

NETWORKS AND COMPETITIVE ADVANTAGE:

SPONTANEOUS VS. INDUCED CLUSTERS



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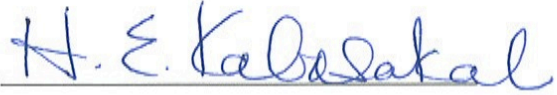
Networks and Competitive Advantage: Spontaneous vs. Induced Clusters

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ABSTRACT

Networks and Competitive Advantage: Spontaneous vs. Induced Clusters

The cluster concept, described as the geographical concentration of interconnected organizations, has received much attention in the field of strategic management. Porter's (1998) diamond model suggests that clusters positively impact competitive advantage, since the proximity of businesses, customers, and suppliers urges all the firms to innovate and upgrade, so that productivity, innovation, and new business formation is increased. This qualitative study aims to analyze the network structures among firms in spontaneous vs. induced clusters based on the case studies of two types of hosiery clusters in different geographical locations in Istanbul (where most of the producers are located), one located in Ikitelli Industrial Zone (induced cluster) and the other located in Yesildirek district (spontaneous cluster). In-depth, semi-structured, face-to-face interviews were held with hosiery firms in the two cluster types in order to get a holistic understanding of the present network structures as well as to explain how these network ties are potential sources of competitive advantage. The results supported the main hypothesis, as networks were found to be more intense in the spontaneous cluster relative to the induced cluster. Although located in the same cluster, the firms in the induced cluster did not develop close relationships with the other firms, therefore inter-firm relations can be described as weakly mutually dependent, or arm's length in terms of Uzzi (1997). On the other hand, the existence of dense inter-firm networks, high level of cooperation, mutual-trust, knowledge-sharing, embedded and long-term relations among the firms in the Yesildirek spontaneous cluster has formed a solid base of support and trust.

ÖZET

Ağlar ve Rekabet Avantajı: Doğal veya İndüklenen Kümeler

Bağlantılı organizasyonların coğrafi yoğunluğu olarak tanımlanan küme kavramı, stratejik yönetim alanında çok dikkat çekmektedir. Porter'ın (1998) elmas modeline göre, işletmelerin, müşterilerin ve tedarikçilerin yakınlığı, tüm firmaları yenilenme ve gelişmeye yönelttiğinden, verimlilik, inovasyon ve yeni iş oluşumunun artmakta ve dolayısıyla kümelenmeler rekabet avantajını olumlu olarak etkilemektedir. Bu niteliksel çalışma, İstanbul'daki farklı coğrafi bölgelerdeki (üreticilerin çoğunun bulunduğu) iki tip çorap kümelenmesinin vaka incelemelerine dayanılarak spontan veya indükte kümelenmelerdeki bağlantı yapılarını analiz etmeyi amaçlamaktadır; kümelenmelerin biri İkitelli Sanayi Bölgesi'nde (indüklenen küme) ve diğeri Yeşildirek bölgesinde (doğal küme) bulunmaktadır. Mevcut ağ yapısını bütüncül bir şekilde araştırmak ve bu ağ bağlarının nasıl potansiyel rekabetçi avantaj kaynakları olduklarını açıklamak için iki küme türünde çorap firmaları ile derinlemesine, yarı yapılandırılmış, yüz yüze görüşmeler yapılmıştır. Sonuçlar ana hipotezi desteklemiştir, zira ağlar, kendiliğinden oluşmuş doğal kümelenmelerde, indüklenen kümelenmere göre daha yoğun bulunmuştur. Aynı kümelenmede bulunmalarına rağmen, teşvikle oluşmuş kümelenmelerdeki firmaların diğer firmalarla yakın ilişki kuramamış oldukları görülmüştür, dolayısıyla firmalar arası ilişkiler, Uzzi (1997)'nin tanımlamasına göre zayıf karşılıklı bağımlı veya kol-boyu mesafeli olarak tanımlanabilir. Öte yandan, Yeşildirek spontan kümelenmesindeki firmalar arasındaki yoğun bağlantılı ağların yüksek düzeyde işbirliği, karşılıklı güven, bilgi paylaşımı, derin ve uzun vadeli ilişkiler ile sağlam bir destek ve güven ortamı oluştuğu görülmüştür.

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CHAPTER 1

INTRODUCTION

Harvard Business School management strategy professor Michael Porter's renowned work, *The Competitive Advantage of Nations*, has held the interest of the academic and business community ever since the publishing in 1990. There have been various reviews conducted on the acclaimed book that include criticism, applause, and a mixture of both (ex. Bellak and Weiss, 1993; Davies and Ellis, 2000; Grant, 1991). In 1993, Management International Review published a special edition delving into Porter's research and just by looking at the numerous studies analyzing the Diamond Framework that has been introduced in the book, it is apparent that Porter contributed to the debate of competitive advantage, as he brought clusters under scrutiny with his theory. Although there were plentiful proposals for alterations and revisions for the framework (ex. Dunning, 1993; Moon; Rugman and Verbeke, 1998), the Diamond Model asserts that the national and even the regional geographical location of an organization has an important part in gaining competitive advantage in the global arena. The four interrelated elements theorized by Porter as the deciding factors of national comparative economic advantage are demand conditions; factor conditions; firm strategy, structure and rivalry; and lastly, related and supporting industries; plus government and chance. By considering all these factors, an organization will be better able to develop a strategic plan for creating competitive advantage in the international markets.

A cluster, described as a geographic concentration of interconnected organizations, supplying industries, and related companies, is the demonstration of the Diamond Model as the proximity of businesses, customers, and supplier firms

pushes all the determinants of the framework to innovate and improve. These days, scholars from many fields, including economics and strategy, as well as business organizations and policy makers analyze clusters in order to explore the function of clusters on local economic development and national prosperity (ex. Enright, 1993; Rosenfeld, 1997). Porter (1998) suggests that clusters' relation to competition is threefold; through increased productivity of the firms in the cluster, through encouraging driving innovation in the industry, and finally by stimulating new businesses to the sector. Based on this theory, clusters are seen as the main sources of competitiveness for organizations as well as nations, thus urging institutions and policy makers to follow new strategies. Therefore, cluster development has been put on the agenda of many government programs in various regions around the globe as clusters maintain a business environment in which learning, innovation, and productivity can be reinforced.

On the other hand, as the significance of relations for business performance began to be recognized, the applicability of the network concept by social science fields increased in the past years (ex. Easton and Araujo, 1986; Nohria and Eccles, 1992). The 'network' term indicates many nodes and the relations that connect these nodes (Fombrun, 1982). A business network is explained as multiple linked business relations and the exchange transaction happens between business enterprises that are considered collective agents (Emerson, 1981). Networks appear as a result of interactive connections, making information transfer possible and thus supporting the cooperation of strategically situated parties. Social capital theory posits that an organization's networks have a major part in helping firm performance (Leenders and Gabbay, 1999). Network literature debates that a firm's existent network aids its forming of new links by referrals of existing relations and the visibility that the

present network allows (Gulati, 1999). It has also been claimed that businesses should seek strategies that are directed towards the creation of networks with outside resource ventures in order for performance benefits (Lee et al., 2001). Accordingly, a business that develops ties through investments in relationship-forming and knowledge-sharing benefits more from its network ties than a firm that does not invest in its linkages. Network ties in the local geographic region of an organization are an important social resource that supports the flow of knowledge and creates trust-based relations. Relevantly, Maskell and Malmberg (1999) describe shared trust as a local capability. There is related research that shows that the efficiency of regional networks is based on social capital, which includes concepts such as trust, cooperation and reciprocity (Fukuyama, 1995). Literature suggests that localized networks are important and clusters can be interpreted as the mixture of formal business and informal social networks within the proximate business environment.

Examples of well-known clusters include the semiconductors cluster in Silicon Valley (Saxenian, 1990, 1991, 1994), the Swiss watch industry (Enright, 1995, 2000, 2003), Chilean wine cluster (Giuliani and Bell, 2004, 2005; Visser, 2004), and the Hollywood film industry (De Propriis and Hypponen, 2008; Scott, 2005). There is a limited but growing literature on clusters in Turkey. For example, there are several studies on the Antalya tourism region cluster (Arsezen-Otamis and Yuzbasioglu, 2013; Erkuş-Öztürk, 2009; Yuzbasioglu, Otamis and Demir, 2011), whereas some other studies have focused on the cultural tourism clusters in parts of Istanbul, such as the Sultanahmet District, otherwise known as the ‘Old Town’ (Nasir, Bulu, and Eraslan, 2006) and the Aksaray Province (Karadal, Yildirim and Saygin, 2014). There have also been studies on the textile clusters in Turkey, for instance, Oz has mainly focused on the towel/bathrobe cluster in Denizli (Öz, 2003, 2004), but still

there are other studies on clusters in the Turkish textile sector (Bulu, Ozben and Eraslan, 2004; Kuştepe, Gülcan and Akgüngör, 2010; Saka-Helmhout and Karabulut, 2006). Yet, in another research, Albayrak, Erkut have focused on the automotive industry in Istanbul and the Eastern Marmara Region in their 2010 study. Öz (2004) mentions entrepreneurial outlook as a shared feature of competitive clusters. For example, since the entrepreneurs of Denizli specifically concentrated on the production of towels and bathrobes, the emergence of the home textiles cluster in Denizli, Turkey cannot be explained simply by accidental occurrences. The entrepreneurs utilized the advantageous business infrastructure of the region, which encompass an extended past of textile manufacturing, experienced employees and the availability of qualified main inputs, as well as the potential of related and supporting industries. Although the local economic environment was probably suitable for cluster development, the formation was triggered by Denizli's entrepreneurs, who accessed and employed the resources later on began exporting their goods to foreign countries. Thus, it could be said that the local entrepreneurs exploited the available resources in Denizli, and still today, are in pursuit of new opportunities by investing R&D in order to upgrade their products.

It is clear from the above summarized discussions that studies on clusters have been flourishing, yet as Öz puts it (2004), there is still "gold to mine" in the analysis of clusters based on management theories. This thesis aims to contribute to several discussion areas regarding geographical clusters. First, analysis of clusters in developing countries are, for instance, rarer in relative terms, though exceptions remain, for example there have been some studies on clusters in India (Das and Das, 2011; Park, 2004; Zaheer, Lamin and Subramani, 2009). This research will be conducted in Turkey, a developing country. Second, although some studies suggest

that networks in the cluster environment might have an influence on competitive advantage (ex. Lechner and Leyronas, 2012; Novelli, Schmitz and Spencer, 2006; Tallman, et al., 2004), the exact nature of this relationship is not clear, as some studies have concentrated in knowledge networks, some on innovation networks, and some studies focus on regional networks vs. extra-regional networks. “Well functioning clusters, like Silicon Valley, move beyond hierarchical networks to establish a ‘fluidity’ in connection to becoming more effective and productive - adding a relatively new and undefined facet to the cluster theory - on who needs to be in the network, for what relationships, and why - an interesting area to explore further” (Kuah, 2002, p.225). This research will aim to contribute to this underexplored area by examining network linkages, in other words, to investigate how ‘fluid’ network ties are and how this relates to competitive advantage for developing strategic goals for clusters.

Finally, this study aims to contribute to the research on emergence of clusters, as the main research objective is to investigate the differences in spontaneous vs. induced clusters. Literature shows that the genesis of clusters might be related to a broad range of determinants including specialized labor and inputs, domestic demand conditions, availability of related and supporting industries, information spillovers, and the ease of comparison as well as decreased time and search costs for customers (Marshall, 1949). Later in time, other factors such as social capital, tacit knowledge, and mutual-trust have also begun to be seen among the reasons why some industries tend to be geographically agglomerated at a certain area. It seems that in some cases a factor of accidental events occur in the original emergence of a specific geographical clustering of companies (Rauch, 1993). Porter (1998) argues that clusters may arise through historical occurrences, via geographical

circumstances (for firms already located in a particular region), as a result of innovations and sometimes accidentally. Clusters can form as a consequence of a single successful start-up and cause the development of spin-offs (de Vet and Scott, 1992) or due to supplier firms moving near a successful big company. Although the course of cluster emergence is difficult to investigate after a cluster is formed, it is relatively possible to explore the progressive route of the clusters. Sometimes, the geographical cluster of firms at a certain region occurs due to the proximity to an important big customer, a large market or a major enterprise (Jacobs and de Man, 1996), for instance the entertainment cluster formed in Disney World near Orlando, Florida (Archer, 1997) and financial services cluster emerged close to the stock exchanges in Wall Street, New York City (Porter, 1998). In these cases, the clustering of enterprises initially materialized in order to benefit from a vertical buyer-supplier structure with a customer or market, but since more suppliers to the market surfaced or moved into the cluster after some time, the clusters took on a horizontal structure, with firms from supplying industries competing to produce for the market (Jacobs and de Man, 1996). Relatedly, although there are studies trying to understand the role of institutions and the government in cluster formation, such as the case of Silicon Valley (Hospers, Desrochers, and Sautet, 2009; Huffman and Quigley, 2002) or techno parks (Cho, 2009; Yim, et al., 2011), whether or not and in which ways, induced (i.e. established by initiatives) vs. spontaneous (i.e. natural formations) clusters might differ remains to be a curious issue. In a similar vein, although there are some reviews that analyze networks in the cluster environment (ex. Bell, 2005; Giuliani, 2006), none has looked into the differences among induced vs. spontaneous clusters. It should be noted here that, in the case of regional clustering in Europe, the emergence of the industrial districts do not result from an

explicitly planned strategy (Humphrey and Schmitz, 1996).

Specifically, we want to explore the network relations in induced vs. spontaneously emerged clusters and how this difference in the origin of the cluster types might relate to competitive advantage factors. The aim of this thesis is to add to this growing literature on clusters by exploring the inter-firm relations and network interactions between firms located in induced clusters vs. spontaneous clusters within the context of Turkey, a middle-income developing country. Specifically, it is argued that a cluster's being natural vs. induced will moderate the relation between network elements and competitive advantage, such that firms in spontaneous clusters are better able to form and utilize network linkages and ties than firms in induced clusters, implying that competitive advantage factors are stronger in spontaneous clusters. By exploring how firms in induced clusters vs. firms in spontaneous firms utilize their network resources in the cluster environment, therefore, the thesis tries to make a few additions to the literature. First, it aims to supplement the debate on the function of networks on competitive advantage in the cluster context. Second, the study also aims to shed additional light to the literature on the specifics of network elements in clusters. Finally, the findings of the research are of special relevance because of the context where the study is conducted; that is, in the context of a middle income emerging economy, Turkey.

The case studies chosen to conduct this challenging task are from the highly competitive hosiery sector, a sub segment of the textile and clothing industry. The textiles sector is among the pillar industries of Turkish economy and foreign trade. According to ITC Trademap statistics, Turkish clothing industry is the 7th largest supplier in the world and the 3rd largest supplier of the European Union. The Turkish hosiery industry ranks the 2nd in the world hosiery production, following

China, and is the 3rd biggest exporter in the world market, with 7.7 % share, coming after China and Italy. The research setting was chosen because Istanbul is the largest city in Turkey and the center of fashion and textiles manufacturing, so the majority of textile and clothing producers are located around the region, thus, this research has been conducted in clusters in the Istanbul districts. Network patterns among hosiery firms have been analyzed in two different geographical locations, namely Ikitelli Industrial Zone Corapcilar Sitesi, more recently set up for hosiery manufacturing, for the induced cluster and the older Yesildirek area in the historic peninsula for the spontaneous cluster. The network relations involve both business-to-business relations and relationships with social and economic institutions as Johannisson et al. suggest (2002). Face-to-face in-depth interviews were held with a sufficient number of firms in each type cluster in order to get a holistic understanding of the network structures as well as to explain how these network ties are potential sources of competitive advantage.

Research results reveal that the hosiery firms in the induced cluster Ikitelli Industrial Zone Corapcilar Sitesi have certain drawbacks in terms of cluster networks, such as low degree of linkages among firms and limited success in the formation of a collaborative business environment, which all indicate the weakness in the level of institutionalization. The inter-firm relationships in the induced hosiery cluster are rather similar to Uzzi's (1997) description of market or arm's-length relations. One important finding of the interviews is that although they are present in the same cluster and geographically near each other, the firms in the induced cluster did not necessarily form relations with the other firms located in the Ikitelli Zone hosiery cluster. Therefore, for the firms in the induced cluster, it can be said that the benefits of being in a cluster are not fully utilized in order to gain competitive

advantage in the international arena. Linkages among firms in the Ikitelli zone induced cluster demonstrate shortcomings in inter-dependence, where network links can be interpreted as limited market relations, and firms can be described as relatively independent. Results of the qualitative analysis show that being in the same location, Corapcilar Sitesi at Ikitelli Organized Industrial Zone, is not enough to connect with other firms and develop network ties for the hosiery firms in the induced cluster. Although in the induced cluster, these types of relationships are not apparent, in contrast, the firms in the spontaneous cluster point out the significance of linkages, embeddedness in the network, especially the essentiality of strong network ties for obtainment of specific information.

In contrast to the Ikitelli induced hosiery cluster, the results that have been obtained from the firms in the spontaneous cluster reveal high level of cooperation, mutual-trust, knowledge-sharing, embedded and long-term relations among the firms in Yesildirek natural hosiery cluster. It was identified that the dense inter-firm networks among enterprises in the Yesildirek spontaneous cluster has created an environment of support and trust, which has also contributed to knowledge spill-overs and the creation of a collective business environment. Thus, an atmosphere intense with these types of relationships inspires motivation and creates synergy in the cluster, causing all firms to benefit from the cooperative relations and positively affect competitive advantage. Another significant result of this research is that as a result of the time and effort put in a relationship, a strong tie develops and these kinds of by dense linkages are more meaningful for firms in the Yesildirek area as more important information can only be acquired through strong ties. To the contrary, weak ties can be described as being the relationship of simply neighboring firms and these kinds of acquaintance ties are not perceived as essential as

information obtained through these ties are mostly basic. This representation resembles the distinction Granovetter (1973) makes among strong vs. weak ties, where an embedded relation in which more interaction and trust is implied is expressed as being a strong link by the hosiery firms. These strong types of ties are considered more worthwhile, especially for firms that follow differentiation strategy and as such, firms choose to invest more in these valuable strong ties over weak ties as through these ties specific and targeted information can be reached.

This thesis is structured as follows. The first chapter consists of a comprehensive review of literature that includes a theoretical background of clusters, the viewpoints of several schools of thought about clusters as well as analysis of Porter's diamond framework and Porterian clusters. The final section of this first chapter discusses and clarifies the cluster definition adopted in this thesis and goes on to explain spontaneous versus induced clusters. The second chapter is a relevant literature survey on entrepreneurship and entrepreneurial orientation as the emergence of the initial hosiery cluster in Yesildirek seems to have come about partly thanks to entrepreneurial spirit, which should, in turn, be aided by social capital and entrepreneurial expertise and support systems (Feldman, 2001). On the other hand, the third chapter is spared for the review and discussion of the literature on networks, linking it to the literature on clusters, including entrepreneurial networks in clusters. Upcoming chapters of the thesis present the theoretical model that frames the study, the research methodology, and the generated hypotheses. Later comes the results, first the diamond analysis of the Istanbul hosiery sector, followed by network analysis of the hosiery clusters. The last chapter will be the analysis of the findings and, finally, the conclusions.

CHAPTER 2

CLUSTERS

2.1 Introduction

A cluster is a geographic concentration of interconnected organizations, supplying industries, and related companies, such as the Wall Street finance cluster, Silicon institutions Valley hi-tech cluster, Hollywood movie cluster, California wine cluster, Gaziantep carpet cluster, and Denizli textile cluster, etc. Clustering occurs when firms from the same industries come together in close local proximity, for example financial centers in cities such as London and New York (Wall Street), have been present for centuries. The industrial cluster paradigm has been the material of intensive research and strategic analysis after Michael Porter's (1990) influential study concerning the competitive advantage of nations (Boja, 2011). Although it has been years since Porter made the concept of regional clusters popular, geographic agglomerations of same industry firms and supporting or related organizations, they are still an integral feature for both strategic business management and governmental policy tool in many economic regions around the globe.

In Porter's study, the cluster phenomenon is analyzed by the diamond framework in which businesses simultaneously compete as well as cooperate in order to acquire competitiveness. Clusters bring about economic advantages as they contribute to value creation in local businesses, in sectors ranging from manufacturing to high-tech, both in urban and rural areas. As clusters stimulate a business environment where learning, innovation, and productivity can flourish, cluster development has been placed on the agenda of numerous governmental programs in many regions of the world. According to Porter (2000), clusters boost

the productivity of firms in the national and global competition. Cluster approach and clustering strategies have the potential to reinforce regional economic development, help with new business generation, and contribute to nations' revenue creation.

These advantages of clusters are the primary reason for the special attention that has been paid to the clustering approach by the academic circles as well as the governmental organizations and it appears that its importance will continue to grow in the forthcoming times of intense global competitive pressures.

As evident from the above discussion, it is appropriate to further inquire into the cluster model and to consider its pertinence to competitive advantage. Therefore, this thesis will explore the cluster paradigm -comparing spontaneous clusters vs. induced clusters- which is relevant to synergistic and competitiveness. Even though, there has been significant progress in cluster research, it is still a complex concept and this dissertation begins by conducting a review of the cluster literature. The objective of this research is to explore the importance and advantages of clustering and also the complexity of the cluster mechanisms by examining the nature of networks among local firms in the various types clusters and investigating the differences of these linkages in spontaneous vs. induced clusters. This study aims to find out whether firms in spontaneous clusters utilize different network dimensions and whether the degree of compared to firms in induced clusters in order to be relatively more agile and adept at developing relationships to promote competitive advantage.

2.2 Theoretical background on clusters

Although the cluster concept are analyzed by a range of academics from many different fields, they are especially important for the discipline of management and are getting increasing consideration from scholars, analysts, and business practitioners from this domain. Research looking into clusters has grown based on the first studies that were based on firms' agglomerations. Originally, the research began with some empirical observations (Malmberg, Solvell and Zander, 1996; Marshall, 1890; Krugman, 1991). Over time, it was recognized that organizations operating in certain sectors tend to be denser in the same geographical regions and that most of the economic or industrial territories around the world are concentrated in a few areas. It was also observed that the businesses' locations in economic agglomeration persevered and, furthermore, it was noticed that these firms had longer lifetimes compared to isolated firms. Moreover, it was also clear that in the cluster environment, the process of innovation was more evident.

2.2.1 The Marshallian industrial district

Although the cluster concept has been getting increasing attention recently, its origin is actually based on Cambridge University economist Alfred Marshall (1890) book, the *Principles of Economics*. Marshall used the name 'industrial districts' to represent the advantages caused by businesses gathering in a particular local geographical area (Boja, 2011). He analyzed the geographic concentration of specific industries in certain places and his argument of industrial districts was mainly built on external economies of localized specialization (Ravix, 2014). These specialized industrial districts could be identified by three sources of external economies, "The ready availability of skilled labor, the growth of supporting ancillary trades, and the development of a local inter-firm division of labor in different stages and branches of

production, all underpinned and held together by what was referred to as the ‘local industrial atmosphere,’ by which Marshall meant shared knowledge about ‘how to do things,’ common business practices, tacit knowledge, and a supportive social and institutional environment” (Asheim, Cooke and Martin, 2006, pp. 5-6).

Marshall’s description of a cluster is not the same as the notion of urban agglomerations, where firms from different industries are gathered in the region, though it is also a notion based on the presence of firms producing comparable goods being geographically clustered, in the concept of clustering, firms operate in similar or interconnected fields (Malmberg, Solvell and Zander, 1996). According to Marshall, the industrial district presents an alternative form to the large integrated firm organizational structure with internal economies of scale (Malmberg, Solvell and Zander, 1996). The main features of Marshall’s industrial district are a high degree of vertical and horizontal specialization as well as the dependency on the market model for transactions (Zaratiegui, 2002). The kinds of firms located in industrial districts are usually smaller in size and concentrate on a single function in the production process and most often, as these firms are highly competitive, there is little product differentiation. It can be said that the major advantage of the Marshallian industrial districts is due to the geographical proximity of firms, which results in the availability of skilled labor and facilitation of tacit information exchange via informal channels.

However, it should be mentioned that Marshall’s work also pointed at the risks associated with the phenomenon of clustering. “A district which is dependent chiefly on one industry is liable to extreme depression, in case of a falling-off in the demand for its produce, or of a failure in the supply of the raw material which it uses” (Öz, 2004, p. 2). Despite the risks, benefits of clusters due to the

competitiveness are also noted in the study, as “the mysteries of the trade become no mysteries; but are as it were in the air” (Marshall, 1927, p. 225). Thus, the sources of advantage form a system that is hard to imitate elsewhere, which increases the odds of the sustainability of the advantage (Öz, 2004). It is important to note that Marshall’s theory does not consider the social relations among cluster firms and this fact was mentioned by scholars such as Sforzi (2002) and Becattini (2001) on their research of clusters consisting of small workshops in a rural region of Italy. Although their work was built on Marshall, Becattini (1990) and his colleagues had a different way of defining industrial districts. Their study showed that the clusters’ success in the Emilia-Romagna region was widely explained by the social relations among the cluster members, thus they defined the industrial district as a socio-cultural model aside from being an economic structure. According to Asheim et al., “This socio-economic reconceptualization of Marshall’s industrial district has strengthened the non-economic, socio-territorial dimension of the concept and has provided valuable insights into the role of trust and co-operation as mechanisms of risk reduction and economic (relational) governance amongst local firms, and how a supportive form of social capital aids the formation and success of industrial districts” (Asheim, Cooke, and Martin, 2006, p.6).

2.2.2 New economic geography

Paul Krugman’s trade theory presumes that trade is mainly shaped by economies of scale, therefore, geographical regions with the highest production levels are more profitable and in turn attract even more business. Economies of scale, based on Marshall’s external economies, have an effect on all kinds of firms and results in enterprises specializing and concentrating geographically. Relatedly, Krugman

(1991) explains geographical concentration through the law of increasing returns that arises from firm-level specialization economies and scale. Krugman (1998) discusses that increasing returns is the main reason that causes producers to come together in a specific location, as otherwise, markets would have to be supplied from various local plants. Therefore, according to the theory, instead of being diversified, production concentrates in a few regions that become more populated as well as reaching higher levels of income. “Once a region develops a comparative advantage against other regions, favorable conditions lead to uneven, self-reinforcing patterns of economic activity, market dominance and specialization” (Saric, 2012, p. 32). Consequently, in order to reduce transport costs, manufacturers tend to locate closer to demand and supply markets.

Applied to the international trade model with respect to the increasing returns in Krugman’s theory, the ‘home market effect’ presents agglomeration “As the outcome of the interaction of increasing returns, trade costs, and factor price differences” (Behrens and Robert-Nicoud, 2009). According to Krugman (1998, p.3), the ‘centripetal forces’ that lead to geographical concentration are the same three Marshallian dimensions of external economies as listed in the above section; namely, market size impact, large labor pools, and the factor of basic external economies. “These geographical promotion forces are involved in a ‘tug of war’ with the ‘centrifugal forces’ that oppose localizations, such as immobility in some factors of production, land rents, and ‘pure external diseconomies’” (Becattini, Bellandi and De Propris, 2009, p. 99). If not, as Krugman argues, “We would all live in one big city” (Krugman, 1998, p. 8). Although Krugman (1998) explains with mathematics why production and labor clustering occurs in some regions, similar to Marshall overlooking the social interaction element in clusters, Krugman overlooks the

technological spillovers among firms, since he describes them as being “invisible; they leave no paper trail by which they may be measured and tracked” (Krugman, 1998, p. 53). It has to be mentioned that “Krugman’s and other international economics scholars’ work on geography have been criticized by economic geographers who question whether Krugman's study contains anything that is original or valuable for the field of economic geography” (Martin and Sunley, 1996, p. 285).

2.2.3 Porterian clusters, diamond framework, and competitive advantage

Harvard Professor Michael Porter’s 1990 study, *The Competitive Advantage of Nations*, is based on the study of ten nations, using the data collected from over a hundred case studies. Porter conducted a four-year study to investigate why a nation gains competitive advantage in particular industries, where he identified attributes that caused domestic firms to build and sustain competitive advantage in the global arena. He proposed (1990) the ‘Diamond Framework,’ a mutually-reinforcing system of four factors that determine national advantage; namely, factor conditions, demand conditions, related and supporting industries, and lastly, firm strategy, structure and rivalry. Porter also introduced two outside variables, government and chance, that influence the diamond system. Shown in Figure 1 is a depiction of the diamond model.

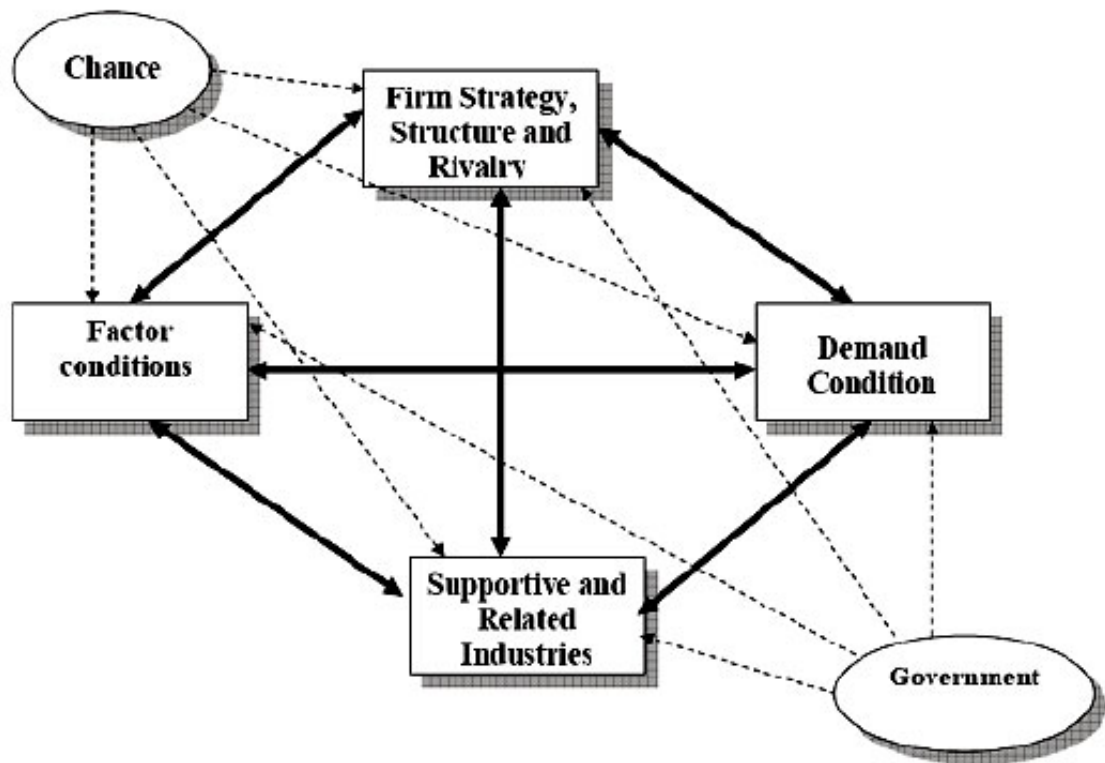


Fig. 1 The Diamond Framework
Source: Porter

‘Factor conditions’ consist of natural resources, such as geographical location, weather, labor, qualified employees, capital, infrastructure, and various research institutes, etc. Factor conditions are “The nation’s position in factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry” (Porter, 2008, p.182). According to Porter, factor endowments of a country are five types; namely human capital, physical resources, knowledge sources, capital assets, and infrastructure (1990). Porter proposes that the factor conditions have two categories: basic and advanced factors as well as generalized and specialized factors (1990). The basic factors are natural resources, weather, location, unqualified and semi-skilled workers, and financial assets. The advanced factors include “modern digital data communications infrastructure, highly educated personnel such as

graduate engineers and computer scientists in sophisticated disciplines” (Porter, 1990, p. 77). The other typology is classified according to ‘specificity.’ The generalized factors include “The highway system, a supply of debt capital, or a pool of well-motivated employees with college educations” and specialized factors involve resources such as “Narrowly skilled personnel, infrastructure with specific properties, knowledge basis in particular fields, and other factors with relevance to a limited range or even to just a single industry” (Porter, 1990, p.78).

Factor conditions that are most important for competitive advantage are advanced and specialized factors. Since basic factors are either inherited or require low investment, they do not represent a unique resource for the country, whereas advanced factors demand higher investments and are harder to achieve and sustain (Porter, 1990). Therefore, natural resources and cheap labor are not distinctive sources for competitive advantage as they cannot be maintained indefinitely, however, in contrast, it is the advanced factors that create substantial value for the nation compared to other nations. In similar vein, as opposed to generalized factors, specialized factors are more meaningful for gaining competitive advantage as they are not readily available globally. As Porter (2008) claims, “The stock of factors that a nation enjoys at a particular time is less important than the rate and efficiency with which it creates, upgrades, and deploys them in particular industries” (p.188). Porter also argues that some shortcomings in the more basic factors can convert to advantages if they cause a firm to innovate and upgrade, but only if they can “send companies proper signals about circumstances that will spread to other nations, thereby equipping them to innovate in advance of foreign rivals” (Porter, 2008, p.189). However, it should be noted that in order for disadvantages to turn into advantages, favorable conditions in the other diamond elements should also exist. In

conclusion, it should be mentioned that according to Porter's diamond theory, private as well as public investment is essential as factor creation demands constant investments in supporting mechanisms like educational and research institutes.

'Demand conditions' are "The nature of home-market demand for the industry's product or service" (Porter, 2008, p.182). According to Porter, domestic demand is much more important for competitive advantage than foreign demand because of proximity. He emphasizes three attributes of the demand conditions that are significant for the competitive advantage of a nation; namely, characteristics of customer needs, growth structure of the domestic demand, and internationalization of home demand (1990). The nature of home market is essential because, "A nation's companies gain competitive advantage if domestic buyers are the world's most sophisticated and demanding buyers for the product or service" (Porter, 2008, p. 191). Demanding consumers have a vital part in urging an industry towards upgrading, as, in order to serve sophisticated buyer needs, firms are continuously under pressure for innovation, which creates a source of advantage. In addition, the structure of demand is also critical as industries that have global advantage get more benefit from home demand conditions compared to industries that are less indispensable for other nations. Thus, the ratio and type of domestic demand increase can boost competitive advantage in the industry as, "Demand conditions help build competitive advantage when a particular industry segment is larger or more visible in the domestic market than in foreign markets" (Porter, 2008, p.190). The industries that have greater demand in homeland causes its enterprises to focus on and invest in products and services offered to these sectors. Because the home market can be a comfort zone when making investment decisions, the extent of domestic demand can be especially relevant for some types of industries, such as sectors requiring

expensive R&D investments or businesses operating under high degrees of uncertainty.

Finally, anticipatory buyer needs, in which the requirements of national consumers reflect the demands in other nations, have an important part in achieving competitive advantage, as “Local buyers can help a nation’s companies gain advantage if their needs anticipate or even shape those of other nations- if their needs provide ongoing ‘early-warning indicators’ of global market trends” (Porter, 2008, p.191). If early native demand can anticipate the needs of the consumers in global markets, it pressures businesses to act faster and get established sooner in a certain industry. The share of independent customers in the homeland and pace of domestic demand may also represent significant factors as these elements also encourage innovation. Finally, sooner reaction of national demand pushes companies to improve and upgrade processes as well as products, while there is remaining potential in international markets. On the globalization of domestic demand, Porter explains that if home demand turns into global, it may move a country’s goods and services outside of national borders through international buyers and as domestic requests get transferred into global buyers, internal demand affects foreign needs, and ends up creating a source of advantage for the homeland (1990).

‘Related and supporting industries’ inquiry into a sector for competitive advantage analysis is also vital. These consist of “The presence or absence in the nation of supplier industries and other related industries that are internationally competitive” (Porter, 2008, p.182). If industries are using similar technology, inputs, distribution mediums, customers, competencies, or produce complementary goods, this sector becomes more competitively advantageous (Öz, 1999). Internationally competitive suppliers are sources of competitive advantage for consecutive sectors

the because of the following reasons. Firstly, local related and supporting industries that have close business relationships generate, “Short-lines of communication, quick and constant flow of information, and an ongoing exchange of ideas and innovations” (Porter, 2008, p. 192). Second, “They deliver the most cost-effective inputs in an efficient, early, rapid, and sometimes preferential way” (Porter, 2008, p. 192). Additionally, as information gets transferred among firms, new business opportunities appear and knowledge transfer begins. Consequently, firms from related competitive industries bring on new businesses that, in turn, prompt the existing firms to upgrade and advance their sources of competitive advantage, thus, it can be said that new comers bring a fresh vision to competing. Moreover, pull-through outcomes may happen when global success in a field intensifies demand for complementary goods and services (Öz, 1999). Competitive advantage in supplier industries causes potential advantages for domestic companies as goods that are essential for innovation and globalization is produced regionally. Rivalry in related sectors is also critical because related industries include firms that produce or split processes within the value chain and also firms that supply complementary commodities. As the sectors reach new opportunities via knowledge spin-offs and technological development, advancement in one industry can sequentially cause an increase in the demand of the products of complementary sectors.

‘Firm strategy, structure, and rivalry’ is the last determinant of the diamond model, which includes “The conditions in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry” (Porter, 2008, p.182). According to Porter, there is no universal management system that is suitable for all countries. There are different goal setting patterns, various systems and organizational forms among societies and the suitability of these arrangements

with the industrial requirements plays a critical function in attaining competitive advantage in that sector of the nation. For example, in Germany, hierarchical structures and more technical practices dominate the business environment, so, industries which fit these standards have advanced, such as automotive and machinery. Whereas, in Italy, SMEs which are mainly family owned and managed constitute most of the working environment, hence resulting in Italy's success in business sectors appropriate for such small and medium sized establishments, for example furniture and footwear. Furthermore, manager-employee relation styles, as well as cultural priorities are also factors that are different among various nations and international competitiveness may be influenced by managerial approaches, cultural expectations, ability to be adaptable, etc. Additionally, capital markets and compensation practices do not have the same characteristics in all nations and organizational structures are not always same among countries. Organizational goals, which are affected by ownership structure, motivation of management and capital holders, as well as personal goals, which are reflected in reward systems, social values, and attitudes to wealth, are considered important factors for nations' competitiveness in a specific field. The potential of competition is also crucial for competitive advantage, as rivals encourage firms to continuously innovate and improve for further advancement. What is more, it should be mentioned that an industry of a country can only succeed when objectives and encouragements of organizations, employers and workers are in sync with the sources of competitive advantage as, according to Porter (2008), "Competitiveness in a specific industry results from convergence of the management practices and organizational modes favored in the country and the sources of competitive advantage in the industry" (p. 194).

Porter asserts that domestic rivalry is a very important determinant of the Diamond Framework since it is a powerful boost for all other elements. Domestic rivalry acts as an intensifier for the integration of the other factors, while geographic concentration “Elevates and magnifies the interaction of the four separate influences” (Porter, 2008, p. 198). As geographic concentration reinforces all these effects, afterwards, this factor was renamed by Porter as ‘context for firm strategy and rivalry.’ Since Porter considers the diamond to be a self-intensifying model, domestic competition, particularly, has the potential to turn the diamond into a functional mechanism. Results of his study showed that nations are more likely lead in industries where strong local rivals are present, hence the relationship between intense domestic competition and the emergence and sustainability of competitive advantage in a specific business field was found to be strong. It is interesting that these findings are contradictory with traditional economies of scale perspectives. As Porter (1990) asserts, domestic rivalry generates a powerful pressure to innovate, pushes firms to lower costs as well as improve product and service quality. Domestic rivalry also urges companies to export to get bigger as well as forcing firms to improve on their sources of competitive advantage since basic resources are readily available to all enterprises for that particular industry of that country.

‘Government’ and ‘chance’ are the last two factors indirectly affect the impact of the above listed four major elements. In the diamond model, the government is not identified as a singular factor, instead is considered as an element affecting the determinants and is perceived to be able to affect national advantage positively or negatively. According to Öz (1999), the government plays the part of stimulant for national advantage rather than acting as a factor on its own. Governments should create an environment favorable for cluster establishment and

development, yet its role is rather more indirect than direct. Porter suggests that governments' "Proper role is as a catalyst and challenger; it is to encourage—or even push—companies to raise their aspirations and move to higher levels of competitive performance, even though this process may be inherently unpleasant and difficult" (Porter, 2008, p. 200). Porter perceives the nation as a stage that helps the global performance of its businesses, which indeed implies that governments do have a role in competitive advantage. Porter (1990) posits that, "Government is a pusher and challenger" (p. 681), therefore, it should be noted that Porter suggests that for countries whose economies are still developing, governments need to play an active part. Furthermore, enterprises themselves can gain competitive advantage, by recognizing industry transformations, through upgrading needs as well as by influencing government policy (Porter, 1990, p. 619). Aside from the government factor, the other external variable in Porter's framework, the 'chance' factor is defined to explain the factors that are beyond the control of firms. 'Chance' is used to describe events such as inventions, oil shocks, and wars (Oz, 1999) and these events may affect the diamond system by giving birth to situations that can alter the structure of the industry, such as foreign political circumstances or considerable changes in international market demand, etc. These chance developments may result in changes that can cause an alteration in industry structure and can sometimes provide opportunities for competitive advantage.

2.2.4 Role of clusters for competitive advantage

Clusters, defined as critical masses of competitive advantage in particular industries, are an integral component of all regional and national economies, especially the economically developed nations like the US. Since the cluster context represents a

business environment in which learning, innovation and productivity can prosper, cluster approach, and seeing clusters as the motivators of a firm's as well as a nation's competitiveness, prompted organizations and policy makers to adopt this paradigm into their strategies. As Öz (2004) says, there's a 'gold mine' in applying management concepts to the analysis of locations' competitiveness. Porter (1990) theorized that clusters may stimulate competition through three directions. First, clusters enhance the productivity of firms around the area. Besides this, clusters guide the route and rate of innovation. Lastly, they trigger the establishment of new firms in the cluster. As outlined above, the diamond framework outlines four broad attributes that help the structuring of the regional environment in order to achieve competitiveness for the firms of the nation. Factor conditions, demand conditions, related and supporting industries, firm strategy, structure and rivalry, as well as the two additional factors, chance and government, are the determinants that affect the system and in the model, all factors are present by themselves, but also act as a collective mechanism. From this point of view, favorable demand conditions alone do not necessarily cause competitive advantage, unless there is sufficient local rivalry to cause firms to respond to competition. Competitive advantage is achievable based on a single or a few factors of the diamond, but is often not sustainable in the long run due to counter reactions from rivals. Therefore, nations should aim to achieve and maintain advantage in all the components of the diamond model in order to achieve sustainable competitiveness in the long run.

Despite the claims that, in an immensely linked world, due to great advancements in information technology, geographic location is no longer a significant element of competitiveness, just the opposite is true according to Porter's diamond model. "Paradoxically, the enduring competitive advantages in a global

economy lie increasingly in local things — knowledge, relationships, and motivation that distant rivals cannot match,” Porter (1998, p.77) has noted. Porter made a very important contribution to the concept of geographical clusters, as contrary to the general tendency to see location as diminishing in importance, with his diamond theory, he highlighted location as the source of national competitiveness. For example, the success of Silicon Valley and other high-performing clusters underlines what Porter describes as the ‘paradox of location.’ He argues that geographic proximity will continue to be important for competitive advantage in the upcoming era of global economies. He explains that, in a time when globalization has decreased the importance of comparative advantages in resources such as labor, capital, innovation, and productivity, instead, the main sources of competitive advantage for firms and even nations is the local environment. As Porter (1998) proposes, “The sophistication and productivity with which companies compete in a location is strongly influenced by the quality of the business environment” (p. 226). Therefore, in contrast to the resource-based theory of the firm, the cluster thinking proposes that competitive advantage factors do not lie inside the firm, but instead, due to externalities and linkages, lies outside the firm, in the locale. A cluster consists of numerous organizations and is portrayed by the many types of interdependencies and networks that gain value due to their local characteristics as proximity causes convenient access to suppliers and labor resources, lower transaction fees, knowledge spin-offs, and expand the potential for innovation by transfer of organizational and technological information (Asheim and Isaksen, 2000; Competitiveness Group, 2002).

As aforementioned, clusters influence competition in three directions; by enhancing the productivity of the firms within the cluster, through urging innovation in the sector, and by attracting new enterprises to the industry (Porter, 1998). Although individual firm performance is also important, the cluster model demonstrates that the proximate organizational environment plays a critical role in the operation of firms as well. No model is an explanation for all economic and/or strategic phenomena as always new problems and different needs arise, still, Porter's theory brought a fresh perspective on competitive advantage and was able to propose a useful framework for both policy makers and business practitioners. While the clustering phenomenon has been explored in a wide range of studies, gaps still exist in location and cluster theory even though Porter, Swann and other scholars came forward with relevant explanations on how clusters contribute to the value chain and stimulate innovation. For instance, the potential of positive feedback in order to amplify clustering has been suggested in numerous studies, and the model by Swann (1998) has taken the concept further and shows how clustering, via new firms entering the business and existent firms becoming bigger, maintains a feedback system and urges further growth. In strategic management, very limited attention has been given to location or geography has only been researched in terms of cultural and various other factors in the business environment of nations and this minimal focus has not put enough emphasis to the region. Accordingly, this current thesis suggests that relations and inter-firm linkages are essential for dealing with the production processes and competitiveness; hence the cluster environment has been selected for the context of this study.

2.3 Defining clusters

In management literature, a major lack of consensus in cluster research is that of definition, although there have been many tries to define geographical concentrations of localized activity. Martin and Sunley (2003) oppose the ambiguous characterization of the concept of clusters, although numerous studies, as well as research have been carried out to examine the concept. In spite of the arguments criticizing the vagueness of the approach, there are generally accepted facts about clusters. Asheim, Cooke, and Martin (2006) comment, “Industrial districts of the so-called Third Italy were one of the earliest prominent types to attract discussion” (Asheim, 2000; Becattini, 1989, 1990; Brusco, 1989, 1990; Paniccia, 2002). The analysis by Krugman and Porter built on to the subject of economic exchanges and flow of goods in Marshall’s study as their more recent cluster studies highlighted and added new dimensions to the observations of Marshall (Porter, 1990; Krugman, 1991). In these works, the favorable results of innovative process occurring within the cluster via information spin-offs, know-how, experience and the positive effects of clustering tendency, such as finance, time, and transport cost savings, a bigger pool of skilled labor, easier and faster diffusion of knowledge have been observed (Marshall, 1890; Krugman, 1991). Despite the numerous theoretical or empirical studies on the cluster approach, there has not yet been a broadly accepted model, however, the advantages of clustering is widely known, thus is the emphasis on the cluster paradigm (Baptista and Swann, 1998; Carlino, 2001; Maskell, 2001; Morosini, 2004; Krugman, 1991; Porter, 1990; Porter, 1998; Sölvell et al., 2003).

According to Krugman (1991), clusters are not stable systems, but instead, they are active mechanisms supporting knowledge creation, increasing returns as well as innovation. However, the most influential terminology was Porter’s concept

of industrial or business clusters, and according to Porter (1998), “Clusters are critical masses in one place of unusual economic success in particular fields.” Porter defines clusters as “Geographic concentration of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions (ex. universities, government agencies, and trade associations) in particular fields that compete but also cooperate” (Porter, 1998, p. 197). Porter (2000), focusing on the form of relations that happen between cluster firms, redefines the cluster concept in a later study, as a “Geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities.”

Morosini (2004) analyzes the cluster concept from a more social perspective, defining it as a “Socioeconomic entity characterized by a social community of people and a population of economic agents localized in close proximity in a specific geographic region.” There have been other attempts to explain and define clustering and the focus of those studies has been varied. For instance, Scott, highlights the rise of new industrial spaces (1988), whereas other scholars concentrate on regional production systems (Crouch et al., 2001). Some highlight localized agglomeration of high-technological work, using terms such as regional high-tech milieu (Keeble and Wilkinson, 2000), local innovation systems (Asheim and Gertler, 2005; Cooke, 1998, 2001), and even learning areas (Asheim, 1996, 2001; Florida, 1995; Morgan, 2007, p.2). On the other hand, Rosenfeld has described clusters as, “A concentration of firms that are able to produce synergy because of their geographical proximity and interdependence” (Rosenfeld, 1997, p. 4), while Roelandt and den Hertog portrayed clusters as “networks of producers of strongly interdependent firms linked to each other in a value-adding production chain” (Roelandt and den Hertog, 1999, p. 9).

Swann explained clusters as, “A large group of firms in related industries at a particular location” (Swann, 1998, p. 1) and has also pinpointed two main cluster strengths as “The agglomeration sizes of similar-firms and related-firms in the region of a particular industry” (Asheim, 1996, 2001; Florida, 1995; Morgan, 2007, p.2) Further adding on to this description, Feser claimed that “Economic clusters are not just related and supporting industries, but rather related and supporting institutions that are more competitive by virtue of their relationships” (Feser, 1998, p. 26). Based on the above analysis, in sum, the cluster concept can be identified by:

- Local economic action at various locational levels
- Restricted to a certain business field,
- Encompasses firms in similar or related sectors,
- Involves rival firms, which is a supporting factor for the overall progress of the cluster,
- Contains vertical value chains as well as horizontal linkages, such as supporting firms
- Proximity of businesses develops trust-based relationships,
- Indicates a collective platform that helps innovativeness and urges knowledge transfer through associated institutions.

The main advantages of clustering can be determined as:

- High domestic demand causes a gathering of firms forms a larger market and, in turn, the opportunity to reach a wider consumer base,
- Lower transport costs and expansive supply chains,
- Easier and wider access to resources,

- Specialization of products and services,
- Intensely competitive working environment that acts as a catalyst,
- Many opportunities for entrepreneurial firms looking to establish themselves in the prosperous business atmosphere,
- Higher levels of cooperation among cluster firms as proximity facilitates communication and increases interaction,
- Gathering of firms in similar fields of production results in a specialized labor pool
- Information spin-offs, in other words, MAR spillover effect

According to the Marshall-Arrow-Romer (MAR) spillover theory, geographical closeness of firms from similar sectors influences knowledge exchanges, which results in growth as well as innovativeness (Carlino, 2001). It is argued that as firms are located more near to each other, this causes higher rates of MAR spillover (Carlino, 2001). The exchange of information between employees from different firms in a certain business field results in flow of knowledge about original products and production systems, causing innovations to happen (Carlino, 2001). MAR spillover benefits firms by causing higher rate of innovativeness as well as more production (Baptista and Swann, 1998). These advantages are generated by the presence of a dynamic environment in knowledge sources due to the proximity to other enterprises and face-to-face relations with other firms in the same industry, which decreases risk as well as shortening the time of the innovative processes via informal information exchanges among agents (Malmberg, Solvell, and Zander, 1996).

To sum up, based on all this work on clusters, three main elements seems to be essential. First, a cluster involves associated and/or linked organizations which are connected vertically and/or horizontally by the way of similar and/or complementary goods and services. Second, a cluster is a geographically close group of interconnected businesses which pressure the establishment of new business and contribute to value creation via the aid of relationships. Finally, proximity does not necessarily entail clustering benefits when network ties are not present. Thus, based on Porter's model, the definition of clusters adopted in this thesis is that, a cluster is a geographical concentration of firms and related industries where associated benefits of clustering are present, for instance higher productivity or superior performance resulting from this gathering of firms within a region.

2.4 Spontaneous clusters vs. induced clusters: Kapalicarsi vs. Kuyumcukent

The Grand Bazaar (Kapalicarsi), located in the center of Istanbul, may be described as one of the earliest and biggest jewelry agglomerations in the world. As a center of organizing for craft and commerce pursuits for longer than five centuries, the Grand Bazaar has been the subject of many studies. Jewelry clustering has been discussed in related literature with various cases from a range of geographies, such as Los Angeles Jewelry Cluster, Bangkok Jewelry Cluster, Italian Jewelry Clusters (Arezzo, Valenza, and Vicenza), etc. As the history of the Grand Bazaar shows as well as some other reviews on clusters, it is evident that historical circumstances have an important role in the birth of clusters (Öz, 2004). During the Ottoman Empire Era, the jewelry artistry was begun and developed by Armenian craftsmen inside and around the Grand Bazaar area. As specialized handcraft production of the jewelry sector is very convenient for clustering, in time, production knowledge spread and

the Grand Bazaar became a very successful a jewelry cluster. A main share of jewelry sector establishments is concentrated in and around the Grand Bazaar in Istanbul, partly due to the advantageous historical and cultural factors. The evolution of the Grand Bazaar as a jewelry agglomeration provides clues about the functions of this historic cluster. Today, life in this area of Istanbul, is a hub of activity and business interactions, and the center of wide network relations. The Grand Bazaar for the purposes of this study comprises the concept of spontaneous clusters. Shown in Figure 2 is a picture of from the historic Grand Bazaar.



Fig. 2 The Grand Bazaar in Istanbul
Source: www.istanbul.com

Koroglu, Eceral, and Ugurlar focused on the properties of the Grand Bazaar as a jewelry cluster in a 2009 study, where they identified the benefits as well as the shortcomings of the region as a cluster focused on jewelry manufacturing. The advantages are listed as; the union of unique cultural elements with the high tourism potential of the region, proximity of the market with the customers, the know-how through a long history of production, and the strong culture of trade. The disadvantages of the location are listed as; environmental pollution, the need for preservation of the historical features, transportation shortcomings, weaknesses in infrastructure, the declining labor quality, as well as problems with security, and also a few legal obstacles. An important feature when studying a cluster is to explore how production relationships among firms are organized and the results of this study show that the firms obtained almost all inputs from suppliers in the Grand Bazaar and from around Istanbul. A major potential advantage of location is that although the inputs of the respondent firms are satisfied mostly by local suppliers, as a considerable amount of the production is exported, the Grand Bazaar, takes presence in the global markets with its considerable turnout. The results of the analysis of the Grand Bazaar suggest that the circumstances that negatively affect the competitiveness of the Grand Bazaar are the drawbacks in design procedures and the lack of creative labor, both essential components of the jewelry sector (Koroglu, Eceral, and Ugurlar, 2009).

The authors mention that the jewelry industry representatives began a new program called 'Kuyumcukent' (Jeweler's City) with the support of government as well as several associations (primarily the Istanbul Chamber of Jewelers) after reviewing the aforementioned shortcomings of the Grand Bazaar. The formation of Kuyumcukent in 1988, represented an alternative area that was set up specifically for

the jewelry manufacturers of Istanbul. Kuyumcukent can be described as a modern jewelry market, meant to be a contemporary version of the Grand Bazaar, however Kuyumcukent does not attempt to compete with the historic structure of the Grand Bazaar, rather, it is a place where production and marketing purposes are served in a new environment. “Istanbul Jewelry Artisans’ Complex Building Cooperative, which brings together the members of the jewelry sector with vision and entrepreneurial spirit, aims to enable the Turkish jewelry sector to develop in modern premises equipped with a state-of-the-art technological infrastructure and to render it competitive in the world markets” (www.kuyumcukent.com.tr). Although there are advantages to moving to Kuyumcukent, some problems were also mentioned in the study, such as the high cost of relocating, the risk of not achieving the previous location’s market potential in the new location, the higher costs of production due to unregistered use of power and water as well as tax cuts in Grand Bazaar (Koroglu, Eceral, and Ugurlar, 2009). Kuyumcukent, for the purposes of this study comprises the concept of induced clusters, due to government induced initiatives at the emergence stage of the cluster.

Findings of the study (Koroglu, Eceral, and Ugurlar, 2009) suggest that there is an institutional business environment in the Grand Bazaar in terms of on the basis of social relations, even though the contemporary organizing style of the Grand Bazaar reveals that these network links are decreasing as time goes by. It should be mentioned that it is important to maintain unity and a cooperative working region for the sustainability of a cluster, as in cluster research, there is emphasis “On the importance of a social environment characterized by strong family ties, sense of community, and ethnic identities” (Schmitz, 1995). Additionally, it should be noted that research shows, “Social links are weakening over time due to increasing

differentiation within the clusters or rapid growth” (Ozelci, 2002). Thus, the establishment of a new induced jewelry cluster in Istanbul, Kuyumcukent, and the changes in the historic and spontaneous cluster, the Grand Bazaar, requires deeper analysis, one that should probably include research on production networks and social relations. Further research should be conducted on how the performance of the jewelry cluster Grand Bazaar changes while the location shift to the new cluster, Kuyumcukent, occurs in order to analyze differences in organizational structures and the network relationships between the two clusters in Istanbul jewelry industry.

The Grand Bazaar and Kuyumcukent were compared above in order to illustrate a portrayal of the two comparative cluster types; the Grand Bazaar depicting a spontaneous cluster and Kuyumcukent an induced cluster. Porter (1998) claims that there are four possible causes for the genesis of clusters. Clusters can emerge thanks to historical events, because of geographical conditions, as a result of innovation or by accident. When describing clusters, Marshall (1949) emphasized the ‘atmosphere,’ whereas Markusen (1996) characterized clusters as ‘sticky places’ including ‘learning regions’ and ‘innovative milieus’ (Brusco, 1996; Storper, 1997). Studies have been pointing towards the possibility of different paths in a cluster’s emergence, from ‘special inputs’ in a particular location to ‘historical accidents’ (Krugman, 1991), which cause unusually ‘sophisticated regional demand,’ and/or past potential of ‘related industries,’ and/or the presence of one or two ‘innovative companies’ (Enright, 1990; Porter, 1998). What we find interesting to investigate in this thesis is if there might be any differences in the cluster synergy if a cluster emerges because of spontaneous occurrences and or if a cluster is established by direct initiatives. What is meant by a spontaneous cluster is a cluster emergence that occurs naturally, mainly due to chance events or as explained above, ‘historical

accidents,' as in the case of the Grand Bazaar example. In contrast, what is meant by an induced cluster is a cluster that has been set up on purpose in an appointed location by government support, cooperative developments, or through collaboration with public and/or private enterprises and/or various institutions, etc. Kuyumcukent, explained above, is an example, but also techno parks and industrial zones (as is in the case study of this research) which are all artificially set up for clustering purposes of related industries. Therefore, we wonder if and how the genesis of a cluster being natural vs. induced will affect the synergy of the cluster networks and how these would relate to competitive advantage. In this thesis, we investigate this interesting issue in the context of a developing country in a relatively low-tech manufacturing sector, the two hosiery sector clusters in Istanbul. In the research of the induced (Ikitelli Zone) and spontaneous (Yesildirek) networks, especially entrepreneurial networks seem to be of key importance. Therefore, below is a survey of the related entrepreneurship literature and then entrepreneurial networks and network literature respectively.

CHAPTER 3

ENTREPRENEURSHIP

3.1 Introduction

In today's competitive business environment, organizations have to continuously upgrade, innovate, and join entrepreneurial activities in order to keep up-to-date with the current business conditions. The rapid advancements in information and communication technologies have made it possible for every business to access all sorts of knowledge and in light of such improvements, even small scale firms have a chance to face big companies in the international fields. Under these competition circumstances, organizations are always trying to differentiate themselves, so that they can generate higher utility for customers and to have supremacy in the market. Entrepreneurial organizations which are fast adaptable to change, value risk-taking and that promote continuous innovation are achieving greater market share and profits. Rigidity, risk aversion, and inelasticity in organizations hinder the development of entrepreneurial activities and therefore are not optimal for survival in the current competitive business world.

Literature emphasizes the significance of entrepreneurship for economic development and progress (Hart et al., 1993; Wiklund et al., 1997). Entrepreneurship is very important for creating jobs, reducing unemployment, providing means for economic growth, promoting business capacity as well as creation of income for individuals and society as a whole. According to Schumpeter (1934), new enterprises and the entrepreneurs that establish these assume primary roles in modern economic development. They aid by creating new employment opportunities and triggering innovations in industries and end up producing revenue for businesses (Kao, 1995;

Tushman and Anderson, 1986). Thus, entrepreneurship is observed to bring both economic (Wiklund et al., 1997) and social benefits to the society (Aldrich et al., 1984; Hyrsky and Ali, 1996). Entrepreneurship is recognized essentially as a regional event (Sternberg and Rocha, 2007) as individuals tend to establish new businesses in the locations that they have connections in in order to gain access to resources. The number of studies focusing on entrepreneurship in the cluster context is quite scarce, especially in Turkey. This thesis shall contribute to the progress of entrepreneurial research in Turkey aside from network studies in the cluster context.

3.2 Entrepreneurship, entrepreneurial orientation, and the entrepreneur

Entrepreneurship is an important way in which business organizations create value, thus many researchers from a wide range of fields such as economics, sociology, psychology, management, marketing, and finance concentrate on the subject of entrepreneurship. In an issue of *Corporate Entrepreneurship in the Strategic Management Journal*, Guth and Ginsberg (1990) associate entrepreneurship with the identification and exploitation of opportunity through different resource combinations. Entrepreneurship can be described as the means of designing, launching, and running a new business, i.e. a startup firm offering a product, process or service (Yetisen et al., 2015). It has also been defined as the capacity and eagerness to establish, organize, and manage a business along with taking the risks in order to earn profits. The word entrepreneurship has its roots from the French term 'entrepreneur' which has roots in the word 'enterprise,' which translates from German into 'to undertake' (Luchsinger and Bagby, 1987). Presently, the entrepreneur context encompasses attributes of leadership, initiative, and innovation in new venture establishment. Entrepreneurial orientation is the concept describing

the practices and attempts of organizations that employ entrepreneurial behaviors and processes (Lumpkin and Dess, 2001) and it has become one of the most well-known and researched notions in the entrepreneurship research (Covin and Lumpkin, 2011). Entrepreneurial orientation is the application of new products and services as well as organizational systems that can be processed through the formation of new interactive relationships by contributing to firms' capability to create advantages in global markets (Eckhardt and Shane, 2003; Knight and Cavusgil, 2004; Roudini and Osman, 2012; Shane and Venkataraman, 2000) As Anderson et al. (2009) puts it, entrepreneurial orientation is a firm-level strategic orientation which includes an organization's decision-making process, management philosophy, and business conduct that are entrepreneurial in nature. As a firm strategic orientation, the breadth and depth of research on entrepreneurial orientation continues to expand as the concept is adopted to understand the effects of being entrepreneurial across an increasing number of research contexts (Wales et al., 2011).

Rauch, et al. explains entrepreneurial orientation as, "Strategy-making processes that provide organizations with a basis for entrepreneurial decisions and actions" (Rauch, et al. 2009, p. 762) and literature shows the following components of entrepreneurial orientation; proactiveness, innovativeness, and risk taking (Covin and Slevin, 1989). Proactiveness is an "Opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand" (Rauch et al., 2009, p. 763). Pro-activeness may be described as a process of foreseeing and reacting to upcoming options by firms searching opportunities either relevant to their immediate operations or not, whether by offering new products or procedures ahead of competition or by removing operations that are declining in life cycle stage (Shane

and Venkataraman, 2000). Basically, it is the firm's inclinations to act fast in order to vigorously compete with other firms (Covin and Slevin, 1989). Innovativeness is described as "The predisposition to engage in creativity and experimentation through the introduction of new products or services as well as technological leadership via R&D in new processes" (Rauch et al., 2009, p. 763). This definition is parallel to Schumpeter's creative destruction concept, which will be further described in the next section, which involves the offering of new products or services by taking the resources of present firms, which results in formation of new business (Lumpkin and Dess, 1996). And finally, risk-taking can be detailed as the upper willingness limit of employers to make risky and unpredictable undertakings that may contain a probability of failure (Miller and Friesen, 1982). According to the strategic perspective, risk-taking is a firm's tendencies to make business related decisions relevant to strategy under uncertain circumstances (Richard et al., 2004) as risk taking involves "Taking bold actions by venturing into the unknown, borrowing heavily, and/or committing significant resources to ventures in uncertain environments" (Rauch et al., 2009, p. 763).

As said, recently, entrepreneurial orientation is a primary subject in the field of entrepreneurship. Although usually risk-taking, innovativeness, and proactiveness are observed as essential dimensions of entrepreneurship, current research also stresses the realization and exploitation of opportunity as part of entrepreneurial activity (Brown, Davidsson, and Wiklund, 2001). Venkataraman (1997) claims that the field of entrepreneurship intends to investigate how prospective products and services are uncovered and capitalized on and hence gives attention to the exploitation of opportunities. Stevenson and Jarillo portray entrepreneurship "The process by which individuals – either by their own or inside organizations – pursue

opportunities without regard to the resources they currently control” (Stevenson and Jarillo, 1990, p. 23). Relevant to this description, the direction of entrepreneurship is towards seeking of opportunities (Brown et al., 2001). Entrepreneurial spirit is usually characterized by innovation and risk-taking as, according to Schumpeter (1976), an entrepreneur has the ability to transform a novel opinion or creation to a successful innovation. Entrepreneurs are those who foresee new venture opportunities and often show favorable tendencies such as finding new strategies and new market needs and a present a risk-taking attitude that makes them more likely to exploit the opportunity (Zhang and Cueto, 2015). Brazeal and Herbert mention that, “The classical conception of entrepreneurship is that the individual is an independent entrepreneur who assumes financial and other risks in order to exploit a new idea or product possibility; he or she may be supported by another, perhaps a venture capitalist or a family member, but the risks of failure uniquely devolve upon the entrepreneur” (Brazeal and Herbert, 1999, p. 40). Thus, it can be said that the entrepreneur operates and maintains a business, taking risk as well as initiative; hence, the entrepreneur is seen as the leader of an organization and innovator of new ideas and business processes.

Entrepreneurship research has a long history as an academic domain (Landstrom, 1999) and researchers and practitioners have used different concepts to explain the notion of entrepreneurship in the organizational context.

Entrepreneurship gained legitimacy as a scholarly field, as it can be observed from the numerous number of journals specifically related to entrepreneurship, for instance ‘Entrepreneurship: Theory and Practice’ and ‘Journal of Business Venturing’ and also the increased number of studies on entrepreneurship that appear in mainstream journals (Stevenson and Jarillo, 1990). While the domain of

entrepreneurship gained a legitimate status in the academia, there is no agreement on the terms and the procedures, as there are inconsistent advancements as well as relative detachment from other relevant disciplines (Brazeal and Herbert, 1999). Also, the topic of entrepreneurship has been researched at various levels, such as people, teams, and the whole organizations (Lumpkin and Dess, 1996). Entrepreneurship broadly refers to innovation in the shape of a new business with original goods, novel services or brand-new procedures. Firm-level analysis is needed for understanding the corporate entrepreneurship concept and exploration of its relationships with organizational level variables, however, since theory development in corporate entrepreneurship research is in its early stages of development (Guth and Ginsberg, 1990) and as there are definitional ambiguities at the firm-level (Chua, Chrisman, and Sharm, 1999), 'entrepreneurship' is generally used to refer to initiatives at the individual level. Because the cluster setting reinforces the spectrum and variety of entrepreneurial opportunity, together with lower costs of establishing a new venture, entrepreneurship in the cluster context seems an interesting and fruitful area to explore and this thesis delves into this analysis as well.

According to Harvard economist Joseph Schumpeter's perspective, entrepreneurs pursue opportunities by seeking new formations and offering these into the market. The regional environment, due to the kinds and variety of resources, existent networks and organizations that supply help and support economic activities, fundamentally influence the sustainability of start-up ventures. Entrepreneurship theory can help explain how firms gain further access to potential business opportunities through clusters. Wennberg and Lindqvist (2010) comment that there are a very few studies that have researched the impact of clusters on the operation of

new entrepreneurial ventures. As clusters provide a propitious local environment for firms to benefit from intense information spills and network links, firms that exhibit an entrepreneurial spirit should be keener in reaching the necessary resources by utilizing these networks. Saric (2012) argues that firms with an entrepreneurship orientation ought to have more ability in exploiting the upcoming opportunities in clusters and utilizing the required means in order to acquire them, since clusters are primary sources of knowledge and other useful assets. Therefore, in this research, we want to touch on the different network dimensions within these clusters and how these works to promote entrepreneurship in various clusters, namely, induces vs. spontaneous.

3.3 Innovation and entrepreneurship

In literature, a variety of innovation theories exist, focusing on the distant features of the concept (Wolfe, 1994), however, this hinders the acceptance of a general terminology at the firm-level. “The most consistent theme found in the organizational innovation literature is that its research results have been inconsistent” (Wolfe, 1994, p. 405). The study of innovation is “very extensive and non-cumulative” (Damanpour, 1991), as the concept has been studied from various aspects; “diffusion or adoption of innovation” (Kimberly, 1981), “innovating or innovativeness” (Van de Ven and Rogers, 1988), also from various levels of analysis, such as the individual or organizational level. In general, innovation is described as the acceptance of a new decision or attitude, such as a technique, program, good or service that is novel for the organization (Damanpour and Evan, 1984). Damanpour (1992) stated that this definition of innovation includes all types of innovations in organizations. Innovation, similar to change, can be described as a result or a

procedure (Brazeal and Herbert, 1999), however, Slappender claims that the most important feature of an innovation is novelty, and that also innovation differs from change (1996). Zaltman, Duncan, and Holbek (1973) note that whereas innovations involve change, not every change brings about innovation. Overall, organizations either adopt innovation (purchase or develop) as a reaction to the changes in the environment or in a preventive fashion (Damanpour, 1992). McFadzean, O'Loughlin, and Shaw (2005) attempted to generate a connection amid organizational entrepreneurship and innovation and noted that in the innovation literature there is diversity regarding the definition of innovative procedure. They define innovation as an operation that requires idea generation, problem solving, application, and utilization and conclude that innovation, as a progress, adds value and novelty to the organization and its stakeholders through originality in organizational outcomes, such as new product development (Damanpour, 1992).

Schumpeterian perspective asserts that improved performance in the organization is due to the innovation that occurs, therefore the connection between management of strategy and Schumpeterian economics is established through the notion of innovation (Parnell, 2007). Based on this view, innovation is “Implementation of changes to the status quo that destroy the old and create the new” (Parnell, 2007, p. 122). Schumpeter (1934) differentiated among several typologies of innovation basics of his argument is called ‘creative destruction.’ As he explains, innovation emerges as a result of the creative destruction procedure, in which the entrepreneur gets rid of the established in order to acquire something novel, however not all innovations are disruptive (Carayannis, Ziemnowicz and Spillan, 2007). Schumpeterian viewpoint is that “entrepreneurship occurs through innovation” and this refers to recombining existent assets and thus does not involve the introduction

of new goods or services (Parnell, 2007). In sum, an entrepreneur begins, runs and maintains the new business, as well as taking the risk, and, Schumpeter adds, all those actions involve newness and innovativeness (Luchsinger and Bagby, 1987). In other words, entrepreneurship is a byproduct of innovation usually occurs as a new enterprise established via new goods and services or procedures.

The link between corporate entrepreneurship and innovation procedure is established through the entrepreneurial attitudes, vision, and actions of the entrepreneur of the business (McFadzean et al., 2005). As enterprises expand in size, structure, organization, and planning become important terms that entrepreneurs do not normally associate with entrepreneurship (Thornberry, 2001). The initial creation of a business is directly associated with entrepreneurship, but, in time, daily business needs increase the importance of organizational necessities such as efficiency, planning, and control. These concerns, unfortunately, sometimes hamper the entrepreneurial spirit; therefore, as start-ups begin to grow and already established companies become larger, the corporate entrepreneurship concept becomes essential for management in order to invigorate the entrepreneurial spirit (Thornberry, 2001). Camisón-Zornoza et al. (2004), in their research of innovation and size, determined four categories as being the characteristics of the innovation process; organization as generator or an adopter of innovation; sorts of innovation, such as technical-administrative, product-procedure, radical-incremental innovation; the level of analysis, such as industry, organization, subunits; and lastly the scope of innovation, such as the amount of innovations adopted in the firm. While the analysis on innovation is usually directed towards technology, literature targeting on the application of innovation takes the human aspect into consideration as well, such as studies on organizational cultures which foster innovative action (Brazeal and

Herbert, 1999). In addition, innovation is usually classified as either incremental or radical in nature (Brazeal and Herbert, 1999; Garcia and Calantone, 2002), where incremental innovation refers to small modifications and radical innovation refers to more dramatic changes.

3.4 Entrepreneurship, innovation and clusters

As explained in detail in the first chapter, it has been a main area of interest to economic analysts and economic geographers to understand the reasons for geographic clustering of interconnected companies and organizations leading industries. This tendency was first observed by Marshall, who observed the phenomena of specialized companies concentrating together as geographic agglomerations in a way that result in higher economic activity. Marshall called these formations ‘industrial districts,’ which presently scholars call as ‘Neo-Marshallian nodes.’ *Principles of Economics*, (1890) work by Marshall notes the great benefits obtained by establishments in similar fields being close neighbors to each other (Glaeser, 1994). Marshall’s study, however, neglected the important of the part of the entrepreneur and, later, in the 1930’s, Schumpeter built on Marshall’s original idea by focusing on the function of self-serving economic participants, with risk-taking propensities in order to earn profits. According to Schumpeter’s theory, the entrepreneur plays a primary role in information exchanges, as he uses contemporary methods and finds new goods, services, and means of production. As Schumpeter noted, original economic endeavor is mainly driven by new technology, by entrepreneurs who develop novel ways of organizing economic activity as well as finding new markets. Romer introduced a knowledge-based model of economic progress, in the 1980’s, that claimed that technological advancement occurs during

the seeking of new ideas of individuals that are seeking to gain financial profits from their innovations. Although Romer's theory does not necessarily equate entrepreneurship with innovation, he implies that growth is a process where innovative work creates new products for the market and businesses develop through novel ideas. Therefore, his model can be perceived as a theoretical foundation of the clustering phenomenon.

As outlined in detail in the above sections, in the more recent years, Porter has shown that productivity of locations can improve the competitiveness of firms in the region. Although he had a more micro approach to the concept than the aforementioned theorists, the link between regional clusters and entrepreneurship were also part of Porter's research program. Delgado, Porter and Stern say that, "Clusters are a particularly important way through which location-based complementarities are realized" (Delgado et al., 2010, p.1). Porter and his colleagues explain that, "While at a (narrow) industry level firms may compete for a given pool of resources, the cluster environment that surrounds an industry will increase the pool of competitive resources and reduce the barriers of entry for new firms" (Delgado et al., 2010, p.20). Therefore, "Strong regional clusters enhance the range and diversity of entrepreneurial start-up opportunities while also reducing the costs of starting a new business" (Delgado et al., 2010, p.20). All analysis shows that, clusters are a useful tool to promote entrepreneurial activity and encourage economic development of a country by determining strategic routes for firms located there or those that want to move there.

Nelson and Winter (1982), argue that innovations occur as an outcome of the knowledge exchange between organizations and that is why network structures are important for this process. According to Edquist, though innovation is fundamental

for the system and is influenced by external influences, it is the result of the knowledge transfer between related parties that form an interactive mechanism (2001). Therefore, network relationships seem to be especially fundamental for information spill-offs and businesses primarily form network ties in order to reach tacit knowledge. (Lundvall and Johnson, 1994). Cooke claims that “Smaller firms show some evidence of recognizing the importance of vertical and horizontal networks for collective learning and innovation” (Cooke, 2002, p.133) and by these ties, firms can tap into global networks (Scott, 1996). In line with this research, Cooke and Morgan’s (1993) ‘network paradigm,’ has contributed to the perception of local innovation networks as stimulants of growth and innovation from an individual business viewpoint as well as a regional perspective (Sternberg, 2000). It was already stated that Porter attributes a great role to innovation in his conceptions of clusters as the neo-Schumpeterian and evolutionary economics also claim that innovation and entrepreneurship are embedded and localized processes (1990). As Schumpeter (1939) describes, when a successful innovation takes place, an accumulation starts as other firms begin to realize the profit potential of the new product or process and begin to invest heavily in that technology. Therefore, the industry where innovation occurs grows and this also has the potential to stimulate other innovations (Sternberg, 2000). Due to this relation, innovations have the tendency to either to group around certain sectors or to cluster (Sternberg, 2000). Therefore, in the neo-Schumpeterian cluster literature, there is emphasis on the network theories of innovation and the emergence of ‘regional innovation systems,’ localized ‘collective learning,’ and the local ‘entrepreneurial milieu.’ However, “Much of this literature is also heavily directed to successful ‘high-tech’ districts and clusters” (Asheim, Cooke, and Martin, 2006, p. 8). For example, as Zhang

mentioned, the success of Silicon Valley comes from its capacity to upgrade by the creation of novel technologies which give birth to original industries (2003).

3.5 Genesis of clusters and entrepreneurship

Delgado et al. distinguished several reasons why new businesses generally start up within an existing cluster (2010). First, individuals employed in clusters are better informed on the gaps in products, services, or suppliers, thus are better situated to start new firms to fill the slots they recognize. In addition, as in the cluster environment barriers to entry are lower than anywhere else, due to resources, skills, employees, etc. that are already available at the cluster location, entrepreneurs can easily take action when they perceive an opportunity. Moreover, as there are already potential regional customers, existing relations, and successful business models, the risk of failure for the local entrepreneur is relatively lower. In the same vein, entrepreneurs located outside a cluster are also attracted into the cluster by the same lower entry barriers and thereby, the opportunity to apply their ideas and skills at better conditions. Furthermore, many firms based outside clusters also often establish subsidiaries at clusters in order to benefit from productivity and innovation advantages and even end up moving their entire business units to the cluster location or the subsidiary in the cluster ends up becoming the center of business. Sometimes, when large firms cannot act immediately on an opportunity, they let branches in the cluster serve the niche markets they cannot serve economically or they establish close relationships with innovative small companies in the cluster and then acquire them later on if they turn out to be profitable.

Feldman and Francis presented a model that can provide some insight into how the presence of an entrepreneur can trigger cluster formation (2006). According to the model, there are three levels characterizing the evolution of an entrepreneurial environment. In the initial level, the region is idle, there are few, if any, entrepreneurial companies. There may be universities, government centers, and large businesses, but there is no significant entrepreneurial activity. It is an exogenous shock that makes the entrepreneurial region shift from a latent to an active phase. The exogenous shock can be company mergers and acquisitions or changes in capital gains or tax rates, but what is important is that the shock causes self-employment to become an attractive option for that region. In the second phase, which is the generation of the cluster, entrepreneurs learn and adapt to the new circumstances and accordingly respond to policy changes. As each environment has its own characteristics, entrepreneurship may develop differently in each environment. “Networks of entrepreneurs, policy makers, and secondary industry contractors spring up; universities, colleges and technical centers recognize the need for high-tech personnel and offer training programs to satisfy that demand” (Feldman and Francis, 2006, p. 118). In the final level of the framework, namely the maturation of the industry, the region already has a well-known status as the area for a certain technology, such as the biotech cluster in Cambridge, Massachusetts (Feldman and Francis, 2006, p. 118).

Entrepreneurs come out as important factors in the emergence and synergy of clusters, as Schumpeter (1942) define entrepreneurs as dynamic actors who manage to gather resources and prepare the field of business, rather than as inactive players. Entrepreneurship may be perceived as a regional action as entrepreneurs usually establish businesses in the areas that they have connections where they have formed

business networks, so entrepreneurs can be seen at the focus of cluster generation as participants who access, gather and utilize resources to introduce original goods and services or methods of organizing. By the new business formation procedure, entrepreneurs generate regional industrial transformation, a shift that displays characteristics of path dependence, adaptability, elasticity, as well as self-organization. Also, sometimes, entrepreneurs, while serving their own self-interests, can work collectively to change the regional environment by establishing organizations that further serve the needs of the sector. Therefore, in the process of establishing new ventures, entrepreneurs can be regarded as change agents, who utilize the resources in the local environment. In fact, clusters usually begin through entrepreneurship; for example, Silicon Valley is a relatively new cluster of computer-related industries, the garage in Palo Alto was addressed as a historic landmark, where Hewlett Packard had started. It is often argued that this was the beginning for Silicon Valley, thus, the birth of a cluster may perhaps be the original choice of region by the entrepreneur.

As will be explained further in the upcoming sections, the initial hosiery cluster in Yesildirek, Istanbul also originated due to the initiatives of several entrepreneurs. Later on, as the cluster becomes established, the vision of the initial entrepreneurs pulls assets, i.e. financial capital and skilled labor to the area and later on these factors altogether contribute to the development of the cluster. This process triggers entrepreneurship and further intensifies the cluster as is the case with the Yesildirek hosiery cluster. In summary, a geographical cluster is a concentration of reciprocally working firms and interrelated parties and the case study cluster in this research, the spontaneous hosiery cluster Yesildirek, also has a very similar history with these findings, whose story will explained in further detail in the next sections.

As stated in the above sections, the local environment ultimately affect the sustainability of the organizations, according to the range and value of sources, the networks and supporting institutions that contribute to economical pursuits. Although clusters are always evolving, as they respond to the constant changes of the marketplace, entrepreneurs' contribution also changes the local environment as they make more investments, extend relationships, form new ties, and build institutions. Wennberg and Lindqvist (2010) point out that there are very few studies that have explores the impact of clusters on the performance of new entrepreneurial firms. Saric calls on the domains of entrepreneurship and strategy theory as the framework of analysis in order to pinpoint which internal properties of firms help them create and defend competitive advantage through clusters (2012) and in thesis we aim to use this theoretical framework in order to understand how the networks in induced vs. spontaneous clusters promote competitive advantage.

CHAPTER 4

NETWORKS

4.1 Introduction

Networks are constructed when there is interaction, whether it is between individuals or organizations. The ‘network’ term indicates many nodes and the relations that connect these nodes (Fombrun, 1982). A social network indicates of a group of agents (‘nodes’) and the links (‘ties’) among these agents (Faust and Wasserman, 1992). A business network meanwhile is described by Emerson as multiple linked business relations and the exchange transaction happens between business enterprises that are considered collective agents (1981). Yeung (1994) defines a business network as “An integrated and coordinated set of ongoing economic and non-economic relations embedded within, among, and outside business firms” (p. 476). This is a very generic definition, which includes geographical concentrations of SMEs, multinational enterprises as well as the linkages between them, put another way, it describes the relations among agents in interaction with one other (Moller and Wilson, 1995). According to Granovetter (1985), every economic activity is naturally embedded in social relationships and, therefore, all economic exchange is also a social exchange. This implies new ways of working, with consequences for the organization’s structure, processes, people and culture, as research shows that interconnectivity of networks may have a substantial effect on performance, learning, and innovation for organizations and many benefits occur from well-connected networks between organizations (Smith, 1999). Based on Granovetter’s (1985), claim, Porter (1998) also argues that economic activities are present in social

activities, that in the context of clusters, it is the ‘social glue’ that binds clusters together.

4.2 Network literature

Research on networks can be seen as a modern strategic management necessity resulting from current market conditions and the development of new business models. Therefore, as a vein in strategic management, aside from the theory of industrial economics by Porter (1990) and the resource-based theory by Barney (1991), an additional level of strategic analysis appeared, i.e. the networks. Despite the interest in networks in the field of management, the network theory is viewed as a relatively young research stream (Czakon, 2009). Studies on networks have been influenced by many social fields and disciplines, such as sociology and psychology, but also mathematics and physics. Although the potential for its application and limitations are not fully realized, a major topic of interest is how to apply the social network concept in the area of strategic management research. For instance, scholars from sociology and anthropology applied social network theory to explain the exchanges among participants (ex. Harland, 1995; Maguire, 1983), as a social network may be defined as the series of ties amid a group of actors (Mitchell, 1973) and by these relations, an agent may reach information, explore opportunities and get access to resources. Social network analysis has been more widely introduced to management relatively recently, mainly due to Granovetter and his concept of embeddedness (1985). When network theory is applied to organizations, firms are not perceived as singular, isolated, self-serving forms, but rather are recognized as parts of a social network formed of many exchange relations with other parties (Granovetter, 1985; Gulati and Gargiulo, 1999). The firms within networks have

many ties with other participants, such as with other organizations, customers, supplier firm, competitor firms, etc. and all those relations connect with others and create a bigger network system (Cook and Emerson, 1978). As firms can access information through their networks, in order to continue operations, existent social relationships have to be used and new ties developed by social ties, so that a firm can access and coordinate the needed resources, thus is the need for focusing on the generation, structure, and function of inter-firm networks (Gay and Dousset, 2005; Owen-Smith et al., 2002; Powell et al., 1996, 2005; Verspagen and Duysters, 2004).

Network analysis, in other terms, social network theory, is concerned with the social structure of relations among people, groups, or organizations shapes actions and attitudes. Rogers (1987) characterizes a communication network as “interconnected individuals who are linked by patterned communication flows.” The communication network research looks into “the interpersonal linkages created by the sharing of information in the interpersonal communication structure,” (Gay and Dousset, 2005; Owen-Smith et al., 2002; Powell et al., 1996, 2005; Verspagen and Duysters, 2004) which is, the network. Organizations are run by people and they are infused with purpose and meaning only through the imagination and will of the people (Lawrence and Lorsch, 1967) and network theory emphasizes the significance of social aspects of people's actions in organizational structures where the focus is not only on optimality or efficiency but also on interconnectedness. According to Sawyer et al. (2003) networking is “the process of sharing contacts and obtaining resources and personal networks are the persons with whom a decision maker has direct relationships or indirect relationships via direct relationships” (p.270). “We know that personal interaction patterns in organizations are associated with power, turnover, information flows, attitudes, promotion

opportunities, and social support” (Salancik, 1995). As pressure is inherent in social contexts, network analysis can be perceived as a method for recognizing and responding to these pressures. The emphasis of the network theory is that analysis should mainly focus on and be explained through the characteristics of relationships among parties rather than the attributes of the participants, hence, it is a relational perspective and in social sciences the actors may be social entities such as individuals, teams, organizations, societies, etc. “Network analysis corrects a tendency in organizational theory to focus on the trees rather than the forest, on the actions of individual organizations rather than on the organization of their actions” (Salancik, 1995).

Young (1998) asserted that economic activity is modified by continuous forms of social relationships and as social networks support business objectives, the networks are seen as the ‘social capital’ of an organization, which is defined as “the set of resources, tangible or virtual, that accrue to a corporate player through the player’s social relationships, facilitating the attainment of goals” (Gabbay and Leenders, 1999, p. 3). As, based on the social network approach, economic progress is dependent on social networks and the relations in these networks have an impact on organizational performance, firms require social capital for establishment as well as development, in order to find new opportunities and keep on prospering. Powell (1990) asserts that, “Networks are particularly apt for circumstances in which there is a need for efficient, reliable information” (p.304), therefore, via the networks, firms can access resources, most importantly, dependable information. At the initial business formation stage, as Lee et al. state, “start-ups, in order to succeed, should pursue strategies that focus on the development of valuable networks with external resource holders as one can access resources through network ties” (Lee et al., 2001,

p. 616) Based on the foundation of the network theory, these networks can be used for both exploring new opportunities and acquiring the necessary resources in order to exploit them. Therefore, the Schumpeter entrepreneur mentioned in the above sections generates innovative ideas via the network, by discovering how to mobilize resources and learning how to combine them in order to exploit the discovered opportunities (Saric, 2012). Firms need numerous resources in both emergence and development stages and as they continue to grow, they maintain to obtain resources through their networks in order to discover potential opportunities, hence, social capital theory posits that, firms' networks have a significant part in leading to firm performance (Leenders and Gabbay, 1999). Literature shows that networks take a major part in phases of firm establishment and progress (ex. Aldrich and Reese, 1993; Birley, 1985; Hansen, 1995; Larson and Starr, 1993; Stuart, Hoang and Hybels, 1999). After the business establishment stage, the role of networks continues to be unquestionable for the success of venture, as according to the social network theory, the relationships within social networks affect economic outcomes, thus the embeddedness of relations among organizations in a network has important relevance to firm performance (Gulati, Nohria and Zaheer, 2000). Powell and Smith-Doerr (1994) researched the role of networks and explored how networks improve businesses in three key ways; social relationships and social connections are critical mediums for information access, as network associations may provide gateway to customers and supplier firms, also, initial customers can spread the news to their own network contacts and lastly these network contacts that may contribute to the firm in terms of financial resources.

Relational view (Dyer and Singh, 1998) as well as the resource-based view (Penrose, 1959) emphasize that network links are crucial to acquire required resources for firm continuation and progress (Gulati, 1998; Jarillo, 1989). There is also agreement in related literature on the fact that social networks have an impact on business performance (Arrow, 2000). For example, Walter et al. (2006) mention that success indicators, such as growth, revenue, quality management, profit share, potential competitive advantage, and sustainability, etc. are affected by a new ventures' network capability. Furthermore, many scholars have emphasized the changing property of social networks, so it is relevant to try to analyze how social networks evolve over time as variations in networks have a major impact on economic indicators such as organizational performance. Lee et al., in order to analyze external networks, compared partnership-based vs. sponsorship-based linkages in their study. Sponsorship-based linkages consist of "Financial and nonfinancial support from commercial banks and the government and these are unilateral relationships as the sponsor commits unilateral support to a business venture without receiving explicit rewards" (Lee et al., 2001, p. 620). On the other hand, partnership-based linkages are "Cooperative, bilateral relationships in which partners give and take resources and maintain long-term ties and these are defined as strategic alliances with other organizations, cooperation with universities and research institutes, and participation in venture associations" (Arrow, 2000). In another line of research, based on the Steier and Greenwood (2000) study, in the beginning of a new enterprise, businesses look for investors and financiers for capital, thus at start-up, networking strategy focuses on funding investments. These kinds of relationships appear rather like sponsorship-based linkages. Later, as business grows, networks appear to focus more on production and marketing

processes, concentrating on customers and suppliers rather than early investors and this leads to shifts in many elements of networks, kind of like partnership-based linkages. Network relations tend to turn more formal relevant to the earlier informal relationships as while firms step into the level of growth, the networks tend to consist of ties more based on economic costs and benefits (Hite and Hesterly, 2001). The change of network structures can be seen as a transfer from mainly socially embedded ties to a less embedded and/or arm's-length relationships (Hite and Hesterly, 2001). It is apparent from all the review of the literature above that networks have a significant part for firms in formation (Greve and Salaff, 2003; Hite, 2003) as well as development stages (Hoang and Antoncic, 2003; Shane and Cable, 2002; Uzzi and Gillespie, 2002).

Strategic management studies have been adopting the resource-based theory of the firm to understand differences in firm performance (Barney, 1991; 2001), which concentrates on the sources and abilities inside the firm. Still, it is widely accepted that the network is also an asset in the acquisition of competitive capabilities (Dyer and Singh, 1998; Gulati, 1998; Pittaway et al., 2004; Powell et al., 1996). This branch of study is called the relational perspective (Dyer and Singh, 1998) or the network view (Gulati, 1998) and the theoretical base of this thesis will be rooted on the relational analysis and network theory. Relationships among participants in the network occur with the aim of exchanging resources, and this process continues as long as it is beneficial for the parties involved. Gilchrist (2009) states notes that the network is a medium for sharing of “Ideas, information about foreign markets, knowledge, practice and experience as well as exchanges among members aiming at common interest of creating added value in a particular field.” Via the network, firms share information, which results in mutual dependency (Sasi

and Arenius, 2008) and from this perspective, three primary network elements can be noted as common goal of the participants, relations, and operations in the network. Provan, Fish and Sydow (2007) focused on the study of inter-organizational networks at the level of the network instead of the level of organization and emphasized that the concept of network level effectiveness can support economic progress in the area, serve as a stimulant for innovation, trigger new product development, and foster network-wide learning. In the relational perspective, the analysis is based on a set of firms or organizational networks, instead of a single firm, since the causes of innovation are rooted amid firms, institutes, industries, suppliers, and clients, rather than within the firms themselves (Kodama, 2005; Padmore, Schuetze and Gibson, 1998; Powell, 1990). Therefore, the scholars concluded that “the more or less recursive interplay between whole networks and regional clusters, organizational fields, or complete societies should also be put on the agenda of network researchers,” (Provan, Fish and Sydow, 2007, p. 512) which this research aims to do.

4.3 Networks and entrepreneurship

Most of the studies integrating the network view into the context of entrepreneurship (ex. Aldrich, 1989; Aldrich et al., 1987; Aldrich et al., 1989; Birley, 1985; Boissevain et al., 1990; Carsrud et al., 1986; Donckels and Lambrecht, 1995; Nohria, 1992; Sanders and Nee, 1996; Zimmer and Aldrich, 1987) deal with the formation process of start-up businesses, whereas a few deal with procedures that come after the foundation. The first research field is named ‘network founding hypothesis’, in which the focus is on how social networks promote entrepreneurship, how network sources, networking actions and network motivation is used to establish a new

business (Brüderl and Preisendorfer, 1998). The other research area is termed 'network success hypothesis,' in which the focus is on the relation between network support and firm performance, the main argument being that entrepreneurs who have connections in a wider and larger network get more support and become successful (Dubini and Aldrich, 1991). Brüderl and Preisendorfer (1998) claim that two separate network avenues are present in entrepreneurship. Whereas the first is concerned with the individual networks of entrepreneurs, including personal relationships of venture founders, the second one is concerned with the common networks of organizations, including organizational embedded relations of firms (Dubini and Aldrich, 1991; Uzzi, 1996). Majority of works in entrepreneurship focuses on the former approach, this personal network line of study, where entrepreneurship is placed in a social environment rather than an isolated context. According to Aldrich and Zimmer, "The approach focuses on entrepreneurship as embedded in a social context, channeled and facilitated or constrained and inhibited by people's positions in social networks" (Aldrich and Zimmer, 1986, p. 14). As networks have a significant part in the entrepreneurship activities and respective results, Hoang and Antoncic (2003) analyzed the directions in network based entrepreneurial analysis and found that there is outcome-oriented research vs. process-oriented research. The outcome-oriented analysis focuses on "How networks affect the entrepreneurial process and lead to positive outcomes for entrepreneurs or their firm" (Hoang and Antoncic, 2003, p.168) where the network is considered an independent variable. The process-oriented analysis, nonetheless focuses on "The development and evolution of networks over the venture formation process, in which networks are treated as dependent variables" (Hoang and Antoncic, 2003, p.168). In this dissertation, the goal is to concentrate to the first vein of research; that is to say, to outcome-oriented

analysis of networks with the goal of investigating how networks affect competitive advantage and thus networks elements will be used as independent variables.

As the competitive environment of modern markets is constantly evolving, literature showed that in many sectors, conventional structures are beginning to turn into networks of inter-organizational connections (Achrol and Kotler, 1999; Gulati et al., 2000; Möller and Halinen, 1999; Ring and Van de Ven, 1992). As this thesis aims to explore how networks are utilized in order to gain competitive advantage in international markets, it is also appropriate to discuss international entrepreneurial orientation. In order to recognize and exploit potential in international contexts, firms need to create strategy goals to become globally successful (Knight and Cavusgil, 2004). As Cannone and Ughetto (2014) note, entrepreneurial orientation as well as entrepreneurs' investments in the network are main factors for internationalization and the capacity for international growth as identification of possibilities in potential new markets are essential features of entrepreneurship. Among the network approaches, internationalization has its roots in social relationships and the resource-based perspective (Johanson and Vahlne, 2003), hence it is associated with the creation of new networks. Businesses that have an international entrepreneurial orientation recognize the significance of adopting an innovative path in order to reach towards global markets, through innovativeness, networking, risk-taking, proactivity and competitiveness. Network theory stresses that by providing wider access to resources and opportunities networks aid firms overcome any resource constraints that they may come across. In addition, network relations create social capital which supports easier means to potential assets, global opportunities and the sources in order to defeat the obstacles of being new and foreign (Kocak and Abimbola, 2009).

4.4 Entrepreneurial networks

Although literature stresses the importance of maintaining access resources in entrepreneurship, a limited number of works has tested this observation. Resource access to resources occurs by the transactions between the entrepreneur and the other network participants as, in entrepreneurial networks, agents exchange resources by connecting through networks (Ostgaard and Birley, 1996; Zimmer, 1986). Both the relational theory (Dyer and Singh, 1998) and the resource-based theory (Penrose, 1959) point out that firms' network relations link them to the needed resources in order to survive and grow (Gulati, 1998; Jarillo, 1989) and Jenssen and Koenig (2002) found that the structural elements of the entrepreneurs' network has a positive relationship with access to resources. In order to establish a new venture, many assets are needed and networks offer a variety of resources, which can include knowledge, products and services, social support or financial capital (Marsden and Campbell, 1984). Therefore, through the network linkages, entrepreneurs may obtain the resources needed to create and develop the business and firm performance is perceived as a result of entrepreneurial activities where procurement of resources is critical (Shane and Venkataraman, 2000). As the performance of a firm is strongly correlated to the presence of resources within the network, entrepreneurs' relations help them obtain information and assets, thus contributing to firm success (Nahapiet and Ghoshal, 1998).

In entrepreneurial networks research, Hoang and Antoncic (2003) state that the following aspects of networks are important for analysis. In this study, the scholars mention three components to describe the network formation stage during entrepreneurial processes and the effect of networks on these, namely; nature of relationship networks, network structure, and governance mechanisms. Analysis of

nature of relationship networks is dependent on personal and inter-organizational relationships that link the entrepreneurs to the resources in the environment. Majority of the research investigates the role of networks for entrepreneurs in order to access intangible resources as entrepreneurs regularly exploit networks in order to gain entrepreneurship benefits (Birley, 1985; Hoang and Young, 2000; Singh et al., 1999; Smeltzer et al., 1991). Network structure, described as the type of links among agents in the network, has a positive effect on resource acquisition as well as entrepreneurship results (Hoang and Antoncic, 2003). Finally, the last component, governance mechanisms are a method of coordinating network exchanges and in the research on governance mechanisms of network exchange, trust is found to be an important element as it indicates the quality of information (Larson, 1992; Lorenzoni and Lipparini, 1999).

4.5 Granovetter's strength of ties in network research

Granovetter's (1973) concept of tie strength is integral in the context of network literature and has received plenty of attention from researchers. According to Granovetter, "The strength of an interpersonal tie in a network defines the value and quality of relations and it is a linear interaction of the amount of time, the emotional intensity, the intimacy, and the reciprocal services" (Granovetter, 1973, p.1361). He differs among the tie types, strong vs. weak ties, and explains how the variety and homogeneity of the ties affect the quality of relationships. Granovetter (1973) asserts that strong ties are formed by a high level of close relations and reciprocity in the network, whereas weak ties simply link agents with external network participants, equivalent to acquaintances. When describing properties and content, there is discussion if strong or weak ties are more valuable, however, there are contradictory

views on the subject as the two types of ties are perceived to bring different resources and benefits. It is suggested that strong ties provide motivation, whereas weak ties supports links to a wide range of resources and knowledge (Aldrich et al., 1987; Bloodgood et al., 1995; Katrishen et al., 1993; Monsted, 1995). Most probably, strong ties are more valuable when there is need for access to sensitive information, whereas weak ties are more valuable when there is need to access wider and more diverse information.

Granovetter posits that “Our acquaintances (weak ties) are less likely to be socially involved with one another than our close friends (strong ties)” (Granovetter, 1983, p. 201). Therefore, “Individuals with few weak ties will be deprived of information from distant parts of the social system and will be confined to the provincial news and views of their close friends” (Granovetter, 1983, p. 202). However, research on the function and utility of each type of tie in networks studies indicate that close strong ties are more important (Aldrich et al., 1987; Hansen, 1995; Lechner and Dowling, 2003). For instance, according to Uzzi (1997) strong ties are considered more valuable in cases of uncertainty. In another study performed by Brüderl and Preisendorfer (1998), results showed strong ties and support from family being critical resources for entrepreneurial orientation and establishment of small businesses compared to support from the outside network (support from weak ties) as support from strong ties show more positive effects, such as higher success.

Another research vein stresses that weak ties are more valuable in the network, as some studies shows that networks characterized dominantly by strong ties are not good sources of knowledge in order to pursue potential benefits (Hills et al., 1997). Some scholars acknowledge that due to being homogenous, strong ties are not as functional (Granovetter, 1973; Ibarra, 1993; Maguire, 1983) as weak ties,

while literature displays the functions of weak ties, focusing on the non-redundant information they provide (Ardichvili, Cardozo and Ray, 2003). According to Podolny and Baron (1997), as the number of weak ties in the network increases, so do the benefits of the network in terms of information and as Brüderl and Preisendorfer (1998) support, the main reason for this is because a business located within a large network is predicted to receive more aid relative to an organization enclosed in a bounded network. Burt (2009) claims that weak ties may be defined by heterogeneity and are more essential for social relations since they encourage information flows to other formations and end up creating a larger network of relationships. He also asserts that weak ties are comparatively more valuable as strong ties supply repetitious information from very similar sources (Burt, 1993). Weak ties are perceived to bring more valuable information, as this kind of information can only be reached through ties with remote parties (Granovetter, 1974; 1983) and, as such, through weak ties businesses can receive information and resources from different social circles and this causes the network to be more effective as weak ties support a variety of linkages to the type of new information that can be necessary to the creation of innovative actions (Granovetter, 1973; Johannessen, Olsen, and Lumpkin 2001; O'Donnell et al., 2001).

Tie strength is a very important characteristic of network structure. Since the two different types of ties, strong vs. weak, are perceived to bring distinct utilities, there is also debate that the functionality of the network may be contingent on the balance of strong together with weak ties. Although there is no consensus in literature, there is support that the best business network would be composed of strong as well as weak ties (ex. Burt, 1992; Granovetter, 1973; Johannisson, 1986). Uzzi (1996) also supports a balance of ties, as a network combining weak ties

together with strong ties, can be more functional. Researching networks of clothing manufacture firms, he discovered that a relation amid the amount of embedded ties in the network and firm continuity, such that networks of many weak or many affected continuation of firms negatively (Hoang and Antoncic, 2003). In another study, Batjargal (2006) claims that successful entrepreneurs should keep the existing strong and weak ties in order to maintain a proportional balance within their networks, as many strong ties can lead to excessive demands, whereas too many weak ties can lead to higher transaction costs due to low personal trust and higher control that is required in arm's-length relationships.

4.6 Measurement and operationalization in network research

The most commonly used network-based variables include size, density, openness, stability, reachability, centrality, degree of clustering, amount of strong ties, amount of weak ties, and other variables that measure the range and intensity of networks as will be explained further in detail below (Aldrich et al., 1986, 1987; Greve, 1995; Greve and Salaff, 2003, Hansen, 1995; Tichy, Tushman and Fombrun, 1979; Zhao and Aram, 1995). Brüderl and Preisendorfer (1998) propose two methods for the application of networks in research. First method includes all factors regarding the basic properties of the entrepreneur's network, such as size, density, diversity, redundancy and the dominance of strong vs. weak ties, but this method does not show the degree to which entrepreneurs benefit from opportunities and therefore, does not focus on the help from the network. The other method is more direct as it analyzes the activities of entrepreneurs at the formation stage of the businesses and, thus, concentrates on the support received from the network. As explained previously, the network concept indicates nodes and links, where the nodes may be

individuals, groups as well as organizations as networks have many levels and the links are the various coordination and adjustment mechanisms. According to the study by Tichy, Tushman and Fombrun (1979), the following terms are used in order to describe a social network; namely, size, density, degree of clustering, openness, stability, reachability, centrality. The size of the network is important, just as the density (also termed as 'connectedness'), which is the number of linkages within a network as a ratio of the total linkages. Network density (Burt and Raider, 2000; McEvily and Zaheer, 1999), measures the degree of interconnectedness among contacts. As network of contacts become denser, more homogeneity occurs in terms new resources meaning that similar resources will circulate, which hinders access to heterogeneous resources. Centrality is another network characteristic, which refers to the capacity to reach resources through direct and indirect links or the possibility of reaching other agents in the network through intermediaries. As it is difficult to gather data on relations from all nodes in a network, network centrality has not been researched as much in literature. The degree of clustering is used to define dense regions of interconnectedness seen in portion of the network. The characteristic openness indicates the ratio of external links against the total number of possible external links. The term stability is used to explain the need for changes or absence of changes in the networks in a period. Reachability measures of the amount of links between any two nodes. And lastly, centrality is the degree of formal hierarchical relations in the network.

In related literature, network size is a subject of study that has attracted interest, which is explained as the amount of direct linkages amid a central agent and other agents and relates to the degree that resources may be reached by the entrepreneur (Aldrich and Reese, 1993; Hansen, 1995) or the organization (Freeman,

1999; Katila, 1997; Katila and Mang, 2003). Research shows that network size is positively correlated to new venture formation as at the initial stage, firms need many resources, such as products or services, knowledge, financial assets, etc. (Aldrich, Rosen and Woodward, 1987; DiMaggio, 1992; Johannisson, 1986; Nohria, 1992; Van de Ven, Hudson and Schroeder, 1984). As the size of the network gets larger, the pool of resources gets bigger also, since firms get an avenue towards resources by the relations with the other participants in their networks (Hansen, 1995). Dunbar and Spoors (1995) call the first tier of the network, 'the support clique,' and it use it to describe "All those individuals from whom one would seek advice, support or help in times of severe emotional or financial distress" (Roberts et al., 2009, p.138). The average number of individuals in the support clique is assumed to be around five (Milardo, 1992). The second layer of the network is defined as the sympathy group and this describes "Those with whom an individual contacts at least monthly, and averages 12-15 members" (Roberts et al., 2009, p.138). The active network, the outer layer, is used to refer to individuals that one has a relatively distant relation with or maintains contact on average once in every two years (Roberts et al., 2009, p.138).

Another dimension used in network research is Granovetter's (1973) concept of ties, as mentioned in detail above. Aside from the strength of ties and network size variables, another measure is network capability, which refers to the capacity of firm to form interconnected organizational relations in order to gain access to resources of other firms (Walter et al., 2006). Network capability is perceived as an organization level characteristic and has four dimensions; market knowledge, coordination, relationship abilities and communication. Market knowledge refers to information on firm suppliers, customers and competitors. Coordination activities refer to boundary-spanning actions (Adams, 1980) as they make the connection among firms in order

form a collectively beneficial network. Relationship skills are defined as social ability and related to how relations are managed and includes the following elements as communication capacity, problem solving competence as well as collaboration (Baron and Markman, 2003; Marshall et al., 2003). And finally, internal communication is related to obtaining information on other firms and their resources and relating it to the organization.

Network diversity is another characteristic used to describe a network and refers to the degree of “Similarity of the entrepreneurs and other connections in the network in terms of background, education, occupation, or experiences, and by their ability to provide resources” (Jenssen and Greve, 2002, p. 255). In network studies, the notion of network diversity is valuable for the business, since as a firm’s network becomes more heterogeneous, the probability to get diverse information and resources from the network is higher. Very similar to Granovetter’s concept of tie strength, tie diversity is also related to the concern of the flow of information from the network being redundant (Burt, 1992; Granovetter, 1973). Network redundancy, a similar concept, is a network characteristic measuring the connectedness among the contacts of entrepreneurs (Jenssen and Greve, 2002). When there is great redundancy in the network, it means that many of the members are interconnected and receive very similar information. In contrast, when there is low redundancy in the network, meaning that the contacts do not know each other, this promotes higher information benefits from relationships (Burt, 1992). Burt (1992) claims that entrepreneurial success is higher when redundancy is low in the network, as when redundancy in the network is low, the contacts do not know each other and therefore do not supply similar information and as such low redundancy provides contacts more diverse information.

4.7 Clusters and networks

There is vagueness in literature on the distinction in the conceptions of industrial districts, clusters and networks, but from the many definitions that can be found in the academic literature, it can be stated that agglomeration economies are a common characteristic of industrial districts and clusters. Nooteboom (2006) argues that the concept of network is more general than that of cluster and that does not necessitate local embedding, a shared objective, or a specific market and he concludes that a cluster is a network but not necessarily vice versa. Also, Öz (2004) points at the differences between a network and a cluster as firms in a network do not have to be located at the same region, whereas a cluster can be perceived as a particular type of network that is situated in a particular geographic location. She concludes that, “Clusters can be seen as localized networks involving geographically concentrated firms from a particular sector with links that can be both cooperative and competitive in nature. Defined as such, it appears that clusters are a form of network, whereas industrial districts are a form of cluster” (Öz, 2004, p.11). A cluster can be seen as a type of network that comes about in a geographical location, where the proximity of firms and institutions create a synergy by increasing the density and frequency of communications and interactions. It could be said that the impact of clusters is rather similar, though not identical to the impact of networks. From another perspective, Öz (2004) notes that, while in relations among cluster participants competitive forces are prominent, network relations are more cooperative. Relevantly, according to Brown and McNaughton “In contrast to clusters, networks are generally based on a group of firms with restricted membership and specific, often contractual, business objectives... The members of the network choose each other; they agree explicitly to co-operate in some way” (Brown and McNaughton, 2002, p. 27).

Provan, Fish and Sydow (2007) reviewed the literature and focused on how network level effectiveness that acts as a motivation for innovation, stimulates new product development, and fosters a learning environment can promote economic development in a region. Saxenian (1994) stresses the importance of industrial organization in her study where she compares Silicon Valley and Route 128, commenting that Silicon Valley's synergy and success lies in the network system, whereas Route 128's decline is due to a few big vertically integrated isolated corporations that are not well-connected. Saxenian draws attention especially to the importance of local networks, "Silicon Valley firms collaborated with one another in formal and informal ways, developing alliances, contracting for components and services, or simply sharing information... In contrast, Massachusetts firms were highly secretive and self-contained, and employees had fewer inter-firm contacts. Boundaries among firms were blurred in California, whereas sharply etched in Massachusetts" (Starr, 1995). Saxenian states that network based systems may involve large as well as small firms, for example, Japanese producers of electronics and autos are embedded in extensive networks of suppliers, linked through ties of trust and partial ownership. Saxenian has also pointed at the coexistence of competition and collaboration in Silicon Valley since the region has long been dominated by individual achievement. In sum, this literature focuses on industrial organization rather than the type of organization that is most successful because it may vary according to particular places (Öz, 2004).

In cluster research, there is consensus regarding the benefits of a regional atmosphere supported by deep family ties, community sense and social identities (Schmitz, 1995). The study of local networks mainly focuses on trust and identity and it is well established that a network involves trust-based relationships that are

generally legitimate and distinct. Biggiero examined industrial districts in Italy and stated that “The more people trust one another, the more they reinforce their sense of membership, and therefore the more they strengthen their group (network) identity. At the same time, the more they perceive themselves as a group (network), the more they trust one another” (Biggiero, 1999, p. 82) Öz (2004) claims that, geographic proximity further reinforces this process as inter-firm relationships thrive on trust between cluster members, which lowers risk as well as uncertainty (Svetina and Prodan, 2008). Another point that should be mentioned is that the cluster environment can aid to reduce opportunistic behavior as cluster participants avoid blemishing their reputation in social and economic exchanges (Öz, 2004), thus, even if by default, trust is created among the firms in the cluster. Aside from the trust established through networks in the clusters, from the transaction costs perspective, Visser (1999) states that “Spatial clustering promotes the development of networks by lowering transaction costs, in at least two ways; the high density of related economic activities facilitates the screening and selection of business partners on the basis of local information and established reputations and proximity between agents facilitates the monitoring of behavior and enforcement of contracts” (p.1555). Porter (1990, p. 103) also mentions transaction costs as he discusses clusters promoting the development of networks by, “Proximity of managerial and technical personnel, along with cultural similarity, tends to facilitate free and open information flow. Thus, transaction costs are reduced”.

Implicit in definition of a cluster is the concept of linkages and relationships (Mallett, 2004; Porter, 1990, 1998; Wever and Stam, 1999) and these include liaisons developed among public and private research organizations, educational institutes, local businesses, etc. In recent years, there have been suggestions that the network

and inter-organizational relationships literature should adopt a more macro level approach and should include geographical location and regional development, thus research on networks and inter-firm relations should also examine clustering (ex. Eisingerich, Bell, and Tracey, 2010; Kajikawa, et al., 2010; Rutten and Boekema, 2007). Provan, Fish and Sydow (2007, p. 512) comment on this, saying that, “The more or less recursive interplay between whole networks and regional clusters, organizational fields, or complete societies should also be put on the agenda of network researcher.” Even though the formation of a cluster has yet to be fully understood, five elements have nonetheless been established as essential ingredients to its success; access to technology and technical knowledge, availability of qualified labor, access to capital, visionary entrepreneurship, as well as networks and linkages (Mallett, 2004). There are many types of networks in a cluster, such as social networks, knowledge networks, and business networks etc. and these networks provide means of aiding information flow and means of driving cooperation in strategically located parties. For knowledge transfer, market and social relations are recognized as important tools for the cluster, for instance solid and close customer to supplier links are seen integral for information transfers (Morgan, 1999). Process of innovation also involves networks and requires efficient linkages within a cluster, which Mallett (2004) describes as ‘active social process.’ Gordon and McCann (2000), Markusen (1996), and St John and Poudier (2006) identified types of cluster networks and have argued that network relationships among clusters are not similar, which suggests that the network characteristics in clusters may vary and further research should be conducted to understand the network structure in various clusters. Also, the structures of these networks may be different, which are heterogeneous in the way knowledge or innovation spreads between cluster members, thus the

properties of the networks among firms in the cluster should be analyzed further.

Saric (2012) states that the cluster literature remains unclear about the mechanisms that produce benefits for individual firms within the clusters. This thesis aims to fill this gap by examining the network properties of spontaneous clusters vs. induced clusters and the effects these properties have on competitive advantage by carrying out an empirical study in the context of clusters. “Cluster theory bridges network theory and competition,” claimed by Porter (1998) and this has implications for the competitive advantage of firms in the cluster and this thesis aims to explore the network mechanisms within clusters.



CHAPTER 5

THEORY AND HYPOTHESES DEVELOPMENT

The challenging business world of this era demands businesses to have remarkable organizational performance in order to achieve competitiveness. A major topic of debate in strategic management literature is the sources of competitive advantage and performance variations among organizations and there are two main perspectives on the subject (McGahan and Porter, 1997). The first viewpoint is industrial organization perspective, in other words, competitive advantage theory (Porter, 1979) that claims that the circumstances of the industry are the main sources of firm performance. According to Porter (1979), there are five forces present in an industry; the threat of new comers, bargain potential of suppliers, bargaining power of buyers, availability of substitutability of goods and services, and the degree of rivalry from competitors. This taxonomy offers that it is the industry that drives the competitive structure and the profitability of firms (Porter, 2008). On the other hand, the second viewpoint is the resource-based theory, which proposes that it is the organizational processes that determine firm performance, as based on the resource-based view, the primary drivers of competitive advantage are the resources or the competences of an organization, such as skills or human capital of the firm (Conner, 1991). Hence, the resource-based perspective focuses more on the firm and firm sources and how these resources are exploited are assumed to be the main determinants of organizational competitive advantage (Barney, 1991).

As an extension of resource-based approach, competence-based view of the firm suggests that the utilization of resources in the market is important as utilization should be goal-oriented (Freiling, 2004), focusing on the exploitation of resources and the competencies that the firm needs (Newbert, Gopalakrishnan and Kirchhoff, 2008). Prahalad and Hamel (1990) propose that competences enable organizations to access different markets and as well as allow firms production superiority, thus, making it difficult for rival companies to duplicate. According to Buden-Fuller (1995), the competence-based perspective of the firm is more related to ‘competition as innovation,’ such that firms compete not on their market position or domination, but rather their competencies and capabilities. Freiling (2004) claims that the competence-based theory of the firm underlines the destruction of current market conditions and from this perspective, this notion is very similar to the Schumpeterian concept of creative destruction (Schumpeter, 1934). Several other studies expand these theories for a resource-based analysis of the region, for instance, Larson asserts, “Although firms and regions are not the same things, both are ensembles of competences that emerge from social interaction, so there appears to be no reason at all why the competence perspective should not be as equally relevant to the study of the region as to the study of the firm” (Larson, 1999, pp. 157-58).

In literature, research stresses that resources are important for firm survival and growth (Bates, 1997; Birley, 1985; Brüderl and Preisendorfer, 1998; Cooper, Woo and Dunkelberg, 1988; Gimeno, Folta, Cooper and Woo, 1997) and it is pointed out that firms that do not have access to resources are not able to grow and their progress would be restrained (Covin and Slevin, 1997; Penrose, 1959). Parallel to this, according to Shane and Venkataraman (2000), firm performance is perceived as the result entrepreneurial processes where resource acquisition is vital. As firms need

to reach, obtain and exploit the necessary resources in order to achieve superior performance, via network connections with other firms, they obtain the information and resources they may need (Nahapiet and Ghoshal, 1998). Clusters provide a favorable environment in terms of the resources embedded in networks, which can be deployed by the firms in the cluster and the resource-based theory of the firm emphasizes that resources are important for firms as primary the determinants of organizational performance (Penrose, 1959). The significance of resources for businesses is noted by Eisenhardt and Martin, who claim “Resources are those specific physical, human, and organizational assets that can be used to implement value-creating strategies” (Eisenhardt and Martin, 2000, p. 1107). Whether it may be acquisition of knowledge, financial means, or social capital, without the required resources, firm performance would be very limited. Through their networks, firms are able to access a range of resources, such as information, social support and financial capital in order to be successful, as according to the network perspective, firm performance is contingent on the capacity to recognize opportunities and gather the essential assets in both the establishment and growth phases of a business. According to Aldrich and Zimmer (1986) and Ostgaard and Birley (1996), resource acquisition happens by the exchange relationships among the entrepreneurs and the network members and firms get necessary information, access to opportunities and the other various needed resources via network ties.

Resource-based theory posits that a venture needs to access resources in order to build new business as well as to improve the existent business, therefore, through the various sources the networks provide, firms can obtain resources at both the creation and growth stages of business. According to network theory, as the cluster environment is abundant in a variety of sources, firms located in a cluster have more

advantage in reaching the necessary resources given that firms properly exploit the network ties in the clusters. As the relational theory (Dyer and Singh, 1998) as well as the resource-based theory (Penrose, 1959) emphasize, networks offer the fundamental resources needed survival and growth of the firm (Gulati, 1998; Jarillo, 1989). It is well known that some environments encourage entrepreneurial orientation, whereas others discourage it and in order to understand the circumstances that promote entrepreneurship, Quinn analyzed agents that enhance innovation and found that appropriate atmosphere and vision for initiatives as well as supportive organizational structuring came forward (1985). Also, according to Powell, Koput and Smith-Doerr, firms that connect with external networks benefit from these relations because factors promoting innovation, “Commonly found in the interstices between firms, universities, research laboratories, suppliers and customers” (Powell, Koput and Smith-Doerr, 1996, p. 118). Procurement of resources from the network is conditional on the variety of sources the network presents as well as the capacity of firms to access the critical resources through the structural dimensions of the network, such as size, diversity, density, degree of clustering, openness, stability, reachability, centrality, redundancy, tie strength. Therefore, the cluster environment appears to be an especially interesting context to study regarding network resources and network relations.

The cluster paradigm emerged as a useful tool to analyze the networks linking various members (OECD, 2001, p. 91). The interaction mechanism among cluster members, conceptualized as networks, is an important component of the cluster system. As the cluster environment is abundant in resources, based on the network theory, firms within a cluster have better and wider access to necessary sources due to the intense network links within a cluster. According to Porter (1990), a cluster is

the gathering of firms in a particular geography which results in such an abundance of resources and competences that the region gains strategic importance in a certain economic field as well as sustainable competitiveness or even global dominance over other locations dealing in that industry. Therefore, in this research, what we want to investigate whether there is a difference in the way and intensity of efficient use and utilization of networks in various types of clusters. Specifically, we want to explore the network relations in induced vs. spontaneously emerged clusters and how this difference in the origin of the cluster types might relate to competitive advantage factors. Literature has some relevant research, for example, Deeds, DeCarolis, and Coombs (2000) found out that, through formal and informal networks in biotechnology clusters, proximity encourages a more fluid transfer of knowledge by continuous exchange of information. In a related research, Gnyawali and Madhavan (2001) found out that a primary status in interactive relationships in the network causes advantages in access to resources and results in higher competitive advantage. In another study, McEvily and Zaheer (1999) analyzed professional, economic and social networks within the cluster and how the network linkages relate to competitiveness at the level of the firm and the results revealed that firms located in a cluster have more direct relations through frequent interactions, which increases the value of the network tie. Yet in another research, Patrucco mentions that, “Based on a network of communication channels, learning by interacting emerges as the crucial mechanism to effectively build up the collective character of knowledge, in turn ensuring innovation” (Patrucco, 2003, p.162).

Networks and inter-organizational relationships are an important strategic source for any business and thus play a critical part in organizational strategy goals. “Still there seems to be only a few studies that have looked into strategic

management from an inter-organizational relationship and network perspective, although the firm's networks, and the resources they allow the firm to tap into, can create a sustainable competitive advantage factor" (Gulati et al., 2000, p. 207).

According to the cluster paradigm, firms that aim to gain and sustain competitive advantage need to use the regional resources, as Porter (2000) describes the cluster as a structure that reinforces itself and influences the competitive advantage of all the members of the cluster and, thus, 'competitiveness' for the whole cluster (Martin and Sunley, 2003). Therefore he argues that, "Cluster theory bridges network theory and competition," therefore, "Clusters offer a new way of exploring the mechanisms by which networks, social capital and civic engagement affect competition" (Porter, 1998, pp. 226-227). Porter (1998) also asserts that the operation of the system relies on the network ties in the cluster enhanced via personal relationships and direct communication. Rosenfeld also notes the need of having effective channels for business interactions, face-to-face dialogue and information exchange for the members of the cluster, since in the cluster context, networks routinely develop due to the existence of market, social and institutional relations all together (1997). Networks are mainly formed through frequent and informal local relationships, which parallel to studies by Becattini (1990), Malmberg (2003) and Pyke et al. (1990) who propose that entrepreneurs as well as employees working in the same cluster interact and communicate on topics ranging from market transactions to other business interactions.

Gordon and McCann (2000), Markusen (1996), and St John and Pouder (2006) identified types of cluster networks and suggested that network interactions across clusters are not identical, which shows that the network characteristics of clusters may be distinct and further study is required to examine the different network

structures in clusters. This is a gap this current research aims to contribute to. There are some accepted constructs that are repeated in network research, such as social interaction, reciprocity, mutual relations, interconnectedness, collaboration, collectivity, shared trust, cooperation, and embedded relationships (Provan et al., 2007). In line with this, due to these characteristics that are important for efficiency and effectiveness of the network, the network linkages are expected to be stronger in a natural occurrence as relationships develop further based on connectedness, collaboration, shared-trust, collective mentality, and cooperation. As a natural cluster formation will most probably involve more personal communication, including trust-based interactions than an artificial origination, in this research, it is hypothesized that the 'social fabric,' in other words, the 'glue mechanism' or 'fluidity' is stronger in a spontaneous cluster than an induced cluster. Due to the systemic nature of advantage, flow of tacit knowledge and info spillovers are expected to happen more easily and more intensely in a spontaneous formation compared to an induced formation.

Therefore, it is hypothesized that a spontaneous cluster due to the presence of an environment of trust and supportive will have more competitive advantage relative to an induced cluster with respect to network elements. Since the diamond is an active system that develops, as well as improves when the four determinants interact, it can be said that the network relations also grow wider and denser along with the progression of the cluster. Thus, parallel with Porter's claims, as social capital enhances the interaction of the four diamond framework elements in the cluster environment, this creates better synergy and intensifies the competitive advantage of the firms. In line with this, this research proposes that this effect is expected to be more intense in a spontaneous cluster compared to an induced cluster. This is parallel

with the conception of the nature of advantage being systematic. Therefore, going one step further from Porter’s propositions, the related literature and theoretical framework above, I formulated the below hypotheses and the conceptual model shown in Figure 3 for the qualitative research.

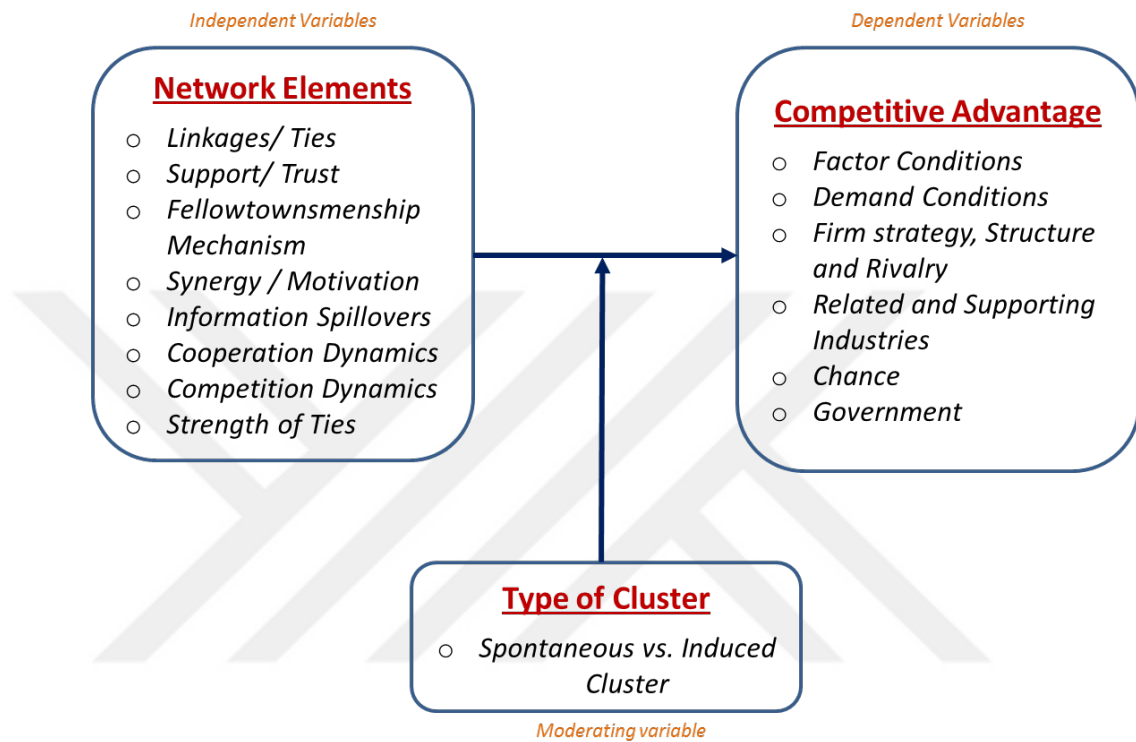


Fig. 3 Conceptual model for the thesis

Hypothesis 1: A cluster’s being natural vs. induced moderates the relationship between network elements and competitive advantage, so that firms in spontaneous clusters are better able to form and utilize network linkages and ties than firms in induced clusters.

Porter (2008) suggests that cluster approach combines network theory and competitiveness, stressing the important role played by the networks, where he claims that the social structure of clusters has an important role in contributing to their value creation process. “The benefits of trust and organizational permeability,

fostered through repeated interactions and sense of mutual dependence within a region or city, clearly grease the interactions within clusters that enhance productivity, spur innovation, and result in the creation of new businesses” (Porter, 2008, p. 242). As such, these network relationships are used for both exploring the potential opportunities and acquiring the necessary resources in order to capitalize on them. Thus,

Hypothesis 2: The embeddedness of links and linkages in the spontaneous cluster network will be stronger when compared to the links and linkages in the induced cluster network.

Sölvell (2009) attempts to illustrate the growth of clusters based on Porter’s diamond model. As stated before, in order for clusters to grow and prosper, the determinants of the diamond framework should exist, including specialization and upgrading in factor conditions, sophistication in demand conditions, evolving strategies for competition and cooperation with related and supporting industries, as well as conditions promoting innovation and change in order to develop strategies to deal with rivalry. According to Sölvell, aside from these factors, cluster growth and development is also dependent on the network links. “Often, the more general social capital within a region must expand with cluster-specific networks if the cluster is to grow. Often, different ‘families’ or ‘clans’ play a role within the region, where the social fabric is denser” (Sölvell, 2009, p. 56). Literature also shows that inter-firm relationships thrive based on mutual-trust between cluster members, which lowers risk as well as uncertainty (Svetina and Prodan, 2008). Thus,

Hypothesis 3: The support and trust mechanism in the spontaneous cluster will be stronger when compared to the support and trust mechanism in the induced cluster.

An important benefit of clusters is knowledge exchange, as ideas and findings get transferred among firms (Griliches, 1995). Trust facilitates the flow of tacit information spin-offs from firm to firm in a cluster, which can be seen as the outcome of recurrent personal relationships, face-to-face interactions, technological linkages, and community ties. Thus,

Hypothesis 4: Knowledge spillovers in the spontaneous cluster will be stronger when compared to the knowledge spill-overs in the induced cluster.

Bathelt et al. (2004) argue that ‘diffusion of buzz’ between the cluster members may circulate easily, or may be rather limited based on the type and quality of social relationships among the regional firms as well as the intensity of ties among members. According to the cluster-based approach, firms that want to attain and sustain competitiveness should utilize the regional sources and exploit them in order to benefit from cluster dynamics. Thus,

Hypothesis 5: The synergy and motivation in the spontaneous cluster will be stronger when compared to the synergy and motivation in the induced cluster.

Morgan (1997) suggests that the difference between high performing geographical regions and less successful locations is the level of their social capital and he describes social capital as, “Features of social organizations, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit” (p. 493). He proposes that locations that have lower performances may

benefit from mediator channels as ‘animators’ to develop and improve their social capital level in order to become more successful. Thus,

Hypothesis 6: Cooperation dynamics in the spontaneous cluster will be stronger when compared to the cooperation dynamics in the induced cluster.

Hypothesis 7: Competition dynamics in the spontaneous cluster will be stronger when compared to the competition dynamics in the induced cluster.

Schmitz (1995) remarked that there is consensus in cluster literature regarding the usefulness of a social environment intense with dense family relations, communal sense and ethnic identity. Case studies based on the two representative hosiery clusters show that a considerable share of entrepreneurs of the Istanbul hosiery sector is from a town in Anatolia, a town called Corum. Fellowtownsmanship, a specific kind of social network, especially in collectivist cultures such as Turkey, refers to simultaneous exploration and exploitation of business opportunities, therefore, in this thesis, we thought that it would be interesting to analyze whether this distinctive business feature is different between the two types of clusters. Hence, we want to investigate how those entrepreneurs of hosiery sector from Corum took advantage of the townsmanship system to be effective and successful and how businesses expanded alongside of fellowtownsmanship. Therefore along with cooperation and competition dynamics in the spontaneous cluster, we predict the fellowtownsmanship mechanism to extend alongside businesses in the spontaneous cluster. Thus,

Hypothesis 8: Fellowtownsmanship mechanism in the spontaneous cluster will be stronger when compared to the fellowtownsmanship mechanism in the induced cluster.

Porter (1998) discussed that the cluster is a type of network that is formed within a certain geographical region, where the proximity of organizations lead to collectivity by the increased repetition and deepness of interactions. Therefore, in the cluster environment, weak ties along with strong ties are seen and according to Granovetter (1973), strong network ties occur as a result of an increased level of close relationships and reciprocal interaction, whereas weak ties link actors with external members, can be described as casual acquaintances. Thus,

Hypothesis 9: There will be more weak ties in the spontaneous cluster when compared to the induced cluster.

Hypothesis 10: There will be more strong ties in the spontaneous cluster when compared to the induced cluster.

CHAPTER 6

RESEARCH DESIGN

6.1 Research method

The main goal of the qualitative research of this thesis is to explore the effect of networks on competitive advantage in induced vs. spontaneous clusters. As clusters present an advantageous regional environment for firms to benefit from the intense information flows and network links, firms should be concerned with accessing the necessary resources by utilizing these local networks. Therefore, in this study, I want to scrutinize the different network dimensions within these clusters and how these mechanisms work to promote competitive advantage in both types of clusters; namely, induced vs. spontaneous clusters. Thus, this thesis will attempt to explore the relation between the network dimensions and competitive advantage in clusters by exploratory research methodology. Utilizing the merits of qualitative research method, this dissertation will try to attempt to add on to the understanding of how elements of a firm's networks are related with competitive advantage in the cluster context. Semi-structured interviews with entrepreneurs in both types of clusters will be employed in the exploratory stage of the research. Qualitative study will be conducted with the aim of investigating the kinds of relations in the cluster environment that lead to competitive advantage, in order to get comprehension on the issue as it is exhibited in the context of Turkey, a developing country and a manufacturing industry, namely the hosiery sector.

Qualitative methodology is employed in this thesis because it is most appropriate method for explaining complex social and economic subjects hence, this research applies an analytical means as an interpretive study mainly tries to decipher

issues via the perceptions attached to them. In order to get a deeper comprehension of the research area of this thesis, it is important to search for explanations from the individuals in the hosiery industry and that is the reason qualitative study is the most useful research method for the study. The main reason for using the qualitative approach for this dissertation is to examine the data collected via the interviews in order to find out the perceptions of representatives of the hosiery sector regarding networks for the enhancement of competitive advantage in order to increase the global competitiveness of the sector. There is previous research on clusters in literature that has employed qualitative methods, such as interviews with respondents who are well informed of the local economy, for instance, Hendry, Brown, and DeFillippi interviewed electronics firms to analyze the creation, type and quality of network relations with other organizations, research institutions and development agencies (2000). The qualitative methodology has been described by Goldman as, “A method that is not meant for the faint of heart. The method demands imagination, courage to face the unknown, flexibility, some creativity and a good deal of personal skills in observing and interviewing” (Goldman, 1989, pp. 83-84). The qualitative research technique requires the researcher to analyze the subjects in order to understand their functioning, so that for this thesis, the relationship between network ties and competitiveness can be explained and the subjective meanings of the business owners in the industry can be interpreted. Therefore, with regards to the examination this specific study requires, it is very useful to conduct the qualitative research approach for the case study analysis of this dissertation. In addition, the characteristics of this research problem demand deeper investigation of the relevant context, such that data collection via the survey method and analysis by using statistical methods is as not as applicable as semi-structured interviews. Therefore,

for accessing in-depth information, detailed qualitative data on this particular research topic is collected and qualitative analysis is chosen as the main research methodology for this research. The purpose of this study is to compile an extensive review of the Turkish hosiery industry and since the most appropriate method to understand social and economic issues is from the viewpoint of the sector representatives, the qualitative research is the most suitable research methodology for this thesis. As Ekanem (2007) puts it, qualitative approach ascertains a deeper analysis as it uncovers interpretations to explain the drivers of the success of the hosiery industry. Therefore, this study is based on comprehensive data collected through semi-structured interviews from information gathered from various entrepreneurs from the sector.

A case study methodology is a detailed report of an event or problem that involves either a real or hypothetical situation which includes the complexities of real-life that influence decision-making. In order to interpret a case study, examination of real-life phenomena through researcher's knowledge and thinking skills is required and in order to learn from a case study review, the researcher has to analyze, apply knowledge, use reasoning and draw conclusions (Kardos and Smith, 1979). Case study style is used in this research since it is the most appropriate analysis for empiric scrutiny that probes into "bounded contemporary phenomena within the real-life context" (Creswell and Miller, 1997). The major feature of a case study is that it aims for an integrated investigation of the focused subject, thus the case study approach is more applicable when organizational issues are the goal of study. Therefore, this thesis applies the case study procedure to scrutinize a real-life phenomenon within its complex context, so the research was handled as an exploratory case study, which is suitable when the differences among phenomena

and context are not definite (Yin, 1994). Considering that the boundaries between phenomena and context are not apparent under socio-economic conditions, case study method is best fitting under circumstances when there are a variety of interest variables among the data. This research also underlines the significance of collecting various types of qualitative data when trying to explore and explain industrial districts or geographical clusters hence it is a contribution to the field of qualitative studies in the context of regional clusters. The exploratory source of information that is essential for the case study is in-depth interviews conducted with 22 entrepreneurs in the hosiery industry and the particular methodology was chosen in order to illustrate the network relationships among the different members in the cluster which help to create and sustain competitive advantage for the hosiery industry.

6.2 Research setting

In this study, the two important hosiery clusters of the Turkish textile industry was analyzed; namely Yesildirek District and Ikitelli Industrial Zone. Ikitelli Industrial Zone Corapcilar Sitesi, more recently set up for hosiery manufacturing, is the case study area for the induced cluster and the older Yesildirek region in the historic peninsula is the case study area for the spontaneous cluster. Yesildirek has a more bazaar-like structure, where many mainly small, family-owned firms line the streets forming a big marketplace, whereas Ikitelli Industrial Zone is composed of SMEs that are just one part of a huge industrial zone. The case study hosiery firms that are located in these clusters have defined geographical locations and work in comparable technology (Stam and Elfring, 2008). Via qualitative method based on appointments to the districts and interviewing sector representatives in the both types of clusters, a holistic understanding of the sector and network interactions was

reached as well as an investigation of sources of competitiveness for the hosiery sector. While most of the research on clusters of SMEs has been administered in high-tech sectors in developed nations (Stam and Elfring, 2008), this research is conducted in the setting of a manufacturing sector in a developing nation with relatively low technology; namely the hosiery clusters in Istanbul. From this perspective, SMEs in Turkish production sector may be illustrative of SMEs in other developing economies, where a limited number of studies have been conducted. This research setting is also especially interesting because the hosiery firms in the clusters have networks that comprise important resources for the firms and since this research is performed in the globally highly competitive hosiery sector, the case study firms are under continuous pressure to manufacture innovative goods.

6.3 Data collection

As said, with the related research question, the methodology employed in this study is the qualitative research approach. In qualitative study approach, “participants are purposely selected” (Creswell, 2002) with the intention of getting in-depth data, which would not be obtained through other research techniques. The focus of this research method is to gather primary data through semi-structured interviews and the data collected from the face-to face accounts provided the necessary in-depth information for this thesis. The primary data collection was via interviews with entrepreneurs and firm owners of the hosiery sector in order to learn about their history and the way this expertise can be transformed into becoming more a competitive sector in the future. Furthermore, the hosiery sector in Istanbul is an expanding and developing industry where it is interesting to obtain data in order to make grounds for a more comprehensive analysis of the research context. However,

the importance of collecting secondary data during the accumulation of primary data must also be emphasized because the secondary data supplements the analysis of primary data while increasing the validity of the primary data. Primary data collection has been completed in 2016 and 2017 through a detailed exploratory research in the two clusters, based on interviews with mostly owners of the enterprises. The sample consists of 22 entrepreneurs and/or owners/partners representing 22 hosiery firms in Istanbul, 12 respondents from the spontaneous and 10 from the induced clusters. At the initial stage, the Hosiery Association, an organization responsible for supporting small and medium enterprises in Turkey, was contacted where general sector information such as industry history, culture, capacities and problems were gathered. Also, a representative from the Hosiery Association was interviewed in the beginning of the research process in order to obtain general information about the sector. Through the Association, it was possible to obtain names, phone numbers and addresses of key informants who have been operating in Yesildirek for a relatively long period, since these respondents know the spontaneous cluster context better. Thus, employing the snowball sampling method, face-to-face interviews were carried on with 12 informants from the Yesildirek district, representing the spontaneous cluster and 10 from the Ikitelli Industrial Zone, representing the induced cluster. Table 1 shows a list of the interviews.

Table 1. List of Interviews

Interviewee number	Cluster type	Status	Interview date
1	Spontaneous	Owner	20.12.2016
2	Spontaneous	Partner	06.12.2016
3	Spontaneous	Son of owner	01.12.2016
4	Spontaneous	Owner	20.12.2016
5	Spontaneous	Son of owner	19.01.2017
6	Spontaneous	Partner	24.01.2017
7	Spontaneous	Grandson of owner	09.02.2017
8	Spontaneous	Partner	23.11.2016
9	Spontaneous	Partner	12.01.2017
10	Spontaneous	Owner	23.02.2017
11	Spontaneous	Owner	22.03.2017
12	Spontaneous	Partner	14.03.2017
13	Induced	Partner	02.03.2017
14	Induced	Partner	11.01.2017
15	Induced	Owner	06.02.2017
16	Induced	Owner	07.03.2017
17	Induced	Daughter of a partner	04.04.2017
18	Induced	Partner	12.01.2017
19	Induced	Son of owner	02.03.2017
20	Induced	Partner	15.12.2016
21	Induced	Owner	30.01.2017
22	Induced	Partner	05.01.2017
23	Noncluster (extra)	Hosiery association manager	15.12.2016

The respondents were all owners or partners of the firms. The interviews also aimed to follow the interviewees' career paths and current professions in order to investigate entrepreneurial orientation in the context of these clusters. However, it should be mentioned that the distinguishing between old and new businesses were often not possible as a number of respondents appeared to have started their careers as employees in the hosiery firms before going ahead to establish their own businesses. The subjects were interviewed with the intention to find out about cluster dynamics, network structure, inter-organizational relations, tie strength, shared-trust, embeddedness, knowledge sharing, as well as competitive advantage factors. The

interviewees were also asked to describe whether they could pinpoint any potential benefits and synergy advantages due to their present locations in the cluster. These semi-structured in-depth interviews were held in offices the informants and the interviews took about one to one-and-a half hour on average. Broadly, the general purpose of the in-depth interviews was to gather data concerning the emergence and advancement of the hosiery sector in Istanbul, acquire information on industry-specific entrepreneurial spirit, and to examine the types and value of inter-organizational network ties. In-depth examination of case studies in the cluster setting is performed for this thesis and for this goal, several cases were analyzed as the data collected from more than one case study is more appropriate and makes the research stronger (Yin, 2003).

6.4 Sampling

Snowball sampling technique was used during the interviewing process of the qualitative study methodology. The snowball sampling is one type of judgment sample and a judgment sample is also termed as purpose sampling, as the subjects for the sample are chosen to best represent the research context. "Sample subjects are selected because it is believed that they are best representative of population of interest" (Churchill and Iacubbi, 2002). Snowball sampling starts with an initial informant or a couple of informants and, later on, each informant is asked to name some other potential informants that could be reached. At the beginning of this research, interviews started with several representatives the Hosiery Association recommended and was able to contact in both cluster types. In snowball sample method, the sample depends on the researcher's success to reach more subjects with the required features through an initial set of informants. In the study, by using

snowball sampling, the initial set of respondents were interviewed first and then other potential interviewees were approached until a satisfactory number of representatives was reached. Towards the completion of the interviews, the participants were invited to give contact details to some of their ties who would be interested in giving an interview and these subjects were then also used as sources to reach yet other respondents with the necessary features. Thereby, “The sample ‘snowballs’ and gets larger as participants identify still other possible respondents” (Churchill and Iacubbi, 2002). Thus, by snowballing, names of other participants whose cooperation could be expected were obtained through those initial informants who gave in-depth interviews for this research. Generally, the snowballing process goes on until no new informants can be reached, or until it is time to end the process, usually due to time and resource limitations, or because the possibility of reaching new subjects from the case study being named is very limited (Hanneman, 1998). Towards the end of our research, no additional firms were sampled as any novel information forthcoming became unlikely therefore the interviews were not continued after talking to 12 respondents from the spontaneous cluster and 10 interviewees from the induced cluster.

6.5 Data

6.5.1 Turkey

Turkey is located in a strategic place in the middle of the Balkan, Central Asian, the Middle Eastern, North African, Eastern European, and the Russian Federation nations. Turkey is widely considered a regional power, since country’s location in the meeting point of Europe and Asia maintains a political and strategic importance for the globe. The history of Turkish trade has been established through a broad

variety of commercial transactions with countries from all over the globe and the nation's developing economy has become one of the largest economies in the region. The nation presents a steady economic base for enduring trade relations with many countries thanks to a large domestic market and also the convenient geographical location that allows for smooth commerce relations with the neighboring nations. Turkey is a charter member of the UN, an early member of NATO, and a founding member of the OECD, OSCE, OIC and G-20 (Wikipedia). After becoming one of the first members of the Council of Europe in 1949, Turkey became an associate member of the EEC in 1963, applied for full EEC membership in 1987, joined the EU Customs Union in 1995 and started negotiations with the European Union in 2005 (Wikipedia). For the past 20 years, Turkey has reached a stable annual growth rate of 3.0% and actualized an average PPP Gross Domestic Product (GDP) of \$ 1.665 trillion in 2016 (Wikipedia). The emerging Turkish economy has been one of the most flourishing of the developing nations, and today, it has the world's 17th largest GDP by PPP and 18th largest nominal GDP (World bank Data). Solid population growth and fast urbanization contributed to the advancement of the country and over the past years and living standards have also increased, parallel with the growing economy, for instance, GDP per capita increased from USD 4,565 in 2003 to USD 9,261 in 2015 as the Figure 4 shows (IMF World Economic Outlook, April 2016).

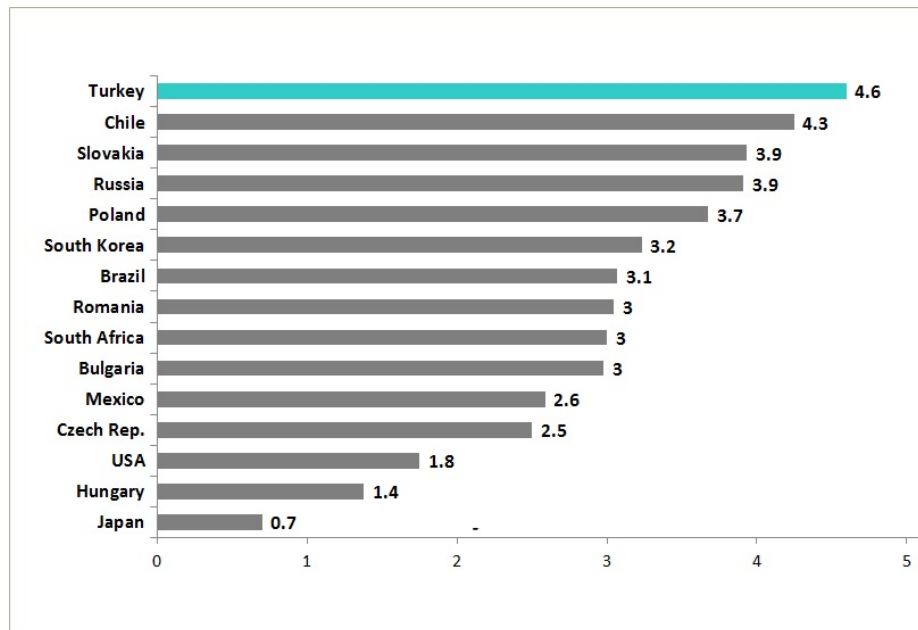


Fig. 4 Average annual real GDP growth of countries (%) 2003-2015
Source: IMF World Economic Outlook April 2016, TurkStat

6.5.2 History of textile industry in Turkey

Turkish textile sector is one of the first established industries in the country and it has the largest share in industrial manufacturing of the nation. The history of textile manufacturing in the region began in the Ottoman Empire era around the sixteenth century and production has been widespread and at an advanced standard ever since. Turkish textile sector rapidly grew during the twentieth century, as large scale facilities with new production techniques became established. A significant amount of production occurred due to the industrialization policy of the 60's and 70's and exports to foreign markets began by the 80's. By 1980's, the textiles sector became one of the most revenue generating and high-performing sectors of Turkey's economy (ITKIB, 2001). The growth of the textile and clothing industry reached its highest rate in the 90's due to investments on latest machinery and integrated production methods in modern factories. During this period, whereas the Turkish

economy reached an estimated growth of 5.2 % per annum, the textiles sector had an estimated growth of 12.2 %. The textile industry was able to improve its global position and increase its export share in the face of foreign competition on the basis of price, quality, as well as the wide range of goods. Turkey has an important position in global markets, as Turkish textile sector, with 4.3 % share, ranks as the 6th biggest supplier of the world as well as being European Union's 2nd largest supplier after China (DEIK, 2011). Currently, Turkish textiles and clothing sector is majorly an export-oriented industry that keeps its status among rival nations in foreign markets due to the fast supply of main raw materials, relatively low labor costs, wide variety of products, and geographical proximity to major buyer nations in Europe.

6.5.3 Textile sector of Turkey

Textile industry, today, has an important position in Turkish economy with a major share in total export volume. As one of the main players in the world markets, textiles has become crucial for the economy of Turkey, on the basis of GDP amount, percent in manufacturing, employment measures, export volume, investment figures and other such economic indicators. The share of textiles in Turkish GDP is about 10 %, the industry's share in employment of the nation is almost 20 %, and share in production is about 40 % (IGEME). Turkish economy, as one of the largest economies in the region, is a developing country with a growing market pressuring for increasing supply of production and this has been a major factor contributing to Turkey's textile industry's stable growth over the last decades. As the largest manufacturing industry of the nation, the textile and apparel sector exports constitute a major part of foreign trade and hold a significant share in the world exports. Turkish textile sector, ranking among the top ten exporters of the world, is the 2nd

biggest supplier to the EU countries. The textile sector comprises about 60 % of total exports and cotton textiles goods of cotton, fiber, yarn and woven fabrics compose around 24 % of total exports of textiles. The textiles industry is the backbone of Turkey's economy today and it includes yarns (cotton and synthetic), fibers and fabrics, home textiles, knitted products, ready-to-wear, clothing accessories and apparel. As mentioned, textiles and clothing is the leading sector of the Turkish manufacturing industry and Turkish textile exports grew even after World Trade Agreement on Textiles and Clothing (ATC) ended in 2004. Presently, the sector exports about 60% of its products to international markets and maintains and reinforces its competitiveness in the global arena. Figure 5 is a profile of Turkish textile industry.

Manufacturing	Production Value (USD bn) 2012	Number of Companies 2012	Share of SMEs in Total Number of Companies, 2012	Number of Foreign Companies 2013	Number of Employees 2012	Number of Employees (incl. unregistered employees), 2012
Manufacturing of Textile	26,5	17.313	98.0%	493	430.213	450,000
Manufacturing of Ready Wear	19,5	33.977	99.5%	130	454.754	1,500,000
Manufacturing of Leather Products	2,6	6.425	99.9%	107	60.591	NA
Total	48,6	57.715	99.1%	730	945.558	NA

Fig. 5 Turkish textile industry profile
Sources: Ministry of Science Industry and Technology, Social Security Institution, Ministry of Economy, 2013

Turkish textiles industry is largely dependent on the availability of cotton, since cotton is the primary input for the production of textile goods. The hosiery sector, as the other segments of the textile sector, obtains its raw material supply mainly from domestic production, which is a major advantage for the industry. As an important cotton producer of the world, Turkey ranked 8th among the world's cotton growers with about 858,000 tons in the 2012-2013 period. Still, domestic production is not able to satisfy sector's demand and although Turkey is a leading cotton supplier in the world, the country also has to import cotton. Since domestic output does not match needs of the textiles industry, Turkey the second highest cotton importer after China. Turkey has the 8th place in global cotton production and 4th in cotton consumption, as well as ranking 3rd in production of organic cotton, following India and Syria. The nation has a 4 % share in knitted clothing exporters of the world and ranks 5th among the exporting nations and ranks 9th in woven product exports of the globe with 2.8 % share. Small to medium sized firms compromise an important part of the Turkish economy and the textile and apparel sector also consists mainly of simple SMEs, which are basic, low capital, mainly family run operations. Although most businesses in the sector are SMEs, it is the larger factories that compose the greater share in amount of production. In Turkey, there are more than 52,000 textile and clothing firms operating with more than 918,000 workers in the sector claim Social Security Institution statistics. The manufacturing units are mostly concentrated in Istanbul, Izmir, Denizli, Kahramanmaras and Gaziantep. Turkey attends a lot of well-known international fairs and international textiles fairs are arranged in Turkey as well. Clothing and textiles accounted for nearly 20 % of Turkey's total exports by volume in 2013 and the total amount of clothing exports was US\$ 15 billion, with about 80 % of exports consisting of cotton clothing. The

main export items are synthetics yarns from monofilaments, cotton woven fabrics, knitted fabrics, synthetic filament yarns, woven fabrics, and woven pile fabrics. Knitted clothing and accessories, with an export value of US\$ 9.3 billion, had a share of 61.8 % of total clothing exports, and woven clothing had a share of 38.2 % with a value of US\$ 5.7 billion in 2013. T-shirts and pullovers are the most important export products in knitted clothing sector. In the same category, as the second largest producer of the world, Turkey's hosiery exports amounted US\$ 1.2 billion in 2013.

6.5.4 Overview of the Turkish textile industry

- Turkish clothing and textile exports have been increasing over the past few years but its share in the country's total exports has been shrinking. The clothing industry exported about 65% of its production and generated USD 15 billion in exports in 2013, with cotton clothing accounting for almost 80% of exports. In 2013, The Turkish clothing industry was the 2nd largest exporter to the European Union and ranked 6th globally.
- The clothing and textile industry is largely based on cotton; however, domestic production does not fully meet demand, which ranks Turkey as the 4th largest cotton importer of the world. Developing trade relations between the European Union and major textile exporters like China and India have a negative impact on the Turkish exports.
- Wages nearly doubling between 2009 and 2013, has led to the gradual loss of the cost advantage of the Turkish textile and clothing industry. Together with trade liberalization, in order to maintain competitive advantage, many Turkish textile and clothing manufacturers have moved on to new products,

up-to-date designs, and higher quality materials targeting sophisticated customers.

- To increase quality level of the industry, the Turkish government has launched “Turquality,” a program designed to provide textile firms assistance in marketing, quality upgrade, and strategic positioning.

6.5.5 Strengths of the Turkish textile industry

- The major strengths of the textiles sector are the country’s high production of cotton as Turkey ranks as 8th biggest producer in the globe and the country’s geographical location near to the markets in Europe. Turkish delivery times average between 2 to 3 weeks compared to 2 to 3 months average delivery times of the Far East firms.
- In addition to Europe, Turkey is also close to rapidly emerging countries, i.e. the Russian Federation, Middle East, and North Africa.
- Turkey has good infrastructure and a liberal foreign exchange policy.
- Other strengths of the sector are the qualified labor, together with the adaptability and entrepreneurial orientation of the Turkish culture.
- The country has developed production facilities.
- Turkey is one of the few of countries that have integrated as well as large capacity production potential. Turkey, China, India and Egypt are the countries that are going to benefit most from the expanding global market of textiles and apparel.

- Another advantage of the sector is that the Turkish products satisfy the internationally accepted ecological standards. Unlike some Far East and Asian countries that allow the use of carcinogenic dyes in textiles manufacturing, Turkish laws ban the use of these materials.
- Many pattern design competitions, organized by different institutions, assist the advancement of fabric creation in the sector, resulting in the appearance of qualified fashion designers as well as increased product range.
- 228 of the 1,000 largest industrial manufacturing enterprises in Turkey operated in the textile, apparel, leather, and carpet business in 2006. This concentration of industry may very well be the primary determinant of sustainable competitive advantage for the Turkey's textiles sector Turkey's.

6.5.6 Weaknesses of the Turkish textile industry

- The main weakness of Turkish textiles industry in recent years has been the loss of cheap labor cost advantage. Between the years 1980 and 1996, the average industry hourly wage more than doubled and current wages are 4 to 6 times more than the rates at major competitors such as China, India, Bangladesh, and Indonesia.
- Energy and financing are more expensive compared to Europe and the Americas.

6.5.7 Istanbul textile sector

Istanbul is located in the north west of Turkey within the Marmara Region on a total area of 5,343 km² (2,063 mile²) (Wikipedia). Istanbul is the largest city in Turkey and the country's economic, cultural, and historic center, its population having grown tenfold between 1950 and 2000 (Turan, 2010). Globalization and World Cities (GaWC) Study Group and Network study in 2010 considers Istanbul a global city, having been one of the fastest-growing metropolitan economies in the world (Brube, 2010). Istanbul grew very fast in the twentieth century, becoming one of the world's biggest cities and ranks as 7th largest in the world and is among the largest European cities. In 2011, Istanbul ranked 29th among the world's urban areas, with a PPP-adjusted gross domestic product of US \$301,1 billion (Global Metro Monitor). Since the mid-1990's, Istanbul's economy has been one of the fastest growing among OECD metro-regions (OECD Territorial Reviews: Istanbul, Turkey). Bosphorus divides Asian and European Continent as well Istanbul and thus, Istanbul has become an important commerce center because of its foundation in this strategic location where land meets sea, where Black Sea joins Marmara Sea. Figure 6 shows Istanbul's location.



Fig. 6 Map of Istanbul
Source: Wikipedia

The main reason Istanbul is such as renowned city is due to its geographical position, located in Europe on the western side and in Asia on the eastern side. The city is situated at the intersection of the continents with the Bosphorus sea-strait present in the middle and both Asia and Europe give different characteristics to the city. Economic and cultural centers connect the historic and economic hubs, where Central Asian, East European, Balkan, the Caucasian, Middle Eastern and North African regions unite. Istanbul has its roots grounded in the seventh century B.C. and had been made capital city by Emperor Constantine in the fourth century A.D. and since then, it has been the capital cities of Rome, Byzantine and Ottomans for almost sixteen centuries. Although the city was a center of Christianity early in history, after its conquest in 1453 by the Ottoman Empire, Istanbul has been considered as one of the most important cities of the Muslim World. As Istanbul has been at the junction of great civilizations because of its geographic and strategic location, the city has a unique position with its history of over 2,500 years, globally acclaimed historical artifacts, institutions, culture, and traditions. As a result of Istanbul's strategic

position as a passage between Europe and the Middle East and being the sole waterway in the middle of the Black Sea and the Mediterranean, it has a very metropolitan population. Being in the junction where all the roads reach the seas, being an easily defendable peninsular, having an ideal climate, offering abundant natural resources, having the strategic control of the Straits and being located at the heart of the world in a very strategic location are all treasures for Istanbul. The city has been of much significance throughout history because joining the two continents Istanbul is on the outer reach of Silk Road extending to Europe. The Bosphorus, connecting the Sea of Marmara with the Black Sea, divides the city into a European and an Asian part, but the city's infrastructure improvements have produced an adept transportation network. Istanbul has a great fortune among world cities thanks to its being the center of tourism and the location of a convention center as well as being the hub of the transportation networks.

Istanbul accounts for 27% share in Turkish GDP, contributes 38% of Turkey's industry workspace, with 20% of the nation's industry workforce living in the city (OECD Territorial Reviews: Istanbul, Turkey; Presentation of Reference City: Istanbul). Istanbul GDP per capita is 70% higher and productivity is 50% higher than national averages. With its high population and significant contribution to the Turkish economy, two-fifths of the nation's tax revenue comes from Istanbul (OECD Territorial Reviews: Istanbul, Turkey). Istanbul is the 'industrial center' of Turkey, since the city generates 55% of Turkey's trade and 45% of the nation's wholesale trade, and generates 21.2% of Turkey's GNP, while constituting 40% of all taxes collected in Turkey and produces 27.5% of Turkey's national product (Wikipedia). Food processing, textile production, oil products, rubber, metal ware, leather, chemicals, electronics, glass, machinery, paper and paper byproducts, etc. are among

the city's primary industries and many of Turkey's large production facilities are located around the region. Istanbul and the neighboring area have a diverse industrial economy, producing varied commodities, such as cotton, silk, fruits and olive oil (Presentation of Reference City: Istanbul). Although there are high value-added businesses, the share of low-value added production sectors is still substantial, representing 26 % of Istanbul's GDP, but 4/5 of the total exports of the city (OECD Territorial Reviews: Istanbul, Turkey). In 2005, companies based in Istanbul produced exports of 57 % of the national totals and received imports of 60% of the national totals, worth \$41.4 billion and \$69.9 billion respectively (Dış Ticaretin Lokomotifi İstanbul [Istanbul is the Locomotive of Foreign Trade]).

Istanbul has the headquarters of many Turkish enterprises and supplies more than 1/4 of the nation's GDP (OECD Territorial Reviews: Istanbul, Turkey). As expected of a city this large, Istanbul has a central importance in both domestic and international trade. Trade is the second most important sector in Istanbul after industrial production and new commercial sectors, such as finance, tourism, service, banking as well as head offices in the city come very close to substituting industry in the recent years. Due to its unique geographical location, Istanbul has become also become a financial center for the entire country as well as the neighboring regions. Presently, 35% of deposits and 33% of credit used in Turkey comes from Istanbul and almost all insurance companies operating in the country are located in Istanbul. The city is becoming a financial capital, being a center for in leasing, factoring and other private financial institutions, etc. The Istanbul International Stock Exchange has experienced an exponential growth among the stock markets around the globe. Istanbul will continue to accelerate the pace of becoming a financial hub with liberalized financial markets and this fact is important because the pattern of

geographical concentration of industries influences the economic opportunities available in the area in which they live.

As said, throughout history, Istanbul has been one of the cosmopolitan cities of the globe. Turkey has a big potential in textile industry and there is no other city as dynamic as Istanbul in terms of production, fashion, and design. In order to support the textile industry, Istanbul Textile and Apparel Exporters Association (ITKIB) was founded in 1986, by the Secretariat for Foreign Trade, to aid the growth and development of textiles exports from Istanbul (Wikipedia). “The Problems of the Textile Industry and Solution Suggestions Panel” was organized by the Textile and Leather Industry Board of Independent Industrialists and Businessmen's Association in order to discuss the position of Turkish textiles sector in the world. The potential and opportunities in textiles as well as the problems and handicaps were evaluated in the panel. “There is no need to seek anything in China or in America,” industry people in Istanbul said, who indicated that supply speed is one of the most important issues for the textile industry. Furthermore, it was added that, “There is no country other than Turkey in the world which manufactures 5 lorries of product in a month, thus, Turkey has a great advantage. China and America are not big markets for Turkey. The first market is the EU market as prices in EU are competitive.” Outsourcing still seems to be in the picture for the sector and comments indicated, “Textiles is still the largest industry in Turkey and it has no alternative. We do not have a quality SME structure.” It was added that, “there are around 50-55 thousand companies in the industry. Around 20 thousand companies are manufacturers and exporters. We can realize our targets if we sustain a quality SME structure.” The panel emphasized, “Istanbul Has a Big Potential. Let's Be Aware.”

6.5.8 Geographic concentration of Turkish textile sector

The global textiles and apparel sector is a huge industry with an estimated total market value of \$1.3 trillion in 2011 and industry forecasts predicted a 5.8 % compound annual growth rate by 2015 (Data Monitor, 2012). The global industry currently consists of a small group of manufacturing countries that export to a large diverse group of importing countries. The major textile exporting countries include China, India, the U.S., South Korea, Turkey, and Pakistan and the main apparel exporting countries include China, Bangladesh, Turkey, India, and Vietnam (World Trade Organization, 2012). China, Europe, India, the US, South Korea and Turkey represent the five largest textiles producers and together compose over 75 % of all textile exports (WTO, 2011). China, today, represents the biggest global share of textile exports, having increased from 7 % market share in 1990 to 31 % of the global textiles export market by 2010. There are several key trends within the textile production value chain. One trend is that transnational firms mainly dominate the industry as these firms expand globally and integrate across the value chain (McNamara, 2008, 6-7). Another tendency is that, as textiles are very trade-intensive, they can be exported at any stage along the value chain, hence, countries can be both major exporters and importers in this industry (McNamara, 2008, 6-7). Finally, lower-income nations typically focus on manufacturing of lower value-added segments such as inputs and fabric, whereas high-income countries focus production of higher value-added pieces such as specialty apparel (McNamara, 2008, pp. 6-7). Turkey has a special position as it is a country that actually plays across the entire value chain.

According to current figures, number of companies and the export shares, textiles and apparel production is mainly concentrated in three geographic regions in Turkey; Marmara Region, Aegean Region and Cukurova region. Regional Concentration of Textile Production in Turkey is shown respectively in Figures 7 and 8.

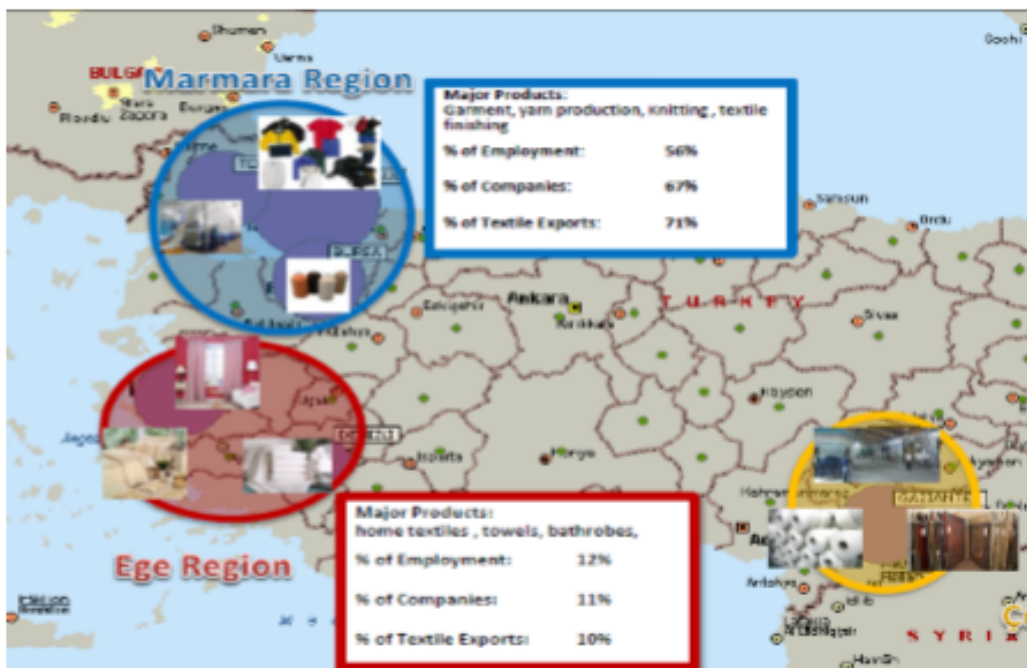


Fig. 7 Regional concentration of textile production in Turkey
Sources: Ministry of Labor and Social Security, Turksat

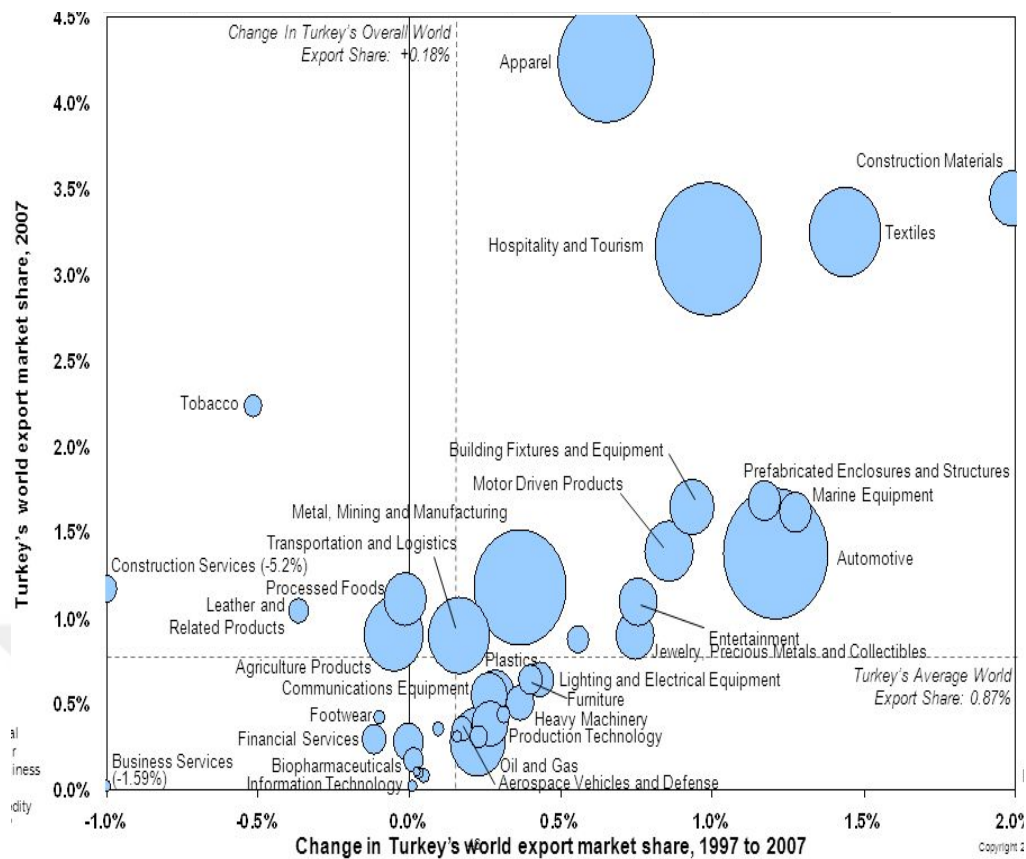


Fig. 8 Turkey's national cluster development portfolio, 1997-2007
 Source: Prof. Michael E. Porter International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School

Turkey has a wide range of clusters, including textiles, tourism, automotive and construction which are shown in Figure 9. However, majority of the industrial businesses is concentrated in western regions, specifically the Marmara region in the northwest part due to the good technical, logistical, and educational infrastructure. Textiles sector, an outstanding Turkish industry, contains many clusters, most located in Istanbul and the surrounding region. The textiles industry became a pillar of Turkey's economy during the period of industrialization as the country opened to foreign markets in the past 30 years. During the 1980's, "It was the leading sector related to the global economy and the export revenues of this hard currency earning sector contributed substantially to the overall economy" (DEIK, 2002: 2). The textile

activity within the Marmara region is concentrated in Istanbul Tekirdag, and Bursa provinces. Marmara Region constitutes the largest textile cluster within Turkey's economy and this fact is underlined by export and company number figures. The region accommodates around 67 % of the total textile related companies (Ministry of Labor and Social Security Statistics), while it performs 71% of the total textile exports within the Turkish economy (Turkstat). The major production activities are garment manufacturing, yarn production, knitting, and textile finishing.

6.5.9 Clustering in Istanbul's textile sector

As stated previously, textile production has a history going back to the sixteenth century, it was very widespread and advanced during the period of the Ottoman Empire. In the period between 1923 and 1962, production capacity developed in Turkey and as a major cotton-growing nation, Turkey kept the growing pace of the industry in the following years. Clothing industry showed a parallel development to that of the textile sector and the industrialization efforts of the 1970's led to the creation of the modern apparel industry in Turkey. By the 1980's, the clothing industry had reached a steady growth and began exporting its products to foreign markets. With a high export performance in the 1990's, the export share of the clothing industry exceeded 20% of the country's total exports and Turkish clothing industry exports reaching 12.9 billion USD in 2009. Clothing production has been expanding mainly in Marmara and Aegean regions of Turkey. Istanbul, Bursa, Tekirdag, Izmir and Gaziantep are the major provinces in terms of physical capacity and export value (ITKIB, The General Secretariat of Istanbul Textile and Apparel Exporters' Associations website). Figure 9 and 10 are two relevant cluster maps.

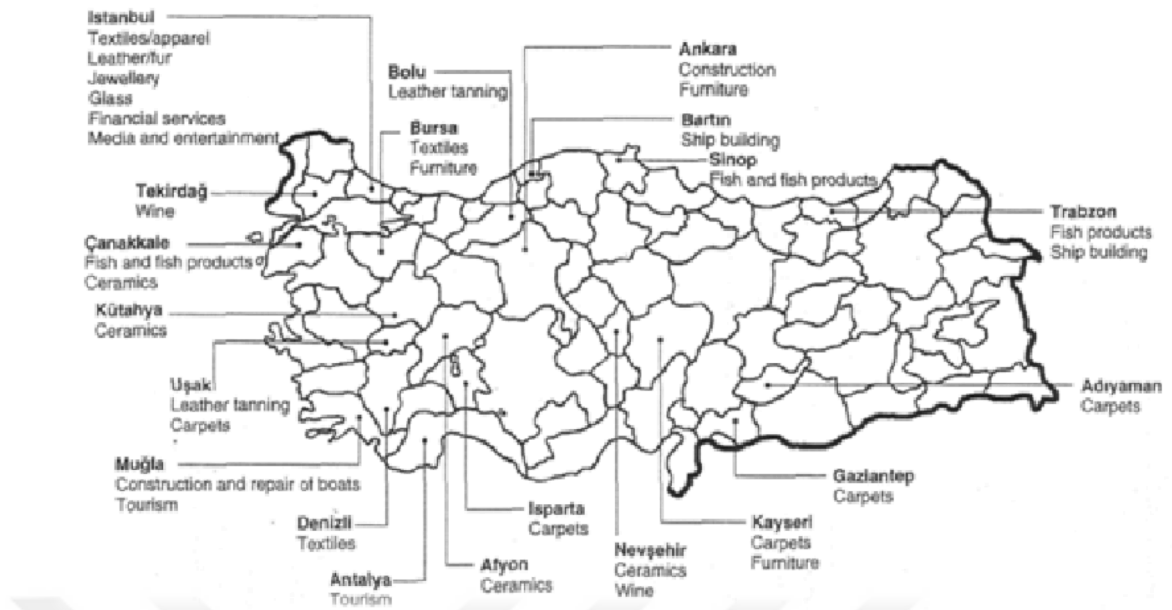


Fig. 9 Clusters in Turkey
Source: Öz

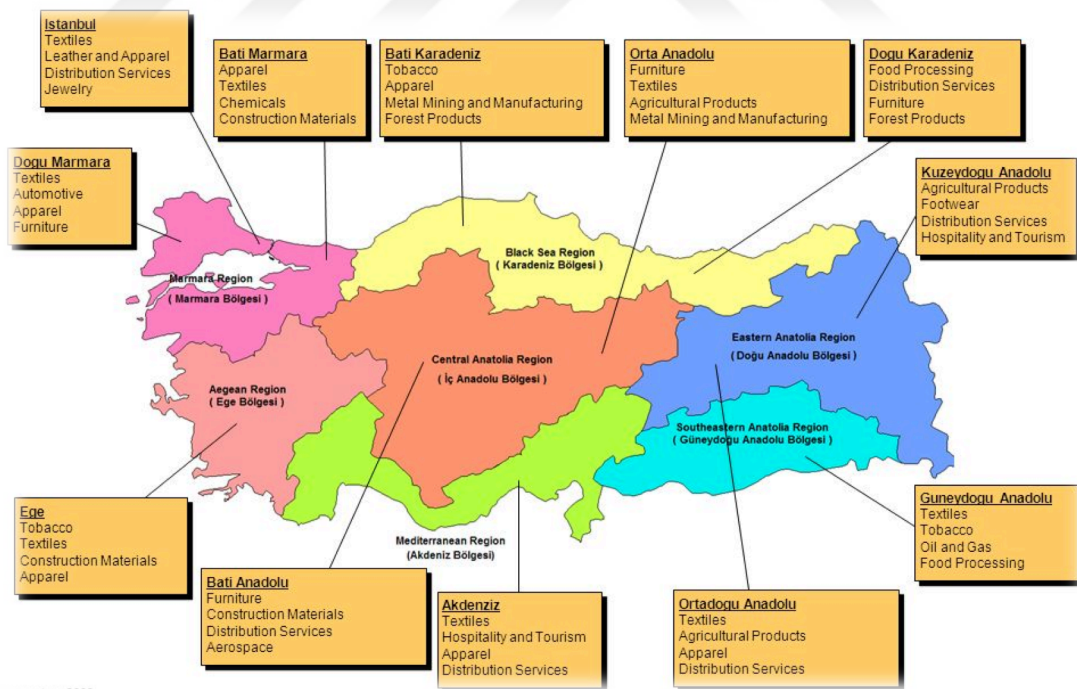


Fig. 10 Specialization by cluster of Turkish regions, 2007
Source: European Cluster Observatory

Table 2 is the location quotients calculated for 2002, Istanbul.

Table 2. Location Quotients (2002), Istanbul

NACE Rev. 1.1.	Sector	LQ Istanbul
66	Insurance and pension funding, except compulsory social security	3.6472
62	Air transport	2.8667
61	Water transport	2.1244
30	Manufacture of office machinery and computers	2.1234
18	Manufacture of wearing apparel; dressing and dyeing of fur	2.0113
19	Tanning and dressing of leather; manufacture of luggage, handbags, harness and footwear	1.8283
72	Computer and related activities	1.7854
22	Publishing, printing and reproduction of recorded media	1.7777
24	Manufacture of chemicals and chemical products	1.7747
31	Manufacture of electrical machinery and apparatus i.e.	1.7239
67	Activities auxiliary to financial intermediation	1.7171
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	1.4804
25	Manufacture of rubber and plastic products	1.4469
70	Real estate activities	1.4371
32	Manufacture of radio, television and communication equipment and apparatus	1.4298
33	Manufacture of medical, precision and optical instruments, watches and clocks	1.4293
21	Manufacture of pulp, paper and paper products	1.3250
35	Manufacture of other transport equipment	1.3150
92	Recreational, cultural and sporting activities	1.3134

Source: Cagla Nigar Mutlucan PhD Thesis

Table 3 is the location quotients calculated for 2012, Istanbul.

Table 3. Location Quotients (2012) – Istanbul

NACE Rev. 2	Sector	LQ Istanbul
59	Motion picture, video and television programme production, sound recording and music publishing activities	2.8185
98	Undifferentiated goods-and services-producing activities of private households for own use	2.6296
78	Employment activities	2.2037
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	2.0511
60	Programming and broadcasting activities	2.0483
58	Publishing activities	2.0108
64	Financial service activities, except insurance and pension funding	2.0099
32	Other manufacturing	2.0060
73	Advertising and market research	1.9835
14	Manufacture of wearing apparel	1.9798
62	Computer programming, consultancy and related activities	1.9172
70	Activities of head offices; management consultancy activities	1.8992
51	Air transport	1.8812
50	Water transport	1.8753
18	Printing and reproduction of recorded media	1.7468
53	Postal and courier activities	1.7226
65	Insurance, reinsurance and pension funding, except compulsory social security	1.7063

Source: Cagla Nigar Mutlucan PhD Thesis

6.5.10 Turkish hosiery sector

Hosiery is the clothing article that is worn on the feet. Hosiery is the most used underclothing item, as well as being a piece of garment that has a very short life cycle. Also named “legwear,” hosiery is worn inside shoes, in chilly weather, it prevents against cold. Also, since the feet produce a heavy amount of sweat in the human body, hosiery aid in absorbing the sweat and moving it to perspire. Knitted fabric in various thicknesses, hosiery includes all types of products for women, men and children. These undergarments include all machine-knitted goods and woven coverings put directly on feet and legs. Though in different shapes and textures, the history of hosiery dates back to very old times, for instance the appearance of socks knitted from animal hair date back to the fifth century B.C. in Anatolia, an indication of how early hosiery production started in these regions. There are two primary milestones for the evolution of hosiery production. The first one is the creation of the knit machinery in the year 1589, even though it was used frequently later in 1800’s. Whereas before socks were mainly composed of silk, cotton and wool, the other milestone is the emergence of nylon, and with its launching in 1938, yarns began to be mixed. Other than these achievements, seamless sewing was the other critical advancement in technology of the sector during the last few decades. Hosiery, not only consists of daily-use socks, but also is a fashion accessory, such as pantyhose for women, as well as involving medical items such as stockings for varicose veins.

As mentioned in previous sections, textiles and is among the primary businesses of Turkey’s economy in terms of GDP ratio, manufacturing share, employment figures, capital investment, and other economic benchmarks. Compromising 18.3 % share of total exports in 2013, Turkish textiles has a superior status in global markets also. According to ITC Trademap statistics, Turkey’s

clothing sector is the 7th ranking supplier in the world and also the 3rd ranking supplier of the EU (Ministry of Economy, 2016). As a sub-category of the expansive textiles umbrella, hosiery sector began in the 1990's in Turkey and in the last decades, pantyhose, stockings, socks and other types of hosiery manufacturing have been growing rapidly in Istanbul. Presently, more than 2,000 establishments are operating in the hosiery business, employing over 110,000 workers (Ministry of Economy, 2016). The sector achieved an output volume of higher than 2,2 billion pairs yearly with the capability of manufacturing high quality products that meet sophisticated demand standards and preferences. As the sector is very export-oriented, exporting more than half of the goods, in order to maintain the position of the sector in the world arena, producers take part in various fashion exhibitions and overseas fairs and Turkish hosiery goods are also displayed in fairs organized domestically.

By additional investments, the hosiery industry currently has a superior status in world markets, with progressive productive potential, improved technological methods, improved design ability and the high number of skilled employees. A sub-category of the successful textiles business, Turkish hosiery sector ranks 2nd in global hosiery manufacturing, following China. As it is apparent that quality, price and service are the major elements that affect the competitiveness in the industry, Turkey has much advantage. Turkey's hosiery products have well-established standing in global markets and have the capability of developing domestic brand names and designs. In addition, due to the flexibility of production systems, the firms are very adaptable to the evolving nature of trend shifts in fashion. With up-to-date and high-quality goods, the sector has been growing its exports, specifically for the customers in Europe who want higher value and superior products. Currently, Turkey ranks 8th

in cotton production and 4th in cotton consumption in the world, also ranking 3rd in organic cotton production, following India and Syria (Ministry of Economy, 2016). This input resource is especially significant for the hosiery sector, since higher than half of manufacturing is composed of cotton-knit production. Table 4 shows Turkey's position in the world in textile industry.

Table 4. Turkey's Position in Textiles Manufacturing in the World and EU

	Category	World Rank	EU Rank
Manufacturing	Thread	3	1
	Knit Fabric	2	1
	Woven Fabric	5	2
	Cotton	8	NA
	Organic Cotton	3	NA
	Hosiery	2	NA
	Carpet	3	2
Exports	Textile	7	2
	Clothing	7	3
	Knitted Clothing	5	NA
	Woven Clothing	9	NA

Sources: Ministry of Science Industry and Technology, Istanbul Chamber of Industry, Ministry of Economy

In 2013, the value of total Turkish clothing exports reached the amount of US\$ 15 billion, whereas knitted clothing and accessories had an export amount of US\$ 9.3 billion, having 61.8% share of total clothing exports (Ministry of Economy, 2016). Even though the globally unfavorable economic conditions affected clothing exports negatively, in 2009, the hosiery sector still received a share of 12.7 % in Turkish knitted or crocheted clothing exports and by 2013, hosiery exports formed 12.4 % of Turkey's knitted or crocheted clothing exports, with 7.7 % share in total clothing export amounts (Ministry of Economy, 2016). Between the years 2002 and 2011, hosiery export figures gradually increased and based on 2012 ITC Trademap statistics, in terms of value, Turkish hosiery industry is the 3rd ranking exporter in the world markets with amount US\$ 12.8 billion and a share of 7.7 %, coming after China and Italy (Ministry of Economy, 2016). Hosiery exports volume increased 16.1 % reaching an export value of 1.2 billion dollars in 2013, achieving a foreign trade surplus of US\$ 1.1 billion and tripling the export figures of 2002 (Ministry of Economy, 2016). Turkey is the 2nd biggest exporter in the world markets following China in terms of quantity (Ministry of Economy, 2016). Turkey's hosiery sector serves about 130 countries worldwide, as well as being the 2nd largest supplier of the EU. The EU is the major destination for Turkish hosiery products, with an estimated 90 % share, distributed as follows by countries; United Kingdom (24.4 %), Germany (20.3 %), France (9.8 %), Spain (7.9%) and the Netherlands (4.7%) (Ministry of Economy, 2016). Table 5 shows the hosiery production capacity in Istanbul.

Table 5. Hosiery Production Capacity in Istanbul

Province Name	Registered Producer	Personnel Details					Production Capacity		
		E	T	M	W	A	Total	Unit	Pair
Istanbul	760	490	376	1535	39486	6016	47903	58,415,550	922,027,170
Total	984	869	829	2699	73066	8900	86561	149,497,314	1,231,549,344
	77%	55%	45%	57%	54%	68%	55%	39%	75%

E: Engineer; T: Technician; M: Master; W: Worker; A: Administrative
 Source: www.sanayi.tobb.org.tr

Tables 6, 7, 8, 9, and 10 show the relevant export figures of Turkey with respect to other countries.

Table 6. Hosiery Exports of Turkey 2002-2015 (US\$ 1,000)

Year	Value	Rate of Change (%)
2002	393,288	
2003	527,489	34.1
2004	657,095	24.6
2005	728,370	10.85
2006	728,370	0.0
2007	856,369	17.6
2008	871,363	1.8
2009	881,063	1.1
2010	952,721	8.1
2011	1,056,734	10.9
2012	991,656	-6.2
2013	1,151,711	16.1
2014	1,216,563	6
2015	1,024,528	-16

Source: Ministry of Economy

Table 7. Major Hosiery Export Markets of Turkey 2011-2013 (US\$ 1,000)

Country	2011	2012	2013	Change (2012/2013)
UK	266,794	272,733	280,570	2.9%
Germany	214,784	199,790	234,023	17.1%
France	119,725	80,146	112,344	40.2%
Spain	80,223	75,112	90,478	20.5%
Netherlands	45,752	41,624	54,124	30%
Italy	39,015	27,285	37,849	38.7%
Sweden	37,432	34,731	36,104	4%
Belgium	36,701	33,562	35,569	6%
Russian Fed.	17,480	16,100	22,976	42.7%
Poland	13,978	16,983	22,663	33.4%
Others	184,849	193,589	225,012	16.2%
Total	1,056,734	991,656	1,151,711	16.1%

Source: Ministry of Economy

Table 8. Major Hosiery Export Markets of Turkey 2013-2015 (US\$ 1,000)

Country	2013	2014	2015	Change (2014/2015)
UK	280,290,601	318,172,441	286,150,274	-10%
Germany	234,003,998	252,334,422	207,582,856	-18%
France	112,208,632	127,450,608	100,270,891	-21%
Holland	54,121,495	50,340,268	46,418,016	-8%
Spain	90,454,614	58,429,417	44,509,086	-24%
Italy	37,808,846	37,767,383	31,670,353	-16%
Belgium	35,546,317	34,901,617	30,746,574	-12%
Sweden	36,103,914	38,370,355	25,003,798	-35%
Romania	14,578,509	26,478,840	24,133,975	-9%
Poland	22,663,000	20,329,391	18,476,566	-9%
List	917,779,926	964,574,742	814,962,389	-16%
Others	233,392,427	251,988,954	209,566,059	-17%
Total	1,151,172,353	1,216,563,696	1,024,528,448	-16%

Source: Ministry of Economy

Table 9. Knitted or Crocheted Clothing Exports of Turkey 2013-2015 (US\$ 1,000)

HS	Products	2013	2014	2015	Change (2014/2015)
6101	Men's/boys' overcoats, capes, cloak etc.	35,431	38,125	37,936	-0.49%
6102	Women's/girls' overcoats, capes, cloak etc.	30,140	37,802	38,985	3.13%
6103	Men's/boys' suits, jackets, trousers etc & shorts	348,749	374,371	338,533	-9.57%
6104	Women's/girls' suits, dresses, skirt etc. & shorts	1,211,741	1,369,948	1,272,573	-7.11%
6105	Men's or boys' shirts	242,611	258,946	237,394	-8.32%
6106	Women's or girls' blouses, shirts & shirt-blouses	532,896	573,039	541,048	-5.58%
6107	Men's/boys' underpants, nightshirts, pyjamas, bathrobes etc.	118,263	150,732	164,903	9.4%
6108	Women's/girls' slips, panties, pyjamas, bathrobes etc.	292,801	319,602	311,989	-2.38%
6109	T-shirts, singlets and other vests	3,276,038	3,566,429	2,979,122	-16.47%
6110	Jerseys, pullovers, cardigans, waistcoats etc.	1,629,288	1,753,886	1,613,651	-8%
6111	Babies' garments and clothing accessories	141,915	146,059	144,418	-1.12%
6112	Track-suits, ski-suits and swimwear	73,892	76,041	79,172	4.12%
6113	Garments, rubberised or impregnated, coated or covered	298	636	865	36.04%
6114	Special garments for Professional, sporting	115,268	85,349	85,516	0.2%
6115	Pantyhose, tights, stockings, socks and other hosiery	1,151,172	1,216,564	1,024,528	-15.79%
6116	Gloves, mittens and mitts	2,511	2,946	3,297	11.9%
6117	Clothing accessories, parts of garments	41,925	53,773	52,542	-2.29%
	Total	9,244,940	10,024,248	8,926,475	-10.95%

Source: Ministry of Economy

Table 10. Hosiery Exports of Turkey 2013-2015 (US\$ 1,000)

HS	Product	2013	2014	2015	Change (2014/ 2015)
6115.95	Full-length or knee-length stockings, socks and other hosiery, of cotton, knitted or crocheted	3,485	5,479	4,529	-17%
6115.29	Pantyhose and tights of textile materials, knitted or crocheted	74,390	70,273	60,150	-14%
6115.96	Full-length or knee-length stockings, socks and other hosiery of synthetic fibre	22,902	39,360	45,589	16%
6115.21	Pantyhose and tights of synthetic fibres, knitted or crocheted, measuring per single yarn < 67 decitex	258,667	248,651	158,573	-36%
6115.99	Hosiery nes, of other textile materials, knitted	19,322	20,654	16,977	-18%
6115.22	Pantyhose and tights of synthetic fibres, knitted or crocheted, measuring per single yarn > 67 decitex	13,362	12,561	8,761	-30%
6115.30	Women's full-length or knee-length hosiery, knitted or crocheted	620,140	671,935	596,722	-11%
6115.94	Full-length or knee-length stockings, socks and other hosiery, of wool or fine animal hair	107,348	114,150	106,890	-6%
6115.10	Graduated compression hosiery (e.g., stockings for varicose veins)	31,551	33,495	26,333	-21%
6115	Total	1,151,172	1,216,563	1,024,528	-16%

Source: Ministry of Economy

CHAPTER 7

DIAMOND ANALYSIS FOR COMPETITIVE ADVANTAGE

As of 2016, according to IMD World Competitiveness Scoreboard, Turkey stands as the 40th most competitive country (Note: There has been a debate over whether or not the word competitiveness can be used at the national level, as according to Krugman (1994), competitiveness of a country is a ‘dangerous obsession,’ as the major nations are not to any significant degree in economic competition with each other), ahead of some competitor nations in textiles such as Pakistan, Bangladesh and Vietnam, but behind other nations, i.e. China, India, South Korea, Italy and Spain (Institute for Strategy and Competitiveness, 2011). Turkey’s natural resources provide major advantages that contribute to the nation’s overall competitiveness. Most importantly, Turkey benefits from its geographical position at the crossroads of Europe, Asia, and Middle East, enabling Turkey to act as a regional trade hub with easy access to the markets in the surrounding regions. Turkey also benefits from the large amounts of land available for agriculture and the long coastlines and sea access for trade.

Turkey’s proximity to the EU is another major benefit as the wealthy EU countries have become Turkey’s main trade partners in textiles. Despite these advantages, Turkey’s proximity to the Middle East poses certain challenges given that the political instability of the region can affect investors’ perceptions of Turkey. As aforementioned, contrary to expectations, current research stresses that the process of globalization increases instead of decreasing the impact of geographical location on industrial performance (Maskell, 1998; Porter, 2000; Storper, 1997). As the highly popular promoter of the geographical clustering phenomenon, Porter points out, “In a global economy – which boasts rapid transportation, high-speed communication, and

accessible markets – one would expect location to diminish in importance. But the opposite is true. The enduring competitive advantages in a global economy are often heavily local, arising from concentrations of highly specialized skills and knowledge, institutions, rivals, related businesses, and sophisticated customers” (Porter, 1998, 90).

Turkey’s textiles sector gained a primary past during the period of industrialization and market orientation of the economy (Ercan, 2002). It is possible to say that the textiles industry is the leading sector of the national economy. The textile industry has a 5.5% share of GNP with production amounting to US \$ 20 billion and contributing an estimated 20% to industrial manufacturing, while total of textiles provides about 10% of national employment figures (SIS, 2004; IGEME, 2004). The major characteristic of the sector is that it is very export-oriented. As the textile sector was the first domain in the Turkish manufacturing industry to begin exporting, the sector gained the necessary experience because it faced with rivals earlier than other Turkish industries, thus, had to assess global competitive conditions. These days, the entrepreneurs in Turkey’s textiles sector are working on increasing the nation’s competitive advantage by developing systems in order to achieve sustainable global competitiveness in the long run. For the sake of this aim, a wide spread tendency to move away from the manufacturing of low value-added goods towards the manufacture of higher value-added commodities has been observed in the industry by taking advantage of the qualified and capable Turkish workforce (DEIK, 2000).

7.1 Hosiery sector findings

It is essential for sectors which focus on achieving to global competitiveness to adopt proper business strategies that encourage relationship building among the sector members as well as support information flows transfer from related institutions. These advancements help to create industry clusters that ultimately sustain global competitiveness of that particular sector. It was inferred from the in-depth interviews that two initiatives are important for understanding the hosiery sector in Turkey. The first one is the Socks Businessmen's Association that was founded in 1996 in Istanbul with about 20 industry-leading firms. As the civil society organizational activities began to grow in Turkey, the foundation objective of the Hosiery Manufacturers' Association was the development of the Turkish socks industry that is currently the second largest world manufacturer and exporter. The Association unites firms from the hosiery industry that have vision and entrepreneurial orientation and aims to help the hosiery industry to adopt contemporary technology in order to make it more competitive in foreign markets. The Association's goal is to help the hosiery manufacturers continue to strengthen and sustain, as well as to renew and develop novel technologies. The Association also works to effectively protect the interests of the members of the industry on government issues, with the Ministry of Industry, as well as help in lobbying and other public activities for the owner or shareholders of the industrial organizations.

The new initiative of the Turkish government, "Istanbul Socks and Hosiery Cluster," was developed in 2015 with the purpose of supporting Turkish hosiery firms in their attempts to expand to new export markets. The cluster was formed as part of the project called "International Competitiveness Project for Supporting Turkish Hosiery Sector in Entering New Export Markets," which is financed by the

Ministry of Economy in Turkey and coordinated by Istanbul Ready-Made Garment Exporters' Association. Working together with the Hosiery Association, the cluster is made up of 20 small and medium size Turkish firms manufacturing a broad variety of socks and other hosiery items for women, men and children. A need analysis of the hosiery sector was conducted and the results helped define project actions as well as identify fields that needed to be provided consultancy on. Three main areas appeared to need improvement, namely, corporate capability, productivity, and design. In addition to the consultancies, companies are targeted to explore export opportunities in new foreign markets such as China and the USA as part of the program. Throughout the project, the firms in the program will be participating in various activities, such as consulting sessions, trainings and trade missions where companies meet with potential buyers and solution partners in order to improve their export capacity. The project has three goals that will strengthen the export capacity of the firms included in the program; one is to improve corporate capability of project companies, which is targeted to cause more efficient organization and management skills as well as increased productivity to serve the expectations of new markets and consumers. Another goal is to enhance design capability of project firms, which will enable them to present a wider range of products for new customers in foreign countries. The last one is to enter into new markets that have not been previously experienced by the cluster companies. However, it should be noted that, although most of the firms in this project are located Istanbul, the implied definition is not necessarily of a geographical cluster.

Despite these important initiatives, it is necessary to note that the cluster term is interpreted differently from Porterian clusters in these cases, as representatives do not necessarily define the cluster concept as defined by Porter

and as this thesis adopts it, which is the geographical cluster. There are in fact a number of different meanings and interpretations of the cluster concept (Martin and Sunley, 2001). One main concern is that there is confusion due to the fact that terms with fairly different meanings are being used interchangeably in literature.

Regarding this disorientation, it has been suggested that there is a need for more precise definitions, at least with respect to the geographical and sectorial extent of analysis (ex. Enright et al., 1996; Malmberg and Maskell, 2002). During the research for this study, how the cluster concept has been put to use in various regional development projects were identified broadly as initiatives that help increase competitiveness and competence in an existing industrial base.

Practitioners, it appears, interpret the concept of a cluster as an analytical method for identifying and supporting activities that are not directly connected to the production of a firm, but rather as significant actions taken to increase the competitiveness of singular firms. One finding of this research is that the representatives of the sector use the term cluster very generally, in order to describe actions ranging from attempts to strengthen local SMEs, to building regional brands, to entrepreneurial activities in order to establish a new industry cluster.

7.2 Origins and entrepreneurial orientation of the Istanbul hosiery clusters

Although cluster formation presents a number of opportunities and benefits for the firms in the cluster, as well as for the region, the development of such a formation is not a straightforward process. One of the most essential factors for cluster establishment has to do with the presence of entrepreneurship and appropriate business mentality, since the evolution of a cluster requires knowledge and information exchanges which warrant a certain level of mutual trust. Strong

infrastructure is also an important component for cluster development as it helps in attracting capital investments to the region and the most important barrier to cluster formation is observed to be weak infrastructure (Asian Development Bank, 2001; Rosenfeld, 2003). Another fundamental factor for cluster formation is related to potential human capital and in particular the presence of skilled workforce. Finally, access to capital is also important, as this influences the adaptation and the implementation of new technologies, which are necessary for maintaining cluster-based economies, thus, limited finances is a serious handicap for the advancement of clusters. Hosiery sector production, concentrated in the geography of Istanbul, has been observed to be driven mainly by advanced infrastructure, good relations with foreign markets, export-oriented industrialization, natural endowments, favorable overseas market conditions, as well as gradually formed sophisticated production networks which are well-connected with each other. Hosiery is a largely labor-intensive, export-oriented industry, and Istanbul hosiery sector has risen rapidly after the beginning of the initial clustering in the Yesildirek district, driven mainly by small to medium sized enterprises. The economic environment is rather similar to the Third Italy model of flexible specialization and has contributed to the economic strength of the surrounding region. Based on theory, production facilities tend to form clusters to take advantage of agglomeration economies and proximate markets and Yesildirek hosiery cluster followed a similar path around the time of the economic transition of Turkey to a liberal economy. There are some other hosiery clusters around the world, for example in Hickory, North Carolina, USA and in Castel Goffredo, Italy (Rosenfeld, 1997).

The geographical concentration of economic activity matters because it has an effect on the rate of growth of the region. The concentration of economic activity may appear as industrial clusters or it may just involve high level of economic agglomeration that is seen in metropolitan areas. Either way, as mentioned in the previous chapters, there is evidence to suggest productivity increases in regions where economic activity is geographically concentrated, as such, there is always interest in understanding the mechanisms that cause such higher productivity and financial benefits. Agglomeration economies are generally considered as the main factor for the reason why production concentration occurs and Puga (2010) summarizes that agglomeration economies can be analyzed from three aspects. One is that production is denser geographically even after controlling for random factors and comparative advantages. Second is that wages and rents are higher in larger urban areas than in smaller ones. Finally, productivity is usually higher where there is a concentration of manufacturing activities. In literature, reasons for agglomeration economies are usually categorized into urbanization economies, localization economies, market conditions, natural advantages, and transportation costs. In another line of research, labor resources are recognized as a major case for agglomeration and as previously stated, it is worth noting here once more that the hosiery industry is a relatively labor-intensive production industry. Dumais, Ellison and Glaeser (2002), find another significant argument for agglomeration in labor market pooling. In their study, Rosenthal and Strange (2001), on a series of agglomeration factors including transport costs and natural advantage, find that labor market pooling has the strongest impact on industry agglomeration, which they find significant at all geographical scales. Ellison, Glaeser, and Kerr (2010) further explore the reasons why firms from 28 different industries tend to be located near

one another and find that industries that buy similar inputs and use similar labor pools tend to be present in proximate environments. Duranton and Puga (2004) establish another framework to understand agglomeration economies, in which they argue that firms choose to locate near each other because of sharing, matching, and learning activities. Firms that are proximate to one another share common labor resources, suppliers, and infrastructure, as well as learn from each other. Hence better relationships are formed between employers and employees, buyers and suppliers, as well as business partners.

Turkish textile and garment industry is increasing its global importance as 1/5 of Turkey's exports come from the textile industry and Turkey is the 7th biggest exporter in the globe and also 3rd biggest producer in Europe. The textile and clothing industry plays a primary part in national economy on the basis of gross domestic product amount, employment figures, export volume and make a significant addition to the Turkish economy. The large customer base, the availability of resources, and the presence of inexpensive skilled workforce have been the major determinants of advantage for the advancement of the Turkish textiles sector. These are the elements that provide a great potential for the competitive advantage of the country. The textile industry continues to be one of the leading sectors in the country by providing 17.5 % of total exports in 2014 by amounting to \$27.6 billion, up about 8 % from \$25.8 in 2013 and this increase in exports was due to a lessening of economic difficulties in the EU market and Turkish exports diversification strategy in new markets (GAIN Report, 2015). Around a total of 53,000 firms are present in the textiles industry, creating an estimated 400,000 million positions only (GAIN Report, 2015). The improvements in the Turkish textile sector has brought about advancements in the hosiery industry as well and as of today Turkish hosiery sector

has managed to gain a considerable position in the global arena. Turkish hosiery industry is one of the most improved sub-categories of the garment and clothing sector and the country is the 2nd biggest sock exporter in the world, ranking just behind China. Turkey's production of pantyhose, tights, stockings, socks and other hosiery products reached more than 2.2 billion pairs in 2015, in terms of global production and Turkish socks sector has been increasing its overseas exports and global market share every year with quality production and product variety.

The textiles sector has been the strength of the national economy beginning around 1980's and, since then, the sector has matured swiftly, becoming a major contributor to the country's revenue by the 1990's. Textile production is present in almost every region and city of Turkey, but the Marmara region is densely populated with textile production facilities and Istanbul is the leading city in production of textiles. The Marmara region has a critical part in the national economy, industrial manufacturing, and exports. The primary advantage of the Marmara region is due to the economic and commercial center of Turkey, which is Istanbul. With respect to the data based on the "Address Based Population Registration System by Turkish State Institute of Statistics", domestic migration to Istanbul goes on at a high level. Although different types of industries may have different spatial patterns of clustering, most of them tend to be geographically concentrated in areas where the majority of the population and economic activities are located. Istanbul is Europe's 3rd and world's 21st biggest city and if these trends continue, it is expected to be the most crowded city of Europe by 2020, hence, Istanbul also receives a considerable amount of domestic and foreign investment. Istanbul is a significant city for the textile sector due to its fashion and shopping centers that reflect the city's unique oriental, historical and East-meets-West characteristics. Istanbul, having become a

center between Asia and Europe, also is a home headquarters, global companies, major retail brands, as well as famous department stores. Consequently, Istanbul is turning into a well-known fashion and shopping attraction and the world's largest retailer companies are opening branches in the city that is why many foreigners have added Istanbul to their shopping destinations. Fashion Week is held in Istanbul biyearly to secure acknowledgment for Turkish brands and designers and where the fashion collections are presented for both the national and international frontiers. Relating to the hosiery industry, an event was organized where sock knitters, garment makers and fabric producers recently gathered in Istanbul to attend an invitation-only seminar arranged by Istanbul Textile and Apparel Exporters' Association (IHKIB). The purpose of the meeting was to inspire the hosiery manufacturers of the sector to expand their horizons and offer more sophisticated, superior quality and higher value-added products to consumers. In another event, major firms representing sock and hosiery knitting mills, yarn spinners, packagers and domestic and international retail brands gathered recently in Istanbul for an update on the latest developments and trends in the knitting sector. With Turkey closing on China as the second largest global producer of hosiery products with over 90% of its output destined for export, the meeting brought the sector's leading sock manufacturers as well as representatives of international brands and retailers together and with the aim of promoting further development and contributing to the sustainable growth of the industry.

Geographical location, cultural norms and trade relations are potential determinants of commerce relations among countries. Geographical proximity is particularly relevant as it strongly affects shipping fees. Turkey's closeness to EU countries is a major advantage as it results in lower shipping costs and economical

insurance costs related to the country's main rival in the world hosiery market, China. Proximity also allows for efficiency as supply times are lower for near destinations and speedy shipping and on-time supply is a source of potential advantage in the world markets. As one sector representative mentioned, "In the textile and apparel industries, fashion trends and customer demands are constantly changing, therefore, it is especially important to maintain constant supply and on schedule delivery of new products. A longer delivery time will diminish the term when the product is fashionable and hence a shorter period in which the goods could be sold at full price." To sum up, Istanbul hosiery clusters make up for the increasing production costs with reliable distribution times due to the country's proximity to the EU market. The presence of a considerable amount of small and medium size firms residing in the Marmara Region supplements the competitiveness of hosiery sector as well, as clusters in emerging economies are likely to consist mainly of SMEs (Schmitz, 1995; Schmitz and Nadvi, 1999).

Geographical proximity to major markets, fast delivery, timely supply that satisfies demand, contemporary equipment, quality production, and the variety of products may be listed as the major strengths of the hosiery clusters located in Istanbul. Also, the performance of the hosiery industry is mainly fuelled by the existence of a large domestic market as with its young and increasing population, Turkish market is gradually becoming more sophisticated, which will lead to increased product diversification in the hosiery sector. Hosiery production, as a traditional labor-intensive industry, requires a substantial amount of labor force and because Istanbul is the most populous city of Turkey and hence has the biggest employee pool, it is another important source of competitive advantage. Other contributing factors for competitiveness aside from proximity to the EU market and

trained work force include the availability of the domestic cotton supply, and the advancements in infrastructure and telecommunication systems. Looking into the future, with decreasing lead times, better price/quality ratio and emergence of domestic brands, hosiery sector has the potential to be among of the most competitive textile clusters of the globe. However, according to a representative of the sector, “Restructuring should be put on the strategic agenda of hosiery firms in order to improve quality, upgrade management and marketing skills, improve logistic performance, obtain certifications, and attract foreign investment in order to increase product variety and manufacturing capacity.” The common perspective among members of the industry is that Turkey needs to create more value-added and higher-quality goods, and most importantly, become an original design and brand producer. However, as another sector representative mentioned, “Impressing quality market segments require advanced design and marketing skills, but the financial limitations and SME structure of the industry are the biggest weaknesses when moving forward.”

7.2.1 Yesildirek hosiery cluster (spontaneous cluster)

The beginning of the hosiery business in Yesildirek in the 1970’s reflects the entrepreneurial orientation of the firm owners of the past times. Yesildirek, in the Old City part of Istanbul, is located very close to the Grand Bazaar, which is one of the biggest and oldest markets of the world. History can be said to have a major part in the formation of the initial Yesildirek hosiery cluster thanks to the economic geography of the region as analyzed in detail in the above sections. The colorful and crowded Grand Bazaar is the heart of Istanbul’s Old City and has been a major

attraction for tourists for many centuries. Built in the fifteenth century, the Grand Bazaar, today, houses more than four thousand shops and attracts up to half a million visitors each day. Covering an area of 54,653 square meters, it still ranks as one of the world's biggest covered markets, this dome of 56 interconnecting passages with neighboring stores lining the lanes where tenacious shopkeepers use endless tricks to make sales. The initial Yesildirek hosiery cluster consisted mostly of small and medium enterprises that originally had been mainly established in the vicinity and from there successfully grew, and some moved to new locations and some to the Ikitelli Zone, which is the second cluster of case study in this thesis.

The SME firms in Yesildirek generally operated as wholesale stores facing the streets in the center of the town, but the manufacturing facilities were also located in the nearby areas. In the research into the process of formation of the Yesildirek spontaneous hosiery cluster, it was found that the proximity to the Grand Bazaar and the local bazaar-like marketplace environment of the surrounding region play a primary role in attracting new comers. It can be said that the hosiery manufacturing district of Yesildirek (spontaneous cluster) was initiated by the activities of several visionary entrepreneurs. "We really owe those who started the initial hosiery sector here because it was them who realized the opportunity that the industry has for the future and they were very much self-driven," described a third-generation firm owner. Risk-taking propensity of those early entrepreneurs was the needed fuel for the birth of the hosiery sector in Istanbul. "The early entrepreneurial investments came mostly from their own personal savings, pretty much without any loans from banks. We are really thankful that they had much risk-taking capacity that resulted in their investigating in this field," says a representative of a Yesildirek firm. It should be noted that the Turkish hosiery sector has initially begun with the efforts of a few

entrepreneurs from a town in Anatolia, called Corum. Even today, the people in the sector are predominantly from this town, therefore, there are relationships based on kinship in the Istanbul hosiery clusters, which we analyze further in this thesis under the headline of fellowtownmanship mechanism. The entrepreneurial orientation of the hosiery sector is a main competitive advantage factor that the sector has gained in time thanks to the initial enterprise owners. It can also be inferred from the interviews that the entrepreneurial spirit of the early firm owners is the main internal factor that supported the sector in getting to the level it is currently at. The central district, where customers could easily purchase goods, where local shops could buy materials from neighboring suppliers, and sell to visiting tourists supported the growth of hosiery industry in the early cluster emergence stage. An important finding of the research is that the results suggest, that interviewees obtained almost all of their input from other supplier firms in Istanbul. One elderly Yesildirek firm owner described, “We put everything together on our own. We learned the manufacturing process, gathered the raw material from the sellers, bargained with them and served the customer as best as we could.” An important concept when analyzing a cluster is to examine production channels of the region and this availability of related and supporting industries in and around Istanbul is another main competitive advantage factor for the hosiery sector. Figure 11 is map of Yesildirek and Figure 12 is a picture from the marketplace.



Fig. 11 Yesildirek
Source: Google



Fig. 12 Yesildirek's marketplace
Source: Google

As the Grand Bazaar and the Old City region of Istanbul are intense tourist attraction sites, the locals of Yesildirek always had direct one-on-one interactions with overseas tourists and had up-to-date information on current global markets. More importantly, through face-to-face meetings in the market area, close relationships between local manufacturing firms and foreign merchants developed via these liaisons. According to Humphrey and Schmitz (1996), “The establishment of efficient marketing channels capable of effectively responding to changes in the external markets is important for cluster development.” As one Yesildirek respondent explains, “Almost every day we were with offshore customers, tourists mainly from Europe; Greek, German, French, even Russia. Most of us had even already learned some English language from communicating everyday with foreigners.” Knorringa (1999) notes that, “Those foreign merchants are the prime source of demand information for producers in the cluster.” It can be deduced from the interviews that the entrepreneurial orientation of offering improved products and selling them to other countries played an essential part in the Yesildirek hosiery cluster development period. The success of the Yesildirek hosiery cluster was of course also due to the fact that the foreign buyers were satisfied with the maintenance of prompt delivery of products, and the guarantee of unflawed goods. Concurrent with this data, the function of international buyers in the improvement of producers within the cluster is also noted to be important in the studies conducted on clusters (Humphrey and Schmitz, 2000; Schmitz and Knorringa, 2000). It is also apparent from the interviews that, with the marketing opportunities brought about by sellers from abroad, the hosiery cluster in Yesildirek further advanced and this finding indicates that one of the main reasons why the Istanbul hosiery industry is so export-oriented is the fact

that the local entrepreneurs had the capacity to respond to market opportunities all around the world.

“One of the most important criteria of a cluster’s energy is its rate of new business formation, which stems from three sources: imitators, complementary products or services, and diversification based on existing skills and technologies” (Rosenfeld, 1997). In the initial phases of cluster organization in Yesildirek, it is obvious that the formation of the market allowed new comers to easily establish firms by the high level of commodity transactions in the region facilitating entry to the market. However, as the hosiery market became more established, this greatly decreased the barrier to entry, even imitators came to business, which led to over-production and lowered profitability. Schumpeter (1942) argue that “A manager who launches a new business, introduces new products and production methods, and enters new markets plays the role of an entrepreneur, who earns substantial profits in the beginning and who later on becomes followed by imitators.” Therefore, leading manufacturers were forced to improve the quality and as well as look into new markets for their products. The interviewees mentioned that, at the beginning phase of cluster evolution, price-based competition between firms was high, nevertheless, later on, as the leading firms stated to improve their goods, competition on quality became stronger. As one elderly firm representative explained, “At the beginning, the customers used to go to the shop that sold for the cheapest, however, in a couple of years, the buyers started to look for quality. That’s when we knew we had to do better and started to produce special goods.” This quality improvement was majorly due to the increase in foreign demand, but also partly in reaction to the elevated interest for superior goods in the home market as well. The reward was entrepreneurial profits in Schumpeterian terms (1934). “Cluster literature emphasizes

that vertical cooperation through specialization and division of labor among enterprises is strengthened when the quality of goods, as well as speed and flexibility of production, is improved” (Rosenfeld, 1997). In the case of Yesildirek, it can be said from the respondents’ portrayals that such inter-firm cooperation developed steadily between hosiery manufacturers and supporting industries in the region, such as machinery repairing, packing, labeling, and shipping, etc., resulting in an upgrading of the whole hosiery manufacturing process. Afterwards, in the next phase, when trade relations with external markets turned more intense, technical and marketing skills became more important and the transition into this stage required investment and innovation. Fortunately, this period also coincided with the rapidly rising income levels in the nation during the period of industrialization, giving the sector the extra push for competitive advantage in the global hosiery industry.

Oz (2004) cites entrepreneurial outlook as one of the common characteristics of competitive clusters. Aside from the distinct advantages of Istanbul in terms of natural endowments, transportation facilities, and labor resources, a main contributory factor to the advancement of the hosiery sector seems to be the entrepreneurial climate in the Yesildirek area. In addition to the initial entrepreneurs of the sector, in the next phases of cluster evolution, the entrepreneurial orientation has been particularly strong also in the employees of Yesildirek region, who later founded their own businesses. An interesting revelation of the interviews is that individuals with entrepreneurial spirit, who previously had been workers in other firms, started their new ventures and began to engage in marketing activities with foreign customers. In literature (ex. Rosenfeld, 1997) this is also touched upon, that, in dynamic clusters, workers yearn to later turn into owners themselves and this is a main reinforcing element to the entrepreneurial atmosphere of the cluster. Most

founders of hosiery SMEs in the clusters of the case studies previously worked in other companies, most of them in the initial Yesildirek enterprises. As one Yesildirek firm owner, who previously was an employee in a hosiery firm explained, “I was a manager in the company and later, told my bosses that I wanted to try standing on my own feet. They were glad and supportive when I started my own small facility. And now, I am my own boss.” Moreover, some new firms got established when a large company closed up or downsized and workers who were forced to find new jobs ended up starting their own new businesses. Former factory employees, who entered the hosiery business increased in the 1980’s, who were mainly spin-offs from the local facilities in the stage of cluster development looking for new economic opportunities. “Some of the synergy of clusters is a result of the skilled and entrepreneurial workers seizing opportunities to take advantage of innovations or new technologies and end up establishing their own new businesses” (Rosenfeld, 1997). These new entrepreneurs tended to be knowledgeable in business and had acquired the necessary skills before starting their own ventures and therefore their actions reinforced the growth of the cluster.

“The know-how needed by entrepreneurs is more likely to come from experiences in family and neighborhood businesses than from school or internships in large corporations. Thus, entrepreneurship is in part ‘hereditary’” (Rosenfeld, 1997). And this seems to be one of the reasons why the hosiery sector tended to grow fast in the early 1980’s, as many entrepreneurs in the region began manufacturing new varieties and higher-quality products. The Yesildirek area became famous for the production of hosiery and the number of manufacturers increased over time as the business became more profitable due to buyers flowing to the region. Yesildirek locality had the geographical advantage because firms were able to conveniently

obtain all the required inputs, such as fabrics, dye, thread, accessories, etc. in Istanbul and sell their finished outputs on to buyers coming from foreign nations to the city. As Cannone and Ughetto (2014) note, “Not only entrepreneurial orientation but also network relationships built up by the entrepreneurs are key drivers for both early internationalization and the scope of international expansion as leadership and identification of possibilities in new markets are essential features of entrepreneurship.” It can be concluded that aside from the centrality of location and the transaction volume of the marketplace, direct contact with foreign buyers facilitated the advancement of the hosiery cluster in Yesildirek. “The local entrepreneurs also learned from each other as we were hanging out together all day talking about business,” remarked an interviewee from Yesildirek. Creating product brochures, ways to negotiate on contracts ways to decrease costs were the kind of information entrepreneurs received from one another. According to our interviewees, the upgrading of the products to higher quality segments was due to direct transactions and close relationships that occurred directly in the Yesildirek district among local producers and wholesalers of foreign countries. These wholesalers brought information on foreign demand to the cluster, which is a very important demand condition according to Porter’s diamond model as explained in further detail in the previous chapters. Through these exchange relationships, information passed on to members of the cluster as there were no search costs in the Yesildirek district where firms and foreign buyers could readily come together in the marketplace. These information spill-overs were what has supported the hosiery industry’s growth at a steady pace and how the industry has further developed over the years.

As Rosenfeld (2003) puts it, “Although innovation is what fuels clusters, entrepreneurship is what makes them grow. Every known competitive cluster has both its innovators and its entrepreneurs.” As said, the beginning of the hosiery business in 1970’s in Yesildirek indicates the entrepreneurial orientation of the firm owners of the initial period. In fact, as the Yesildirek cluster prospered, the importance of production knowledge and marketing capability and the role of entrepreneurial ability grew as the level of competition rose. Consequently, visionary entrepreneurs focused on quality upgrading and this inherent strategic management mechanism can be seen as the one of the main competitive advantage determinants supplementing the progress of the Istanbul hosiery industry in the global arena. This was a very booming time for the general Turkish economy as well, as the foreign policy was intent on opening the country to global markets and industrialization was going on full force. The location pattern of the hosiery manufacturing industry, together with the process of economic liberalization, put the sector on the rise. Therefore, parallel to general economic trends in the 1990’s, the number of firms in Yesildirek hosiery marketplace gradually increased over time as well as firm sizes, the quantity of production, and the number of employees. As said, entrepreneurial energy has been particularly strong in the spontaneous hosiery cluster in Yesildirek region, and as businesses grew, firms began looking for bigger production facilities, either in the Ikitelli Industrial Zone induced cluster, or some other location in Istanbul. Today, still, most of the entrepreneurial hosiery businesses are mainly family run, though there are growing concerns, such as the rising cost of production technologies and limited financial resources. According to the sector representatives, however, it is becoming harder every day to access funding for the textile business, therefore entrepreneurial energy is hampered and interest among the second-

generation firm owners to with continue with SME ownership is declining. Findings of this research shows that the hosiery cluster in Yesildirek was triggered and progressed further thanks to the regional entrepreneurial atmosphere as well as the effective local networks, however, today, the sector still has shortcomings. There is yet more to be done to reach the capabilities achieved by the hosiery cluster in Castel Goffredo in Italy, in which industry specific competencies have empowered the cluster to secure a superior place in the global markets in high quality product segment.

7.2.2 Ikitelli Organized Industrial Zone Corapcilar Sitesi Hosiery Cluster (induced cluster)

As said, originally the hosiery market became established near the center of the city, Yesildirek district, close to the Grand Bazaar, but as the volume of business increased rapidly, larger spaces were needed, creating the need for shifting some of the production facilities toward other locations around Istanbul. This is about the time that a second hosiery cluster appeared inside the Ikitelli Organized Industrial Zone, the biggest industrial center in Turkey. Ikitelli Organized Industrial Zone (induced cluster) was founded by the trade chambers of Istanbul Union of Chambers of Tradesmen and Craftsmen and managers of sub industry trade associations in 1984. Its major development process, however, began in the 1990's when the construction was finished. Today, there are 38 cooperatives and about 30,000 workplaces in the Ikitelli Zone and the number of the workers employed within the zone has almost reached 300,000. Located on an area of almost 700 hectares, it is the most expansive industrial zone based on production potential and number of accommodated businesses and the Corapcilar Sitesi is just one of the cooperatives in

the Ikitelli Zone. The Corapcilar Sitesi cooperative, which is the second hosiery cluster that was researched for these cases studies, was established in 1985 and was built on an area of 52,100 m² with 96 workplaces. Figure 13 is a map of Ikitelli and Figure 14 is a picture of Ikitelli Industrial Zone.

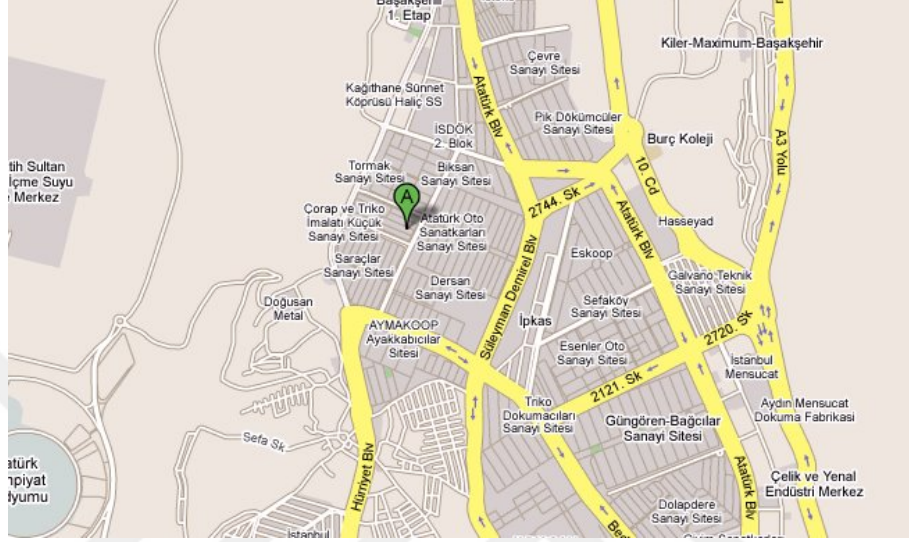


Fig. 13 Ikitelli Industrial Zone
Source: Google



Fig. 14 Ikitelli Industrial Zone
Source: Google

During the interviews, several interesting facts were revealed about the formation process of the new industrial cluster. Expectedly, the amount of face-to-face interactions with foreign buyers was more for firms situated around the Yesildirek market, in the center of the town; due to high proportion of overseas traders who usually visited the shops lined up side by side on the street. This is the advantage of a central location. For firms who decided to move to the new location, Ikitelli, there was the risk of not reaching the customer potential in the central Yesildirek region. Respondents remarked that, on average, the availability and cost of labor and raw materials are same in both hosiery cluster locations as well as access to related and supporting industries, in line with Marshallian industrial districts as both clusters are in Istanbul. The findings clearly indicate that the central location initially had the shortcomings of high rent, traffic problems and limited space disadvantages, in contrast, initially, the factories in the Ikitelli Zone were much more advantageous in terms of availability of space, cheap rent, and electricity. Originally, the factories in the Industrial Zone were much larger and comfortable in terms of production, however, today, the respondents claimed that they are not satisfied with the conditions in the Industrial Zone with respect to current volume needs. We noticed that entrepreneurial orientation during the development of clusters is an area that should be concentrated on, to get an understanding on the differences in the forms of interaction between the two types of hosiery clusters. Therefore, we find it proper to pay attention to the outcomes the changing of location in the process of cluster development has brought about, i.e., between the initial spontaneous cluster at the central location of Yesildirek vs. the later established induced cluster in the Ikitelli Industrial Zone. Since the Ikitelli Zone can be categorized as an induced cluster as it has been established via initiatives from trade associations, this thesis is

relevant in focusing on the differences between induced vs. spontaneous clusters. Research provided empirical evidence that geographical proximity is important for interactive learning and knowledge spillovers, particularly in the Yesildirek region, which has a high density of businesses related to the hosiery industry and the network ties are utilized to a good degree. However, the research findings of the case studies have implications for the preoccupation with geographical clusters because results reveal that spatial benefits do not apply to all cases, as the network ties are not utilized to their potential in the Ikitelli Zone. In terms of the geographical level of empirical analyses, it is clearly demonstrated that the system that makes up the induced cluster is not well connected beyond being logistically close, therefore the firms do not benefit from the advantages of being located within a cluster. Therefore, there is need for much improvement in the case of the induced hosiery cluster Ikitelli Organized Zone as will be further analyzed in the upcoming chapters.

7.3 Competitive advantage sources in the Istanbul hosiery sector: Diamond Analysis

In this part of the study, the research problem of whether there are any distinctions in the diamond factors and how this relates to competitiveness of the clusters in the spontaneous vs. induced clusters will be investigated. The export-oriented hosiery industry was selected as the context of this research as the textiles is a pillar industry for Turkish economy and constitutes a large portion of the nation's export-oriented production industries. Istanbul hosiery clusters have a competitive structure with the potential to fend off the current problems the Turkish textile sector is facing due to the pressures from international competition. As part of Turkish Ministry of Economy's 'Supporting the Improvement of International Competitiveness' manifesto, 'The Expansion of Socks Manufacturers to the Foreign Market'

introduced a project coordinated by Istanbul Garment and Clothing Exporters Association (IHKIB). The project aims to support businesses in the hosiery sector and help them upgrade their value chain in order to improve their competitiveness in the international market. Supporting the power, the important and dynamic sock sector gained in recent years, the objective of the project is to reach Turkey's 2023 export target and maintain sustainable increases in volume as well as market varieties. 19 Turkish hosiery manufacture enterprises have come together for this project, putting their collective needs and objectives into perspective; such as becoming a customer oriented, fast and efficient producer, designer and manufacturer of brands, innovative developer of collections, manager and marketer of effective production channels. In accordance to the above objectives, the main goal is to increase quality as well as global market share.

In the global arena, the competitiveness of production industries have shifted away from high-labor segments towards hi-technology segments and this has implications for the hosiery industry as well. While better strategic management can significantly enhance the sector's global position, the hosiery sector owes its worldwide competitive structure to several determinants. The advancement of the Istanbul hosiery industry was primarily based on the competitiveness of their products, which could be summarized into three categories. First is the cost advantage, as labor is cheaper compared to developed countries and Turkey is an important cotton producer of the globe. Another is quality advantage, as Turkish hosiery export products have superior quality and more variety compared to under-developed countries. And finally, the advantage of Western technology, as investments in the textile and garment industry has been extensive and the advanced technology and equipment is at the level of developed countries. However, on the

downside, the low level of innovation and limited production of value-added goods are the basic disadvantages of Turkish hosiery industry. Rosenfeld (2003) describes another hosiery cluster as, “The resiliency of North Carolina's hosiery cluster has been mainly due to the strength of its local trade association and its ability to rally the companies around a common crises of global competition and of the effects of an increasingly consolidated customer base.” Istanbul hosiery clusters, on the other hand, do not have these strengths unfortunately.

Porter (1998) states that competitive advantage, which brings about industry domination, is gotten through intensified production, guiding the focus and speed of innovativeness, and lastly by triggering the emergence of new businesses. Clusters are a mechanism for every firm to be able to operate as if were bigger, acting as a channel for being joined together with other firms informally while staying flexible. Increased production, innovativeness and emergence of new businesses are stimulated by wider connection to labor and supplier industries, more sharing of specialized information and complementarities, and easier connection to private and public institutions. Cluster members are also motivated to perform better as a result of environmental pressures since the firms in the cluster often share common resources and performance criteria of neighboring firms becomes the yardstick for success. It was inferred from the interviews that the synergy within the firms in the induced cluster are not as strong and the linkage of firms is weaker compared to the links in the spontaneous cluster. Therefore, the end of this part, there is a review section on quality, technology, branding, and labor management of industry clusters relating to competitive advantage, industry progress, and complimentary associations in order to increase the competitiveness of the hosiery sector of Istanbul.

7.3.1 Factor conditions

There were a couple of valuable findings from the interviews relating to the factor conditions of the hosiery sector in Istanbul. All the interviewed firms state that Istanbul is a very important and convenient position for the hosiery firms to be located in, as it is close to yarn manufacturers, label producers, packaging companies, accessory providers as well as labor sources. An important part of analyzing a cluster is to examine the production relationships within the cluster and the findings of the study suggest that respondents obtain nearly all of their inputs from other firms in Istanbul. As all these supporting industries are distributed in and around Istanbul, that is why almost all firms stated that it would be difficult to be efficient in this sector if located anywhere other than Istanbul. There is substantial sector knowledge and specialized supplier firms clustered around Istanbul which promotes efficient production with prompt delivery with respect to due dates. Another advantage of Istanbul is that, as most firms export mainly to European and Russian Federation countries, logistically the city is also close to all these regions. This is considered a main advantage for timely shipment compared to the far away location of China, which is the globe's top manufacturer and exporter of hosiery. Although Istanbul has the logistics advantage, even being in a closer time zone, China has the advantage of cheap labor cost and inexpensive raw material. On the downside, although Istanbul is the base for supplier industries and labor resources, almost all firms say that Istanbul is very expensive in all these factors. As Istanbul is the largest and most cosmopolitan Turkish city, the prices are not moderate in terms of rent, transportation, labor, energy prices etc. Another main advantage of the sector that the respondents mentioned is that Turkey is a very significant cotton producer of the world. As the main input for the textile industry, this is an important factor

advantage for the overall textile industry in Turkey as well as the hosiery sector in Istanbul. Although there is also skilled labor available around Istanbul, due to the fact that hosiery is a very labor-intensive industry, the workers want desk jobs where they can earn more. As one of the interviewees stated, “Total hosiery export of Turkey is 1.2 billion dollars, however compared to much bigger industries, we hire more employment comparatively.” Although skilled labor that is knowledgeable on hosiery is abundant around Istanbul, on the downside, machinery is still imported from abroad, as these kinds of machines are not produced in Turkey, still, technical services are well provided for in the Istanbul area.

7.3.1.1 Labor

Diamond framework by Porter stresses the importance advanced and specialized factors of among the factor conditions. Therefore, part of the in-depth interviews aimed to investigate the basic and advanced factor conditions of the sector, trying to explore how the Istanbul hosiery sector matured based on Porter’s model. As previously noted, hosiery industry is a relatively labor-intensive field, labor expense being the main part of production costs. It is believed by the respondents that the main reason the hosiery industry initially has gained momentum was due to low-cost labor, however, “In the recent years the wages in the sector has risen five times,” according to a representative in the Hosiery Association. Labor costs are increasing relative to other emerging economies and this has reduced Turkey’s overall competitiveness in labor-intensive industries, including textiles as shown in Figure 15. Although hourly wages are still inexpensive relative to developed nations, they are much higher than some of Turkey’s main competitors, such as China. Especially

in Istanbul, labor, relative to the eastern part of Turkey, is much more expensive, and this actually gives the region a disadvantage in textiles over the eastern regions. As a firm owner summarized, “The rise in labor costs are seen in increasing prices, which decreases the exports for the whole textiles industry as well as the hosiery industry.” Istanbul hosiery sector has been developing on the basis of low-cost labor angle in the past, yet this game plan will not be applicable in the future and there is a need for new strategic planning on this area.

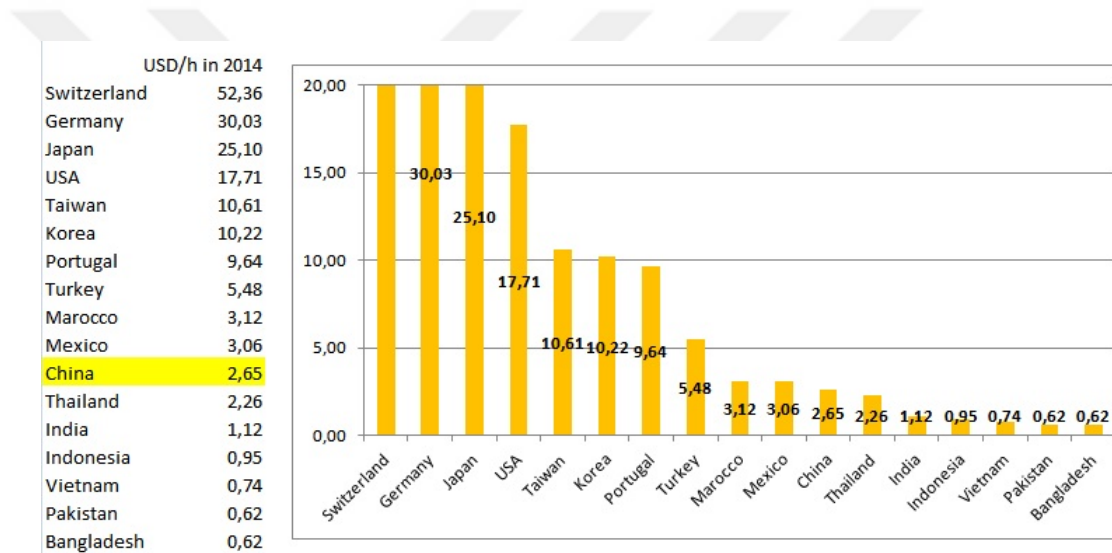


Fig. 15 Labor costs in textile industry
Source: Werner

Although Turkish textile industry is dropping its strength in low-cost labor advantage, on the bright side, an interviewee said, “This is the case for low skilled labor, but the region also attracts the more skilled human capital to higher paying industries of the west.” Regarding the labor factor, one of the most important advantages Istanbul has accumulated seems to be the quite skillful labor pool. On the other hand, “Although textiles is one of the major sectors in Turkish economy, the

industry does not attract skilled workers,” said one respondent and almost all firm-owners declared similar concerns that the sector is not a magnet for very well-educated employees. Limited resources of qualified human capital in managerial levels presents a disadvantage for Porter’s advanced factors, therefore, the Hosiery Association feels that there seems to be an urgency to develop programs to train more skilled employees for management levels. “Under these conditions, technological knowledge is the only direction to proceed on to increase the industry’s competitiveness,” remarks another hosiery firm representative. However, another respondent, who previously was a worker himself, claims the opposite, “All knowledge cannot be gained by education, some things can only be learned by observation and experience. Spending years hand-on the job is invaluable compared to training in a school environment.”

Another important concern related to labor, which generates problems for the sector, is the large number of unregistered workers, especially the Syrian refugees in the recent times. According to ITHIB, the Istanbul Textile and Raw Materials Exporters’ Association, about 3 million war refugees from Syria live in Turkey right now. The intent was to offer opportunities for Syrian refugees to generate an economic benefit, reduce the high level of unemployment among the emigrants, and lower the risk of terrorism on a global scale. However, these benefits have not been realized as European fashion brands outsourcing from Turkey have been urged to offer support towards preventing the abuse of Syrian refugees in Turkish garment factories, most of whom are claimed to be undocumented and subjected to low wages and excessive working hours. An interviewee commented on this, “This is an advantage for Turkey, as with this additional labor resource, work times may be shifted to deal with fluctuations in orders, but, use of child labor and estimated

relative high usage of unregistered labor creates illegal competition in the sector.” A main concern of the textile sector seems to be that although most of the factories in Istanbul are eager to maintain standards at the work place, still there are some establishments that operate below the standards, that produce ‘under the ladder’ via unauthorized labor. This large amount of small manufacturing establishments is not easy to control and the facilities employ unregistered workers, without paying taxes, creating unjust competitiveness (Bodgener, 1997).

Turkey benefits from advantageous demographical conditions, namely its large and young population with average age 29, versus 40 being the average age in EU (World Bank). Totaling 26 million, Turkey has the 4th highest labor pool among EU countries, however, quality of this labor force is not high due to lack of standards in the schooling system and limited availability of industrial preparation. Education policy in Turkey is national and based on the OECD 2012 report, “An average 15-year-old in Turkey is one school year behind his/her OECD counterparts in reading, math and science courses.” There are more than 4,000 technical high schools in the country, but interest is low since they do not have a good and there is a general preference among the nation for university education. Although there are over 160 universities in Turkey, among them, there are only four technology universities and just two technology institutes. Turkey has qualified engineers and scientists, but there is still need for more, especially in order to upgrade production techniques in textiles and move further up the value chain of the global textile industry. As the hosiery industry is a relatively labor-intensive production industry, technical expertise will stimulate more efficient and effective manufacturing operations. An interviewee commented, “Present level of education is well up to a point and ITKIB also has educational training. Qualified workers are present in the industry, but mainly top

managers and some firm owners are well educated. Although KOSGEB holds trainings, education and consulting for SMEs, work floor people in small scale firms are less educated and low skilled.” For this aim, the government opened vocational schools on textiles in many regions of Turkey and this is a good incentive, but, unfortunately, most employers say that they do not see benefits of hiring from these schools. As such, vocational school and higher education graduates are lower in textiles and apparel clusters than those in overall manufacturing sector (TISK). “ITKIB is an association that works for the development and advancement of the sector by organizing various events and educational opportunities to train the people in textiles sector,” says an exporter, and also adds, “But we cannot send our workers to these trainings because it increases our labor costs.”

As inferred from the above discussions, Turkish hosiery sector’s cost advantage is weakening as textile sector labor fees got above China, Pakistan, India, Bangladesh, etc. in the recent years. Expenses in Istanbul and other populous regions of Turkey rose even more than the rest of the country. Furthermore, with the high real estate demand in Istanbul over the last decade, available areas for industrial land are declining as well as becoming extremely expensive. This results in land rents rising as well as other production resources also getting more expensive. This means that if firms continue to rely exclusively on cost advantage, Istanbul hosiery industry cannot hold on to its superior status. The hosiery industry should try to cultivate advanced factor conditions because the strength due to traditional advantage of “cheap labor lasts only for a short time” (Jin and Moon, 2006). Results of the research on the hosiery clusters point out that there is need for transformation and upgrading of the sector to be able to stay competitive. Therefore, it can be concluded that although substantial information resources are present and collaboration and

knowledge exchanges happen among peers, the structure is fragmented and should be better coordinated. More cooperation among organizations is essential in order to utilize these sources of knowledge into a competitiveness factor for the further advancement of the hosiery clusters in Istanbul.

7.3.1.2 Raw material

Another factor that has generated a potential factor of advantage for the textile sector is that Turkey has an abundance of raw material as the country grows its own cotton. The nation is the 7th biggest cotton grower in the globe and since cotton is the main basic input for most textile goods, the amount of domestic cotton production gives Turkey its most important competitive advantage in textiles. On the other side of the coin, as one interviewee claimed, “Everyone should be aware that cotton fiber export trend in the world has shifted to higher-value goods, such as voile.” Therefore, turning to more value-added yarn fibers and cotton materials is required. Turkey needs to shift manufacturing strategy from basic cotton goods to, as one respondent expressed, “Value added cotton by-products, such as bio cotton, for example, which is produced without the use of fertilizers.” Therefore, upgrading is integral for the industry, to further compete on improved quality rather than on cheap cost.

7.3.1.3 Capital

Financial capital is important for the development of any industry. General Turkish economy, high interest rates, low access to capital for entrepreneurial incentives for the improvement of the sector is a handicap for the advancement of the hosiery

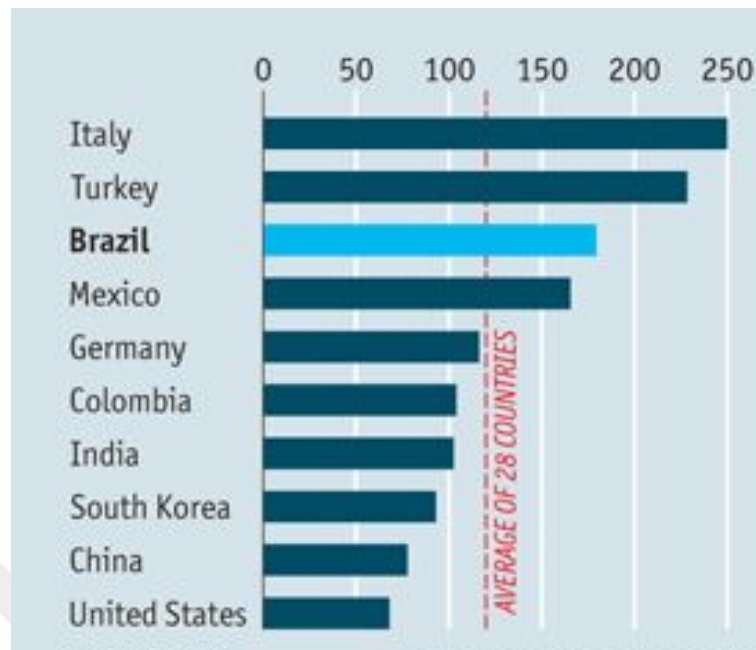
business. An interviewee explained, “Hosiery sector needs finance. However, financial resources are weak and reliance on bank credits is expansive. As the nation’s economy declines, the need for working capital increases and this can only be obtained through banks. This environment results in high costs, and sometimes, regrettably, even bankruptcies.” Although capital is essential for R&D and innovation, which are very important resources according to Porter’s diamond framework, limited support from the government and high charges of financial institutions is a major area of complaint from most respondents. “The working capital amount is limited and the institutions supply very restricted amounts new for investments. The problems in the finance frontier are reflected on all the other industries of the country badly and we hosiery firms are no exception,” a company representative commented. Low access to capital also hampers entrepreneurial orientation as new firms find it a challenge to overcome financial limitations in order to enter the business. The Hosiery Association representative claimed, “There is no incentive for the hosiery sector. With the burden of high interest rates in the banks, it is hard to find investments for the establishment of new firms or resources for the improvement of the sector.”

7.3.1.4 Energy sources

The textiles sector, as most other sectors in Turkey, has the shortcomings of higher rates relative to foreign averages as shown in Table 11 and the issue electricity cuts. Small and medium size establishments are mainly exposed to the problem of electricity cuts, as bigger and modern facilities have their own generators in house (Bodgener, 1997). Expensive industrial electricity costs have been a major drawback

for all the Turkish industries, and since energy is scarce, the firms feel the need to be economical with energy. One interviewee commented, “The prices are almost five times the average of OECD countries. When compared to the countries we compete with, such as China, Turkey is very expensive.” Turkish Government helps the regions of the country that are in the development stages, i.e. Eastern and South Eastern parts, by electricity incentives, such that tariffs are 25 % to 50 % lower in these areas (ITKIB, 1999), however this is not the case for Istanbul. However, it’s important to note here that in the induced cluster, Ikitelli Industrial Zone, electricity is cheaper compared to the prices in other locations of Istanbul. In fact, one of the few advantages of the industrial zone that firm representatives mentioned was the electricity that is low-priced as an industrial zone incentive. On the other hand, Italy, specializing on the value-added high-quality product segment, also has the disadvantage of high electricity prices, but nonetheless sustains to be competitive. Porter’s generic strategies show that an industry cannot last long only on cost advantage, additionally, has to adopt a differentiation strategy. Thus, in order to make up for rising costs, Istanbul hosiery clusters, like the case of Italy, should also try to maintain the strategy to differentiate its products as well as try to establish domestic branding in order to achieve competitiveness in the global markets.

Table 11. Industrial Electricity Prices (\$/MWh) in Countries



Source: Firjan

7.3.1.5 Location

Turkey exports clothing and textile commodities mainly to the European Union countries. Istanbul's geographical position is especially convenient due to the city's closeness to the major European buyer markets. Turkey's major competitor for European markets is China as the prices are cheaper in China compared to Turkey. The positive developments in the Far Eastern market affect the Turkish textile sector negatively, as Europe is the major buyer, having the highest high export share of Turkish textiles goods. However, proximal location of Turkey to Europe, from geography and culture perspectives is an asset compared to the countries in Far East (Bodgener, 1997). According to a representative, "Turkish delivery times are faster compared to its competitors. We have much shorter delivery times, in comparison to far away countries, for example relative to China." Still these locational benefits are also present for East European and North Africa and these nations have also been

increasing their shares, with respect to Turkey. Istanbul is very well connected to the rest of the nation, as well as European and the Middle Eastern markets and the infrastructure is considerably more developed with respect to many developing countries. “Thanks to its transportation network, Istanbul is exceptionally well located to send textile products internationally and proximity to major foreign markets provides an important advantage,” declared a large manufacturer. For decades, main export partner of Turkey has been the EU and this tendency is also apparent in textiles, with EU accounting for more than 50% share of Turkish textile exports. One hosiery firm owner commented on the need to discover new markets, “European demand has been shrinking due to the economic crisis in the region and the recent move to Middle Eastern markets can, to some extent, thwart these negative circumstances. There is huge potential in the Middle East region if the political stability of the region recovers, although relations with Turkey’s neighbors are not at the preferred stage yet.”

7.3.2 Demand condition

Turkey is among the most appealing countries among the developing nations, in terms of market structure, with 80 million young people (23% of which is between ages 24 to 30), together with increasing per capita income. Turkey has substantial and increasing demographics, which is estimated to reach 100 million by the year 2050. The biggest customer segment is C-level economic group and the residents of the largest six cities account for one third of the total population. Marmara region is densely populated and Istanbul is the largest city in Turkey with inhabitancy of about 15 million people. As aforementioned, the textiles and clothing industry has its beginnings in the early 1970’s, and the advancement of the industry was stimulated

by growing domestic demand Porter (1990), while describing the demand conditions in the diamond framework, emphasizes the function of domestic demand in the primary level as well as at the sustainability phase. He further explains the characteristics, such as size and growth of local demand, are important factors for gaining competitive advantage. Thanks to rising GDP of Turkey, domestic demand is increasing in sophistication, although there is major difference in buyer requirements among various parts of the country, i.e. Western vs. Eastern markets. Whereas a part of Turkish customers concentrate on high-quality and fashion-oriented products, still others focus solely on prices. An interviewee explains, “Purchasing behavior research for our sector indicates that even though customers are becoming quite very brand-name oriented, cost-quality ration is still the major determinant.”

Textiles and apparel presently accounts for about 9 % of domestic income of Turkey, but as textiles output is 2.5 times the volume of the internal requirement, the sector is very dependent on exports. Consequently, the global status in the textile and apparel industry improved parallel to the increasing export volume after the 1980's. The hosiery industry also has very high dependence on foreign trade and this is another factor that generates the competitive strength of the industry. As said, Istanbul is the most populous city in Turkey and it has a big population, so relatedly, the demand for all apparel and clothing items is very high which was another important fuel for the hosiery sector gaining competitiveness at the beginning times. Later on, domestic demand pushed the sector to upgrade its system and to become innovative to be able to increase competitiveness in the foreign frontier. Even though Turkey has a young population and domestic demand is high in terms of absolute consumption, sophistication of demand is still low in comparison to Western countries. Although the Turkish market is becoming more sophisticated every day, as

one interviewee explained, “European consumers are very difficult to satisfy and upper segment producers have the ability to anticipate these customer needs. They are good at predicting the changing trends and embracing new strategies as well as adopting their production systems based on these trends.” Foreign markets require higher quality, diversity, variety and faster supply times and becoming more responsive to the higher sophistication of international demand is the ultimate way to increase the share of exports of the sector. Another representative said, “We enhance our skills by the marketing inputs we get from our foreign buyers as well as from overseas traders who tell us what new products to manufacture and which new methods to use.” The future of the Istanbul hosiery clusters is highly dependent on the improvements the firms can adopt for innovation and upgrading to sustain a more stable growth for the sector. One other respondent commented, “As always recommended to the whole textile and apparel industry, branding hosiery products is essential, since higher income segments prefer superior products such as brand name clothing items or accessories. Therefore, the future for the hosiery sector is in branding.”

There is a high demand for Turkish hosiery products in international markets and demand may be raised further if the sector accomplishing adapting to the changing customer requirements, abiding by environment regulations, as well as applying quality standards, such as ISO. “Most small to medium sized enterprises do not have the capital resources for funding of quality certifications like ISO9000, ISO14000 and environmental certifications and this may affect the sector widely,” claims a factory owner and this could also negatively affect the total achievement of clusters. Attracting foreign capital is important for the investments needed to increase the quality of the production facilities, as competition based on price is very

fierce. China, as well as Vietnam and Pakistan are foreseen as the major rival countries for Turkish textiles industry in the upcoming era, especially with respect to costs. Therefore, producers of lower quality goods will continue to face high competition in global markets and many smaller SMEs which produce low value-added products and non-branded goods will become increasingly uncompetitive. “This affects the informal sector that retains many people,” claimed a firm owner. On the other hand, if the hosiery sector can compete based on quality by investing in value-added products, increasing supply times and creating brands, competitive advantage will be sustainable.

EU demand for Turkish hosiery products is good thanks to the high-quality products and fast supply, however, there is need for more investment in order to achieve European excellence. As one firm owner described, “We have regular trips to Italy, which is the leader in the high quality segment. They have superior specialization, advanced technology and manufacturing knowledge. We also need diversification and integration to the Western system, but that requires capital and we are beyond in that area.” In order to reach European competitiveness, Turkish hosiery companies should work on the grade of goods as well as supply management. Another important factor in order to reach European superiority is that EU norms and standards of environmental legislation quite different from Turkey. One respondent explained, “The textile industry should participate in voluntary environmental pollution control and the efficient use and cleaning of water, as well as recycling the used water. That’s how European firms act, but implementation is very hard due to lack of enforcement because of high level of corruption.” Adjustment to environmental regulations and ecological labeling are factors contributing to competitiveness for the EU market, unfortunately, only a few large

establishments comprehend that these factors are important tools in order to increase competitiveness. These tools will also aid in attracting foreign investments by improving the investment climate of the sector.

7.3.3 Related and supporting industries

A cluster is a group of firms and related institutes in the sector that specialize in manufacturing for certain type of industry that the nation becomes an expert in and hence can compete globally. The related and supporting industries together with the hosiery enterprises form these clusters and when applied to hosiery production, these include the raw material processing companies, mainly cotton, that produce fiber and yarn as well as the dye and finish firms that specialize in the of the fabric. The related and supporting industries comprise even labeling and packaging producers, cutting and sewing handlers, exporters, brokers, shippers, wholesalers, retailers, quality controllers, accessories firms, etc. together with other various fashion related businesses and educational establishments, banks and other financial institutions, even media and advertising mediums, as well as the government. When all these supplementing industries come close, they create a cluster and their combined efforts affect the performance and compose the competitive advantage of the sector. The success of the cluster in the global fields is composed of the performance and competitiveness of the members within this composition (Porter, 1990). Italy is a successful model of clustering, as some areas in Italy specialize on the manufacture of a certain fashion article. Turkish textiles and fashion industry is another fortunate region with the integrated and settled system giving the sector a favorable position compared to competition. According to the interviews, the hosiery clusters profit from this collective business mentality among producers within the sector and

broadly, it can be said that there is cooperation and collaboration between members in the hosiery sector. However, the results indicate that the linkages among firms are weaker in the induced cluster compared to the links among firms in the spontaneous cluster. Still there is potential for capacity building and more support is needed in order to establish coordination among organizations in order to benefit more from the advantages of being located within a cluster.

As stated before, Istanbul is the center of economic activity in Turkey. The economy is well diversified; agriculture, transportation and logistics, plastics and paper, energy, jewelry, and food processing are among the largest sectors in the province, all of which support the textiles business. Concentrated especially in the Istanbul area, there are assorted and variety of products in all sub-segments of the textiles category, as said, other hosiery complementing businesses such as packaging, labeling chemical dyes, knitting, yarning, etc. which are also essential for mainstream production are also present in the Istanbul region. The collaboration and knowledge sharing between the organizations and related industries are a factor that makes the industry stronger, however, as one firm representative commented, “Numerous organizations and associations are working at the same time, however, although there is a collective business environment, organizing is still limited.” Another interviewee mentioned, “Assimilation is apparent among supporting businesses of the textile and apparel industry, such as accessories, dyeing, packing, chemicals, yarn production, machinery etc., but there is need for organization. Organizing could be established via sector specific initiatives, by ensuring structured and periodic communication between all involved parties and aiming at a shared industry policy in the long term.” A respondent commented, “Istanbul houses a wide range of hosiery sector suppliers, ensuring the local availability of a range of inputs,

including cotton-fibers, chemical dyes, and ornaments. The presence of a large accessory industry also gives strength to our business.”

Porter mentioned that internationally competitive supplying industries provide additional advantages, for instance innovativeness, know-how, knowledge flows and exchanges of the technology which in turn creates advantage in downstream industries” (Jin and Moon, 2006). The availability of related businesses in a country promotes benefits in subsequent industries of the field via the following means. First benefit is created by functional and prompt availability of most economical raw material. In terms of ongoing management, the advantage provided via home based suppliers is more important than access to machinery and inputs as equipment and technical items are all readily accessible to world firms. However, the most important benefit arises during the innovation and upgrading process, in which alliances and liaisons facilitate the exchange of knowledge and R&D as “Proximity of managerial and technical personnel, together with cultural similarity, tend to facilitate free and open information flows” (Porter, 1990).

Turkish hosiery industry has come a long way while the sophistication of consumer demand has elevated and at the present, more innovation is required for the sector. While connecting across the supply chain, firms often share new technologies and novel ideas and it results in innovation, which is the essential component for competitiveness in the international arena. Therefore, the potential of supplying and related industries around mainstream textile companies serves the sector by encouraging knowledge flow and information spillovers resulting in innovation and upgrading. Respondents of the interviews were asked how relationships with suppliers contribute to competitiveness and almost all firm representatives mentioned that developing strategic alliances are an integral determinant of developing

competitiveness. Interviewees emphasized the importance of building relationships as this results in split supply-costs, co-development of new products, sharing of data, and joint managing of contracts, etc. These connections are further analyzed in the network chapter of the thesis. Although all supplementing businesses industries add on to the success of the mainstream industry according to the diamond model, they are also highly dependent on banks for financial support or insurance for risk support. A firm owner again emphasized capital at this point, “The major complementary financial institutions and insurances charge costly fees from us, even though we are very dependent on monetary assets to serve in the best capacity.” Another respondent commented, “The country as a whole suffers from inflation as an outcome of the economic troubles of the nation.”

Machinery

Turkey mainly depends on machinery and technical products from abroad since textiles equipment in the country is almost nonexistent. One respondent asserted, “There is need for great investments in Turkey in terms of equipment track in order to produce our own machinery and we are standing there yet.” So the inclination is towards supplying equipment from abroad, mainly from Italy and Germany, hence, Turkey is also among the top importers of textile and clothing machinery, engine spare parts and chemical components. In addition, Turkey still needs the technical support of this imported equipment. The representatives in the hosiery sector say that although machines are not produced in Turkey, after-sales technical service is reliable and easily reachable in Istanbul. Some big establishments even have their own support staff within the facilities and this provides considerable build-up of

technical knowledge for the industry. However, the interviewers mentioned that they still have to get the assistance of the international producers and bring technicians to Istanbul for the complications that arise at the assembly line. However, “Bringing mechanics from overseas rises expenses and results in time wasted to fix the trouble,” complained several company owners.

7.3.4 Firm strategy, structure, and rivalry

In global textiles and clothing market, Turkey is mainly subcontracting and manufacturing for world brands. Currently, non-branded products constitute the majority of export sales of the sector. Almost 90% of textile outputs are manufactured for major foreign markets. “The textile industry in Europe is not competitive in terms of production costs, so the solution found by the major players is outsourcing. It is the optimal solution for them and they come to us at that point,” explained a sector representative. Although retail is growing in the country, it is still not at the level of worldwide counterparts. Turkish textile and apparel industry firms, which primarily manufacture non-branded products market their finished non-branded goods through third party retail chains. Foreign competition to supply retailers is intense, as one interviewee commented, “It would be expected that rivalry would be good for the upgrading of the sector, but competition is mostly based only on prices, which damages us in the end.” The hosiery market is very much influenced by seasonality and fashion trends, so to be able to react swiftly to shifts in the market buyers usually request a short contract period. “To face the challenges, we learned develop certain skills, such as elasticity. Needs of the customer come first and the quickness of reaction to customer requirements is also vital,” an interviewee explained. The flexibility and adaptability of hosiery producers to changing market

needs creates a major advantage for Turkey. As one company owner explained, “In contrast to China, we have very diverse fibers resources and are able to complete current styles in minimum time.” Another advantage is that the production methods in Turkey comply with the worldwide acceptable environmental regulation guidelines do not let hazardous ingredients to be used in manufacturing, whereas some producers in Far East and Asia still continue to use them (Bodgener, 1997). However, a major disadvantage noted by the respondents is that the Turkish hosiery industry is overly dependent on exports to European countries and USA, so when there is an economic decline in those markets, the industry is disturbed. Therefore there is need for diversification of overseas buyers and concentrate on reaching other regions of the globe as well.

As mentioned before, Istanbul hosiery sector mainly consists of small and medium size producers and most establishments are family-owned and operated. Consequently, there is limited number of well-qualified executives and managers, as also mentioned in the above sections. The textiles industry is not attractive for skilled employees. One interviewee described, “Although the textile industry is the pillar industry of the country, the sector does not have prestige as a top chosen field to work. So, qualified human capital does not choose this business.” As Porter (2008) emphasizes, “Employee and managers are very important elements of firm structure in order to achieve competitive advantage and hence, company goals and ownership structure must be aligned.” According to the diamond framework, another concern is whether both managers’ and employees’ motivation is high enough to make the necessary effort for achieving to and maintaining competitiveness. From this perspective, aspects that effect motivation involve manager employee relations as well as the reward system. In the case of hosiery sector ownership structure, it is

found that most firms are family owned and it is debatable, whether in such structures, motivation is sufficiently triggered in employees. One respondent explained, “Giving responsibility is usually minimal in family-owned firms as most choices are made by the owners. Owners rule on price bids, select sellers and customers, decide on machinery investment, etc., so there’s almost no major choice left to the manager.” And consequently, in the structures where only the owner makes the major selections for the firm, short-term gains usually take priority over long term planning. This becomes a shortcoming for the firms, keeping them from improving and limiting investments in R & D.

In-cluster rivalry is part of Porter’s diamond’s last determinant and is a critical component of competitive advantage (1990). In order to emphasize the importance of this determinant in order to gain global competitiveness, it is even mentioned that rivalry should be pursued as it strongly contributes to the long-term performance of a firm. A major advantage of the hosiery clusters is the cooperative and competitive business environment thanks to the high number of SMEs in the sector. Turkey benefits from strong regional rivalry as small and medium size establishments compose 99 % of Turkey’s economy (TCMB). The domination of SMEs in a regional economy not only provides high synergy and a drive for efficiency, but also elasticity to manage the changes in businesses environment (SME Strategy and Action Plan, 2007). A good portion of the interviewed hosiery firms claimed that, if necessary, they could easily adjust their production line fast in response to changing customer demands as SMEs are less reliant on bureaucracy, have high flexibility, more liable on innovativeness, and entrepreneurship oriented (Rosenfeld, 2003). On the downside, aside from R & D dependent firms, small and medium size firms are sluggish in adjusting to new technology and current methods.

Another shortcoming, as mentioned in previous sections, is that access to finance constitutes a big obstacle for the growth of these SMEs. High competition from the Western nations, which have finer quality human capital and higher productivity levels, together with lack of institutionalization in the sector present obstacles in attracting foreign investment to the hosiery sector. For instance, an owner of a mid-sized establishment described his ideal, “Turkish hosiery firms have been competing on cost-based goods, but this will not work in the near future. We have to work on quality and a good method to gain expertise may be by gathering as a group and working collectively as a group. A new strategic program for the whole industry needs to be set; or else there will be a mess when the markets shrink.”

As said, the present competitive advantage in the hosiery industry is realized from lower expenses comparative to the European Union, Turkey’s cotton sources, the availability of Western machinery, and free commerce with the European Union markets. On the other hand, high tax rates and unregistered labor cause a substantial black-market economy, which is predicted to compose 40% to 45% of Turkish revenue. Due to limitations on legislations, a large illegal economy exists, which causes a decrease in overall labor productivity, generating an average of 30% to 40 difference between legal and illicit commerce. Nevertheless, the country’s increasing level of labor productivity is at the same level as Eastern Europe countries; while higher than many competitor nations, still remaining below the level of OECD countries. In the past decades, Turkish textiles industry has prospered thanks to the leverage gotten by the free trade relations thanks to the Customs Union between Turkey and the European Union and the presence of many free and industrial zones. In addition, the relatively low corporate income tax level of 20% has attracted many foreign firms, resulting in updated production processes and technological

knowledge coming to the sector. As one respondent described, “By the end of 90’s, there were major investments in the sector and after Customs Union agreement between Turkey and the European Union, the industry attracted funds with the expectation that the sector would become even more globally successful. Part of these investments was supported via loans when financing was limited and firms that did not have experience unfortunately have not survived for long.”

Firms gain competitiveness by coming up with new and superior ways to function, which is actually the execution of innovation. Innovativeness involves upgrading in technique as well as improved processes of operating and innovativeness may be exhibited in product enhancement, procedure techniques, up-to-date practices in business, and novel strategies of management, etc. as innovativeness is an outcome of industrial experience, know-how, and investments in R & D. The most typical causes of innovations that lead to shifts in competitive potential are novel technology, altering market demand, fluctuating input costs or availability, the emergence of a new sector segment, and finally changes in government regulation (Porter, 1990). For the future of Istanbul hosiery cluster, the most important shortcoming of Porter’s diamond’s factor conditions is the lack of innovation. One sector representative summarized, “Aside from the need to improve quality of education, innovation has an important role in coping with competition, there is need for investment in R&D, where new products are developed from new materials with functional usage.”

The R&D investments in Turkish hosiery sector in operation advancement, product development, and style expansion are restricted, according to the interviewees. “Most of the effort is focused on product evolution, this involves design of models and new fabric techniques. However, these efforts only bring short-

term benefits, since this level of customization occurs usually in response to customer demands rather than involving extensive research and development. Therefore, these responsive short-term actions do not result in increased levels of productivity in the long-term,” summarized a representative from the Hosiery Association. In fact, this mentality seems to be one of the main barriers against competitiveness of the Turkish hosiery sector in the global market. Another interviewee complained that, “In the rush to cut costs, R&D activity in SMEs is minimal, as the firms performing with short term profit targets never invest time and money for R&D process.” However innovation is a very important component of competitiveness according to Porter’s diamond framework and Istanbul hosiery clusters should beware of this fact. One other respondent commented, “R & D activity in the sector is minimal. There are some exceptions, a few big firms conduct R & D in house, but access of SMEs, even to technology from abroad, is weak.” A visionary sector representative also remarked, “We should look for ways to create an innovation and R & D center by managing the resources of organizations of various related industries and institutions such as universities. Government can be a positive influence by bringing all these associations together.”

As the general strategy, Istanbul hosiery clusters should target to produce more value added goods, as this is positive guarantee of the business competitiveness in the sector. For instance, there is need for greater product differentiation, as this helps firms to request higher prices, in turn, resulting in increased production (Porter, 1990). It was observed through this research that specific and target focused strategies are needed for intensifying Turkish hosiery business’ competitive advantage in the international arena. Historically, government policies in Turkey have been centrally driven and as Turkish competitiveness discussions always point

out, not cluster-oriented. Turkey benefits from a diversified economy, however, it lacks an integrated national cluster policy, and its existing clusters have appeared largely in the period of industrialization rather than an intentional cluster strategy. Although Turkish industrial clusters are not sufficiently organized, agglomerations are still seen in some areas, for instance Marmara, Aegean, and South East parts are concentrated on textiles, but as the Marmara and Aegean are also the most populous and well-developed parts of the country, most industrial production is there. Even though the textile sector has been in decline in Marmara and Aegean, it has not received much government help since 2000's.

Unfortunately, most of the above mentioned improvements and developments the hosiery sector requires to upgrade depend on access to capital, which all respondents find missing. The major gap that limited funding is apparent in is the low level of innovation and R&D in the sector. One interviewee commented, "The low capital level affects the industry negatively. And receiving a credit is a predicament for the firms since the rates are immense." Maybe in the future, if the practice of joint R&D activities with firms from the EU can be achieved, this will have a positive impact on the sector. As another respondent explained, "The financial sources are weak and there is not a pool of loans for businesses in our sector." In fact almost all interviewees complained of limited resources for professional training and need for wider access to capital for the upgrading of the industry. It was gathered from the interviews that emphasis must be given to organizational performances, distribution operations, marketing capabilities and industrial credentials. One respondent concluded, "Quality, flexibility, supply times, labeling and organization may be worked on. Industrial upgrade is hindered by lack of limited finances and this is apparent in three areas. One is that firms are unable to attract investments, which

results in almost half of machines being old. Second is that due to no R & D investments, the sector is always behind its European counterparts in terms of high-quality and contemporary products. And finally financial limitations result in lack of education to work floor employees and SMEs workers.”

The strength of the hosiery sector comes from comparatively cheap labor costs relative to EU, fast supply terms due to its geographical closeness to major buyers, good price-quality value and comparatively higher quality products relative to Far East. However, the sector should to strengthen and adjust its structure to continue being globally aggressive and capital is very much requires at this point. As pointed out previously, low-cost labor comparative advantage does not guarantee competitive advantage in today’s business world. There is need for technical innovation, educated professionals and access to capital as there is always need for more product differentiation and higher value-added goods. Turkish hosiery firms can sustain competitiveness is by improvement and upgrading for example by investing in organizational capabilities, supply performance, brand creating and attaining global certificate qualifications. Fierce competition exists among rivals and without these improvements. SMEs mainly rely on purchasing production equipment from abroad and searching for low cost raw materials to maintain the manufacturing operations. Instead of competing in the global arena with low value-added and non-branded goods, hosiery firms should instead try to turn towards new designs, processing, and marketing and distribution channels in order to deal with the emerging strong competitors such as China. Rather than producing cheap goods, Turkish hosiery firms ought to search for new approaches to maintain competitiveness, such as by product differentiation and manufacturing high value-

added products, as new competitors from Asia continue to enter the market with low-priced commodities.

7.3.5 Government and chance

During the interviews, the main disadvantage almost all socks manufacturers stated is the inadequate role of the government in the industry. “We are a very strong industry and have a very good footing in terms of resources and high quality labor. Although the government should encourage further growth for our sector, there are always barriers to development instead of aid.” All firms indicate the importance of the support they need from the government in order to increase productivity and export volume. “The current state of economy in general is not good and foreign currency is very expensive. The Russian market is shrinking, so we want to grow into new markets. However, there are always new obstacles coming from the government or the Ministry of Trade. We feel that they are not on our side, but we only ask them to please not stand against us. Where is the logic in this as the hosiery sector already has global advantage? We only ask not to be handicapped.” The government’s support policy should be more toward sectorial incentives instead of regional incentives. The representatives of the sector complain that they cannot compete with the lower prices of China due to higher insurance and tax payments. “Whereas foreign governments offer hosiery manufacturers incentives, Turkish government is raising our fees. The textile sector in Turkey in general is declining, however we hosiery producers are growing. We are a sector that provides significant employment and rightly ask for support from the government associations.”

Turkish governmental support has recently started to focus on geographical clusters; however, these regional studies have not yet led to an integrated cluster policy at the national level. Consequently, the spillovers and linkages across existing clusters in Turkey are very weak or nonexistent. Additionally, initiatives at the cluster level continue to focus on cost reduction rather than building the capacity for innovation within existing clusters as Turkey misses strong collaborative associations that can facilitate the connections and flows within and among clusters. Turkey attempted to establish various IFCs (institutes for collaboration) at the national and local levels, including exports-associations, industrial chambers, trade-agencies, etc. however, these IFCs have not yet fully incorporated to be effective enough. More broadly, there is a limited coalition among organizations sectors to include governmental institutes as well as research associations. Therefore, Turkey needs to develop an integrated national cluster strategy that provides a common vision and framework and as one exporter commented, “In order to coordinate the implementation of this strategy, a national competitiveness planning agency should be established.”

If we come to the chance factor, Turkey has been having political problems in the recent years, such as the attempted coup in July 2016 and a series of terrorist attacks, including a bomb at Istanbul Ataturk Airport. There’s also turmoil in the neighboring regions, such as the ongoing war in Syria and Iraq and problems with Russian Federation following the incident of Russian fighter jet on the Turkish-Syrian border. Consequently, clothing sector exports fell from a peak of US \$18.5 billion in 2014 to about US\$ 17 billion in 2016. There is also the problem of unregistered Syrian refugees who work in Turkey, producing for European brands and retailers. Against all odds, Turkish textile and apparel industry associations and

sector leaders assert that the sector remains strong and still has substantial growth potential. Turkey is the top supplier to Europe and among the top three in the world in yarns, accounting for 16.7 % of the EU's total textile imports and 11.7 % of clothing imports in 2015. During the recently held Istanbul Yarn Fair, sector members showed significant confidence, as one interviewee related, "Russian business is coming back to Turkey, as in the second half of 2016, the two countries restarted trade relations and made a fresh start. Exports to markets such as Iran, the US, Algeria, Israel, Poland and Bulgaria are increasing. A new free trade agreement with Pakistan on the way and the domestic hosiery market is also growing." Seref Fayat, President of Turkish Clothing Manufacturers' Association (TGSD) forecasts that in 2017, the domestic market will grow by 8-10 %. Turkish textile and clothing associations organize conferences and meetings with European businesses to encourage the expansion of the sector. Not discouraged by the negative experiences of the recent past, the Turkish textile sector has set an aggressive export target of USD 72 billion for 2023. On the way to achieving this target, the chance factors of national and regional political circumstances are unknown, but international trade relations must remain stable, especially with the EU, the sector's principal trading partner.

7.3.6 Conclusion

Constituting almost half of Turkish exports, textiles is an essential the nation, all the same, in today's competitive world, the industry is facing challenges for its position in important international markets. Turkey has some significant potential in this industry as it is a well-integrated field and the labor pool is skilled and experienced. The proximity to the EU market, without tariffs is another major advantage,

nevertheless, not only Turkey has these advantages and its competitive advantage as a global textile producer is declining. This means that the future of the sector depends on the production of high quality and branded goods, rather than commodities that come at low prices from countries such as China, Pakistan and India. In 2016, almost two-thirds (64%) of total Turkish textile and apparel exports went to the EU countries. According to the Istanbul Apparel Exporters Association (IHKI), textile exports to the EU increased by 8.6 % in 2016; UK was the sector's top export market in Europe, with 9% share, followed by Germany. For textile products like hosiery, UK is Turkey's largest market, comprising 28 % of total Turkish sock exports.

Hosiery is a subsector of textiles and apparel and has an established global status, coming second after world leader China in terms of both production and export volume. As discussed in above sections, Istanbul has strong and promising hosiery clusters. The hosiery sector is a major player in international markets, however, while showing a superior performance, in order to fulfill its potential the sector needs to address various challenges going forward. The hosiery sector's major competition for the EU buyers is China and even though Turkey's supply time is much faster, China has lower costs. Therefore, the sector should be preparing itself for the future by leaving price-based competition as competing in the lower cost segments of the export market against nations with cheap production costs is not reasonable anymore. The low-cost labor position is not sustainable in the long-run and in addition, as one interviewee commented, "Industry employers should target on rising the quality of goods, creating new designs and presenting alternative fibers, rather than wasting time campaigning to the government for price cuts of cotton, labor, energy, taxes, etc." In order to increase profitability we have to turn to special

fabrics, concentrate on creating modern collections, offer product alternates to consumers, rather than duplicating designs and following specifications.” Against increasing production expenses, including input, electricity, rent and labor prices, hosiery firms ought to alter their strategy and convert to high value-added products via fine-tuning their technological infrastructure.

The high degree of regional concentration generates conditions for the phenomenon called clusters, in terms of Porter. ‘Industrial districts,’ in Marshall’s terms, have greater flexibility and together with decentralization, members of the district, acting as bulk cooperation, are better able to adapt to change. These agglomerations of SMEs manufacturing similar items in the same geography is most commonly observed in Italy, where each firm is specialized in a certain type of product or specific part of the production process. Similar to the Italian case, developing a well-functioning cluster will help the Istanbul hosiery sector perform better in international competition. By using a series of methods to upgrade from lower value-added products, i.e. by upgrading of machinery and investing in R & D, the issue of low profit margins can be fixed. Competitive advantage can be sustainable by promoting brand building and urging pattern and technique innovation, as one interviewee pinned down, “The sector has higher value-added categories, in which R & D focus is a primary contribution for competitiveness.” The future lies in moving up the market segment, by focusing on differentiation and investing in design and branding as well as shifting from the focus on Western-Europe countries and turning away from outsourcing for international brands. As a major export company owner summarized, “It is broadly known the bigger share of the cake in hosiery, in textiles generally, is not earned by nations having low labor

costs or a surplus of cotton, but by the ones managing the collections, brand names and retailers in sophisticated markets, such as Italy.”

Brand building has an essential function for the sustainability of the Turkish hosiery sector in the long-term, for instance, Turquality has been a notable program to promote Turkish products internationally and has been particularly successful for home textiles produced in Denizli. A similar campaign in hosiery might be beneficial in penetrating new overseas markets, by giving firms further knowledge on foreign demand, while diversifying political and economic risks. Investments in R&D, manufacturers’ speedy response to buyer requirements, flexibility, agility, and the quickness at which manufacturers can adjust to demand changes is really what competitive advantage is and a well-developed cluster structure is another plus for better performance. Profitable hosiery firms in the future are likely to be the ones that accomplish to create their own brands and thereby move into global markets. For the future, potential competitiveness could be achieved by a shift in plan of action from production of subcontracting of commodities towards the development of Turkish brands and distributing them into the domestic market as well as Eastern Europe, Russian Federation and other regions, where strong and established retailers are not present. Turkey also needs to diversify its export markets, as the hosiery sector is highly contingent on the demand and economic circumstances of the major export countries, mainly the EU nations.

In the diamond theory, Porter (1990) emphasizes that the basic factors are necessary but not sufficient for competitiveness, whereas advanced and specialized factors are integral for higher competitive advantage. Porter’s diamond framework shows its distinction when it distinguishes between traditional factors of production by identifying basic/general vs. advanced/specialized factors. Some basic/general

factors are “Natural resources, climate, locations, unskilled labor and semi-skilled labor and even capital. On the other hand, some of the specialized factors of production are: educated personnel, digital data, communications, and infrastructure” (Porter, 1990, p.77). Still, the model points out that majority of the basic/general factors are already present, for example input resources, climate conditions and cheap labor are inherently present in a state; these factors are either there or not. In Istanbul hosiery sector conditions, cheap labor, availability of inputs, i.e. cotton and location advantages were primary actors for the initial acceleration of the Yesildirek cluster. However, advanced/specialized factors, for instance skilled human capital, and well-developed infrastructural resources are not innate, in contrast, they have to be developed and improved. However, it is reasonable to say that advanced/specialized factors usually depend on basic/general factors. A nation’s firms gain advantage if the homeland has low-cost or uniquely high quality factors, however maintaining potential advantage from these factors relies on how these factors are used and exploited. Therefore, basic/general factors, such as cotton, energy, and labor are either insignificant or the competitive advantage they bring is unsustainable. Instead, advanced factors are the main sources for advantage in the long-run. Therefore, “Advanced/specialized factors contribute more to sustainability of competitive advantage than to basic/generalized factors” (Shafaeddin, 2012).

It is clear from the analysis of the hosiery sector that due to rising labor costs in Istanbul, low priced labor, which was one of the primary reasons for the Turkish textile industry to bloom in the beginning, in near future probably will no longer an advantage in near future. Therefore, in order to guarantee sustainable success and competitiveness in international markets, the valuable strategy is to convert the basic/general factors into special/advanced factors. It can be said that Istanbul

hosiery industry is also strong in the context of advanced/specialized factors as they are sufficient to meet the current market conditions, for example physical resources are easily accessible, infrastructure means, such as ports and modern transportation, are significant. However, more advanced factors need to be generated still, for example, by establishing schools so that more professionals and engineers can be educated, where designers can study in training programs. As one respondent explained, a major constraint in the sector seems to be, “The quality of education needs to be expanded and curriculum should be reformed parallel with the modern manufacturing techniques in textiles as well as the current human capital needs of the sector.” Educational and research institutions can also be utilized as advanced factor developing resources in order to upgrade technology and machinery as well as by working on R&D and innovation.

Presently, the competitive advantage in the hosiery sector is actualized by good quality products in combination with relatively low wages, national cotton availability, the use of Western machinery, and easy entry to the EU market. However, competitive advantage could decline due to increased competition from emerging world economies and limited availability of capital for SMEs. In sum, it is obvious that the Istanbul hosiery sector has significant potential, but reinforcing the cluster structure is essential to grow and sustain profitability in this globally competitive industry. Weak quality of education and limited innovation remain as major barriers to convey the hosiery clusters to a higher level of productivity. High tax rates and the informal economy hurt competitiveness for the Istanbul hosiery sector, and for Turkey overall, while strong domestic competition due to high number of SMEs are strong drivers pushing the industry forward. A specific focus on the issue of clusters in government policy is not only crucial in order to advance the

existing clusters such as hosiery clusters, but also fundamental to increase competitiveness of Turkey as a nation. Thus, future competitive advantages should be developed in integrated marketing and logistic chain investments, R&D capabilities and strengthening the cooperation of clusters by coordination. Further improvements in the following areas could compensate the shortcomings of the sector in the long term; by quality improvement and standardization for small and medium size establishments and fulfillment of environmental regulations.

With the increasing pace of international competitiveness and the new players such as China entering the market, hosiery sector of Istanbul must aware that the base of competition is not price. It is fortunate that Istanbul has plenty of basic/general factors of production that were necessary for the initial emergence of the industry and the above recommendations have been made according to the respondents' comments for achieving continuous competitiveness in the world hosiery markets for the future. Cheap labor, generous inputs and low energy costs can no more be considered the foundations of competitive advantage for Turkish hosiery industry. Although low-cost labor and availability of cotton were the major determinants that stimulated the rise of the sector in the beginning of industrialization, however, under current conditions, investing on the advanced/specialized factors of Porter's diamond model is more appropriate. Hosiery firms should try to enhance their competitiveness not by exploiting the basic wealth of the country, instead by analyzing demand and competition. By making the products more attractive to various consumer segments, market share with current trade partners could be increased as well as adding new markets to the export portfolio. A visionary company owner described his dream-scenario, "We have to upgrade ourselves from being passive agents to being searchers, and ultimately, to

being originators. If we can master consumer needs well to the level we could predict or even direct it, we could turn into initiators.” Therefore, sectorial organizations should be working towards shaping a common range of view and creating a new strategy that will bring strength to the sector.

Government funding is essential for R&D projects and there is special need for focusing on textiles. Government could support innovation in textiles via tax incentives or co-sponsored projects with public institutes. The Hosiery Association could organize more events to regularly update the firms on the latest technological or process improvement developments such as lean manufacturing or quick response, etc. In the competition against strong rivals, especially the other major export-oriented nations such as China, a respondent suggested, “In order to beat Far Eastern countries in this race, it would be smart for Turkish hosiery firms to consider developing and improving environmental protection standards and regulations as well as turning to clean production methods.” Government organizations can progress firms towards regulatory actions, such as establishing early warning mechanism, while value-added goods such as manufacturing of green products can be sponsored. The government should also concentrate on the education and preparation of design people as well as establishing new institutes in collaboration with professionals. Finally, branding should be done by the government, as within the relatively high-cost environment, branding provides more advantage than the basic/general factors, such as energy, workforce, and inputs.

Unfortunately, the tax system in Turkey, with many exemptions and loopholes, promotes the informal economy. The existence of the complex tax system with many implementing agencies and unclear terms creates confusion and gives rise to irrational investment decisions within the market (Textile, Apparel and Leather

Products Sectorial Evaluation Report, 2010). Therefore, it would be more applicable to shift to a simpler tax and incentive system to encourage the legal economy. From another perspective, a respondent mentioned, “Government should support local investment groups and aid contact with ‘Invest in Turkey’ agency in order to pull investments to the sector.” Collaboration between regional development agencies and ‘Invest in Turkey’ organization is also of importance as all interviewees emphasized that the government should take action, especially concentrating on clusters. In order to plan the overall long-run advancement of the declining textile industry, as an interviewee summarized, “Development goals and measures should be established to be active guides to provide a fair competition business environment by reforming the tax system to reduce the tax burden.” As for the government’s role in helping supporting industries reorganizing and upgrading, strengthening the cooperation among universities and research institutes is especially beneficial for the hosiery firms. Encouraging knowledge transfer is an essential component of government support to these organizations in order to aid information spillovers in the clusters. Innovation in the hosiery clusters can be fueled by the government investments on R&D, through local stakeholder participation and the principle of complementary advantages. As mentioned previously, although the economy of Istanbul is well diversified. There is little collaboration between sectors, which is mostly due to lack of strong trade associations and export organizations.

As a result of the high real estate prices in the last decades, industrial land has become scanty in Istanbul. Due to land rents increasing rapidly, resulting in a rise in production costs, factories make plans to move to the eastern regions of Turkey in order to reduce expenses. And as more and more factories move out from Istanbul to the inland, the geographical concentration of the sector in and around Istanbul will

decrease and the skilled labor scarcity will become a problem. It has already been discussed that energy costs are an important handicap for the textile industry in Turkey and although energy costs make up only 9% of costs in textiles, given international competition prices, this is still important. Relative to other regions, Ikitelli Zone induced cluster has less problems with electricity prices, but energy cost and stability is still a key element to look out for concerning the performance of clusters. Results of this research reveal that there are only two major distinctions among the spontaneous vs. induced clusters in the elements of the diamond relating to competitive advantage. One is the cheaper energy in the induced cluster, which relates to factor conditions, and the other is the Bazaar like marketplace shopping characteristic of Yesildirek, which relates to the demand conditions. Aside from these differences, the major distinction seems to be the level of social capital in spontaneous and induced clusters; the social capital in Yesildirek spontaneous cluster being higher compared to the Ikitelli induced cluster. As will be analyzed further in-depth in the next chapter of the thesis, the networks of firms in Yesildirek form an embedded local production system, utilizing the benefits and advantages of being located within a cluster. Results show that in the case of the spontaneous cluster, in contrast to the induced cluster, the dense inter-firm networks have contributed to the information flows amid the various members of the hosiery cluster. Therefore, know-how is exchanged and the diversification of production becomes more specialized. Local firms share information and knowledge, and their cooperation and collaboration, in turn, reinforces the overall advancement and competitiveness of the cluster. With the emergence of stronger network relationships in the cluster, the collaboration with related and supporting also increases, and this would be especially

beneficial for the case of induced clusters as their ties are looser and weaker compared to those in spontaneous clusters.

Rosenfeld (1997) did a study on the hosiery cluster Castel Goffredo, the biggest hosiery manufacturer, which produces 1/3 of the stockings and pantyhose that is worn in Europe every day. Castel Goffredo enjoys the benefits of being proximate to the important markets in both geographical and cultural terms very much like the case of both induced and spontaneous Istanbul hosiery clusters. Analyzing the Italian hosiery cluster Castel Goffredo, among the factors adding to the cluster's competitive advantage, Rosenfeld (1997) mentions companies being knowledgeable about and oriented toward exports, which findings reveal, is another similarity with both induced and spontaneous Istanbul hosiery clusters. Our researched showed that there is significant knowledge and experience in the sector regarding production methods as well as exporting to foreign markets. The Turkish hosiery clusters have other aspects in common with Castel Goffredo. Both induced and spontaneous Turkish counterparts of the Italian hosiery cluster have the advantages of a large labor pool and a strong marketing focus, however, the Ikitelli induced cluster does not possess the high degree of network interactions that the Yesildirek spontaneous cluster has. "Castel Goffredo hosiery firms are more self-aware of the benefits of their interdependencies and collective strength and view these as economic development," (Rosenfeld, 1997) which sounds very much like the culture in the Yesildirek spontaneous cluster, but not in the induced Ikitelli zone.

This research revealed that there are also major differences among the Turkish clusters and the Italian, especially relating to the level of R & D activity. Rosenfeld's (1997) research mentions an advanced technology center that contributes to the competitiveness of Castel Goffredo, whereas the Istanbul hosiery clusters do

not have any such establishments. This Italian hosiery cluster obviously has wider opportunities for investment in improved technological systems than the firms in Yesildirek and Ikitelli Industrial Zone. Castel Goffredo has concentrated on a specific kind of product, stockings and pantyhose from women, for many decades and has gained a superior status in the world by continuous investment in technology innovativeness and product improvement. Unlike its Turkish counterparts, the hosiery cluster in Italy is outstanding in its innovative capability. There is an innovativeness support team that works on the upgrading of the cluster by ensuring continual interaction of producers that maintains exceptional quality and assures designer tasks by the performance of highly capable employees. By contrast, the Turkish hosiery clusters are still weak in innovation and low in skilled labor resources. Rosenfeld adds, “Castel Goffredo has the advantages of a large work force with the tacit skills in and general knowledge of an industry, a high level of social capital that bonds cluster members and provides opportunity for informal interaction and learning, and a strong marketing focus” (1997).

The aim of the first part of this research was to identify the determinants that have an impact on the competitive advantage of the Turkish hosiery industry. In short, this thesis suggests that Porter’s diamond approach may be useful for exploring the underlying mechanisms that can explain the origins and development of competitive advantage in a complex cluster production system such as the hosiery industry. Moreover, it is demonstrated that extending and/or combining the cluster context with the concept of embeddedness (ex. Grabher, 1993; Granovetter, 1985; Zukin and DiMaggio, 1990) can provide an enhanced analytical framework for delving into the sources of the Istanbul hosiery industry’s competitive advantage. Thus, the next chapter will investigate this issue further. A critical empirical result of

the research is that the existence of dense interpersonal networks in the spontaneous cluster has facilitated interaction and cooperation among the members in the cluster. Furthermore, competitiveness of the firms in the spontaneous cluster is explained, at least in part, by the well-developed networks as the learning capability has also been strengthened by a high level of staff circulation between the various sub-sectors that make up the cluster. In conclusion, thus, this thesis shows that there is a relation between the high concentration of hosiery-related business in the Istanbul region and the ability to create and sustain international competitiveness.



CHAPTER 8

NETWORK ANALYSIS

8.1 Similarities in induced and spontaneous clusters

In this chapter of the thesis, we aim to investigate whether and how network elements such as linkages/ ties, support/ trust, fellow-towns-men-ship mechanism, information spill-overs, cooperation/ competition, strength of ties and synergy/ motivation are different in induced vs. spontaneous clusters and how these relate to competitive advantage in clusters. In this research, it was targeted to describe the network structures of firms in both types of clusters at two different geographical locations, namely Ikitelli Industrial Zone for the induced cluster and Yesildirek area for the spontaneous cluster. Analyzing the various degrees of network links, the different types of linkages among hosiery firms were analyzed, which include both business-to-business relationships and the ties among organizations and socio-economic enterprises as suggested by Johannisson et al. (2002). In-depth interviews with entrepreneurs of small and medium size businesses (SMEs) from Istanbul are used as the main source of data in order to reach a deeper understanding of the phenomenon under investigation within this context.

First it is important to pinpoint the similarities in the induced and spontaneous hosiery clusters. One finding that is common to both types of clusters is that due to the characteristics of the hosiery sector, all the interviewed firms stated that there is not much direct competition among the firms in the industry, only rarely what they describe as ‘sweet competition,’ in other words, competition that is balanced by cooperation. Almost all domestic firms emphasized that they have a specialization, such as children pantyhose, number 9 sports socks, men socks, etc. As a result, there

are many small and medium size establishments present in the sector, specializing in different aspects of hosiery production. The products cover a wide variety of socks/stockings, for both ladies and men, adults as well as children, from army type to sportive types, and silk pantyhose to cotton hosiery. This is a main differentiating factor and the main reason that there is no direct competition among the firms in both types of clusters. Also, most of the firms sell almost solely abroad and they all have different customers in various countries; some sell mainly to the Russia region and some mainly to Europe, leading with Germany. They state that their main competition is with the big firms in China as their prices are much more reasonable due to lower-cost raw material and cheaper labor costs. As noted previously, Turkey comes after China in both world production and exports. However, the representatives mention that India, Pakistan, and Bangladesh are also emerging as considerable competitors with their cheaper prices as well. For the companies that are serving a very price sensitive market, their main concern is with the companies in those countries that produce cheaper products, rather than domestic competition.

On the other hand, though, there are also firms, which produce higher quality non-branded hosiery goods, which mainly sell to European countries, especially to Italy as contract manufacturers, from where the Italian firms put their own brand name. These firms state that, again, there is no direct competition with respective Turkish firms as they each have a specialization even if they sell to similar markets. These firms that mainly serve the higher quality market mention that they have worked with the same foreign firms for many years. Their relations with these foreign companies were built through years of trust and investment in relationships and neither side is willing to risk this, so they do not change the firms they do business with. One firm stated that they have been manufacturing non-branded

hosiery products for the same German company for 20 years, for instance. For these firms that produce high quality material, Portugal is the main competition as it is already a European Union country and the main supplier for UK, France and Spain. The Turkish firms complain that European countries prefer to trade with other European Union members, rather than Turkey. In summary, if a firm is selling to the domestic market, there is specialization of products, and if a firm is mainly an exporter, they have different markets. In the case of rivalry, it can be said that the competition in hosiery sector respectively occurs first of price, then quality and lastly service.

“The institutional variety and service facilities provided in different clusters are crucial in determining collaborative actions and other forms and linkages” (Saxenian, 1994). Another finding that is common in both types of clusters is that in-depth research on the network structures of hosiery firms in both induced and spontaneous clusters display the interest of interviewees to develop ties at various degrees. All firms are aware of the importance of network relationships for success as well as international competitive advantage. Firms look for ways to increase competencies, through forming new network connections (Low and Abrahamson, 1997), as well as through exploiting the relations with the existent links (Lipparini and Sobrero, 1994). In this respect, the hosiery clusters in Istanbul are similar to the case of Denizli, which is the most established textile cluster in Turkey, concentrating on home products. “Local production networks are important in Denizli, which are dominated by subcontracting relations and it is not surprising to see intensive subcontracting relations in a place specialized in textiles and clothing production” (Eraydin and Koroglu, 2005). Literature confirms that regional networks are also vital for information exchanges (Lundvall, 1995). Relatedly, the performance of

clusters has been associated with the existence of localized networks, which are a result of the market and social interactions amid cluster members. Storper (1997, p. 44) claims, “The status of the region is now not merely a locus of true pecuniary externalities, but—for the lucky regions—as a site of important stocks or relational assets.” Studies show that clusters are areas in which market relations that Storper (1995) defines as ‘traded interdependencies’, are related to social ties between cluster firms (Becattini, 1990; Camagni, 1991; Maillat, 1990; Porter, 1998; Saxenian, 1994; Scott, 1988; Storper, 1995). All the interviewed firms of this research state that for hosiery firms which are in similar areas of production, networking is fundamental; both for innovation activity and for product improvement. As Rosenfeld (2003) asserts, “Business networks can create external economies even where the scale of the cluster is unable to attract them and building networks depends largely on the ability of intermediaries to broker and manage inter-firm collaboration.” All respondents stated that local networks make a very important contribution to competitive advantage by reinforcing to the manifestation of the diamond framework. Thus, all firms are concerned with sustaining their network relations as well as investing in new linkages.

The field of business is the means for explaining production diversities (Kanter, 1996). For instance, the essentiality of innovation and types of networks may differ in regions that are serving various types of industries. For instance, high-tech industries usually utilize international information channels to get up-to-date information (Koschatzky, 1999). In line with this, it can be said that clusters that operate in relatively low-tech production fields do not need to be as innovative, since they are more dependent on local social and information networks that smooth the way for tapping into regional knowledge resources (Christerson and Appelbaum,

1995; Schmitz, 1995), while know-how is necessary for the performance of high-tech companies. One conclusion of the in-depth interviews is that social networks are a major factor in explaining sources of competitive advantage in the hosiery industry, which is a traditional low-tech manufacturing sector. This is also true for the home textile firms in the Denizli cluster, where regional know-how is used for marketing, product improvement and innovational upgrading of the enterprises (Eraydin, 2002). The interviews in this study with informants of the hosiery sector located in Istanbul pointed out the importance of networks, for both induced and spontaneous clusters. However, it can be inferred from the study that the significance and degrees of benefit of informal networks vary in induced and spontaneous clusters; in this research specifically the hosiery sector of textile industry. In the induced cluster, mainly, the information benefits that the hosiery firms gain through the network ties within the cluster is considered as weak, whereas the firms in the spontaneous cluster give more credit to networking for information.

8.2 Induced clusters: Ikitelli Industrial Zone

Above two factors, first being that there is not much direct competition in the hosiery industry, but only competition by cooperation and that all firms are concerned with forming linkages with other firms and interested in networking are the findings that are similar in both the induced and the spontaneous clusters. However, there are main distinctions in the network relations among the firms in both types of clusters and how these may relate to competitive advantage. In the interviews conducted with the representatives of different firms in the Ikitelli Industrial Zone hosiery induced cluster, firms commonly indicate the unfavorable business conditions that were not planned ahead when the site was built. One, there have been no improvements since

the zone was built 30 years ago and the space that was adequate then, is not sufficient for the conditions of present day. Most of the companies say that their business has enlarged since then and the space that was satisfactory twenty years ago when they first moved is not fit to deal with today's higher production needs. Another complaint has been that the facilities are all two-storied, whereas all interviewees said they would have preferred a single flat area according to the standards. All interviewed firms said that their current production facilities consist of many blocks, some had to combine five blocks, and some even had to go as far as connecting nine blocks. This space limit is considered an obstacle for efficient manufacturing and increasing export volume by the respondents. The only advantages of the industrial zone that the representatives of the firms stated seem to be the infrastructure conveniences, cheap electricity, which is low-priced as an industrial zone incentive. Other than these advantages, the expectations the firms had when they first moved to the industrial zone unfortunately have not been met compared to today's needs.

8.2.1 The embeddedness of links and linkages

Johannisson et al. suggests, "In industrial districts there are formal structures, in terms of institutions deliberately created to deal with collective concerns, which are accompanied by social and business networks" (Johannisson et al., 1994, p.332). The interviews conducted with various actors in Ikitelli induced hosiery cluster imply weak mutual dependence among firms, which hinders the embeddedness of inter-firm relations between them. For the firms in the induced hosiery cluster, it can be said that the benefits of existing in a cluster and the potential network resources in the environment are not properly utilized to gain competitive advantage in the

international arena. One interviewee depicts the situation by saying, “All the firms in the Corapcilar Sitesi at Ikitelli Organized industrial zone are kind of independent, and there is almost no collective mentality. It takes time and energy to interact with other firms, which is actually an exertion in the zone. Thus, the firms here do not make such an investment because, usually, we do not feel the need to change the firms we do business with. I know almost all the firms we currently work with from our previous location in Yesildirek, and if we have new requirements and have to search for new contacts, we go to the Association. Therefore, as there is no need, we do not really get in touch the other firms in the industrial zone.” Another respondent made similar observations, “Logically, we know the importance of networks for our business and sometimes feel the need for such kind of ties, but days go by and we do not take action to contact another firm. There are some events arranged by the organized industrial zone, such as administrative meetings, however we do not meet new business partners through such events. For example, we want to open to the Middle Eastern market and would be interested to get information if there is a firm around here who already sells to any of the countries in Middle East. We want to know what type of products they need and what is important for them in terms of service.” One important empirical finding of the interviews is that for the hosiery firms in the same induced cluster, although being near each other, there is no common cluster culture present and there is very limited social capital to speak of. Firms have not felt the need to cultivate relations with the other firms in the cluster, as an interviewee of a large export company summarized, “I do not even attend all meetings in the zone, sometimes a firm changes owners and we hear about it several months later. Everybody minds his own business here. It could be claimed that we are relatively isolated, we do not even know which neighbor produces what kind of

socks currently or which market they sell to.”

8.2.2 Support and trust mechanism

Inter-firm relationships thrive on trust between cluster members, which lowers risk and uncertainty (Svetina and Provan, 2008). However, the nature of inter-organizational ties that represent Ikitelli induced cluster culture can be defined as arm’s-length ties in terms of Uzzi (1997). An interviewee explains, “It is not clear which firm specializes in what in the Ikitelli organized industrial zone, there is no common platform to communicate. We have connections to many other firms in the hosiery business through our Association, however mostly they are not located here geographically. For example, I do know one of the partners of the neighbor firm next door, but when we see each other, we almost do not talk about our business at all. It is just friendly small talk. I cannot say that there is no trust, rather there is no basis for trust.” Similarly, another respondent complained of arm’s-length relations and lack of support in the Industrial Zone, “We have recently started doing business together with another close by firm in the industrial zone, after a friend’s firm in Beylikduzu Zone (another organized industrial area in Istanbul) referred the mentioned firm to us. Although we are very near each other here, before, we had no idea what kind of hosiery they specialized in or that they were located so near.”

Another firm representative explains, “It is not that we do not trust the other hosiery manufacturers in the industrial zone, we just have no grounds to make such a claim. We do not interact much, thus I could not vouch for their business ethics.” As seen from the above descriptions, the firms in the Ikitelli Industrial Zone hosiery induced cluster express rather inadequate linkages between firms and organizations. It can be deducted from the interviews that in the induced cluster, building up social capital in

the regional business environment has not been accomplished. “The combination of entrepreneurial firms and inter-firm networks is shown to foster a range of dynamic cluster processes which, in turn, underlie the growth of Silicon Valley and the unexpected resurgence of Boston's Route 128” (Best, 2001). Although networks are very important for the performance of a cluster, the relationships in the induced hosiery cluster are more or less similar to Uzzi's (1997) definition of arm's-length relations. According to the interviews, there is no strong local collaborative business environment between the different economic actors in the induced cluster. In other words, one of the important competitive advantage factors, “The intense social fabric makes that makes possible for companies to trust their neighbors and even competitors and join forces for mutual advantage” (Rosenfeld, 1997) is not apparent in the induced cluster.

8.2.3 Cooperation and competition dynamics

Firms benefit from the resources in the environment by their presence in a network, which enables them interaction gains via the help of connections and collective business activities. This is the advantage of network externalities, because networks bring more marginal benefits compared to the cost of participation to the members (Arndt and Sternberg, 2000; Lechner and Dowling, 2003). In the induced cluster, the firms declare that due to central management structure and unnecessary bureaucratic formalities, there is not much affinity or mutual effort between firms, which impedes cooperative action. “Firms work in an individualistic manner here. Although we are part of an established cooperative here, there is no collective mindset. It would be great if we could be more unified and have mutual trust with our peers,” a large

manufacturer explained. Another respondent complained about this situation by saying, “We would wish to have more local partners, it would be so much more convenient to do business that way, however, we do not have any connections in the industrial zone.” Regarding cooperation an interviewee related, “The only cooperation I can talk about happens if there is a certain need during the process of production. For example, if a yarn is finished or if we run out of lycra, we can immediately send for that in a neighbor. That rarely happens though.” Both cooperation and competition dynamics in the induced cluster Ikitelli Industrial Zone are very weak due to the limited interaction and lack of embedded network ties between firms. With respect to this issue, another respondent commented, “In the Ikitelli organized industrial zone, there are no direct competitors for me, because I mainly sell to domestic market, whereas all the other firms in this area sell abroad. Therefore, as our wholesales are different, we do not have much collaboration either. I would only visit a neighbor if I had an immediate need for a certain material.”

8.2.4 Fellowtownmanship mechanism

As explained in the previous sections, the Turkish hosiery sector has initially begun with some entrepreneurs from a town in Anatolia, called Corum. Even today, the people in the sector are predominantly from this town, therefore, there are relationships based on kinship in the Istanbul hosiery sector. “If there are a couple firms that we are in touch within the Ikitelli industrial zone, but that is because they are firms of fellow-towns-men. We were introduced to several firms in a fair in Europe and we realized that we had not met before even though our factories are very close to one another, in the same organized industrial zone.” If there are dense inter-firm relations that could be pinned down in the induced cluster, it seems that

there are mainly due to the affinity gained through fellow-town-men-ship. These interrelations are mainly trust based relations, those based on kinship or regional (i.e., primordial) characteristics, which is usual in collectivistic cultures like Turkey (Önder and Şengun, 2011).

8.2.5 Information spill-overs

In clusters, the linkages at the local level are essential for knowledge transfer and information flow, therefore, during the interviews, respondents were asked their main knowledge and information resources. However, the interviewees in the induced cluster declare that their main source of information and knowledge is not the regional firms, but rather the Hosiery Association and the Internet. When asked the major sources of information to the firms in the induced cluster, most firms mentioned the importance and benefits of the Hosiery Association, followed by the World Wide Web. As the owner of a mid-size firm explained, “Every member of the Association knows what each of us is good at and we meet once every month or so to keep versed of the updates. A lot of knowledge is shared and information exchanged in these meetings and some members from the organization even became my friends.” Through the Association, the hosiery firms can also access information about conferences, fairs, trainings, or funds provided by government institutions. Another interviewee commented, “From the Internet, we can immediately look for the information that we want as almost all of the information can be accessed through the internet. For more detailed and sensitive information, we use the Hosiery Association rather than the Internet. The Association arranges fair admissions and gets discounts as well as organizing events for the industry, such as monthly dinners and talks from professionals in these events.” One other respondent related, “The

world wide web has so much information that we do not need much additional information from other firms in our area. Because we mainly sell abroad to specific companies, we can learn about these firms from the Internet. However, for what other companies in Turkey is doing and how they operate their factories, we get beneficial information thanks to the Association. For example, a couple of years ago, the Association organized a trip to a factory in Kayseri that is very modern and has state of the art technology. We learned a lot from that trip.”

8.2.6 Strength of ties

The findings reveal that, for firms in the induced cluster, the Association, followed by the internet is the major sources of knowledge rather than information obtained through network ties. Consequently, this hinders the development of relationships with firms in the cluster. Almost all firms in the induced cluster referred to the internet as a reliable source that provides diverse and endless information instantly as one respondent described, “As internet is quickly available and easy to access, when we need to learn about something, we try the internet first. For instance, we find out about what is going on abroad and the prices of the firms in China, which is much cheaper than ours. There is no way we can keep up with their prices as labor and material in our country is very expensive comparatively. However, we than discuss these issues with our business partners further and compare notes.” With the internet as an information resource, firms can access knowledge on new products, keep abreast of technological advancements, analyze market demand changes and as well as check the potential of a new buyer. However, when deeper information is required, the firms in the induced hosiery cluster go to the Association rather than the

firms in the proximity, which is in contrast to the case of the spontaneous cluster. Therefore, due to the nature of ties among the firms, the information benefits of networking are not fully explored in the induced cluster. Therefore, it can be said that the presence of both weak ties and strong ties in the induced cluster are very low as firms do not have much interaction.

As seen from the quotations above, our qualitative analysis shows that although located in the same geography; i.e., the Corapcilar Sitesi at Ikitelli Organized Industrial Zone, hosiery firms did not get to know the other sector members in this induced cluster and develop linkages or ties with them. Therefore, it can be concluded that geographical proximity does not automatically result in the formation of network links. In other words, the required level of embeddedness due to interaction is not achieved in the induced cluster in order to benefit from network externalities. According to the results reached by this study, some recommendations seem to be on target for induced formations. Establishing and forming connections among member firms should be on the agenda of industrial zone administrations as well as cooperative managements. In order to benefit from regional resources, the generation of connection or linkages among the firms is vital, as the current study shows that providing nearby locations for firms is not enough to ensure relations among them. To sum up, Ikitelli Organized Industrial Zone induced cluster could not manage to build up social capital as firm relations can be characterized by limited mutual dependence and arm's-length relations. In other words, there is no social fabric present in the Ikitelli induced hosiery cluster. Although in the induced cluster, these types of embedded relationships are not evident, in contrast, the firms in the spontaneous cluster emphasize the importance of linkages, especially the essentiality of embedded network ties. Analyzing the ties of hosiery firms within the

induced cluster, Ikitelli Industrial Zone and the spontaneous cluster, Yesildirek, it is apparent that the firms in the induced cluster do not see the social structure of the industrial zone as a good basis to form network of relationships. Therefore, the vicinity of firms due to being stationed in the same industrial zone does not bring the advantages of location that Porter's diamond theory mentions for the firms in the induced hosiery cluster, especially when compared to how Yesildirek hosiery firms use the advantages of locational network resources.

8.3 Spontaneous clusters: Yesildirek District

In contrast to the induced cluster, the results that have been obtained from the firms in the spontaneous cluster show; high level of cooperation and trust, information-sharing and embedded long-term network relations among the firms in Yesildirek natural hosiery cluster. The results are very similar to findings from other high-performing cluster dynamics, such as those studied by Biggiero, who examined industrial districts in Italy and stated that, "The more people trust one another, the more they reinforce their sense of membership and therefore the more they strengthen their group (network) identity. At the same time, the more they perceive themselves as a group (network), the more they trust one another" (Biggiero, 1999, p. 82). And according to Oz, geographic proximity further reinforces this process (2004). Staber and Morrison assert that the advantages of industrial districts are due to geographical proximity of member firms, inter-firm cooperation and embeddedness (1999) and it could be said that the Yesildirek spontaneous cluster uses these advantages of geographical concentration to gain competitive advantage in global fields.

8.3.1 Embeddedness of links and linkages

A common feature of the Yesildirek natural hosiery cluster, which almost all the interviewees mentioned, is the embedded relations between suppliers, producers and wholesalers. A representative stated as follows, “The most important characteristic of Yesildirek is well established neighbor relations, which means strong cooperation and collaboration.” Another interviewee explained, “Yesildirek can be seen as an organized district of hosiery firms with collective mentality. Firms come together when there is a need, since we have shared stakes that an outside entity cannot know about.” The following respondent explained his relations with a supplier, “We have been buying yarn from the same supplier since 1985 and plan to continue this way. We are very happy working with them and vice versa. Being close to the supplier firm location wise as well as relation wise is a big advantage.” Another respondent tells a similar story about a former employee, “The relationships here are friendly, even toward former employees, who now own their own business. For example there was this employee, he was very good and successful and after working for us for about ten years, he bought machinery and established his own small production unit. We still have good relationship with him, he even does contract manufacturing for us.” Yet another interviewee explained, “In our previous contract, we had to work with a new foreign customer. It became hard to manage some of the prerequisites and documentation and so we got delayed in starting. By chance, we realized a close by firm had done work for this customer for another type of hosiery. We asked for assistance and they were more than glad to give guidance. They were very helpful and this is what a good neighbor relationship is about. We would be more than happy to repay them for the favor and help them whenever they ask something of us.”

The extent of relations between firms is another measure of embedded ties and the findings indicate that inter-firm relations amid members are typically long-term in Yesildirek. “Our relations here are not new, they are actually very old. There are many firms who got bigger and had to move, but I know that they could not form relations such as in Yesildirek in their new places. Their only network they have left is with their fellow townsmen,” explained a firm owner. The respondents generally mentioned that the interactions between them have been formed through thinking of long-term, instead of just short-term profit gains. Therefore, the firms continue to invest in relationships and even try to form mutually beneficial new connections. One company representative mentioned, “We have been here in Yesildirek for almost 50 years and we even have a supplier with whom we have been working for those 50 years. Why risk getting to know a new firm? Yes, we prefer to have long-term relations with the firms we do business with. It took years to build the relationship with my supplier, how could I go to some other firm now? It would take too much investment and more importantly, we have actually never felt the need to.”

8.3.2 Support and trust mechanism

“Embeddedness emphasizes the role of social relations and structures of these interactions in generating trust” (Dayasindhu, 2002). As a firm owner described, “Since the beginning the relations here have been very well, that is why Yesildirek could be described as an environment of cooperation. The long-term, trust-based relationships provide a dynamic atmosphere that cannot be found everywhere. I would say that is one of the factors that contribute to the competitive advantage of the Turkish hosiery sector in the global arena.” Powell (1987) also mentions that

reciprocal relations are an important characteristic of clusters, which indicates the social aspect of exchanges develop through relations based on trust. Another respondent described, “I would say trust is very important for the success of our company. Working with the same yarn supplier, machinery provider and logistic company allows us to do our job better, faster and easier. Good relations with firms we can trust is very important for a manufacturing company such as us working with big volume exports and relatively short target due dates.” As the interviewee concluded, “I definitely trust my neighbors to take care of me if something went wrong in my business. I know they would try to offer a helping hand to me.” Another respondent related, “We work together with a limited number suppliers, because, we have trust relations with them, pay them on time, and we support each other in bad times. Our business understanding is not disappointing our partners, so that both sides are happy.”

According to Dayasindhu, “Behavioral drivers of transaction cost economics, such as trust and experience influence embeddedness, which describes the types of relationships among organizations in a cluster” (2002). “In mornings we all have our tea together, we go to lunch together. We sit in front of our stores and play backgammon. If there is a fight on the street, we all gather to separate it. The people here are my neighbors and friends. How could I betray them? If someone’s business is rough, we try to try help in various ways,” another manufacturer related. However, it seems that as firms get busier, sometimes daily interactions become less frequent. As an owner of a large firm explained, “I learn about new fabrics, up-to-date machinery and upcoming fair information from the locals of Yesildirek. However, in the last few years, as everyone is busy as businesses got bigger and firms began moving, these kinds of relationships seem to become less frequent. However, when

there is need, we always become a group.” Research highlights the importance of informal networks, mutual trust and collectivity for small firms (Granovetter, 2000) and the interviews showed that inter-firm trust, the major indicator of embedded relations, is high in Yesildirek. It can be concluded from the in-depth interviews that the existence of close inter-firm networks among members of the Yesildirek spontaneous cluster has formed a solid base of support and trust, which has assists the progress of knowledge spill-overs and cooperation. Thus, an environment packed with these types of relationships inspires motivation and creates synergy in the cluster, causing all the participants to benefit from the cooperative atmosphere and contribute to competitive advantage.

8.3.3 Cooperation and competition dynamics

In Yesildirek, face-to-face personal relationships characterize most business transactions. Dealing with some urgent or oversize orders from buyers, firms may seek help from nearby firms or getting technology and market information may be other reasons for cooperation. An interviewee related, “We are co-producing a new type of product with a firm in Yesildirek which began last year. We were familiar the firm for many years, however, in the last years, we got to associate together closely and this created trust. This alliance is better than competition.” Another respondent explained, “Sometimes we accept an order for which we do not have the required production capacity. It is better to outsource these orders or to pass them on to another firm that has the necessary expertise; therefore, our firm becomes stronger through deeper relations with partner firms. Also, working this way, new products come up by the exchange of ideas among the organizations.” The following firm representative had a similar story, “We sometimes have adequacy problems for a

contract either due to volume or timely production. We can readily go to this company we have worked with for several years now and they fill in for us when we lack competence. There was an important customer from Greece, who had immediate need of a type of hosiery that we do not produce, so we immediately introduced them to this firm.” Alliances due to capacity limitations are very common in Yesildirek, thus, even competitors engage in cooperation for a while, as the interviewee concluded, “This way, we did not lose the contact and gained an important customer and also assisted a neighbor company in getting new business.” Over time these relationships continue and firms share orders and profits meanwhile in competition with one another. The cluster environment becomes a network of organizations, in a way, because proximity aids communication and members can get connected to new ties without difficulty (Gilsing et al., 2008). As a large exporter described, “We prefer to do business with the same firms. Yes, we choose to have long-term relations with the firms we work with, as long as we do not have to end the relationship because we use their products anymore or they become materialistic. There was this one company we worked with for a long time, but we had to end it end it because they got greedy.”

However, negative experiences such as the one above are not common in Yesildirek and even if they occur sometimes, they are usually categorized as ‘sweet competition’ as the following stories portray. There is mainly complaint about the new firms who try to get business in Yesildirek by bargain prices and several respondents expressed concern in a similar way, saying that, “Some firms sell out another manufacturer even for a ten lira gain, since there are some cheap newcomer firms around. These small-scale new firm owners also try to steal our staff, especially high-skilled employees. However, in Yesildirek these kinds of establishments never

survive and, eventually, they only hurt themselves and end up going out of business.”

Another interviewee said, “There is this one establishment, who doesn’t let other manufacturers enter their shops because they worry their patterns will be copied. They complain that they do not want to share design knowledge, as they mainly sell to Italy, however it makes no sense. Everybody here knows the fashion of the year in hosiery industry and many other firms can produce that same model in same quality.” Although there are few negative anecdotes sometimes, mainly, there is an environment of collaboration in Yesildirek, there is still potential for denser network ties. Regarding this issue, a large hosiery export representative explained, “We would like to expand our wholesaler portfolio, the number of wholesalers we work with, but it is not possible. Here in Yesildirek, there are hundreds of manufacturers but there are only several wholesalers who have enough capacity to buy our products, or at least that we are in touch with.” On the same issue, a large company owner said that, “Differentiation retailers never want to expand their network of subcontractors because as the number of subcontractors increases, leakage of information on designs and imitation of collections becomes more likely.” This indicates that when a retailer follows differentiation strategy, the manufacturer has the advantage, as long as manufacturer has the potential that the retailer requires. In contrast, retailers that have low-cost strategy of selling basic products with bargain prices tend to have arm’s-length relations with manufacturers. A producer of standard goods described the procedure of low-cost retailers as follows, “All firms offer their discounted amounts for the standard product and retailers choose the bid with the cheapest price at the requested criteria.”

8.3.4 Fellowtownmanship mechanism

As explained in the previous chapters, the Turkish hosiery sector has initially begun with the initiatives of some entrepreneurs from a town in Anatolia, called Corum. Even today, the people in the sector are predominantly from this town, therefore, there are relationships based on kinship in the Istanbul hosiery sector. One interviewee described, “Our firm was one of the first ones to come here about 50 years ago. There were some other relatives from Corum located here, so we began our business here. Since then, firms come and go, but I would say most of the original firms are still here and surviving.” A small-scale manufacturer mentioned trust-based relationships and commented, “Even though making sales and profits is the ultimate goal here, people still care about their neighbors, relatives, friends and especially take care of their fellow townsmen.” Another exporter stated that, “There is this new company from Russia that we met in a fair. They gave us a big contract, however there is a product that they request which we cannot produce, since we don’t have the technical equipment for it. Therefore, for that order we contacted another firm in Yesildirek, the firm of a fellow townsman, who has the necessary machinery and asked for their help.” Another firm representative relates a story about a former employee, “There was this foreman we brought from our hometown Corum and he learned the hosiery business here. He was very good and successful and after working for us for about ten years, he bought machinery and established his own small production unit.”

8.3.5 Information spill-overs

Another common characteristic of the Yesildirek natural hosiery cluster is the high level of information and sharing of know-how. It has been argued in the literature that the increased innovative level of cluster firms is a result of the geographical agglomeration of firms that urges localized information spill-overs (Caballero and Jaffe, 1993). “If we need to talk to another firm, we can give each other a phone call anytime. We could always step outside our store and there are many neighbors sitting around and exchanging conversation about business or other random stuff. Where else can we find this? Of course, I would say information is flowing in the air,” a respondent explained. Expertise and knowledge sharing is beneficial in many areas of the business, for instance, another interviewee comments on the technological benefit, “There is this new machinery that decreases our need for man labor. This new machinery can even sew the toes of the socks. We first heard about this machine from our neighbor firms here in Yesildirek. Than they introduced us to the Italian company they bought it from. We even got a good discount on the machine thanks to our neighbor. Now, we don’t need to hire as many workers as we used to.” Another interviewee explains, “Hosiery is a very labor intensive sector. We need lots of man work as it is mainly an art, especially women’s pantyhose. Thus, skilled and experienced foreman is important. We sometimes transfer between firms, not meaning that firms steal manpower from each other, but rather exchange human resources. This way, all of us firms almost have the same kind of know-how.” However, it should be noted that as with the firms in the induced cluster, firms in Yesildirek spontaneous cluster referred to the same source, the internet, as their main source of knowledge resource, for general, readily-available information. Here is another quotation from one of the interviewed firms, “In our market, most of

the firms are our long-term partners and we have been doing business with them for many years, still, there is always competition. Hence, we go online to keep updated about the sector, especially abroad. Sometimes we search the web to find out the range of goods provided by the big firms in China, which is the main competition.” Another respondent explained, “From the internet, we get can get all the information basic we require. However, the Association is also a good resource to meet firms, to get updates about the market and the sector.”

In the cluster environment, the presence of regional labor resources and the availability of qualified workers, constituting also of former employee establishments, is seen as smooth means for the flow of information and knowledge (Camagni, 1991; Capello, 1999; Capello and Faggian, 2005) In addition, the competitiveness of firms in a cluster is partly explained by the large number of qualified employees who aid in forming networks among producer firms, wholesalers and suppliers and the development of such networks in the hosiery sector is also a result of the fact that many workers frequently change jobs between firms. An employee of a firm explained, “All fellow industry workers will support me when I say that we would learn more if we could connect to other employees in outside companies. However, sometimes, our bosses try to stop us from communicating, as they do not give us credit not be led by a competitor.” The learning capacity is also extended by high level of employee transfers among the cluster firms (Power and Hallencreutz, 2002). Furthermore, regarding knowledge-sharing or inter-firm learning, respondents noted that it is customary in Yesildirek for a manufacturer to directly visit another manufacturer’s store in person, even if that manufacturer is not a close neighbor. “The degree of trust the informal ties provide is so high that it is common for firms in a cluster to visit their competitors’

factories in order to gain know-how and new insights” (Nadvi, 1999). It can be concluded from the in-depth interviews that the informal network among firms in Yesildirek spontaneous cluster has generated a solid foundation of trust and support, which has also promoted local knowledge spillovers and regional collaboration. Thus, an environment packed with these types of relationships inspires motivation and create synergy in the cluster, causing all the participants to benefit from the cooperative atmosphere and strongly affect competitive advantage.

8.3.6 Strength of ties

Literature confirms that clustered firms can generate additional advantages by developing local networks and, hence, reinforce competitiveness (Erkuş-Öztürk, 2009). There are some factors that contribute to the emergence of network relations, for example trust is one of the most important inducements for developing inter-firm networks. According to the interviews, the firms in the spontaneous cluster have a considerable degree of cooperation and trust, knowledge-sharing and embedded long-term ties with the other firms in Yesildirek natural hosiery cluster. Another finding of this research is relevant to Granovetter’s (1973) discussion of nature of strong vs. weak ties. It was found out for firms in the Yesildirek natural cluster that the extent of benefit obtained through interconnections has an important part in the preference amid weak vs. strong ties and the interviewed firms make the categorization of ties based on the level of embeddedness of linkages. It seems that a strong tie is formed when firms communicate often and there is intensity in the relationship and these embedded ties are considered more advantageous for the hosiery firms in Yesildirek spontaneous cluster. On the contrary, a tie is perceived as weak when the relationships between firms mainly consist of interchanging relatively

narrow, redundant and basic everyday information, therefore, weak ties are considered simply as associates and these kinds of linkages are not seen as essential for the cluster members. It could be said that strong ties are relatively more valuable when there is need for access to sensitive information, whereas weak ties, are relatively more valuable when there is need to access wider and more diverse information (Granovetter, 1973). As in the case of the induced cluster, for the firms in the spontaneous cluster too, the Internet is a considerable information source in order to acquire general information on a various range of topics. The Hosiery Association is another reliable source of information can be perceived as interchangeable with weak ties, which is a major constraining factor for the utility of weak ties. As weak ties are needed for access to wider and more diverse information, according to the respondents' claims, internet comes up as an alternative resource and it can even be said that the value of information from the Association and the internet is almost at the same benefit level with forming weak ties amid firms. According to the findings from the in-depth interviews, it can be concluded that for the spontaneous cluster members, their weak ties are almost compatible with the Association and the internet as was the case in the induced cluster, and hence, less helpful than strong ties.

The interviewees claim that, through weak ties they can access information up to a certain level, whereas through strong ties, they obtain get important information that cannot be acquired from elsewhere, such as trade secrets, confidential info etc. "If your relationship with another firms is close, you get access to sensitive information, such as finances of the firm, shortcomings and potential capacity. Otherwise, the information does not get much deeper than sharing basic business word-of-mouth," a respondent related, and parallel with this finding, almost

all firms in the spontaneous cluster stated that they would prefer to have few, but strong ties over numerous weak ties. A one firm representative noted, “We prefer to have few and strong relations over many weak links as the strong ties are more beneficial for us.” For firms in the in the Yesildirek spontaneous cluster, the more helpful business Intel is reached through the strong ties, as the subsequent respondent expressed, “With the firms we form a closer relation, we discuss ways improve business, how to earn more profits, whom we can trust, which firms we can work together in order to increase revenue, etc. Usually that information is specific and is not generic, it is critical for deciding on strategy. Via other types of linkages, we only learn about the sector updates and new technological equipment, although useful, this knowledge is not as valuable.” Another interviewee comments, “I can reach comprehensive knowledge from firms we work together with, such as new materials for improved products and information on suppliers. But this kind of information I would rather get from a close source, as I need to trust that the information is valid and accurate.” According to Rosenfeld, “In nearly every cluster, firms call on their trusted neighbors to share orders, technologies, and information. A local saying in North Carolina’s Catawba Valley is that there are no secrets in hosiery” (Rosenfeld, 1997, p: 13). Another manufacturer explained the importance of strong, trust-based ties as follows, “My connection with my current partner progressed over time. About ten years ago, we worked together on an order and got to know each other better, such as way of doing business, ethics and work habits. Then we cooperated more for a bigger contract and eventually we began talking about partnership and how it would suit us both. Since we have similar goals and vision, we have a mutually beneficial partnership.”

According to Uzzi (1997), embedded ties formed through recurring exchanges between a few members are more valuable in cases when trust and cooperative action is necessary. Therefore, strong ties imply enhanced interaction and this higher strength of inter-firm ties is perceived more valuable by the hosiery firms, for instance, working together with another firm for business necessitates time and effort spent for relations where both sides receive collective benefits. As a respondent related, “There are many different firms we are in touch with here. With one firm we work together in a contract, so that relationship is a bit more intense than the relations with others. Although we have good communication with all firms here in Yesildirek, with the firm we do contract with, our employees talk every day and we have face-to-face meetings at least every week. This firm is more valuable to us and vice versa most probably.” “Firms find ways to cooperate with other firms, for example, in Italy, joint ventures among SMEs that produce complementary manufacturing functions is common practice and they also even market cooperatively. Even potential competitors cooperate to strengthen the cluster and region” (Rosenfeld, 1997, p.13) Similar to the hosiery cluster in Catawba Valley, Yesildirek hosiery cluster’s dense networks patterns and the degree of networking also reflect the high level of social capital and intense social fabric that exists between firms. Research emphasizes that the geographical dimension of social capital is critical as it has been seen that social capital can develop regional externalities (Iyer et al., 2005). Therefore, it can be deduced that local networks and social capital is more important for hosiery firms for developing strong ties, as firms perceive the benefit of the strong ties more enhanced in geographical region.

The findings show that firms in the Yesildirek spontaneous cluster that especially follow the differentiation strategy prefer stronger ties and trust-based embedded

relations with the other members in the cluster, rather than weak or arm's-length relations. The tie between firms can be characterized as an embedded link when there is a stronger linkage, such as working together on a contract for a specific buyer or a differentiation retailer. For example, working together with another firm for a made-to-order contract necessitates a denser relationship where firms get to know one another deeper, learning the strengths as well as the weaknesses of the other firm. One interviewee commented, "While working together, we learned each other's competencies as well as shortcomings. However, it is a very profitable alliance and we believe that mutual expectations are met on both sides." Another respondent explains, "Relationships with some of the firms in Yesildirek have different characteristics. If I do shared business with a firm, like partnering on a custom-made order, it is different. In a way, it means our relationship is more worthy." As the following firm representative related, "There is a firm around here that also produces for the same big buyer in Europe. With this firm we share all kinds of business Intel about the buyer, such as payment options, due dates, shipment preferences, etc. Of course our ties with this firm are stronger and more valuable to us as no other firm around here has access to such sensitive information about this important buyer in Europe." Geographical proximity aids hosiery firms when they need to interact through stronger ties in order to receive more benefits from the local network resources, especially for firms that serve the higher quality segment and follow differentiation strategy.

8.4 Conclusion

The cluster is an important paradigm for competitive advantage as it is an efficient platform for working collectively by providing trust and cooperation and contributing to mutual learning and business synergy. Simmie (2004) and Romijn and Albaladejo (2002) as well as other scholars emphasized that networks are integral to the performance of cluster enterprises. The cluster environment creates an informal network as proximity increases interaction as well as inter-firm trust and through the network, access to the resources of the firms within located in a cluster are higher than firms located away from a cluster. Social capital theory posits that firm networks have a significant function in leading to superior firm performance (Leenders and Gabbay, 1999), thus, clusters are an important paradigm of regional economic development (Giuliani, 2002). In this study, the concept of networks was taken one step further and distinction was made between induced cluster relations (Ikitelli Industrial Zone) and spontaneous cluster relations (Yesildirek). Whereas the cluster literature has, for the most part, analyzed the relationships between organizational-level variables in clusters, such as geographical concentration of firms and the level of embeddedness in networks, and the presence of innovation ability and collaborative working capacity, this thesis followed a somewhat different track and has focused on the role of the networks in induced vs. spontaneous clusters. It is argued that a cluster being induced vs. spontaneous moderates the relation between network elements and competitive advantage and the findings show that firms in induced vs. spontaneous clusters can be utilizing distinct sources of linkages and network ties. And it had been found out that the results of the research confirm this main hypothesis. If we come to the analysis of all sub-hypotheses, we could definitely say we have support for the first six hypotheses below based on the

qualitative interviews in Istanbul's two hosiery clusters, Yesildirek spontaneous and Ikitelli Zone induced cluster.

Hypothesis 1: A cluster being natural vs. induced will moderate the relation between network elements and competitive advantage, such that firms in spontaneous clusters are better able to form and utilize network linkages and ties than firms in induced clusters.

Hypothesis 2: The embeddedness of links and linkages in the spontaneous cluster network will be stronger.

Hypothesis 3: The support and trust mechanism in the spontaneous cluster will be stronger compared to the support and trust mechanism in the induced cluster.

Hypothesis 4: Knowledge spill-overs in the spontaneous cluster will be stronger compared to the knowledge spill-overs in the induced cluster.

Hypothesis 5: The synergy and motivation in the spontaneous cluster will be stronger when compared to the synergy in the induced cluster.

Hypothesis 6: Cooperation dynamics in the spontaneous cluster will be stronger when compared to the cooperation dynamics in the induced cluster.

The results of this qualitative study with regard to the spontaneous cluster are very similar to the 2005 research by Eraydin and Koroglu conducted in the Denizli textile cluster, which is a very competitive spontaneous cluster, specializing in home textiles. Eraydin and Koroglu (2005) state that in Denizli, which is among the well-known textile clusters of Turkey, because of the nature production, there appears to be dense production networks, information exchanges and know-how sharing. The study, similar to the research in this thesis, reveals that social networks

are fundamental, and the success of the Denizli cluster is viewed to depend on the regional collective mentality, the availability of high quality inputs, the long history of textile production and entrepreneurship capability (Eraydin and Koroglu, 2005). “Local knowledge networks seems to be important for firms in traditional production sectors, as we see in the case of Denizli, where ‘following the best practice’ is the attitude of many entrepreneur” (Eraydin and Koroglu, 2005). The results of this study also emphasize the importance of network relations with supplier firms and customers (Bergman and Feser, 2001; Braun et al., 2002; Camagni and Capello, 2000; Freel, 2003; Todtling and Kaufmann, 1999, 2001) as well as competitor firms (Arndt and Sternberg, 2000). Similar to the case of Denizli spontaneous cluster, the local environment in Yesildirek spontaneous cluster can be defined by the presence of competition that is neutralized by cooperation dynamics built on collective trust (Eraydin, 2002). Gemser and Wijnberg (1996) found that the competitive advantage of the Italian furniture sector is due to constant improvement and product specialization, which is assisted by the existence of clusters, composed of SMEs forming a network similar to families in terms of organizational structure. This seems to be the case for the Yesildirek spontaneous cluster as well, according to the depictions of the interviewees. As with the part of this research on the spontaneous clusters regarding fellow-town-men-ship, the results of the Eraydin and Koroglu (2005) research also show that, competition firms in the region as well as “Local trust circles such as family and kinship relations, friendship and compatriot relations, religious communities, relations based on past familiarity are important as sources of knowledge” (Ozelci, 2002).

Literature has depicted that exchanges in a geographical cluster support a collective platform for innovation and organizational learning (Gilbert, McDougall, and Audretsch, 2008). The findings of our study also confirm that information spillovers and knowledge sharing is enhanced in the cluster environment of the spontaneous cluster, which shows that business-to-business relations are important for both increased productivity and knowledge transfers (Arndt and Sternberg, 2000; Maskell, 1998). McCann and Folta (2011) have underlined that being located in a regional cluster enables firms to access information in part because of the regional characteristics of informational sharing. This is parallel with the Schumpeterian view where knowledge is created as a result of information flows in the network. This perspective identifies knowledge as a tacit resource and has inspired scholars to represent knowledge diffusion through direct relationships in geographical clusters (Nonaka and Takeuchi, 1995; Polanyi, 1966). Caniels and Romijn (2005) research shows that by aiding the creation of knowledge between member firms, network ties enhance the innovative capabilities of cluster firms. The results of Eraydin and Koroglu (2005) study show that on the basis of knowledge sharing, the regional clusters come forward as fundamental factors contributing to diffusion of knowledge. An important finding of our research with the hosiery firms in the Yesildirek spontaneous cluster is that a great deal of knowledge is generated and information exchanged in the complex interpersonal networks between firms, more than the induced cluster Ikitelli industrial zone.

Although in related literature geographical concentration of firms is generally assumed to be a sufficient condition for gaining the advantages of the cluster system, the findings of this study show that, for the firms in the induced cluster, being located close is not an adequate condition for developing interactive relations. Although as

described by Kuah, “A cluster is also a form of network that occurs within a geographical location, where the proximity of firms and institutions ensures certain commonality, increases the impact and frequency of communications and interactions” (Kuah 2002, p.225), which is not the case for the Ikitelli induced cluster. Relationships among members of the induced cluster can be described by weak level of mutual dependence, the result indicating that proximity does not guarantee the development of ties with the other firms within the cluster. These findings of the induced hosiery cluster in Ikitelli Zone are very similar to the previous research on techno parks, which are another type of induced cluster. For instance, Aslan and Wasti, in their research, concluded that, “Therefore, the locational proximity provided by the techno park does not constitute a source for the formation of interaction or relation for high tech firms. Sharing the same geographic location is not enough to get benefit from being together for the high tech firms as it does not ensure creation of interaction among them” (Aslan and Wasti, 2015, p.12). In another study on techno parks, Vučić found similar results, “Techno-parks’ tenant companies have potential of forming cluster with dense inter-firm networks, yet, our previous results indicate that there are no dense inter-firm networks in the studied techno-parks. According to formal and informal information gathered through the field survey, we assume that majority of the firms is not aware of the benefits that they can obtain through inter-firm networks” (Vučić, 2009, p.119). On the contrary to the case of induced clusters, in the spontaneous cluster, firms located in the proximate area develop stronger informal relations and engage in trust-based relationships with each other. As results reveal, it is seen that spontaneous cluster firms have more access to network resources and benefit from inter-firm trust relationships, hence, it could be said that motivation and the synergy within the

spontaneous cluster is much stronger than the induced cluster. Based on the interviews, the below two hypotheses were not supported, as there were no meaningful differences between the clusters as far as depicted from the interviews.

Hypothesis 7: Competition dynamics in the spontaneous cluster will be stronger when compared to the competition dynamics in the induced cluster.

Hypothesis 8: Fellowtownsmanship mechanism in the spontaneous cluster will be stronger when compared to the fellowtownsmanship mechanism in the induced cluster.

Research also showed support for the final two hypotheses below:

Hypothesis 9: There will be more weak ties in the spontaneous cluster when compared to the induced cluster.

Hypothesis 10: There will be more strong ties in the spontaneous cluster when compared to the induced cluster.

A review of the literature discloses that by the network relationships, participants may obtain a wide variety of resources and firms located within a cluster, this a factor that lowers the search costs of members. According to Granovetter (1973), strong ties are formed by close relationships and reciprocity, whereas weak ties are comparable with casual acquaintances. Consequently, according to the tie being strong vs. weak, the utility of the linkage varies and all the interviewees in both types of clusters stated that they prefer a few, but strong ties over numerous weak ties. The firms in both the induced and spontaneous cluster mainly use and exploit the Internet to get the general and basic information they

seek as the World Wide Web quickly provides a vast amount of information. Aside from the internet, the Hosiery Association is an important resource that curbs the tendency to form interactions with other firms within the cluster and it can be deduced that, these mediums are on a par with weak ties. This may be due to the fact that according to Batjargal (2006) many weak ties may increase transaction costs due to low personal trust and higher control that is required in arm's-length relationships. On the other hand, it has also come to light that when firms are in need of strong ties (Granovetter, 1973), the local networks in the spontaneous cluster becomes particularly useful for hosiery firms. According to Uzzi (1997) embedded ties where frequent exchanges take place between a small numbers of firms are more preferable for conditions involving trust and cooperation. Therefore, firms in the spontaneous cluster utilize strong ties when working cooperatively or when in need of sensitive information. According to the results, strong ties are more helpful for the firms in the spontaneous cluster, especially for firms which follow differentiation strategy, where firms interact frequently and give time and effort for the relationship. Consequently, as firms in located in the spontaneous cluster Yesildirek perceive their weak ties as on a par with the Association and internet, and hence, less favorable than their strong ties, they are more eager to cultivate strong ties through investing in interactions with the other firms in the cluster. However, the benefit of strong ties can only be exploited by firms in the spontaneous cluster, as strong ties do not seem to be apparent in the induced cluster. Therefore, according to the results obtained from the interviews among the cluster firms, it can be concluded that the network relationships geographical proximity provides turns out to be more important when firms are in need of developing embedded ties as this gains them other potential advantages. Thus, firms are more interested in forming

and investing in localized strong ties as these types of ties have more benefit due to their value compared to weak ties (Granovetter, 1973).



CHAPTER 9

CONCLUSION

Firms located in a cluster may be described as a proximate set of companies that may encompass producers, suppliers, and distributors as well as other various related and supporting industries. Due to their geographic closeness, firms in a cluster present a high level of connectedness among each other as well as with regional associations, such as government institutions, research organizations and education centers (Porter, 2000). The firms within a cluster are supported by economies of scale and collectivity and thereby gain competitiveness compared to firms located outside a cluster (Schmitz, 1995). Studies have shown that firms that are part of a geographical cluster tend to be higher performance, in terms of innovation and revenue, relevant to firms located outside clusters (Caniels and Romijn, 2005; Oerlemans, Meeus, and Boekema, 2001; Simmie, 2004). According to Schoales (2006), high-performing clusters are seen to expedite regional economic progress by increasing firm production and promoting higher local wages. Relatedly, Almeida and Kogut (1999) research shows that the emergence of clusters during 1980's in the U.S. hi-tech industry contributed to elevated innovation and energizing of the sector. This research was conducted in a traditional manufacturing sector in a developing nation, Turkey, in the context of two hosiery clusters, using Porter's cluster framework as the basis for national and regional competitiveness, as well as innovation and growth. Cluster research in emerging economies is less, but they also demonstrate that clustering reinforces the competitive advantage of firms within the cluster (Caniels and Romijn, 2003; Schmitz and Nadvi, 1999).

Networks are constructed when there is interaction, creating means of making invisible patterns of information flow and means of contributing to collaboration in strategically placed members (Wikipedia). As academicians and practitioners began to appreciate the essentiality of relations for business life, the network concept has been increasingly integrated into social sciences in the last years (Easton and Araujo, 1986; Harland, 1995; Nohria and Eccles, 1992). In this study, it was aimed to contribute to the current debates regarding the relevance of networks by analyzing network relations in the context of clusters. According to Lee et al. (2001), businesses have to adapt strategies that aim to develop networks with other resource holders. In this study, it was aimed to add to the research on networks and investigate the differences among networks in spontaneous and induced clusters. We argue that ties in spontaneous vs. induced clusters can have different characteristics; therefore, we analyze the local networks in both types of clusters, as regional networks are an investment that enhances competitive advantage in the global arena. Literature has scrutinized how the network of the firm contributes to social capital (Stam and Elfring, 2008) and how the absorptive capacity of the firm affects firm performance (Larrañeta, Zahra, and González, 2012). This thesis extends this line of research by differentiating between induced vs. spontaneous cluster network ties in the context of a developing economy, in low-tech traditional production clusters. To our knowledge, this is the first research analyzing the differences between spontaneous vs. induced clusters, specifically in relation to firms' networks. In this dissertation, therefore, it was attempted to combine the geographical cluster framework that stress the importance of cluster ties (Giuliani and Bell, 2005) and the literature on networks that emphasize the contribution of the local environment for competitive advantage.

As mentioned in previous sections, recently, economic development by the clustering phenomenon has become an important and popular topic studied often in literature. The cluster concept, described as the geographical concentration of interconnected organizations, has received much attention in the field of strategic management (ex. Beal and Gimeno, 2001; Öz, 2004; Porter 1998). Porter's (1998) diamond model suggests that clusters positively impact competitive advantage, since the proximity of businesses, customers, and suppliers urges all the firms to innovate and upgrade, so that productivity, innovation, and new business formation is increased. Another field of research, social capital theory, posits that firms' networks have a significant part in leading to firm performance (Leenders and Gabbay, 1999). Relatedly, literature shows that the functions of local networks are enhanced by social capital, through the development of trust, cooperation and reciprocity (Fukuyama, 1995). Although numerous studies have been conducted on clusters, Saric (2012) mentions that cluster literature is still not clear about the system that generates benefits for the individual firms located in clusters and he tries to bring the cluster paradigm back to the firm. His study proposes that the most successful cluster firms are the ones that have the entrepreneurial orientation elements of proactiveness, innovation, and risk-taking. He suggests that cluster-capability is recognizing the opportunities in a cluster in order to exploit the value-generating potential of the resources and lists the elements of cluster-capability as follows. One is the ability to gather information and dispersing it through the organization, another is building and maintaining relationships with other nearby located organizations, and lastly recruiting and hiring skilled employees, which are all resources obtained from the network (Saric, 2012). Therefore, cluster-capability depends mostly on making use of and taking advantage of the network ties within a cluster. However, an

examination of cluster literature displays that not much focus has been given to how firms utilize networks in clusters, and this thesis attempted to fill in this gap by further exploring the network characteristics of firms in clusters. Thus, the theoretical model in this study examined the relationships between network variables and competitive advantage in the context of clusters in Turkey, an emerging economy.

Analyzing network ties, in this study, it was also aimed to investigate and add on to the ongoing discussions on the effect of clusters on competitive advantage. In conclusion, this study demonstrates that there is a correlation between the high concentration of hosiery-related business in the Istanbul region and the ability to create and sustain international competitiveness. In their research article, Eraydin and Koroglu (2005) define two aspects that can be perceived as conditions for competitiveness in the today's business environment, which are networking and innovativeness. In order to be successful, a firm must nourish and invest in its network and thereby reach and utilize new information and knowledge. The regional network, according to types and quality of network ties, that provide support and the resources, ultimately affects the performance of organizations. Hoang and Antoncic (2003) mention that studies on entrepreneurship networks studies attracted interest as a new field of research, as the essential part that networks have in promoting entrepreneurial processes and consequences has been proven. Networks of a firm have a primary part in business performance and clusters provide a prosperous environment for firms by the intensity of the network ties and information flows, allowing firms to benefit from the resources in the environment by exploring opportunities and utilizing the necessary sources. As network ties are an important resource for firms, in this thesis, we consider it relevant to understand the relation of the network ties of a firm and competitive advantage.

This qualitative study aimed to analyze the network structures of firms in spontaneous vs. induced clusters based on the case studies of two types of hosiery clusters in different geographical locations in Istanbul, one located in Ikitelli Industrial Zone (the induced cluster) and the other in Yesildirek district (the spontaneous cluster). Textiles industry is among the most important for Turkish economy and, as a sub-category, hosiery sector ranks 2nd in the world, exporting to about 130 countries worldwide. According to Turkish Ministry of Economy reports, hosiery industry is the 3rd largest exporter in the world following China and Italy in terms of value and the 2nd largest supplier of the EU. In-depth, semi-structured, face-to-face interviews were held with hosiery firms in the two cluster types in order to get a holistic understanding of the present network structures as well as to explain how these network ties are potential sources of competitive advantage. The results supported the main hypothesis, as networks were found to be more intense in the spontaneous cluster relative to the induced cluster. Although located in the same cluster, the firms in the induced cluster did not develop close relationships with the other firms. Therefore, for the induced cluster, it can be claimed that the benefits of the cluster paradigm are not realized to potential since inter-firm relations can be described as weakly mutually dependent, or arm's length in terms of Uzzi (1997). On the other hand, the existence of dense inter-firm networks, high level of cooperation, mutual-trust, knowledge-sharing, embedded and long-term relations among the firms in the Yesildirek spontaneous cluster has formed a solid base of support and trust. Thus, an environment packed with these types of relationships inspires motivation and creates synergy in the cluster, causing all members to benefit from the information spill-overs and the collective atmosphere, thereby contributing to competitive advantage. Another finding, which is in line with Granovetter (1973), is

that while weak ties are seen as just acquaintances, whereas strong ties, developed by time and energy investments in the relationships, are more valuable for firms in the Yesildirek the spontaneous cluster.

Enright (1993) claims that regional clusters can be typified as working or 'overachieving' clusters, which have become bigger than the total of individual members and latent or 'underachieving' clusters where opportunities exist, yet, the potential advantages are not exploited. A 'working' cluster signifies that firms within the cluster have the social network as well as the support system to keep the information flowing, help develop new ideas, reinforce relationships, and stimulate entrepreneurship. The induced cluster could be described as a 'latent' cluster, since, although the cluster enjoy the status of being a geographical cluster, the firms do not have the mutual dependence to achieve the synergy of a 'working cluster.' In the case of the induced cluster, it could be said that the concentration is apparent, but the advantages of clustering is not utilized, broadly, due to the fact that the social system that encourages communication between firms is lacking. The interviews revealed that the businesses in the induced cluster neither have a shared vision nor take steps to become a 'working' cluster. The induced cluster seems to have limited interaction benefits of taking advantage of competencies and collective strength, which are factors that are required to be competitive in the global arena. The induced cluster, very similar to the Route 128 cluster around the Boston area, as Saxenian (1994) puts it, lacks the inter-firm dependencies that are apparent in energetic clusters. However, it should be noted here that these are very large, campus-like companies, whereas the studied firms in this research are SMEs, so size and industry might matter, for instance large firm dominated clusters might be favored by some industries and interaction patterns might be working differently.

As a spontaneous emergence involves more personal communication, including trust-based interactions, compared to an induced formation, in this research, it is found that the 'social fabric,' in other words, the 'glue mechanism' or 'fluidity' is stronger in a spontaneous cluster than an induced cluster. As Kuah (2002) puts it, well-functioning clusters, such as Silicon Valley, are composed of more than just hierarchical networks, establishing 'fluidity,' thus, becoming more effective and productive. As Porter's diamond is a working system that grows, as well as upgrades when all the four elements interact, it can be said that the network linkages also grow larger along with the development of the cluster. Thus, parallel with Porter's claims, as social capital adds on the diamond framework elements in the cluster environment, creating a better synergy and contributing to the competitiveness of the firms, this effect is more intense in a spontaneous cluster compared to an induced cluster. Therefore, the findings of this research point out several key implications for the induced cluster, such as the need for encouraging network relations and developing interdependencies. Attaining wider access to resources by nurturing network ties and increasing the variety of a firm's information resources are essential for firm performance as well as innovative activities. Firms must make knowledge exchange a priority, for instance by providing opportunities for employees from various firms to interact in a professional environment. The development of such networks in the industry is sometimes as result of professionals or workers that are concurrently hired by one firm and/or loosely linked to another or several other employers. However, this is not the case, as one interviewee from the induced cluster mentioned, "Oftentimes, firm owners suspect their employees when they interact with employees of other firms. It is seen as a betrayal of one's own firm." The fact that there is not much trust among firms and firm owners, hinder the

embeddedness of network ties and discourage knowledge exchanges. There is also the need for establishing a culture that emphasizes trust as cluster synergy requires the need to appreciate the significant part trust-based relations play in embedded networks and in order to encourage knowledge exchanges (Dayasindhu, 2002). On the other hand, the relationships in the spontaneous cluster can be characterized by embeddedness, strong linkages among organizations and increased information spillovers. The cluster context adds another perspective to the commonly discussed function of networks in the performance of businesses (Kuah, 2002) and one finding of this study is that further research should be done in order to analyze the role of social networks in explaining sources of competitive advantage. Another discovery is that, as a significant amount of knowledge is generated and information exchanged in the complex networks within the cluster, it is appropriate to focus exclusively on the firm-level for identifying and explaining regional process of knowledge generation and dissemination.

Textiles industry is Turkey's top export generating sector and hosiery, as seen above, is an important sub-segment of the hosiery clusters are among the most developed clusters in Istanbul's textile clusters. An important concept when analyzing a cluster is to examine production channels of the region and this availability of related and supporting industries in and around Istanbul is the main competitive advantage factor for the hosiery sector. In conclusion, this study demonstrates that there is a correlation between the high concentration of hosiery-related business in the Istanbul region and the ability to create and sustain international competitiveness. From the result of the study, it was seen that hosiery clusters have a lot of potential for improvement as the network relations in the induced cluster are especially weak. Various methods to enhance relationships

among cluster firms would also affect the competitiveness of the clusters so that the hosiery clusters in Istanbul can become one of top hosiery clusters in the world.

In this thesis, literature on networks was integrated with Porter's diamond framework for analyzing competitive advantage sources. As Porter (1998) also asserts, clusters present a new perspective to understand the system of how networks and social capital have an impact competition. In the sixth chapter of the thesis, the research question of whether there are differences among competitive advantage factors among induced and spontaneous clusters was investigated. The main objective of the seventh chapter of this study was to analyze whether the network ties provided by the cluster environment is different among induced vs. spontaneous formations. In order to understand interactions or ties among the firms located in these clusters, the network relations of the hosiery firms within the induced and spontaneous clusters have been explored in detail. The results, based on the data collection via the in-depth interviews supported most of the hypotheses. This thesis adds on to the research on clusters by incorporating theories in geographical economics that highlight the part of the networks with the diamond framework for competitive advantage, under the resource based perspective.

Even though most of the research on the impact of clustering on innovativeness has been conveyed in developed nations, mainly in the domain of high-tech industries (Stam and Elfring, 2008), this study was conducted in the setting of a relatively low-tech manufacturing cluster in a developing nation, a subsector of the textile industry, hosiery clusters in Istanbul, Turkey. Results from the induced cluster underline a major debate in strategy literature that existing in a cluster does not ensure success (Schmitz and Nadvi, 1999). This concern may be especially relevant for SMEs in geographical clusters that are identified by restricted

inter-firm relations, weak network ties and insufficient collective initiatives in business. Thus, the study indicates that firms located in induced clusters should actively pursue ways to develop trust-based relationships and inter-firm networks. In order to become competitive beyond the region, firms should better utilize the potential cluster resources, so that the location factor turns into a competitive advantage factor, particularly in emerging nations. However, in this study, only a single industry was analyzed, hosiery manufacturing as a subsector of the textile industry. These factors may narrow down the generalizability of the findings to other sectors, still, the key points from the results of this thesis may be indicative for alike low-tech, but export-oriented sectors dominated by SMEs which compose the majority of the manufacturing sectors in many of the developing economies.

REFERENCES

- Achrol, R. S., & Kotler, P. (1999). Marketing in the network economy. *The Journal of Marketing*, 146-163.
- Adams, J. S. (1980). Interorganizational processes and organization boundary activities. *Research in Organizational Behavior*, 2, 321-355.
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17-40.
- Aldrich, H. (1989). Networking among women entrepreneurs. *Women-owned Businesses*, 103, 132.
- Aldrich, H. E., & Reese, P. R. (1993). Does networking pay off? A panel study of entrepreneurs in the research triangle. *Frontiers of Entrepreneurship Research*, 1993, 325-339.
- Aldrich, H. E., Rosen, B., & Woodward, B. (1987). The impact of social networks on business foundings and profit: A longitudinal study. *Frontiers of Entrepreneurship Research*, 154-168.
- Aldrich, H., Jones, T. P., & McEvoy, D. (1984). Ethnic advantage and minority business development. *Ethnic Communities in Business: Strategies for Economic Survival*, 189-210.
- Aldrich, H., Reese, P. R., & Dubini, P. (1989). Women on the verge of a breakthrough: Networking among entrepreneurs in the United States and Italy. *Entrepreneurship & Regional Development*, 1(4), 339-356.
- Aldrich, H., Rosen, B., & Woodward, W. (1986). A social role perspective of entrepreneurship: Preliminary findings from an empirical study. Chapel Hill: Department of Sociology, University of North Carolina at Chapel Hill.
- Almeida, P., & Kogut, B. (1999). Localization of knowledge and the mobility of engineers in regional networks. *Management Science*, 45(7), 905-917.
- Anderson, B. S., Covin, J. G., & Slevin, D. P. (2009). Understanding the relationship between entrepreneurial orientation and strategic learning capability: An empirical investigation. *Strategic Entrepreneurship Journal*, 3(3), 218-240.

- Antoncic, B., & Hisrich, R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, 16(5), 495-527.
- Antoncic, B., & Hisrich, R. D. (2003). Clarifying the intrapreneurship concept. *Journal of Small Business and Enterprise Development*, 10(1), 7-24.
- Araujo, L., & Easton, G. (1996). Strategy: Where is the pattern? *Organization*, 3(3), 361-383.
- Archer, K. (1997). The limits to the imagineered city: Sociospatial polarization in Orlando. *Economic Geography*, 73(3), 322-336.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105-123.
- Arndt, O., & Sternberg, R. (2000). Do manufacturing firms profit from intraregional innovation linkages? An empirical based answer. *European Planning Studies*, 8(4), 465-485.
- Arrow, K. J. (2000). Observations on social capital. *Social capital: A multifaceted Perspective*, 3-5.
- Arsezen-Otamisa, P., & Yuzbasioglu, N. (2013). Analysis of Antalya tourism cluster perceived performance with structural equation model. *Procedia-Social and Behavioral Sciences*, 99, 682-690.
- Asheim, B. R. T. (1996). Industrial districts as 'learning regions': A condition for prosperity. *European Planning Studies*, 4(4), 379-400.
- Asheim, B. T. (2000). *Industrial districts: The contributions of Marshall and beyond*. The Oxford Handbook of Economic Geography, 413-431.
- Asheim, B. T. (2000). Localised knowledge, interactive learning and innovation: Between regional networks and global corporations. *The networked firm in a global world: Small firms in new environments*. pp. 163-98

- Asheim, B. T. (2001). Learning regions as development coalitions: Partnership as governance in European workfare states?. *Concepts and Transformation*, 6(1), 73-101.
- Asheim, B. T., & Gertler, M. S. (2005). The geography of innovation: Regional innovation systems. In *The Oxford Handbook of Innovation*. pp. 291-317
- Asheim, B., Cooke, P., & Martin, R. (2006). *The Rise of the Cluster Concept in Regional Analysis and Policy: A Critical Assessment* (pp. 1-19). Routledge. London.
- Aslan, D., & Wasti, S. N. (2015) Space, Interaction, and Innovation: Does proximity really matter for high tech firms? *Proceedings of the DRUID15 Conference*.
- Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 909-924.
- Baden-Fuller, C. (1995). Strategic innovation, corporate entrepreneurship and matching outside-in to inside-out approaches to strategy research. *British Journal of Management*, 6(1), 3-16.
- Baptista, R., & Swann, P. (1998). Do firms in clusters innovate more?. *Research Policy*, 27(5), 525-540.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643-650.
- Baron, R. A., & Markman, G. D. (2003). Beyond social capital: The role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18(1), 41-60.
- Bates, T. M. (1997). *Race, self-employment, and upward mobility: An illusive American dream*. Woodrow Wilson Center Press. Washington DC.

- Bathelt, H., Malmberg, A., & Maskell, P. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28(1), 31-56.
- Batjargal, B. (2006). The dynamics of entrepreneurs' networks in a transitioning economy: The case of Russia. *Entrepreneurship and Regional Development*, 18(4), 305-320.
- Baum, J. A., Calabrese, T., & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 267-294.
- Becattini, G. (1989). Sectors and/or districts: Some remarks on the conceptual foundations of industrial economics. In E. Goodman and J. Bamford (eds), *Small firms and industrial districts in Italy*, 123-135.
- Becattini, G. (2001). *The caterpillar and the butterfly: An exemplary case of development in the Italy of the industrial districts*. Felice Le Monnier. Florence.
- Becattini, G., Bellandi, M., & Propris, L. (2010). Critical nodes and contemporary reflections on industrial districts/Regional responses and global shifts: Actors, institutions and organizations. In *Regional Studies Association Annual International Conference*.
- Behrens, K., & Robert-Nicoud, F. (2009). Krugman's Papers in Regional Science: The 100 dollar bill on the sidewalk is gone and the 2008 Nobel Prize well-deserved. *Papers in Regional Science*, 88(2), 467-489.
- Bell, G. G. (2005). Clusters, networks, and firm innovativeness. *Strategic Management Journal*, 26(3), 287-295.
- Bellak, C. J., & Weiss, A. (1993). A note on the Austrian "diamond". *Management International Review*, 109-118.
- Bergman, E. M., & J. Feser, E. (2001). Innovation system effects on technological adoption in a regional value chain. *European Planning Studies*, 9(5), 629-648.

- Best, M. (2001). *The new competitive advantage: The renewal of American industry*. OUP Catalogue from Oxford ; New York: Oxford University Press.
- Biggiero, L. (1999). Markets, hierarchies, networks, districts: A cybernetic approach. *Human Systems Management, 18*(2), 71-86.
- Birley, S. (1985). The small firm-set at the start. *Sixth Annual Babson Entrepreneurship Research Conference*.
- Bloodgood, J. M., Sapienza, H. J., & Carsrud, A. L. (1995). The dynamics of new business start-ups: Person, context, and process. *Advances in Entrepreneurship, Firm Emergence and Growth, 2*, 123-144.
- Bodgener, J. (1997). The clothing industry in Turkey. *Textiles Outlook International, Textiles Intelligence*.
- Boissevain, J., Blaschke, J., Grotenbreg, H., Joseph, I., Light, I., Sway, M., ... & Werbner, P. (1990). Ethnic entrepreneurs and ethnic strategies. *Ethnic entrepreneurs: Immigrant business in industrial societies*, 131-156.
- Boja, C. (2011). Clusters Models, Factors and Characteristics. *International Journal of Economic Practices and Theories, Vol. 1, No. 1*.
- Brajkovich, L. F. (1994). Sources of social structure in a start-up organization: Work networks, work activities, and job status. *Social Networks, 16*(3), 191-212.
- Brass, D. J. (1992). Power in organizations: A social network perspective. *Research in Politics and Society, 4*(1), 295-323.
- Braun, B., Gaebe, W., Grotz, R., Okamoto, Y., & Yamamoto, K. (2002). Regional networking of small and medium-sized enterprises in Japan and Germany: Evidence from a comparative study. *Environment and Planning A, 34*(1), 81-99.
- Brazeal, D. V., & Herbert, T. T. (1999). The genesis of entrepreneurship. *Entrepreneurship Theory and Practice, 23*(3), 29-46.

- Brown, P., & McNaughton, R. B. (2002). Global competitiveness and local networks: a review of the literature. *Global Competition and Local Networks*, Ashgate Publishing Company: Burlington, 3-37.
- Brown, T. E., Davidsson, P., & Wiklund, J. (2001). An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based firm behavior. *Strategic Management Journal*, 22(10), 953-968.
- Brusco, S. (1989). *A policy for industrial districts* (pp. 259-269). Routledge, London.
- Brusco, S. (1990). The idea of the industrial district: Its genesis. *Industrial districts and inter-firm co-operation in Italy*, 10-19.
- Brusco, S. (1996). Global systems and local systems. Research Series-International Institute for Labour Studies, In Cossentino, F. et al. (eds) *Local and Regional Response to Global Pressure: The Case of Italy and its Industrial Districts*, Research Series 103, pp. 145-158
- Brüderl, J., & Preisendörfer, P. (1998). Network support and the success of newly founded business. *Small Business Economics*, 10(3), 213-225.
- Bull, I., & Willard, G. E. (1993). Towards a theory of entrepreneurship. *Journal of Business Venturing*, 8(3), 183-195.
- Bulu, M., Ozben, O., & Eraslan, I. H. (2004, April). Clusters in Turkish textile industry: A case study in Bayrampasa district. In *International Istanbul Textile Congress* (pp. 22-24).
- Burt, R. S. (1993). The social structure of competition. In *Explorations in Economic Sociology*, Russell Sage Foundation.
- Burt, R. S. (2000). The network structure of social capital. *Research in Organizational Behavior*, 22, 345-423.
- Burt, R. S. (2009). *Structural holes: The social structure of competition*. Boston: Harvard University Press, Cambridge.

- Burt, R. S., & Raider, H. J. (2000). Creating careers: Women's paths through entrepreneurship. *Ronald Burt's website of working papers*: <http://gsbwww.uchicago.edu/fac/ronald.burt/research>.
- Caballero, R. J., & Jaffe, A. B. (1993). How high are the giants' shoulders: An empirical assessment of knowledge spillovers and creative destruction in a model of economic growth. *NBER Macroeconomics Annual*, 8, 15-74.
- Camagni, R. (1991). *Innovation networks: Spatial perspectives*. Belhaven-Pinter, London, pp 121–144.
- Camagni, R., & Capello, R. (2000). The role of inter SMEs networking and links in innovative high-tech milieu. In: Keeble D, Wilkinson F (eds) *High-Technology Clusters, Networking and Collective Learning in Europe*, Ashgate Publisher, Avebury, pp. 118–155.
- Camisón-Zornoza, C., Lapiedra-Alcamí, R., Segarra-Ciprés, M., & Boronat-Navarro, M. (2004). A meta-analysis of innovation and organizational size. *Organization Studies*, 25(3), 331-361.
- Caniëls, M. C., & Romijn, H. A. (2003). Firm-level knowledge accumulation and regional dynamics. *Industrial and Corporate Change*, 12(6), 1253-1278.
- Caniëls, M. C., & Romijn, H. A. (2005). What drives innovativeness in industrial clusters? Transcending the debate. *Cambridge Journal of Economics*, 29(4), 497-515.
- Cannone, G., & Ughetto, E. (2014). Born globals: A cross-country survey on high-tech start-ups. *International Business Review*, 23(1), 272-283.
- Capello, R. (1999). Spatial transfer of knowledge in high technology milieux: Learning versus collective learning processes. *Regional Studies*, 33(4), 353-365.
- Capello, R., & Faggian, A. (2005). Collective learning and relational capital in local innovation processes. *Regional Studies*, 39(1), 75-87.
- Carayannis, E. G., & Ziemnowicz, C. (Eds.). (2007). *Rediscovering Schumpeter: Creative destruction evolving into "Mode 3"*. London: Palgrave Macmillan.

- Carayannis, E. G., Ziemnowicz, C., & Spillan, J. E. (2007). Economics and Joseph Schumpeter's theory of creative destruction: Definition of terms. In E. G. Carayannis & C. Ziemnowicz (eds.), *Rediscovering Schumpeter: Creative Destruction Evolving into "Mode 3"*. London: Palgrave Macmillan: 23–45.
- Carlino, G. A. (2001). Knowledge spillovers: Cities' role in the new economy. *Federal Reserve Bank of Philadelphia Business Review* 4, 17-24.
- Carrier, C. (1996). Intrapreneurship in small businesses: An exploratory study. *Entrepreneurship Theory and Practice*, 21(1), 5-20.
- Carsrud, A. L., & Johnson, R. W. (1989). Entrepreneurship: A social psychological perspective. *Entrepreneurship & Regional Development*, 1(1), 21-31.
- Cavusgil, S. T., & Knight, G. (2009). *Born global firms: A new international enterprise*. New York, NY: Business Expert Press.
- Cavusgil, S. T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, 46(1), 3-16.
- Chell, E., & Baines, S. (2000). Networking, entrepreneurship and microbusiness behaviour. *Entrepreneurship & Regional Development*, 12(3), 195-215.
- Christerson, B., & Appelbaum, R. P. (1995). Global and local subcontracting: Space, ethnicity, and the organization of apparel production. *World Development*, 23(8), 1363-1374.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19-39.
- Churchill, G. A., & Iacobucci, D. (2006). *Marketing Research: Methodological Foundations*. New York: Dryden Press.
- Churchill, N. C., Carsrud, A. L., Gaglio, C. M., & Olm, K. W. (1987). Entrepreneurs—Mentors, Networks, and Successful New Venture Development: An Exploratory Study. *American Journal of Small Business*, 12(2), 13-18.
- Clyde, M. J. (1973). Networks, norms and institutions. In *Network Analysis: Studies in Human Interaction*, edited by J. Boissevain and J. Clyde Mitchell, 15–35. The Hague: Mouton.

- Collins, O. F., & Moore, D. G. (1964). *The enterprising man* (Vol. 1). East Lansing: Michigan State University.
- The Global Competitiveness Report (2002). New York: Oxford University Press.
- Conner, K. R. (1991). A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm?. *Journal of Management*, 17(1), 121-154.
- Cook, K. S., & Emerson, R. M. (1978). Power, equity and commitment in exchange networks. *American Sociological Review*, 721-739.
- Cooke, P. (1998). Introduction. Origins of the Concept. Teoksessa Braczyk, H.-J., Cooke, P. & Heidenreich, M.(Eds.): *Regional Innovation Systems*. pp. 2-25.
- Cooke, P. (2001). Regional innovation systems, clusters, and the knowledge economy. *Industrial and Corporate Change*, 10(4), 945-974.
- Cooke, P. (2002). *Knowledge economies: Clusters, learning and cooperative advantage*. London: Routledge.
- Cooke, P., & Morgan, K. (1993). The network paradigm: New departures in corporate and regional development. *Environment and Planning D: Society and Space*, 11(5), 543-564.
- Cooper, A. C., & Bruno, A. V. (1975, August). Predicting performance in new high-technology firms. In *Academy of Management Proceedings* (Vol. 1975, No. 1, pp. 426-428).
- Cooper, A. C., Woo, C. Y., & Dunkelberg, W. C. (1988). Entrepreneurs' perceived chances for success. *Journal of Business Venturing*, 3(2), 97-108.
- Cooper, A., & Folta, T. (2000). Entrepreneurship and High technology Clusters. *The Blackwell Handbook of Entrepreneurship*, 348-367.
- Coviello, N. (2015). Re-thinking research on born globals. *Journal of International Business Studies*, 46(1), 17-26.
- Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship Theory and Practice*, 35(5), 855-872.

- Covin, J. G., & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship Theory and Practice*, 23(3), 47-63.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7-26.
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative* (pp. 146-166). Upper Saddle River, NJ: Prentice Hall.
- Creswell, J. W., & Miller, G. A. (1997). Research methodologies and the doctoral process. *New Directions for Higher Education*, 1997(99), 33-46.
- Crouch, C., Gales, P. L., Trigilia, C., & Voelzkow, H. (2001). *Local production systems in Europe: Rise or demise?* Oxford: Oxford University Press, pp. 46-78.
- Czakov, W. (2009). Network governance dynamics impact on intellectual property management: The case of a franchise system. *International Journal of Intellectual Property Management*, 3(1), 23-38.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.
- Damanpour, F. (1992). Organizational size and innovation. *Organization Studies*, 13(3), 375-402.
- Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: The problem of "organizational lag". *Administrative Science Quarterly*, 392-409.
- Das, R., & Das, A. K. (2011). Industrial cluster: An approach for rural development in North East India. *International Journal of Trade, Economics and Finance*, 2(2), 161.
- Davies, H., & Ellis, P. (2000). Porter's competitive advantage of nations: Time for the final judgement?. *Journal of Management Studies*, 37(8), 1189-1214.

- Dayasindhu, N. (2002). Embeddedness, knowledge transfer, industry clusters and global competitiveness: A case study of the Indian software industry. *Technovation*, 22(9), 551-560.
- De Propriis, L., & Hypponen, L. (2008). 11. Creative clusters and governance: The dominance of the Hollywood film cluster. *Creative Cities, Cultural Clusters, and Local Economic Development*. Cheltenham, UK: Edward Elgar, pp. 258–286.
- De Vet, J. M., & Scott, A. J. (1992). The Southern Californian medical device industry: Innovation, new firm formation, and location. *Research Policy*, 21(2), 145-161.
- Deeds, D. L., DeCarolis, D., & Coombs, J. (2000). Dynamic capabilities and new product development in high technology ventures: An empirical analysis of new biotechnology firms. *Journal of Business Venturing*, 15(3), 211-229.
- Delgado, M., Porter, M. E., & Stern, S. (2010). Clusters and entrepreneurship. *Journal of Economic Geography*, 10(4), 495-518.
- Dib, L. A., Da Rocha, A., & Da Silva, J. F. (2010). The internationalization process of Brazilian software firms and the born global phenomenon: Examining firm, network, and entrepreneur variables. *Journal of International Entrepreneurship*, 8(3), 233-253.
- DiMaggio, P. (1992). Nadel's paradox revisited: Relational and cultural aspects of organizational structure. *Networks and Organizations: Structure, Form, and Action*, 118-142.
- Dimitratos, P., Plakoyiannaki, E., Pitsoulaki, A., & Tüselmann, H. J. (2010). The global smaller firm in international entrepreneurship. *International Business Review*, 19(6), 589-606.
- Dixit, A. K., & Stiglitz, J. E. (1977). Monopolistic competition and optimum product diversity. *The American Economic Review*, 67(3), 297-308.
- Dollinger, M. J. (1984). Environmental boundary spanning and information processing effects on organizational performance. *Academy of Management Journal*, 27(2), 351-368.
- Donckels, R., & Lambrecht, J. (1995). Networks and small business growth: an explanatory model. *Small Business Economics*, 7(4), 273-289.

- Dubini, P., & Aldrich, H. (1991). Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing*, 6(5), 305-313.
- Dumais, G., Ellison, G., & Glaeser, E. L. (2002). Geographic concentration as a dynamic process. *Review of Economics and Statistics*, 84(2), 193-204.
- Dunbar, R. I., & Spoor, M. (1995). Social networks, support cliques, and kinship. *Human Nature*, 6(3), 273-290.
- Dunning, J. H. (1993). Internationalizing Porter's diamond. *Management International Review*, 7-15.
- Duranton, G., & Puga, D. (2004). Micro-foundations of urban agglomeration economies. In *Handbook of Regional and Urban Economics* (Vol. 4, pp. 2063-2117). Elsevier, Amsterdam.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Easton, G., & Araujo, L. (1986). Networks, bonding and relationships in industrial markets. *Industrial Marketing and Purchasing*, 1(1), 8-25.
- Eceral, T. Ö., Köroğlu, B. A., & Uğurlar, A. (2009). Jewellery Clusters: Comparative Evaluation of Istanbul Kapalicarsi and World Cases. *Ekonomik Yaklasim*, 20(70), 121-143.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333-349.
- Edquist, C. (2001, June). The Systems of Innovation Approach and Innovation Policy: An account of the state of the art. In *DRUID Conference, Aalborg* (pp. 12-15).
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they?. *Strategic Management Journal*, 1105-1121.
- Eisenhardt, K. M., & Schoonhoven, C. B. (1996). Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science*, 7(2), 136-150.

- Eisingerich, A. B., Bell, S. J., & Tracey, P. (2010). How can clusters sustain performance? The role of network strength, network openness, and environmental uncertainty. *Research Policy*, 39(2), 239-253.
- Ekanem, I. (2007). "Insider accounts": A qualitative research method for small firms. *Journal of Small Business and Enterprise Development*, 14(1), 105-117.
- Ellison, G., Glaeser, E. L., & Kerr, W. R. (2010). What causes industry agglomeration? Evidence from coagglomeration patterns. *American Economic Review*, 100(3), 1195-1213.
- Emerson, R. M. (1981). Social exchange theory. In M. Rosenberg & R. H. Turner (Eds.), *Social psychology: Sociological perspectives* (pp. 30-65)
- Enright, M. (1996). Regional clusters and economic development: A research agenda. In: Staber, U., Schaefer, N., Sharma, B. (eds.) *Business networks: Prospects for regional development*. Berlin: Walter de Gruyter, pp. 190–213.
- Enright, M. J. (1992). Geographic concentration and industrial organization. Ph.D. Dissertation, Harvard University.
- Enright, M. J. (1995). Organization and coordination in geographically concentrated industries. In *Coordination and information: Historical perspectives on the organization of enterprise* (pp. 103-146). University of Chicago Press.
- Enright, M. J. (2000). The globalization of competition and the localization of competitive advantage: Policies towards regional clustering. In *The globalization of multinational enterprise activity and economic development* (pp. 303-331). Palgrave Macmillan, London.
- Enright, M. J. (2003). Regional clusters: What we know and what we should know. In *Innovation Clusters and Interregional Competition* (pp. 99-129). Springer, Berlin, Heidelberg.
- Enright, M. J., Frances, A., & Scott-Saavedra, E. E. (1996). *Venezuela: The challenge of competitiveness*. New York: St. Martin's Press.
- Eraydin, A. (2002). Building up Competence, Institutions and Networks: A Perspective on "Catch-up" in the Knowledge Economy. In *Knowledge, Industry and Environment: Institutions and innovation in territorial perspective* (pp. 49-66).

- Eraydin, A. (2002). The local embeddedness of firms in Turkish industrial districts: The changing roles of networks in local development. *Embedded enterprise and social capital: International perspectives*, Eds Taylor, M, Leonard, S Ashgate, Aldershot, pp 269–289.
- Eraydin, A., & Armatli-Köroğlu, B. (2005). Innovation, networking and the new industrial clusters: The characteristics of networks and local innovation capabilities in the Turkish industrial clusters. *Entrepreneurship & Regional Development*, 17(4), 237-266.
- Ercan, E. (2002). Changing world trade conditions force the Turkish textile and apparel industry to create new strategies. *Journal of Textile and Apparel, Technology and Management*, 2(4), 1-8.
- Erkuş-Öztürk, H. (2009). The role of cluster types and firm size in designing the level of network relations: The experience of the Antalya tourism region. *Tourism Management*, 30(4), 589-597.
- Feldman, M., & Francis, J. L. (2006). Entrepreneurs as agents in the formation of industrial clusters. *Clusters and Regional Development: Critical Reflections and Explorations*. London/New York: Routledge, 115-136.
- Feser, E. J. (1998). Old and new theories of industry clusters. *Clusters and Regional Specialisation*, London : Pion, p. 18-40.
- Florida, R. (1995). Toward the learning region. *Futures*, 27(5), 527-536.
- Fombrun, C. J. (1982). Strategies for network research in organizations. *Academy of Management Review*, 7(2), 280-291.
- Foss, L. (1994). Entrepreneurship: The impact of human capital, a social network and business resources on start-up. Ph.D Thesis, Norwegian School of Economics, Norway.
- Freel, M. S. (2003). Sectoral patterns of small firm innovation, networking and proximity. *Research Policy*, 32(5), 751-770.
- Freeman, J. (1999). Efficiency and rationality in organizations. *Administrative Science Quarterly*, 44(1), 163-175.
- Freiling, J. (2004). A Competence-based Theory of the Firm. *Management Revue*, 27-52.

- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity* (No. D10 301 c. 1/c. 2). New York: Free Press Paperbacks.
- Gabbay, S. M., & Leenders, R. T. (1999). CSC: The structure of advantage and disadvantage. In *Corporate social capital and liability* (pp. 1-14). Springer, Boston, MA.
- Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: A literature review. *Journal of Product Innovation Management*, 19(2), 110-132.
- Gartner, W. B. (2001). Is there an elephant in entrepreneurship? Blind assumptions in theory development. *Entrepreneurship Theory and Practice*, 25(4), 27-39.
- Gay, B., & Dousset, B. (2005). Innovation and network structural dynamics: Study of the alliance network of a major sector of the biotechnology industry. *Research Policy*, 34(10), 1457-1475.
- Gemser, G., Leenders, M. A., & Wijnberg, N. J. (1996). The dynamics of inter-firm networks in the course of the industry life cycle: The role of appropriability. *Technology Analysis & Strategic Management*, 8(4), 439-454.
- Ghent Mallett, J. (2004). Silicon valley North: The formation of the Ottawa innovation cluster. In *Silicon Valley North* (pp. 21-31). Bingley, Emerald Group Publishing Limited.
- Gilbert, B. A., McDougall, P. P., & Audretsch, D. B. (2008). Clusters, knowledge spillovers and new venture performance: An empirical examination. *Journal of Business Venturing*, 23(4), 405-422.
- Gilchrist, A. (2009). *The well-connected community: A networking approach to community development*. 2nd ed. Bristol, Policy Press.
- Gilsing, V., Nooteboom, B., Vanhaverbeke, W., Duysters, G., & van den Oord, A. (2008). Network embeddedness and the exploration of novel technologies: Technological distance, betweenness centrality and density. *Research Policy*, 37(10), 1717-1731.
- Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 750-783.

- Giuliani, E. (2006). The selective nature of knowledge networks in clusters: Evidence from the wine industry. *Journal of Economic Geography*, 7(2), 139-168.
- Giuliani, E., & Bell, M. (2004). When micro shapes the meso: Learning networks in a Chilean wine cluster. SPRU Electronic Working Paper Series (115), 35.
- Giuliani, E., & Bell, M. (2005). The micro-determinants of meso-level learning and innovation: Evidence from a Chilean wine cluster. *Research policy*, 34(1), 47-68.
- Glaeser, E. L. (1994). Cities, information, and economic growth. *Cityscape*, 1(1), 9-47.
- Gnyawali, D. R., & Madhavan, R. (2001). Cooperative networks and competitive dynamics: A structural embeddedness perspective. *Academy of Management Review*, 26(3), 431-445.
- Gordon, I. R., & McCann, P. (2000). Industrial clusters: Complexes, agglomeration and/or social networks?. *Urban Studies*, 37(3), 513-532.
- Grabher, G. (1993). The embedded firm. *On the socio-economics of industrial networks*. London and New York: Routledge, pp. 35-51.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, 201-233.
- Granovetter, M. (1984). Small is bountiful: Labor markets and establishment size. *American Sociological Review*, 323-334.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510.
- Granovetter, M. (1992). Problems of explanation in economic sociology. *Networks and Organizations: Structure, form, and action*, pp. 25-56.
- Granovetter, M. S. (1977). The strength of weak ties. In *Social networks*, pp. 347-367.
- Grant, R. M. (1999). The resource-based theory of competitive advantage: Implications for strategy formulation. In *Knowledge and strategy*, pp. 3-23.

- Greve, A. (1995). Networks and entrepreneurship—an analysis of social relations, occupational background, and use of contacts during the establishment process. *Scandinavian Journal of Management*, 11(1), 1-24.
- Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, 28(1), 1-22.
- Griliches, Z. (1995). The discovery of the residual: An historical note. Working paper series (No. w5348). Cambridge, Mass.: National Bureau of Economic Research.
- Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, 19(4), 293-317.
- Gulati, R. (1999). Network location and learning: The influence of network resources and firm capabilities on alliance formation. *Strategic Management Journal*, 20(5), 397-420.
- Gulati, R., & Gargiulo, M. (1999). Where do interorganizational networks come from?. *American Journal of Sociology*, 104(5), 1439-1493.
- Gulati, R., Nohria, N., & Zaheer, A. (2000). Strategic networks. *Strategic Management Journal*, 203-215.
- Guth, W. D., & Ginsberg, A. (1990). Guest editors' introduction: Corporate entrepreneurship. *Strategic Management Journal*, 5-15.
- Hamel, G., & Prahalad, C. K. (1991). Corporate imagination and expeditionary marketing. *Harvard Business Review*, 69(4), 81-92.
- Hansen, E. L. (1995). Entrepreneurial networks and new organization growth. *Entrepreneurship Theory and Practice*, 19(4), 7-19.
- Hara, G., & Kanai, T. (1994). Entrepreneurial networks across oceans to promote international strategic alliances for small businesses. *Journal of Business Venturing*, 9(6), 489-507.
- Harland, C. M. (1995). Networks and globalisation: A review of research. *EPSRC Final Report*.

- Hart, M., Harrison, R. T., & Gallagher, C. (1993). Enterprise creation, job generation and regional policy in the UK. *Spatial policy in a divided nation*, 176-191.
- Hartsfield, S., Johansen, D., & Knight, G. (2008). Entrepreneurial orientation, strategy, and marketing capabilities in the performance of born global firms. *International Business: Research, Teaching and Practice*, 2(1), 12-38.
- Hébert, R. F., & Link, A. N. (1989). In search of the meaning of entrepreneurship. *Small Business Economics*, 1(1), 39-49.
- Hendry, C., Brown, J., & Defillippi, R. (2000). Understanding relationships between universities and SMEs in emerging high technology industries: The case of opto-electronics. *International Journal of Innovation Management*, 4(01), 51-75.
- Herron, L., Sapienza, H. J., & Smith-Cook, D. (1992). Entrepreneurship theory from an interdisciplinary perspective: Volume II. *Entrepreneurship Theory and Practice*, 16(3), 5-12.
- Hills, G. E., Lumpkin, G. T., & Singh, R. P. (1997). Opportunity recognition: Perceptions and behaviors of entrepreneurs. *Frontiers of Entrepreneurship Research*, 17(4), 168-182.
- Hisrich, R. D. (1990). Entrepreneurship/intrapreneurship. *American Psychologist*, 45(2), 209.
- Hite, J. M. (2003). Patterns of multidimensionality among embedded network ties: A typology of relational embeddedness in emerging entrepreneurial firms. *Strategic Organization*, 1(1), 9-49.
- Hite, J. M., & Hesterly, W. S. (2001). The evolution of firm networks: From emergence to early growth of the firm. *Strategic Management Journal*, 22(3), 275-286.
- Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1994). A mid-range theory of the interactive effects of international and product diversification on innovation and performance. *Journal of Management*, 20(2), 297-326.
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6□7), 479-491.

- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, 18(2), 165-187.
- Hoang, H., & Young, N. (2000). Social embeddedness and entrepreneurial opportunity recognition: (More) evidence of embeddedness. *Frontiers of Entrepreneurship Research*, Babson College, Wellesley, MA.
- Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2002). Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale. *Journal of Business Venturing*, 17(3), 253-273.
- Hospers, G. J., Desrochers, P., & Sautet, F. (2009). The next Silicon Valley? On the relationship between geographical clustering and public policy. *International Entrepreneurship and Management Journal*, 5(3), 285-299.
- Huffman, D., & Quigley, J. M. (2002). The role of the university in attracting high tech entrepreneurship: A Silicon Valley tale. *The Annals of Regional Science*, 36(3), 403-419.
- Huggins, R. (2000). The success and failure of policy-implemented inter-firm network initiatives: Motivations, processes and structure. *Entrepreneurship & Regional Development*, 12(2), 111-135.
- Humphrey, J., & Schmitz, H. (1996). The triple C approach to local industrial policy. *World Development*, 24(12), 1859-1877.
- Humphrey, J., & Schmitz, H. (2000). Governance and upgrading: Linking industrial cluster and global value chain research (Vol. 120). Brighton: Institute of Development Studies.
- Hyrsky, K., & Ali, A. A. (1996, November). The rocky road of immigrant and ethnic business in Finland. In *2nd Irish Entrepreneurship Conference, Belfast*, November.
- Ibarra, H. (1993). Personal networks of women and minorities in management: A conceptual framework. *Academy of Management Review*, 18(1), 56-87.
- Inge Jenssen, J., & Greve, A. (2002). Does the degree of redundancy in social networks influence the success of business start-ups?. *International Journal of Entrepreneurial Behavior & Research*, 8(5), 254-267.

- Jack, S. L., & Anderson, A. R. (2002). The effects of embeddedness on the entrepreneurial process. *Journal of Business Venturing*, 17(5), 467-487.
- Jacobs, D., & De Man, A. P. (1996). Clusters, industrial policy and firm strategy. *Technology Analysis & Strategic Management*, 8(4), 425-438.
- Jarillo, J. C. (1989). Entrepreneurship and growth: The strategic use of external resources. *Journal of Business Venturing*, 4(2), 133-147.
- Jenssen, J. I. (2001). Social networks, resources and entrepreneurship. *The International Journal of Entrepreneurship and Innovation*, 2(2), 103-109.
- Jenssen, J. I., & Koenig, H. F. (2002). The effect of social networks on resource access and business start-ups. *European Planning Studies*, 10(8), 1039-1046.
- Jin, B., & Moon, H. C. (2006). The diamond approach to the competitiveness of Korea's apparel industry: Michael Porter and beyond. *Journal of Fashion Marketing and Management: An International Journal*, 10(2), 195-208.
- Johannessen, J. A., Olsen, B., & Lumpkin, G. T. (2001). Innovation as newness: What is new, how new, and new to whom?. *European Journal of Innovation Management*, 4(1), 20-31.
- Johannisson, B. (1986). Network strategies: Management technology for entrepreneurship and change. *International Small Business Journal*, 5(1), 19-30.
- Johannisson, B. (1987). Beyond process and structure: Social exchange networks. *International Studies of Management & Organization*, 17(1), 3-23.
- Johannisson, B., & Peterson, R. (1984). The personal networks of entrepreneurs. Paper presented at *the ICSB Conference*, Ryerson Polytechnical Institute, Toronto.
- Johannisson, B., Alexanderson, O., Nowicki, K., & Senneseth, K. (1994). Beyond anarchy and organization: Entrepreneurs in contextual networks. *Entrepreneurship & Regional Development*, 6(4), 329-356.
- Johannisson, B., Ramírez-Pasillas, M., & Karlsson, G. (2002). The institutional embeddedness of local inter-firm networks: A leverage for business creation. *Entrepreneurship & Regional Development*, 14(4), 297-315.

- Johanson, J., & Vahlne, J. E. (2003). Business relationship learning and commitment in the internationalization process. *Journal of International Entrepreneurship*, 1(1), 83-101.
- John, C. H., & Poudar, R. W. (2006). Technology clusters versus industry clusters: Resources, networks, and regional advantages. *Growth and Change*, 37(2), 141-171.
- Jones, G. R., & Butler, J. E. (1992). Managing internal corporate entrepreneurship: An agency theory perspective. *Journal of Management*, 18(4), 733-749.
- Jones, M. V., & Casulli, L. (2014). International entrepreneurship: Exploring the logic and utility of individual experience through comparative reasoning approaches. *Entrepreneurship Theory and Practice*, 38(1), 45-69.
- Jones, M. V., Coviello, N., & Tang, Y. K. (2011). International entrepreneurship research (1989–2009): A domain ontology and thematic analysis. *Journal of Business Venturing*, 26(6), 632-659.
- Kajikawa, Y., Takeda, Y., Sakata, I., & Matsushima, K. (2010). Multiscale analysis of interfirm networks in regional clusters. *Technovation*, 30(3), 168-180.
- Kanter, R. M. (1996). Weltklasse. *Im globalen Wettbewerb lokal triumphieren*. (Global Competition and Victory at the Local Level), edited by R. M. Kanter, 41-68. Wien: Ueberreuter.
- Kao, R. W. (1995). *Entrepreneurship: A wealth-creation and value-adding process*. Prentice Hall, New York.
- Karadal, H., Yildirim, M. H., & Saygin, M. (2014). Analysis of export needs of business clusters: The case of Aksaray province. *International Journal of Business and Management Studies*, 6 (1), 118-129.
- Kardos, G., & Smith, C. O. (1979, March). On writing engineering cases. In *Proceedings of ASEE National Conference on Engineering Case Studies* (pp. 42-50).
- Katila, R. (1997). Technology strategies for growth and innovation: A study of biotechnology ventures. In P. D. Reynolds, et al. (Eds.), *Frontiers of Entrepreneurship Research*: 405-418.

- Katila, R., & Mang, P. Y. (2003). Exploiting technological opportunities: The timing of collaborations. *Research Policy*, 32(2), 317-332.
- Katrishen, F. A., Sandberg, W. R., & Logan, J. E. (1993). Social networks and entrepreneurial performance. In *Proceedings of the Annual Meeting of the Southern Management Association*, November, Atlanta, GA.
- Keeble, D., & Wilkinson, F. (Eds.). (2017). *High-technology clusters, networking and collective learning in Europe* edited by David Keeble, Frank Wilkinson.- 1st. London: Routledge.
- Keupp, M. M., & Gassmann, O. (2009). The past and the future of international entrepreneurship: A review and suggestions for developing the field. *Journal of Management*, 35(3), 600-633.
- Khandwalla, P. N. (1977). *The design of organizations*. New York: Harcourt Brace Jovanovich. Chicago (Author-Date, 15th ed.)
- Kimberly, J. R. (1981). Managerial innovation. *Handbook of Organizational Design*, 1(84), 104.
- Knight, F. H. (1921). *Risk, uncertainty and profit*. New York: Hart, Schaffner and Marx.
- Knight, G. A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12(3), 213-225.
- Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 124-141.
- Knorringa, P. (1999). Agra: An old cluster facing the new competition. *World Development*, 27(9), 1587-1604.
- Kocak, A., & Abimbola, T. (2009). The effects of entrepreneurial marketing on born global performance. *International Marketing Review*, 26(4/5), 439-452.
- Kodama, M. (2005). How two Japanese high-tech companies achieved rapid innovation via strategic community networks. *Strategy & Leadership*, 33(6), 39-47.

- Koschatzky, K. (1999). Innovation networks of industry and business-related services—relations between innovation intensity of firms and regional inter-firm cooperation. *European Planning Studies*, 7(6), 737-757.
- Köroğlu, B. A., ECERAL, T. Ö., & Uğurlar, A. (2009). The Story of a Jewelry Cluster in Istanbul Metropolitan Area: Grand Bazaar (Kapalıçarşı). *Gazi University Journal of Science*, 22(4), 383-394.
- Krugman, P. (1991). *Geography and Trade*, MIT Press, Cambridge, MA.
- Krugman, P. (1994). Competitiveness: A dangerous obsession. *Foreign Affairs*, 28-44.
- Krugman, P. (1998). What's new about the new economic geography?. *Oxford Review of Economic Policy*, 14(2), 7-17.
- Kuah, A. T. (2002). Cluster Theory and Practice: Advantages for the small business locating in a vibrant cluster. *Journal of Research in Marketing and Entrepreneurship*, 4(3), 206-228.
- Kuratko, D. F., Montagno, R. V., & Hornsby, J. S. (1990). Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal*, 49-58.
- Kuştepe, Y., Gülcan, Y., & Akgüngör, S. (2010). Innovativeness of Turkish Textile Industry across Different Knowledge Bases and Regional Innovation Systems. *European Urban & Regional Studies*, 20(2), 227-242.
- Legendijk, A., & Cornford, J. (2000). Regional institutions and knowledge—tracking new forms of regional development policy. *Geoforum*, 31(2), 209-218.
- Landstrom, H. (1999). The roots of entrepreneurship research. *New England Journal of Entrepreneurship*, 2(2), 9.
- Langen, P. D. (2002). Clustering and performance: The case of maritime clustering in The Netherlands. *Maritime Policy & Management*, 29(3), 209-221.
- Larrañeta, B., Zahra, S. A., & González, J. L. G. (2012). Enriching strategic variety in new ventures through external knowledge. *Journal of Business Venturing*, 27(4), 401-413.

- Larson, A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange relationships. *Administrative Science Quarterly*, 76-104.
- Larson, A., & Starr, J. A. (1993). A network model of organization formation. *Entrepreneurship Theory and Practice*, 17(2), 5-15.
- Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 1-47.
- Lawson, C. (1999). Towards a competence theory of the region. *Cambridge Journal of Economics*, 23(2), 151-166.
- Lechner, C., & Dowling, M. (1999). The evolution of industrial districts and regional networks: The case of the biotechnology region Munich/Martinsried. *Journal of Management and Governance*, 3(4), 309-338.
- Lechner, C., & Dowling, M. (2003). Firm networks: External relationships as sources for the growth and competitiveness of entrepreneurial firms. *Entrepreneurship & Regional Development*, 15(1), 1-26.
- Lechner, C., & Leyronas, C. (2012). The competitive advantage of cluster firms: The priority of regional network position over extra-regional networks—a study of a French high-tech cluster. *Entrepreneurship & Regional Development*, 24(5-6), 457-473.
- Lee, C., Lee, K., & Pennings, J. M. (2001). Internal capabilities, external networks, and performance: A study on technology-based ventures. *Strategic Management Journal*, 22(6-7), 615-640.
- Light, I. (1984). Immigrant and ethnic enterprise in North America. *Ethnic and Racial Studies*, 7(2), 195-216.
- Lipparini, A., & Sobrero, M. (1994). The glue and the pieces: Entrepreneurship and innovation in small-firm networks. *Journal of Business Venturing*, 9(2), 125-140.
- Lorenzoni, G., & Lipparini, A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal*, 317-338.

- Low, M. B., & Abrahamson, E. (1997). Movements, bandwagons, and clones: Industry evolution and the entrepreneurial process. *Journal of Business Venturing*, 12(6), 435-457.
- Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139-161.
- Luchsinger, V., & Bagby, D. R. (1987). Entrepreneurship and intrapreneurship: Behaviors, comparisons, and contrasts. *SAM Advanced Management Journal*, 52(3), 10.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16(5), 429-451.
- Lundvall, B. A. (1992). *National innovation system: Towards a theory of innovation and interactive learning*. Pinter, London.
- Lundvall, B. Ä., & Johnson, B. (1994). The learning economy. *Journal of Industry Studies*, 1(2), 23-42.
- MacMillan, I. C., & George, R. (1985). Corporate venturing: Challenges for senior managers. *Journal of Business Strategy*, 5(3), 34-43.
- Maguire, L. (1983). *Understanding social networks* (Vol. 32). Beverly Hills, CA, Sage Publications, Inc.
- Maillat, D. (1990). SMEs, innovation and territorial development. *The Spatial Context of Technological Development*, 331-351.
- Mainela, T., Puhakka, V., & Servais, P. (2014). The concept of international opportunity in international entrepreneurship: A review and a research agenda. *International Journal of Management Reviews*, 16(1), 105-129.
- Malmberg, A. (2003). Beyond the cluster-local milieus and global connections. *Remaking the global economy*, 145-159.

- Malmberg, A., & Maskell, P. (2002). The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering. *Environment and Planning A: Economy and Space*, 34(3), 429-449.
- Malmberg, A., Sölvell, Ö., & Zander, I. (1996). Spatial clustering, local accumulation of knowledge and firm competitiveness. *Geografiska Annaler: Series B, Human Geography*, 78(2), 85-97.
- Markusen, A. (1996). Sticky places in slippery space: A typology of industrial districts. *Economic Geography*, 72(3), 293-313.
- Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Social Forces*, 63(2), 482-501.
- Marshall, A. (1920). *Principles of economics*. London: Macmillan.
- Marshall, Alfred. (1927) "A Note on Method in Economic Study." *Industry and Trade, London*: 677.
- Marshall, A. (1949), *Principles of Economics: An Introductory Volume*, reset version of 8th edn., Macmillan, Basingstoke and London.
- Marshall, G. W., Goebel, D. J., & Moncrief, W. C. (2003). Hiring for success at the buyer–seller interface. *Journal of Business Research*, 56(4), 247-255.
- Martin, R., & Sunley, P. (1996). Paul Krugman's geographical economics and its implications for regional development theory: A critical assessment. *Economic Geography*, 72(3), 259-292.
- Martin, R., & Sunley, P. (2001). Rethinking the “economic” in economic geography: Broadening our vision or losing our focus?. *Antipode*, 33(2), 148-161.
- Martin, R., & Sunley, P. (2003). Deconstructing clusters: Chaotic concept or policy panacea?. *Journal of Economic Geography*, 3(1), 5-35.
- Maskell, P. (1998). Learning in the village economy of Denmark. *Regional innovation systems: The role of governances in a globalized world*, 190.
- Maskell, P. (2001). Towards a knowledge-based theory of the geographical cluster. *Industrial and Corporate Change*, 10(4), 921-943.

- Maskell, P., & Malmberg, A. (1999). Localised learning and industrial competitiveness. *Cambridge Journal of Economics*, 23(2), 167-185.
- Mathews, J. A., & Zander, I. (2007). The international entrepreneurial dynamics of accelerated internationalisation. *Journal of International Business Studies*, 38(3), 387-403.
- McCann, B. T., & Folta, T. B. (2011). Performance differentials within geographic clusters. *Journal of Business Venturing*, 26(1), 104-123.
- McClelland, D. C. (1961). *The achieving society*. Princeton, NJ: D. Van Norstrand Company. Inc.
- McDougall, P. P., & Oviatt, B. M. (2000). International entrepreneurship: The intersection of two research paths. *Academy of Management Journal*, 43(5), 902-906.
- McEvily, B., & Zaheer, A. (1999). Bridging ties: A source of firm heterogeneity in competitive capabilities. *Strategic Management Journal*, 1133-1156.
- McFadzean, E., O'Loughlin, A., & Shaw, E. (2005). Corporate entrepreneurship and innovation part 1: The missing link. *European Journal of Innovation Management*, 8(3), 350-372.
- McGahan, A. M., & Porter, M. E. (1997). How much does industry matter, really?. *Strategic Management Journal*, 15-30.
- McNamara, K. (2008). The Global Textile and Garments Industry: The role of information and communication technologies (ICTs) in exploiting the value chain. *Enlightenment economics*, 6. Economics for the World Bank, Washington.
- Milardo, R. M. (1992). Comparative methods for delineating social networks. *Journal of Social and Personal Relationships*, 9(3), 447-461.
- Miles, M. P., & Covin, J. G. (2002). Exploring the practice of corporate venturing: Some common forms and their organizational implications. *Entrepreneurship Theory and Practice*, 26(3), 21-40.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.

- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: The third link. *Strategic Management Journal*, 4(3), 221-235.
- Mønsted, M. (1995). Processes and structures of networks: Reflections on methodology. *Entrepreneurship & Regional Development*, 7(3), 193-214.
- Moon, H. C., Rugman, A. M., & Verbeke, A. (1998). A generalized double diamond approach to the global competitiveness of Korea and Singapore. *International Business Review*, 7(2), 135-150.
- Morgan, K. (2007). The learning region: Institutions, innovation and regional renewal. *Regional Studies*, 41(S1), S147-S159.
- Morgan, K. J. (1999). Reversing Attrition: The Auto Cluster in Baden-Württemberg. In: Barnes, T. J. and Gertler, M. S. eds. *The New Industrial Geography: Regions, Regulation and Institutions*, Routledge Studies in the Modern World Economy, vol. 22. Abingdon: Routledge, pp. 74-97.
- Morosini, P. (2004). Industrial clusters, knowledge integration and performance. *World Development*, 32(2), 305-326.
- Morris, M. H., & Kuratko, D. F. (2002). *Corporate entrepreneurship: Entrepreneurial development within organizations*. South-Western Pub, Mason, OH.
- Möller, K. K., & Halinen, A. (1999). Business relationships and networks: Managerial challenge of network era. *Industrial Marketing Management*, 28(5), 413-427.
- Möller, K. K., & Wilson, D. T. (Eds.). (1995). *Business marketing: An interaction and network perspective*. Springer Science & Business Media. MA: Kluwer, Boston. Möller.
- Mutlucan, N. Ç. (2015). PhD Thesis, Bogazici University.
- Nadvi, K. (1999). The cutting edge: Collective efficiency and international competitiveness in Pakistan. *Oxford Development Studies*, 27(1), 81-107.

- Nahapiet, J., & Ghoshal, S. (2000). Social capital, intellectual capital, and the organizational advantage. In *Knowledge and social capital* (pp. 119-157).
- Nasir, A., Bulu, M., & Eraslan, I. H. (2006). The Analysis of Tourism Cluster Development of Istanbul: A Longitudinal Study in Sultanahmet District (OldTown). Robert Mac Gregor (Editör), *Small Business Clustering Technologies: Applications in Marketing, Management, IT and Economics*, USA: Idea Publishing, 184-197.
- Nelson, R. R., & Winter, S. G. (1982). The Schumpeterian tradeoff revisited. *The American Economic Review*, 72(1), 114-132.
- Newbert, S. L., Gopalakrishnan, S., & Kirchhoff, B. A. (2008). Looking beyond resources: Exploring the importance of entrepreneurship to firm-level competitive advantage in technologically intensive industries. *Technovation*, 28(1-2), 6-19.
- Nitin, N., & Eccles, R. G. (1992). Networks and organizations. *Structure, Form and Action*. Boston, Harvard Business School Press.
- Nohria, N. (1992). Information and search in the creation of new business ventures: The case of the 128 venture group. *Networks and organizations: Structure, Form, and Action*, Harvard Business School Press, Boston.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press, New York.
- Nooteboom, B. (2006). Innovation, learning and cluster dynamics. *Clusters and Regional Development*, 137-163.
- Novelli, M., Schmitz, B., & Spencer, T. (2006). Networks, clusters and innovation in tourism: A UK experience. *Tourism Management*, 27(6), 1141-1152.
- O'Donnell, A., Gilmore, A., Cummins, D., & Carson, D. (2001). The network construct in entrepreneurship research: A review and critique. *Management Decision*, 39(9), 749-760.
- Oerlemans, L. A., Meeus, M. T., & Boekema, F. W. (2001). Firm clustering and innovation: Determinants and effects. *Papers in Regional Science*, 80(3), 337-356.

- Ostgaard, T. A., & Birley, S. (1994). Personal networks and firm competitive strategy—a strategic or coincidental match?. *Journal of Business Venturing*, 9(4), 281-305.
- Ostgaard, T. A., & Birley, S. (1996). New venture growth and personal networks. *Journal of Business Research*, 36(1), 37-50.
- Oviatt, B. M., & McDougall, P. P. (2005). Defining international entrepreneurship and modeling the speed of internationalization. *Entrepreneurship Theory and Practice*, 29(5), 537-554.
- Owen-Smith, J., Riccaboni, M., Pammolli, F., & Powell, W. W. (2002). A comparison of US and European university-industry relations in the life sciences. *Management Science*, 48(1), 24-43.
- Önder, Ç., & Şengün, A. E. (2009). Endüstriyel kümelerde yenilikçilik: Firma özellikleri etkili mi?. *Journal of Management Research/Yonetim Arastirmalari Dergisi*, 9(1).
- Öz, Ö. (1999). *The comparative advantage of nations—the case of Turkey, assessing Porter's framework for national advantage*. Aldershot: Ashgate.
- Öz, Ö. (2003). Changing patterns of competitive advantage: The towel/bathrobe cluster in Denizli (Turkey). *Clusters, Industrial Districts and Firms: The Challenge of Globalisation*, 12-13.
- Öz, Ö. (2004). The Towel and Bathrobe Cluster in Denizli. In *Clusters and Competitive Advantage* (pp. 84-113). Palgrave Macmillan, London.
- Öz, Ö. (2004). *Clusters and competitive advantage: The Turkish experience*. New York: Palgrave MacMillan.
- Özelçi, T. (2002). Institutional aspects of regional/local economic development (Doctoral dissertation, Middle East Technical University. Department of City and Regional Planning).
- Padmore, T., Schuetze, H., & Gibson, H. (1998). Modeling systems of innovation: An enterprise-centered view. *Research Policy*, 26(6), 605-624.
- Paniccia, I. (2002). *Industrial Districts: Evolution and Competitiveness in Italian Firms*, Edward Elgar, Cheltenham. Pavan M.

- Park, J. (2004). Korean Perspective on FDI in India: Hyundai Motors' Industrial Cluster. *Economic and Political Weekly*, 3551-3555.
- Patrucco, P. P. (2003). Institutional variety, networking and knowledge exchange: Communication and innovation in the case of the Brianza technological district. *Regional Studies*, 37(2), 159-172.
- Penrose, E. (1959). *The theory of the growth of the firm*. New York: John Wiley & Sons.
- Pettitt, S., & Thompstone, K. (1990). Entrepreneurial Networking within Rural Communities--Some Cases from Ireland's Shannon Region. *When the Harvest Is In: Developing Rural Entrepreneurship*. London, UK: Intermediate Technology Publications.
- Pinchot III, G. (1985). *Intrapreneuring: Why you don't have to leave the corporation to become an entrepreneur*. Harper and Row, New York.
- Pittaway, L., Robertson, M., Munir, K., Denyer, D., & Neely, A. (2004). Networking and innovation: A systematic review of the evidence. *International Journal of Management Reviews*, 5(3-4), 137-168.
- Podolny, J. M., & Baron, J. N. (1997). Resources and relationships: Social networks and mobility in the workplace. *American Sociological Review*, 673-693.
- Polanyi, M. (1966). The logic of tacit inference. *Philosophy*, 41(155), 1-18.
- Porter, M. (1990). *The competitive advantage of nations*. New York: Free Press, 1990.
- Porter, M. E. (1991). Towards a dynamic theory of strategy. *Strategic Management Journal*, 12(S2), 95-117.
- Porter, M. E. (1998). Clusters and the new economics of competition (Vol. 76, No. 6, pp. 77-90). Boston: Harvard Business Review.
- Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14(1), 15-34.
- Porter, M. E. (2008). *On competition*. Boston: Harvard Business School Press.

- Porter, M. E., & Porter, M. E. (1979). How competitive forces shape strategy. *Harvard Business Review*, March/April.
- Portes, A., & Sensenbrenner, J. (1993). Embeddedness and immigration: Notes on the social determinants of economic action. *American Journal of Sociology*, 98(6), 1320-1350.
- Powell, W. (2003). Neither market nor hierarchy. *The sociology of organizations: Classic, contemporary, and critical readings*, 315, 104-117.
- Powell, W. W. (1987). Hybrid organizational arrangements: New form or transitional development?. *California Management Review*, 30(1), 67-87.
- Powell, W. W., & Smith-Doerr, L. (1994). Networks and economic life. *The handbook of economic sociology*, 368-380.
- Powell, W. W., Koput, K. W., & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. *Administrative Science Quarterly*, 116-145.
- Powell, W. W., Koput, K. W., Smith-Doerr, L., & Owen-Smith, J. (1999). Network position and firm performance: Organizational returns to collaboration in the biotechnology industry. *Research in the Sociology of Organizations*, 16(1), 129-159.
- Powell, W. W., White, D. R., Koput, K. W., & Owen-Smith, J. (2005). Network dynamics and field evolution: The growth of interorganizational collaboration in the life sciences. *American Journal of Sociology*, 110(4), 1132-1205.
- Power, D., & Hallencreutz, D. (2002). Profiting from creativity? The music industry in Stockholm, Sweden and Kingston, Jamaica. *Environment and Planning A*, 34(10), 1833-1854.
- Provan, K. G., Fish, A., & Sydow, J. (2007). Interorganizational networks at the network level: A review of the empirical literature on whole networks. *Journal of Management*, 33(3), 479-516.
- Puga, D. (2010). The magnitude and causes of agglomeration economies. *Journal of Regional Science*, 50(1), 203-219.

- Pyke, F., Becattini, G., & Sengenberger, W. (Eds.). (1990). Industrial districts and inter-firm co-operation in Italy. International Institute for Labour Studies: Geneva.
- Quinn, J. B. (1986). Innovation and corporate strategy: Managed chaos. In *Technology in the Modern Corporation* (pp. 167-183).
- R. Bryson, J. (1997). Business service firms, service space and the management of change. *Entrepreneurship & Regional Development*, 9(2), 93-112.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761-787.
- Rauch, J. E. (1993). Productivity gains from geographic concentration of human capital: Evidence from the cities. *Journal of Urban Economics*, 34(3), 380-400.
- Ravix, J. L. (2014). Localization, innovation and entrepreneurship: An appraisal of the analytical impact of Marshall's notion of industrial atmosphere. *Journal of Innovation Economics & Management*, (2), 63-81.
- Richard, O. C., Barnett, T., Dwyer, S., & Chadwick, K. (2004). Cultural diversity in management, firm performance, and the moderating role of entrepreneurial orientation dimensions. *Academy of Management Journal*, 47(2), 255-266.
- Ring, P. S., & Van de Ven, A. H. (1992). Structuring cooperative relationships between organizations. *Strategic Management Journal*, 13(7), 483-498.
- Roberts, S. G., Dunbar, R. I., Pollet, T. V., & Kuppens, T. (2009). Exploring variation in active network size: Constraints and ego characteristics. *Social Networks*, 31(2), 138-146.
- Roelandt, T. J., Den Hertog, P., van Sinderen, J., & van den Hove, N. (1999). Cluster analysis and cluster policy in the Netherlands. *Boosting Innovation the Cluster Approach*, 315.
- Rogers, E. M. (1987). Progress, problems and prospects for network research: Investigating relationships in the age of electronic communication technologies. *Social Networks*, 9(4), 285-310.

- Romijn, H., & Albaladejo, M. (2002). Determinants of innovation capability in small electronics and software firms in southeast England. *Research Policy*, 31(7), 1053-1067.
- Rosenfeld, S. A. (1997). Bringing business clusters into the mainstream of economic development. *European Planning Studies*, 5(1), 3-23
- Rosenfeld, S. A. (2003). Expanding opportunities: Cluster strategies that reach more people and more places 1. *European Planning Studies*, 11(4), 359-377.
- Rosenthal, S. S., & Strange, W. C. (2001). The determinants of agglomeration. *Journal of Urban Economics*, 50(2), 191-229.
- Roudini, A., & Osman, M. H. M. (2012). The role of international entrepreneurship capability on international performance in born global firms. *Ibusiness*, 4(02), 126.
- Rugman, A. M., & D'cruz, J. R. (1993). The "double diamond" model of international competitiveness: The Canadian experience. *Management International Review*, 17-39.
- Rutten, R., & Boekema, F. (2007). Regional social capital: Embeddedness, innovation networks and regional economic development. *Technological Forecasting and Social Change*, 74(9), 1834-1846.
- Saka-Helmhout, A., & Karabulut, E. (2006). Institutional barriers to entrepreneurship in clusters: Evidence from the Turkish textile sector. *International Journal of Emerging Markets*, 1(2), 128-146.
- Salancik, G. R. (1995). Wanted: A good network theory of organization. *Administrative Science Quarterly*, 40: 345-349.
- Sanders, J. M., & Nee, V. (1996). Immigrant self-employment: The family as social capital and the value of human capital. *American Sociological Review*, 231-249.
- Sarasvathy, S., Kumar, K., York, J. G., & Bhagavatula, S. (2014). An effectual approach to international entrepreneurship: Overlaps, challenges, and provocative possibilities. *Entrepreneurship Theory and Practice*, 38(1), 71-93.

- Šarić, S. (2012). *Competitive advantages through clusters: An empirical study with evidence from China*. Wiesbaden: Springer Gabler.
- Sasi, V., & Arenius, P. (2008). International new ventures and social networks: Advantage or liability?. *European Management Journal*, 26(6), 400-411.
- Sawyer, O. O., McGee, J., & Peterson, M. (2003). Perceived uncertainty and firm performance in SMEs: The role of personal networking activities. *International Small Business Journal*, 21(3), 269-290.
- Saxenian, A. (1990). Regional networks and the resurgence of Silicon Valley. *California Management Review*, 33(1), 89-112.
- Saxenian, A. (1991). The origins and dynamics of production networks in Silicon Valley. *Research Policy*, 20(5), 423-437.
- Saxenian, A. (1994). *Regional networks: industrial adaptation in Silicon Valley and route 128*. Cambridge, MA: Harvard University Press.
- Schildt, H. A., Zahra, S. A., & Sillanpää, A. (2006). Scholarly communities in entrepreneurship research: A co-citation analysis. *Entrepreneurship Theory and Practice*, 30(3), 399-415.
- Schmitz, H. (1995). Collective efficiency: Growth path for small-scale industry. *The Journal of Development Studies*, 31(4), 529-566.
- Schmitz, H. (1995). Small shoemakers and Fordist giants: Tale of a supercluster. *World Development*, 23(1), 9-28.
- Schmitz, H., & Knorringa, P. (2000). Learning from global buyers. *Journal of Development Studies*, 37(2), 177-205.
- Schmitz, H., & Nadvi, K. (1999). Industrial clusters in developing countries-clustering and industrialization: Introduction. *World Development*, 27(9), 1503-1514.
- Schoales, J. (2006). Alpha clusters: Creative innovation in local economies. *Economic Development Quarterly*, 20(2), 162-177.

- Schollhammer, H. (1982). Internal corporate entrepreneurship. *Encyclopedia of entrepreneurship*, 209, 223. Edited by: Kent, C., Sexton, D. and Vesper, K. Englewood Cliffs, NJ: Prentice Hall.
- Schumpeter, J. (1942). Creative destruction. *Capitalism, socialism and democracy*, 825. New York, Harper.
- Schumpeter, J. A. (1939). *Business cycles* (Vol. 1, pp. 161-74). New York: McGraw-Hill.
- Schumpeter, J. A. (1942). 1976. *Capitalism, Socialism and democracy*. New York: Harper & Row.
- Scott, A. J. (1988). Flexible production systems and regional development: The rise of new industrial spaces in North America and Western Europe. *International Journal of Urban and Regional Research*, 12(2), 171-186.
- Scott, A. J. (1988). *New industrial spaces*. London: Pion, 8.
- Scott, A. J. (1996). Regional motors of the global economy. *Futures*, 28(5), 391-411.
- Scott, A. J. (2014). *On Hollywood: The place, the industry*. Princeton, NJ: Princeton University Press.
- Sehumpeter, J. A. (1934). The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle. *Social Science Electronic Publishing*, 25(1), 90-91.
- Sforzi, F. (2002). The industrial district and the 'new' Italian economic geography. *European Planning Studies*, 10(4), 439-447.
- Shafaeddin, M. (2012). *Competitiveness and development: Myth and realities*. London: Anthem Press.
- Shane, S., & Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management Science*, 48(3), 364-381.
- Shane, S., & Venkataraman, S. (2007). The promise of entrepreneurship as a field of research. In *Entrepreneurship* (pp. 171-184). Springer, Berlin, Heidelberg.

- Sharma, P., & Chrisman, S. J. J. (2007). Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. In *Entrepreneurship* (pp. 83-103). Springer, Berlin, Heidelberg.
- Shetty, P. (2004). Attitude towards entrepreneurship in organisations. *The Journal of Entrepreneurship*, 13(1), 53-68.
- Silverman, B. S., & Baum, J. A. (2002). Alliance-based competitive dynamics. *Academy of Management Journal*, 45(4), 791-806.
- Simmie, J. (2004). Innovation and clustering in the globalised international economy. *Urban Studies*, 41(5-6), 1095-1112.
- Singh, R. P., Hills, G. E., Lumpkin, G. T., & Hybels, R. C. (1999, August). The entrepreneurial opportunity recognition process: Examining the role of self-perceived alertness and social networks. In *Academy of Management Proceedings* (Vol. 1999, No. 1, pp. G1-G6).
- Slappendel, C. (1996). Perspectives on innovation in organizations. *Organization Studies*, 17(1), 107-129.
- Slevin, D. P., & Covin, J. G. (1997). Strategy formation patterns, performance, and the significance of context. *Journal of Management*, 23(2), 189-209.
- Smeltzer, L. R., Van Hook, B. L., & Hutt, R. W. (1991). Analysis of the use of advisors as information sources in venture startups. *Journal of Small Business Management*, 29(3), 10.
- Sölvell, Ö., Lindqvist, G., & Ketels, C. (2003). *The cluster initiative greenbook* (p. 11). Stockholm: Ivory Tower Publishers.
- Stam, W., & Elfring, T. (2008). Entrepreneurial orientation and new venture performance: The moderating role of intra-and extraindustry social capital. *Academy of Management Journal*, 51(1), 97-111.
- Starr, J. A., & MacMillan, I. C. (1990). Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, 79-92.
- Starr, P. (1995). *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Cambridge, MA: Harvard University Press.

- Steier, L., & Greenwood, R. (2000). Entrepreneurship and the evolution of angel financial networks. *Organization Studies*, 21(1), 163-192.
- Sternberg, R. J. (2000). *Practical intelligence in everyday life*. New York: Cambridge University Press.
- Sternberg, R., & Rocha, H. O. (2007). Why entrepreneurship is a regional event: Theoretical arguments, empirical evidence, and policy consequences. *Entrepreneurship: The engine of growth*, 3, 215-238.
- Stevenson, H. H., & Jarillo, J. C. (2007). A paradigm of entrepreneurship: Entrepreneurial management. In *Entrepreneurship* (pp. 155-170). Springer, Berlin, Heidelberg.
- Stevenson, H., & Gumpert, D. (1985). The heart of entrepreneurship. *Harvard Business Review*, Vol 63, pp 85-94.
- Stopford, J. M., & Baden-Fuller, C. W. (1994). Creating corporate entrepreneurship. *Strategic Management Journal*, 15(7), 521-536.
- Storey, D. J. Understanding the Small Business Sector,(1994). *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*. London: International Thomson Business Press.
- Storper, M. (1995). The resurgence of regional economies, ten years later: The region as a nexus of untraded interdependencies. *European Urban and Regional Studies*, 2(3), 191-221.
- Storper, M. (1997). *The regional world: Territorial development in a global economy*. Guilford Press, New York.
- Stuart, T. E., Hoang, H., & Hybels, R. C. (1999). Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative Science Quarterly*, 44(2), 315-349.
- Svetina, A. C., & Prodan, I. (2008). How internal and external sources of knowledge contribute to firms' innovation performance. *Managing Global Transitions*, 6(3), 277.
- Szarka, J. (1990). Networking and small firms. *International Small Business Journal*, 8(2), 10-22.

- Tallman, S., Jenkins, M., Henry, N., & Pinch, S. (2004). Knowledge, clusters, and competitive advantage. *Academy of Management Review*, 29(2), 258-271.
- Thai, M. T. T., & Chong, L. C. (2008). Born-global: The case of four Vietnamese SMEs. *Journal of International Entrepreneurship*, 6(2), 72.
- Thornberry, N. (2001). Corporate entrepreneurship: Antidote or oxymoron?. *European Management Journal*, 19(5), 526-533.
- Tichy, N. M., Tushman, M. L., & Fombrun, C. (1979). Social network analysis for organizations. *Academy of Management Review*, 4(4), 507-519.
- Townroe, P. (1997). The Determinants of Small Firm Growth: An Interregional Study in the United Kingdom 1986-90. *Cities*, 3(14), 185-186.
- Tödting, F., & Kaufmann, A. (1999). Innovation systems in regions of Europe—a comparative perspective. *European Planning Studies*, 7(6), 699-717.
- Tödting, F., & Kaufmann, A. (2001). The role of the region for innovation activities of SMEs. *European Urban and Regional Studies*, 8(3), 203-215.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41(4), 464-476.
- Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 439-465.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review*, 674-698.
- Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 35-67.
- Uzzi, B. (1999). Embeddedness in the making of financial capital: How social relations and networks benefit firms seeking financing. *American Sociological Review*, 481-505.
- Uzzi, B., & Gillespie, J. J. (2002). Knowledge spillover in corporate financing networks: Embeddedness and the firm's debt performance. *Strategic Management Journal*, 23(7), 595-618.

- Van de Ven, A. H., & Rogers, E. M. (1988). Innovations and organizations: Critical perspectives. *Communication Research*, 15(5), 632-651.
- Van de Ven, A. H., Hudson, R., & Schroeder, D. M. (1984). Designing new business startups: Entrepreneurial, organizational, and ecological considerations. *Journal of Management*, 10(1), 87-108.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. *Advances in Entrepreneurship, Firm Emergence and Growth*, 3(1), 119-138.
- Verspagen, B., & Duysters, G. (2004). The small worlds of strategic technology alliances. *Technovation*, 24(7), 563-571.
- Visser, E. J. (1999). A comparison of clustered and dispersed firms in the small-scale clothing industry of Lima. *World Development*, 27(9), 1553-1570.
- Visser, E. J. (2004). *A Chilean wine cluster? The quality and importance of local governance in a fast growing and internationalizing industry*. CEPAL, Santiago de Chile: United Nations Publications.
- Volkman, C. K., Tokarski, K. O., & Grünhagen, M. (2010). *Entrepreneurship in a European perspective*. Wiesbaden: Gabler, 10, 978-3.
- Wach, K. (2014). The Role of Knowledge in the Internationalisation Process: An Empirical Investigation among Polish Businesses. *International Competitiveness in Visegrad Countries: Macro and Micro Perspectives*, 143-158.
- Wales, W. J., Gupta, V. K., & Mousa, F. T. (2013). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. *International Small Business Journal*, 31(4), 357-383.
- Walter, A., Auer, M., & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, 21(4), 541-567.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications* (Vol. 8). Cambridge: Cambridge University Press.
- Wennberg, K., & Lindqvist, G. (2010). The effect of clusters on the survival and performance of new firms. *Small Business Economics*, 34(3), 221-241.

- Werbner, P. (1990). Ethnic entrepreneurs and ethnic strategies. *Ethnic entrepreneurs: Immigrant business in industrial societies*, 131-156.
- Wever, E., & Stam, E. (1999). Clusters of high technology SMEs: The Dutch case. *Regional Studies*, 33(4), 391-400.
- Wiklund, J. (1999). The sustainability of the entrepreneurial orientation—performance relationship. *Entrepreneurship Theory and Practice*, 24(1), 37-48.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing*, 20(1), 71-91.
- Wiklund, J., Davidsson, P., Delmar, F., & Aronsson, M. (1997). Expected consequences of growth and their effect on growth willingness in different samples of small firms. *Frontiers of Entrepreneurship Research*, 1-16.
- Wolfe, R. A. (1994). Organizational innovation: Review, critique and suggested research directions. *Journal of Management Studies*, 31(3), 405-431.
- Woolcock, M. (1998). Social capital and economic development: Toward a theoretical synthesis and policy framework. *Theory and Society*, 27(2), 151-208.
- Yetisen, A. K., Volpatti, L. R., Coskun, A. F., Cho, S., Kamrani, E., Butt, H., ... & Yun, S. H. (2015). 1. The university entrepreneur. *Lab Chip*, 15, 3638-3660.
- Yeung, H. W. C. (1994). Critical reviews of geographical perspectives on business organizations and the organization of production: Towards a network approach. *Progress in Human Geography*, 18(4), 460-490.
- Yim, D. S., Seong, Y. C., Lee, W. I., Park, S., & Hong, J. K. (2011, July). Management and governance issues in the development of Science and Technology based Innovation Cluster. In *Technology Management in the Energy Smart World (PICMET), 2011 Proceedings of PICMET'11*: (pp. 1-8). IEEE.
- Yin, R. K. (1994). *Case study research: Design and Methods, Applied social research methods series*, vol. 5, 2nd edn, Sage Publications, London.
- Yin, R. K. (2003). Designing case studies. *Design and Methods*. Sage Publications, Thousand Oaks, 4th ed.

- Yoon, I. J. (1991). The changing significance of ethnic and class resources in immigrant businesses: The case of Korean immigrant businesses in Chicago. *International Migration Review*, 303-332.
- Young, N. (1998). The structure and substance of African American entrepreneurial networks: Some preliminary findings. *Frontiers of Entrepreneurship Research*, 118-31.
- Yuzbasioglu, N., Otamis, P. A., & Demir, M. O. (2011). Antalya region tourism cluster: To measure the impact of tourism cluster on regional development. *Middle Eastern Finance and Economics*, 11, 89-94.
- Zaheer, S., Lamin, A., & Subramani, M. (2009). Cluster capabilities or ethnic ties? Location choice by foreign and domestic entrants in the services offshoring industry in India. *Journal of International Business Studies*, 40(6), 944-968.
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), 259-285.
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319-340.
- Zahra, S. A. (1995). Corporate entrepreneurship and financial performance: The case of management leveraged buyouts. *Journal of Business Venturing*, 10(3), 225-247.
- Zahra, S. A. (2005). Entrepreneurship and disciplinary scholarship: Return to the fountainhead. In *Handbook of entrepreneurship research* (pp. 253-268). Springer, Boston, MA.
- Zaltman, G., Duncan, R., & Holbek, J. (1973). *Innovations and organizations*. John Wiley & Sons, New York.
- Zander, I., McDougall-Covin, P., & Rose, E. L. (2015). Born globals and international business: Evolution of a field of research. *Journal of International Business Studies*, 46(1), 27-35.
- Zaratiegui, J. M. (2002). What does profit mean for Alfred Marshall?. *International Journal of Applied Economics and Econometrics*, 10(3), 381-402.

- Zhang, J. (2003). *High-tech start-ups and industry dynamics in Silicon Valley*. Public Policy Institute of California, San Francisco, CA.
- Zhang, M., Tansuhaj, P., & McCullough, J. (2009). International entrepreneurial capability: The measurement and a comparison between born global firms and traditional exporters in China. *Journal of International Entrepreneurship*, 7(4), 292-322.
- Zhang, S. X., & Cueto, J. (2017). The study of bias in entrepreneurship. *Entrepreneurship Theory and Practice*, 41(3), 419-454.
- Zhao, L., & Aram, J. D. (1995). Networking and growth of young technology-intensive ventures in China. *Journal of Business -Venturing*, 10(5), 349-370.
- Zimmer, C. (1986). Entrepreneurship through social networks. *The art and science of entrepreneurship*. Ballinger, Cambridge, MA, 3-23.
- Zimmer, C., & Aldrich, H. (1987). Resource mobilization through ethnic networks: Kinship and friendship ties of shopkeepers in England. *Sociological Perspectives*, 30(4), 422-445.
- Zukin, S., & DiMaggio, P. (Eds.). (1990). *Structures of capital: The social organization of the economy*. Cambridge, UK: CUP Archive.