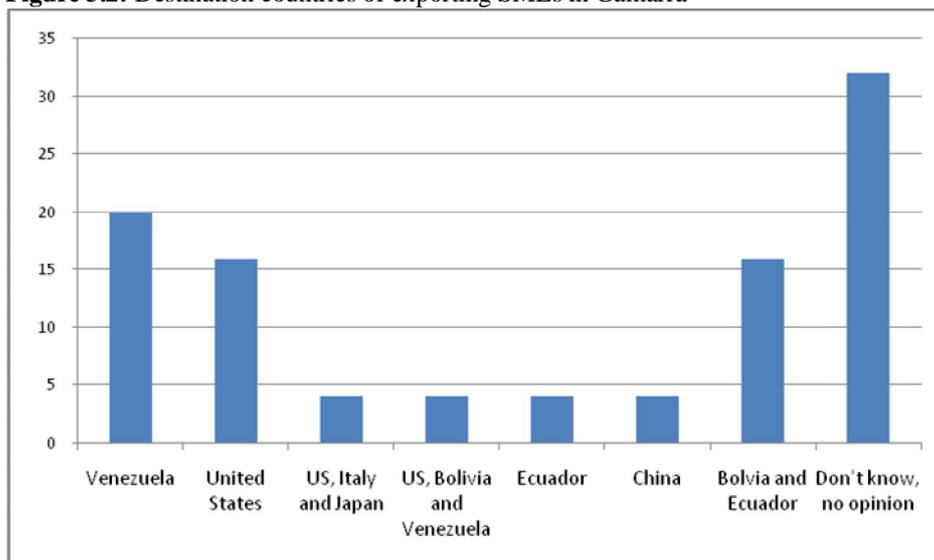
**Figure 3.1:** Markets served by SMEs in Gamarra (in percentages).



Source: Ministerio de Trabajo y Promoción del Empleo 2008

Furthermore, the investigation points out to which countries is exported. Figure 3.2 (below) shows the destination countries of exporting SMEs in Gamarra.

**Figure 3.2:** Destination countries of exporting SMEs in Gamarra



Source: Ministerio de Trabajo y Promoción del Empleo 2008

Thus, SMEs in Gamarra mainly export to neighboring countries such as Venezuela (20%) and Bolivia & Ecuador (16%); and the United States (third bar, 16%). Surprisingly, there is little export to Europe and if so, it is in combination with other countries and only to Italia.

Visser et al. (2009) concludes the same: that export of firms in Gamarra is limited. In contrary, more firms in the control group (high-income areas) do explore international markets. Visser finds that a significant number in the control group (10%) displays a type of sales dynamisms that may be explained by their involvement in attractive market niches, export markets and/or value chains (Visser et al., 2009).

### **3.4 Additional information**

After assessing the research of Visser it may be interesting to look at some research done by other academics, to compare their findings with those of Visser. In doing this, some contradicting statements are found. Where Visser finds both positive (performance and transacting behavior) as negative (transformation behavior and innovation activities) results, others (PROEXPANSION 2005; Chion 2001; and Ponce Monteza 1994) have contradicting findings as well. These are considered in this section.

First, research by the consultancy firm PROEXPANSION (2005) is assessed. An interesting finding in this research is that only 5% of the firms in Gamarra started 1 year ago or earlier. This implies that the number of firms in Gamarra reduces and is believed to be caused by a loss of dynamism. Above all, the district is not generating sufficient incentives to attract new entrepreneurs. Research done by PROMPYME, another association concerned with the development of SMEs, indicated that only 5% of the entrepreneurs in Gamarra say to belong to an association. The entrepreneurs in Gamarra have a serious trust issue among them. The lack of a shared vision, capacity to innovate and to co-operate makes that some prefer to commercialize the cheapest products, produce outside Gamarra and make use of Chinese products.

This makes the sales of firms in Gamarra decrease, because merchants from other zones in Lima sell these Chinese products. This competition is heaviest with firms located in the “Cercado de Lima (Jirón de la Unión)”, the boutiques and galleries of Jesús María, Magdalena, Polvos Azules, Polvos Morados, Polvos Rosados and the department shops Ripley and Saga Falabella, which permanently have periods of special offers. For Gamarra to develop (or survive) it should enter in a new stage, for it is necessary that the entrepreneurs consolidate their relations of trust and develop a strategy of growth, which rests on three lines of complementary action: 1, improve the export offer; 2, promote the formation of consortiums and relations of subcontracting; and 3, identify markets.

To earn trust of the large firms, small firms need to homogenize their standards and comply with the rules of subcontracting. The “mature” phase of a cluster should be characterized by collective action, competence to co-operate, technological innovation, social capital, institutions and a sophisticated demand. These are absent in Gamarra, especially the lack of collective action is a problem. Moreover, Gamarra has deficiencies such as heavy reduced space available, not automated machinery, lack of modern methods and quality control. Innovation in Gamarra refers to the copying of products of others. While the growth difference (competitive advantage) will always be marked by creativity and originality, especially in apparel and fashion issue, the key is the design.

However, the principal problems which one finds in Gamarra are the lack of safety (against robbing and accidents), bad services (poor attention, indifference, scarcity of basic services) and the lack of cleanliness. These problems are a task for the local government to attend. There also needs to be assistance for the entrepreneurs with relevant business information and opportunities, local as well as international; services to assist in education, technical assistance and specialized financial services. Thus, the research of PROEXPANSION proves to be rather negative, identifying problems in different areas such as joint action, infrastructure, innovation, growth and competition, among others.

On the other hand, Chion (2001) has a much more positive vision concerning the district of Gamarra. She argues that in 10 years, from the beginning of the privatization policies and the opening of the Peruvian economy, the capacity to adapt and innovate of the small firms and their economic and social networks, transformed Gamarra in a prosperous neighborhood regarding revenues, working opportunities and expanding firms. In contrary to PROEXPANSION (2005), Chion finds that the Asiatic countries are an opportunity instead of a tread, by contributing to the operation and expansion of small firms in the Gamarra district. In her eyes, Gamarra is a small area characterized by a close coordination between firms, through networks which facilitate the exchange of information and inputs. These networks formed true the close relations of trust between relatives, friends and also between selected firms, which originally emerged from informal interactions, apart from the regulations by the municipal and regional government.

In these developments, the large leader firms led by former entrepreneurs have proved to be essential in the provision of capital, inputs and infrastructure for the production on small scale. The intersection of international and local networks developed from the dense institutional structure, based on a high level of exchange between small and large firms, reinvestments made by local firms and the leadership of innovative business organizations.

These business organizations have created a variety of business services which facilitate the coordination between firms and government agencies. As the reputation of Gamarra was changing from a marginal area of ordinary cheap products, to an important metropolitan centre with products at low prices and high quality, the use of its own brands and promotion of its own products demanded a variety of services. Finally, Chion finds that Gamarra fulfills a specific social and economic function and is interconnected on a metropolitan (local), national and international level through networks. Whereas PROEXPANSION was much more pessimistic regarding the role of leader firms, co-operation and business associations, Chion has a clear contradicting vision regarding these subjects.

Finally, the book of Ponce Monteza (1994) is considered, because of his experience and knowledge concerning the district Gamarra. According to Ponce Monteza, the majority of firms in Gamarra is characterized by a familiar character and is found by entrepreneurs coming mostly from Huancayo, Ayachucho, Huancavelica, Cusco, Puno, Abancay and Ancash (Ponce Monteza 1994). He argues that a clear dimension of the phenomenon Gamarra can be obtained from the problems faced by the municipality of La Victoria to

control the functioning of the process. In Gamarra, information flows are widespread; although there is no regular “official” channel; a communication network exists, established from the galleries, to the various agents (Ponce Monteza 1994). A restriction to these information flows is related to the international market: although some firms have accurate knowledge of what happens on this market, however not generally among firms in Gamarra. Knowledge and experience are almost always the only mechanisms to improve and are usually poorly administrated. In any case, one may improve training using mechanisms such as the academic school of arts and craft, SENATI, the occupational educative centers (CEO), academics in sewing or clothing or through direct market mechanisms, which can integrate the academic and everyday practice (Ponce Monteza, 1994).

Regarding co-operation, Ponce Monteza argues that co-operation between firms in Gamarra is widely spread. Firms are both sharing new technological knowledge as each is maintaining its independence. The associations do not appear to have played an important role in the foundation of business experience, as it did later in the elevation of quality standards, export promotion, the development of technology and the organization in Gamarra (Ponce Monteza 1994). Finally, in Gamarra there is a massive use of subcontracting, which permitted that the levels of productivity elevated (Ponce Monteza 1994).

### **3.5 Concluding remarks**

This concluding section shortly reviews the results found in this chapter, to connect it to the rest of the research and point out the important findings of former research (by Visser et al. 2009; Ministerio de Trabajo y Promoción del Empleo 2008; PROEXPANSION 2005; Chion 2001; and Ponce Monteza 1994). The summary below can be seen as the basis or starting point for this follow-up study, concerning the performance, transformation & transacting behaviour and cluster characteristics of garment firms over the past 15 years, the following interesting results were found:

- Firms in Gamarra are becoming smaller due to the limited workspace available (especially for producing firms) and the high rents in the area. Mature clothing firms relocate from Gamarra and are constrained in migrating to Gamarra.
- The firms which choose to stay in Gamarra generally manage to grow. Usually, this is until a certain size is reached when it is not profitable to keep producing in Gamarra and the choice is made to migrate to other (cheaper) areas in Lima.
- The monthly average of sales per worker is significantly higher in Gamarra than in the control group. However, the number is lower, and falls even further when correcting for inflation and exchange rate fluctuations. Moreover, the significant difference only holds for micro firms.
- Location (in Gamarra) matters (more now than 15 years ago) for worker’s pay, although this relation may be obscured by the influence of firm-size on worker’s pay, and the fact that working days are usually longer in Gamarra.
- Unpaid family labor was rare in Gamarra (in 1993). In 2007, the difference between the firms in Gamarra and the control group (high-income areas), where family labor is relatively often unpaid, is still not significant.

- Nearly all firms in Gamarra outsource at least one (mostly finishing) activity. More firms involve in joint actions, collective investments, knowledge exchange and diagonal linkages in Gamarra than in the high-income areas, although not significantly. However, both in Gamarra as in the high-income areas vertical relations are more important than diagonal relations.
- Firms in Gamarra manage to sell more on the national market and to neighboring countries. However, some firms in the control group managed to integrate in global value chains of sophisticated buyers in distant markets.
- Over the period 1993-2007 there has been an increase in public-private and private-public co-operation (in Gamarra), but these still yield certain frictions.

The results of three other studies discussed in the previous section, are also briefly summarized:

- PROEXPANSION (2005) finds that the Gamarra district is not generating sufficient incentives to attract new entrepreneurs. Moreover, there is a lack of shared vision, capacity to innovate and co-operate. However, principal problems are the lack of safety & cleanliness and poor services.
- Chion (2001) finds that Gamarra is a prosperous neighborhood regarding revenues, working opportunities and expanding firms, characterized by close coordination through networks which facilitate the exchange of information and inputs. Leader firms provide capital, inputs and infrastructure for the production on small scale and business organizations provide services which facilitate the coordination between firms and government agencies.
- Ponce Monteza (1994) argues that co-operation between firms in Gamarra is widely spread and that firms are both sharing new technological knowledge as each is maintaining its dependence. Moreover, there is a massive use of subcontracting, which permitted that the levels of productivity elevated.

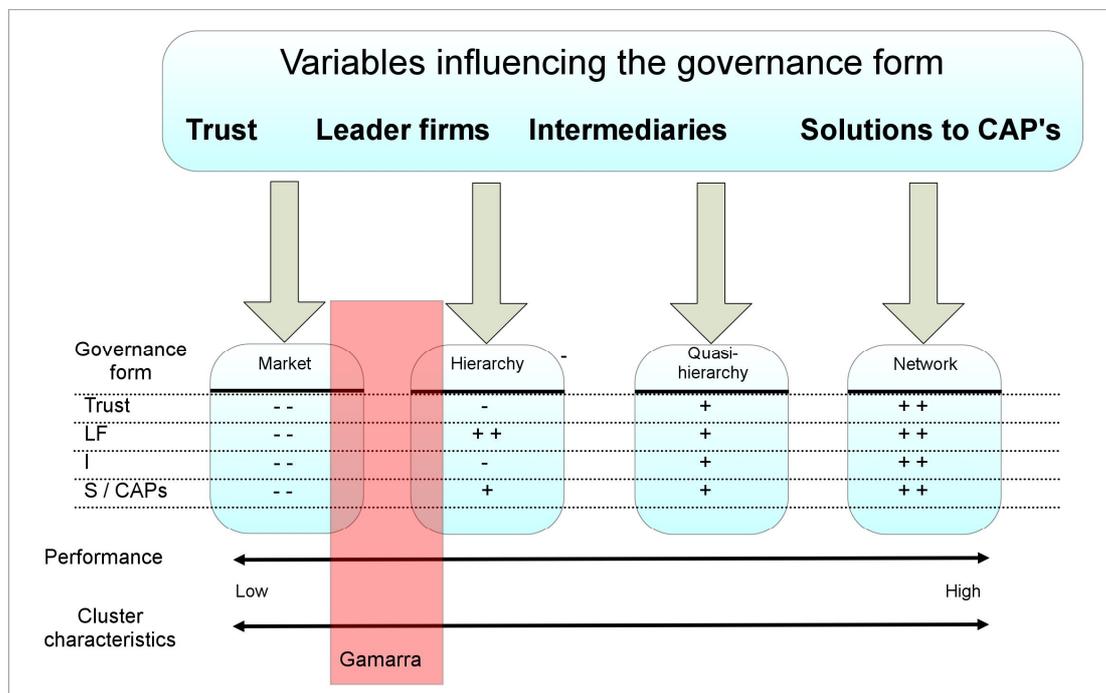
Thus, in line with Visser (1996, 1999 and 2009), Ponce Monteza acknowledges that subcontracting is important in Gamarra, but that there are also certain problems. But in contrary, Ponce Monteza believes that co-operation among firms is widespread and that associations have an important role in Gamarra. This vision is not shared by Visser. These contradicting visions concerning the important factors, processes and developments which are important in Gamarra, make it interesting to investigate it in more detail. This is done in the chapter six, which assesses the results regarding the quality of coordination.

### 4 Typology and hypotheses

First, the typology of this study is elaborated on (figure 4.1). It generally shows what is discussed in the former part, although the order of the different governance forms is slightly different.

The model below orders the different forms regarding the level of performance and cluster characteristics. In other words, the governance form which likely has a low performance (market) is first in the column. And the governance form which is most likely to have a high performance (network) finishes the row. The variables are rated from very high (+ +) to very low (- -), which is deduced from the former part of this study; where LF stands for leader firms, I for intermediaries and S / CAPs for solutions to CAPs. When leader firms is rated + + it implies that the influence of leader firms is very high in the concerning governance form. Cluster characteristics refer to the relation between the different governance forms and clusters. Thus, a network form of governance is more likely to occur in a cluster than the other forms. And the market form of governance is not likely to occur in a cluster. The performance of firms is highest when all variables are high. In other words, the level of trust, influence of leader firms and intermediaries is high. Moreover, solutions to CAPs are best found, implying that there is a collective action regime.

**Figure 4.1:** Typology of the governance structure and the expected position of the Gamarra district



Source: own work

It is expected that all variables are low in the Gamarra district. This lack of trust, leader firms, intermediaries and solutions to CAPs result in a low performance and a lack of cluster characteristics. This is reflected in figure 4.1, where the expected position of Gamarra is indicated. Therefore, the following hypotheses are formulated, which estimate presence and/or influence of the different variables in the Gamarra district. The hypotheses are formulated following the model above.

Inter-firm relations in Gamarra are mainly based on formal contact and supplemented by the use of (legal) contracts. As described in the former section of this study, inter-firm cooperation is seldom and mainly leads to static advantages (cost-related). Joint action and horizontal cooperation are absent. Firms (and other actors) in Gamarra rarely have shared norms and values and there is a lack of coordination among them. This implies that the level of trust is low in Gamarra. Therefore, the following hypothesis is formulated:

**Hypothesis 1:** *The level of trust between actors in Gamarra is low.*

Second, the influence of leader firms is also minor in Gamarra. Cooperation in Gamarra is characterized by a lack of leadership. Rarely do firms invest in the inter-firm relations, which could lead to positive external effects for the other firms in the cluster. This leads to the following hypothesis:

**Hypothesis 2:** *Leader firms have a minor role in Gamarra*

Third, it is also estimated that intermediaries have a minor influence in Gamarra. Diagonal relations (between firms and intermediaries for example) are seldom in Gamarra. The firms in Gamarra are mainly geared towards cost-related advantages. Whereas intermediaries can play a role when cooperation is more focused towards dynamic advantages. The third hypothesis is formulated as follows:

**Hypothesis 3:** *Intermediaries have a minor role in Gamarra; there is hardly any cooperation between intermediaries and firms.*

Leader firms and intermediaries can contribute to the solution of CAPs. The second and third hypotheses suggest a minor influence of both, which implies a weak coordination of finding solutions to CAPs. Moreover, joint actions and horizontal cooperation are absent, which suggest a lacking coordination of successful collective action regimes. This leads to the fourth hypothesis:

**Hypothesis 4:** *A collective action regime is absent in Gamarra, collective action problems are rarely solved true inter-firm cooperation.*

Finally, it is apparent that the Gamarra district is characterized by a geographical concentration of firms in related activities. This is in line with the description given by Visser and De Langen (2006) stated above.

It is not entirely clear whether Gamarra is characterized by *mutually related business units* as described by De Langen (2004). A lack of joint action and horizontal cooperation in Gamarra indicated in the former section, leads one to suspect that these mutually related business units are more or less absent in Gamarra. It is not certain that the spatial concentration of firms and organizations is based on local interactions, which is included in the definition of Visser (2008a).

Moreover, an enhancement of the number of firms and/or employment implies that firms in the cluster are characterized by a higher performance than firms located outside the agglomeration. Visser et al. (2009) finds a higher performance, in terms of average of gross sales per worker. Moreover, the number of firms still grows with a rate of 6 to 7.5 percent a year.

Thus, evidence for clustering processes is present, but it is not entirely convincing. Because many clustering characteristics are absent. The results of this study can give further insights in this matter, by identifying the inter-firm relations in Gamarra and relating it to characteristics found in clusters.

## 5 Methodology

This chapter describes the methodology used in this research. This study is characterized by two phases; the summary of findings of previous research (e.g. Visser et al. 2009) in chapter three and, in continuation, a follow-up study on this existing research. The goal of this follow-up study is to gain insights into processes at hand in Gamarra. The survey is qualitatively orientated, meaning that especially the qualitative data is of key importance in this research. However, for this research both quantitative and qualitative data are gathered, using a questionnaire administered during interviews. The qualitative data is also used to clarify these quantitative results. This method is chosen, because it is best suited to answer the questions and testing the hypotheses in this research.

The methodology of previous research by Visser (in 1993 and 2007) was assessed in a previous chapter. This research of Visser et al. (2009) made it useful and, above all, interesting to do more research in the area, but with another goal. Instead of assessing the performance of a sample of firms in Gamarra, it is more useful to determine the processes and factors that underlie the development of Gamarra in the past 15 years (1993 to 2007). Therefore, a survey among approximately 30 experts was undertaken, in the (European) summer of 2009 in the months May to July, mostly in a face-to-face setting.

The 'expert' characterization is based on a so-called *snowball method* among an additional group of academic experts. This non-random method was chosen to gain the qualitative insights, discussed earlier. Furthermore, because this research continues on Visser's work, which was based on a random sample among producers in the district.

To test whether or not the variables are present in Gamarra closed questions were used. Respondents had to assess different propositions and rate the different influencing variables. Therefore, the presence and also indirectly the quality of coordination can be assessed. First, the observation methods used in this research are considered. Among others, the method used to select the respondents and the settings in which the interview is conducted are taken up in this chapter. Second, the interview schedule is considered, assessing questions and concepts and individually attending to the operationalization of the variables (trust, leader firms, intermediaries and solutions to CAPs). Questions are introduced to determine whether or not these variables are present in Gamarra. Third and finally, the data analyzing method is discussed. The analysis of both quantitative as qualitative data is considered.

### 5.1 Observations method

This research is characterized by a rather innovative method. The group of respondents consists of 28 experts, which were selected on the basis of the knowledge and experience of another group of academic experts. In other words, a *snowball* method was used. These 7 academic experts are characterized by many years of work experience and/or academic work (Villaran 2007; Triveño 2005; in Ministerio de Trabajo y Promoción del Empleo 2008; Visser 1996, 1999 and 2009; among others) concerning the developments in Gamarra. This group of academic experts was already selected in 2008 by Visser.

In 2008, all 7 academic experts were asked to name a number of other experts in the field, whom in their eyes could provide up-to-date and unbiased information about the governance in Gamarra and related topics. Experts named at least twice were selected for the research which resulted in a preliminary list of 27 experts. To expand the number of respondents, respondents were asked to name additional experts, in 2009. These suggestions were combined with the 2008 preliminary list. Again, when an expert was named twice or more, he or she was invited for an interview.

Twenty-eight interviews are used in this research, whereas 24 experts participated and four interviews were already conducted in 2008. The interviews were conducted from May to July 2009 in Lima, Peru, and their duration ranged from approximately 30 to 150 minutes. All interviews were conducted in a face-to-face setting, at locations chosen by the respondents, except one which was sent by email. Four were already conducted in 2008. . Before the actual start of the research, a number of experts were consulted to gain additional insights about the key actors in Lima

This method of data-collection is supposed to qualify best in this research, because these selected experts are best able to provide information (know-how) about the topics in question. The respondents were able to provide this knowledge and represent different groups, which are connected or present in Gamarra: entrepreneurs, business organizations, public organizations, representatives of galleries, NGO's and academic experts. The list of experts is taken up as appendix (appendix 1) and their background, experience and activities are assessed further in the next section.

It is hard to say whether or not this method of data-collection is representative. This could mean that the data (results) may be biased. However, no other method seemed applicable in yielding results of comparable quality. Respondents are working for both private and public institutions and might therefore have different interests, visions or ideas about the topics in question. Respondents that work at a public organization, for example, may have a totally different opinion concerning the execution of policies than entrepreneurs do. Of course, not only in the area of policies variable visions exist. However, the group of experts contains stakeholders representing various sectors and groups. This limitation is further assessed in a later section.

### **5.1.1 Experts**

This section aims at sketching background information on those experts in the field that were selected as participants within this research. The list (appendix 1) contains 11 development organizations (ONG's), 6 consultants (with a history in Gamarra), 4 government agencies, 3 business associations, 2 producers (entrepreneurs) and 2 (academic) experts who are not working in Gamarra at the moment. Most experts have an important position in the organization, such as; general/executive manager, director and supervisor. Eight of the experts are known to have written about Gamarra, of which work of 5 experts is used in this research.

The development organizations are both public, private as public-private. Surprisingly, almost none of the development organizations are currently active in Gamarra (using

projects or programs). However, all of the organizations have worked in Gamarra and are eventually planning to work with firms in Gamarra in the future. At the moment, these organizations are more concerned with developing projects to be implemented in rural areas or areas which are less developed as Gamarra. In other cases, the development organizations (or NGO's) had negative experiences working in Gamarra. This may be because everyone wants to be involved in the development of the district, and therefore consensus is hard to achieve.

No of the consultants are currently active in Gamarra, but have been recently involved in either public or private organizations. Not actively involved in Gamarra doesn't necessarily mean that they haven't got up-to-date knowledge concerning the (recent) developments in Gamarra.

Three of the four public agents are working for the national government, from which two are involved in the Centers of Technical Innovation (CITEs). The fourth public agent worked at the municipality of La Victoria (local government) and was involved in the economic development of the district. Unfortunately, she isn't working there anymore and therefore the interview of 2008 was used.

## **5.2 Interview schedule**

In this study, a semi-structured questionnaire is used to test the hypotheses introduced in chapter four. The questionnaire includes 13 closed questions and 2 open questions. Respondents are asked to elaborate on all questions, in their own words. The questionnaire is structured by using 5 blocks containing questions, which are all described below. For further information see appendix 2, which includes the used questionnaire translated in English.

First, some general information is asked for: name, organization, function and years of experience in the industry.

Second, respondents indicate whether or not they observed the formulation of policies (described in section 1.2.2) and if they co-operated with firms in Gamarra. These two questions are dichotomous; respondents may use 'yes' or 'no', but are asked to explain their answer in more detail.

Third, 5 important themes for the performance of firms in Gamarra and for co-operating between firms are indicated. These themes are; innovation (1), education & training (2), market & promotion (3), internationalization (4) and infrastructure (5). The choice for these five themes is two-fold:

1, these themes are chosen because they are important for different groups of firms in the area. Market & promotion and infrastructure are especially important for the development of the traders in the area. This is to promote their products, attract clients (market & promotion) and to make it easier for traders (as well as clients) to distribute their products and interact with other firms (infrastructure).

Infrastructure, in this context, means the external infrastructure (both physical as ICT). In other words, the internal infrastructure (within firms) is not asked for in this case.

Whereas the other three themes are especially important for the development of the agglomeration as a whole as well as for (productive) firms individually. For a firm and its workers to improve or advance it needs to innovate and invest in education & training. Moreover, investing in internationalization makes it easier for a firm to explore international markets and grow through exports. Besides the individual importance of these themes, they are also to a high extent connected. Innovation and promotion, for example, may be necessary to internationalize.

2, other comparable researches (Visser and De Langen 2006; and De Langen and Visser 2005) used the same five themes in their research as being important for the development of firms and the agglomeration in general.

These themes are used in the questionnaire in frames to identify the importance of these themes for improving the performance of firms as well as co-operation between firms in Gamarra. The frame is illustrated below (figure 5.1), which makes use of a 5-point scale, ranging from not important (1) to very important (5).

**Figure 5.1:** Frame to indicate the importance of various themes for the performance of firms in Gamarra

Theme	Importance for improving the performance of firms in Gamarra				
Innovation	Not important	Minor importance	Moderately important	Important	Very Important
Education and training	Not important	Minor importance	Moderately important	Important	Very Important
Internationalization	Not important	Minor importance	Moderately important	Important	Very Important
Market and promotion	Not important	Minor importance	Moderately important	Important	Very Important
Infrastructure	Not important	Minor importance	Moderately important	Important	Very Important

Source: own questionnaire

As was mentioned before, the same frame is used to indicate the importance of these themes for the co-operation between firms in Gamarra.

Fourth, the different variables are assessed individually, in the same order as in the theoretical framework. One to four propositions per variable are used to determine the presence and strength of these variables. Furthermore, the importance of various factors and actors for solving CAPs in Gamarra are indicated. These factors include the role of public organizations, business organizations, the use of voice by individual firms and the influence of a community argument. The next section explores this block in the questionnaire in more detail.

Fifth, two questions are included to determine other important factors for the development of Gamarra. This question asks the respondents to rank the importance of certain factors for the development of Gamarra, at the moment and 5 years ago. The following six factors are included:

1. *Structural features*: In other words, the structure of the textile industry in Gamarra. Structural features in this sense are e.g. the number and size of firms, ownership, vertical

integration, foreign investment, and the availability and quality of production factors (Visser and De Langen, 2006).

2. *The quality of coordination*: the key topic in this research. The question is whether the current quality of coordination among actors in Gamarra played an important role in the development of Gamarra.

3. *Developments in the national market*: In this case one can think of developments in other sectors or in the textile sector, but in other regions in the country.

4. *Developments in the international market*: developments in markets abroad can also affect the development of the Gamarra district. Changes in products (e.g. design, developments in the fashion world, use of materials) and processes (e.g. developments in global value chains), for example, might have their effect on the Gamarra district and its firms. It has to be said though, that the effect of international markets also depends on the degree in which firms are willing to internationalize.

5. *Local or national policies*: as the term says, policies which are confined within the national borders. These may be local, e.g. solely designed for firms in Lima or the La Victoria district; or national, e.g. meaning to contribute to the development of all SMEs in the country or the textile industry in general throughout the country.

6. *International policies*: international trade agreements, trade barriers as well as the influence of important international institutions such as the World Bank.

Respondents rank the 6 factors above ranging from not important to very important. This implies that the numbers 1 to 6 all have to be used. The most important factor is ranked with a 1 and the least important factor is ranked with a 6. This question can help in finding the key factors in the development of Gamarra. Perhaps more important is whether certain factors have become more important in the past 5 years. In this way, developments or changes over time may be found.

Finally, two open questions are included in the questionnaire to determine important factors for the development in Gamarra and opportunities to secure the future of the district.

### **5.2.1 Variables**

In order to define the presence of the four key variables (described in section 2.2.2) in Gamarra these variables must be operationalized. How can one measure the level of trust, the presence and influence of leader firms and intermediaries and the presence of a collective action regime? Therefore, different questions are used in the questionnaire, which results in quantitative as well as qualitative data.

#### **Trust**

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To define the level of trust between different actors, it is important to make trust measurable to a certain extent. Four propositions are used to determine the level of trust between actors in the district. The first method to determine the level of trust between firms in Gamarra is by determining if contracts are frequently used in relations. When trust is low, (legal) contracts are frequently used to coordinate transactions between

firms. Therefore the following proposition (in line with Nooteboom et al. 1997) is introduced in the questionnaire:

**Proposition 1:** *In Gamarra, informal agreements have more significance than formal contracts in inter-firm relations.*

good communication, and empathy). Therefore, two other propositions are added to the questionnaire:

**Proposition 2:** *In Gamarra, partners (e.g. firms, associations and governmental organizations) have shared norms and values.*

**Proposition 3:** *In Gamarra, relations between partners are characterized by strong bonds and good communication.*

Finally, respondents are asked to agree or disagree with the following proposition to determine whether a culture of trust exists in Gamarra:

**Proposition 4:** *In Gamarra there is a culture of trust, which facilitates the coordination of joint actions in the area.*

With this proposition one can find out whether or not the respondent believes there is a high level of trust between the firms and other actors in Gamarra. There is room for the respondents to elucidate on all four propositions. Much agreement with the four propositions above suggests a high level of trust in Gamarra.

### **Leader firms**

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The presence and influence of leader firms in Gamarra is assessed next. First, it is important to define what a leader firm is exactly. De Langen and Nijdam identify different criteria for leader firms: foreign participation, innovation (at least 1 patent in the last 10 years), size (more than 200 employees) and the turnover (at least 5 million). However, these criteria are not useful for the firms in Gamarra. It is very unlikely that a firm in Gamarra is characterized by more than 200 employees or a turnover of 5 million dollars. Therefore, other criteria have to be used to define whether or not a firm can be defined as a leader firm. A leader firm must have the capacity (financially, a strategic vision and the insights in the yield of cooperation) and incentives (willingness to cooperate and commercial opportunities) to invest time and money in joint actions, which create positive external effects for other firms in the area. These leader firms can play a positive role in the coordination of collective initiatives.

In other words:

A leader firm is characterized by either its size (in employment or turnover), its innovative capacity (e.g. the number of patents) or/and its foreign participation (which can be measured in the share of exports and number of international partners). Besides these characteristics a leader firm must also be willing to cooperate with other firms in the area and assist in the coordination of inter-firm relationships, therefore creating positive externalities for other firms in the area.

This definition of a leader firm is introduced in the questionnaire, and if necessary explained further. First, respondents are asked to indicate whether or not leader firms exist in Gamarra. And if so, they are asked to give some examples of leader firms and their initiatives in Gamarra. Subsequently, the following propositions are presented to the respondents:

**Proposition 5:** *In Gamarra, leader firms exist that invest in projects with positive effects for other firms.*

**Proposition 6:** *In Gamarra, the presence of leader firms facilitates the coordination of collective action.*

A high agreement with the first proposition suggests that leader firms, which are willing to invest, are present in Gamarra. A high agreement with the second proposition suggests that the leader firms facilitate in the coordination of collective action. This means that besides the positive external effects for other firms, the leader firms also deliberately assist in the coordination between firms and other actors in the area. Additional information given by respondents can give further insights in the influence of the leader firms in Gamarra.

### Intermediaries

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The same method is used to identify the presence and influence of intermediaries in Gamarra. Intermediaries are defined and presented to the respondents as follows:

Intermediaries are persons, private firms and/or associations that possess, collect and distribute information and valuable knowledge in a commercial, technological and social environment. Intermediaries connect actors, mediate between them and disconnect networks when it is necessary to make relations more dynamic.

To determine the presence of intermediaries, respondents are asked to indicate whether or not intermediaries exist in Gamarra. If so, they are asked to give some examples of intermediaries in Gamarra. To indicate the influence of intermediaries in Gamarra, the following proposition is used:

**Proposition 7:** *In Gamarra, the presence of intermediaries in the garment industry facilitates the coordination of collective action.*

A high agreement with the proposition above suggests a presence of intermediaries and above all a positive influence on the coordination of intermediaries.

### Solutions to CAPs

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Finally, the solutions to CAPs have to be assessed. Therefore, the CAPs have to be assessed first. In other words, what CAPs are relevant in Gamarra? The respondents are asked to indicate in what area these problems are relevant (e.g. in innovation, education/training, internationalization, market/promotion or infrastructure).

Second, respondents are asked to indicate which factors or actors contribute to the solutions of these problems. Contributing factors are: leader firms, governmental associations, public organizations, intermediaries, a community argument or the use of ‘voice’. The respondents are asked to rate the importance of these factors as well, by rating them from very bad to excellent. In this way relevant CAPs and the actors which are important in solving CAPs can be indicated. The following proposition is used to determine whether a collective action regime exists in Gamarra:

**Proposition 8:** *In Gamarra, certain solutions to collective action problems have been found, which relate to certain joint actions in the past and today catalyze or can catalyze new collective initiatives.*

Finally, a more pessimistic proposition is used to determine the vision of the respondents concerning the future of Gamarra.

**Proposition 9:** *In Gamarra, the quality of coordination of collective action is pessimistic; improving the quality of coordination will improve the economic development of Gamarra.*

To identify whether certain factors and actors contributed in finding solutions to CAPs, two additional questions are included in the questionnaire. The previously introduced important factors, or sub-variables, are introduced (figure 2.4).

First, respondents are asked to determine the contribution to solve CAPs of each factor using an ordinal distribution, ranging from not contributing (1) to contributing much (5). Second, a frame is used to identify the actual quality of each factor in the five regimes, previously introduced (innovation, education and training, internationalization, market and promotion, and infrastructure). A 10-point ordinal scale is chosen, ranging from very poor (1) to excellent (10). The used frame is illustrated below (figure 5.2).

**Figure 5.2:** Frame to determine the actual quality of various factors in different regimes

Factor/regime	Innovation	Marketing and promotion	Infrastructure	Training and education	Internationalization
The presence of leader firms					
The efficiency of business organizations					
The role of public organizations					
The presence of intermediaries					
The legitimacy of the “community argument”					
The use of “voice” by individual firms					

Source: own questionnaire

Therefore, the differences between different factors as between different regimes can be identified. The frame can thus be read vertical as well as horizontal. This question can therefore indicate which factors are important for solving CAPs in Gamarra. Finally, interviews were recorded using a Philips Voicetracer 600.

### **5.3 Analyzing method**

The conducting of the interview results in quantitative as well as qualitative data. The quantitative data is analyzed using SPSS (version 17.0). First, frequency tables are used to calculate the mean and standard deviation of different cases. The means of different variables, for example the importance of various themes for the development of Gamarra, are compared using a paired *t*-test with a 95%-confidence interval, e.g. to calculate whether or not a certain theme (e.g. innovation) is significantly more important than other themes for the development of Gamarra. This is done for multiple questions in the interview. Moreover, is it possible to determine whether there is significant more agreement (or disagreement) with a certain proposition than with others. This gives useful insights in the presence of certain variables in Gamarra.

The standard deviation is calculated to determine whether there is consensus across the experts regarding certain questions. To determine whether there is consensus across the experts regarding a variable in a certain collective action regime, for example, the standard deviation can give useful insights. When the standard deviation is low, it means that there is much consensus across the experts regarding this specific variable. The contrary is true when the standard deviation is high. Further analysis of the data is not possible because the data-collection method is not random and rather small ( $n = 28$ ). The qualitative data is used to give more insights on the presence and influence of the different variables and processes at hand in Gamarra. Experts, for example, elaborate why they gave a certain answer to a proposition about leader firms, trust, intermediaries or solutions to CAPs. When there is no clear agreement with a certain proposition, the qualitative data can probably assist in finding solutions for the lack of agreement. The same holds for the determination of important factors in the development of Gamarra, the quality of various variables in finding solutions to CAPs and the determination of important themes for the development of Gamarra and stimulating co-operation.

### **5.4 Limitations**

The following section considers the limitations which are relevant concerning the methodology used in this research. Especially when doing qualitative research it is important that one identifies where errors or bias can be expected to keep this in mind at the moment the data is analyzed. The limitations are explored for the observation methods, questionnaire design and the analyzing method.

#### *1. Representativeness (validity)*

One might question if the group of respondents gives an unbiased image? In the case of this research it is not that big of an issue, because this research mainly focuses on qualitative data given by a number of experts. These experts are supposed to have specific knowledge which should result in further insights concerning the way economic activity is coordinated in Gamarra.

The list of experts (appendix 1) includes private as well as public institutions such as, ONG's, entrepreneurs, governmental organizations, business associations, etc. Therefore, the group has at least some kind of representativeness. The main idea though, is not so much the representativeness of the sample, because another sampling method would have been chosen. As is discussed in a previous section, this study is continuing on work of Visser and therefore the 'expert' approach is the selected method. The purpose is to gain useful insights in the processes at hand in Gamarra.

### *2. Year of interview*

Most of the 28 used interviews are conducted in 2009 (24), whereas 4 additional interviews conducted in 2008 were used. The first question is whether there is a difference in content between the interview used in 2008 and 2009. The interview is almost identical; the only difference is that some additional questions were added in 2009. This was done to be able to determine the influence of the different variables in more detail. Therefore, various questions were added. This results in the fact that for some questions the response rate is lower ( $n=24$  instead of  $n=28$ ). However, this is only the case for a few questions.

The choice was made to use the interviews for it resulted in a greater sample size for most questions. Moreover, respondents in 2008 were also approached in 2009 for a new interview, but no appointment could be made in these four cases. The second question which rises is whether data obtained in 2008 can be compared to data obtained in 2009. The situation could have changed and important developments in the past year could be overlooked, especially with the recent crisis affecting the global market. Nevertheless, evaluation of the 2008 data is useful, especially because the qualitative results are less time-bound.

### *3. Language barrier*

There may be some kind of language barrier between the respondents and the researcher. As is well known, Spanish (with some differences) is the national language in Peru. Therefore, the choice was made to conduct the interview in the national language, although a number of experts could speak English. The Spanish language is also known by the researcher, however not perfectly mastered. Therefore, analysis of the interview is more difficult. To overcome this problem, the interviews were recorded using a sound recorder.

### *4. Interpretation of questions*

Because various questions can be interpreted in different manners, close attention and guiding by the researcher was provided. Some questions can, for example, be understood as asking for the current situation as well as the ideal situation, e.g. a high level of trust among actors is present in the ideal situation but not necessarily in the current situation in Gamarra.

The questions are designed to elaborate on the current situation and when this was unclear it was explained by the researcher. The same holds when respondents were asked to determine or estimate the actual quality of various actors in contributing in solving CAPs. Respondents need to understand that the questionnaire asks for the current

situation (or actual quality) in Gamarra and is not asking for factors which could be important for solving CAPs in the district.

### 5. Definitions

The research uses various definitions for important concepts, which are introduced in the questionnaire and explained by the researcher. It may be the case that the definition has to be “made easier”, by translating it to logical terms for the respondent. On the other hand, one doesn’t want to introduce a definition which is not in line with definitions given in the theoretical framework. Therefore, in this case an ‘in between’ choice was made. The definitions which are used in the questionnaire are both scientific as well as ‘fitting’ in the context of the respondents. And when this was not the case, definitions were explained more thoroughly by the researcher. Moreover, the respondents (being experts) proved to have the relevant academic knowledge and therefore further explanation was not necessary in most cases.

### 6. The use of different scales in the questionnaire

In the previous section it became clear that the questionnaire uses different scales for different questions. The propositions, for example, are characterized by a dichotomous scale (yes, no or no opinion). While an ordinal scale belongs to the possibilities as well. Using, for example, categories which reflect the degree of agreement (fully agree, moderately agree, slightly disagree, fully disagree, etc.). Other questions, such as the questions asking for the importance of various themes for the development of the district, do use an ordinal scale (ranging from very important to not important).

The choice is made to use a dichotomous scale, in the case of the propositions, because one can more easily see whether there is general agreement or disagreement with a certain proposition. Simply because there are a number of respondents saying “yes” and “no” and in some cases “no opinion”. Moreover, what does, for example, moderately agree mean? How much more is full agreement than moderate agreement? To avoid these complexities, dichotomous scales are used in this research to simply identify whether there is agreement or disagreement.

The second limitation, concerning the used scales, is the fact that nearly all ordinal distributions use a 5-point scale except for one. For the question where respondents are asked to estimate the quality of various factors and actors in finding solutions to CAPs, a 10-point scale is used (ranging from 1 to 10). This choice was made because it gives the opportunity to respondents to assess the quality in more detail. Instead of a 5-point scale, a 10-point scale makes it possible to indicate differences (between the various factors and regimes) more clearly. All in all, the difference between 1 and 10 is bigger than between 1 and 5.

### 7. Propositions

There are also a number of remarks which can be made regarding the propositions which are used in the questionnaire. First, propositions are formulated in a positive form, such as: “*In Gamarra there is a culture of trust, which facilitates the coordination of joint actions in the area.*” (proposition 4). Whereas, hypotheses are formulated in a negative form, such as: “the level of trust between actors in Gamarra is low” (hypothesis 1). The question rises why the propositions aren’t formulated in a negative sense like the

hypotheses. This choice is made because respondents may not share this negative vision and may therefore be affected when the proposition is stated in a negative form. When the respondent agrees with the hypothesis, for example, that the level of trust is low in Gamarra, then he or she disagrees with the proposition. Therefore, all propositions are introduced in a positive form.

Second, especially the propositions regarding CAPs and solutions to CAPs might seem rather general. And therefore the question is whether respondents are able to give a satisfying reply. These propositions are stated in a rather general way to stay close to the subject and not, for example, focus on a few specific CAPs. Introducing propositions that focus on these specific CAPs may confuse respondents or make it too complex. Certain problems may not be known to respondents and they may therefore be unable to answer the proposition. The respondents are asked to give additional information to their reply. With this qualitative data these focus areas can be looked upon in more detail. The research will point out whether or not this method was ultimately the best way.

Third, propositions regarding leader firms and intermediaries seem to be more or less the same. This is done to make them more or less equal in importance, regarding the quality of coordination. Of course both concepts were explained individually to the respondents.

Fourth and finally, only the propositions that determine the level of trust are given in proxies. In other words, characteristics of trust (informal agreements, communication and shared norms and values) are measured, instead of measuring the level of trust in general (with the exception of proposition 4). The propositions that determine the presence of leader firms, intermediaries and a collective action regime do not measure proxies. These propositions are a reflection of the hypotheses. This choice was made to avoid complexities for respondents, because (too) many proxies exist for leader firms and intermediaries.

This could result in more questions, such as; which proxy's need to be tested with propositions? Therefore, some proxy's may not be tested or overlooked. Furthermore; are the chosen proxy's/propositions valid and the most important? Thus, to avoid these problems, propositions are formulated in a more general manner.

#### *8. The usefulness of a t-test*

Concerning the number of cases (28 at the most), the question is whether a t-test is really useful. One can question the representativeness or significance of a test when the number of cases is small. However, the choice is made in some cases to use a t-test. This is done to find out whether, for example, difference in importance between certain factors (or variables) is significant. Therefore, a t-test is used, but in this study with caution.

That is, the results of these tests cannot have too much weight attach to them. In this research they only serve to illustrate the other (qualitative) results.

## 6 The quality of coordination

The following section focuses on the gathered data, which is obtained using the expert judgments. The main goal of this data is to be able to determine whether or not the different variables are present in the district and if so, determine the influence of these variables. In other words, determine the quality of these variables and factors. The results are analyzed in four sections.

First, some general information concerning the experts is discussed. This includes the average number of years of experience in Gamarra, whether or not the experts participated in association with other firms in Gamarra and whether they observed the formulation of politics for the development of Gamarra. Second, the important themes and factors for the development of Gamarra are indicated. Third, the four key variables are assessed individually. This chapter includes the quantitative, as well as the qualitative data. For each question the quantitative data is combined with the analysis of the qualitative data. In this way, the qualitative data can be used to elaborate or clarify the quantitative information. The quantitative results are displayed in tables after being analyzed using SPSS. The qualitative data is used by selecting citations which give further insights regarding the different variables. These citations are given in *italics* and shown in frames. Finally, the recommendations for improving the development of Gamarra are considered.

### 6.1 General information and personal attributes

On average, experts have an experience of 17.1 years in any of the related sectors. The years of experience ranges from 45 to 3 years ( $SD = 10.6$ ). Some experts started working in Gamarra from when they were young, e.g. in the family business, and are still working in, or related to, the district. Few years of experience doesn't necessarily mean that the judgments of these experts are less useful. It can give useful insights in recent development and processes at hand in Gamarra. Experience in this case is defined as working in Gamarra specifically, with SMEs or in the textile industry in general. Table 6.1 (below) shows the participation of experts in co-operations with other firms and observed formulation of politics.

**Table 6.1:** Experts judgments concerning the participation in co-operation with other firms and the observation of politics

	Yes	No	n
Participated with other firms in Gamarra in co-operative association.	20	8	28
Observed the formulation of policies for the development of Gamarra.	21	6	27

The first notion has to be given to the fact that the sample size for the first question is complete ( $n=28$ ), whereas one respondent was unable to answer the second question and therefore, a slightly smaller sample size ( $n=27$ ) can be observed. Most experts participated with other firms in Gamarra; this can be a co-operative relation between 2 or

more firms (vertical or horizontal) or the co-operation between third parties and firms (diagonal). Both direct and indirect co-operation was mentioned, meaning that for instance a NGO participates with multiple firms at the same moment, offering technical assistance, for example.

On the other hand, direct co-operative experiences of firms exist, which are working together in a more intensive manner. To survive in an environment such as Gamarra one needs to co-operate, at least in a basic way (e.g. the co-operation with a supplier):

*“For an entrepreneur to develop its firm, it needs to develop a co-operation network. You can’t survive without co-operation. Each firm that exists more than 10 years is part of a network. The firms that don’t survive, are the firms which are unable to form a network. And the network has to increase vertical as well as horizontal.”*

Most of the experts indicate that they participated in a co-operative association with other firms in Gamarra; there is still little association among the actors, however. Co-operative initiatives are not widespread (don’t include many actors) and have a temporal character, this may be the cause of a lack of trust:

*“There are not many consortiums of people in Gamarra, an exception is the association of traders, but it doesn’t really function.”*

*“Nowadays the associations of consortiums counts 500 entrepreneurs, but it doesn’t function good. All consortiums make their own products; one makes polo’s another jeans, etc.”*

*“At one moment, there was an intent to make clothing together (in the form of an production association). These associations don’t function, due to a lack of trust.”*

The same holds for the observation of policies, whereas most experts have observed the formulation of policies in Gamarra. However, the general viewpoint of the experts was that these policies are not designed for firms in Gamarra specifically, but for the development of SMEs in general; on national level:

*“There have never been policies which functioned for the firms in Gamarra; they had to do everything by themselves.”*

*“There are difficulties with the policies. Specific policies to promote the development of SMEs don’t exist. The local government intended to do something for the district (La Victoria).”*

*“Little policies exist regarding the productive part of the SMEs.”*

*“The ‘Ley de la MYPE’ (= SME law) was mostly designed for the urban zone, and didn’t attend to rural zones. There are no specific laws for Gamarra, solely for SMEs in general. The municipality (of La Victoria) has to make more specific laws (guidelines) for Gamarra.”*

*“There is no (specific) policy of the state concerning the integration of all types of firms/activities (e.g. large, medium, small and micro firms). There is no policy for business or industrial promotion.”*

Thus, policies exist mainly for the development of the SME sector. But there are no specific policies for Gamarra, which should be the task of the municipality of La Victoria.

Nor are there policies which can create awareness to articulate or co-operate:

*“Articulation with the municipality is important, because the producers spend most of their time (7 days a week) in Gamarra.”*

*“There is no formulation of policies to get firms articulating, which brings various advantages with it. Firms are individual, they are small capitalists or investors and are able to unite for market demand issues eventually, but later they separate. “*

Moreover, national policies are characterized by a lack of continuity:

*“Initiatives exist, but there is a lack of continuation.”*

## 6.2 Factors and themes determining the development of Gamarra

In the following, important factors and themes for the development of Gamarra are identified. The following section consists of two parts. The first analyzes the factors which determine the development of Gamarra, nowadays and 5 years ago. The second part indicates earlier identified themes which are important now, for both the development of the district as for the co-operation between firms.

### 6.2.1 Important factors

**Table 6.2:** Ranking of factors determining the performance of the Gamarra district five years ago and nowadays

Variable	5 years ago (Mean)		Now (Mean, $n = 24^{**}$ )		Change (Mean)
	Mean ( $n$ )	SD	Mean	SD	
The structure of the textile industry in Gamarra (structural features)	2.18 (28)	1.16	2.75	1.48	0.57
The quality of coordination of collective action(s)	3.96 (27)	1.48	4.08	1.41	0.12
Local/national policies	3.79 (28)	1.37	4.08	1.32	0.29
International policies	5.00 (27)	1.21	4.58	1.69	-0.42
Developments in the domestic market	1.75 (28)	0.84	1.79	1.18	0.04
Developments in the international market	3.48 (27)	1.09	2.71	1.16	-0.77*

Notes: (a) \*, this change is larger and more negative than the changes in relative importance of other factors (paired  $t$ -test  $p = 0.008$ ); (b) \*\*, 24 of the 28 respondents possess the required knowledge to determine the current importance

Table 6.2 above shows the ranking in importance of various, previously introduced, factors explaining the development of the district of Gamarra over the last 5 years. The scores are given in means by using all the experts' judgments; standard deviations are included to determine the consensus across experts. A mean score of 1 implies that the factor be ranked as the principal by all experts, whereas a mean of 6 implies that the factor is ranked least important by all experts. The factor that is clearly most important determining the performance, both 5 years ago as now is the developments in the domestic market.

Finding consensus across experts is not solely a matter of calculating the standard deviation, it relates to the relationship between the standard deviation and the mean. Dividing the standard deviation by the mean results in the coefficient of variation (*CV*). The closer the *CV* is to 0 the greater the uniformity of data. Regarding the ranking of factors 5 years ago, the consensus across experts is smallest for the structure of the textile industry (*CV* = 0.53) and greatest for the international policies (*CV* = 0.24). Nowadays, most consensus is reached in the case of local/national policies (*CV* = 0.32) and least consensus is reached for developments in international markets (*CV* = 0.66). In general, much variation exists concerning the consensus in the various cases.

The change of the means over the last 5 years is also included in the table. The structural features of Gamarra were more important 5 years ago than they are now. In contrary, the development in the international market is more important nowadays than it was 5 years ago.

A paired *t*-test is used to compare the means of two paired samples. In this case, the *t*-test is used to compare two moments in time (now and 5 years ago). The test determines whether the null hypothesis (difference between two cases is zero) can be accepted ( $H_0: \mu_D = 0$ ). If the null hypothesis is rejected, there is a significant difference between the two moments in time. Developments in the international market is the only variable which is characterized by a significant change between now and 5 years ago (paired *t*-test  $p = 0.008$ ). Thus, the null hypothesis is rejected; because  $p$  is smaller than  $\alpha (=0.05$ ; because of 95%-confidence interval).

Development in international markets is even seen as more important than the structural features, whereas the structural features were clearly seen more important than international markets 5 years ago. Globalization makes it necessary for firms to export their products to other parts of the world. Therefore, it is not remarkable that international markets are more important determining the performance at the moment. The other three factors; the quality of coordination, local and national policies, and development in domestic markets, are not regarded as being important by the experts. Not now nor 5 years ago.

The experts mainly focus on two developments which greatly influenced the development of Gamarra the last years. Not necessarily the last 5 years, because these movements started earlier. The first is the change of activities in the district. In the '90s Gamarra was an industrial park, mainly populated by producing firms. Nowadays, Gamarra can be seen as a commercial centre, populated by thousands of small shops and various large galleries:

*“Gamarra started with the production part. The last years Gamarra especially increased in terms of infrastructure and the construction of buildings (real estate). There used to be only small housings, today it is populated by galleries. In the '90s ('96/'97) Gamarra was much more like an industrial park.”*

*“Gamarra was a space for demonstrating, being an important agglomeration of related garment firms; there were characteristics typical for a cluster. At the moment it is a commercial centre.”*

This development caused many producing firms to leave the area to search for other locations in Lima, where producing is cheaper; because the rent per square meter increased much in the past years. The advantages of being in the agglomeration were annihilated by the high costs of renting space to produce. Moreover, because producing firms usually need more space than the shops do:

*“ Due to the high costs of land and construction, producers moved to other zones in Lima.”*

*“Originally, Gamarra was an industrial district but nowadays it is a selling district (‘lugar de venta’). There are different examples of firms which have their productive part located in other areas in Lima.”*

The other process which affected Gamarra (as it affected the whole world) is globalization. Both international policies and the developments in the international market are more important now than 5 years ago (table 6.2). Structural features, national policies and developments in the national market are less important nowadays.

It is important for the development of Gamarra to explore other (international) markets:

*“The economy changed; there are new conditions, because of internationalization.”*

*“The development of Gamarra over the last 5 years is influenced by the globalization and the entry of Chinese products.”*

*“Before, they (entrepreneurs) tried to improve the infrastructure (the precision of machinery) and education to improve internally. Nowadays, they search to attend the external market; product of globalization, internationalization. But still, the effort to leave the domestic market is weak. A weakness of the business organizations.”*

## 6.2.2 Important themes and CAPs

The following section describes the importance of different themes and the relevance of CAPs in Gamarra.

**Table 6.3:** Importance of competitive problems (mean of expert judgments) and CAPs in five areas

Area	Importance of themes for co-operation between firms (n=28)		Importance of theme for improving the performance of firms in Gamarra		CAPs relevant in different areas (n=28)	
	Mean	SD	Mean (n)	SD	Yes	no
Innovation	4.36*	0.62	4.71** (28)	0.60	22	6
Education and training	4.18	0.77	4.29 (28)	0.90	20	8
Internationalization	3.96	0.92	4.11 (27)	0.75	23	5
Marketing and promotion	4.36*	0.73	4.19 (27)	0.83	26	2
Infrastructure	3.57	0.92	3.79 (28)	0.96	20	8

Notes: (a) \*, these areas are more significant than the areas of internationalization and infrastructure (paired t-test  $p \leq 0.05$ ); (b) \*\*, this area is more significant than the other areas (paired t-test  $p \leq 0.05$ )

Five themes were indicated in a previous section as being important for improving the performance of firms and for the co-operation between firms (table 6.3). Furthermore, the relevant CAPs were indicated. In other words, which CAPs (related to a certain theme) are important for firms in Gamarra.

The importance was measured on a scale from 1 (not important) to 5 (very important). Innovation is the most important theme (in both cases) and infrastructure the least important.

Again a paired *t*-test was used to test whether there were significant differences between the various themes, using a 95%-confidence interval. Innovation is significantly more important than all the other themes for improving the performance of firms (paired *t*-test  $p \leq 0.05$ ). This implies that for all cases the null hypothesis (difference between two cases is zero) is rejected. In the case of co-operation, innovation and marketing & promotion are significantly more important than internationalization and infrastructure (paired *t*-test  $p \leq 0.05$ ).

In all CARs (collective action regimes), CAPs are seen as relevant by the experts. Mostly in the area of marketing and promotion the CAPs are seen as hindering the resolution of problems. As an expert put it:

*“CAPs in all themes are relevant and related to each other.”*

Innovation is seen as an important theme to invest in:

*“CAPs regarding to innovation are the most important in Gamarra. Innovation is the key to be competitive. Gamarra needs to make a choice; to compete with China (Chinese products), or to increase the quality (value) of its products.”*

Regarding the themes above, qualitative data may give some useful insights. First, the **innovation** theme is elaborated on. All themes are also related to each other and to co-operation, which is also shown in table 6.3 The citation below clarifies this further:

*“One needs to innovate, to enter the external market which is most demanding. The focus on external markets has advanced in Gamarra. In an indirect way, where some firms subcontract in Gamarra; not in association (co-operative form) but individually.”*

Moreover, to innovate there needs to be a certain level of trust between actors and/or firms. One needs to trust another, because innovation is related to the sharing of specific in-house knowledge. One expert said it as follows:

*“There are advances in terms of innovation, formation of human resources and internationalization, but there should be much more trust, integration, articulation and more use of the supporting institutions. It has a very individual character, not collective.”*

Producing firms in Gamarra are generally not interested in innovating processes or products. The main goal of firms or entrepreneurs in Gamarra is surviving and serving the local market. The quality of products doesn't necessarily have to be that high when producing for the local market, because clients mainly come to Gamarra to buy cheap products. If a firm wants to export, it needs to have high quality products or even cheaper production methods; it therefore needs to innovate.

Experts indicated that many firms don't find innovation necessary:

*"No small entrepreneur sees the necessity of incorporating new knowledge in the firm (products or processes); new working methods, marketing, selling techniques, etc. People say they need it, but don't effectively accept it."*

*"Some entrepreneurs do have a vision and are willing to improve, others only produce to survive. To improve you need better products and (a better) standardization."*

Moreover, the innovation of new products mainly consists of copying the products of other firms (especially large warehouses). Everything the entrepreneurs need is displayed on the street. Therefore, many firms produce the same products:

*"Innovation is related to individual initiative. Innovation in Gamarra means copying or understanding needs of the market. Thus, innovation is both individual as it is related to co-operation."*

The problem with **education and training** is that it is offered by intermediaries and public organizations, but that these courses or assistance are not designed around the needs of the firms. The firms want to receive more basic education than is offered; the offered services are not in line with the needs of the firms:

*"There is not much education or training offered. There is no ability of people to be educated, they don't consider it to be important."*

*"At the moment there is an extended offer of education & training, but it is not of great quality. Many SMEs do not trust the offered services."*

*"Most of the services (education) which are offered are temporary. These services are not really articulated and don't have a clear vision."*

Of course, **internationalization** is also considered to be important. Internationalization is a way in which firms can develop by exploring international markets. In Gamarra, of the total annual sales, it is estimated that only 3% is sold to international markets (Cortellese et al. 2003). One expert, who has a long experience in Gamarra, made an estimation regarding the export of firms in the textile industry:

*"Last year (2008) 4000 firms in Peru in the textile industry exported, which equals 2000 million dollars. Of these firms, 100 firms account for 90 percent of the export value. In 2003, 800 firms were exporting, where 10 firms accounted for 90 percent of the export value."*

What can be concluded is that a small group of large firms accounts for the mayor part of export in the industry. Most of these large firms are not located in Gamarra. Thus, the greatest part of the exports in the sector takes place outside Gamarra by large firms:

*"To internationalize, you need a certain scale. And this is mostly absent in Gamarra."*

Exportation is mainly focused on nearby markets, such as Colombia, Bolivia and Venezuela. Exportation to higher quality markets, such as; the United States or Europe, is rare. An interesting point is the competition with the Chinese market. Because Peruvian

firms are specialized in certain fabric (knitted), it is less affected by the Chinese producers. Simply because Chinese producers aren't specialized in this fabric:

*“The Peruvian market wasn't really affected by the Chinese, because the Peruvian market is specialized in 'tejido (fabric) de punto' (knitted). In this area of textiles the Peruvian products are in the high quality range; second after Italy (in added value). The cost of Peruvian products is 12 dollars (average), against 28 dollars for Italian products.”*

The above indicates that the Peruvian textile market is still more or less cheap. On the one hand, **market and promotion** is important because Gamarra is known in other areas or countries and can be an example for entrepreneurs. In this way, it can attract new entrepreneurs and grow. On the other hand, actors can make misuse of Gamarra, using it for their own development or in their own interest:

*“Promotion of Gamarra is important; promotion individually as well as agglomeration.”*

*“The government utilizes the name of Gamarra in the sector campaigns.”*

Table 6.3 makes clear that both for the improving the performance of firms and for co-operation, **infrastructure** is rated as being least important of all themes. Infrastructure becomes more important at the moment that firms co-operate (intensively). A well developed infrastructure makes transactions and (knowledge) streams flow more fluently. Therefore, in Gamarra it could be of less importance. Simply because in Gamarra, actors do not frequently co-operate intensively. Experts put it as follows:

*“Infrastructure is important when all firms in the chain have to do their separate part (e.g. a part of the product), it is less important when all firms make the products completely by themselves.”*

*“In an agglomeration of the type of Gamarra, infrastructure is not crucial.”*

### 6.3 Factors determining governance

The following section focuses on the four variables, which were previously indicated (trust, leader firms, intermediaries and solutions to CAPs). It presents evidence on the variables influencing the quality of governance. The propositions which are used to indicate the presence and quality of the variables were also introduced in a previous chapter. Agreement or disagreement with the propositions indicates the importance of these variables. The results of these propositions are combined with the qualitative data. Therefore, one can identify whether or not the variables are present and in what way these influence coordination in Gamarra.

#### 6.3.1 Trust

The propositions determining the level of trust in Gamarra are analyzed and the results are shown in table 6.4.

**Table 6.4:** Propositions in relation to the level of trust determining the quality of governance

Proposition	Agrees	Disagrees	No opinion	n
In Gamarra, informal agreements have more significance than formal contracts in inter-firms relations.	9	14	1	24
In Gamarra, partners (e.g. firms, associations and governmental organizations) have shared norms and values.	2	20	2	24
In Gamarra, relations between partners are characterized by strong bonds and good communication.	0	20	4	24
In Gamarra there is a culture of trust, which facilitates the coordination of joint actions.	3	24	1	28

The result of the first proposition shows a different result than the other three propositions. Informal agreements cause more agreement among experts than in the case of the other propositions. It implies that most of the experts find that, in Gamarra, formal agreements have equal or more significance than informal agreements. Whereas, informal agreements were indicated as being a characteristic of a relation based on trust. However, the disagreement is not strong among the experts. In other words, there are also a significant number of experts that agree. The judgments of the experts do indicate that informal agreements are also important in Gamarra. This doesn't necessarily mean that this is an indication of the presence of trust. It might be that informal agreements are necessary, because formal contracts are not available. Which can be a result of the lack of standardization within firms (processes within firms). Firms in Gamarra rely heavily on the power of relationships, and not the power of the contract. Another important reason might be the interference and involvement of the government in the business process. In certain cultures, the actual meaning of the contract may be something other than its embodiment of a finalized agreement. It may be viewed merely as a symbol of the intentions to do business or continue talking.

Even as business concepts become more universal (global), they will still always reflect the local business culture at hand in Peru (or Gamarra). Some judgments of the experts may shed light on the agreements used in Gamarra:

*“The use of informal or formal contacts depends on the size of the firms involved; bigger firms or transactions need formal contacts (contracts).”*

*“Firms solely use words (informal contacts) when negotiating (don’t use formal contacts).”*

*“On country level, as well as in distinctive parts in the country, it is not usual to work with contracts. On the other side, notes which ask for the demand do exist. But more detailed contracts are mostly absent.”*

*“Transactions among firms exist, but a long term vision is absent. They don’t need contracts. There are no strategic alliances, which are based on trust.”*

*“In the beginning they make much use of words. Some firms don’t accept documents; there is a lack of credibility. There are more informal than formal agreements between firms (actors) in Gamarra.”*

*“In reality firms need contracts to negotiate, but in some cases these are unnecessary. A document is needed to strengthen the ‘word’ (informal agreement). Not to make sure that the partner will live up to its agreements, but more to work out the details.”*

The frame above indicates that the use of informal agreements is not necessarily a matter of the presence of trust. Most of the firms in Gamarra are small firms and are not used to use (legal) contracts. It is also due to a lack of credibility and cultural norms, that make it harder to use contracts. Thus, in Gamarra the use of informal agreements is not necessarily an indicator that trust-based relations exist between firms.

The other results indicate that there is a general disagreement with the propositions. Experts disagree that the partners in Gamarra have shared norms and values, that relations between partners are characterized by strong bonds and good communication and that there is a culture of trust, which facilitates joint action. Therefore, when all these propositions are taken together, all characteristics of the presence of trust in inter-firm relations are denied by the experts.

While most of the experts judge that the level of trust is low in Gamarra, most of the experts indicate that certain cultures of trust do exist. In other words, they indicate that there are some groups which are characterized by a high(er) level of trust, better communication and shared norms and values. These groups of entrepreneurs are characterized by their shared origin.

These groups of firms in Gamarra are originally from other parts in the country (outside of Lima). The following is said about these specific groups:

*“In Gamarra, there are many groups which have their origin in certain provinces (e.g. Puno). These groups are characterized by their own culture of trust.”*

*“The entrepreneurs from Puno are characterized by much stronger ties.”*

*“Trust exists between two partners but not in associations. Trust in groups, people which they know, but these groups are small.”*

*“The level of trust between entrepreneurs is moderate, there are some groups characterized by a high level of trust.”*

*“Trust exists in different small groups of firms, which is the same as in each other nation or agglomeration in the world. A situation where everybody trusts each other is fictional; all have their own interest, and therefore trust amongst all is impossible.”*

*“In Gamarra circles exist, where documents or contracts (formal contacts) aren’t necessary (in a general way).”*

*“‘The word’ (‘la palabra’) is accepted but circulates much more with a closed character. This means that the networks that exist are closed and formed due to family reasons and also because entrepreneurs are from the same area. In these groups informal contacts (words) are sufficient, but outside this familiar circle there is a lack of trust.”*

*“Homogeneity and joint vision don’t exist in Gamarra. In some branches or groups trust exists, but there is no totality.”*

*“Peru has a serious trust problem. Association is really difficult without trust. Until a certain point there is trust between the associations, but it doesn’t exist in business networks. The value of relations is much stronger in other parts of Peru (outside Lima). Trust solely exists in certain groups, like a group of producers from Puno or Ayacucho.”*

*“There are groups that coordinate and communicate in Gamarra, but not all have this characteristic.”*

*“In some networks or groups (business networks), the use of words (informal contacts) is normal. But it is not a characteristic of all firms in Gamarra.”*

The citations above clearly indicate that, in general, experts find that trust is limited to certain groups in Gamarra, which do work together and have collective sales. Not only trust between firms is important for a successful co-operation, but also public-private trust is important in business districts.

In other words, trust between the firms and public organizations (the municipality or the state). An expert said the following:

*“There is no trust between the central government and the entrepreneurs. Because the government promises to assist (e.g. offer technical assistance programs), but the entrepreneurs solely want to sell and are not interested in education or training. Although there is more coordination between the associations and the state.”*

### 6.3.2 Leader firms

Second, the focus is on the presence of leader firms in Gamarra (table 6.5). The experts were asked to indicate whether or not leader firms are present in Gamarra (after explaining the concept ‘leader firm’). Strikingly, almost all experts indicated the presence of leader firms. Moreover, most of the experts judged that these leader firms facilitate the coordination of collective action. There is no consensus among the experts regarding the other proposition, which focuses on the investments of leader firms in Gamarra.

**Table 6.5:** Propositions relating to the presence & influence of leader firms determining the quality of governance

Proposition	Agrees	Disagrees	No opinion	n
Leader firms exist in Gamarra?	21 (yes)	3 (no)	/	24
In Gamarra, leader firms exist which invest in projects with positive effects for other firms.	12	12	4	28
In Gamarra, the presence of leader firms facilitates the coordination of collective action.	14	8	6	28

If the experts indicated that leader firms exist in Gamarra, they were asked to name some of these leaders, which, in their eyes, have a leading role (as was indicated in the previous chapter) in Gamarra. Many of the firms which were indicated as being leaders are firms which started producing in Gamarra, and after growing moved to other (cheaper) areas in Lima. A number of experts named *Topitop* as a leader, mainly because this firm subcontracts other smaller firms. Thus, not necessarily because this firm invests in the district Gamarra and neither is purposefully interested in the development of other firms. Therefore, not being a leader firm as it is defined in the previous chapter. But still, it is interesting to give this specific firm attention; because *Topitop* has its production history in Gamarra and is an example for many other firms or entrepreneurs.

The experts had the following judgment concerning Topitop:

*“Gamarra ejected her best childs; the firms which increased the most are outside Gamarra.”*

*“The SMEs are exploited by the leader firms (Topitop or Saga). They benefit by subcontracting small and micro firms. These large firms pay little money for other firms or workers to produce their clothing.”*

*“Leader firms (e.g. Topitop) exist, but are not necessarily located in Gamarra. These leader firms could co-operate or interact with firms in Gamarra.”*

*“Topitop formed a homogenate, disciplined group. Which creates a culture of quality, compliance, productivity, etc.”*

The judgments regarding Topitop differ. On the one hand, the citations above make clear that Topitop is not a leader firm in the sense of the definition, which is introduced in the previous chapter. The experts indicated that Topitop subcontracts other firms and these firms are even exploited. On the other hand, one expert indicated that Topitop created a culture of quality, compliance and productivity. Which indicates that positive externalities are indeed created by Topitop.

Next, experts indicated a second type of leaders in Gamarra. However, these leaders are not active in the productive sector of Gamarra, but in the commercial sector. These so-called *“inmobiliarios”* have an important role, because the main activity in Gamarra is of commercial nature. In other words, the selling of products to clients which visit the district. These galleries are constructed to serve as a place where entrepreneurs can start their business. The renting cost is really high in these galleries. Therefore, one gallery serves as a location for hundreds of small shops, which take up only a few square meters. The owners of the galleries have a certain degree of responsibility for the entrepreneurs which have their business in their galleries and are concerned with the development of Gamarra, because it is the place where they earn their money.

Some of the citations made by the experts are taken up in the frame below:

*“The accumulation of firms in Gamarra changed to another sector: construction, instead of the sector of clothing manufacture.”*

*“There are three different types of businesses in Gamarra; producers, real-estate owners (galleries) and traders. In the case of the real-estate owners; there exist 5 galleries which are more expensive than others and have a leading role. In the production sector leader firms don’t exist. There are firms with higher sales, but that doesn’t make them leaders.”*

*“The leader firms are not concerned with infrastructure and market, to increase the production. The initiatives and investments of leader firms are mainly geared towards the commercial part.”*

*“The firms that are leaders know the textile market, but the investments concentrate in the immobile part (galleries). This is the principal characteristic of leadership.”*

*“There are many firms, but none of them are characterized by leadership. The leaders in Gamarra are the renters of space (owners of galleries).”*

*“In the immobile sector (‘lugar de venta’) de leader firms invest in collective projects with other firms. These firms have much more power than the firms which are active in the textile production sector.”*

Thus, the galleries (or owners of galleries) have a leading role in Gamarra, but that is not necessarily positive for the other firms (especially not in the productive sector). The investments mainly take place in the infrastructure and market regime, whereas for small producing firms to advance, investments in education; innovation; and internationalization are of significant importance as well. It is not surprising though; because the greatest part of the firms are active in the commercial sector, the focus is on this sector.

Finally, if there are leader firms in Gamarra, what are their characteristics and their actions? Experts indicate that these leaders firms do rarely exist:

*“There are leaders which are transparent in terms of textiles. They are small but form networks or associations with other firms and participate to stimulate local development (the community). These examples are unique, only in some cases is it observable.”*

*“The leaders are those which govern various themes: commercialization, production, internationalization and infrastructure.”*

*“There are leader firms in Gamarra, which are an example for other firms and are representative. They are respected for their production history and for increasing from a small or micro firm to a medium or large firm.”*

*“Firms which appear in conversations, transactions and agreements with public institutions. Sometimes they are characterized by promotional actions and are worried about this promotion and the awareness of technical development. Not more than 20 of these firms exist”*

Thus, leader firms do exist and in some cases participate in associations or networks. The problem is that there are far too little of these leader firms, especially for a district or agglomeration the size of Gamarra. Moreover, other actors (owners of galleries and associations) want to have a leading role, whom usually not handle in the interests of small producing firms.

### 6.3.3 Intermediaries

Third, intermediaries are put to the test (table 6.6). As in the case of leader firms, experts were asked to indicate if intermediaries are present in Gamarra. There is a high degree of consensus among the experts that intermediaries exist, as there is a slight agreement with the proposition. Most experts agree that intermediaries facilitate the coordination in Gamarra. But also in this case, qualitative data is needed to determine the influence of intermediaries more thoroughly.

**Table 6.6:** Propositions relating to the presence & influence of intermediaries determining the quality of governance

Proposition	Agrees	Disagrees	No opinion	n
Intermediaries exist in Gamarra?	20 (yes)	4 (no)	/	24
In Gamarra, the presence of intermediaries in the garment industry facilitates the coordination of collective action.	15	11	2	28

As can be observed in the table above, many experts judge that intermediaries are present in Gamarra. Because the hypotheses suggested differently, the qualitative data may elaborate further on the topic of intermediaries. First, various examples of intermediaries are considered that were indicated by the experts. Some institutions are not necessarily knowledge intermediaries but can have an intermediating role in Gamarra. Table 6.7 shows some intermediaries which are active in Gamarra.

**Table 6.7:** Intermediaries active in Gamarra

<b>Name of organization</b>	
ADEX	Association of Peruvian exporters
COPEME	Consortium of private organizations for the promotion of the development of SMEs
CENTROMYPE	Offers specialized services to SMEs for commercial management.
CEPEFODES	Peruvian centre for the promotion and development of SMEs
ITC	Textile and confections institution
INPET	Institution for the promotion of solitary development
Mujer y Sociedad	Promotes the human development, which respects the diversity, cultural plurality and policies of women
PROEXPANSION	Evaluates the capacity of firms to co-ordinate and articulate themselves
PROMPERU	Governmental organization which promotes the international trade of firms
SENATI	Offers practical education (training) for students with technical careers
UNPADS	Union for social development

Besides the intermediaries which are named in the table above, Universities, the municipality, service centers and independent consultants have an intermediating role in Gamarra. An intermediary, which is not mentioned in the table above, is 'Mype Competitiva'. An expert said the following about this program:

*"2 themes are important in the 'competitive program' (Mype Competitiva), regarding the SME sector:*

- 1. The importance of business articulation;*
- 2. The coordination of education and training."*

The first that strikes the mind is that many experts indicated that intermediaries indeed offer services (e.g. technical assistance or advice), but that entrepreneurs in Gamarra are not interested in or not willing to pay for the services, which the intermediaries offer. The intermediaries can't satisfy the needs of the firms. In the words of an expert:

*"Intermediaries want to enter Gamarra, but the firms are not willingly to cooperate with these intermediaries. The intermediaries are more or less unnecessary, because firms don't cooperate."*

Another problem, which is indicated by a number of experts, is that intermediaries often operate from outside the district, and therefore lack knowledge concerning the interests and needs of firms in Gamarra. Moreover, when intermediaries offer courses or (technical) assistance, it is difficult for the entrepreneurs to attend these meetings and pay for the costs of transport:

*“From the part of the Universities there is little interaction. Universities incidentally have programs, but these are far from La Victoria. Thus, people (entrepreneurs) have to invest time and money to come to these Universities.”*

*“There are services which include technical assistance or advice; but people don’t use these kinds of services. The way to solve this, is for NGO’s to stay in Gamarra longer and learn the way to do it. However, you can’t help all the firms, you have to select.”*

What was also mentioned was that intermediaries are active a short period of time, in other words; there is only little continuity. This does not only hold for business associations but evenly for public organizations, such as Ministries. The programs that they offer are usually too short to really have effect:

*“There were intermediaries; Magazine Gamarra, PROMPYME, Ivan Mifflin, etc. The question is whether or not these intermediaries still exist? The Ministry of Commerce (MINTINCE), had some (sporadic) initiatives, but there was no continuity.”*

A specific group of intermediaries are the so-called “gremios” (translated: union). From this moment on, these are indicated as business associations. These business associations act in the interest of the entrepreneurs, but the problem is that all these associations have their own interests and concerns. Therefore, there is no union among these different associations. Moreover, all these associations have the idea that they have the best interests in the development of Gamarra, which results in a coordination problem. A few citations concerning these associations illustrate this:

*“There is no union between the different associations; only among different groups of firms or associations, e.g. from Puno, Juliaca or Cusco”*

*“The leaders (‘dirigentes’) in Gamarra don’t communicate. There are 50 associations in Gamarra, but all are unknown; they are not united.”*

*“SENATI has worked with some associations and also with PROMPYME. Developing specific programs for agglomerations like Gamarra.”*

#### **6.3.4 Solutions to CAPs**

Fourth, solutions to CAPs are investigated by using two propositions (table 6.8, below). Again, experts were asked to judge whether solutions to CAPs in Gamarra have been found and are related to sustainable joint actions. This proposition implies that CARs (Collective Action Regimes) exist. There is not much consensus across experts in the case of this proposition, still most experts agree and indicate that solutions to CAPs facilitate coordination in Gamarra. Second, a rather pessimistic proposition is introduced to test how the experts judgment regarding the future of Gamarra. Although the consensus is not high, it can be said that the second proposition can be accepted.

Moreover, because most experts who disagree or have no opinion agree that the quality of coordination is low, but not necessarily pessimistic. In their eyes, pessimistic is too negative. In this sense, no opinion could mean that the expert has a neutral opinion instead of not having one. The same applies for the first proposition, whereas no opinion may indicate a neutral vision; because this proposition might be too complex. This problem was discussed in the methodology. Qualitative data elaborates more on this issue.

**Table 6.8:** Propositions relating to the solving of CAPs determining the quality of governance

Proposition	Agrees	Disagrees	No opinion	n
In Gamarra, certain solutions to collective action problems have been found, which relate to certain joint actions in the past and today catalyze or can catalyze new collective initiatives	13	7	8	28
In Gamarra, the quality of coordination of collective action is pessimistic; improving the quality of coordination will improve the economic development of Gamarra.	16	7	5	28

A low degree of coordination stems from a lack of co-operation between the actors in Gamarra. Because all sectors (productive, commercial and services) have their own interests and their own vision how to invest in Gamarra, it is hard for actors from these groups to work together. Whereas producers are interested in investing in innovation, internationalization and education, the commercial sector is more interested in investing in marketing & promotion and infrastructure. These different interests make that co-operating is difficult:

*“The problem of a lack of co-operation and co-ordination stems from the fact that these 3 groups (production, commercial and service) exist in Gamarra. The sector which is most representative in Gamarra at the moment is the commercial sector. The development of Gamarra lies in their hands.”*

*“There are some firms which invest in collective action, but the number of firms which are involved is too small to induce a change.”*

The following two tables indicate the quality of various variables in finding solutions to CAPs. First, table 6.9 below shows the contribution of various variables in finding solutions to CAPs.

**Table 6.9:** Contribution of various variables in finding solutions to collective action problems (mean of expert judgments)

Variables Contributing to solving CAPs	Contribution	
	Mean	SD
Leader firms	3.43*	1.32
Business associations	3.04	1.26
Public organizations	2.89	0.83***
(Knowledge) intermediaries	2.96	0.96
Community argument	3.07	1.12
Voice	2.54**	1.00

Notes: (a) \*, this variable is more significant than the variables public organizations, intermediaries and voice (paired  $t$ -test  $p \leq 0.05$ ); (b) \*\*, this variable is less significant than all other variables (paired  $t$ -test  $p \leq 0.05$ ); (c) \*\*\*, lowest coefficient of variation indicates that the most consensus across experts exists for this variable

Experts were asked to indicate the contribution ranging from 1 (not contributing) to 5 (contributing much). A mean score of 5 implies that all experts find that the variable contributes much in finding solutions to CAPs. In contrary, a mean score of 1 implies that all experts have ranked the variable as not contributing. Most consensus across experts is reached in the case of public organizations, because the coefficient of variation is closest to 0. Thus, experts agree most on the contribution of public organizations in finding solutions to CAPs.

Table 6.10 can be compared to the table above. The only difference is that in this case the general contribution of variables is asked for, whereas the following table is concerned with the rating of the quality of the same variables in various collective action regimes. According to the experts, leader firms are most contributing in finding solutions to CAPs. Therefore, a  $t$ -test was used to find out whether there is a significant difference in contribution compared to other variables, using a 95%-confidence interval. Leader firms are significantly contributing more than public organizations, intermediaries and voice (paired  $t$ -test  $p \leq 0.05$ ). The null hypothesis ( $H_0: \mu_D = 0$ ) is therefore rejected. A  $t$ -test is also used to determine whether voice is contributing significantly less than other variables. Voice is indeed significantly contributing less than all the other variables which are included in table 6.9 (paired  $t$ -test  $p \leq 0.05$ ). For both cases (leader firms and voice) yields  $p \leq \alpha (=0.05)$ ; for a 95%-confidence interval).

Finally, different factors which contribute to the solutions of CAPs are determined by asking the experts to judge these ranging from very poor (1) to excellent (10). The experts were asked to assess the exact quality of all the variables below in each of the collective action regimes (innovation, marketing & promotion, internationalization, training & education and infrastructure). A mean score of 1 implies that the variable in the concerning CAR is rated as being very poor by all experts. A mean of 10 implies that all experts believe that the variable in the concerning CAR is of excellent quality. The mean quality scores are shown in table 6.10. The first thing that strikes the eye is that all variables are rated 5.52 or lower. This implies that the quality of the variables is rated insufficient in nearly all cases. There is little difference in quality between the various

variables. The highest quality is 5.52, whereas the lowest observed quality is 3.25. This means that all variables have a mean quality of 3 (poor) to 6 (moderate). Strikingly, leader firms have the highest mean quality in all CARs. This was also noticed in the former part, where leader firms were not judged as negative as the other variables. However, the quality of variables can only be individually analyzed. It might have been more useful to ask to compare the quality of the various variables. In this way, one can say something about the relationships among these variables. However, the choice was made to only assess the individual quality.

Standard deviations tend to be high, because a 10-point scale is used for this question. Therefore, in the cases where  $SD/Mean (CV) \leq 0.5$  there is relative consensus across experts. These cases are marked with an asterisk (\*). Strikingly, relative consensus is reached for leader firms in all regimes. Thus, leader firms are not only judged as having the highest quality in solving CAPs in Gamarra, but also most consensus is reached concerning the quality of leader firms in Gamarra.

**Table 6.10:** The quality of five collective action regimes in the Gamarra district (mean of expert judgments)

Variables influencing CARs (collective action regimes)	Innovation ( <i>n</i> )	Marketing and promotion ( <i>n</i> )	Infrastructure ( <i>n</i> )	Training and education ( <i>n</i> )	Internationalization ( <i>n</i> )
Leader firms	4.96* (27)	5.52* (27)	4.52* (27)	4.93* (27)	5.41* (27)
Business associations	3.43 (28)	4.11 (28)	4.04 (28)	4.30 (27)	4.11 (28)
Public organizations	3.68 (28)	4.29* (28)	3.61 (28)	4.61* (28)	4.07 (28)
(Knowledge) intermediaries	4.41 (27)	4.67 (27)	3.25 (28)	4.81* (27)	4.22* (27)
Community argument	3.63 (27)	5.07* (27)	4.30* (27)	4.11* (27)	4.37 (27)
Voice	4.07 (27)	4.89* (27)	4.19 (27)	3.89 (27)	4.11* (27)
Overall	4.03	4.76	3.98	4.44	4.38

Note: (a) \*, cases where  $SD/Mean \leq 0.5$

Leader firms are important in finding solutions to CAPs, due to their possibility to invest and the power they have because of their leadership. The problem in Gamarra is that these leader firms hardly exist. In the previous section, the presence and influence of leader firms was explored, because most experts indicated that leader firms are present in Gamarra. It is too early to draw conclusions, but one may say that these indicated leader firms are not the leader firms defined in the theoretical framework.

Leader firms in Gamarra may subcontract and invest in the safety and cleanliness of Gamarra, but mostly don't invest to create positive externalities for other firms (e.g. in the areas of education, innovation and internationalization). Certain citations of experts illustrate this:

*“Leader firms are key for finding solutions to CAPs, and other firms have to accept this leadership.”*

*“Leader firms and business associations don't exist in Gamarra, and therefore don't contribute to solving CAPs.”*

*“There are some leaders in Gamarra which individually manifested themselves by solving problems in Gamarra (e.g. safety) and negotiate with the municipality.”*

*“The leader firms, which exist in Gamarra, facilitate the coordination of collective action. The problem is that only little exist.”*

*“Leader firms contribute because they subcontract other firms. But don't contribute because they exploit these firms and therefore generate a culture of distrust.”*

*“There are some leaders in Gamarra which individually manifested themselves by solving problems in Gamarra; safety and negotiate with the municipality.”*

Business associations can unite firms in the industry to collectively solve CAPs. It is also important that there is a certain degree of coordination among the various associations, however:

*“The efficiency of the business associations is an important theme that contributes, but not as they act at the moment.”*

*“There are some experiences of collective action which functioned. For example, there is a group of firms which joint to export to Venezuela (induced by PROMPYME). There are also some firms which joined to explore the North-American market, because of the TLC ('Tratado de libre comercio').”*

*“The business associations are fighting most for infrastructure (traffic problems), transit problems, safety, etc.”*

In the category of public organizations, especially the local government (municipality) has an important role in solving CAPs. Perhaps not directly solving CAPs, but uniting all important actors to create awareness to collectively solve CAPs. The themes where the municipality needs to have a principal role are infrastructure, safety and cleanliness. In other words, the basic needs for the firms in the district. Attention is needed in these themes primarily, to make or keep Gamarra attractive for entrepreneurs and clients. Afterwards, the municipality can play a role in improving the development of firms by investing in education, innovation and internationalization; giving firms more possibilities to improve the quality of products (and processes) and attend international markets.

The quality of public organizations in finding solutions to CAPs determined by the experts:

*“In finding solutions to CAPs, the municipality plays the most important role.”*

*“The public organizations always contribute if they have clear the role they have.”*

*“Public organizations exist, but an adequate approach lacks.”*

*“Some years ago public organizations contributed to finding solutions to CAPs, but at the moment not (or less).”*

*“Much bureaucracy and vagueness regarding public organizations/institutions.”*

As was indicated in the previous section of this chapter, intermediaries exist and offer programs for the firms in Gamarra. However, entrepreneurs are not interested in the offered programs, the initiatives of intermediaries are temporary and many intermediaries are located outside Gamarra. If this is the case, one wonders whether the quality of intermediaries to solve problems is adequate. In all areas the quality is low, but especially in the area of infrastructure. Perhaps not surprising, because a knowledge intermediary mainly plays a role in innovation and education. But even in these areas the quality is estimated low. The results shown in table 6.10 are partly illustrated by the following citations:

*“PROMPYME and ADEX do contribute to solutions to CAPs.”*

*“For what the firms need, the intermediaries in Gamarra don’t contribute enough.”*

*“The presence of intermediaries doesn’t facilitate the coordination much.”*

Finally, voice and community argument may also contribute in finding solutions to CAPs. Firms can use their voice to stimulate other actors (business associations, public organizations, intermediaries, etc.) to take action. On the other hand, actors may unite and thereby use their community argument. Doing this by co-operating, these united actors create a strategic vision which is favorable in finding solutions to CAPs. The two citations below illustrate the absence of voice as well as a community argument in Gamarra:

*“Key to the solution of CAPs are business associations, although these show a dispersed growth. ‘The voice is fractured’: no one is representative for Gamarra.”*

*“There is a lack of more ‘united’ communication. The set of mind is really individualistic, for an entrepreneur or the people in Gamarra their own interest are most important. Each firm is a different world.”*

*“A joint vision of all firms in Gamarra is difficult. Spaces have to be created; different possibilities for co-operation (e.g. between firms which export, serve the internal market, specialized in certain clothing, etc.). Heterogeneity exist; not one community, but different communities.”*

## 6.4 Recommendations

The questionnaire contained two questions regarding the prospects of Gamarra. The experts were asked to indicate ways to improve the development of the district as a whole and to improve the co-operation and coordination among firms (and other actors) in the district.

### 6.4.1 The role of the public sector

Especially important for the development of Gamarra is the role of the municipality and to a lesser extent the national government (or state). The municipality has the responsibility to improve the safety, cleanliness and infrastructure in the district. These are important themes which should be well attended. Moreover, because these themes are of poor quality at the moment. Many complain that the area is dirty and unsafe, for example. Especially for clients and entrepreneurs these are factors which can cause them to look out for other areas or markets:

*“A more active role for the municipality to promote the coordination, and increase the safety and cleanliness in Gamarra.”*

*“The role of the state has always been weak. The municipality has a stronger/more important role, in areas of infrastructure and promotion. The mayor of La Victoria promotes Gamarra out of its political vision. He is not only promoting the image of Gamarra, but his own image as well. Some things, like the cleanliness, lighting and safety, did improve by his work in Gamarra (the work of the municipality).”*

*“The municipality La Victoria has to do more to solve the problems of safety and cleanliness. For the amount of taxes that are paid in Gamarra, the municipality should do more for Gamarra.”*

*“The state should focus itself on basic needs such as; infrastructure, health, education and safety. After attending these basic needs it can focus itself on the formation of networks, etc. On the level of the municipality it should be transparent; how much firms are there, of which type, how many workers, etc.”*

Another important role of the municipality should be the association of various actors in Gamarra. All actors have their own interests and visions concerning the development of Gamarra. Especially the conflict between the different groups (production, trade and services) should be well coordinated to reach consensus.

Furthermore, the municipality should guide the co-operation or coordination among the various business associations, which all seem to know what is best for Gamarra:

*“At the moment there is equilibrium of low intensity cooperation in Gamarra. And the global crisis is not going to be enough to break this equilibrium. The future of Gamarra is unclear. An important (massive) intervention of the state can break the equilibrium and will set in motion equilibrium of high intensity, characterized by a strong leadership and alliances between large firms and the state.”*

*“Trade should be collective, in co-operation with the state. The costs of light, for example, are much more expensive in Gamarra than other commercial centers, because the voltage is different.”*

The municipality also has the task to make trade transparent, or formal, in Gamarra. Nowadays, a significant part of firms in Gamarra are unregistered:

*“Identify and make information transparent; 80% of the businesses in Gamarra are informal. There should be an articulated intervention strategy. There aren’t interventions to formalize businesses, and without these interventions there is not much you can do. In Peru there are no intervention policies for clusters.”*

To summarize, the municipality needs to participate more in the (economic) development of the district. It needs to invest not only in infrastructure and safety but also in innovation, education and internationalization. Moreover, association between the different actors needs to be reached and the focus shouldn’t be solely on the development of the commercial sector but evenly on the trade and service sectors. As a respondent put it:

*“A really strong investment of the state, more in magnitude than quality (to strengthen the capacities in Gamarra). To design education and innovation, and connect Gamarra to the rest of the world, by educating in design and products. An intervention which requires the participation of the associations of local producers and the national government & municipality, to facilitate the development of producers and less of the owners of the galleries.”*

#### **6.4.2 Internationalization**

For the firms in Gamarra and for the district as a whole to develop, it needs to export its products. Also because the competition on the local market becomes fiercer:

*“The textile sector is one of the strongest in exportation. This is an opportunity for Gamarra. An image has to be created of Gamarra being an internationally oriented textile industry.”*

*“10 years ago there was no competition by other big markets; Saga, Metro, etc. Also therefore, Gamarra should think about exporting products outside Gamarra.”*

Especially integrating in global value chains of sophisticated buyers in distant markets is important. These global buyers foster upgrading at cluster levels and provide sustainable growth (Giuliani et al. 2005). Upgrading, in this sense, refers to the capacity of firms to innovate to increase the value added of products and processes. But as Visser et al. (2009) indicated, clustered firms are not integrated in any such GVCs. Some firms do export, but mainly to neighboring countries such as Venezuela, Colombia and Bolivia. This does not necessarily mean that there are no opportunities in these countries. Especially for small firms, exporting to these neighboring countries might be interesting:

*“Important opportunity were, and in lesser extent still are, the Venezuelan, Colombian and national market.”*

*“The markets of other countries in South America are interesting (opportunities).”*

Moreover, intercontinental exports may be even more important. Because these markets demand more quality and provide more intensive competition. Opportunities mostly lie in the United States and Europe:

*“The clothing (textile) industries of Europe or Japan.”*

*“Especially the United States (as well as Columbia) could be potential markets for firms in Gamarra. Make the products and give these the right price; giving standards and quality criteria. ‘Myte Competitiva’ wanted to associate with 80 firms and assist them to export their own product to other markets (in particular the United States). Finally, after a selection/revision procedure, solely 24 firms entered the program. A significant number to work with this punctual and direct technical assistance. The importance of the group was to associate and have a certain power.”*

Projects and policies may also contribute to stimulate internationalization:

*“The free trade agreement can be an opportunity for firms. They have the possibility to attend international markets, but they have to work together.”*

*“International projects as “Project Enterprise Networks successfully established the relations between companies by forming partnerships including joint work to reduce costs and the approach to jointly export.”*

### 6.4.3 Association

Related to all other areas of opportunities is association. To internationalize, innovate, promote, etc. association with other actors is important. Furthermore, for public policy to function co-operation with firms is necessary. One of the main problems in Gamarra is the lack of collective action, and therefore the poor quality of coordination. Both association between public and private actors and association between the various private actors is important. Internationalization, for example, can be reached true collective action:

*“Normally a cluster develops from a conglomeration, through the formation of (better) networks. It is going to need co-operation and co-ordination. In Gamarra it is happening in contrary. There are no dynamic processes, solely subcontract contacts.”*

*“Coordination between the consortium of traders and the municipality (or other organizations of the state) is important to promote the complex of Gamarra.”*

*“Better communication/interaction between the municipality and the business associations, by the use of public programs.”*

*“Work with the different business associations and generate businesses through association.”*

*“All business associations know the problems at hand in Gamarra, but they have to invest with other entrepreneurs to solve these.”*

*“The three different groups in Gamarra (production, commercial and service), need to seat themselves at one table. The problem is that they don’t want this. And the municipality only listens to the commercial sector (owners of galleries).”*

*“At the moment the opportunities are limited, because there are conflicting interests. The group with the greatest power/influence are the owners of galleries, not the entrepreneurs. The associations; industrial association(s) and business associations have to be improved/strengthened.”*

*“True collective action is needed, even when they are not located near each other, to enter other (exterior) markets with similar clothes (products). Export like a commercial centre.”*

*“In this global economy, the firms should work together with firms in a higher dimension. An alliance with firms which aren’t necessarily located in Gamarra.”*

*“If there is no coordination there is not opportunity for the agglomeration. Coordination is reached through two important factors. First, trust among the actors, which translates itself in working with a shared objective. Second, public - private interaction formulated in policies. This results in two types of capital: social capital and institutional capital, which should improve the economic capital to have a shared vision that is absent in Gamarra at the moment.”*

*“The public-private co-operation is really important, but doesn’t exist. What the public sector offers is not what the private sector needs.”*

#### **6.4.4 Gamarra as a commercial centre and promotion**

Considering the lack of space and the high rents in Gamarra, the district might be better off as a commercial centre to what it is developing at the moment. It therefore might be favourable to focus solely on the development of the commercial sector:

*“The market of Gamarra will probably never be comparable to other markets/commercial centers like Metro. Gamarra is a good commercial centre, but can only be competitive in the products that are sold there.”*

*“Gamarra is a textile conglomeration, but different actors are active here. It is not solely textile industry, but also the commercial and service sectors are important. It is important to group these different sectors together.”*

*“A formula is to be an excellent commercial centre, which is a global reference point and could be excellent on local as well as global/international level. Therefore, Gamarra would have to change radically; safety, infrastructure, etc. To achieve this Gamarra has to be destroyed and rebuild.”*

Promotion can be constituted by various aspects. Not only the promotion of products and the district in general are considered to be important, but also the promotion of successful businesses in the district:

*“The promotion of the brand of Gamarra using two products: ‘polos’ (shirts) and ‘algodon’ (cotton).”*

*“Promote successful examples. Generate trust through pilot projects, to show ‘how it is done’ to business owners (entrepreneurs) in Gamarra.”*

#### **6.4.5 Young entrepreneurs and innovation**

Another opportunity, which is acknowledged by various respondents, is the key role of young entrepreneurs. These young entrepreneurs have up-to-date knowledge concerning the design world and have new (innovative) ideas. The problem is that many young entrepreneurs are not attracted to Gamarra, due to the lack of safety, infrastructure, cleanliness and the high rents, among others.

At the other hand, Gamarra could be an example for these young people to start a business there, by using successful business experiences of other firms:

*“Make use of the competencies of young entrepreneurs, e.g. coming from Universities and technical institutes who want to innovate.”*

*“There are new people with better knowledge, which could be the new leaders.”*

*“The new generation has the sense that Gamarra has to change. They want to see other things and exports. The former generation has invested much and asks themselves the question; ‘Why should I change when I am doing well?’. The vision and viewpoint of the new generation are totally different from the vision of the old generation (they are really closed).”*

*“For young people/entrepreneurs (e.g. active in de designing branch) Gamarra could be an interesting place to start a business. However, in Gamarra there is a lack of safety (personal and physical)and coordination with the municipality.”*

For firms to be able to export to external markets and to compete on the national market, they need to innovate to improve the quality of their products:

*“Gamarra needs cable services, so that the entrepreneurs can watch design programs from all over the world, to see other things. At the moment they are copying products of others.”*

*“It is of key importance that the quality of the products are improved, because there is much competition on the internal market. The preferences of the people who come to Gamarra have to be observed.”*

*“A possibility would be a system for certification of quality. The standards have to be higher, because quality is a big problem in Gamarra.”*

Related to innovation, many respondents find that a CITE (Technological innovation centre) should be created in Gamarra. The problem is that such centers are not present in Gamarra. Another, previously introduced, institute that offers business services is SENATI.

SENATI does offer services to entrepreneurs in Gamarra, such as training and business practices:

*“Bad quality of products in Gamarra. Therefore, a technical innovation centre is really useful.”*

*“In Peru there exist technical innovation centers in different sectors, but not in the case of textile. However, Gamarra is the biggest textile cluster/agglomeration in Latin America.”\*

*“An industrial centre or a Cite (Technological Innovation Centre), where one can find all productive/technical developments (in all parts of the production chain).”*

*“Create a CITE; an investigation centre of technical innovation.”*

*“The quality of the market needs to improve; more quality and variety of products. Institutions like SENATI are important, because they offer technical assistance and practices for the firms in Gamarra.”*

*“In the vision that Gamarra will be a space for the textile industry in Peru, it could change into a meeting place for the access to knowledge, trade and services. With the presence of SENATI and an innovation centre to educate or train people. But this is difficult at the moment, because the commercial and production sector do not share interests.”*

Finally, experts gave a number of additional recommendations, which cannot be related to the categories introduced previously:

*“The crisis could be an opportunity for co-operation in Gamarra. When there are problems, the firms/actors need to unite.”*

*“Focus on Gamarra’s development on the national market facilitated by state programs, to develop trust and co-operation.”*

*“Attention to the business culture, developed for the entrepreneurs. A more developed/modern management.”*

*“Increased awareness in organization, management and business management by employers. Governmental entities and training should have greater presence, consultancy carried out in situ, more information on international market, greater emphasis on working with Technical Standards.”*

*“It is quite necessary to create awareness for employers to re-believe in government agencies and the training and advice must be tailored to the needs of business and not impose on the basis of what training is being provided.”*

## 7 Conclusion

In this chapter conclusions are drawn concerning the performance of firms, the four key variables, agglomeration characteristics and governance form in Gamarra. Furthermore, the recommendations are briefly considered.

First, previous research (see chapter 3) indicated that firms in Gamarra performed (in 1993) and still perform (in 2008) better than firms that are not located in the area. Firms in Gamarra, which are generally smaller than firms elsewhere, outperform other firms in terms of monthly average sales per worker, outsourcing and manage to sell more on the national market. However, most firms in Gamarra do not manage to sell their products on international market and problems concerning co-operation and innovation exist. Especially when the high rents in Gamarra are included; the question is whether it is still favourable for firms to locate in Gamarra?

As indicated before, relations of trust have various characteristics such as: shared norms and values, strong bonds and good communication and the prevalence of informal over formal agreements by verbal agreement rather than contracts. These characteristics are absent in Gamarra and therefore suggest that there is little presence of trust in relations between the firms and other actors in Gamarra. Not surprisingly, former studies (Visser et al. 2009; among others) found that inter-firm co-operation is limited in Gamarra, which can be explained by the lack of trust.

Especially relations between the public- and private actors yield frictions. Development- and training programs for the SMEs or entrepreneurs specifically don't seem to work and lack focus. Development programs are mainly concerned with the SMEs in general, and not the SMEs which are situated in Gamarra. Thus, no specific programs for the development of Gamarra exist; nevertheless it is one of the largest agglomerations of SMEs. Strikingly, for other agglomerations specific programs do exist. Because the vision exists that these agglomeration (e.g. in the rural areas of Peru) require more assistance, such as the agricultural agglomerations in central and southern Peru. Therefore, entrepreneurs in Gamarra may have lost confidence in public organizations, which makes co-operation in the future even more difficult.

The results indicate that formal agreements are more important than informal agreements in relations between firms in Gamarra. This is in line with the hypothesis, which predicts the absence of trust and therefore the use of agreements. However, if informal agreements are used in inter-firm relations this is not necessarily an indication for the presence of trust. Various other factors may explain the use of informal agreements in Gamarra. The small size of firms, the absence of contracts and the Peruvian business culture are factors that could explain the prevalence of informal agreements between firms in Gamarra. It therefore needs to be concluded that the proposition concerning the nature of agreements did not work or function as it should have.

Thus, the results indicate an absence of trust in relations between firms. However, exceptions were found; in Gamarra, certain (small) communities are characterized by the presence of trust among its members. Usually, these groups of producers share their origin and started producing in other parts of the country (e.g. Puno, Ayacucho and Cuzco). These members share norms, values, religion and culture, and therefore have

stronger bonds than with other entrepreneurs in the area. In these groups there is trust and co-operation, and therefore relations are better coordinated.

By combining the characteristics of leader firms and the results of this study, the presence of leader firms can be determined. The characteristics of leader firms were determined in a previous chapter (for further details; see chapter 2).

The results indicate that leader firms are indeed present in Gamarra, and it is therefore interesting to discuss what these leaders do for the development of Gamarra. One known leader which has a production history in Gamarra is *Topitop*. Although, this firm was brought up much in the course of the investigation, the question is whether it can really be seen as a leader. Is Topitop really interested and investing in the development of other firms in Gamarra? Topitop makes use of subcontracting, using other small firms in its value chain. Is this because this makes it easier and/or cheaper for Topitop to produce and therefore results in the exploitation of other SMEs? Or, is it also because it is interested and investing in the development of these suppliers? The investigation mainly found that Topitop is more concerned with fulfilling their own demand by subcontracting other firms, rather than being concerned with the development of these firms. This doesn't mean that these other firms are not benefiting from their relations with Topitop. However, one cannot speak of the formation of sophisticated business networks, characterized by joint action, knowledge exchange and collective efficiency.

Other possible leaders are the owners of galleries in Gamarra. It needs to be said that these are not producing firms and therefore cannot be characterized as leader firms in the producing sector. However, it may still be interesting to review the role they play in Gamarra. These owners of galleries have a leading role because they are active in the most important branch in the agglomeration at the moment: real estate. Due to the skyrocketing prices for renting space in Gamarra these actors have much power and might abuse this power. Moreover, because these owners are active in the commercial sector, the productive sector of Gamarra doesn't really benefit from their presence. The focus is on the creation or construction of more galleries and not on the development of garment firms and/or products.

Chapter 2 also focused on the importance and characteristics of intermediaries. This study found four interesting results concerning the intermediaries in Gamarra.

First, entrepreneurs or firms in Gamarra often do not see the necessity to invest in the programs which are offered. They rather concentrate on the production and sales of their products. Thus, the preferences of intermediaries and firms are two worlds apart.

Second, intermediaries are indicated to be active in Gamarra but this doesn't mean that they are physically present in Gamarra. This is one of the problems indicated by the experts. It is not surprising though, because the rents in Gamarra are exceptionally high. Therefore, it is impossible for an intermediary to locate in Gamarra. Moreover, because it might need extra space for education and training facilities for entrepreneurs. Third, programs and initiatives offered by intermediaries are too short of duration. After a period of time projects cease to exist or intermediaries leave the focus area to concentrate on other areas. The impact of these programs is therefore too little and firms or entrepreneurs are not able to profit. This could also be a reason why they do not want to invest in the co-operation with intermediaries.

Fourth, there is little consensus among the different intermediaries especially not among the business associations, which all seem to know what is best for the development of Gamarra. But in the end, none of them can fulfill the needs of the firms.

Previous chapters (e.g. section 2.2.2) indicated various variables that contribute to finding solutions to CAPs. The propositions that were used to test the presence of collective action regimes must be interpreted with caution, though (see sections 5.4 and 6.3.4).

The absence of greatly influencing leader firms and intermediaries (as indicated in the previous section) is a first signal for why CAPs in Gamarra stay unresolved. However, the results indicate that leader firms are considered to be the most contributing factor when it comes to solving CAPs. This gives some indication concerning the quality of collective action regimes in Gamarra: not that promising. Thus, concerning the quality of the six factors discussed in the previous chapters, leader firms are determined as having the highest presence and best quality.

Despite this first indication, the results show us that most experts find that solutions to certain CAPs have been found in the past, which relate to collective action and may catalyze new collective initiatives. However, experts generally also find that the quality of coordination is pessimistic in Gamarra.

On the one hand, experts find that solutions to CAPs have been found. But on the other hand, they also find that the quality of coordination is unsatisfactory in Gamarra. As illustrated in figure 2.4, various factors and actors may contribute to the solution to CAPs in different regimes. One variable which firms can use in solving CAPs is voice. Voice is the individual argument of firms which they can use to create awareness among actors in the district to induce change. Public organizations, for example, are less vulnerable for changing circumstances than private entities such as firms. Public organizations do not have to make profit to survive and are not that sensitive to changing market circumstances. Therefore, the importance of voice to stimulate collective action needs to be stressed. However, the results indicated that voice is determined as having a low quality and weakly contributing to solving CAPs. Perhaps firms are too small or influential to have a significant impact on the public sector. Especially real estate owners have a voice in Gamarra, due to their share in the area. Therefore, public organizations are more stimulated to react to the voice of this group than to the many different voices which exist in the groups of traders or producers. This leads to the second problem that exists concerning the voice of firms: it is fractured. There is only little consensus among entrepreneurs concerning the development of Gamarra.

The community argument is another factor which could be important in solving CAPs. A community argument is characterized by stable, multiplex and direct relations; and the members in the group share beliefs and preferences. Therefore, a (shared) community argument makes that the members of a group are better able to work together and therefore collectively solve problems. Though the results indicate that the community argument is of higher quality and contributes more in solving CAPs than voice, it is still unsatisfactory. There is no homogeneity among actors and a joint vision is absent. As with voice this can be explained by the many different visions and interests that exist among actors in Gamarra. There can't be a (shared) community argument if the different groups (production, trade and service) are unable to work together.

To conclude, some remarks are made concerning the type of concentration process at hand in the Gamarra district. The data obtained in the research cannot be used to define Gamarra as being a cluster or not. More detailed information concerning proximity, dimensions of relations, scale of interactions, knowledge exchange (e.g. information transparency), collective efficiency and learning is needed to be able to categorize the district Gamarra. However, it might be useful to discuss the observations that are made during the research.

Obviously, the Gamarra district is a spatial concentration of businesses, mostly of related economic activity. However, over the years the district developed in an agglomeration of mainly commercial activities. In recent history, many producers migrated out the district, starting their business in other areas outside Gamarra. Thus, the economic activities become more one-sided. Activities in Gamarra are mainly horizontal, meaning that firms in Gamarra are active in the same part of the production chain. Vertical relations are also present in the district, as identified; subcontracting is even more important now than it was 15 years ago (for further details; see chapter 3). However, one of the main problems of firms in Gamarra is the lack of diagonal relations with third parties such as knowledge institutes, NGO's, Universities and public organizations. Relations that are of significant importance for the development of firms in the agglomeration.

Knowledge exchange and innovation are mostly basic between and within firms in Gamarra. Product innovations in Gamarra equals copying products of other firms or copying products found in magazines of retail centers. The lack of internet and cable services makes it even harder for entrepreneurs to innovate. Moreover, there is an absence of modern machinery and knowledge to improve the production process. Thus, on the one hand, there is a high level of information transparency because the information "lies on the street". On the other hand, innovation and sophisticated knowledge exchange between firms is scarce. Especially collective innovations are seldom. If so, these only occur in the small communities of producers.

Both collective efficiency and collective learning are mostly absent in Gamarra. Simply because joint action is rare.

Next to these general characteristics which were discussed in the theoretical framework, this research also characterizes a cluster on the bases of the different variables: trust, leader firms, intermediaries and solutions to CAPs. Thus, when these variables are present in a concentration of firms it can be more characterized as being a cluster, because a cluster is characterized by co-operative relations based on trust, coordinating leader firms, intervening intermediaries and collective action leading to solutions to CAPs. And therefore, performance in a cluster is higher than in an agglomeration, which is solely characterized by static advantages for firms. As previously discussed, these four factors are mostly absent in the district of Gamarra. The level of trust is low, some leader firms are present but not significantly contributing, intermediaries are not physically present in the district and their initiatives lack affiliation & sustainability and CAPs are rarely solved true joint action.

Therefore, it is safe to say that the Gamarra district cannot be defined as a cluster characterized by e.g. mutual dependence, extensive knowledge exchange and sophisticated business networks (as it was characterized by many authors). In the light of this research, the Gamarra district can solely be characterized as an agglomeration of garment firms mainly active in the commercial sector. It has to be said though that this

research is mainly concerned with the coordination between actors in the district, which makes it difficult to answer the question whether or not Gamarra is a cluster.

The lack of the variables in Gamarra also implies that the governance form in Gamarra is likely to be market-based (see figure 4.1), as was expected. Little leader firms exist, therefore making it unlikely that the governance form is either hierarchic or quasi-hierarchic. A network-based governance form is even more unlikely, because the formation of sophisticated networks between firms and other actors is rare. Only in a few cases, such as in small communities, can one speak of the formation of networks.

For the development of Gamarra, various opportunities exist (see section 6.4). Perhaps most important is the role of the municipality. The municipality should invest more in basic needs (such as; safety, cleanliness, infrastructure and transparency) and should also assist in the association of various actors in the district. One can argue that the municipality has a certain responsibility for the development and survival of firms in the Gamarra district, because a great amount of money, products and labour is generated in the district, and therefore in the municipality. First, the municipality needs to invest in the basic needs, creating a favourable working environment to attract entrepreneurs to the agglomeration. After basic services are provided, the municipality also needs to focus on the development of firms, by investing in innovation, education and internationalization. Association in general is important to reach a high quality of coordination. Not only the municipality, but also the different sectors (trade, produce and service) should invest more in joint action. Key actors, each representing their own sector or area, should unite to find solutions to CAPs, because only when united is it possible to solve these complex problems. Thus, local and national governmental organizations, entrepreneurs, NGOs, business organizations and other representing organizations need to seat themselves together at one table, to collectively find solutions.

The commercial sector (traders and owners of real estate) is the most important in Gamarra at the moment, and therefore producers are leaving to other areas in Lima. An opportunity may be to focus on the commercial sector, because its development is most promising at the moment. Especially when accounting for the upsurge of other commercial markets and department stores, such as; Ripley and Saga Falabella. To keep competing with these markets, Gamarra may need to focus on the sector which is already growing in importance; the commercial sector.

Another opportunity for Gamarra to develop is the export of its products (internationalization). However, to internationalize the firms in Gamarra need to improve the quality of their products by investing in innovation, for example. It is important that firms invest more in product and process innovation instead of copying the products of others. For innovation and learning to take place it is of key importance that firms work together; innovating is simply easier when it is done collectively.

Young entrepreneurs may also be important for the development of Gamarra; they may introduce new products or production methods and may therefore play an important role in innovation and internationalization. Therefore, the district needs to be attractive for these entrepreneurs to start their business in Gamarra. The municipality has a key role to create such an environment. Moreover, young people need to be prepared to work in Gamarra. SENATI is an organization which focuses on the education of these young

entrepreneurs, preparing them for running their own business. Still, more attention is needed for the training of these people.

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## Appendix 1: List of interviewed experts

No.	Organization	Experts position within the organization
1	Red Cites (Ministry of Production)	Director
2	RBSuarez SRL (textile producer)	expert market & sales
3	Ex-PEMTEC (association of small- and medium size industrial firms)	Independent consultant,
4	SWISScontact (development organization)	Coordinator & Engineer
5	Red Cites (Ministry of Production)	Project coordinator
6	SASE (consultancy)	General manager
7	Intinellas (textile producer)	General managers
8	FONCODES (development organization)	Supervisor of the COMPRA MYPERú program
9	Guizado gallery (business association and conglomeration of shops), ex-president SME Committee of ADEX	Director
10	Ministry of Production	specialist; management of projects
11	PROEXPANSION (consultancy)	General manager
12	Recursos SAC (consultancy)	General manager
13	FINCyt (intermediary)	Director of special projects
14	IPAE (business institution)	Executive Director
15	LLADE (development organization)	President
16	SNV, ex-CNC (council of competitiveness)	Assessor of public policies
17	COPEME (NGO)	Director
18	INPET (development Institution)	President
19	Perú Compite (national council of competitiveness)	Executive director & assessor
20	Ex-Director of the national direction of SMEs	Independent consultant (Academic expert)
21	AMPIC (business association)	President
22	Catholic University	Academic Director of Economy
23	SENATI (R&D, training centre)	Director SME Centre (Centro Pymes)
24	USAID, Mype Competitiva (consultancy, development organization)	(sub) Executive Director
25	Unpades (NGO)	General Manager
26	SWISScontact (development organization)	Representative HUB Perú
27		Consultant
28	Municipality <i>la Victoria</i>	Director economic development

## Appendix 2: Questionnaire

Quality of coordination and collective action in the Gamarra agglomeration.

The focus of this study is identify the quality of coordination of collective action (co-operation) between firms and other actors in the Gamarra agglomeration.

**A survey among key experts in the textile industry, who have experience interacting with garment firms in Gamarra.**

University Utrecht, the Netherlands

**June and July, 2009**

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### Expert

1. Name \_\_\_\_\_
2. Organization \_\_\_\_\_
3. Profession \_\_\_\_\_
4. Years of experience in the textile industry / in Gamarra \_\_\_\_\_
5. Have you participated in collective interaction with other firms in Gamarra? YES/NO

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Have you observed the formulation of policies for the development of (firms in) Gamarra? YES/NO

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**Performance**

6. Please indicate the importance of various themes for improving the performance of firms in Gamarra.

Theme	Importance for improving the performance of firms				
Innovation	Not important	Minor importance	Moderately important	Important	Very important
Education and training (human captial)	Not important	Minor importance	Moderately important	Important	Very important
Internationalization (geografic difersification, greater market penetration)	Not important	Minor importance	Moderately important	Important	Very important
Market and promotion (creation of a collective image)	Not important	Minor importance	Moderately important	Important	Very important
Infrastructure (outside the firm: physically or ICT)	Not important	Minor importance	Moderately important	Important	Very important

Infrastructure; assisting the physical and digital flows between firms. ICT = Information and Communication Techonologies

If you wish to elaborate on your response, please use the section below:

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**Co-operation**

It is not always possible to solve a problem by yourself, sometimes co-operation is needed to obtain economies of scale and learning effects (together we know more than individually, and/or understand more, better and quicker)

**Please indicate the importance of various themes for the co-operation between firms and/or other actors in Gamarra.**

Theme	Importance for the co-operation between firms and/or other actors				
Innovation	Not important	Minor importance	Moderately important	Important	Very important
Education and training (human captial)	Not important	Minor importance	Moderately important	Important	Very important
Internationalization (geografic difersification, greater market penetration)	Not important	Minor importance	Moderately important	Important	Very important
Market and promotion (creation of a collective image)	Not important	Minor importance	Moderately important	Important	Very important
Infrastructure (outside the firm: physically or ICT)	Not important	Minor importance	Moderately important	Important	Very important

If you wish to elaborate on your response, please use the section below:

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**Coordination**

This section assesses various variables, which are known to improve the quality of coordination: trust, leaders firms and intermediaries.

Coordination	The coordination of “economic life” in general can be based on various mechanisms, such as; price negotiations (on the market), the accumulation of trust (in business networks) or the distribution of power (in value chains, for example), etc.
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**I Trust**

Trust:	Trust can have a general basis, on the norms and values of the society, or be based on the specific characteristics of the interacting actors, such as; relations of friendship and kinship or family relations withing a community.
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7. Please indicate whether you agree with the following propositions:

Proposition	Opinion
In Gamarra, informal agreements have more significance than formal contracts in inter-firm relations.	Agree / Disagree / No opinion
In Gamarra, partners (e.g. firms, associations and governmental organizations) have shared norms and values.	Agree / Disagree / No opinion
In Gamarra, relations between partners are characterized by strong bonds and good communication.	Agree / Disagree / No opinion
In Gamarra there is a culture of trust, which facilitates the coordination of joint actions in the area.	Agree / Disagree / No opinion

If you wish to elaborate on your response, please use the section below:

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**II Leader firms**

Leader firms:	Leader firms are firms that have the possibilty and willingness to make positive investments for the other firms in their vicinity, due to their size, position on the market, knowledge and entrepreneurial experience. These firms can play an important role in the coordination, through their initiatives.
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8. Do leader firm exist in Gamarra?

YES/NO

If YES; could you name these/this lead(er) firm(s): .....

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9. Please indicate whether you agree with the following propositions:

In Gamarra, leader firms exist that invest in projects with positive effects for other firms.	Agree / Disagree / No opinion
In Gamarra, the presence of leader firms facilitates the coordination of collective action.	Agree / Disagree / No opinion

If you wish to elaborate on your response, please use the section below:

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### III Intermediaries

Intermediaries:	<b>Private and/or public persons or firms, which stimulate the sharing of knowledge, assist in transactions and/or control the “stealing” of knowledge. Intermediaries could be NGO’s (Non Governmental Organizations), consultancy firms, investigation offices, etc.</b>
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10. Do intermediaries exist in Gamarra?

YES/NO

If YES; ¿ could you name these/this intermediaries/intermediary? .....

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11. Please indicate whether you agree with the following proposition:

In Gamarra, the presence of intermediaries in the garment industry facilitates the coordination of collective action.	Agree / Disagree / No opinion
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If you wish to elaborate on your response, please use the section below:

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In the following section, I would like to consider collective action problems (CAPs).

**IV CAPs**

CAPs: Behavioral risks may exist in the area of co-operation, such as; the “stealing” of knowledge obtained by co-operating, or the renegotiation of the terms of co-operation (how much do I contribute and how much do you contribute?). CAPs may exist because the coordination doesn’t function and the co-operation between actors is weak. This may result from a lack of leader firms or trust, for example.

12. Please indicate which CAPs are relevant in the agglomeration Gamarra, in respect to the various themes indicated below.

Theme	CAPs	
	Relevant	No relevant
Innovation	Relevant	No relevant
Education, training	Relevant	No relevant
Internationalization	Relevant	No relevant
Market and promotion	Relevant	No relevant
Infrastructure	Relevant	No relevant

If you wish to elaborate why certain CAPs are relevant, please do so in the following section:.....

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13. Please indicate whether you agree with the following propositions:

In Gamarra, certain solutions to collective action problems have been found, which relate to certain joint actions in the past and today catalyze or can catalyze new collective initiatives.	Agree / Disagree / No opinion
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In Gamarra, the quality of coordination of collective action is pessimistic; improving the quality of coordination will improve the economic development of Gamarra.	Agree / Disagree / No opinion
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If you wish to elaborate on your response, please use the section below:

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**Solving CAPs**

Various actors exist that can contribute to solve CAPs. For example, leader firms and intermediaries, but there are also two other concepts (factors) that may play a positive role in solving CAPs; the *community argument* and the use of voice.

Community argument	The willingness of the community to develop efficient initiatives. The investments of the community may result in better solutions to CAPs.
The use of voice	Firms which use their voice and take initiative in an individual manner. Firms may use their voice to influence public organizations (public-private), which may improve the efficiency of these organizations.

14. Please indicate the actual contribution of the factors below to solve CAPs in Gamarra

(F)actor	Solving CAPs				
	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much
The presence of leader firms	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much
The efficiency of business organizations	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much
The role of public organizations	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much
The presence of intermediaries	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much
The legitimacy of the "community argument"	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much
The use of "voice" by individual firms	Not contributing	Little contributing	Contributing	Contributing enough	Contributing much

If you wish to elaborate on your response, please use the section below:

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15. Finally, please indicate the actual quality of the actors and factors in Gamarra mentioned below to solve CAPs, with respect to each of the relevant themes. The qualification ranges from 1 (very bad) to 10 (excellent).

	Innovation	Marketing and promotion	Infrastructure	Training and education	Internationalization
The presence of leader firms					
The efficiency of business organizations					
The role of public organizations					
The presence of intermediaries					
The legitimacy of the "community argument"					
The use of "voice" by individual firms					

If you wish to elaborate on your response, please use the section below:.....

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**Development of the Gamarra district**

16. Please indicate the relative importance of six explanatory factors for the superior development of firms in the Gamarra agglomeration, **5 years ago**. Please rank the factors using 1 (the most important factor) to 6 (the least important factor).

Explanatory factor	Ranking in relative importance
The structure of the textile industry in Gamarra ( e.g. the number and size of firms, ownership, vertical integration, foreign investment, and the availability and quality of production factors)	
The quality of coordination	
Local and/or national policies	
International policies	
Developments in the national market	
Developments in the international market	

17. Please indicate the relative importance of six explanatory factors for the superior development of firms in the Gamarra agglomeration, **nowadays**. Please rank the factors using 1 (the most important factor) to 6 (the least important factor).

Explanatory factor	Ranking in relative importance
The structure of the textile industry in Gamarra ( e.g. the number and size of firms, ownership, vertical integration, foreign investment, and the availability and quality of production factors)	
The quality of coordination	
Local and/or national policies	
International policies	
Developments in the national market	
Developments in the international market	

If you wish to elaborate on the changes between the two question above (a change in ranking between 5 years ago and nowadays), please do so in the following section:

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**Other questions**

What opportunities are there for improving the development of the Gamarra agglomeration?

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What opportunities are there for improving the quality of coordination, and co-operation in general, in the Gamarra agglomerations?

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Are there other experts who have much experience and/or knowledge concerning the themes discussed in this interview?

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**THANK YOU FOR YOUR COOPERATION!**

If you want to keep informed about the results of this study, please mark the box

**Frank Keukens, Student Economic Geography, Utrecht University**