Contributing Factors to the International Competitiveness of a Garment Cluster:

A Ningbo Case Study

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ABSTRACT

The garment cluster is a diversity and heterogeneous industry. Faced the fiercely increasing competition and rapidly changing markets, how to promote its international competitiveness in the globalization era? The purpose of this dissertation is to find an applicable theoretical framework that could describe the factors attributing to the international competitiveness of a garment cluster. Based on Porter's Diamond theory and Padmore's Groundings-Enterprises-Markets (GEM) model, and combined the implications from the Cluster Initiative Performance Model (CIPM), Smiling Curve and Global Value Chain (GVC) as well, we have modified the GEM model and established fourteen hypotheses according to the characteristics of a garment cluster. Consequently, a questionnaire was designed, and a company survey and an institution survey were conducted in the Ningbo garment cluster respectively. Furthermore, a comparative study between the Ningbo garment cluster and the Daegu garment cluster was conducted. The collected data from the surveys were analyzed through the SPSS software. We have calculated the mean value and p-value of each factor and put the results in the modified model. Combined the result of the comparative study, the finding in our study suggests there are six contributing factors to the international competitiveness of a garment cluster: internal coordination, strategy, sources, external cooperation, policies, and markets.

Key words: Cluster　Diamond theory　GEM model　Garment　Competitiveness　Factors　Exploration

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CHAPTER 1   INTRODUCTION

In the first chapter, the background of the dissertation and some definitions are described; the research problem and research purpose are discussed; finally, the limitations, the research questions, and the outline are presented.

1.8 Background

The overriding purpose of our dissertation is not only to deepen our knowledge and understanding of a certain field, but also to address certain business issues and practical managerial problems.

International Business is one of most important and useful courses in our view, since it provides a clear picture of the development of world economies, and also gives an overview of the different theories of modern trade. Theoretically speaking, Porter's diamond theory has made great contributions to the development in both theories and practices. The theory also enlightens us to do some researches in this field for the purpose of trying to make local economies sustainable and competitive.

As a matter of fact, cluster is a hot issue in the field of both theoretical researches and practices in China including Ningbo city. Among clusters, the garment cluster is a traditional and very important cluster, an outstanding representative of the Ningbo Economy. After a long development, the Ningbo garment cluster reaps economies of scale to some degree, and also has a large proportion of export products compared with both domestic rivals and international competitors. However, export products are always focused on low and middle economic buyers and have a low-market reputation. In reality, governments, garment management groups, and researchers are trying to seek a strategy to make the Ningbo garment clusters stronger and stronger. Although

there are many researchers or scholars who have conducted their researches on assessing the competitiveness of a garment cluster, the scientific alternatives are to promote the competitiveness of the Ningbo garment cluster, especially internationally, but it is still unclear how to do that. Consequently, there may be something available for our team to explore.

1.9   Definition

There are some basic concepts that must be defined.

1.9.1   Garment

Garment is a rather broad concept. According to the definitions of dictionaries, the concept of garment is blurred as is the definition of apparel. For example, "*(formal) Garment is a piece of clothing. See notes at clothes... clothes are the things that you wear, such as trousers/pants, dresses and jackets* (Oxford Advanced Learner's Dictionary, 7th ed. 2005)". We can see it is not clear. Given our objective of the dissertation, it is a case study of Ningbo garment cluster. So based on the traditional usage and characteristics of Ningbo Garment, we define garment as followed: garment is the primarily ready-to-wear product that is manufactured in mass production way and certain standards.

1.9.2   Cluster

Cluster in a modern sense is a strategy alliance that contains prevailing enterprises and other related enterprises and supporting institutions on the basis of value chain, which has strong ability for sustainable development. We will discuss in details in chapter 3.

1.10   Research Problem

Many researchers pay much attention to the assessment of the competitiveness of clusters based on varying theories and model. The aim is rarely to promote

the competitiveness of clusters, and that is the case with the available theories and models as well.

Consequently, the problem is how to promote the international competitiveness of a garment cluster in effective and efficient ways. The international competitiveness of a cluster is actually the combined effect of efforts taken both on company level and political level, so we will focus our field study on both garment companies and government officials and researchers.

Furthermore, we will modify existing models to combine alternatives to promote the international competitiveness of the Ningbo garment cluster. How can we modify these models, and whether is the modified model suitable for the Ningbo garment cluster or not? This is exactly our research problem.

Finally, the measurements of a cluster's international competitiveness is exactly the foundation of the research, the theories or models adopted focus in both qualitative and quantitative ways

1.11 Research Purpose

The purpose with our dissertation is to investigate and clarify the underlying attributing factors to the international competitiveness of a garment cluster.

Furthermore, the purpose is to investigate whether existing theories or models of cluster are applicable for a garment cluster. If not completely suitable, we will modify and improve a new model to support the international competitiveness of a garment cluster.

Finally, we will try to examine the value of our model by conducting an empirical study, as well as, giving some theoretical and practical suggestion for

the further development of the Ningbo garment cluster.

1.12 Research Questions

➢ What is a cluster in a modern sense?

➢ What are the characteristics of a garment cluster?

➢ Are there any existing theories or models for promoting the international competitiveness of a garment cluster?

➢ If not, how to modify and improve a new model for promoting the international competitiveness of a garment cluster?

1.13 Limitation

One of the limitations in our dissertation is that the research will be made from an aggregate perspective, and we presume that each cluster company supports the cluster development as good as possible. In reality, some of cluster companies explore individual economic returns and other purposes, and then support the cluster development in negative ways. So it will play bad impacts on our judgments.

Furthermore, our field study will be made within the Ningbo garment cluster due to the limited time. The respondents probably finish the questionnaire with their bias. If so, some evaluation on contributing factors might a little subjective. Consequently, the results of our research might not be applicable to other garment clusters.

1.14 Outline of the Dissertation

The dissertation has the following outlines:

Chapter two: the method, research approach and strategy are presented.

Chapter three: the theoretical framework is presented. First, we redefine the

conception of clusters in a modern sense; second, we map the characteristics of garment clusters; third, we intend to find some existing theories or models to support the international competitiveness of garment clusters; finally, we modify and improve the existing model of garment clusters.

Chapter four: the empirical methodology is presented. We discuss the research strategy, sample, limitation, response rate, validity, reliability, and generalizability.

Chapter five: the survey is analyzed. We present the result of the questionnaires and evaluate the hypotheses.

Chapter six: a comparative study is presented. We discuss the result of the comparative study and further evaluate the hypotheses.

Chapter seven: the conclusion is present. The dissertation is summarized and the applicability of our model is discussed. Methodological criticism, future research, theoretical implications and practical implications are also presented.

CHAPTER 2   METHODOLOGY

The choice of research philosophy, research approach, and research strategy is presented; the data collection is discussed, including both the primary data and secondary data.

2.1 Research Philosophy

There are three dominating views about the research process in the literature, namely positivism, interpretivism and realism (Saunders, Lewis& Thornhill, 2003). Due to the fact that our dissertation is based on the principles of positivism, only positivism will be explained.

The research philosophy of this work is based on the principle of positivism. The concept of positivism aims to develop knowledge the authors discussed in an objective way and interpreted data in a value-free manner. Researchers who adopt a positivistic approach strive to be independent, which means that they do not want to affect or be affected by the subject of the research (Saunders, Lewis& Thornhill, 2003, p83). Therefore, when we conduct our research，we try to be as neutral as possible and try to exert subjective opinions as little as possible in this research.

2.2 Research Approach

There are two main research methods used to understand different procedure to link existing theory to the empirical research, namely the inductive and the deductive method. The inductive method starts the research from reality, and develops a theory based on the data collected. While the deductive method means using existing theories to test and interpret these data (Saunders, Lewis& Thornhill, 2003).

According to our research, the purpose of our dissertation is to test the existing theories or models to identify the contributing factors that promote the international competitiveness of a garment cluster, as well as, to find alternatives to shape a stronger competitiveness of a garment cluster from existing theories or models. Consequently, our dissertation is of the deductive approach.

In addition, there are some elements of inductive method at the end of the research. This dissertation aims at exploring the contributing factors to the international competitiveness of a garment cluster. This will be done by the development of hypotheses, which will be empirically tested. Furthermore, an evaluation of the results will be done to find causal relationships between different factors of international competitiveness. So for these reasons and the fact that there exists a wealth of literature, the deductive approach was the most suitable for this dissertation (Saunders, Lewis & Thornhill, 2003).

2.3 Research Strategy

Input/ output analysis and case studies appear to be the most popular techniques for cluster analysis. Whereas the former technique stands for an attempt to provide rudimentary quantitative data on the intensify of cluster interaction and the location of cluster actors (if regional input/output data are available), the latter results in mainly qualitative data and is a typical method for researching relatively new and complex phenomena for which a conceptual framework still has to be developed (Brigitte Preissl and Laura Solimene, 2003). According to the nature of our dissertation, we choose the case study.

Furthermore, a research can be qualitative or quantitative. "*Qualitative studies are researches where data is collected, analyzed and interpreted but not can be in a meaningful way being quantified* (Lekvall & Wahlbin, 1993, p.141)". Our study is quantitative. Quantitative studies are researches where the collected

materials can be expressed in numbers and analyzed quantitatively.

2.4 Data Collection

There are two different types of data collection: secondary data collection and primary data collection. Secondary data is the kind of data that already exists and has already been collected. Primary data is the kind of data that is collected for the first time (Saunders, Lewis & Thornhill, 2003). We used both primary data collection and secondary data collection in this dissertation. The validity and reliability of the data collection will be introduced in chapter 4, in which the empirical methodology is discussed

2.4.1 Primary Data

Primary data is the information that has not been collected and summarized and that has to be collected by the researchers for the first time. The primary data in our dissertation mainly comes from questionnaires. We will discuss primary data in details in chapter 4.

2.4.2 Secondary Data

Secondary data includes three parts: documentary, multiple sources and survey (Saunders, Lewis & Thornhill, 2003). Our dissertation is built upon documentary secondary data. Documentary secondary data is often used combined with the primary data collection method. Documentary secondary data contains written documents such as books, journal and magazine articles and newspaper. Documentary secondary data also includes non-written documents such as tapes and video recordings, and pictures (Saunders, Lewis & Thornhill, 2003).

The Kristianstad University Library was the primary resource to collect data on the topic. The books borrowed from the library were very useful. The relevant articles and journals from the Internet were also useful resources to be studied.

Specifically, as to our research, the secondary data is the concentrative resource for comparative studies between Ningbo city and other similar cities in the field of the garment industry.

2.5 Summary

The purpose of this research will be reached by applying a deductive approach, which includes a review of existing theories and models on the competitiveness of clusters. Positivism is our research philosophy. Given the respondents are answering according to a numerical scale, the qualitative data will be collected by the use of self-administrated questionnaire.

CHAPTER 3   THEORETICAL FRAMEWORK

This chapter presents the theoretical framework of this dissertation. First, the notion of cluster in a modern sense is produced; second, the characteristics of a garment cluster nowadays is analyzed; third, the existing theories or models   related to the competitiveness of clusters are illustrated; finally, the contributing factors of the international competitiveness of a garment cluster are demonstrated, and the modified model and hypotheses as well.

3.1 Definition of Cluster

According to the researches so far, the concept of clusters can be found in literatures that traces back more than one hundred years ago. As early as in 1890, Marshall observed a phenomenon he calls *industrial districts*, which has contained most of the elements that are regarded today as typical clusters. Although he illustrates the benefits, knowledge spillovers and innovation for instance, attributed by clusters, he does not explain how to organize the members and improve the competitiveness, and "*not envision public-private interaction as a driving force in an industry district*" (Keeble and Wilkinson 1999, pp.297-298), as well.

Based on the concept of *innovative milieux*   (or ambiences) (Camagni 1991; Capello 1999; Keeble and Wilkinson 1999), Rosenfeld (1997, p.10) defines clusters as "*a geographically bounded concentration of similar, related or complementary businesses, with active channels for business transactions, communications and dialogue that share specialized infrastructure, labor markets and services, and that are faced with common opportunities and threats*". So far, a whole series of potential linkages are included, but clusters

merely equal business firms, and exclude research institutes, trade associations, and other non-profit organizations.

Michael Porter presents a version that seems more general and comprehensive: "*Clusters are geographic concentrations of interconnected companies and institutions in a particular field*". "*The cluster thus consists of companies cooperating vertically and competing horizontally at each stage of value chain* (Porter, 1998b, p.78)." Porter illustrates the cluster in the value chain perspective, and overemphasizes on geographical locations, but pays no attention to those enterprises that optimize the allocation of resources globally and develop international cooperation extensively.

Bergman and Feser refine the cluster as followed: "*An industry cluster may be defined very generally as a group of business enterprises and non-business organizations for whom membership within the group is an important element of each member firm's individual competitiveness* (Bergman and Feser, 1999, p.2)." The authors develop the definition from merely institutional concept to a functional one, but do not explicitly illustrate the cluster how to increase the product of value-added.

Roelandt and Hertog pay much attention to raise the added value of products and think "*Clusters are networks of production of strongly interdependent firms (including specialized suppliers) linked to each other in a value adding production chain. In some cases, clusters also encompass strategic alliances with universities, research institutes, knowledge intensive business services, bridging institutions (brokers, consultants) and consumers* (Roelandt and Hertog, 1999, p.1)". They stress on the importance of interdependence between cluster members, and creating value-added products as well. The authors explore how to strengthen the competitiveness of clusters, such as collective works, R&D, and consumer preference. But, Roelandt and Hertog still concentrate their

research on internal coordination between cluster members in geographical economics, and overlook international cooperation and value-chain extension over limited regions.

Given the concept of global value chain, firstly proposed by Gary Gereffi, Gil Avnimelech and Morris Teubal define cluster upgrading "*as comprising both product/process innovation and functional upgrading*" (Avnimelech and Teubal, 2004, p.17). He identifies that the process/product innovation and functional upgrading are the essentials to promote the competitiveness of clusters. Their analysis is concerned with how to organize global production and distribution systems. In order to face rapidly increasing competition in international markets, it is of importance for a cluster to upgrade itself from the perspective of global value chain. However, the authors do not provide a new definition of clusters.

As analyzed above, those definitions reflect some characteristics of clusters in part and respectively add some essential points to clusters in particular. Furthermore, these researchers continuously develop the definition of clusters in accordance with the development of clusters. It is evident that these definitions infuse new blood into clusters and also enrich the contents of clusters. In reality, rapidly changing in marketplace results in increasing furious competition Therefore, it is necessary that the definition of cluster should keep pace with the times.

Therefore, we redefine cluster in a modern sense as followed: *cluster is a strategy alliance that contains prevailing enterprises and other related enterprises and supporting institutions on the basis of value chain, which has strong ability to sustainable development*.

First of all, cluster is a strategy alliance. Traditionally speaking, as Porter (1990) illustrated, cluster is geographical agglomeration, and clusters members have

each clear responsibility and work together. The relevancy of product brings some enterprises come together to form an alliance in a region or a country, which support the development of clusters. Meanwhile, clusters members can benefit from clusters development, such as technological and institution innovation, tacit knowledge spillover, market shares, and the like.

Secondly, the value chain is not focused on single geographical proximity. With the speeding-up of globalization and the help of advanced information technology, it is necessary and possible for enterprises to rationalize distribution of resources over the word. Therefore, cluster members can spread over regions and nations，because "*the strict orientation towards a geographical or spatial dimension of clusters seems obsolete in an information-based and knowledge-based economy*"(Preissl and Solimene, 2003). In order to promote the international competitiveness of clusters, cluster members are supposed to maximally optimize the allocation of resources. The value chain nowadays is extended and has been prolonged from a regional or domestic to global (Avnimelech and Teubal, 2004). To larger degree, the value chain of clusters nowadays is the combinations of domestic and global.

Thirdly, the aim is to promote cluster's competitiveness and make cluster develop sustainable. Modern clusters are strategy alliances. The motivation of strategy alliance is to maximum the market shares, and economic returns as well. In the extremely competitive situations today, "s*urvival is very uncertain in an environment filled with risk, the unexpected, and the competition (*Michael H. Best, 1990, p.1*)*". Because "*Local suppliers are being challenged by international companies with long experience of building brands* (Apéria and Back, 2004, p.11)", therefore, the survival choice of clusters is nothing but strong competitiveness in the world at least in some specific fields. The comparative advantage theory also suggests that international cooperation is a positive-sum in which all enterprises that participate realize economic gains (D.

Richardo, 1967; Hill, 2005, p.153). The case in point for either clusters or cluster members is how to face and adapt to international competition. That is to say those both clusters and cluster members should know how to share the marketplace and compete with rivals over the world. It is true that international competition is much more crucial and uncontrolled and unpredictable compared with domestic competition, but a global strategy can supplement "*home-base advantages and nullify home-base disadvantages*" (Porter, 1998, p. 583). Consequently, to keep the sustainable development of clusters, it is extremely necessary for both clusters and cluster members to explore initially to strengthen their international competitiveness.

3.2 The Characteristics of a Garment Cluster

The definition of cluster in a modern sense is seeking to describe the essential characteristics of the cluster in general. Characteristics differ from different types of clusters. As to a garment cluster, there also exist many differences. Furthermore, it is necessary to map the unique characteristics of a garment cluster if we want to exactly illustrate the contributing factors to the international competitiveness.

3.2.1 The Definition of Garment Cluster

Given the definition of cluster in a modern sense, garment cluster, one type of clusters, is an organ alliance that contains prevailing garment companies and other related companies and supporting institutes on the basis of the garment value chain, which has strong ability to the sustainable development.

3.2.2 The Value Chain of a Garment Cluster

A value chain refers to the whole range of activities involved in the design, production, and marketing of products. As far as the value chain of a garment cluster is concerned, Peter Dicken thinks it mainly includes four stages illustrated in Figure 3-1: fabric (the main material of garment product), design,

production, and distribution. Meanwhile, we also can find out the related and supporting industries of a garment cluster, textile industry (its responsibilities of providing high quality fabric), research institutions (who are responsible to conduct some studies timely in the field of design, manufacture, material, marketing, and so on), and the like. Furthermore, each related industry may have own sub-suppliers, for instance of textile industries, fibers industries, chemical plants, etc.

Materials	Processes	Ends uses

Materials

Natural fibers

Raw cotton, Wool, etc.

Chemical fibers

Wood, oil, Natural gas

Processes

Textile industry

YARN PREPARATION spinning

FABRIC MANUFACTURE Weaving/ knitting

Chemical plants And petrochemical refineries

PRODUCTION OF MAN-MADE FIBRES
(a) cellulosics
(b) synthetics

Ends uses

HOUSEHOLD GOODS
Furnishings
Carpets, etc

c.25%

c.50%

Garment cluster
DESIGN
PREPARATION
PRODUCTION

Basic fashion- fashion
Garment basic garments
garments

DISTRIBUTION
Retail/wholesale operations

c.25%

INDUSTRIAL GOODS
Belting, upholstery
For auto industry, etc.

Figure 3-1 The Textile-Garments Value Chain (adapted from Peter Dicken. 2003, p. 318)

Furthermore, Briscoe (1971) divides the garment value chain into four levels: Level 1 is the manufacture of fibers; Level 2 is textile mill products and hosiery; Level 3 is industrial textiles, household textiles or garment; Level 4: garment products are distributed to final consumption. "*A more modern view would stress the importance of all levels in the pipeline working together to achieve*

advantage in world markets (Richard, 2002, pp.2-3)."

In view of analysis above, we can simplify the garment value chain into four phrases illustrated in Figure 3-2: material input (fabric), design (especial for fashion), production, and distribution (retailer or wholesale).
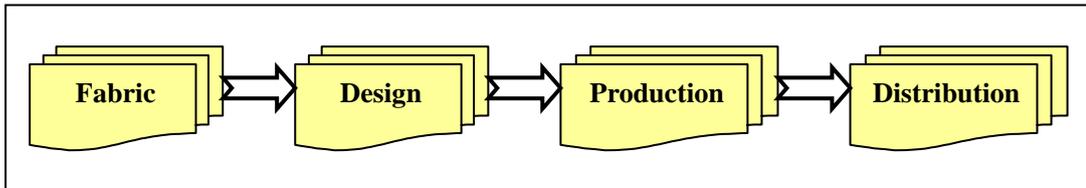
Figure 3-2 The Garment Value Cluster Chain

3.2.3 The Nature of a Garment Cluster

Different clusters have their specified characteristics, and so does a garment cluster.
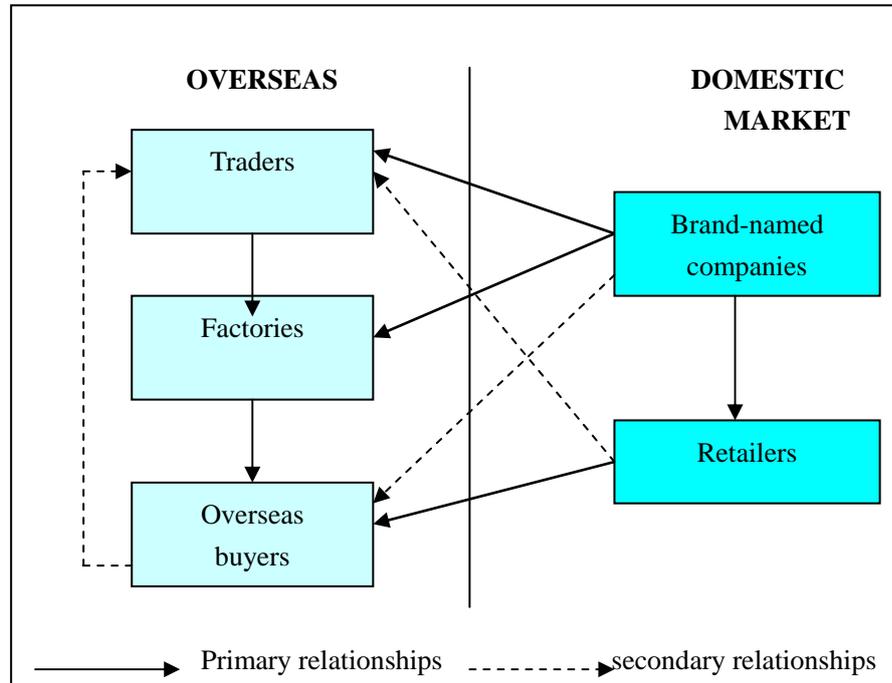
Figure 3-3 Buyer—Driven Production Networks (Source: Based on Gereffi, 2001)

Firstly, the garment cluster is a buyer-driven value chain rather than

producer-driven one. As far as production network is concerned, a crucial distinction in this approach is between buyer-driven and producer-driven value chain (Gereffi, 1999, 2001). The garment is a prototypical buyer-driven product (illustrated in Figure 3-3) because it generates a highly aggressive pattern of global sourcing through a variety of organizational channels, including giant cost-driven discount chains (Wal-Mart, Kmart, or Target), upscale branded marketers (Liz Claiborne, Tommy Hilfiger, Nautica), garment specialty stores (The Limited, The Gap), and burgeoning private label programs among mass merchandise retailers (JC Penney, Sears).

Buyer-driven production networks tend to occur in those industries in which larger retailers, brand-named merchandisers, and trading companies play the pivotal role in setting up decentralized production networks in a variety of exporting countries, such as Garment, footwear, toys, and house-wares. The role of distribution makes significant contribution to garment cluster (Gereffi, 1994). Distributors particularly the retailers are of "*considerable and growing importance and have enormous implications for the organization and global geography of garment manufactures*" (Dicken, 2003, p.319). In contrast to buyer-driven production, it is producer-driven production networks which are capital- and technology–intensive industries like automobiles, computers, aircraft, and electrical machinery.

Secondly, the garment cluster is a customer-oriented consumer industry. With the development of society and economy, the garment is becoming more and more diversity and heterogeneous industry with its products being used by virtually everybody (Christina, 2005). Customer preference and tastes have overriding influence on the development of a garment cluster. Furthermore, with the development of market from seller's to the buyer's market, consumer or customers play an outstanding actor in the process of garment development. The management group of a garment cluster has to have considerations of customers'

both physical and psychological needs, which figure out the importance of distributing as well as design. It means that a garment cluster is supposed to pay more attention to the distribution, and then take effective measures to strengthen and enlarge the market share. Compared with other three processes, contribution is relatively prominent. After all, customers are the focus of garment products, which means that the garment product should pay much attention to the requirements of customers, namely customer-based products and respond to the market situations timely and correctly.

Thirdly, the garment cluster is an export-oriented industry. As a matter of fact, a garment cluster has been characterized by global production and trade networks since at least the middle of the twentieth century. Its expansion and growing capabilities of global supply-base have permitted it to move rapidly from captive to more complex relational value chains over the span of just a few decades. The epicenter of export-oriented garment production has been East Asia, as Japan in the 1950s and 1960s, Hong Kong, South Korea, and Taiwan during the 1970s and 1980s, and China in the 1990s emerged sequentially as world-class textile and apparel exporters (Bonacich et al., 1994). The key to East Asia's success was to move from captive value chains – i.e., the mere assembly of imported inputs, typically in export-processing zones – to a more domestically integrated and higher-value-added form of exporting broadly known in the industry as full-package supply (Gereffi, 2005). The garment cluster is the typical 'starter' industry for countries engaged in export-oriented industrialization, and it played the leading role in East Asia's early export growth.

Finally, the garment cluster is a labor-intensive industry rather than capital-intensive one. So far, garment clusters are the most geographically dispersed of all industries across both developed and developing countries. Despite the changes wrought by new technologies, corporate rationalization and

competition from new products, garment clusters continue to be important sources of employment in the developed countries. China also dominates global employment in the garments cluster, with more than 1.6 million workers followed, a long way behind, by the United States, the Russian Federation and then Japan. Garments manufacture also remains important in Western Europe (notably in the United Kingdom, Germany, France, and Italy), and Eastern Europe (notably in Romania and Poland. Among developing countries, the East and South East Asia region is overwhelmingly dominant. Apart from China, there are major concentrations of garments workers in Indonesia, Thailand, the Philippines, South Korea and Hong Kong) (Dicken, 2003). Moreover, it is the reason why "*most nations produce for the international textile and apparel market* (Dickerson, 1995, p. 6)". It makes this one of the most global of all industries. It is also one of important elements of international trade conflicts in the field of textiles and garments.

3.2.4 The Upgrading Process of Garment Products

The upgrading process of garment products discussed here primarily contains two parts, one is process innovation, and the other is product innovation.

First, it is the process innovation of garment products. It is actually that process innovation can reduce the time involved and provide possibility of an increased level of output with the same size – or even smaller – labor force. As the international competition between garments clusters has intensified the search for new, labor-saving technologies has increased, especially among different manufacturing operations within the production sequence. There are two kinds of technological change are especially important: increasing speed of process/replace manual with mechanized and automated operation. Furthermore, current technological development in the manufacture of garments is focused on following areas: first, to increase the flexibility of machines; second, to address the problem of sequential operations; finally, to development the unit production

system. Consequently the benefits are clear, which can speed up the production cycle of the cost working capital by increasing the velocity of its use to respond more quickly to customer demand (Dicken, 2003).

In sum, the process innovation directly results in higher productivity and quality. But with the market transformation from supplier-orientation to buyer-orientation, customers have more and more alternatives and become much more sophisticated. These changes make great influences on the development of a garment cluster, as a customer-orientation consumer industry. Generally speaking, what costumers in reality are concerning is quality, and brand and new style as well. Whatever, process innovation is outstanding. It means the development of a garment cluster will involve process innovation. The emphasis of garment process innovation is labor-saving, design, and so on.

Second, it comes to the product innovation of garment products. Generally speaking, most of the development of new products is under stronger brands. From the perspective of cost-effectives consideration, the effective and efficient way is to persistently seek to develop new products to enrich and strengthen the master brand. It is also the best way to sustain the market share and explore new markets. In reality, "*Fewer and stronger brands implies that the brands currently present will see more products launched under their master brand… brand is the starting point for the development of new products* (Tony Apéria and Rolf Back, 2004, pp.341-342)", which can be illustrated as Figure 3-4

From the Figure 3-4, we can see that the starting point of product development is idea generation. Before putting into actions, the management group has to take considerations brand strategy. If the plan fit between all components of brand strategy, the company makes final decisions of lunching a new product. If not, the company has to revise and improve the plan or give it off.

The launch succeeds or not, which depends on the acceptance of customers. Generally speaking, sophisticated customers possess their own preferences and tastes on quality, brands and style. If a new product is not in accordance with the characteristics of master brand, it is of risk. From both theoretic and practical considerations, economic returns are the first priority in all economic work. The motivation of companies to launch a new product is to gain and sustain competition advantages in the market via technology innovation. The competition advantages directly or indirectly result in economic effectives. Brands can also be seen as "*a powerful means of securing a competitive advantage*" of enterprises (Keller. 2003, p.11).
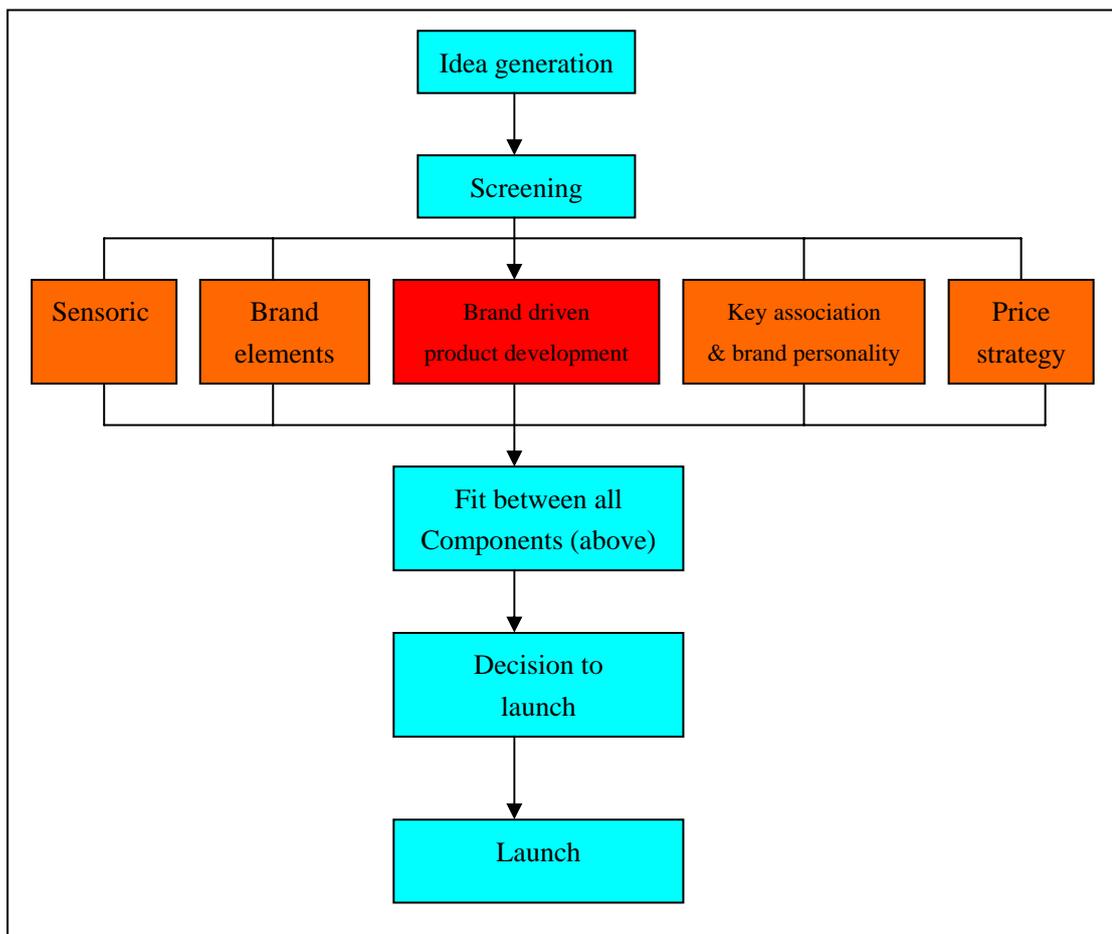
Figure 3-4 The Brand-Based Product Development Process (Apéria, 2001, p.375)

Given the analysis above, technological innovation makes great contributions on

quality, quantity, design. Furthermore, it also shows the importance of garment brands. Branding has been a hot issue for centuries as a means to distinguish the goods or services of one producer from those of another. "*A brand is a valued intangible asset that needs to be handled carefully* (Keller, 2003, p.3)", which is the combination of functional attributes and symbolic values and consequently can meet both customers' needs of physical and psychological. Specifically, brand contains the garment product's quality, usability, usefulness, and the like, which is the functional attributes on the one hand; on the other hand, it also embodies the vitamin rich, elegant, prestigious and so on, which is the value symbolic, because brands also provide a number of valuable functions to firm (Leslie and Gil, 1998). Furthermore, the latter is the competitive advantages of garment product especially the top grade one, because its motivation is to meet the psychological requirement of customers. So the role of brands is very important, particularly in the modern times of globalization, as Douglas (1987, p.19) points out: "*Globalization has become a key theme in every discussion of international marketing strategy. Proponents of the philosophy of 'global' products... argue that in a world of growing internationalization, the key to success is development of products and brands...a focus on the marketing of standardized products and brand world-wild.* "

3.2.5 The General Developing Path of a Garment Cluster

Garment is one of the oldest and largest industries in the history, which can date back to thousands of years ago. So far, the garment product has significantly developed from a simplest one to a much more complicated one, from merely meeting the need of physical to adapting the requirements of psychological. To review the original development of garment products is to try to summarize the general developing path of a garment cluster especially the modern one.

Based on the analysis of the developing tendency of Italian, German, French, and other countries' garment clusters, Peter Dicken generalizes the upgrading

process of a garment cluster. "*This upgrading process has consisted of three broadly sequential phases: simple assembly of basic garments for export trade; subcontract manufacturing to design specified by the buyer with the product sold under the buyer's brand name (original equipment manufacturing, OEM), development of own-brand manufacturing (OBM) capability...Of course, not all firms follow this sequence* (Dicken, 2003, p.347)." So the sequence can be illustrated in Figure 3-5:
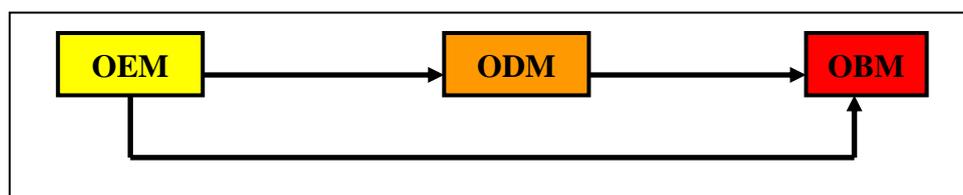
Figure 3-5 The General Developing Path of Garment Clusters

Development strategy differs in different garment clusters, and management style and margin way also differ. It is evident that garment companies cannot pursuit a same margin way in different developing phases. It is certain that garment companies are shifting from OEM to ODM to OBM (Internet, September 10, 2006).

OEM, abbreviated from Original Equipment Manufacturer, is a form of commercial subcontracting in which the buyer–seller linkage between foreign merchants and domestic manufacturers allows for a greater degree of local learning about the upstream and downstream segments of the apparel chain. It involves in the initial developing phase of companies. These companies for survival seek to make cooperation for large companies, because the scales, abilities and the like are limited. It is the opposition of outsourcing for larger companies. OEM has the following features: the supplying firm makes a product according to the design specified by the buyer; the product is sold under the buyer's brand name; the supplier and buyer are separate firms; and the supplier

lacks control over distribution. East Asian firms soon became full-range package suppliers for foreign buyers, and thereby forged an innovative entrepreneurial capability that involved the coordination of complex production, trade, and financial networks (Gereffi, 1995). OEM enhances the ability of local entrepreneurs to learn the preferences of foreign buyers, including international standards for the price, quality, and delivery of export merchandise. It also generates substantial backward linkages in the domestic economy because OEM contractors are expected to develop reliable sources of supply for many inputs. Moreover, expertise in OEM production increases over time and it spreads across different types of activities. The OEM supplier learns much about the down-streamed upstream segments of the garment value chain from the buyer. This tacit knowledge can later become a powerful competitive weapon. In 1990s, Taiwan, South Korea, Hong Kong and Singapore were OEM production.

When companies develop stronger, they come to the phases of developing, mature, and more concern and focus on ODM and OBM. Compared with OEM, *ODM* (Original Design Manufacturer) and OBM (Original Brand Manufacturer), the product of international divisions of labor, are much more creative rather than merely produce, which can maximize the economic returns for enterprises. Both ODM and OBM seek to improve the added value of products, in the field of either design or brand as analyzed above. Then it is inevitable that technology innovation, design and brands make the possible. Nowadays, both the Italian and German garment industries are characterized by ODM. As said by (German) garment associations' chairman, '*we are no longer a production-oriented company. Today, we are a company with a strong emphasis on creativity and design, marketing and logistics*' (The Financial Times, 9 January 1996*))*. Moreover, the best known Italian company to have developed an especially distinctive strategy, of course, is Benetton. As a "garments services company", it sells itself as an "Italian" company. The company uses around 500 subcontractors for its actual production, 90 per cent of which are located in the

Veneto region of north-east Italy (Schary and skjøtt-Larsen, 2001). This system gives it considerable flexibility in responding to changing demand for its garments. Benetton itself performs only those functions--- mainly design, cutting, dyeing and packing--- that it considers crucial to maintain quality and cost-efficiency.

Compared with ODM, **OBM** is the top stage of garment industries. The nature of OBM is integrating their manufacturing expertise with the design and sale of their own branded merchandise. It is true that different garment industries have their own unique characteristics; ODM is not the necessary developing step of garment industries, which depends on the concrete situations and circumstances. Some garment industries can shift from OEM directly to OBM. In Hong Kong, garment companies have been the most successful in making the shift from OEM to OBM. The women's garment chain Episode, controlled by Hong Kong's Fang Brothers Group, one of the foremost OEM suppliers for Liz Claiborne in the 1970s and 1980s, has stores in 26 countries, only a third of which are in Asia. Giordano, Hong Kong's most famous clothing brand, has added to its initial base of garment factories 200 stores in Hong Kong and China, and another 300 retail outlets scattered across Southeast Asia and Korea. Hang Ten, a less-expensive line, has 200 stores in Taiwan, making it the largest foreign-clothing franchise on the island (Granitsas, 1998).

As matter of fact, most of garments clusters in developed countries, Italy, France, United States, United Kingdom, for instance, belong to ODM or OBM. They are in the upper stages. However, most of Chinese garment companies, by contrast, belong to OEM. How to improve the value-added of Chinese garment products? The tendency of garment clusters may give some useful and practical suggestions and the advanced experience form a garment cluster in developed countries as well. In fact, it is the hot issue how Chinese garment cluster develops from "Made in China" to "Created by China" favorably and

successfully.

3.2.6 Summary

To sum up, the garment cluster is buyer-driven, customer-oriented, export-oriented industry, and the textile is the main supporting industries. There are some main contributing factors so far, such as design, brand, technological innovation, resources (fabric, labor including skilled workers), through the analysis of the value chain, the nature of garment products, the process of upgrading garment products, and the general developing path of garment clusters. Furthermore, the international trade situation also has significant influence on the development of a garment cluster.

3.3 Contributing Factors to the International Competitiveness of a Garment Cluster

Based on the analysis above, we have demonstrated some characteristics of a garment cluster, and some contributing factors to garment clusters as well. So far it is not enough to illustrate the contributing factors to the international competitiveness of a garment cluster as whole. Are there existing theories or models available for our research's theoretical foundation? As matter of fact, there are some precursors that have conducted fruitful researches, which can give us some useful indications. In addition, as mentioned in chapter 1, the precondition of the dissertation is to measure the improvements in a cluster's international competitiveness, so do the way of output is to the input as well. The theories or models to be discussed, therefore, include both qualitative and quantitative types.

3.3.1 Porter's Diamond Theory

Porter (1990) proposes a complete concept of cluster at first and demonstrates how the elements interact to each other and influence the cluster's performance,

which illustrated as Figure 3-6.
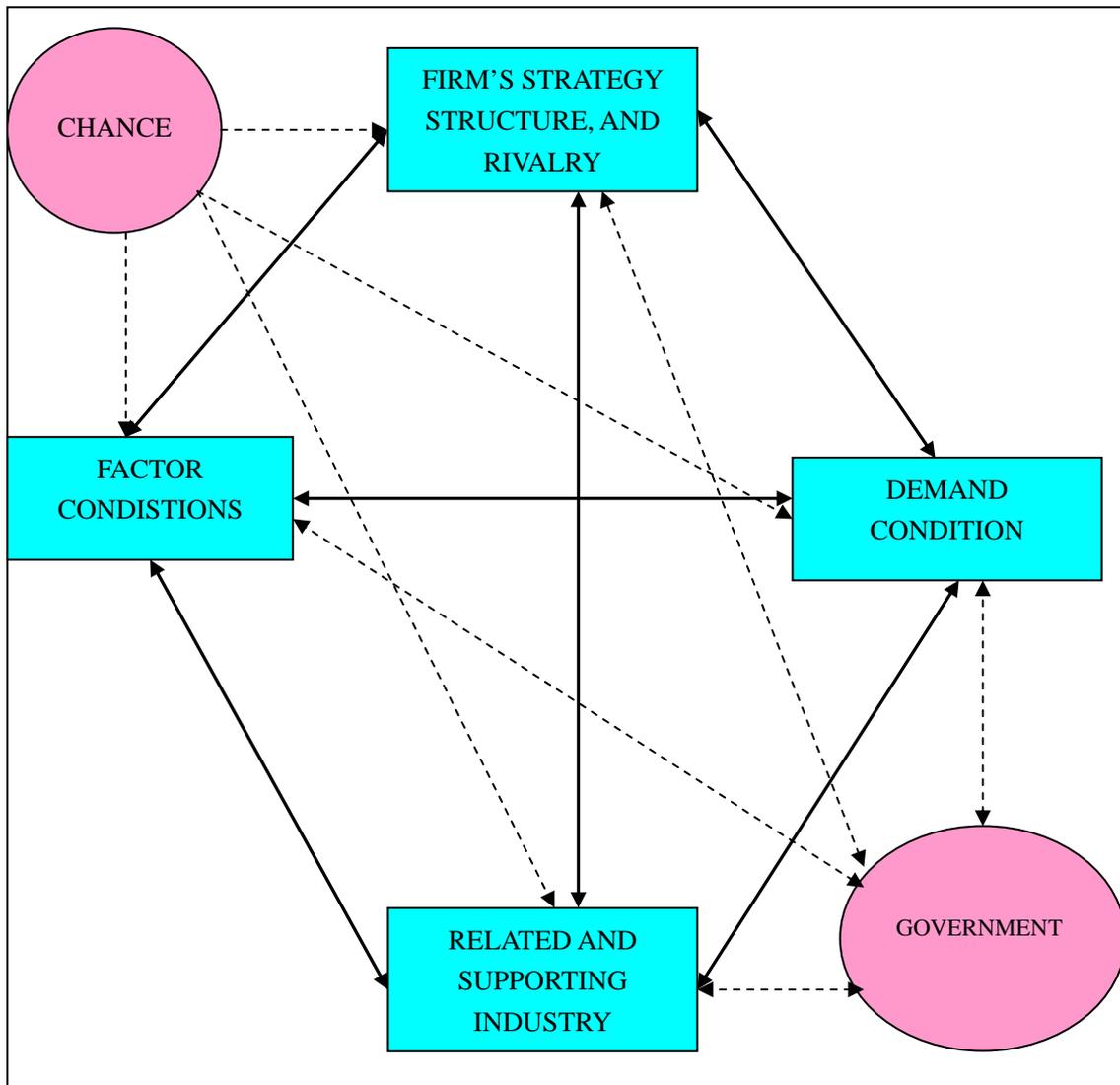
Figure 3-6 The Complete System of Porter's Diamond (adapted from Porter, 1998a, p.127)

Firstly, in porter's view, the competitiveness of clusters depends on the internal coordination between cluster members. "*Coordination involves sharing information, allocating responsibility and aligning efforts … can also enhance a firm's differentiation with internationally mobile or multinational buyers… yields flexibility in responding to competitors. (Porter, 1998b, pp. 58-59)*" Secondly, the competitiveness derives from increasing productivity, driving the

direction and pace of innovation, and stimulating the formation of new business (Porter, 1998b). Thirdly, he pays much attention to local resources endowment, such as labor, materials, and the like. Fourthly, the author points out that the significant importance of trade associations with the functions of providing information, hosting trade fairs, as well as creating equal dialogue between cluster members and the authorities to solve environment issues and the like. Finally, the author further emphasizes that there are four issues essential to cluster strategy agenda: choosing location, engaging locally, upgrading cluster, and working collectively (Porter, 1998b). Undoubtedly, Porter succeeds in providing a fresh way of thinking of how agglomeration economies work efficiently and effectively, and how to improve the status of competition, in enterprise's prospective on the one hand; on the other hand, he also gives some indications for government decision-makers that how to try to support the development of clusters through different policies. All in all, it is evidently that Porter's theory is a new development in the field of geographic economies.

However, he excessively emphasizes how to improve the competitiveness of cluster from the perspective of geographical cooperation, based on the presumption that all four components of the diamond are favorable. Furthermore, Porter's theory lacks "*independent empirical testing*" (Hill, 2005, pp.165-169). In reality, with the development of international trade, more and more clusters cooperation have broken the boundaries of geographic and even national. Mostly clusters members are exploring to develop cooperation partners over the world based on global value chain. In addition, it is true that we can get useful information for a garment cluster, but the theory only focus on the general guidelines of all clusters. So it may not exactly figure out all contributing factors of a garment cluster. We had better to seek more theoretical groundings to support our research.

3.3.2 The Groundings—Enterprises—Marketing (GEM) Model

On the basis of Porter Diamond Model, Tim Padmore and Hervey Gibson (1998)，two Canada scholars， create a new model—GEM— to describe and access the competitiveness of clusters from regional respectively through the analysis of important contributing factors to clusters performance. The GEM categorizes the contributing factors into three parts: groundings, enterprises, and marketing, and each of factor pairs includes different sup-categories. Groundings: resource, and infrastructure, is called factor pair I. Enterprises: suppliers and related industries, enterprise's structure, strategy and rivalry, is called factor pair II. Marketing: local market, external market, is called factor pair III. Their relationships are illustrated in Figure 3-7.
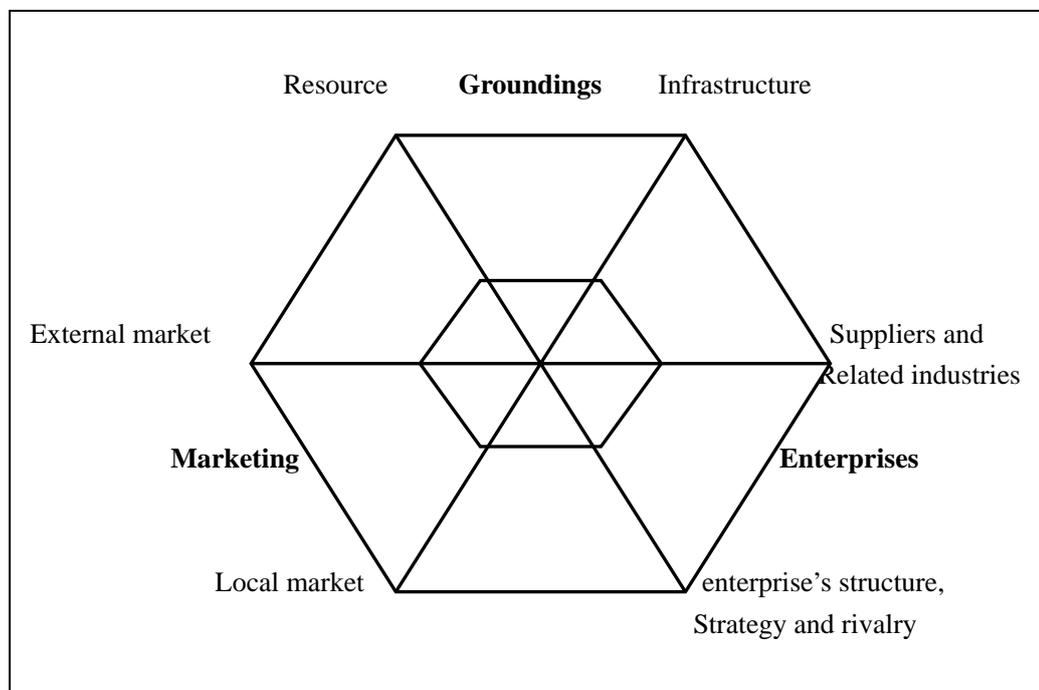
Figure 3-7 The GEM Model (adapted from Padmore, 1998.)

Compared with Diamond Model, GEM Model firstly quantifies cluster's competitiveness by mathematics methods, which can make it much more straightforward and convenient. Secondly, it puts much more emphasis on the market situations including both local market and external market on the development of cluster, which improves Porter Diamond Theory via external market analysis. It may be a useful model for our quantitative research.

However, the model is too generally to apply to a garment cluster, because the model cannot specifically figure out all contributing factors to the international competitiveness of a garment cluster. Furthermore, the model merely focuses internal coordination within cluster members, and pays little attention to international cooperation.

3.3.3 The Cluster Initiative Performance Model (CIPM)

Based on Porter's theory and inspired by Porter's work, Örjan Sölvell, Göran Lindqvist & Christian ketels, the cooperators of Porter in Sweden, develop a model to analyze and evaluate the performance of cluster initiative via statistics analysis of more than 500 unique cluster initiatives around world (Sölvell, Lindqvist & ketels, 2003). The model is named the Cluster Initiative Performance Model illustrated in Figure 3-8.

The CIPM is based on four components: divers— the social, political and economic setting within a nation; the objectives of cluster initiative; the process by which the cluster initiative develops— affecting the performance of cluster initiatives; the real performances. Each of four components comprises several factors.

The authors bring forward a new concept of cluster initiatives (CIs) that "*are organized efforts to increase growth and competitiveness of cluster within a regional, involving cluster firms, government and/or the research community* "(Sövell, 2003, p.16). They think CIs have become the central feature of improving growth and competitiveness of clusters, and also analyze the characteristics of successful cluster initiatives. To sum up, they provide a useful and general methodology to evaluate cluster performance, which is conformed by 238 clusters in 23 countries varying from agriculture to industry, from low-tech to high-tech industries, from developing countries to developed

countries, from the most advanced economies to transition economies developing economies. The findings are also confirmed by their latest masterpiece (ketels, Lindqvist & Sölvell, 2006). To large extent, it is the empirical study of Porter's cluster theory.

Objectives
- Research and networking
- Policy action
- Commercial co-operation
- Education and training
- Innovation and technology
- Cluster expansion

Setting
- Business environment
- Policy
- Cluster strength

Performance
- Competitiveness
- Growth
- Goal fulfillment

Process
- Initiation and planning
- Governance and financing
- Scope of membership
- Resources and facilitators
- Framework and consensus
- Momentum

Figure 3-8 The Cluster Initiative Performance Model (adapted from Sölvell, 2003, p.25)

Compared with GEM model, firstly, CIPM figures out the importance of business cooperation especially international cooperation as one of objectives as well as technological innovation and environments, because "*successful clusters are linked to global markets (*Sövell, 2003, p.24*)*". Secondly, it concretely illustrates policy which has significant impacts on the development of clusters

both in the field of objectives and settings. Finally, the model pays attention to growth of clusters. However, it is less straightforward than GEM model although it is still a quantitative model. Other limitations are similar to GEM model.

3.3.4 Global Value Chain (GVC)

In 1990s, Gary Gereffi, a professor of Duke University, and other researchers develop the concept of Global Commodity Chain (GCC). The GCC perspective starts from the premise that analyzing the dynamics and structure of global industries is a useful way to understand the local consequences of globalizations for firms and workers. Commodity chains are composed of links that represent discrete, though interrelated, activities involved in the production and distribution of goods and services. With the development of globalization, they substitute global value chain for global commodity chain in 2000. They pay much attention to the linkages external to the cluster. They suggest that "*the way in which firms in clusters are linked to external actors has significant implications for the cluster's performance and local development* (Bair and Gereffi, 2001, p.1887)." They also show the importance of external linkages in the changing organizational dynamics of clusters. Moreover, they think that there are two factors emphasized in the analysis are collective efficiency (external economies & joint actions within the clusters) and different forms of GVC governance. GVC governance influences not only the value chain of organization/coordination activities, but also upgrading & distribution of gains along the value chain. Finally, from their perspective, participation in global value chain is a necessary step for industrial upgrading because it puts firms and economies on potentially dynamic learning curves.

Globalization has altered the competitive dynamics of nations, firms and industries. It implies that the functional integration and coordination of internationally have dispersed activities. In reality, globalization is creating a

new innovation and increasingly competitive environment, which is redefining the conditions for firms, industries and clusters. The harsh selection environment is characterized by both high-expected returns and high risk. The risk is engulfing high tech industries and increasingly mid, low and service industries. GVC analysis emphasizes that local producers learn a great deal from global buyers about how to improve their production processes, attain consistent and high quality, and increase the speed of response (Humphrey and Schmitz, 2002). Furthermore, it also emphasizes how the relationships among the various actors in the value chain affects their development; and related to this, the nature of GVC governance or coordination is central particularly decisions regarding what will be produced; how will it be produced; and how much will be produced.

The authors explore to promote the competitiveness of cluster in modern times from a new perspective: global scopes, and proposes a new notion: global value chain. They also demonstrate in details that why and how modern clusters to resource over the world and upgrade them. Furthermore, GVC confirms the importance of technological innovation, internal coordination, international cooperation, as well as resources.

It is true that GVC still lacks empirical study so far, but in reality, as analyzed above, export-orientation is one of the characteristics of garment cluster. To large extent, a garment cluster is born global. In order to upgrade garment clusters and promote their international competitiveness, it is necessary to take part in the GVC initially.

3.3.5 Smiling Curve

Shi, Zhengrong (2005), the ex-president of Acer in Taiwan, proposes a new model after reviewing and analyzing the general developing process of Acer, a computer manufactory. The model is named by Smiling Curve and illustrated in Figure 3-9:

By having done well in the "value-added" business segments, he concludes that companies can succeed in the current dis-integrated business environment. To explain the dis-integration trend, calls "smiling curve". Value is added in component production on the left side and marketing/distribution on the right. Today, there is no longer any value added in assembling computers – everyone can make a PC. To succeed in the new IT age, computer companies have to gain a top position in component segments, like software, CPUs, DRAM, ASICs, monitors, storage, etc. or else as a distribution leader in a country or region. The key to success on the components' side of this chart is global competitiveness. Universal standards in components mean global competition, so if computer companies are going to pursue a segment along the left side, they need technology and a strong manufacturing capability for economies of scale. On the distribution side, where competition is local, computer companies can succeed through a good image, brand name awareness, well-managed channels, and effective logistics.
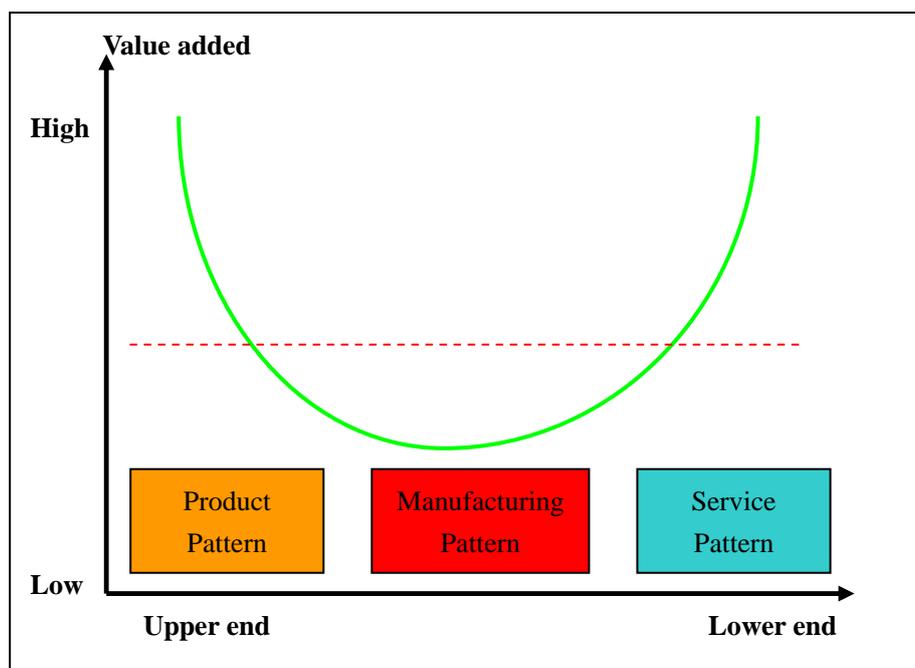
Figure 3-9 The Smiling Curve (adapted from *Shi, Zhengrong, 2005*)

The author brings forward a fresh thinking how to strengthen the international competitiveness of modern companies under the global era. The developing process of Acer has substantially identified his judgment. The limitation is that the model derives from computer clusters rather than a garment cluster. The problem is whether it is available for analysis of a garment cluster or not. But the current development of German garment, British garment and Italian garment clusters, shows that its tendency is similar to computer's developing process. Both upstream and downstream of garment's value chain are being highly concentrated, for instance, design, brand, international cooperation.

3.3.6 Summary

So far, it is true that we only show some pictures of related theories or models compared with the pool of theories on clusters, but we can find much more useful resources. It not only provides the theoretical supporting, but also provides the possibility for us to modify the GEM model which is supposed to combine the resources from other theories or models. Furthermore, theoretically speaking, it is clear that the contributing factors to the international competitiveness of a garment cluster. There are: internal coordination, strategy (design, brand, technological innovation), resources (materials, labor), external cooperation especially international cooperation, markets (domestic and international situations), and policies (native policies and foreign policies).

3.4 Research Model and Hypotheses

Based on the GEM model, we combine the selected contributing factors above and modify the model in Figure 3-10, namely contributing factors to the international competitiveness of a garment cluster.

The model is based on these six most important contributing factors, which can be categorized into two parts: *internalization and externalization*. Internalization,

which involves the contributing factors within the cluster, includes internal coordination, strategy, and resources; externalization includes external cooperation, markets, and polices. The model is supposed to be useful for displaying the degree of importance of the factors to a garment cluster.

Internalization   *Externalization*

Strategy   Markets

Internal
Coordination   External
                                                          Cooperation

Resources   Policies
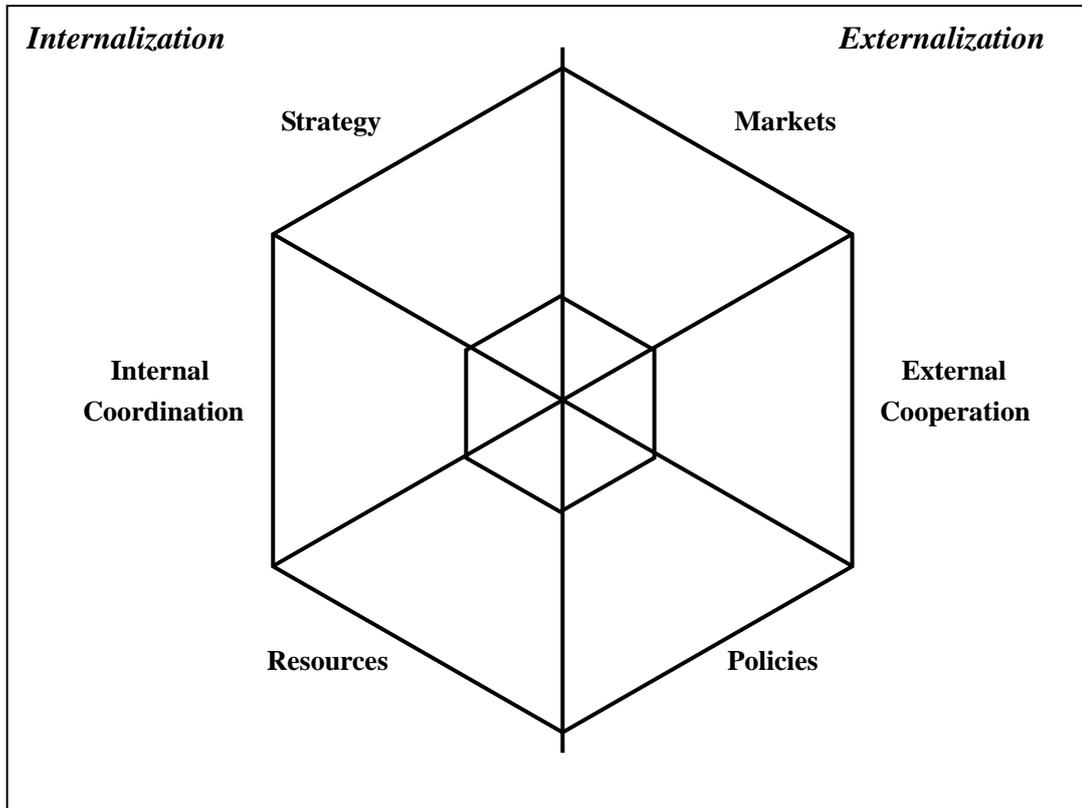
Figure 3-10 Contributing Factors to the International Competitiveness of a Garment Cluster (based on GEM model, Padmore, 1998)

3.4.1 Internal Coordination

The theories above make great emphasis on the importance of collective forces and efforts within cluster members. Internal coordination is the precondition and foundation of any kind of clusters. First, the structure of garment companies, namely how these companies are managed and organized, has a decisive role on the international competitiveness, for example, the training, background, and orientation of leaders, group versus hierarchical style, the strength of individual initiative, the tools for decision making, the nature of the relationships with

customers, the ability to coordinate across functions, the relationship between labor and management. "*These differences in managerial approaches and organizational skills create advantages and disadvantages in competing* (Porter, 1998a)". Second, collective works within cluster members via vertical production networks represents "*a robust organizational form that offers advantages in efficiency, effectiveness, and flexibility*" (Porter, 1998b). Meanwhile, horizontal collaboration between same-sector small and medium-sized enterprises can also yield '*collective efficiencies*' (Schmitz, 1997). Finally, trade associations can "*provide a forum for the exchange for ideas and a focal point for collective action in overcoming obstacles to productivity and growth*" (Porter, 1998b), and solve some common problems which involve public business as well, such as environments issues.

> *H1: company structure is an important factor to provide basis for coping with international competition.*
>
> *H2: collective work is an important factor to provide competitive advantages in efficiency, effectiveness, and flexibility.*
>
> *H3: trade associations are an important factor to provide chance and information for promoting the international competitiveness of a garment cluster through forums, trade fairs.*

3.4.2 Strategy

The garment cluster is very diverse and heterogeneous industry, with its products being used by virtually everybody. To promote the international competitiveness depends on the garment company's strategy to large extent. The strategy involves companies' policies, brand strategy, design, and technological innovation. The policies directly decide garment companies' goals, such as short-term objective, advanced and exploratory development objectives, which make crucial contributions to creation and enhancement competitive advantages.

Given a garment cluster as a customer-oriented industry, design, brand and technological innovation play significant roles. Advanced and differentiated design can clearly figures out the unique characteristics of garment products, and also does its value symbols. Brand is the unique characteristics of garment products, which is the combination of functional attributes (physical quality) and value symbols (psychological requirements of customers).

Furthermore, brand is the intangible asset as well as important part of own intellectual prosperity of a garment cluster. Technological innovations both process and product innovations make great contributions to productivity, cost-efficiency, upgrade product. Moreover, "*technology has given firms the power to circumvent scarce factors via new products and processes* (Porter, 1998a, p.14)" Technological innovation is also one of main weapons to promote the international competitiveness of a garment cluster.

> *H4: enterprise policies have direct impacts on creating and sustaining the international competitiveness of a garment cluster.*
>
> *H5: design ability is a crucial factor to the international competitiveness of a garment cluster.*
>
> *H6: brand strategy is the contributing factor of improving value-added of product of a garment cluster.*
>
> *H7: technological innovation is the contributing factor of productivity, cost efficiency, as well as product design of a garment cluster.*

3.4.3   Resources

Fabric and human resources are the main resource of a garment cluster. Top grade garment products depend on the quality of fabric. Human resources: the quantity, skills, and cost of personnel (including management), make significant contributions on the productivity, cost-saving, and marketing as well (Porter, 1998a).

H8: materials play a crucial role to the international competitiveness of a garment cluster.

H9: skilled workers and pool of human resources directly make impacts on the international competitiveness of a garment cluster.

3.4.4 External Cooperation

Globalization has reshaped the dynamics of economic activities. The cooperation between countries, enterprises has extremely developed nowadays. The notion of GVC makes emphasis on vertical cooperation, source globally. It is evident that external cooperation is inevitable, which can also have important influence of cluster upgrading and expansion. Furthermore, it also can realize experience curve economies and learning effects (Hill, 2005). It may make clusters full of vigor via establishing vertical relationship between domestic manufactures and foreign merchants.

H10: international cooperation is a contributing factor to the international competitiveness of a garment cluster.

3.4.5 Markets

A garment cluster is a customer-based or buyer-driven production network. The needs of both domestic market and international markets have significant influences on the international competitiveness of a garment cluster. Generally speaking, a garment cluster has to explore to international market after/when strengthening domestic market. Domestic market can play active effects on testing the quality, design of garment product, namely the touch stone. Furthermore, vigorous domestic rivalry can create pressure on government companies to improve and innovate. Consequently, the domestic market especially domestic rivalry is the source of the creation and persistence of competitive advantage in garment cluster (Porter, 1998a).

In addition to domestic market, international markets are the main target markets of international competition of a garment cluster. Compared with domestic market, international markets are the yardstick of international competitiveness, which makes a decisive role on the international competition. Therefore, in order to promote the international competitiveness of a garment cluster, both domestic market and foreign markets are necessary and they are complimentary.

> *H11*: *domestic market is a contributing factor to the international competition of a garment cluster.*
>
> *H12: international markets are a contributing factor to the international competitiveness of a garment cluster.*

3.4.6   Policies

Polices comprise native government policies and foreign economic policies. The stronger supporting policies of domestic governments have significant impacts on increasing the international competitiveness of a garment cluster, such as tax relieve, infrastructures, and the like. Because "*governments are prominently discussed in treatments of international competitiveness…also can influence*" other determinants either positively or negatively (Porter, 1998a, pp.126-127).

Foreign economic policies in the field of textile garment trade have significant influences on the international trade situations, such as quota access/restriction, subsidies, and so on. These policies, therefore, directly and indirectly make impacts on the international competitiveness of a garment cluster. Because to large extent, foreign economic policies are equals to trade chances for a garment cluster. "*Chance events are important because they create discontinuities that allow shifts in competitive positions.*(Porter, 1998a, p.124)" It is also the exact reason for why the textiles and garments clusters exemplify many of the

intractable issues facing today's global economy, particularly the trade tensions between developed and developing economies (Dicken, 2003).

H13: native government policies can provide substantial support of promoting the international competitiveness of a garment cluster.

H14: foreign economic policies have significant influences on the international competitiveness of a garment cluster.

3.4.7 Summary

Analysis above can be generalized into the following Table 3-1:

Table 3-1 Contributing Factors and Hypotheses

Categories	Contributing Factors	Contents of Hypotheses
Internalization	Internal coordination	*H1: company structure*
		H2: collective work
		H3: trade association
	Strategy	*H4: enterprise polices*
		H5: design ability
		H6: brand strategy
		H7: technological innovation
	Resources	*H8: materials*
		H9: skilled workers
Externalization	External cooperation	*H10: international cooperation*
	Markets	*H11: domestic market*
		H12: international market
	Policies	*H13: domestic government policies*
		H14: foreign economic policies

3.5 Summary

In this chapter, the conception of cluster used as a starting point to the research was presented. The dissertation focused on a single garment cluster from the perspective of international competitiveness, and then the characteristics of a garment cluster were illustrated. Since our purpose is to promote the international competitiveness of a garment cluster the first step is to explore and identify the contributing factors. For this we used Porter cluster theory and Padmore's GEM model as theoretical foundation, the CIPM, Smiling Curve and Global Value Chain are used to our research's complementation. Six most important contributing factors and fourteen hypotheses were developed from existing theories and characteristics of a garment cluster.

CHAPTER 4   EMPIRICAL METHOD

In this chapter the empirical method used in this dissertation is described in detail. To begin with, we introduced one research strategy and how we selected our samples. Subsequently we interpret the questionnaire we designed. Furthermore, the response rate is considered. Finally we discuss validity, reliability, and generalizability in turn.

4.1 Research Strategy

Our research strategy is a general plan of how we will go about answering the research questions we asked before. As a case study is "*a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context multiple sources of evidence*" (Robson, 2002, p.178), we thought it would be a very worthwhile way of exploring an existing theory. Here, we adopt a simple, well-constructed case study to evaluate our research model, and, therefore, the fourteen hypotheses illustrated in Chapter 3 as well. Furthermore, we will conduct two different surveys on two different populations in order to improve the quality of results by triangulation.

4.2 Sample

We divided the population into two parts mentioned in chapter 2.

4.2.1 The Sample of Garment Companies

One was the managers of the Ningbo garment companies who are in charge of manufacturing, marketing, and the like. This survey is namely company survey，and supposed to test our hypothesis from their practices and experiences.

According to the statistic data from Ningbo Administration for Industry &

Commerce who are take the responsibilities for registration, administrative supervision on all kinds of companies in the Ningbo market, there are 2,469 companies in the field of the Ningbo garment cluster on December 31, 2005. Based on the proportion of 4 per cent, 90 different garment companies were selected. We introduce the method of simple random sampling method. The sample was selected by the officials of Ningbo Administration for Industry & Commerce, based on the total number of samples, 90 garment companies.

4.2.2 The Other Sample

The other sample was the Ningbo government officials, researchers, and association employees, who are responsible for the theoretical and policies-making researches. This survey is namely institutional survey, and supposed to identify our hypotheses from institutional perspective.

There were some 1,426 government officials, researchers, and association employees who were connected to the Ningbo garment cluster on December 31, 2005 based on the statistic data from Ningbo Garment Trade Association.

As for the samples of the institutional survey, we used a simple random sampling method. Based on the proportion of 4 per cent, the similar proportion to the first population, consequently 60 samples were selected by the employees of Ningbo Garment Trade Association.

4.3 Limitation

The research has some limitations. First, our sample is limited to the Ningbo garment companies because it is convenient for us to reach these companies. If we conduct research on foreign countries we believe it could lead to problems with the response rate.

Another limitation is that we conduct our field study far away from our target

groups. Given by the facts that we study in Sweden, the main ways of communication available are E-mail and telephone.

Furthermore, the number of questions in the questionnaire is also limited. To be able to get people to answer the questionnaire we have to limit the number of questions to 38, since more questions could act as a deterrent for the participants and lead to a lower response rate.

Finally, there are also limitations connected to time and finance. Since the purpose of our empirical study was to evaluate the contributing factors to the international competitiveness of a garment cluster, we have to conduct the field study in the end of our dissertation period. This leads to that we have to conduct the study very fast. We also have to consider our financial constraints when conducting the empirical study. This leads to that certain research methods are not possible for us to use.

4.4 Questionnaire

In order to verify the relevance of the hypotheses, a survey is to be conducted by the use of questionnaires. A questionnaire is preferable to use when there is a large amount of respondents, when you have limited time and when the questions are of standardized character (Saunder, 2003). So, we accept questionnaire as the sole primary data collection method of our dissertation. In result, some useful indications are supposed to get by attitude scales designed.

4.4.1 The Type of Questionnaire

The questionnaires are delivered by E-mail to respondents who return them after completion, which means that the questionnaires are completely finished by the respondents. To some extent, it ensures that the respondents answer the questions objectively and reliably.

4.4.2 Designing the Questionnaire

First, there is a letter of introduction to the respondents as the starting point of the questionnaire. The letter contains such information: the purpose of the questionnaire, the general requirements for the respondents, the ultimate use of the result, and the like. Therefore, the respondents may get well understanding of the questionnaire.

Secondly, the questionnaire includes a combination of open and closed questions. In part one, there are 14 numerical scale questions, which ask the respondent how important or not important they feel the contributing factors are to the Ningbo garment cluster. Scale 1 means the listed factor is not important at all, scale 4 equals to "neither important nor unimportant", and scale 7 equals to "very important"

In part two, ranking questions are adopted to ask the respondents to rank the contributing factors, in order to discover their relative importance to the respondents. For example, scale 1 means the factor is the least important, scale 13 equals to "the second important", and scale 14 equals to "the most important".

In part three, the respondent is expected to offer some comments on listed factors or suggestions of other factors to the international competitiveness of the Ningbo garment cluster from his or her perspective in part three of the questionnaire.

In part four, general information is requested in order to identify the respondent. There are 10 questions designed which are numbered from 29-38.

4.4.3 Language of the Questionnaire

Because all respondents are mainly Chinese and more familiar to Chinese than

English, the questionnaire is finally translated into Chinese and sent to the respondent in both an English and Chinese version. Only one of these versions is asked to be sent back according to their free choice of language.

4.4.4 Pilot test

After the questionnaire was initially designed, five copies were sent to the first five respondents (government officials or researchers, namely our classmates studying in Kristianstad University) and pilot tests were conducted. Therefore the feed-back has been checked, and we have improved the questionnaire accordingly.

4.4.5 Tool of Data Analysis

Given the situations that there are two independent populations selected and the number of questionnaires is 150 in total, we will adopt the tool of the Independent-Samples T Test through the software of SPSS 13.0 for Windows.

4.5 Response Rate

The most important aspect of the samples is that they represent the whole populations. Therefore, it is necessary to obtain as high a response rate as possible to ensure that the sample is representative.

The questionnaire was designed simply with limited questions in order to achieve a high response rate. Furthermore, the questionnaire was delivered by E-mail. In order to improve, we asked some extra researchers and colleagues in Ningbo city familiar to the garment industry to deliver the questionnaires and collect the respondents' answers.

4.6 Validity

"*Validity examines the causal relationship between two variables and shows if the findings are what they appears to be* (Saunders, 2003, p.101)". A good

research is characterized by high validity. Even if we believe that our questions measure what we want them to measure, we cannot be sure. There is always a risk that the questions are misleading or that they may wrongly formulated, and unclear respondents as well. To guarantee the validity, firstly, we designed the questions as neutral as possible, and only invited the respondents to give their evaluation on the factors according to the relative importance rather than to mark them in yes/no or good/bad alternatives, and on the Ningbo garment cluster in general rather than each garment company individually. Secondly, we designed part three to ask the respondents to offer some comments or suggestions in case that we omitted other important factors. Finally, we designed part four to ask the respondents to provide general information about him/her or the organizations. The purpose is to identify that the respondent is qualified.

4.7 Reliability

"*The reliability of the collected data is whether or not the measures will yield the same results on other occasions and if similar observations will be reached by other observers* (Saunders, 2003, p.101)". One threat to reliability is participant error. For this, we minimized the respondents' error to the least possible level through selection by local authorities, limited questions, and an introduction letter before the questions as well.

Another threat may arise from participant bias. To avoid it, we tried to design the questions more generally and objectively. For example, "How important is a company structure in general in the Ningbo garment cluster to make the cluster more international competitive?"

The third factor that may have affected the answers could be how the respondents felt the day they answered the questionnaire. A questionnaire filled out at different times of the week may generate different results. To avoid that this questionnaire should be conducted at a neutral time when the participants

may be expected to be neither on a "high", looking forward to the weekend, nor on a "low", with a working week in front of them (Saunders, 2003), we chose to send out our questionnaire and follow-up letter via E-mail on a Wednesday, October 25 and November 3, 2006.

4.8 Generalizability

The purpose with many researches is to be able to generalize the result to a larger population. However, to be able to generalize about the regularities in human social behavior it is necessary to select samples of sufficient numerical size (Saunders, 2003). In chapter 3, we modified a model for a garment cluster and introduced 14 hypotheses. We also want to generalize a result to similar garment clusters. We will conduct a survey on the Ningbo garment cluster, and a comparative study between the Ningbo garment cluster and the Daegu garment cluster in chapter 6 as well.

4.9 Summary

In this chapter we present the empirical method used to reach the purpose of this dissertation. Our research strategy is to develop hypotheses, which are empirically tested in a field study. The strategy for this research is to use a survey and distribute questionnaires. As a setting for this field study, the Ningbo garment cluster was chosen. The chapter ended with a discussion on the research's reliability, validity and generalizability.

CHAPTER 5 A SURVEY OF THE NINGBO GARMENT CLUSTER

First, the description of the Ningbo garment cluster is presented; second, the result of the survey is analyzed.

5.1   Introduction

In the preceding chapter, we will make a description of the Ningbo garment cluster and a brief introduction of the Ningbo city as well.

We will also present the results of the questionnaires. Each question will be explained verbatim accompanied with different tables and charts. The six factors which contribute to international competitiveness will be discussed in two parts, one based on the scale questions, and the other to ranking questions.

5.2   The Description of the Ningbo Garment Cluster

As the part of the Yangtze River Delta economic circle, Ningbo is a coastal city in the Zhejiang Province of China. It covers an area of 9,365 Sq km and has a population of 5.43 million. The jurisdiction of Ningbo City encompasses two counties (Xiangshan and Ninghai), three county-level cities (Yuyao, Cixi and Fenghua) and six urban districts (Haishu, Jiangdong, Jiangbei, Zhenhai, Beilun and Yinzhou) (Ningbo City, 2006).

Ningbo Port is not only a deep-water port famous all over the country, but also one of the few ports with a cargo throughput of more than 100 million tons in the world. As it enjoys a sound infrastructural basis, Ningbo has scored remarkable achievements in its social and economic development since the beginning of reform and opening up. In 2005, the city's GDP reached US$ 3.13 billion, among which the per capita GDP made up US$ 4,700(Ningbo City,

2006).

Ningbo, the birthplace of the garment industry in China, has been famous at the largest garment manufacturing base in China for last 100 years. In Ningbo the first western-style business suit and the first sun yat sen's uniform were produced in the history of China. Furthermore, the first chronicle of business suit sewing was published for the first time in China. In 2005, more than 2,000 companies were engaged in the garment industry with a production capacity of 1.4 billions suits of all kinds of garment products, accounted about 12% of overall nation's capacity. The export turnover of garment was approximately US$ 5 billion.

In particular since 1990, the garment industry has expanded and been modernized because of efforts in its privatization and market-focused. Sponsored by the Association of Garment Industry in China, Ningbo garment companies have been honored in all various fields. Shanshan Enterprise, Romon Group co., Ltd and Younger Group Co., Ltd gained ranks respectively among the Ten Strongest Competitive Garment Companies in China.

Table 5-1 The Ranks of the Three Ningbo Garment Companies in China during 2004-2005

	Shanshan	Romon	Youngor
The ranking of most competitive garment companies	3	5	9

(Source from: the data of the Association of Garment Industry in China)

Correspondingly, Ningbo Shenzhou Knitting Co., Ltd and Bridge Knitting Group Co., Ltd respectively ranked the No.4 and No.6 of the turnover in knitting companies in China of 2005.

Table 5-2 The Ranks of the Two Ningbo Garment Companies in Turnover of Knitting Industry of China in 2005

	Shenzhou	Bridge
The ranking of turnover in 2005	4	6

(Source from: the data of the Association of Garment Industry in China)

The Ningbo garment cluster was the first one to focus on brand development strategy and now it has taken the lead in implementing the strategy all over the China. At present, the registered trademark amount is over 3000 related to different garment categories, whilst only 50 registered in foreign countries. There are sixteen Chinese brands and four well-known trademarks of China, Younger, Shanshan, Romon, and Tanglion. It is a clear trend that the Ningbo garment cluster has developed from the industrial brand era to the fashion brand era.

Over the decades especially the last ten years, a huge market network has been established. There are different types of selling channels, such as specialty shop, specialty store, agents and so on throughout China except the two provinces, Taiwan and Tibet. The main exporting markets of Ningbo's garment products include the European Union, the United States, Japan, Hong Kong, Southeast Asia and other countries and regions. From January to August in 2006, total turnover of garment exporting products in Ningbo announced to US$ 4.098 billion, and an increase of 25.7% compared with the same period of 2005.

Statistics show that the non-restriction markets such as ASEAN, the Republic of Korea, the United Arab Emirates, South Africa, Norway, have increased above 50%, comparing with only 9.0% in Untied States and 3.8% in the European Union. The absolute turnover amounts are relatively big, US$ 930 million in the European Union and US$ 531 million in the United States. However, the

average exporting price per unit of Ningbo garment products increase 14.2% to EU and 10.3% to the U.S.A.

In Ningbo, the garment industrial chain has improved and integrated gradually. Based on the strong manufacturing capacity, costume design, textile fabrics, costume education and garment exhibition industry sectors have developed. Garment producers, garment suppliers and garment sellers integrate within a company and cooperate across companies.

The principal garment products of Ningbo are suits, shirts and knitted products, with a well-known brand effect, advanced technology, well-management and skilled workforce. The Ningbo garment products show a strong competitive edge in the domestic market. Suit products of Younger, Shanshan, Romon were the three top products of the domestic market in 2005. As to shirt, Younger and Rouse were leading the market in 2005. As a whole, the Ningbo city had the fastest growing garment export in 2004-2005.

The NIFF (The Ningbo International Fashion Festival) has been successfully held for 10 years in succession and was awarded the most internationally influential festival and event in China by the IFEA. The Ningbo Garment Association is the social intermediary and self-regulating organization of garment industry, consisting of 200 member companies and six county clubs. There are four branches – Professional Designers Committee, Professional Lady's Costume Committee, Professional Educational Committee and Industrial Economic Research Council. Additionally, such as Zhejiang Textile and Fashion College, the Culture and Art Transferring College of Ningbo University and other secondary vocational schools providing the human resources for the Ningbo garment cluster of (Ningbo City, 2006).

5.3 The Analysis of the Survey's Result

5.3.1   The Analysis of the Response Rate

According to the sample method mentioned before, we just chose two typical groups to respond the same questionnaires. The response rate of the first group consisting of government officials, researchers and association staff is 100%. The proportion of researchers is largest, 45%, and, correspondingly, officials is 40% and association staff is 15%.
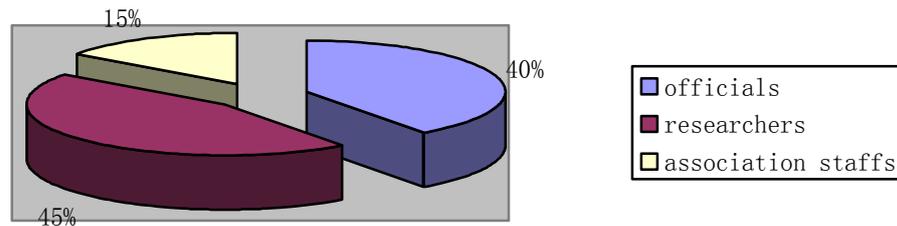
Figure 5-1 The Proportion of Officials, Researchers, and Association Staffs

As for the second group, managers of garment companies, the response rate is 67.78%. We compare the differences of two groups in following Figure 5.2.

Table 5-3 Differences between Two Groups

Populations	Respondents	samples	Respondent rate
Managers	61	90	67.78%
officials	60	60	100%

5.3.2   The Analysis of the General Information

In the group of managers, there are five aspects of each respondent to be described one by one.

As for annual turnover of 2005, 29% of the managers work in companies above US$ 1000 million while the same 20% working in companies of turnover between US$ 100 - 999 million and between US$ 5 – 19 million, and 16%, 15% respectively work in companies of turnover below US$ 5 and between US$ 20- 99 million.
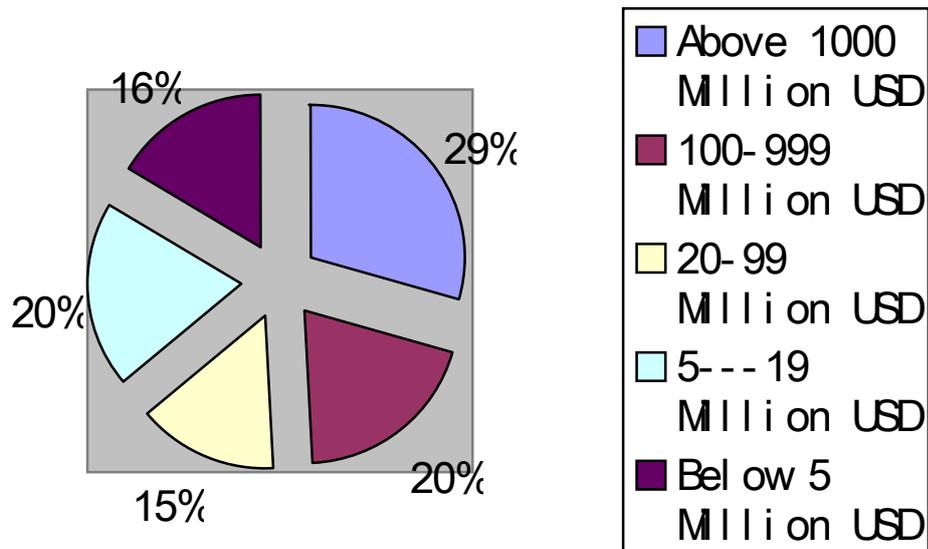
Figure 5-2 The Proportion of Various Annual Turnovers

In 2005, 53% have more than 1000 employees; 15% have the number of employees between 500 – 999; the percentages of the lasting two groups are the same, 16%.
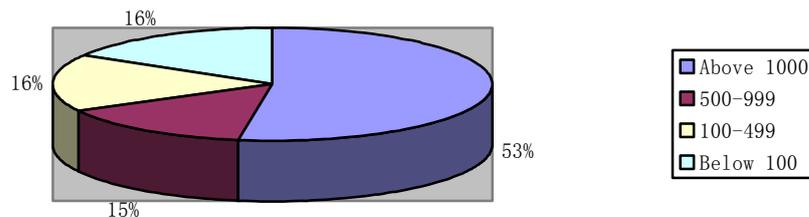
Figure 5-3 The Proportion of Different Employees

According to the ownership structure of companies, 67% are the hundred-percent domestic investment companies and 33% are joint venture companies. Hundred-percent foreign investment companies have not been found at all.
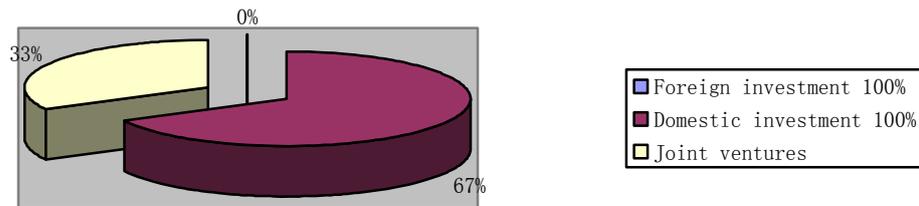
Figure 5-4 The Proportion of Ownership Structure

Among the roles in the chain of the garment cluster, the sole producer's proportion is almost half, 49%. Involving all three kind roles, the companies' proportion is 25%. The sole supplier's proportion is 20% while the sole seller's proportion and proportion of producer plus seller are equal, at 3%.
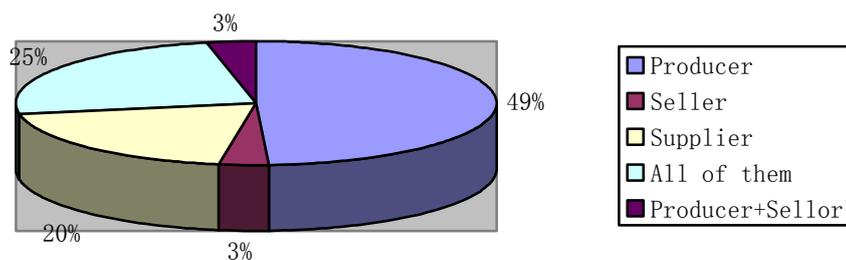
Figure 5-5 The Proportion of Different Roles in the Garment Cluster Value Chain

As to products market, 49% of the companies are involved both foreign and domestic markets. The 28% of companies face foreign markets and 23% focus on domestic market.
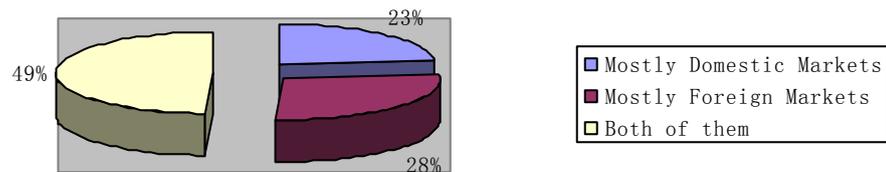
Figure 5-6 The Proportion of Different Markets

5.3.3   The Analysis of the Importance of Each Contributing Factor

We used the software of SPSS 13.0 for windows, which helped us establish the mean value, and the p-value to analyze the survey. Generally, the p-value is a measure on the probability that the result achieved would have occurred randomly. A low p-value means that the results are significant. Normally the p-value should not be higher than five percent the result is regarded as significant. If the p-value is between five percent and one, the result is regarded as almost significant. Based on the results of these hypotheses, we calculate the mean value and p-value thought SPSS.

The result of the survey indicates whether those fourteen hypotheses are tenable or not. If so, the result, therefore, tests to what extent the six most important contributing factors to the international competitiveness of the Ningbo garment cluster. Afterwards we compare the two different groups to show various opinions. In addition, we analysis the significance of the contributing factors based on the second part of the questionnaires.

5.3.3.1 Internal coordination

Internal coordination is the precondition and foundation of a garment cluster. Therefore, we consider that it is a contributing factor to the international competitiveness of the Ningbo garment cluster. In our model we used the following hypotheses, company structure, collective work and trade association

as to identify how much importance to contribute the international competitiveness. In the survey question 1 to 3 was designed to investigate the significance of internal coordination.

Three hypotheses we set up were that:

   H1: company structure is an important factor to provide basis for coping with international competition.

   H2: collective work is an important factor to provide competitive advantages in efficiency, effectiveness, and flexibility.

   H3: trade associations are an important factor to provide chance and information for promoting the international competitiveness of a garment cluster through forums, trade fairs.

In our questionnaire we tested those hypotheses by asking two different groups, managers and officials (researchers, and association staff) related to the garment cluster. In the manager group, the outcome of the questions showed there were to some extent important to make the garment cluster more competitive.

Table 5-4 Mean Values and P-values for Questions 1 to 3

Contributing factors	Hypotheses	Mean value		P-value
		Managers	**Officials**	
Internal coordination	*H1: company structure*	5.344	5.425	0.796
	H2: collective work	5.787	5.777	0.562
	H3: trade association	5.230	5.017	0.373
	As a whole	5.454	5.370	0.758

(Scale: 1 = not important at all, 7 = very important)

From the managers' point of view, all of the mean values are above 5. Therefore, they believe that internal coordination play an important influence to the international competitiveness of the Ningbo garment cluster.

In the officials (researcher, association staff) group, the mean values of question1 to 3 are all above 5. Therefore, they believe that either the whole factor or each hypotheses of internal coordination play an important role in improving the international competitiveness of the Ningbo garment cluster. Although the p-values for the question1 to 3 are 0.795, 0.562, and 0.378 respectively, and as a whole, the p-value is 0.758, they are all between 1 and 0.05; we still consider the result is mostly significant.

In summary, although the average mean value of the managers is slightly higher than that of officials (researcher, association staff), we believe the internal coordination is a contributing factor to the international competitiveness of the Ningbo garment cluster.

5.3.3.2 Strategy

The garment cluster is a very diverse and heterogeneous industry; therefore we consider company strategy to be a contributing factor to the international competitiveness of the garment cluster. In our model we used the following hypotheses, company policy, design ability, brand strategy and technological innovation as to identify how much to contribute the international competitiveness. In the survey, questions 4 to 7 were designed to investigate the significance of company strategy.

Four hypotheses we set up were that:

>   *H4: enterprise policies have direct impacts on creating and sustaining the international competitiveness of a garment cluster.*
>
>   *H5: design ability is a crucial factor to the international competitiveness of a garment cluster.*
>
>   *H6: brand strategy is the contributing factor of improving value-added of product of a garment cluster.*
>
>   *H7: technological innovation is the contributing factor of productivity, cost*

efficiency, as well as product design of a garment cluster.

In our questionnaire we tested those hypotheses on two different groups, managers and officials (researchers, and association staff) related to garment industry. In the managers group, the outcome of the questions showed there were to some extent important to make the garment cluster more competitive.

Table 5-5 Mean Values and P-values for Questions 4 to 7

Contributing factors	Hypotheses	Mean value		P-value
		Managers	Officials	
Strategy	H4: *enterprise polices*	5.689	5.883	0.327
	H5: *design ability*	5.393	6.050	0.009
	H6: *brand strategy*	5.787	6.150	0.107
	H7: *technological innovation*	5.574	6.083	0.015
	As a whole	5.610	6.041	0.006

(Scale: 1 = not important at all, 7 = very important)

From the managers' point of view, all of the mean values are above 5. Therefore, they believe that either the whole factor or each sub-factor of company strategy play an important role to improve the international competitiveness of the Ningbo garment cluster.

In the officials (researcher, association staff) group, all of the mean values are above 5. Therefore, they believe that company strategy plays an important role to improve the international competitiveness of the Ningbo garment cluster. Furthermore, the average p-value is 0.006 below 0.05; we exactly consider the result is significant.

In summary, although the average mean value of managers is slightly less than that of officials (researcher, association staff), we believe the company strategy is a contributing factor to the international competitiveness of the Ningbo garment cluster.

5.3.3.3 Resources

Fabric and human resources are the main resource of the garment cluster; therefore we consider resource a factor contributing to the international competitiveness of garment cluster. In our model we used the following sub-factors, material and skilled work as to identify how important they contribute to the international competitiveness. In the survey questions 8 to 9 were designed to investigate the significance of resource.

Two hypotheses we set up were that:

   H8: materials play a crucial role to the international competitiveness of a garment cluster.

   H9: skilled workers and pool of human resources directly make impacts on the international competitiveness of a garment cluster.

In our questionnaire we tested those hypotheses by asking two different groups, managers and officials (researchers, and association staff) related to the garment cluster. In the managers group, the outcome of the questions showed there were to some extent important to make the garment cluster more competitive.

Table 5-6 Mean Values and P-values for Questions 8 to 9

Contributing factors	Hypotheses	Mean value		P-value
		Managers	Officials	
Resources	*H8: materials*	4.705	5.167	0.087
	H9: skilled workers	4.836	5.167	0.166
	As a whole	4.771	5.167	0.026

(Scale: 1= not important at all, 7 = very important)

From the managers' point of view, all of the mean values are just above 4. Therefore, they believe that either the whole factor or each sub-factor of

resources play an important role to improve the international competitiveness of the Ningbo garment cluster.

In the officials (researcher, association staff) group, all of the mean values are above 5. Therefore, they believe that either the whole factor or each sub-factor of resources play an important role to improve the international competitiveness of the Ningbo garment cluster. Although all the p-values are between 1 and 0.05, we still consider the result is mostly significant.

In summary, although the average mean value of managers is slightly less than that of officials (researcher, association staff), we believe the resources are the contributing factor to international competitiveness of the Ningbo garment cluster.

5.3.3.4 External cooperation

As having important influence of cluster upgrading and expansion, therefore, external cooperation is considered as a contributing factor to the international competitiveness of garment cluster. In our model we used the following international cooperation as to identify how important they contribute the international competitiveness. In the survey, question 10 was designed to investigate the significance of external cooperation.

One hypothesis we set up was that:

> *H10*: *international cooperation is a contributing factor to the international competitiveness of a garment cluster.*

In our questionnaire we tested this hypothesis by asking two different groups, managers and officials (researchers, and association staff) related to the garment industry. In the managers group, the outcome of the questions showed there were to some extent important to make the garment cluster more competitive.

Table 5-7 Mean Value and P-value for Question 10

Contributing factors	Hypotheses	Mean value		P-value
		Managers	Officials	
External cooperation	*H10: international cooperation*	5.279	5.383	0.586

(Scale: 1 = not important at all, 7 = very important)

From the manager's point of view, the mean value of question is 5.279, which is just above 5. Therefore, they believe that the factor of company strategy plays an important role to improve international competitiveness of the Ningbo garment cluster.

In the officials (researcher, association staff) group, the mean value of question 10 is 5.383, which is above 5. Therefore, they believe that the factor of external cooperation plays an important role to improve the international competitiveness of the Ningbo garment cluster. Although the p-value is between 1 and 0.05, we still consider the result is mostly significant.

In summary, although the average mean value of group managers is slightly less than that of group officials (researcher, association staff), we believe the external cooperation is the contributing factor to the international competitiveness of the Ningbo garment cluster.

5.3.3.5 Markets

A garment cluster is a customer-based or buyer-driven production network. The needs of both domestic market and international markets have significant influences on the international competitiveness of a garment cluster. In our model we used the following hypotheses, domestic market and international market as to identify how important they contribute the international

competitiveness. In the survey question 11 to 12 were designed to investigate the significance of resource.

Two hypotheses we set up were that:

H11: *domestic market is a contributing factor to the international competition of a garment cluster.*

H12: *international markets are a contributing factor to the international competitiveness of a garment cluster.*

In our questionnaire we tested those hypotheses by asking two different groups, that is, managers and officials (researchers, and association staff) related to garment industry. In the managers group, the outcome of the questions showed there were to some extent important to make the garment cluster more competitive.

Table 5-8 Mean Values and P-values for Question 11 to 12

Contributing factors	Hypotheses	Mean value		P-value
		Managers	Officials	
Markets	*H11:domestic market*	5.180	5.000	0.390
	H12: international market	5.557	5.683	0.527
	As a whole	5.369	5.342	0.951

(Scale: 1 = not important at all, 7 = very important)

From the manager's point of view, all of the mean values are all above 5. Therefore, they believe that either the whole factor or each sub-factor of market play an important role to improve international competitiveness of Ningbo garment cluster.

In the officials (researcher, association staff) group, all of the mean values are above or equal 5. Therefore, they believe that either the whole factor or each

sub-factor of market plays an important role to improve international competitiveness of Ningbo garment cluster. Although all the p-values are between 1 and 0.05, we still consider the result is mostly significant.

In summary, although the average mean value of group managers is slightly bigger than that of group officials (researcher, association staff), we believe the markets is a contributing factor to the international competitiveness of the Ningbo garment cluster.

5.3.3.6 Policies

The stronger supporting policies of domestic governments have significant impacts on increasing the international competitiveness of a garment cluster, such as tax relieve, infrastructures, and the like. Foreign economic policies in the field of textile garment trade have significant influences on the international trade situations, such as quota access/restriction, subsidies, and so on. These policies, therefore, directly and indirectly make impacts on the international competitiveness of a garment cluster. In our model we used the following hypotheses, native government policies and foreign economic policies as to identify how important they contribute the international competitiveness. In the survey question 13 to 14 was designed to investigate the significance of policies.

Two hypotheses we set up were that:

> *H13: native government policies can provide substantial support of promoting the international competitiveness of a garment cluster.*
> *H14: foreign economic policies have significant influences on the international competitiveness of a garment cluster.*

In our questionnaire we tested those hypotheses by asking two different groups, that is, managers and officials (researchers, and association staff) related to garment industry. In the managers group, the outcome of the questions showed

there were to some extent important to make the garment cluster more competitive.

Table 5-9 Mean Values and P-values for Question 13 to 14

Contributing factors	Hypotheses	Mean value		P-value
		Managers	Officials	
Policies	*H13: domestic government policies*	5.295	5.100	0.382
	H14: foreign economic policies	5.492	5.233	0.268
	As a whole	5.394	5.167	0.196

(Scale: 1 = not important at all, 7 = very important)

From the managers' point of view, all of the mean values are all above 5. Therefore, they believe that either the whole factor or each sub-factor of policies play an important role to improve international competitiveness of the Ningbo garment cluster.

In the officials (researcher, association staff) group, all of the mean values are all above 5. Therefore, they believe that either the whole factor or each sub-factor of policies plays an important role to improve the international competitiveness of the Ningbo garment cluster. Although all the p-values are between 1 and 0.05, we still consider the result is mostly significant.

In summary, although the average mean value of group managers is slightly bigger than that of group officials (researcher, association staff), we believe the markets is a contributing factor to the international competitiveness of the Ningbo garment cluster.

5.3.3.7 Summary

To sum up, there are various opinions on the factors except the factor of strategy between group of managers and that of officials (researchers, association staff). Generally, in factors of internal coordination, markets and policies, the average mean of managers are higher than that of officials, while in the other three factors, the conditions are opposite.

Table 5-10 The Summary of Mean Values and P-values of Managers and Officials (Researchers, Association Staffs)

Factors	Population	Mean	P-value
Internal coordination	Managers	5.454	0.758
	Officials and others	5.370	
Strategy	Managers	5.610	0.006
	Officials and others	6.041	
Resource	Managers	4.771	0.026
	Officials and others	5.167	
External Cooperation	Managers	5.557	0.586
	Officials and others	5.683	
Markets	Managers	5.369	0.951
	Officials and others	5.342	
Policies	Managers	5.394	0.196
	Officials and others	5.167	

For applying the modified model introduced in chapter 3, the average mean value of each factor was calculated according to different questions (see table 5.9). We just draw modified model as following Figure 5-9:
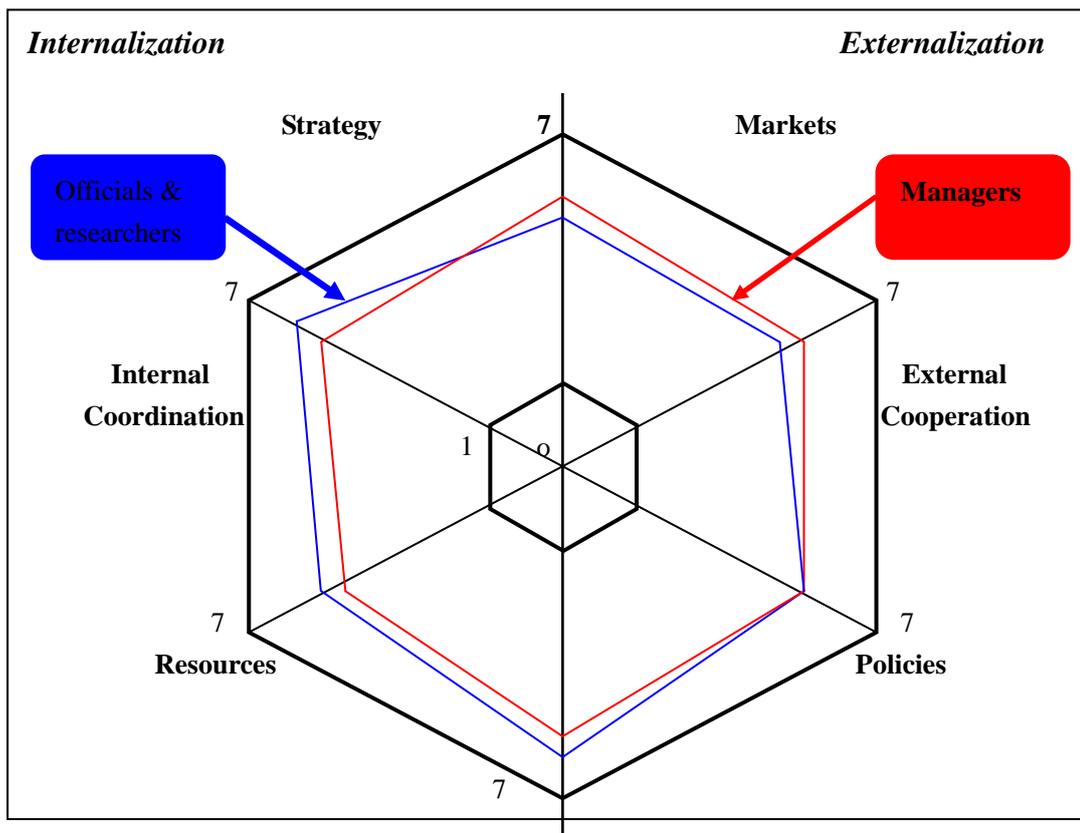
Figure 5-7 The Comparison of the Results

5.3.4 The Analysis of the Ranking Questions

From the result of the ranking question, we can draw a similar conclusion: both groups consider the strategy, external cooperation and markets as the three most important factors distributing the international competitiveness of the Ningbo garment cluster, despite of some little different views between them. Managers just regard external cooperation as the most important factor while officials regard strategy as the most important one. Interesting, they both consider resource the least important factor among the total six factors.

Table 5-11 The Rank of the Factors

Factors	Managers' view		Officials' view	
	Scores	Rank	Scores	Rank
Internal coordination	7.749	5	7.661	4
strategy	7.910	3	9.004	1
resources	6.156	6	6.567	6
External cooperation	8.574	1	8.350	2
Markets	8.189	2	8.209	3
Policies	7.787	4	7.016	5

Note: Rank 1 indicates the most important, while Rank 6 indicates the least important.

5.3.5 The Analysis of the Comments or Suggestions Offered by Respondents

In the part three of the questionnaires, we asked the respondents to present their comments or suggestions on the contributing factors to the international competitiveness of the Ningbo garment cluster from their perspective. Unexpectedly, few respondents gave their comments or suggestions and no new contributing factor was brought forward to help us to analyze further.

5.4 Summary

In this section, on the one hand, we introduce the general information of the Ningbo garment cluster. On the other hand, the analysis of the survey is presented. Firstly, we provide the various respondents of the samples to indicate which two groups, managers and officials (researchers, association staff), we focus on. Secondly, we use the software SPSS to evaluate the importance of the six factors (including fourteen hypotheses) and compare the ranks between six factors based on the ranking questions. We conclude all the six factors are important to contribute the international competitiveness of the Ningbo garment cluster. Finally, the modified model is presented on the basis of the previous analyses.

CHAPTER 6 A COMPARATIVE STUDY

In this chapter, a comparative study is conducted. The results of the analysis are expected to identify and examine the previous hypotheses further.

6.1 Purpose

In Chapter 5, we introduced a survey on the Ningbo garment cluster. The results of the survey indicated that, all fourteen hypotheses that we presumed to the international competitiveness of a garment cluster were verified by the Ningbo garment cluster. Thus, the contribution of six factors, including internal coordination, strategy, resources, external cooperation, markets, and policies, also were confirmed. Now, a question is come, that is, can all these six factors be validated by another garment cluster similarly? In other words, does the new model we established have a universal applicability for all garment clusters?

In order to answer the questions above, in this part, we introduce the Daegu textile and garment cluster in South Korea, as a comparative study. By an analysis between Daegu and Ningbo, we intend to check whether previous six factors which have been proved by the Ningbo garment cluster are really contributing factors; or, whether exist any unconfirmed factors, which are off our model, do be vital to the international competitiveness of a garment cluster?

6.2 Description of the Daegu Textile and Garment Cluster

South Korea's textile-garment industry is among the world leaders in exports and production. In 2003, the Korean textile and garment clusters enjoyed a global market share of 3.5%, US$13.7 in the amount, and ranking fifth in the world (KOFOTI, 2005). The textile-garment industry plays a key role in South Korea's economic growth.

Daegu is a growth engine of the South Korea's textile and garment cluster. The city has long enjoyed its reputation as a leading textile city in South Korea. Statistics showed that, in 2002, Daegu accounted for 11.0 per cent of total textile establishments in Korea's textile-garment industry, 12.3 per cent of total employment, 14.5 per cent of total textile production, and 8.3 per sent of total textile exports of Korea. When it comes to the proportion in the whole manufacturing of Daegu, the textile and garment cluster accounted of 31.3 per cent of total establishments, 34.7 per cent of total employment, 34.6 per cent of total production, and 54.2 per cent of total export in 2002. (CHO, M-R. 2003)

6.3 Comparison between Daegu and Ningbo

6.3.1 Policies

The growth of textile production in Daegu can be dated back to the early 1960s, from which South Korea started to conduct its export-oriented industrialization. Stimulated by the advantaged economic policy, a rudimental textile industry was established in Daegu in the next years. Seen form it, the economic policy, which was draw by the central government, played a key role in the growth of Daegu's textile-garment industry. This situation was extremely similar in Ningbo. Ningbo garment industry started from the end of 1970s. The background to it was the Chinese government declared the policy of reform and opening-up in 1978.

In the 1980s, with the Central Government's industrial policy shift towards the heavy industry, the textile and garment industry lost its priority position in national industrial system. From that time to the early 1990s, the textile and garment industry degraded from a once leading export industry to a retired industry in Daegu. During that time, industrial policy acted as a barrier to the Daegu's textile-garment industry.

With the worsening situation, Daegu would lose its competitiveness in world textile and garment business clearly. Finally, the Korean government was aware of the crisis. In 1998, an ambitious plan, which was named Milano Project, was launched. The purpose of the project was "*to nurture the textile and garment businesses in the Daegu area to be highly competitive to succeed in the world market environment of the 21st century*" (Daegu City, 2006). Up to now, the structural adjustment of the textile and garment is undertaking. Compared with Daegu, in order to promote the industrial competitiveness, local government in Ningbo drew a project, in order to drive the city to be the leading fashion city in China.

Domestic economic policy is only one face of a coin. Foreign economic policies in the field of textile garment trade have significant influences on the international trade situations. For Korea, basing on the supporting policy, Southeast Asia countries expand their shares in world textile market. And it leads to a decrease of Korea's share unavoidably. On the other hand, it drives Daegu to restructure its textile-garment industry. And what the Ningbo textile and garment industry faces mainly is quota restriction. Therefore, foreign economic policies do make impacts on the international competitiveness of a garment cluster in a direct or indirect way, and in a positive or negative way.

6.3.2 Strategy

South Korea mainly adopts OEM as the mode of textile production. The specific design and technology which the production required are supplied by the foreign buyers. And products are sold under the buyer's brand name. It leads the textile and garment industry be enslaved to some developed countries in cutting-edge technology and design, unable to cope with changes in conditions of foreign trade flexibly. The low abilities in design and innovation cause Daegu's textile enterprises specialized in the narrow low-value added and low-tech middle stream in the model of mass production of a limited number of products. In

other words, Daegu's textile-garment cluster increasingly suffered from the absence of high-class design, top brand and hi-technology.

These elements limited the promotion of the industrial competitiveness. Waking up to it, the Daegu textile-garment cluster is changing the strategy from the mass production to small quantity batch production, which focuses on differentiation and specification. The advantage of this change is that, Korea avoided challenges coming from counterparts in low-value added products, and held competitiveness in some certain products.

This factor blocks international competitiveness of the Ningbo garment cluster in the same way. The lack of design ability and innovation result in a lag on world famous brands building. And this increasing becomes a death-wound to the Ningbo garment cluster.

6.3.3. Internal Coordination

The garment cluster involves not only producers, but also researchers, designers, traders, government, business association and banks. The networks are functioned through participation of a variety of members. The main body of the producers, either in Daegu or Ningbo, is composed of the large number of small companies. With the direct production arrangements, like subcontracting relations, employment relations and marketing relations between firms, these SMEs have shaped strategic collaborations with few leading companies for competitive advantage in the fast changing global environments.

Except for the role of coordinator within the cluster, and, between the government and industry, business association's another role is organizer of forums and exhibitions. In order to enhance the image of Daegu textile and garment in the world, Textile & Fashion Festival was held annually since 2001. Moreover, as a representative textile exhibition of Asia, Preview in Daegu (PID)

has successfully been presented in every March since 2001. PID 2002 attracted around 210 domestic and overseas companies in the fair. A total of 4,121 foreign buyers visited the exhibitions. Furthermore, 720 million dollars of export contracts were accomplished during the fair. (Daegu City, 2006) Back to Ningbo, the Ningbo International Fashion Festival (NIFF), which is charged by the Ningbo Garment Association, has been successfully held for 10 years since 1997. For its scale and operation skills, NIFF gets well acknowledged as an influential textile garment exhibition of Asia.

Along with the implement of Milano Project, some research institutions related to the textile and garment cluster were established, covering from fiber manufacturing, fabric dyeing techniques, to the design of fabric and fashion. These institutions are financed by the government mainly. The purpose of these research institutions is to provide technology support to the enterprises. Among these institutions, Fashion Design R&D Center and Dyeing Technology Institute are two active organizations. Fashion Design R&D Center collects and analyzes the overseas information on recent fashion trends and then provides the results to enterprises. Dyeing Technology Institute has a close relationship with many of the world's leading research institutions in textile and fiber, and provides technical support to the thousands of textile and garment SMEs in Daegu. The case in Ningbo is a bit different. Universities and colleges in Ningbo take the responsibilities of research and technological supports.

6.3.4 External Cooperation

Daegu stresses the connection and communication with leading fashion cities in the world, such as Milan, Tokyo etc., in the field of textile and garment business. Daegu scheduled exhibitions of technology and products in these cities, in order to guide foreign textile and garment brands to enter the South Korea market; meanwhile, with the exchange of information, Daegu's textile and garment companies learned more about the characteristics of the European consumer

preferences and market changes. This, in turn, helped South Korean enterprises for the research and development of new products to export to the European market. Moreover, meetings with Northeast Asian trade partner countries held annually.   Based on the exchange of information and reinforcement of trade cooperation, the international competitiveness had a significant promotion.

Similarly, in Ningbo, the NIFF has held successfully for ten years so far. As a complex of fair, forums, fashion show, the NIFF has been become an indispensable platform for information exchanges. With the bridge effect of the NIFF, numerous manufacturers, traders, service provider, researchers, experts gather on the NIFF. Through the participation of meeting, the NIFF brings information, new technologies and flesh ideas to the Ningbo garment cluster.

6.3.5 Resources

Daegu's textile garment cluster developed from the production of fiber weaving and fabric manufacturing. With over four decades' development, it has occupied an advantaged position in fiber and fabric production in the world. And it shapes a strong competitiveness in the abundance of raw material supply for garment manufacturing. A weakness to it is that Korea is absent in original cotton planting. It is one of main import countries in world's cotton business. This situation brings a potential threat, which is the domestic garment sector will be influenced by the global price fluctuations in cotton. Besides, with the rapid economy growing, employment in the textile industry is considered least attractive. The shortage of skilled workers and the higher wage level subsequent hurt the international competitiveness of the industry.

For the Ningbo garment cluster, abundant labor resource forms its advantage. A negative factor lies in raw materials, especially in fabric with high quality. Compared with the garment section, the textile section is less developed. Most of high-graded fabrics are imported form Italy and South Korea. To some extent,

it may offset the international competitiveness brought by its labor resource.

6.3.6 Markets

Due to the small-scaled domestic market, the Daegu's textile-garment cluster is highly dependent on foreign markets from the initiation. As implicated by the policy of export-oriented industrialization, international market serves as a drive force to accomplish the industrialization. However, with the full abolition of Multi-fiber Arrangement in 2005, China and India, whose exports was restricted by quota, are regarded to be the largest beneficiary in the garment field. They expand shares in the world. On the other hand, in the world garment market, exports from Korea fall sharply, as well as its market share. Luckily, with the rapidly improving standard of loving, the domestic market has become the second pillar for the Daegu's textile and garment cluster.

Different from the case in Daegu, the Ningbo garment cluster faces with the largest domestic market in the world, with 1.3 billion populations. A variety of nation, climate condition, geographic circumstance, local culture, favorite and economic development level, supplies wider demands for the Ningbo garment cluster. On the other hand, international markets also act as a significant propellant to the Ningbo textile and garment cluster. It can be seen from the results of our questionnaires, in whole sample firms, 49% of them are involved either foreign or domestic markets, 28% of them focuses in foreign markets.

6.4 Summary

In this chapter, we introduced a comparative analysis on the garment clusters between Daegu and Ningbo. From the courses of development, both two clusters benefited from economic policies draw by native governments on one hand. In virtue of policies' supporting, both these two clusters won favorable positions of competition in global garment business. On the other hand, foreign economic policies aimed on protecting native garment industries, influenced and restricted

domestic garment industry directly or indirectly. From above two sides, it is clear that the policy is one of contributing factors to the international competitiveness of a garment cluster. Similarly, we found internal coordination and external cooperation, resources and markets, also played important roles in these two clusters. For the reason of their lower abilities of technological innovation and design, these two garment clusters looked less competitive. Thus, in an indirect way, strategy was also proved to be the contributing factor to the international competitiveness of a garment cluster. The results can be illustrated in Table 6-1.

Table 6-1: Results of Comparison

Factors	Qualitative Analysis	
	Daegu	**Ningbo**
Policies	1960s: Export-oriented industrialization Formation of textile Industry 1998: Milano project Structural adjustment	1980s: Policy of reform and opening-up Establishment of garment manufacture Early 2000s: Project famous city in fashion Industrial upgrade
Strategy	OEM: limited abilities of design and innovation	Same as Daegu
Internal coordination	Well-organized network of production; Positive industry association; Supports from research institutions	Same as Daegu
External cooperation	Exhibitions and regular meetings	Same as Daegu
Resources	Abundant fabric Shortage of labor	Abundant labor absence of high quality fabric
Markets	International market-depent, due to the small-scaled domestic market	Equal focusing on international and domestic market

CHAPTER 7 CONCLUSIONS

In this final chapter, the conclusions are presented. The dissertation is summarized and methodological criticisms are discussed. The applicability of the model, future researches, and practical implications are also presented.

7.1 Summary of the Dissertation

The garment cluster is a diversity and heterogeneous industry. Faced the fiercely increasing competition and rapidly changing markets, a hot issue is presented, that is, how to promote the international competitiveness of garment clusters in the globalization era? In order to analyze this issue, the alternatives for us are to find what contributing factors are in formation of international competitiveness of a garment cluster. And this is the main purpose of our dissertation.

At the very start, we tried to conduct an extensive literature review to learn more about the research. Primarily, we focused our efforts on the theories established by Porter (1990), Padmore (1998), Bair and Gereffi (2001), Sölvell (2003), and Shi (2005). These researchers expounded the subject in different ways. Based on these existing theories and/or models and characteristics of a garment cluster, we selected relevant elements to modify the GEM model, namely Contributing Factors to International Competitiveness of a Garment Clusters Model. The model consisted of six factors, which were further categorized into two parts: internalization and the externalization. The former included internal coordination, strategy, and resources; the latter, external cooperation, markets, and polices, belonged to the externalization. Meanwhile, fourteen hypotheses were embodied to above six factors.

After the creation of our own model, we conducted two surveys on garment

companies and institutions related to the Ningbo garment cluster separately. The aim was to investigate whether different respondents' opinions on contributing factors to the international competitiveness of a garment cluster were similar to each other. By using a simple random sampling, we selected 90 managers as the sample of company survey. The sample of institutions included 60 government officials, relevant researchers and trade associations' staffs. Finally, we got a one hundred percent response rate in the institution survey against 67.78% in the company survey.

Both these two surveys indicated that garment companies and relevant institutions had similar opinions on contributing factors to the international competitiveness of a garment cluster. Both of them considered these six factors as contributing factors. At the same time, strategy, external cooperation and internal coordination were regarded as the top three contributing factors. And the other factors were comparatively less important in shaping international competitiveness.

Subsequently, a comparative analysis on the garment cluster was conducted between Daegu and Ningbo. The purpose was to reconfirm the validity and generalizability of these six factors as contributing factors. Given the results of analyses, some factors like policies (mainly domestic policies), markets, external cooperation and internal coordination promoted the international competitiveness of two garment clusters obviously. On the other side, strategy and resources were thought as less important factors to both of these two clusters, with the results of low ability to innovation and low-tech products. Thus, the fact identified that these two factors were also important to attain and upgrade the international competitiveness of a garment cluster.

Consequently, the Contributing Factors to the International Competitiveness of a Garment Cluster Model was tested satisfactorily by the results of the surveys

and the comparative study.

7.2 Methodological Criticism

The research was conducted by surveys applied the method of questionnaire. Some limitations occurred in the research. Firstly, it is the choice of sample. Relative to two sample groups which hold numerous individuals, the numbers of sample we selected are not big enough. A bigger sample size helps to upgrade the reliability of the surveys. At the same time, our sample is limited to the Ningbo city. We might have got a more ideal research result, if we can conduct research on a larger field involving similar garment clusters in domestic cities or foreign countries. If so, it can improve the validity of the research further.

Secondly, it is the questionnaire itself. The number of questions in the questionnaire is limited in order to obtain a higher response rate. At the same time, the design of the questionnaire maybe has misguided the participants. They tended to regard our fourteen questions as actual contributing factors. This resulted in higher and close scores for these factors. Neither was a new factor added, nor was a hypothesis denied. As for the ranking questions, frankly speaking, it was a bit vague to judge which factor should be ranked first among the fourteen options which was from similar perspective to the part one as well.

Furthermore, due to the time restriction, the participants only got a short period to answer the questionnaires; and few of them completed the part of comments or suggestions. The questionnaire might have received a higher response rate (for the company survey) and more comments or suggestions on the contents, if a longer period is allowed.

Finally, we have no choice to have interviews with the participants. If it was possible, our model might have modified further. Moreover, we did not try to use other analytical tools to deal with collected data.

7.3 Future Research

In this research, the factors which were involved in our model are limited. Meanwhile, the size of the sample in two surveys is a bit small. Finally, the space of the survey is restricted. In order to identify the factors influencing international competitiveness of a garment clusters accurately, further researches are needed. Further researches can be focused on the following aspects.

First, due to the previous small sample sizes, larger surveys are suggested to conduct, in order to check the contributing factors to the international competitiveness, and, therefore, generalize the results better.

Second, it would be much more interesting to conduct extensive case studies, for example, the case of the Milan or Hong Kong garment clusters. Because these two garment clusters with well-known high international competitiveness, analyses related to them might be helpful to modify the model.

Third, a further study may be on the relationships between each two or several factors (sub-factors) of the contributing factors (sub-factors), which are embodied in our model. If there is a negative correlation between them, their contribution effects will be countervailed. Otherwise contributing effects derived from these factors will be strengthened further.

The final interesting area of future researches is to focus on other factors, such as environment issue, which were not taken into consideration in this dissertation. What is the role of green garment when it comes to the international competitiveness of a garment cluster? Will it change the existing competitiveness? These areas could be studied more deeply.

7.4 Theoretical Implications

Based on the Porter Diamond theory and GEM model as well as the characteristics of the garment cluster mainly, we modified the GEM model and named Contributing Factors to International Competitiveness of a Garment Cluster Model, which embodied six factors. Surveys indicated that all these six factors were contributing factors to the international competitiveness of the Ningbo garment cluster. Meanwhile, according to the comparative analysis between Daegue and Ningbo, a similar result was obtained. Hereby, we can judge this model is able to analyze contributing factors to the international competitiveness of any other garment clusters. To larger extent, the model has theoretical generalizability.

7.5 Practical Implications

Firstly, the Ningbo garment companies had better put strategy, external cooperation and markets on the first and foremost important agenda. The main purpose is to improve the value-added of garment products by application with advanced techniques, brand strategy and design ability. Through external cooperation with world-known garment companies in particular, the Ningbo garment companies further improve their development strategy on the one hand. On the other hand, they may enlarge the foreign market shares via cooperation with local garment companies in targeting markets. Furthermore, the coexistence phenomena of few large-scale enterprises and numerous SMEs, as a characteristic of the Ningbo garment cluster, the garment Ningbo cluster should improve the collective works and boost the integration step of different enterprises, including vertical integrations and horizontal integrations. Relying on integrations, the large-scale enterprises can strengthen their competitiveness further; add investments in brand operations and R&D, shift productions to high value-added products and high-end products. As for the SMEs, with their sensitivities to market changes, they can specialize in some certain middle and low class garments. In addition, the garment companies are also supposed to pay much attention to the changing resources, increasing wages and decreasing

numbers of skilled workers, and improving materials.

Secondly, policies as an important contributing factor to the international competitiveness of a garment cluster, the governments have significant roles on the competitiveness of the Ningbo garment cluster. Meanwhile, the garment cluster is an intensively competitive industry. Therefore, the Ningbo government had better transform from a direct intervenor to a provider of public service. It ought to focus on the following areas. First, the government should draw up a long-term development plan for the garment cluster in the field public policies, to guide the garment cluster's sustainable development. At the same time, as a provider of public service, the government is required to increase investment on public infrastructure, such as transportation, roads, energy, communications, networks, information platform for consultation, the media, and the like. The improvement of the infrastructure conditions will be helpful to the industrial competitiveness. Furthermore, the government has the responsibilities to strengthen the Ningbo garment cluster and the Ningbo garment in the promotion and popularization, especially in the international communications. As for those conflicts and barriers occurring in the garment cluster, which are beyond the authority of the garment trade association, and, therefore, the government is supposed to be a coordinator of various benefits.

Finally, the garment trade association is expected to play a positive role in the development of the Ningbo garment cluster. As a platform of communication and cooperation among garment companies, governments, universities and research institutions, its role as a coordinator should be strengthened. Specifically, the association is suggested to pay more attention to studies on trade safeguard measures and settlement mechanism of disputes, in order to protect garment companies benefits. Furthermore, the Ningbo International Fashion Festival (NIFF) as a communication and cooperation platform, the association can further deepen the forum functions.

REFERENCE

BOOKS:

Alfred Marshall. (1952) *Principles of Economics.* London: Macmillan (First edition 1890).

Brigitte Preissl & Laura Solimene. (2003) *The Dynamics of Clusters and Innovation: Beyond Systems and Networks,* Physica-Verlag Heidelberg, New York.

Briscoe, L. (1971) *The Textile and Clothing Industries of the UK,* Manchester: Manchester University Press.

Christian ketels, Göran Lindqvist & Örjan Sölvell. (2006) *Cluster Initiatives in Developing and Transition Economics.*

D. Richardo. (1967) *The Principles of Political Economy and Taxation.* Homewood, IL: Irwin, first published in 1817.

Douglas, S. P. & Wind, Y. (1987) *The Myth of Globalization,* Columbia Journal of World Business, 22, 19-29.

Lotte Darsø. (2001) *Innovation in the Marketing.* Gylling in Denmark: Narayana Press.

Tim Padmore and Hervey Gibson. (1998) *Modeling Systems of Innovation II: A Framework for Industrial Cluster Analysis in Regions*. Research Policy, 22, 625-632.

Gereffi, G. (1990) Paths of industrialization: an overview, in G. Gereffi and D. L. Wyman (eds), *Manufacturing Miracles: Paths of Industrialization in Latin America and East Asia. Princeton,* NJ: Princeton University Press. Chepter1.

Gereffi, G. (1994) The organization of buyer-driven global commodity chains: how US retailers shape overseas production networks, in G. Gereffi and M. Korzeniewicz. (eds), C*ommodity Chains and Global Capitalism.* Westport: Praeger. Chapter5.

Graham Hankinson and Philippa Cowking. (1996) *The Reality of Global Brands:*

Cases and strategies for the successful management of international brands, McGRAW-HILL Publishing Company.

Hill, Charles W.L. (2005) *International business: Competing in the global marketplace(* 5th ed.). McGRAW-Hill Companies, Inc.

Kevin Lane Keller. (2003). *Strategic Brand Management: Building, Measuring, and Managing Brand Equity* (2nd ed.). Upper Saddle River, New Jersey 07458.

Lynn B. Upshaw. (1995) *Building Brand Identity: A Strategy for Success in a Hostile Marketplace.* John Wiley & Sons, Inc.

Mark Saunders, Philip Lewis & Adrian Thornhill. (2003) *Research Methods for Business Students (*3rd ed.*).* London: Prentice Hall.

Michael E. Porter. (1990) *The Competitive Advantage of Nations.* New York: Free Press.

Michael E. Porter. (1998a) *The Competitive Advantage of Nations: with a new introduction.* New York: Free Press

Michael H. Best. (1990) *The New Competition: Institutions of Industrial Restructuring,* Polity Press.

Peter Dicken. (2003) *GLOBAL SHIFT: Reshaping the Global Economic Map in the 21st Century (* 4th ed.). London: SAGE Publications Ltd.

Richard, M, Tones. (2002) *The Apparel Industry,* Oxford: Blackwell Publishing.

Sally Dibb, Lyndon Simkin, William M. Pride & O. C. Ferrel. (2001) *Marketing Concepts and Strategy* (4th European ed,). Houghton Mifflin Company.

Schary and skjøtt-Larsen (2001:103): Schary, P.B and skjøtt-Larsen, T. (2001) *Managing in the Global supply Chain* (2nd ed.). Copenhagen: Copenhagen Business school Press.

Shi, Zhengrong and Lin, Wenling. (2005) *Reshaping Acer: Initiating, Development and Challenge.* Beijing: CITIC Press.

Tony Apéria & Rolf Back. (2004) *Brand Relations Management: Bridging the Gap Between Brand Promise and Brand Delivery.* Copenhagen: Copenhagen Business School Press.

ZLTC. (2004) *An investigation and analysis on competitiveness: A new perspective*

of Ningbo garment industry. Chengdu: Southwest Jiaotong University Press.

Åge Mariussen. (Eds.). (2001) *Cluster Policies – Cluster Development? A contribution to the analysis of the new learning economy,* Nordregio.

Örjan Sölvell, Göran Lindqvist & Christian ketels. (2003) *The Cluster Initiative Greenbook.*

ARTICLES:

Capello R. (1999) Spatical transfer of knowledge in high technology milieux: learning versus collective learning processes. In: *Regional Studies*, 33.4.

Chen, Rongfang,(2006) Analysis of Competition in South Korea's Textile Apparel Industry. *Journal of Nantong Textile Vocational Technology College.* Vol.6, No.1 pp. 69-73.

Cho, M-R. (2003) Locking out through High-Road Restructuring -The Case of

Textile Industry in Daegu, Korea. Unpublished manuscript.

Christina Li, William Huang & Jordan Zhang. (2005) An Exploration of the Contributing Factors: How can Chinese apparel companies build global brands in the European market? Master Dissertation in Kristianstad University, Sweden.

Den Hertog P., T. J. A. Roelandt. (1999) Cluster analysis and cluster-based police making: the state of the art. In: *Roelandt T. and P. den hertog (Eds.), Cluster Analysis and Cluster-based Policy: New perspectives and Rationale in Innovation Policy*, Paris, OECD.

Gary Gereffi. (1999) International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics 48 37-70.*

Gary Gereffi. (2001) Beyond the Producer-driven/Buyer-driven Dichotomy: The Evolution of Global Value Chains in the Internet Era. *IDS Bulletin* Vol. 32, No. 3.

Gary Gereffi, John Humphrey. (2005) The governance of global value chains. *Review of International Political Economy* 12:1 February 2005: 78-104.

Jennifer Bair, Gary Gereffi. (2001) Local Clusters in Global Chains: The Causes and Consequences of Export Dynamism in Torreon's Blue Jeans Industry. *World Development* Vol. 29, No. 11, pp. 1885-1903.

Gu Qinliang, Kou Qiang, Analysis Of Group Competitive Force Of Ningbo's Clothing

Industry. *Shangdong Textile Economy,* No.5, 2004 pp14-17.

Han Lihua,(2005) Policies and Measures Taken by ROK for Coping with Global Textile. *Trade Integration China Textile Leader* No.8, pp 18-20.

He Sailong, (2005) A study on the international competitiveness of Ningbo clothing industry: based on industrial cluster. *Contemporary Finance and Economics*, No.4, pp91-94.

John Humphrey, Hubert Schmitz. (2002) How Does Insertion in Global Value Chains Affect Upgrading in Industrial Clusters? *Regional Studies,* Vol. 36.9, pp. 1017-1027.

Keeble D., F. Wilkinson. (1999) Collective Learning and Knowledge Development in the Evolution of Regional Clusters of High Technology SMEs in Europe. In: *Regional Studies*, 33.4.

Korea Federation of Textile Industries, Textile Korea Annual Report 2005.

Leo Wang, Peter Wang & Roger Wang. (2005) Analysis of the Competitiveness of the Ningbo Garment Industry. Master Dissertation in Kristianstad University, Sweden.

Leslie de Chernatony, Gil Mc William. (1998) "The Varying Nature of Brands as Assets." *International Journal of Advertising* 8.

Liu Li, Zhang Xin (2006), Analysis on the affecting factors about industrial cluster development in Ningbo. *Journal of Xi'an University Engineering Science and Technology*, No3, pp 33-36.

Maryann P. Feldman. (1998) The new economics of innovation, spillovers and agglomeration: a review of empirical studies, Econ. *Innov New Techn*, 1999, Vol.8 pp5-25.

Ningbo Garment Association (2005), An Introduction of Ningbo garment industry.

Ningbo Garment Association (2006), An Introduction of Ningbo garment industry.

Pan Huiming (2006), Establish Innovation Platform, Improve the Competitive Ability of Traditional Industrial Cluster--Taking Textile & Apparel Industrial Cluster as an Example. *Pioneering With Science & Technology Monthly* No.4, pp 20-22.

Porter M. (1998b). Clusters and New Economics Competition. *Harvard Business Review,* 6, 77-90.

R.M. Grant. (1991) "Porter's Competitive Advantage of Nations: An Assignment",

Strategic Management Journal 12.

Rosenfeld S. A. (1997) Bringing Business clusters into the Mainstream of Economic Development. In: *Economic Planning Studies*, 5(1), 3-23.

Shepherd, G. (1983) Textiles: new ways of surviving in an old industry, in G. Shepherd, F. Duchene and C. Saunders (eds). *Europe's Industries: Public and Private Strategies for Change*. London: Pinter, Chapter 2.

Wang Huizhen. (2004) Strategic Thoughts On Ningbo Clothes Export. *Journal of Ningbo Fashion Institute* No.2, pp 24-27.

Wang, Liping and Li, Chuang and Tang, Binyong, (2005) An Overview of International Cometitiveness of Chinese Textile Industry (I). *Chemical Fiber & Textile Technology* No.4, pp 13-17.

Wang, Liping and Li, Chuang and Tang, Binyong, (2006)An Overview of International Cometitiveness of Chinese Textile Industry (II). *Chemical Fiber & Textile Technology* No.1, pp33-37.

Xu Junkang, (2006) On the Study of the Prospect of Fashion Industry in Ningbo Under Economic Globalization. *Journal of Ningbo Polytechnic* No.4, pp 8-11.

Zhang Hongxing, (2005) The Research of International Competitiveness of Textile and Clothing Industry of China. *Statistical Research* No.1, pp30-34.

Zhang, Zhiping, (2004) On the Improvement of the International Competitiveness of Textile and Garment Industry of China after Its Entry into the WTO. *Journal of Ningbo University（Liberal Arts Edtion）*No.1, pp 26-28.

INTERNET:

Bergman E. M. and E. J. Feser (1999): *Industrial and regional Clusters: Concepts and Comparative applications*. The Web Book of Regional Science, Retrieved August 20, 2006, from http: // www.rri.wvu.edu/webBook/Bergman-Feser/contents.htm.

China Knitting Industry Association, Retrieved October 20, 2006, from

http://www.eck.com.cn/article/disp.biz?tid=t2005102000066

Daegu Convention & Visitors Bureau, Retrieved October 12, 2006, from

http://www.daegucvb.com/eng/4_about_3.htm#6

Daegu Government, Retrieved August 18, 2006, from

http://english.daegu.go.kr/Business/Industry/milano.asp

Gil Avnimelech, Morris Teubal. (2004). From Direct Government Support Of Innovative SME's to Targeting Venture Capital / Private Equity (VC/PE) & Innovative Clusters: An Innovation and Technology Policy (ITP) Cycle Model for Industrializing Economies. Retrieved September 16, 2006, from

http://economics.huji.ac.il/facultye/teubal/ThreePhaseModelGeneral-Final%20Draft.pdf#search=%22the%20cycle%20model%20of%20industrial%20innovation%22.

Ningbo Government, Retrieved October 20, 2006, from

http://english.ningbo.gov.cn/col/col333/index.html

Ningbo Daily. Retrieved October 10, 2006, from

http://www.cnnb.com.cn/new-gb/index.shtml#.

Ningbo Daily. Retrieved October 15, 2006, from

http://www.cnnb.com.cn/new-gb/index.shtml#.

Ningbo Daily. Retrieved October 17, 2006, from

http://www.cnnb.com.cn/new-gb/index.shtml#.

Ningbo Daily. Retrieved October 18, 2006, from

http://www.cnnb.com.cn/new-gb/index.shtml#.

OEM, ODM, OBM, Different Margin Options. Retrieved September 10, 2006, from

http://www.oemtimes.com/School/trainingCamp/5905/818/Cases01.html

Taiwan silk & Filament Weaving Industrial Association, Retrieved from
http://www.filaweaving.org.tw/silk/documents/39/g39-13.htm

The 10th Fashion Ningbo, Retrieved October 20, 2006, from

http://www.fashionningbo.com/index_en.html.

ZJSR，Retrieved August 20, 2006, from

http://big5.zjol.com.cn:86/gate/big5/biz.zjol.com.cn/05biz/system/2005/08/20/006276588.shtml

Appendix 1

Questionnaire for the International Competitiveness
of Ningbo Garment Cluster

A survey is being carried out to find the contributing factors of international competitiveness of the Ningbo Garment Cluster. The proposers, who were dispatched by Ningbo municipal government, are writing a Master dissertation. The purpose of the dissertation is to investigate and clarify the underlying attributing elements to the international competitiveness of the Ningbo garment cluster.

Please answer the questions freely base on your experiences. All the information you provide will be presented in our dissertation solely and will be kept confidential completely. The questionnaire will take you some time to complete. Please read the instructions carefully and answer the questions. Try to complete the questions at a time when you are unlikely to be disturbed.

We hope you find completing the questionnaire (seven pages in total) enjoyable, and thank you for taking your time to help us. Your answers are essential and important in building an accurate picture of the Ningbo garment cluster. If you have any queries or would like further information about this project, please call 0086   or email to   . We will appreciate that you email us before   .

Thank you for your help.

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PART ONE: contributing factors to international competitiveness of Ningbo garment cluster

Instruction: *The following questions are designed to find out which factors are contributing to international competitiveness of Ningbo garment cluster, and which one(s) are relatively important among them. Please tick ✓ in the box(□) that best corresponds with your view.*

※ **Scale: 1= not important at all**

4= neither important nor unimportant

7= very important

1. How important is a company structure in general in the Ningbo garment cluster to make the cluster more international competitive?

1	2	3	4	5	6	7
□	□	□	□	□	□	□

2. How important is collective work in general in the Ningbo garment cluster to make the cluster more international competitive?

1	2	3	4	5	6	7
□	□	□	□	□	□	□

3. How important is a trade association in general in the Ningbo garment cluster to make the cluster more international competitive?

1	2	3	4	5	6	7
□	□	□	□	□	□	□

4. How important is enterprise policy in general in the Ningbo garment cluster to make the cluster more international competitive?

1	2	3	4	5	6	7
□	□	□	□	□	□	□

5. How important is design ability in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

6. How important is brand strategy in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

7. How important is technological innovation in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

8. How important is a higher quality of materials (such as fabric) in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

9. How important are skilled workers in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

10. How important is international cooperation between domestic garment industries and foreign garment industries in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

11. How important is domestic market in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7
☐   ☐   ☐   ☐   ☐   ☐   ☐

12. How important is the international market in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7

☐ ☐ ☐ ☐ ☐ ☐ ☐

13. How important are domestic governments' policies in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7

☐ ☐ ☐ ☐ ☐ ☐ ☐

14. How important are foreign economic policies in general in the Ningbo garment cluster to make the cluster more international competitive?

1   2   3   4   5   6   7

☐ ☐ ☐ ☐ ☐ ☐ ☐

PART TWO: Ranking question

Instruction: From your perspective, please number each of the factors listed below, promoting the international competitiveness of Ningbo garment cluster, in order of importance. Please tick ✓ in the box(☐) that best corresponds with your view.

  ※ **Scale: 1 = the least most important**

           ………………

        13 = the second most important

        14 = the most important

        The others follow this way.

15. Company structure

1   2   3   4   5   6   7   8   9   10   11   12   13   14

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

16. Collective work

1   2   3   4   5   6   7   8   9   10   11   12   13   14

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

17. Trade association

1   2   3   4   5   6   7   8   9   10   11   12   13   14

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

18. Enterprise policy

1   2   3   4   5   6   7   8   9   10   11   12   13   14

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

19. Design ability

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

20. Brand strategy

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

21 Technological innovations

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

22. Material

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

23. Skilled worker

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

24. International cooperation

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

25. Domestic market

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

26. International market

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

27. Domestic governments' policy

1	2	3	4	5	6	7	8	9	10	11	12	13	14
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

28. Foreign economic policies

1	2	3	4	5	6	7	8	9	10	11	12	13	14

□ □ □ □ □ □ □ □　□　□　□　□　□　□

PARTER THREE: Comments or suggestions

Instruction: from your perspective, please offer us some comments or suggestions on the contributing factors to the international competitiveness of the Ningbo garment cluster. Please add your comments or suggestion in the following blank passage.

PART FOUR: general information

Instruction: Please answer the following questions according to general information about you and your company or institution. Please tick ✓ in the box(□) based on the facts of each question.

29. How long have you been working in the garment industry? (unit: year)

□ above 10(inclusive)

□ 5(inclusive)---9

□ 1(inclusive)---4

□ Below 1

30. Are you a manager of a Garment Company?

□ Yes

□ No

※ **If "no" please go directly to question 37**

31. What is your occupation in your company?

□ An investor outside management

□ A member of the Board

□ A General Manager

□ A manager

□ Another position (please describe) …………………

32. What was the annual turnover of your company last year? (unit: million US $)

□ Above 1000(inclusive)

□ 100(inclusive)----999

□ 20(inclusive)---99

□ 5(inclusive)---19

□ Below 5

33. How many employees are there in your company?

□ Above 1000(inclusive)

□ 500(inclusive)---999

□ 200(inclusive)---499

☐ 50(inclusive)---199

☐ Below 50

34. What kind of ownership structure does your company have?

☐ Foreign investment 100%

☐ Domestic investment 100%

☐ Joint venture foreign / domestic investment

35. What is the role(s) of your company in the value chains of garment industry?

(multiple-choice question)

☐ Garment producer

☐ Garment seller

☐ Garment supplier

☐ Others (please describe)………

36. Do you mainly produce for the domestic market or mainly for foreign markets?

☐ Mostly for the domestic market

☐ Mostly for foreign markets

☐ Equally for both

※ **Thanks for your cooperation!.**

37. What is your occupation with relation to the garment cluster?

☐ Government official

☐ Researcher

☐ Staff of garment association

38. What is your position in your organization?

☐ The chief

☐ The middle-level one

☐ Others (please describe)……….

Thanks very much!

Appendix 2

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调 查 问 卷

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　　本项调查旨在揭示宁波服装产业集群国际竞争力的贡献性因素。并以此作为我们在瑞典 Kristianstad 大学硕士学位论文的一个组成部分。

　　请仔细阅读相关的说明，并根据您个人的相关工作实践和理论知识独立完成此份问卷。我们承诺：问卷所涉及的信息仅限于学位论文所用。

　　谢谢您抽出宝贵的时间完成这份问卷，您的见解对我们的论文将起到非常关键的作用。如果您有任何意见、建议或需要了解更多相关信息，请联系　　　，电话　　　　　　或 E‐mail：　　　　。

　　本问卷分四部分共六页，请在 10 月 27 日前完成此份问卷。

　　顺颂

秋安！

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《关于服装产业集群国际竞争力的贡献性因素分析

——以宁波服装产业为例》论文组

二○○六年十月二十二日

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第一部分：贡献性因素评价

提示:下面设计的问题是为了甄别宁波服装产业集群国际竞争力的相关贡献性因素。请在您认为最合适的空格（□）打勾（√）。

※ 选项1：表示**根本不重要**　　　　选项5：表示**较为重要**

选项2：表示**不重要**　　　　　　选项6：表示**很重要**

选项3：表示**不很重要**　　　　　选项7：表示**极其重要**

选项4：表示**一般**

1. 公司内部治理结构对提升宁波服装产业集群的国际竞争力的贡献度

　　　　　　1　　2　　3　　4　　5　　6　　7

　　　　　　□　　□　　□　　□　　□　　□　　□

2. 服装产业集群成员间的良性互动与整合对提升宁波服装产业集群的国际竞争力的贡献度

　　　　　　1　　2　　3　　4　　5　　6　　7

　　　　　　□　　□　　□　　□　　□　　□　　□

3. 行业协会对提升宁波服装产业集群的国际竞争力的贡献度

　　　　　　1　　2　　3　　4　　5　　6　　7

　　　　　　□　　□　　□　　□　　□　　□　　□

4. 企业的经营发展战略对提升宁波服装产业集群的国际竞争力的贡献度

　　　　　　1　　2　　3　　4　　5　　6　　7

　　　　　　□　　□　　□　　□　　□　　□　　□

5. 产品设计能力对提升宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

6. 企业品牌战略对提升宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

7. 技术创新对提升宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

8. 优质面料供应对提升宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

9. 技术工人（包括销售人员）对提升宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

10. 服装企业开展境外合作对宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

11. 国内市场对宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□   □   □   □   □   □   □

12. 国际市场对宁波服装产业集群的国际竞争力的贡献度

1   2   3   4   5   6   7

□　□　□　□　□　□　□

13. 各级政府针对服装产业的政策指导对提升宁波服装产业集群的国际竞争力

的贡献度

1　　2　　3　　4　　5　　6　　7

□　□　□　□　□　□　□

14. 贸易伙伴所在国或国家联盟（如欧盟）的对外贸易政策对宁波服装产业集群

的国际竞争力的贡献度

1　　2　　3　　4　　5　　6　　7

□　□　□　□　□　□　□

第二部分：贡献性因素排序

提示：请根据宁波服装产业集群国际竞争力贡献性因素的重要性程度进行排序，

并将代表该因素的重要性程度的数字标注在相应的括号内。(※ 数字 1 表示最

弱，数字 14 表示最强，依此类推）

15. 公司内部治理结构

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

16. 产业集群成员间的良性互动与整合

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

17. 行业协会

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

18. 企业经营发展战略

1　2　3　4　5　6　7　8　9　10　11　12　13　14

□　□　□　□　□　□　□　□　□　□　□　□　□　□

19. 产品设计能力

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

20. 企业品牌战略

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

21. 技术创新

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

22. 优质面料供应

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

23. 技术工人（包括销售人员）

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

24. 服装企业开展境外合作

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

25. 国内市场

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

26. 国际市场

1　2　3　4　5　6　7　8　9　10　11　12　13　14
□　□　□　□　□　□　□　□　□　□　□　□　□　□

27. 各级政府针对服装产业的政策指导

1　2　3　4　5　6　7　8　9　10　11　12　13　14

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

28. 贸易伙伴所在国或国家联盟（如欧盟）的对外贸易政策

1 2 3 4 5 6 7 8 9 10 11 12 13 14

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

第三部分：评论和建议

提示：如果您认为上述所列举 14 个贡献性因素存在偏颇之处，请不吝赐言。

第四部分：基本信息

提示：请在相关的空格（□）打勾（√）。

※ **企业界**人士请回答第 **5 - 10**；**其他**人士请回答 **1 - 4** 题。

1．您供职的单位？

　　□ 政府经济管理部门

　　□ 研究机构

　　□ 高等院校

　　□ 行业协会

2．您的职位或职称？

　　□ 主要负责人

　　□ 部门负责人

　　□ 其他（请注明）————————————

3．您的职称

　　□ 高级职称

　　□ 中级职称

　　□ 初级职称

　　□ 无

4．您从事服装产业研究、管理工作的年限？

　　□ 10 年以上（含 10 年， 以下类同）

　　□ 5 年（含——10 年

　　□ 1 年（含）——5 年

　　□ 1 年以下

5．您在贵企业里担任的职位？

　　□ 董事会成员

　　□ 总经理（厂长）

　　□ 部门经理（主管）

　　□ 其他职位（请注明）　———————————

6．贵企业 2005 年度年销售额是多少？（单位：人民币）

　　□ 10 亿（含）以上

　　□ 1 亿（含）－－9.99 亿

　　□ 5000 万（含）－－0.99 亿

　　□ 1000 万（含）－－4999 万

　　□ 500 万（含）－－ 999 万

　　□ 500 万以下

7．贵企业拥有多少员工？

　　□ 1000 人（含）以上

　　□ 500 人（含）－－999 人

　　□ 100 人（含）－－499 人

　　□ 100 人（含）以下

8．贵企业资本结构？

　　□ 全部外资

　　□ 全部内资

　　□ 中外合资

9．在服装产业链中，贵企业居于何种地位？（可以多项选择）

□ 服装供应商

□ 服装制造商

□ 服装销售商

□ 其他（请注明）——————————

10．贵企业产品面向的主要市场？

□ 国内市场为主

□ 国际市场为主

□ 两者兼顾