THE IMPACT OF ENVIRONMENTAL FACTORS ON BUSINESS STRATEGIES IN SELECTED MAJOR U.S. APPAREL MANUFACTURING COMPANIES 1970-2005

By

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ABSTRACT

The purpose of this study was to examine the impact of environmental factors on business strategies for U.S. apparel manufacturing companies. Three research objectives were established to achieve this study purpose: (a) to explore the business environment of the U.S. apparel manufacturing industry from 1970 to 2005, (b) to investigate the business strategies for selected major U.S. apparel manufacturing companies in response to the environment from 1970 to 2005, and (c) to determine if patterns or themes are found in changes of the business strategies for the selected U.S. apparel manufacturing companies.

Two theories were used as a framework for this study: organizational interpretation process (e.g., Daft & Weick, 1984; Milliken, 1990) and organizational adaptation theory (e.g., Miles & Snow, 1978; Zeithaml & Zeithaml, 1984). Qualitative analysis was conducted for data analysis. Part 1 of data analysis was the in-depth exploration of the business environment for the apparel manufacturing industry in terms of globalization, technology, and consumer; and apparel firms' business strategies that have been implemented in response to these environments, from 1970 to 2005. Part 2 of data analysis was the case studies of two sample apparel companies (i.e., Nike, Inc., VF Corporation). The business strategies of the two companies in response to their business environments from 1970 to 2005 were investigated.

The in-depth exploration of general business strategies of the U.S. apparel industry and the case studies of two sample companies' specific business strategies revealed that U.S. apparel

manufacturing companies have gone through the process that was proposed in the model of the study; they have been significantly affected by the environmental changes and have made changes to their business strategies in order to survive. These changes did vary between the two companies in the case study and were related to the original organization of the companies showing a variation in interpretation of the information.

ACKNOWLEDGEMENT

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CHAPTER 1. INTRODUCTION

The apparel industry is a segment within the fiber, textile, apparel, and retail (FTAR) complex. This FTAR complex represents a supply chain or pipeline from design ideas through fabrication to sale to a final consumer. The contribution of these textile and apparel industries to the U.S. economy is significant when evaluated in terms of its share of the U.S. gross domestic product and its related employment (Bureau of Industry and Security, 2003). Apparel, shoes, and accessories products, sold (at the retail level) in the United States, amount to over $450 billion a year (Plunkett Research, Ltd., 2006). Consumption of apparel only (at the wholesale level) reached more than 18.4 billion garments in 2003 (American Apparel & Footwear Association, 2004).

The apparel market, also known as the fashion market, is always facing rapid change; therefore, the success of any business in this market depends on how the company responds to turbulent and volatile changes within the market (Christopher, 2000; Christopher, Lowson, & Peck, 2004). As a consequence of various changes in business environment, many companies have experienced a need to change their business strategies (Christopher & Lee, 2004; Dickerson, Oh, & Park, 2004; Jacobs, 2006; Pan & Holland, 2006; Su, Gargeya, & Dyer, 2004).

Birtwistle, Fiorito, and Moore (2006) found that factors affecting the business environment within the textile and apparel industries include globalization, difficulties in getting customers, and increased competition. Sridharan, Caines, and Patterson (2005) stated that globalization, customers' changing expectations, and advances in technology have brought changes in companies' new supply chains and their associated activities. Power and Sohal (2002) noted that new developments of technology, changing customer demographics, globalization, and requirements for customized products have demanded new strategies for companies through optimization for their whole supply chain. In the textile and apparel industries, a company's management activities and performance outcomes are impacted by the external environmental factors, such as rapid development of technologies, globalization and competition, and competitive strategies (Stapleton, Hanna, & Ross, 2006).

Even in the early 1990s, Kincade and Cassill (1993) recognized that environmental changes for the textile, apparel, and retail industries had occurred in the areas of competition, customers, and technology. In the study of the consumer merchandising field, Shim (1998) stated

that technological advancement and the development of a global economy created major changes in consumers' demands, and that these changes are among the most important factors to affect the global marketplace. Earlier in the 1980s, the report from a U.S. government study noted that technology improvements, growth of international trade, changing patterns of consumer demand, and a shifting regulatory environment had affected U.S. textile and apparel industries (Office of Technology Assessment, 1987). These researchers explored various business strategy and performance issues related to the business environment in the textile and apparel industries and found that changes in business environments can affect companies' strategic management practices.

The decline of U.S. manufacturing firms' dominance in the apparel industry began in the 1970s. Changes in the business environment in apparel industry and the reactions of associated firms have continued to affect the profile of the industry over the past 30 years, including some dramatic changes over the past ten years. Although managers in the U.S. apparel industry have become increasingly aware of the needs for efficient and effective business strategies, there remains a lack of research focusing on these issues. Therefore, a detailed exploration about the business environment of the U.S. apparel manufacturing industry and the resultant interpretations and reactions of apparel firms is needed.

Conceptual Framework

Interpreting the business environment and making decisions relative to that environment are basic requirements for the daily and long term operations of individuals and organizations (Daft & Weick, 1984). Numerous researchers have made a systematic attempt to define the interpretation and adaptation theories for both organizational and individual problem solving (e.g., Aldrich & Pfeffer, 1976; Hrebiniak & Joyce, 1985; Kiesler & Sproull, 1982; Lyled & Mitross, 1980).

The organizational interpretation process and the organizational adaptation process are two main bodies of research relative to this understanding of how organizations function within a business environment. Organizational adaptation theory is similar to the organizational interpretation process theory; however, they differ in their points of emphasis and perspectives on the source of the change force. Organizational interpretation process tends to focus on the

process of reviewing the environment and organizational adaptation theory focuses more on the end of the process, where companies choose reactions or strategies to the environment.

Organizational Interpretation Process

The organizational interpretation process explains how organizations approach, interpret, and act on the business environment that surrounds the organization (Daft & Weick, 1984). To succeed within an environment, organizations must develop information processing mechanisms relevant to competitors, trends, technological development, and market for their organizational performance and survival (Daft & Weick; Dutton & Duncan, 1987; Lyled & Mitross, 1980; Milliken, 1990). Understanding the process of how organizations work within and react to their environment is the focus of the organizational interpretation process research.

Daft and Weick (1984) divided the organizational interpretation process into three stages: scanning, interpretation, and learning. These three stages are the basis of their organizational interpretation model. Their model has two underlying key dimensions: (a) management's beliefs about the analyzability of the external environment and (b) the extent to which the organization intrudes into the environment. The first dimension covers the management's assumptions about the environment. Characteristics of the environment combined with management's previous interpretation experience can be influential factors on this assumption. The second dimension covers the level of conflict between the organization and the environment, and thus the amount of intrusion of the company into the environment. This dimension can be divided into two types according to the approach of environmental interpretation; active organizations named a "test maker" (p. 288) tend to search, create, and manipulate the environment while passive organizations named a "test avoider" (p. 288) tend to accept the environment as given. The factors of organizational age and size can be used to explain organizational intrusiveness. Based on this assumption, Daft and Weick categorized organizations according to four interpretation modes: enacting, discovering, conditioned viewing, and undirected viewing. The resulting model can be completed by making predictions about other organizational characteristics (i.e., scanning characteristics, interpretation process, and top management's strategy and decision behavior) associated with interpretation modes. When the variables in the model are combined, the four interpretation modes are shown as determined by

management's beliefs about the environment and organizational intrusiveness, and it is hypothesized to be associated with organizational characteristics (Daft & Weick).

Milliken (1990) added three types of environmental uncertainty (i.e., state uncertainty, effect uncertainty, response uncertainty) to the three stages (i.e., scanning, interpretation, learning) of Daft and Weick's (1984) model. These three types of uncertainty are from his earlier research on the perceived uncertainty about the environment. Milliken (1987) stated that recognizing the uncertainty, which organization have, provides the understanding about not only the particular source of environmental uncertainty but also the type of environmental uncertainty experienced. With this information, an organization can better understand the environment. Each of the three uncertainties is associated with one of the three particular stages of Daft and Weick's organizational interpretation process model. State uncertainty occurs during scanning or when managers feel unable to understand what are the key trends or events or are uncertain about whether particular events or changes will occur. Effect uncertainty occurs in the interpretation process when managers do not feel confident that they understand what an environmental event or change will bring to their organization and are unsure about whether a change will pose threats and opportunities for an organization to face. Response uncertainty, during learning, exists when managers are not confident about how to respond to an environmental change.

In the 1990 study, Milliken stated that the influence of the role of strategic and structural characteristics of an organization on the interpretation process should be considered because multiple organizations have diverse approaches to and interpretations of the same changes in their environments. He, therefore, added two more variables (i.e., resource dependence characteristics, perceived organizational characteristics) to the interpretation process model. He expected that the extent of organizational dependence on a particular resource influences managers' notice of change in resource availability or their perceived capacity for responding. Also, perceived organizational effectiveness, perceived organizational sense of institutional identity, and perceived organizational extent of decentralization are added in his organizational interpretation process.

Review of literature on the management theory of organizational interpretation revealed the three major components of perception, interpretation, and response that constitute the organizational interpretation process. Key components from two organizational interpretation

theories (i.e., Daft & Weick, 1984; Milliken, 1990) were classified according to the three stages in Figure 1.

Perceive the key trends, changes, and events	Identify the key environmental effect, threats, opportunities	Response to environmental changes
Scanning	Interpreting	Learning
Data collection	Data given meaning	Action taken
Analysis of the environment	Analysis of a change's likely effect or significance	Analysis of response options and their utility
Perception of an environmental change	Perception of a change's likely effect or significance	Perceived knowledge of response options and their likely effectiveness

Figure 1. Organizational interpretation process (data obtained from Daft & Weick, 1984; Milliken, 1990).

Although the organizational interpretation process has been studied in a number of industries, limited information is available on organizational interpretation related to the apparel business environment. Ko and Kincade (1998) examined the relationships between organizational characteristics and implementation of QR technologies in 368 U.S. apparel manufacturers based on the environmental interpretation model. This model was used to explain that organizational characteristics can be the determinants of the QR strategies implemented by a company. They focused on the third task of the environmental interpretation model, responding, and examined the role of product line characteristics in determining implementation of new technologies. To measure the relationship between product line characteristics and implementation of QR technologies, they identified product line characteristics as the following three groups: product categories, fashion change, and seasonal change. They found that fashion change was significantly related to QR technology implementation, which affects a company's response strategies.

Organizational Adaptation Theory

The environment, in which an organization operates, is important because it influences the structures and decisions of organizations (Aldrich & Pfeffer, 1976). Again, the relationship between organizations and their business environments is central to the explanation of organizational adaptation in the marketing literature. Organizational adaptation theory is the view of adaptation as a dynamic process, with elements or variables related to strategic choice and environmental determinism. One of the central arguments in this theory is whether the adaptation is managerially or environmentally derived (Hrebiniak & Joyce, 1985). From this argument, numerous researchers have approached organizational adaptation in their own point of view and adopted it to explain various topics.

Miles and Snow's (1978) typology of organizational strategy, structure, and process was based on the foundation of organizational adaptation theory. There are two major components of their theory: the adaptive cycle and the strategic typology. Miles and Snow stated that organizations align themselves with their environment, developing their own strategies to respond to environmental change and uncertainty. They also stated that the organizational adaptation is a complex and dynamic process requiring the continual solution of three major problems, which management must continually solve: entrepreneurial, engineering, and administrative problems. The three problems generally occur simultaneously and interwoven complicatedly. The entrepreneurial problem occurs when organizations define their organizational domain, such as a type of products or service, and target market or market segment. Organizations decide to assign their resources to achieve managerial objectives relative to the domain that was defined in this process. The engineering problem involves the creation of a system, which facilitate the actual operational management. Organizations select an appropriate technology for production and distribution of products or services and create new information, communication and control linkages for operation of the technology. The administrative problem primarily involves two organizational activities: reducing uncertainty within the current organizational system and implementing the process as organizations continue to grow.

Additionally, Miles and Snow (1978) stated the types of organizational adaptation can be broadly categorized within a single industry. The four organization types that they identified are defenders, prospectors, analyzers, and reactors. They reported that each type of organization

has its own characteristics and behavior, and the characteristics of each type can be briefly summarized. For example, defenders are organizations that have narrow product market but high expertise in that area. They focus more on improving the efficiency of their existing operations rather than on searching new opportunities. Prospectors are organizations that always search for new markets and create opportunities, change, and uncertainty within the company and their environments. Thus, they are innovative but not wholly efficient. Analyzers are organizations that manage two different product market areas, such as stable products and more turbulent products, and they operate different strategies in each area. Reactors are organizations that lack ability to respond effectively to market change and uncertainty. Thus, they perceive market opportunities but do not make change until they are forced by environmental pressures.

In an examination of organizational adaptation, Zeithaml and Zeithaml (1984) emphasized that marketing can significantly affect the relationship between an organization and the environment. After reviewing the literature on environmental management theories, they suggested the typology of environmental management strategies with examples of relevant marketing activities for each type of strategy. With this classification, they also identified the selection and implementation issues of environmental management strategies. Zeithaml and Zeithaml stated that once a strategy is adopted by a company, certain factors regarding its selection and implementation should be considered, such as the following activities: a company's ability to focus on a particular component of the external environment, the costs and benefits associated with the implementation, and environmental contingencies.

In a study of the industrial marketing area, Kitchell (1995) examined corporate culture dimensions for 110 companies related to innovation adoption within an environmental adaptation framework. The seven corporate culture dimensions identified by Kitchell were as follows: environmental turbulence, internationalization, corporate objectives, risk taking, communication, staff relationship, and innovation adoption. Kitchell measured seven hypotheses based on the linkages between environmental adaptation, corporate culture, and innovation adoption. According to his study, many companies perceived their business environment to be competitive and felt the need to make strategic choices for their marketing strategies. Innovative and non-innovative companies were found to perceive their environment differently; therefore, they formed different culture norms.

In a study of 103 apparel companies, Ko, Kincade, and Brown (2000) investigated the relationship between a company's business type and the organization's likelihood of adopting QR technologies in the apparel industry. They used Miles and Snow's (1978) four strategic types (i.e., defender, prospector, analyzer, reactor) to identify the business type of apparel manufacturers. Based on Rogers' (1983) innovation-decision process model, Ko et al. empirically investigated how each type of company adopts QR technologies. They found that business type was significantly related to a company's perception of QR benefits. In addition, the perception of QR benefits significantly influences its adoption of QR technologies, which in turn, influences the extent to use QR technologies.

Model Development

Understanding the two theories about organizations (i.e., organizational interpretation process, organizational adaptation theory) is particularly important to the success of firms in apparel industry that is dependent, for product development and targeted selling, on fashion trends, consumer changes and other environmental influences. Previous research has confirmed that the apparel industry is largely dependent on environmental influences, such as (a) related technologies, (b) consumer needs, and (c) global competition (e.g., Christopher et al, 2004; Daly & Bruce, 2002; Pan & Holland, 2006; Tyler et al., 2006).

The following company factors may need to be considered in understanding the model of the study: organizational age and size, a manager's previous interpretation experience, the level of organizational intrusiveness, and resource dependence characteristics of the organization. In addition, the three adaptive problem factors including entrepreneurial, engineering, and administrative problems can be considered.

Viewing the organizational interpretation and organizational adaptation procedures in the context of a dynamic process related to strategic choice and environmental determinism will provide the support to understand the decision and implementation of business for individual organization.

With consideration of these theories and factors, the model, which diagrams the relationship among business environments, companies' interpretation, and their responses, was created (see Figure 2-A). The two theories about organizations provided the evidence of each

step; organizational interpretation process supports the relationship between the environment and organizational interpretation, and organizational adaptation theory supports the relationship between organizational interpretation and their responses. Both theories also identify variables that affect the nature of each relationship (i.e., organization's internal resource); the organizational interpretation process considers the company factors (e.g., organizational age and size, resource dependence characteristics of the organization) and the organizational adaptation theory considers the three adaptive problem factors (i.e., entrepreneurial, engineering, administrative). Based on this framework, a model for the study is proposed (see Figure 2-B).
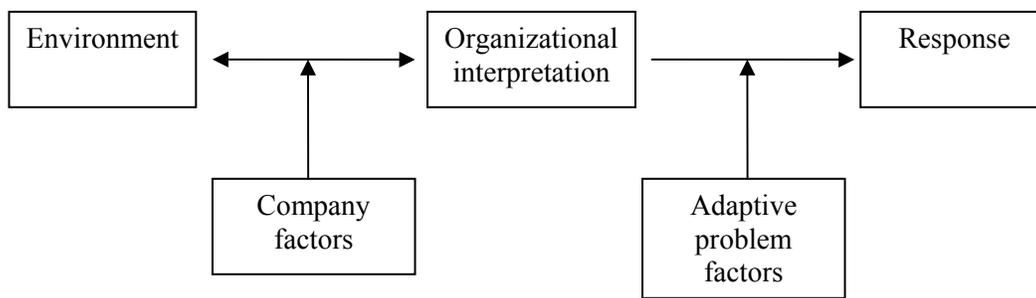
Figure 2-A. Proposed model of study
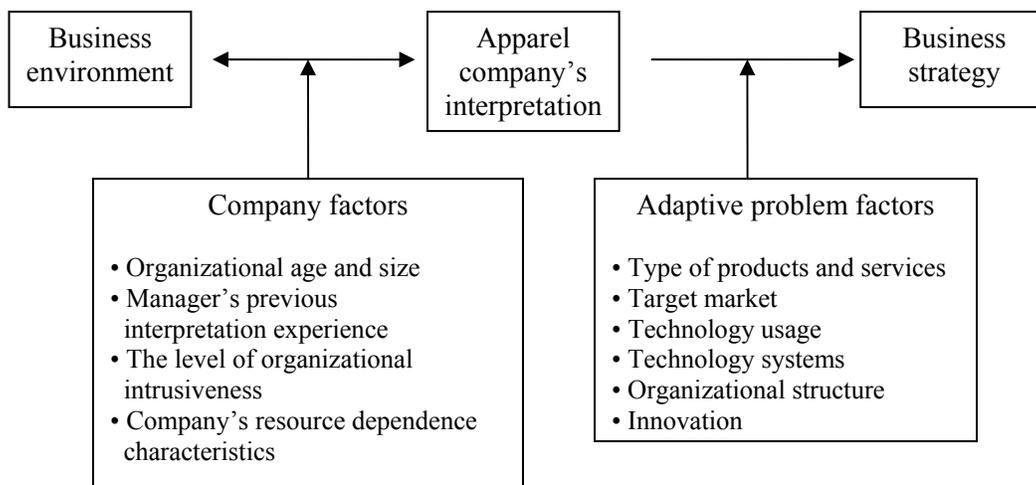
Figure 2-B. Proposed model of study, specifically for apparel companies

Figure 2. Model of study development

As previously discussed, the environment of the apparel industry has drastically changed over the past several decades. The two theories about organizations and the environment surrounding them and the known environmental factors will help the researcher to understand how apparel firms have interpreted and responded to these environmental changes.

Statement of the Problem

Over the past 30 years and particularly in the past five years, competitive pressures have greatly increased for U.S. apparel manufacturers. Moreover, recent market changes in terms of globalization, technology, and consumers, as previously discussed, complicate the management of the overall supply chain (Rollins, Porter, & Little, 2003). Apparel manufacturing firms must use business strategies to handle inventory management, customer service, communication among channel members, and other operational activities as well as product development and production. Companies need a strategy that enables them to be competitive in a changing and competitive business environment, such as the one that has challenged is continuing to challenge U.S. apparel manufacturing companies. Apparel manufacturing companies, the focus of this study, are regarded to have the most difficult and complex inventory issues within the FTAR supply chain (Lee & Kincade, 2003a). Because apparel manufacturers are involved with two main interfaces (i.e., fabric suppliers and customers of finished goods), Lee and Kincade stated that a single apparel manufacturer may have multiple suppliers as well as numerous customers.

In this study, three environmental factors previously identified (i.e., globalization, technology, consumer) of the U.S. apparel manufacturing industry and general business strategies of the apparel industry, from 1970 to 2005, were analyzed. In addition, through the case studies of the selected apparel manufacturers, specific business strategies for selected major U.S. apparel manufacturing companies were explored. The WTO quota changes, the increasing number of regional trade agreements, the differential between high wage and low wage companies, the continued and changing demands from consumers, and the revolutions in computer technology have heightened the environmental challenges to U.S. apparel manufacturers. However, a review of literature revealed a limited number of academic studies about these environmental changes; and no study was identified that placed these issues in a historical context. In addition, little is documented in academic literature about the perceptions of

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apparel manufacturers about these changing environment and their organizational reactions to these changes. Many of the changes in the U.S. apparel industry have been so dramatic that traditional terms, such as manufacturer and jobber, are no longer viable terms when describing companies.

Purpose of the Study

The purpose of this study was to examine the impact of environmental factors on business strategies for U.S. apparel manufacturing companies. To achieve this study purpose, three research objectives were established:

1. To explore the business environment of the U.S. apparel manufacturing industry from 1970 to 2005,

2. To investigate the business strategies for selected major U.S. apparel manufacturing companies in response to the environment from 1970 to 2005,

3. To determine if patterns or themes are found in changes of the business strategies for the selected U.S. apparel manufacturing companies.

A model of the study was developed from the theories about organizational interpretation process and organizational adaptation described by numerous researchers (e.g., Daft & Weick, 1984; Dutton & Duncan, 1987; Milliken, 1987; Milliken, 1990). This conceptual framework provided support to organize the collected data for this study.

Also, the cases of three selected apparel companies were studied. Because the financial performance of the sample apparel companies in the apparel market has been influential, examining the history of their business strategies provide important information on a major aspect of the apparel manufacturing industry in the United States over the several decades. Significant findings and conclusions of the study are presented.

CHAPTER 2. LITERATURE REVIEW

This section is composed of a literature review with the following three parts: U.S. apparel manufacturing industry, business environment, and business strategies. First, the scope and definition of apparel manufacturing industry is explored. The issues of restructure of the apparel manufacturing industry are also discussed. Second, three business environmental factors (i.e., technology, globalization, consumers) categorized from previous literature are briefly discussed prior to the in-depth exploration of these factors in data collection and analysis. Last, the concept of business strategy and related literature in apparel sector is defined and provided.

U.S. Apparel Manufacturing Industry

Structure

The structure of the apparel manufacturing industry can be understood in the context of the fiber, textile, apparel, and retail (FTAR) structure (see Figure 3). As previously stated, the apparel industry is one sector of the FTAR complex. Apparel products are manufactured from fiber and textile components, and final products are distributed through retailers to consumers. The shaded part of Figure 3 represents the scope of the apparel manufacturing industry.
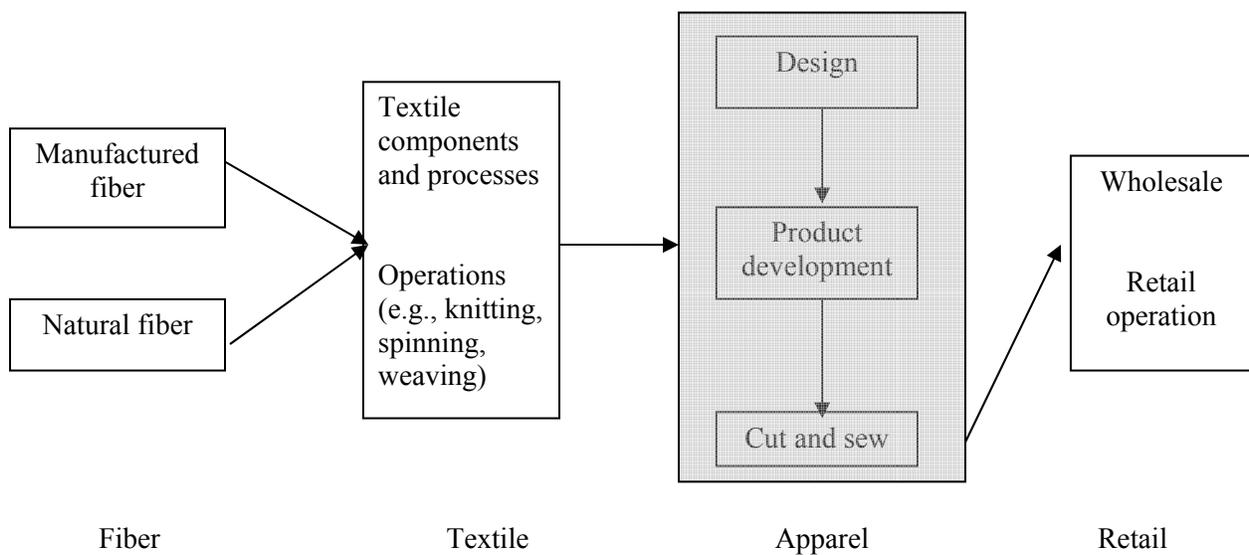
Figure 3. Traditional FTAR structure (data obtained from Dickerson, 1995; Kincade, 2008)

The apparel manufacturing industry is made of a complex chain of participants (i.e., businesses) from design through production to distribution of apparel products. According to the North American Industry Classification System (NAICS) definition, apparel manufacturing is defined by NAICS as code 315, and its sub-sector groups can be categorized into two distinct manufacturing processes: the manufacture of knit garments (i.e., knitting fabric into garment shapes such as socks and sweaters, cutting and sewing the knit fabric into a garment) and the cut and sew operations from flat fabrics (i.e., purchasing woven fabric, cutting and sewing to make an apparel garment) (U.S. Census Bureau, 2003). Apparel manufacturers, according to the NAICS 315 code, are companies that perform all apparel related functions from design, through fabric purchase and cut and sew operations, to distribution of the product to wholesalers or retailers.

Sub-sectors of apparel manufacturers traditionally have included (a) apparel contractors performing one or more cutting or sewing operations on raw materials (e.g., textile fabrics) owned by others; (b) jobbers performing entrepreneurial functions (e.g., buying fabric, sourcing production) involved in apparel manufacture; and (c) tailors, who manufacture custom garments for individual clients. The description of these apparel manufacturing sub-sectors according to the NAICS definition is presented in Table 1. Under NAICS, the apparel industry is also classified by several variables, such as gender (e.g., men's, women's), age (e.g., women's and girls', children's and infants'), services (e.g., folding and packaging, pressing), and levels of processing (e.g., manufacturing, wholesalers, contractors, retailers) (U.S. Census Bureau, 2003).

Table 1. North American Industry Classification System (NAICS) Definition of Apparel Manufacturing

NAICS code	Description
315	Apparel Manufacturing
3151	Apparel Knitting Mills
31511	Hosiery and Sock Mills
315111	Sheer Hosiery Mills
315119	Other Hosiery and Sock Mills
31519	Other Apparel Knitting Mills
315191	Outerwear Knitting Mills
315192	Underwear and Nightwear Knitting Mills
3152	Cut and Sew Apparel Manufacturing
31521	Cut and Sew Apparel Contractors
315211	Men's and Boys' Cut and Sew Apparel Contractors
315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors
31522	Men's and Boys' Cut and Sew Apparel Manufacturing
315222	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing
315223	Men's and Boys' Cut and Sew Shirt (except Work Shirt) Manufacturing
315224	Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing
315225	Men's and Boys' Cut and Sew Work Clothing Manufacturing
315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing
31523	Women's and Girls' Cut and Sew Apparel Manufacturing
315231	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing
315232	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing
315233	Women's and Girls' Cut and Sew Dress Manufacturing
315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing
315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing
31529	Other Cut and Sew Apparel Manufacturing
315291	Infants' Cut and Sew Apparel Manufacturing
315292	Fur and Leather Apparel Manufacturing
315299	All Other Cut and Sew Apparel Manufacturing
3159	Apparel Accessories and Other Apparel Manufacturing
31599	Apparel Accessories and Other Apparel Manufacturing

NAICS code	Description
315991	Hat, Cap, and Millinery Manufacturing
315992	Glove and Mitten Manufacturing
315993	Men's and Boys' Neckwear Manufacturing
315999	Other Apparel Accessories and Other Apparel Manufacturing

Note. From "U.S. North American Industry Classification System (NAICS)," by U.S. Census Bureau, 2003. Retrieved July 25, 2007 from http://www.census.gov/cgi-bin/epcd/srchnaics02defs

Over the past four decades, the apparel industry has experienced dramatic changes in its structure (Abernathy, Dunlop, Hammond, & Weil, 1995; American Apparel Manufacturers Association, 1991; Kilduff, 2001a; Kilduff, 2001b; Office of Technology Assessment, 1987). Manufacturing processes from design to cut and sew are now performed by several participants, such as manufacturers, contractors, and jobbers. Traditionally, these three jobs were separated and specialized in their functions (Abernathy et al., 1995).

Currently, a type of company exists that does not belong to any of the previously defined types. Apparel companies, which engage in designing and developing their own products, but do not own any manufacturing facilities, are not classified, in practice, in any of the three traditional manufacturing categories (i.e., manufacturer, contractor, jobber). These companies are not considered jobbers because jobbers do not design and own the products. According to the NAICS definition, these companies are not manufacturers because they do not own manufacturing or production facilities. Over the last several decades, many apparel companies have transformed their businesses from manufacturers to marketers to survive in the competitive environment. Most of the leading apparel brand companies (e.g., Jones of New York, Liz Claiborne, Nike) do not own the manufacturing facilities that produce their products, but they focus instead on designing and selling their products. Even if some companies started their business as manufacturers or dry goods wholesalers and are currently identified as manufacturers by the NAICS 315 codes, they have shifted their operations from that of traditional manufacturers or wholesalers to marketers. The competitive business environment with global trade, low wage countries, and rapidly changing consumers' needs have, according to trade literature, affected the entire process of how the companies develop, deliver, and market products (e.g., Christopher & Lee, 2004; Dickerson, Oh, & Park, 2004; Jacobs, 2006; Pan & Holland, 2006; Su, Gargeya, & Dyer, 2004). Considering the dimension and scope of their business and

the strategies they use, this type of company does not fit any of the three traditional apparel manufacture terms (i.e., manufacturer, contractor, jobber).

Employment

U.S. apparel manufacturing within the FTAR complex employed approximately 284,800 workers in 2004 (Plunkett Research, Ltd., 2006). This employment level represents a dramatic decline since 1973. In 1973, the peak year of apparel manufacturing employment, more than 2.4 million employees were working in textile and apparel manufacturing in the United States; 58 percent of these worked in the apparel industry (Kincade, 1988). Because of the labor intensive aspect of apparel manufacturing the proportion of workers in apparel is necessarily hired than workers in textiles. This figure dropped to 1.5 million by 1996, which is a 39 percent decline from the year of 1973 (Mittelhauser, 1997). Along with the drop in employment, the industry has seen a reduction in the number of companies and U.S. plants that produce apparel. In conjunction with the decline of U.S. apparel manufacturing, the U.S. textile industry has been forced to close 367 textile plants since 1997, and more than 440,000 U.S. jobs have been cut (Plunkett Research, Ltd., 2006). Table 2 shows the employment in the combined textile and apparel industries in the United States from 1973 to 2005.

Table 2. Textile and Apparel Employment in the United States-1973-2005

Year	1970	1973	1975	1977	1980	1985	1990	1995	2000	2002	2004	2005
Employ-ment (in thousand)	1,365	1,402	1,235	1,334	1,264	1,121	1,036	919	497	360	286	260

Note. Due to change the industry title, the numbers were drawn from several different data available in the different year-versions of *Statistical Abstract of the United States*. Data titles that are drawn are as following: "Manufacturing Industries-employment by Industry" for Apparel (NAICS code 315) category, "Manufacturing Full-Time Equivalent Employees and Wages by Industry" for Apparel and leather and allied products (NAICS code 315) category, and "Manufacturing Full-Time Equivalent Employees and Wages by Industry" for Apparel and other textile products (SIC code 23) category. From *Statistical Abstract of the United States,* by U.S. Census Bureau, 1977, 1983, 1985, 1990, 1996, 2000, 2005, Washington, DC: U.S. Bureau of the Census.

In contrast to the loss of textile and apparel manufacturing plants, the U.S. consumers' consumption of apparel at the wholesale level in 2004 was more than 18.4 billion garments, growing 1.9 percent over the previous year, and personal consumption of apparel (i.e., retail value of apparel and shoes) in 2004 was $326.5 billion, increasing 6.3 percent from the previous

year. This increase in consumption is mirrored in the increase in apparel imports. In 2004, the dollar value of apparel imports into the United States reached nearly $65 billion. U.S. imports from China, Mexico, and other countries listed among the top suppliers to the U.S. retailers are predicted to continue to increase (AAFA, 2004).

Despite the decline in the number of U.S. apparel production workers, the U.S. apparel industry has retained employment in the areas of sourcing, marketing, sales, and distribution (AAFA, 2004). Some companies, such as Nike, have become both designers and marketers of sports wear by sourcing, distributing, marketing, and selling brands in the United States and throughout the world (Sridharan, Caines, & Patterson, 2005).

Business Environments

Literature analysis identified three major environmental factors that affect apparel business: globalization, technology, and consumer (Birtwistle et al., 2006; Kincade & Cassill, 1993; Office of Technology Assessment, 1987; Power and Sohal, 2002; Shim, 1998; Sridharan et al., 2005; Stapleton et al., 2006). This section provides an overview each of these factors.

Globalization

Globalization is defined as "a set of economic and political structures and processes deriving from the changing character of the goods and assets that comprise the base of the international political economy – in particular, the increasing structural differentiation of those goods and assets" (Cerny, 1995, p. 596). Globalization is the concept commonly recognized as "growing international interconnectedness" (Hirst & Thompson, 2003, p. 17) in terms of increasing international trade, investment, and communications across the nations. It has been identified with various aspects of information, finance, industry, politics, or culture. Some researchers argued that the scope or definition of globalization has been misinterpreted and tried to redefine its nature and characteristics (Hirst & Thomson; Perraton, 2003; Sutcleffe & Glyn, 2003). When globalization is applied to the area of business, many issues emerge from the economic activity across the world's countries. Although various researchers have different positions and perspectives on globalization, one common point emerges from these authors.

Globalization results in increased levels of international economic activities, especially since the 1970s.

Shim (1998) discussed some of the important environmental factors that affect the global marketplace based on economic forces that shape the future world market. Although social and governmental factors have constantly shaped the global economy, some new factors, such as shifts in types of technology, modes of transportation, and availability of communication, are creating a borderless market and changing the alignment of partnerships. Shim also indicated that multiple channel options for suppliers and retailers are accelerating the development of a global economy. She stated that as retailers have tried to combine sourcing or manufacturing processes into their operations, manufacturers and distributors also have marketed their service and products directly to their consumers around the world. This trend has generated more attention to distribution, transportation, and logistics operations, which make possible better service, value, and profitability for both firms and consumers.

In the apparel industry, companies from many countries have increasingly played bigger roles in the production aspect of the business than previously noted in the industry. Numerous issues emerged related to textile and apparel products as they have crossed international boundaries, and many researchers have discussed related topics. Abernathy, Dunlop, Hammond, and Weil (2002) divided the globalization in apparel and textile industries into old issues and new issues. Old issues include (a) the movement of products between nations that have different levels of economic value and its impact on product costs, (b) flow of goods mediated by changes in international exchange rates, and (c) foreign competition with quotas and tariffs. New issues about globalization in apparel industry are factors related to the distribution of products, which originate from international trade.

Some researchers have discussed the changes of macroeconomic environments generated mainly from the U.S. and international trade policies (e.g., NAFTA, US-CAFTA). Lim (2006) examined the impact of the North American Free Trade Agreement (NAFTA) on the U.S. textile industry. Through a qualitative and quantitative study, Lim concluded that, in the early years of its implementation, NAFTA was an effective policy in terms of expanding, diverting, and regionalizing trades and promoting domestic textile production. However, it also had a negative impact on the domestic textile industry's profit performance. Similarly, Lin (2003) investigated changes in the U.S. apparel import market related to NAFTA. Her results revealed the increase in

imports of five apparel commodities from Mexico and Canada into the U.S. market. Lin also examined the import production ratios from 1967 to 2000 and found that the ratio increased almost four times during that period. Shelton (2003) examined the changes of trade patterns of textile and apparel products of several NAFTA countries. The biggest change was the shift of countries that were trading with the United States, from China, Hong Kong, Taiwan, and South Korea, to Canada and Mexico. Shelton also stated that NAFTA created new opportunities for U.S. fiber, textile, and apparel manufacturers by increasing production and sales and facilitating import and export opportunities.

Technology

Technology is "the physical combined with the intellectual or knowledge processes by which materials in some form are transformed into outputs used by another organization or subsystem within the same organization" (Hullin & Roznowski, 1985, p. 47). In a study of apparel industry, Ko et al. (2000) stated in their QR technology study that technology can be both the use of new equipment and the implementation of new processes. This statement is particularly true in the apparel industry, where technologies include new process (e.g., methods for shared information, product planning with customer, receiving point-of-sale data) as well as new equipment (e.g., computers for design, automated sewing equipment) (Kincade et al., 2001).

Because technology is closely related with productivity and the associated production costs (Lin, Kincade, & Warfield, 1994), it has always been a key factor for competitive survival in the apparel business. Moreover, the apparel industry has an extraordinarily complex structure; the supply chain from production and final consumers is very long, and its products exhibit constant changes in style, tastes, and production technologies. For this reason, each participant of the apparel supply chain has a unique history, business structure, and management style; and each has adopted various types of technologies (Office of Technology Assessment, 1987).

Studies about technologies in the apparel industry range in topic from sewing operations to the use of e-commerce. Kincade (1995) noticed that the changing environment pressured companies in the apparel industry to facilitate more effective strategies linking manufacturers to retailers. Kincade provided 17 QR technologies of apparel manufacturing area through case study interviews and a comprehensive literature review. Those technologies were grouped into three functional areas, such as linkage between textile and apparel manufacturers, activities

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within the apparel production facility, and linkages between apparel manufacturers and retailers. In another study reporting the importance of flexibility in apparel production, Locker (2002) examined the relationship between people and technology management in apparel production based on the High-performance work system (HPWS) model. Locker concluded that technology management was the main input for employee's effort and high performance in the HPWS. Through case study interviews, a relationship between people, who created opportunities for employee's involvement and their discretionary effort, and managing technology was also established.

The importance of new technologies, such as EDI and POS, to the whole FTAR supply chain process, has been highlighted in trade publications and other media over the past decade (Power & Sohal, 2002). At the manufacturing level, a wide range of software is available to facilitate effective and responsive manufacturing; however, few software products are designed specifically for the apparel industry. Consequently, many small and medium sized companies experience difficulty in understanding and achieving the desired match between their business needs and the capabilities of the available software (Rollins, Porter, & Little, 2003). When the complexity of software is combined with the lack of U.S. government funding for apparel manufacturing, U.S. apparel manufacturing firms find that affordability and availability of technology are important factors within the technology environment.

Consumer

Consumers exert extreme pressures on businesses through their shopping and buying behaviors as determined by various factors (e.g., trends, weather, media, social, political, economic environments) and through the consumer movement (e.g., consumer advocates, consumer organizations, consumer legislation, consumer education) (Hicks, Pride, & Powell, 1975). For any business to make profits, understanding consumer is essential part of doing business (Peter & Olsen, 1999). Bennett (1995) defined consumer behavior as following three things: 1. "the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives" 2. "the overt actions of consumers", and 3. "the behavior of the consumer or decision maker in the market place of products and services."

In apparel business, consumers are the pivotal point. Defining fashion as the styles in dress and accessories worn by a group of people at a set period in time, Mueller and Smiley (1995) defined the market of fashion goods as "a group of people who have the money and the desire to purchase fashion merchandise" (p. 56). This group of people constantly demands new styles and products, and the market tries to meet those demands to have competitiveness. Consumer demands for apparel products, as known as fashion products, are very volatile and easily changed (Barns & Lea-Greenwood, 2006; Christopher, Lowson, & Peck, 2004). Therefore, predicting their demands and satisfying them is essential in apparel business. Thus, the apparel business is deeply marketing oriented, and is thereby totally dependent on wants and needs of the final consumers (Christopher et al., 2004; Lee & Kincade, 2003).

Blackwell (1997) stated that, traditionally, the consumer market was driven by manufacturers; in the 20th century, the same market was driven by retailers; but in the 21st century, it was driven by consumers. Noticing the importance of consumers in the business world, numerous issues have been identified within the consumer factor (e.g., the demographic shifts, economic change to consumers' demands for the new products, their changing shopping channels).

In a study about the changing marketplace, Shim (1998) mentioned the demographic changes including the fact that people are becoming older and relatively affluent, and that a large portion of the population is moving from poorer countries to richer countries. Shim identified that new consumer markets (e.g., consumers from countries with strong buying power or fastest growing population, new groups of consumers with purchasing power) and new patterns of shopping behaviors (e.g., Internet shopping) have emerged. These changes were stimulated by several factors, such as a change in consumption patterns, the emergence of new retail formats, and the influx of foreign capital into domestic economies through retailers and suppliers. Shim also mentioned that as increasing number of consumers can access the same information through the Internet, consumers around the world are not only becoming familiar with but also affected by each other, knowing different cultures or exchanging information.

In the new millennium, consumer demands have become more volatile from previous decades. Consumers are highly sensitive to brand and other promotional strategies and have high levels of demand for entertainment and assortment offerings from retailers (Christopher et al., 2004; Jacobs, 2006; Walters, 2006). In response to this market situation, apparel retailers have

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shifted the focus for their strategy of competitive advantage from price competition towards fast response to consumer demands and quick inventory changes to address rapid changing trends (Barnes & Lea-Greenwood, 2006).

In the current decade, the concept of an agile supply chain is recognized as highly responsive to the needs of these market requirements and therefore an appropriate management strategy for companies who wish to be market responsive (Christopher, 2000). The importance of these consumer-related issues to business strategies are noted by Christopher et al. (2004); who stated that agile supply chains and other business strategies (e.g., mass customization) are more likely to provide real time information, while conventional supply chains and traditional product development methods are forecast driven and based on past inventory information.

Business Strategies

Strategy or strategic management in the business world is referred to as the overall plans and purposes dominating the company's decision making processes and functions (Hamermesh, 1983). Christensen, Andrews, and Bower (1978) discussed several key concepts regarding corporate strategy. First, strategy is defined as the "pattern of purposes and policies defining the company and its business" (Christensen et al., 1978, p. 131). This strategy can be deduced from examining the company's behavior including their pattern, purposes, and policies. Second, there are four components of strategic choice that a company should consider: environmental opportunity and threat; a company's resources and their strength and weakness; personal values, aspirations, and ideals; and expectations of society. Third, to implement strategies, a company must consider their resources including organizational structure, organizational processes and behavior, and the personal leadership.

Defining the word, strategy, Coad (2005) provided two major concepts about strategy, strategy as a position and strategy as a process, from the related literature. The first concept, strategy as a position, is concerned with organizations' tasks including identifying their position within the environment and considering their competitiveness and other aspects of environments, (e.g., customers, suppliers, investors, governments). The second concept, strategy as a process, focuses on the procedure of how strategies are formed and implemented. This view considers who is involved in a strategy and why a particular strategy is made. However, Coad indicated

that these two traditional concepts oversimplify strategic management where the organization moves in predetermined ways in relation to environments. Noticing that organizations and their environments are not static things but groupings of people interacting with each other, he spotlighted the importance of thinking as part of strategy. Thus, Coad emphasized the perceptions of strategy whereby organizations make sense of their environment and develop strategy in response to those environments. This finding parallels the information about the activities of organizations relative to environments described in the organizational interpretation theory, and reflects the four concepts of strategies identified by Christensen et al.

Business strategies can be implemented at different rates and to different levels by many companies because the way of responding to changing environment for individual companies is different. Even different companies operating in a single industry may react differently on similar kinds of environmental changes. Miles and Snow (1987) stated that no two organizational or business strategies are the same because every organization decides its own target market and set of products or services supported by their technology, structure, and process. Understanding the patterns of business strategy implementation for different apparel manufacturing companies in relation to their perceived or interpreted environments is an important contribution to the understanding of how apparel manufacturing firms perform.

In the apparel industry, environmental changes are continuously exerting new pressures on company performance (Rollins et al., 2003). To respond to these changes, some companies within the apparel industry have formulated and implemented strategies to reorganize and reform the way products are manufactured and distributed to final consumers (Birtwistle et al., 2006; Lee, 2002; Rollins et al.). Over the past thirty years, the efforts to change (i.e., formulation and implementation of business strategies) have varied from an emphasis on manufacturing a quality product through the rapid movement of products as needed for sale to consumers (i.e., using a Quick Response (QR) strategy) to the current effort of supply chain management (SCM) and a focus on consumer requirements (Barnes & Lee-Greenwood, 2006; Kincade, Vass, & Cassill, 2001; Ko & Kincade, 1997; Lee). These recent strategies are in contrast to keeping large inventories at retail or at manufacturing. While QR, just-in-time (JIT), and other management strategies generally focus on one link in the pipeline or one process in the FTAR complex, the most recent strategy of SCM is a broader concept and encompasses all channel members within a company or between companies (Lee & Kincade, 2003b).

A few researchers have conducted studies about business strategies in the apparel industry. Horridge, Martin, and Craig (1999) examined the relationship between the strategic posture of 123 sewn-products manufacturers and their use of new technologies. For this study, they first grouped the sewn-products manufacturers according to strategic posture by risk level. Four groups (i.e., high risk, moderate risk, low risk, minimal risk) were identified on the basis of strategic posture scores. Second, they profiled the four cluster groups by company demographics and production characteristics. By understanding how each type of manufacturer has accepted and implemented technology in regard to the risk level, they found that the high risk group showed a proactive strategic posture, which was different from the other three groups. They used more technology to increase the competitiveness of the sewn-products industry than the other three groups. Kincade (2002) explored the barriers and organizational characteristics of 107 apparel manufacturers that had low implementation levels of new manufacturing practices (e.g., automated sewing operations, use of EDI and CAD). Through the pilot tests and literature analysis, the researcher proposed five competitive business strategies for the apparel manufacturing companies: differentiation, employee empowerment, flexibility, investment determination, and quality management. The research result shows that low levels of the strategies were related to the low implementation levels of new manufacturing practices.

CHAPTER 3. METHODS

This study examined the impact of environmental factors on business strategies for U.S apparel manufacturing companies. Three research objectives were established to meet the study's purpose:

1. To explore the business environment of the U.S. apparel manufacturing industry from 1970 to 2005
2. To investigate the business strategies for selected major U.S. apparel manufacturing companies in response to the environment from 1970 to 2005
3. To determine if patterns or themes are found in changes of their business strategies

A qualitative research design was employed for this study. Qualitative research is used to seek the answers to the questions in the real world and its purpose is "to learn about some aspect of the social world and to generate new understandings that can then be used" (Rossman & Rallis, 2003, p. 4). Ritchie and Lewis (2003) defined four characteristics of qualitative research and identified the data collection methods. First, the aim of research is in providing an interpreted knowledge of research subjects by learning about "their social and material circumstances, their experiences, perspectives, and histories" (p. 5). Second, sample size is generally small and research participants are purposely selected based on the criteria for a study purpose. Third, data analysis may be conducted by producing detailed descriptions or classifications, identifying patterns of association, or developing typologies and explanations. Fourth, the results of qualitative research "tend to focus on the interpretation of social meaning through mapping or re-presenting the social world of research participants" (p. 5).

A mixture of positivism and phenomenology techniques were used within the scope of the historical review of pertinent literature. The research framework described in Chapter 1 aided the researcher to identify and classify the study results. To achieve the study purpose, historical data for the given period of time was obtained and analyzed. For the first objective, an exploration of archival or published trade literature and academic research studies was reviewed using content analysis or other unobtrusive observation measures. For the second objective of this study, case studies using archival or secondary data within the frame of historical analysis were employed in investigating the business strategies for selected major U.S. apparel

manufacturing companies. Case studies are considered as "an overall strategy rather than a genre of research" (Rossman & Rallis, 2003, p. 104). They are in-depth explorations of a single organization, institution, event, decision, or group (Baker, 1999), and researchers use these methods to "seek to understand the larger phenomenon through close examination of a specific case" (Rossman & Rallis, 2003, p. 104), while focusing on the particular. Yin (1989) stated that case studies are appropriate when the research is conducted to answer various questions of how and/or why, as needed for phenomenology studies. This means that researchers using case studies try to figure out "why a certain situation prevails or how an organization or group has succeeded" (as cited in Baker, 1999, p. 321). In this study, an analysis of business strategies, for a sample of apparel companies, was explored in the context of the environmental changes. Using inductive analysis for the third objective, the researcher determined if patterns or themes were found in changes of the business strategies for the selected case study companies.

Sample

General business strategies of the apparel industry and specific business strategies for selected major U.S. apparel manufacturing companies, from 1970 to 2005, were investigated in this study. This time frame was determined with the consideration of data availability for sample companies and their year of establishment. Also, the early 1970s mark the beginning of the decline of U.S. apparel manufacturing employment and the beginning of extensive plant closures (Office of Technology Assessment, 1987).

For sample selection, a list of *The TOP 50* (*The TOP 40* or *The TOP 30*) firms in *Apparel* magazine was reviewed. This list is a ranking of U.S. publicly traded apparel firms, which only includes firms whose sales are above $100 million annually (i.e., the most profitable apparel firms). The length of the list ranges over time from the top 30 to the top 50 apparel companies. Profitability in this list is measured by the level of net income as a percentage of sales (Cole, 2005). *Apparel* is a leading trade magazine, which has been published monthly, in some form, from 1946 to the present, and it has provided a wide range of viable information about the apparel industry. *Apparel* is the current name for this major apparel trade magazine and is the result of the merger for the influential trade magazines of *Apparel Industry Magazine (AIM)* and *Bobbin Magazine*.

The process of sample selection was as follows:

(1) All available lists from 1992, in which this list was begun, to 2006, in which the latest list was made, were reviewed.

(2) Among the companies ranked in the list in 2006, eight companies were also ranked in the list in 1992. Further investigation verified that these eight companies, found on both lists, existed on or before the 1970s. This sample of eight apparel manufacturers was selected as the population for the study.

(3) Among the eight companies, finally, two sample companies, Nike, Inc. and VF Corp. were selected. These two companies were selected for following reasons: First, after reviewing the availability of historical data (e.g., data beginning in the 1970s) for each individual company, these two companies belonged to the one that had the most data currently exists. Second, each of two companies represented two different extremes in the industry. Nike, Inc. represents the unique case that has operated the business without owning its plants since the beginning of its business in the early 1970s; and VF Corp. represents the case, which initially started the business with a manufacturer and grew into a large firm currently operating a number of apparel brands.

Through this method, major apparel companies, which have been influential in the industry for at least 14 years, were drawn from a reliable source.

Validity and Reliability of Study

Several terms are used in judging quality and credibility of qualitative study including validity, trustworthiness, reliability, confirmability, generalizability, objectivity, consistency, and dependability (Ritchie & Lewis, 2003; Rossman & Rallis, 2003). From this extensive listing of terms, the researcher decided to use the concept of validity and reliability to review the quality and credibility of the study because these two concepts are most commonly used in both quantitative and qualitative research. Although often used, some confusion is created when these concepts are applied in qualitative research because the concepts of validity and reliability were developed in the natural sciences. This study, thus, will follow the broad concepts of these terms as identified by Ritchie & Lewis, that is, "validity meaning 'well grounded'" and "reliability meaning 'sustainable'" (p. 270).

Validity

Validity of a qualitative study is usually concerned with the ability of the study and the researcher to investigate what is intended and the extent to which the results are applicable to other groups within the population (Ritchie & Lewis, 2003). Especially, a researcher with a qualitative study using content analysis needs to consider the following questions to increase the study's validity: "Does the content address the problem being studied? Will the coding scheme devised for the content fairly extract the meaning from the content data?" (Baker, 1999, p. 277) Baker stated that these questions will aid the researcher to make a balance between the content being studied and content intended to be studied. By using the results of the questions to direct data collection and analysis, the researcher improved assurance that the study was well grounded in selection of the sample companies and that the data set exemplified the companies in the population.

In this study, only a small number of cases were investigated; therefore, the selection of the sample and associated data must cover the research problems as identified. Two apparel manufacturing companies (i.e., Nike, Inc., VF Corporation) were selected based on the companies' profitability as reported in *Apparel* magazine, the major trade journal for the apparel industry, and for information availability about the companies throughout the selected time span of the study. Because their financial standing in the apparel industry is significant, it is assumed that these companies have led the apparel manufacturing industry in strategy formulation and implementation, and that other follower companies have tried to emulate these companies' business strategies and performances. Thus, examining this sample of companies will be meaningful and useful in understanding the industry and in making an outline of the history for apparel manufacturing during a relevant time.

There is an implicit assumption that the findings of this study can, to a certain extent, be generalized to other situations. As industry leaders, these two firms have become model firms for the industry and perhaps the ideal concept of the typical firm in the apparel industry. Although the use of typical cases cannot guarantee that the cases will be representative, they will at least be typical; in other words, "other cases are likely to resemble it sufficiently for general conclusions to be drawn" (Henn, Weinstein, & Foard, 2006, p. 59). Although these firms may not be typical as in representative of each firm in the industry, these firms are financial and marketing leaders in the industry; have remained financially viable over a long period of time; and should be

representative of the strategies and other changes experienced in the apparel industry throughout the 30 years selected for the study.

Considering a common disadvantage of content analysis, the researcher acknowledges that the analysis is limited to the examination of recorded communications, written documents. And, the degree of validity in the measure and the coding of value orientations in the communication tools (e.g., *Apparel*) are thereby another issue of validity in this research. Regarding the quality of data for this study, multiple data sources and theories were used to achieve the study objectives. Data was drawn from the following sources: Data from government offices and statistical publications published by trade and industry associations, previous academic literature in related areas including business environment, apparel industry, and business strategies, leading business newspapers, companies' websites, and data available through the university's on-line databases. Detailed information about data sources will be provided in the next section.

Variables selected to initiate the analysis of study were confirmed in previous apparel related studies, and the research framework (see Chapter 1) was built based on previous studies in apparel and in general business research. For example, the researcher identified three environmental factors from the numerous previous studies. Using this method for developing coding, the researcher used variables that have been recognized as significant topics or issues in previous apparel research and have been readily accepted as meaningful measures within the apparel industry. In addition, a multi-method technique combining content analysis and case studies provided multiple perspectives on the research topic (i.e., the impact of environmental factors on business strategies for U.S. apparel manufacturing companies).

Reliability

Reliability of a qualitative study is generally understood by the terms consistency or sustainability and dependability, or replicablility of research (Ritchie & Lewis, 2003). Consistency or sustainability means that the results of study are meticulously or rigorously derived by the researcher. Dependability or replicability means the extent to which the research conduct is agreed to or replicated by another study (Baker, 1999; Ritchie & Lewis).

To ensure the reliability of research or to have the quality associated with potential replication, several considerations were taken by the researcher. First, internal checks regarding

the sample design and selection, systemic and comprehensive analysis of data, and equal opportunity for all perspectives were conducted by the researcher. Second, information about the research process was provided clearly in a written format so that readers can ensure that "claims are supported by adequate evidence" (Ritchie & Lewis, 2003, p. 271).

For the appropriate design and conduct of the research, the following questions were asked by the researcher throughout the research process: "Was the analysis carried out systemically and comprehensively, were classifications, typologies confirmed by multiple assessment? Is the interpretation well supported by the evidence? Did the design/conduct allow equal opportunity for all perspectives to be identified or were there features that led to selective, or missing, coverage?" (Ritchie & Lewis, 2003, p. 272). Careful notes about the research method including all these considerations taken by the researcher, and these notes and the process used by the researcher were reviewed by peer checkers. Two peer checkers, one doctoral student who has worked as a qualitative researcher and one Ph.D. experienced in qualitative research methods were used. They verified the themes of the study and confirmed the categories found in the data to ensure both validity and reliability.

Limitations

This research has several limitations. The first limitation was availability of data. In computer searchers, lack of data especially for the 1970s and the 1980s was a weakness of this study. In these decades the apparel industry was not often reported in general business literature so that the researcher was limited to apparel trade literature and any available company literature. The second limitation was the interpretation process conducted by the researcher. In this study, the researcher collected data and interpreted the meaning through a particular procedure of content analysis. Although the data analysis was based on a comprehensive literature review and a research framework, the interpretation process was dependent on the researcher's analysis skill and ability. In consideration of this weakness, the researcher has several working experiences in the apparel industry, course work in qualitative study, and knowledge about the related fields (i.e., apparel industry, merchandising, and business). These researcher skills reduced this potential weakness. Other weaknesses regarding the validity and reliability of a qualitative study

as previously discussed (e.g., generalizability of small number of sample, limited method of data analysis) are also limitations of the study.

Data Collection

Data was collected from a variety of sources. Data from government offices including U.S. Department of Labor, U.S. Department of Commerce, U.S. International Trade Commission, U.S. Census Bureau, and Office of Technology Assessment within the U.S. Congress were used. Also, the data from statistical publications published by trade and industry associations (e.g., American Apparel & Footwear Association (AAFA) formerly the American Apparel Manufacturers Association (AAMA)) were collected. In addition, previous academic literature in related areas including business environment, apparel industry, and business strategies were used. Articles from relevant trade journals and magazines (e.g., *Bobbin, Apparel Industry Magazine, Women's Wear Daily, Daily News Record, Textile Consumer*) were also collected as important data sources for this study. In addition, the leading business newspaper including *Wall Street Journal, Fortune, Business Week, The Economist*, were used for any articles relevant to the research topic, especially on business strategies in the apparel industry and information specific to the sample companies.

The form 10-K Report of each of the sample companies that is available both on the company website and through historical microfiche were investigated to analyze the business performances. Other information on the companies' websites was also collected. Additionally, the researcher searched for the data in consultation with three university reference librarians at Virginia Tech, for the areas of Business, Agriculture, and government information. Data available through the university's on-line databases (e.g., Business & Company Resource Center, Factiva, ProQuest, InfoTrac OneFile) and data in paper and microfiche versions within the library were used.

Data Analysis

As a method of analyzing data for this study, content analysis was used. Content analysis is "a social research method appropriate for studying human communications" (Babbie, 1992, p.

342) and generally written documents are examined as "a class of social artifacts (Babbie, 1992, p. 312). With the content analysis method, researchers regard a body of communication as the data set of their study and see the problems within that set (Baker, 1999). Baker stated that content analysis might be the best method when the research problems "can be addressed by a study of patterns in various forms of communication" (p. 277). Also, it is useful in identifying themes and focusing on the way the theme is treated or presented within a body of literature or other data sets (Ritchie & Lewis, 2003).

Part 1

First, the researcher analyzed the business environment of U.S. apparel manufacturing industry from 1970 to 2005. Through the content analysis method, in-depth exploration, on how business environments (i.e., globalization, technology, consumer) have changed, was conducted. A coding operation is the core part of content analysis (Babbie, 1992). Babbie suggested several coding techniques in content analysis. Researchers, first, develop the operational definitions of the key variables. All operational definitions need to contain certain attributes in them as the descriptions or classification of variables that satisfy the research purpose. Also, before the coding scheme is used, researchers "should decide what manifest or latent contents of communications will be regarded as indicators of the different attributes composing the research variables" (p. 319). Using definitions for key terms, researchers can ensure that the result of coding will be a fit to the analytical concerns. Although researchers should make preliminary operations definitions from the review of literature, in qualitative research, researchers can most likely make the most appropriate definition of a concept during the later data analysis. In other words, definitions within coding do receive adjustments throughout the qualitative research process.

Table 3 summarizes the operational definitions of the variables and the measurement of each variable for this study as derived from the review of literature. Through the analysis of the contents of the printed forms of communication covering the topics, further development and refinement of each concept were made.

Table 3. Variables, Operation Definitions, and Measurement for the Study

Interpretation process	Variables	Operational definition	Measurement
Perception and interpretation of the business environmental changes	Globalization	Growing international interconnectedness in terms of increasing economic activity across the world's countries (Hirst & Thompson, 2003)	(a) Foreign competition with quotas and tariffs, (b) current and future scene of apparel trade regarding trade policies and agreements among nations, (c) distribution of products issues originated from international trade (e.g., lean retailing)
	Technology	The use of new processes and new equipment (Ko, Kincade, & Brown, 2000)	(a) Use of new equipment, (b) implementation of new processes (Ko et al., 2000)
	Consumer	A group of people who have the money and the desire to purchase apparel products (Mueller & Smiley, 1995)	(a) Demographic change, (b) population shifts, (c) consumer movement, (d) consumer shopping behavior, (e) target market (Blackwell, 1997)
Response to environmental changes	Business Strategies	The overall plans and purposes dominating the company's decision making processes and functions (Hamermesh, 1983)	(a) Pattern of purposes and policies defining the company and its business, (b) four components of strategic choice (i.e., environmental opportunity and threat; a company's resources and their strength and weakness; personal values, aspirations, and ideals; and expectations of society), (c) company resources (Christensen, Andrews, & Bower, 1978)

Through the content of the coding terms, researchers also must refine the conceptual framework; that is, conceptualization and operationalization of the framework, should be made as the study progresses (Babbie, 1992). In this study, business environments (i.e., globalization,

technology, consumer) from 1970 to 2005 and the business strategies in response to these environmental changes was gathered and classified according to conceptual framework. Figure 4 describes the procedure of this coding. Major issues and concepts regarding each variable were coded. Through this procedure, the proposed model of the study (see Figure 2) was revised.

	Globalization	Technology	Consumer		Business Strategies
1970				→	
				→	
2005				→	
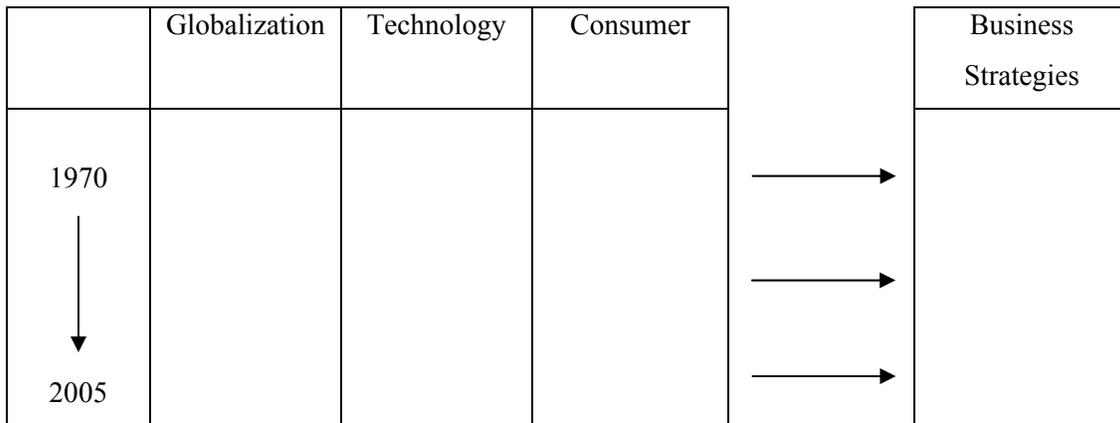
Figure 4. Coding of business environments and business strategies for data analysis Part 1

Part 2

For the second objective, the cases of the two selected apparel companies were studied based on the analyzed data for the first objective. Through case studies using archival data, the business strategies of the selected major U.S. apparel manufacturing companies were investigated. A case study of each sample company was conducted basically in the same manner as the other. Again, the researcher used content analysis as a basis for examining the data set for each company. Based on the analyzed data and the completed model from the results of data analysis for Objective 1, the business strategies of each sample company in response to the environmental changes were investigated (see Figure 5).

	Globalization	Technology	Consumer		Company Business Strategies
1970 ↓ 2005				→ → →	
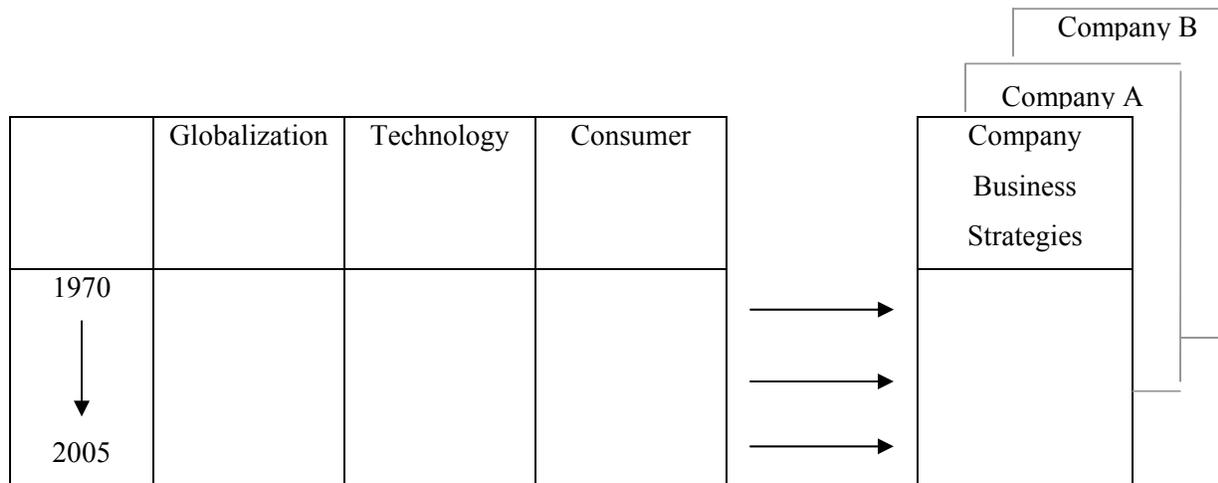
Figure 5. Case studies for data analysis to accomplish Objectives 2 and 3

Using the refined model from the results of Objectives 1 and 2, the researcher determined if patterns or themes of the business strategies across companies were found. Inductive analysis was employed in this stage. Robinson (1951) stated that inductive analysis in a qualitative study can be used to predict and explain a phenomenon by identifying essential characters of a phenomenon and generalizing them under consideration.

To complete the analysis for Objective 3, the researcher completed the code sheet (see Figure 5) illustrating the business strategies for each of sample companies in response to the environments from 1970 to 2005. Then, the researcher used a process of reasoning to explore what variables each company had in common and what changes occurred in what pattern. Through this effort, patterns of the two companies' business strategies were determined.

CHAPTER 4. RESULTS AND DISCUSSIONS

This chapter, from the data analysis results, provides an in-depth exploration of the business environment for the apparel manufacturing industry in terms of globalization, technology, and consumer; and apparel companies' business strategies that have been implemented in response to the environment. Historical analysis for these issues from 1970 to 2005 is explored. Based on the results from this part of the data analysis, the second part presents the results of case studies for the two selected apparel companies (see Chapter 5). In the second part, the researcher mainly explores how the business strategies of the sample companies have changed from 1970 to 2005.

During the data analysis, the way of organizing the contents (i.e., a strict chronological listing by origination or implementation) had to be modified several times because the researcher found that each variable was not parallel in concept across the 30 year period. Consequently, each variable could not be organized based on the same criteria. Thus, choosing the main sub-categories for each variable (i.e., globalization, technology, consumer, business strategy) progressed concurrently with the data analysis procedure. During this procedure, the researcher tried to verify whether the operational definitions of each variable, established in the review of literature, were consistent with the findings and whether the analyzed data parallel each other. After several modifications through the data collection and data analysis process, the following organization for the data subcategories was decided: (a) globalization and technology factors were organized chronologically based on the issues regarded as historically important events (e.g., NAFTA implementation, the emergence of computer); (b) the contents for the consumer factor were organized based on the three main issues identified from the literature review (i.e., the demographic shifts, changes in consumers' demands for the new products, and changing shopping channels); and (c) in the business strategies, those noted as most frequently discussed in trade journals and academic literature in the apparel sector (e.g., QR, SCM) were chosen, and the content was organized based on those strategies, which were somewhat chronological but overlapped with early introductions and latent implementation.

Globalization

From the literature review, globalization was operationally defined as growing international interconnectedness in terms of increasing economic activity across the world's countries (Hirst & Thompson, 2003). Since 1970, the business environment within the United States has experienced an increasing global competition of the apparel industry. To respond to the problems associated with this high level of competition, a variety of trade policies have continually been developed and implemented. Reviewing these trade policies that have affected the apparel industry provide evidence for understanding the globalization factor for the U.S. apparel industry. In the following section, major U.S. apparel-industry-based trade polices from 1970 to 2005 are reviewed.

Beginning of import protection

The growth of apparel production in the 1960s and 1970s led to an excess number of apparel producers in the world. This overcapacity for apparel production has made the competition among companies from many countries intense (Dickerson, 1995). At the same time that the number of apparel companies increased in other countries, the U.S. textile and apparel industry experienced difficulty with increasing imports from low-wage countries. In response to this growing competitive pressure, in the early 1960s, two arrangements regarding the trade in textiles were proposed: the Short-Term Arrangement (STA) in 1961 and the Long-Term Arrangement (LTA) in 1962. These two significant events were international regimes, which authorized restrictions on limited categories of products to avoid market disruption. This type of restriction was a concept originally developed from the discussion of General Agreement on Tariffs and Trade (GATT) in 1959 and 1960 (Cline, 1987). In contrast to the plan behind these restrictions, the controls on imports of cotton textile products (e.g., men's cotton dress shirts) resulted in the rapid import growth of an uncontrolled area (i.e., manufactured fiber products) (Dickerson, 1995; Lim, 2006). Instead of lowering imports through restrictions, imports continued to rise. Import of apparel products increased from $648 million in 1961 to $3.47 billion in 1972, which was more than a five times increase for 10 years (Cline, 1987).

To resolve these continuing problems, the Multi-Fiber Arrangement (MFA) was developed in 1973. The MFA (i.e., MFA I) was the new multilateral agreement regulating the

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rate at which textile and apparel could be traded and controlled. Under the MFA I, each member country had bilateral agreements to set import quotas specifying the imported products and the associated quantities. Dickerson (1995) stated that "the bilateral agreements are the vehicles through which the MFA is operationalized for participating countries" (Dickerson, 1995, p. 335). However, the actual impact of MFA was different in practice from the officially stated goal of MFA I (Cline, 1987; Dickerson, 1995; Lim, 2006; Rosen, 2002). The basic objectives of MFA I, written in the statement of General Agreement on Tariffs and Trade (1974), were as follows:

> The basic objectives shall be to achieve the expansion of trade, the reduction of barriers to such trade and the progressive liberalization of world trade in textile products, while at the same time ensuring the orderly and equitable development of this trade and avoidance of disruptive effects in individual markets and on individual lines in both importing and exporting countries. (p. 6)

As written in this statement, the MFA I attempted "to balance the needs of developing countries for export markets with the needs of the United States and other industrialized countries" (Rosen, 2002, p. 111). However, bilateral agreements of MFA I allowed developed countries (e.g., United States) to influence the quantity of exporting products from developing countries through the quota restraints (Cline, 1987; Dickerson, 1995; Finnie, 1992; Rosen, 2002). Regarding these controversial agreements, Cline stated that MFA I "violated the most-favored-nation principle by permitting discriminatory treatment among supplier countries[,] . . . . broke the general GATT mandate of applying tariff rather than quota protection[,] [and] . . . . established a precedent of imposing quantitative restrictions against developing countries but not against industrial countries" (p. 150).

In 1977, the renewal of MFA I into MFA II extended the original document. MFA II resulted in more restrictive and protective bilateral agreements (Cline, 1987; Dickerson, 1995; Rosen, 2002). In 1977, MFA II permitted "jointly agreed reasonable departures from particular elements of the MFA in particular cases" (American Apparel Manufacturers Association, 1982, p. 8). These changes from the terms of MFA I led to the key change in the arrangement. With this clause, which allowed reduction of quotas and denials of flexibility, importing countries (e.g., United States, European countries) influenced more power over the exporting countries (Cline; Dickerson). Specifically, the United States negotiated its bilateral agreements to reduce quota

increases at less than 6% and tighten trade controls for Big Three suppliers (i.e., Hong Kong, South Korea, Taiwan), and in 1978, the total quotas from these three countries were frozen (AAMA, 1982; Cline; Dickerson; Rosen). Although the actual value of imports rose in the 1970s, the MFA I and MFA II did provide some restriction on the growth rate of textile and apparel imports into the United States.

Continuous protectionism vs. Exponential growth in imports

In the early 1980s, U.S. imports of textile and apparel began to surge, after the substantial decline of growth rate for imports under MFA I and MFA II (Cline, 1987). Cline stated that the main reasons for this import surge were the appreciation of the U.S. dollar relative to Asian currencies and the strong recovery of the U.S. economy from the 1970s recession. While textile and apparel imports into the United States were rapidly growing, U.S. exports declined (see Figure 6 and 7); which caused the first major U.S. trade deficit since 1917 (Rosen, 2002). The growth rate of apparel imports was higher than in any previous year during this period; the value of apparel imports $7.75 billion in 1981 tripled to $22.4 billion in 1988.
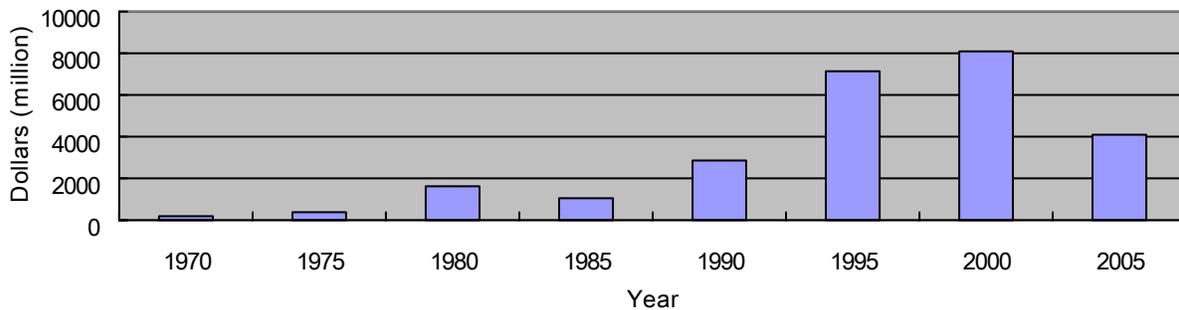
Figure 6. U.S. exports of apparel and related products 1970-2005

Note. Due to change in industry wording, the numbers were drawn from several data available in multiple year-versions of *Statistical Abstract of the United States*. The data for 1970 and 1975 were drawn from "Domestic Exports by selected commodity groups," 1975; the data for 1980 and 1985 were drawn from "Domestic Exports and Imports for consumption of Merchandise by selected SIC-Based Product Category," 1985; the data for 1990 to 2005 were drawn from "Domestic Exports and Imports for Consumption of Merchandise by Selected Product Category," 1990; and "Domestic Exports and Imports for Consumption of Merchandise by selected NAICS Product Category," 2005. From *Statistical Abstract of the United States,* by U.S. Census Bureau, 1975, 1985, 1990, 2005 Washington, DC: U.S. Bureau of the Census.

Figure 7. U.S. imports of apparel and related products 1970-2005

Note. Due to change in industry wording, the numbers were drawn from several data available in multiple year-versions of *Statistical Abstract of the United States*. The data for 1970 and 1975 were drawn from "Domestic Exports by selected commodity groups," 1975; the data for 1980 and 1985 were drawn from "Domestic Exports and Imports for consumption of Merchandise by selected SIC-Based Product Category," 1985; the data for 1990 to 2005 were drawn from "Domestic Exports and Imports for Consumption of Merchandise by Selected Product Category," 1990; and "Domestic Exports and Imports for Consumption of Merchandise by selected NAICS Product Category," 2005. From *Statistical Abstract of the United States,* by U.S. Census Bureau, 1975, 1985, 1990, 2005 Washington, DC: U.S. Bureau of the Census.

Lim (2006) noted that this highly competitive market condition led the United States to adopt strong protectionism policies especially for labor-intensive or import competing industries, such as the apparel industry. Cline (1987) criticized the impact of MFA policies in that it obstructed the growth of imports during some periods and permitted a rise in imports during other periods such as when the underlying economic pressure rose (e.g., overvalued dollar, recovery from recession). He explained this situation as follows:

Overall, the evidence is that the MFA did restrict U.S. imports in the 1970s, but it had sufficient room for flexibility that it could not prevent brisk import growth in the early 1980s when the pressure of an overvalued dollar in particular was too great for the protective apparatus to overcome. Nor can rising import growth under MFA III be attributed to a liberalization of the regime… the United States either maintained or tightened its implementation of the arrangement in this period. (p. 171)

During MFA III from 1981 to 1986, the United States tried to demand stronger import protection to overcome what some perceived as difficult economic conditions. Lim (2006) stated that the U.S. foreign policy shifted from multilateralism to protectionism and regionalism in the mid-1980s. To tighten measures that restricted imports, the United States obtained several

modifications in MFA II, when creating MFA III. First, new mechanisms (i.e., additional claims for the presumption of market disruption) were obtained to restrict surges of imports. Second, countervailing duties against supplying countries were imposed. Rosen (2002) stated that, by 1983, the textile and apparel imports from Big Three countries and other Asian countries composed more than 80% of U.S. textile and apparel imports. To respond to this heavy competition, the United States monitored the textile and apparel trade with these countries and responded to the quota violations by issuing new rules for curbing the imports from East Asian countries (e.g., Taiwan, Hong Kong, South Korea, and the People's Republic of China). Third, a protective policy called rules of origin was implemented in 1984. This policy was developed to prevent trans-shipment of products, which was a significant barrier to trade. To guard against countries taking advantage of second countries' unused quota, this rule required "substantial transformation" (Dickerson, 1995, p. 342) of products in the second countries for the products to be considered as having originated in those second countries (Dickerson; Lim, 2006). Fourth, additional bilateral agreements with Big Three countries were renegotiated (Dickerson). In 1985, the bill to proposing cut backs of imports for textiles and apparel defined the Big Three countries as major producing countries and restricted the imports from these nations to no more than 1% growth annually (Cline, 1987). These efforts provided companies within the United States some increased protection against imports. This support continued with MFA IV from 1986 to 1991.

In 1989, the United States also completed the Canada-U.S. Free Trade Agreement (CFTA) to establish the free trade between the two countries. Dickerson (1995) explained that CFTA was important because it laid the foundation for developing an open market in Western Hemisphere.

NAFTA: Transformation of North American apparel industry

In contrast to the expanding and protectionist coverage of the MFA and other trade agreements, the imports of textile and apparel into the United States continued to increase in the 1990s. The apparel imports in 1999 were more than twice than those in 1990, and the sum of textile and apparel imports also doubled between 1990 and 1999 (see Figure 8).
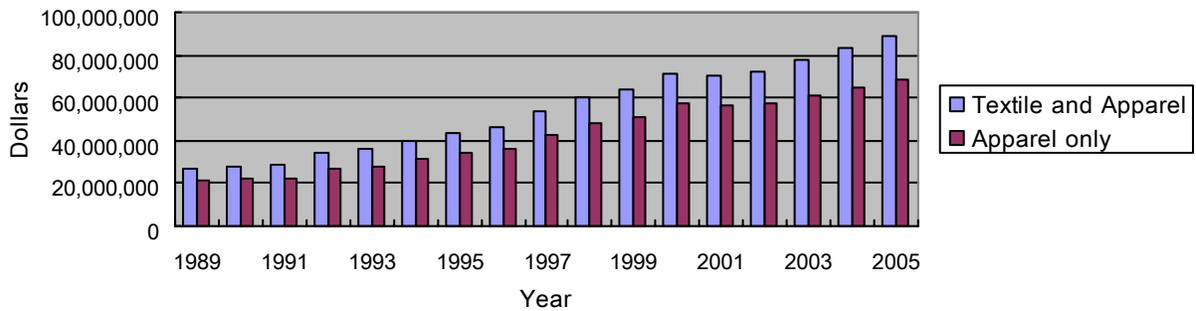
Figure 8. U.S. imports of textile and apparel 1989-2005

Note. Multiple data were drawn through the database query from the Office of Textiles and Apparel website: http://www.otexa.ita.doc.gov/scripts/tqads1.exe/catpage From "U.S. Imports of Textiles and Apparel," by Office of Textiles and Apparel, U.S. Department of Commerce.

In 1990, the U.S. government launched the Enterprise for the Americas Initiatives (EAI). EAI integrated the North American Free Trade Area with Latin American countries to create a Western Hemisphere Free Trade Area (WHFTA) to achieve economic ties between the United States and Latin American countries (Lim, 2006). The next logical step of CFTA, under the government of EAI, was the North American Free Trade Agreement (NAFTA) (Dickerson, 1995).

NAFTA, which became effective in January 1994, eliminated all quotas and tariffs on general merchandise including textile and apparel, from Canada and Mexico into the Unite States (Presidential Documents, 2001). This final removal of quotas was preceded by slow but constant removal of restrictions over several years. The objectives of NAFTA were restructuring North American firms and improving their international competitiveness (Lim, 2006). Rosen (2002) stated that "NAFTA has facilitated the growth of a vertically integrated textile and apparel complex in Mexico increasingly owned and controlled by U.S. textile and apparel transnationals" (p. 153). Because of the considerable wage difference between the United States and Mexico, the opponents of NAFTA argued about the many negative effects of NAFTA including the loss of jobs from the United States to Mexico (Dickerson, 1995; Lim, 2006; Rosen, 2002). By 1998, Mexico had exported enough textile and apparel products to make this category their fifth-largest export, and the United States received 97.5% of these exported textile and apparel products (Rosen). Overall, the United States experienced a trade deficit with both of their NAFTA partners. The U.S. net export deficit of $16.6 billion with Mexico and Canada in 1993, the year before the finalization of NAFTA, increased to $62.8 billion in 2000, six years after full

implementation of NAFTA. In addition, the United States lost 766,030 actual and potential jobs between 1994 and 2000 in correspondence with the growth of the U.S. export deficit with Mexico and Canada (Scott, 2001).

Increasing interdependency of nations

The United States continued to support regionalism in its trade policies in the 2000s (Lim, 2006). Lim stated that the U.S. textile and apparel market continued to experience high competition and corresponding financial difficulties in the early years of the twenty-first century with changing economic and political conditions. These changes included "the collapse of the high tech bubble, corporate scandals, the events of September 11th, [and] wars against Afghanistan and Iraq, recession" (p. 36).

The most influential event regarding U.S. apparel trade in the 2000s would be phasing out the textile and apparel quotas according to the WTO agreement. On January 1, 2005, all quotas among the World Trade Organization (WTO) member nations that had previously restricted textile and apparel imports into the United States and other countries through the MFA and other agreements were eliminated (Abernathy, Volpe, & Weil, 2005). This removal of import restrictions meant for the United States, that nearly 50% of the apparel imports that were currently under quota restriction until the December 2004 lost their quota protection (Abernathy et al.).

Regarding the continuing impact of NAFTA, which is considered by some authors as the most important trade agreement over the past several decades (Abernathy et al., 2005; Dickerson, 1995, Lim, 2006), there are still many controversial arguments about its benefits and disadvantages. Lim stated that the early expectation on the benefits of NAFTA included market expansion, trade diversion, decreased trading costs, and improvement in North America firms' comparative advantage and specialization. However, the rapidly growing number of imports from Mexico and Canada contributed to the U.S. trade deficit and huge job loss in opposition to the planned changes (Cline, 1987; Dickerson; Finnie, 1992; Lim; Rosen, 2002; Scott, 2001). In 2005, U.S trade deficits were $82.6 billion, which were an 8% increase from 2004; U.S. exports were $17.9 billion and U.S. imports were $100.5 billion (see Figure 9) (United States International Trade Commission, 2006). The value of imports into the United States from all countries in 2005, at $100.5 billion, was a 7% increase from 2004. This was combined with a 5%

increase in consumer spending on apparel products, which boosted demand for imports. In contrast to the import growth, Abernathy et al. stated that, between 1989 and 2002, U.S. textile and apparel production declined by 3.3% and 3.4%, respectively, and employment declined even more rapidly during those periods, accompanied by the growth of apparel imports.
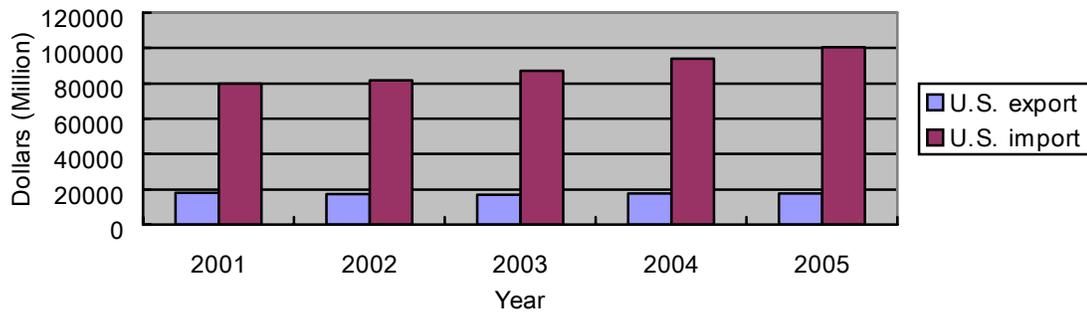
Figure 9. U.S. exports and imports of textiles and apparel 2001-2005

Note. From "Shifts in U.S. Merchandise Trade 2005: Textiles, Apparel, and Footwear," by United States International Trade Commission, 2006. Retrieved January 15, 2007, from http://www.usitc.gov/tradeshifts/2006/tradeshifts_textiles.htm

In 2002, the United States negotiated the Central American Free Trade Agreement-Dominican Republic (CAFTA-DR). This agreement was designed to eliminate the trade barriers and to facilitate the movement of goods and services in the Central American nations (i.e., Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua) (Abernathy et al., 2005; Lim, 2006; Office of the United States Trade Representative, 2006). The Office of the United States Trade Representative reported that CAFTA-DR will eliminate tariffs on 80% of the U.S. exports of consumer and industrial products to the participating countries, with the 10-year phase out. Lim stated that a concern about CAFTA-DR is that "Central America may become the entry port of Chinese textiles to the U.S. market as input materials used in the region's assembled apparel goods" (Lim, 2006, p. 23).

This section on globalization presents the historical review of major trade policies, concerning the U.S. apparel industry including the MFA and its phase-out, multilateralism, regionalism, NAFTA, and US-CAFTA. Table 4 summarizes these trade policies from 1970 to 2005.

Table 4. Major Trade Policies on U.S. Textile and Apparel Products 1970-2005

Year of passage	Trade policy	Countries involved	Objectives of the policy
1973	Multi Fiber Arrangement (MFA)	United States, EEC, developing countries	1. To reduce barriers of liberalization for world trade (multilateral agreement) 2. To avoid market disruption for both importing and exporting countries (bilateral agreement)
1977-1981	MFA II	United States, EEC, developing countries	1. To permit more restrictive bilateral agreements on textile and apparel imports 2. To provide framework for the textile import control 3. To develop new bilateral agreements with Big Three countries
1981-1986	MFA III	United States, EEC, developing countries	To provide increased protection
1986-1991	MFA IV	United States, EEC, developing countries	To provide more extensive and more restrictive protection (additional fiber coverage)
1988	U.S./Canada Free Trade Agreement	United States, Canada	To eliminate trade duties and quota
1991	Andean Trade Preference Act (ATPA)	United States, Bolivia, Colombia, Ecuador, Peru	To eliminate the trade barriers in Andean countries
1994	North American Free Trade Agreement (NAFTA)	U.S., Canada, Mexico	To liberalize trade in North America (elimination on tariffs and quotas on textile and apparel products)
1995	Agreement on Textiles and Clothing (ATC)	WTO nations	To phase out the MFA (quota system) and allow for free trade of textile and apparel products across multiple countries

Year of passage	Trade policy	Countries involved	Objectives of the policy
1973	Multi Fiber Arrangement (MFA)	United States, EEC, developing countries	1. To reduce barriers of liberalization for world trade (multilateral agreement) 2. To avoid market disruption for both importing and exporting countries (bilateral agreement)
1977-1981	MFA II	United States, EEC, developing countries	1. To permit more restrictive bilateral agreements on textile and apparel imports 2. To provide framework for the textile import control 3. To develop new bilateral agreements with Big Three countries
2004	U.S.–Central America – Dominican Republic Free Trade Agreement (US-CAFTA)	United States, six Central American countries	To eliminate the trade barriers and facilitate the movement of goods and services among the Central American nations and the United States

Trade agreements have regulated or encouraged the textile and apparel business among involved countries and have generated many complex issues. As reviewed in the previous literature, many countries have increasingly played bigger roles in the production aspect of the textile and apparel business (Shim, 1998). This increasing global business has continued to disperse apparel manufacturing, previously done in the United States, to lower wage countries including China, India, and many countries in South America (Kunz & Garner, 2006). Consequently, from 1970 to 2005 the United States experienced "the transformation of a traditional, locally based, production-centered industry into a creative and knowledge-based feeder for a consumer-centric retailing business" (Cooklin, 2006, p. ix). The international interconnectedness through increasing economic activity across the world's countries, or globalization, as described by Hirst and Thompson (2003) is clearly occurring in the textile and apparel industry and within the United States. Increasing globalization in the U.S. apparel industry, with declining domestic production and increasing import pressure, have shaped the global economy and the U.S. apparel industry in a borderless market.

Technology

In the review of literature, technology was operationally defined from a previous study of the apparel industry as "the use of new processes and new equipment" (Ko et al., 2000). This definition includes the process (e.g., methods for shared information, product planning with customer, and receiving point-of-sale data) as well as the equipment (e.g., computers for design and automated sewing equipment) (Kincade et al., 2001). Kincade et al. stated that the technology can help apparel manufacturers to target the products for the market, to produce the more appropriate and timely products, and to deliver the products at the right time to retail. This section explores the technologies used in the apparel manufacturing industry from 1970 to 2005.

New production technologies: Productivity improvements

Office of Technology Assessment (1987) reported that the forces (e.g., globalization resulting in high levels of imports) leading to changes in the apparel industry began to greatly influence the industry from the early 1970s. In a report on technology in the apparel industry, AAMA (1991) stated that, until the 1960s, technology primarily meant cutting and sewing, and the focus of technology was on the speed of sewing and cutting. Owners and managers in the industry, at this point, began to realize the need to upgrade to the use of modern equipment, such as automatic opening rooms; new knitting machines; and computerized finishing, cutting, and sewing equipment. This change was mainly a result from the competitive threat of low labor costs available for production in developing countries in comparison to higher cost labor in the United States (Kurt Salmon Associates, 1977).

Kurt Salmon Associates (KSA) (1977) identified the major problem that the apparel industry faced in the 1970s as the growing numbers of imports originated primarily from developing countries with low cost labor and their increasing access to the U.S. market. KSA stated that the advantages of the U.S. apparel industry with regard to quality, fashion, and delivery responsiveness no longer existed at this time because the wage levels of the developing countries offset this advantage. Emphasizing the importance of automation of the manufacturing process, KSA stated that "the achievement of automation is the only hope the U.S. apparel industry has for successfully competing with imports from developing countries" (KSA, p. 125).

Thus, the industry, as reported by the major U.S. trade association - the American Apparel Manufacturers Association (AAMA) (1991), focused on automating all manufacturing stages to achieve economies of scale. The entire process from initial design through cut and sew to final inspection was operated to lower manufacturing costs and to improve product quality (AAMA).

Mechanization, one aspect of automation, is defined as "the use of technology to replace manual labor (in any form) to some degree" (KSA, 1977, p. 126). Consultants at KSA predicted that introducing technology into the multi-step process of apparel manufacturing had been and would be accomplished operation by operation. KSA identified the degree of mechanization as four groups: non-automated operation, semi-operational automation, full operational automation, and full sequential automation. Details of each stage will be discussed in the business strategy section. Most mechanization introduced in the 1970s was for the sewing operation; meanwhile, preparation for sewing still remained as manual tasks. The degree of mechanization, and thereby technology implementation, depended on the type of sewing. Most types of sewing at this time were performed according to the degree of semi-automation and full operational automation. Moreover, the trend that big companies with big capital got bigger continued because these U.S. apparel manufacturers with a higher level of technological investment could improve their competitiveness with imports. Stating that only big companies can afford this capital expenditure, KSA noted that the very small manufacturers for high style clothing (i.e., a niche market) could probably survive without technology.

In the 1970s, many apparel companies realized the need for technology, but their internal capacity for buying and using the new technology was limited. KSA (1977) indicated that the organizational capability to manage the changing technology and to serve the changing requirements was much more important than the technology itself. Proposing the role of apparel technology in the survival of the apparel industry, KSA quoted the opinions sent to the editor of AAMA Apparel Research Journal as following:

> That [low wage differential for the U.S. apparel industry with manufacturers in developing countries] leaves technology! And management! There is a far greater difference from company to company in the way current technology is applied and utilized than there is in the technology itself. (p. 122)

Some researchers reported that the apparel industry could achieve a significant competitiveness by operating new plants and using new equipment in the 1970s (Ghadar, Davidson, & Feigeroff, 1987). Ghadar et al., on behalf of the National Chamber Foundation, stated that the goals of this effort were: increasing manufacturing efficiency and versatility, reducing production costs, and improving the quality of fabrics. They also stated that this accomplishment of the apparel industry in the 1970s was possible because of the newer technology, which permitted apparel production with shorter start-up times.

The National Academy of Engineering (NAE) and National Research Council (NRC) (1983) noted that the new technology in the late 1970s benefited the apparel companies to improve their international competitiveness. However, this benefit from adopting single technological development was not sufficient because there was a rapid spread of new technology world wide. Moreover, apparel manufacturing still remained a more labor intensive and less capital intensive industry than other segments of the FTAR complex. Members of the NAE and NRC indicated that this resulted from several factors including constantly changing fashion, multiple fabric weights, and many separate sewing operations for a single garment. This nature of apparel manufacturing made automation of key processes more difficult. Thus, NAE and NRC concluded that technological development must be accompanied with technological adoption for companies to have a competitive edge in the industry.

The emergence of computer

In the 1980s, the level of textile and apparel imports into the United States dramatically rose, and this surge of imports undermined much of the technology progress that the U.S. apparel industry achieved in the 1970s (Ghadar et al., 1987). Ghadar et al. stated that the rise in the dollar value and implementation of the trade policies (e.g., MFA) in this period made conditions worse for the U.S. apparel industry. According to the Ghadar et al.'s report, in order for the U.S. apparel industry to restore its competitiveness against low cost imports, the improvement of manufacturing performance was essential, which included the adoption of more technology. They also noted that although the employment in the industry declined and the performance rate slowed, the effort to improve the productivity in the U.S. apparel industry was exceeding in this difficult time.

In the 1980s, the introduction of the computer with multiple applications moved the emphasis of technology in the apparel industry from production only to all other operations throughout the manufacturing processes, including preproduction activities and post production sales (see Figure 3 for the basic steps in the manufacturing process) (AAMA, 1991). AAMA reported that the use of the computer greatly changed the process of sewing and managing plan operations, although the focus of the U.S. apparel industry was still on efficiency of production. The use of Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) slowly became apparent in some companies within the U.S. apparel industry (Byrne, 1995; Collier & Collier, 1990). Collier and Collier stated that CAD and CAM technology had already been applied successfully in other industries, such as electrical and mechanical engineering, but had not been fully joined together in the FTAR industry. Nevertheless, CAD and CAM significantly influenced the apparel manufacturing process from design to cutting and sewing at this time (Byrne; Collier & Collier; Gilbert, 1995).

In many of the preproduction applications of the computer, CAD is used for color and design work. In the area of apparel design, a two-dimensional mapping technique was first used in the 1980s to visualize the pattern in fabrics and to alter the appearance of designs, showing all of the considered combinations (Collier & Collier, 1990). It also displayed the design image on a screen, produced high quality photographs, and produced the copies of displays on plotters with three-dimensional sketching and styling techniques. These functions reduced the cost of the whole process, particularly the preproduction steps, considerably (Collier & Collier). Overall, CAD changed the entire process of fabric preparation and other preproduction steps from the creative design to pattern making and cutting (Byrne, 1995).

Later in the mid-1980s, the Quick Response (QR) management system was introduced in the apparel industry for more competitive positioning (AAMA, 1987; Kincade, 1995; Martin, Horridge, & Craig, 1998). Adoption of QR involved the implementation of numerous new technologies including CAD, bar coding, and computerized sewing processes (Kincade; Ko, Kincade, & Brown, 2000). QR was first discussed at the Textile Apparel Linkage Council (TALC) meeting in 1985. In the late 1980s, the pilot project was implemented to measure its effectiveness, and financial benefits were confirmed (AAMA; Office of Technology Assessment, 1987). However, the actual implementation level of QR at this time was low (Ernst & Young, 1990; Kincade & Cassill, 1993). Kincade and Cassill stated that many apparel manufacturers did

not immediately change their traditional systems for QR operation, and Ernst and Young stated that by the end of the 1980s only 50% of apparel manufacturers had implemented a QR program. More detailed technologies of QR will be discussed in the next section.

Technologies for logistics and communications

A number of environmental changes brought about increased implementation of Quick Response (QR) in the apparel industry in the 1990s. First, the cost of technology was down relative to its earlier costs, and the accessibility of technology for small and medium sized companies was much higher than the previous decade (Byrne, 1995). Second, global outsourcing, which had continuously increased from past decades, was boosted through changes in the MFA and the implementation of NAFTA especially in South Asia and Latin America (Gereffi, 2002). In conjunction with these previously discussed environmental changes, the growing power of retailers was another force driving the apparel industry to use technology. Finally, retailers through growth, mergers, and acquisitions, began to gain influence on the manufacturing industries that serviced them and extended their relationships with suppliers including apparel vendors through technologies used in QR (Byrne; Kunz & Garner, 2006; Mueller & Smiley, 1995; Rosenau & Wilson, 2001).

Although QR is considered as an overall business strategy rather than a specific technology (AAMA, 1987), it requires various technologies for actual implementation of QR. Kincade (1995) identified the 17 technologies used in QR operations, according to a manufacturing area, through literature review and case study interviews. Those technologies were grouped in the following three categories: (a) technologies used in the linkages between textile and apparel manufacturers (i.e., reduction in inventory, small lot fabric orders, EDI confirmation with suppliers, shade sorting of fabric rolls, reduction of wait time, elimination of redundant tests), (b) technologies used in activities within the apparel production (i.e., flexible manufacturing, automated sewing operations, scan bar coding of fabric, overhead conveyor for handling, garment dyed products), and (c) technologies used in the linkages between apparel manufacturers and retailers (i.e., garment design – CAD, bar coding of finished garments, product information with customer, EDI confirmation with customers, receive POS information, forecasting with retailer).

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The philosophy of QR was extended to the strategy of Supply Chain Management (SCM) by the end of the 1990s (Lee, 2000). The apparel industry began to realize that the most important thing in providing advanced service to consumer is communications within the organization and their internal system rather than the utilization of an individual technology. This thought changed the perspective of research and development of technology from "the concept of highly capital intensive, fully robotized manufacturing centers . . . [to] . . . the implementation of more flexible, modular, team-based approaches to the organization and use of the new technologies" (Byrne, 1995, p. 115).

Technologies for logistics and communications between supply chains used in this time included computer controllers (e.g., computer, microprocessor), information technology for customized garment design and manufacture (e.g., advanced customer oriented information techniques), and Integrated Service Digital Networks (ISDN) for fiber optic and satellite communications (Byrne, 1995). Byrne stated that ISDN exchanged a large amount of data along the supply chain from suppliers to the point of sale. He also stated that cheaper air transport made possible the quick supply of products that were customized in one country and sold in another country.

Byrne (1995) stated that a significant change in operations was made in the preproduction stages of the apparel manufacturing process in the 1990s. He noted that modernized technologies (e.g., CAD, CAM) were incorporated with designing, maker making, and cutting processes, which facilitated companies to respond faster and better to the market. In addition, new market requirements, flexibility for QR (i.e., small orders in various styles), and semi-automation for high productivity of a few basic or sub-assembly operations (e.g., attaching pocket or collars, hemming) stimulated the incremental development of new sewing technologies (Byrne).

The era of information technology

Although new technologies helped U.S. apparel manufacturers become more productive and faster in supplying products, the competitive pressure from low wage imports has caused many U.S. apparel manufacturers to close. The remaining U.S. firms are now using technologies to manage global supply chains (Cooklin, 2006). The new products displayed in the Tech Conference, held annually by *Apparel* magazine, show what categories of technologies are

recently of concern by U.S. apparel companies. Of the 2002 Tech Conference, DesMarteau (2002) reported the major trends of apparel technology as the following:

> Competing globally. Collaborating. Going digital. Getting goods to market faster. When it comes to design, product development and information technology, these were the key theme . . . (p. 34)

The categories in the 2004 Tech conference were reported as design and development, information technology, sourcing and manufacturing, transportation and logistics, and retailing (DesMarteau, 2004b). Numerous technology tools have been continuously developed, but the main trend of apparel technology remains focused on managing all stages of production in a real-time base, from product design to shipment and delivery to final consumers.

Kusterbeck (2004) reported that implementing a Web-based platform for design and pattern work became a principal requirement for U.S. apparel companies because this type of software integrates product design with overseas product development. New software, such as Product Development Management (PDM) and Product Lifecycle Management (PLM) are becoming essential technology in U.S. apparel companies that are doing global business (DesMarteau, 2002; DesMarteau, Speer, & Haisley, 2002; Kusterbeck; Seibert, 2005, Tait, 2001). DesMarteau defined PDM as "strategies and solutions related to product development and pre-production processes, including approaches and technologies that streamline these processes and the ways in which conceptual and product data is communicated throughout the supply chain" (p. 26). Product data stored and handled in a PDM system is tracked and managed in a PLM system. PLM software "tracks deadlines, manages design files, and streamlines communications among domestic design rooms and offshore production offices" (Seibert, 2005. p.22). Seibert stated that PDM and PLM bring great agility in product development to apparel companies by managing all the detailed tasks, so that the companies can focus on creative design.

This section overviewed the technologies used in the U.S. apparel industry from 1970 to 2005. Table 5 summarizes the specific technologies used in the industry in the manufacturing process from design to sewing.

Table 5. Major Technologies in U.S. Apparel Industry 1970-2005

	Design	Pattern making	Spreading & cutting	Sewing
1970 ↓ 2005	Three dimensional (3-D) sketching and styling technique (Office of Technology Assessment, 1987) Computer Aided Design (CAD), Computer Aided Manufacture (CAM) (Byrne, 1995; Office of Technology Assessment, 1987) PDM (Product Data Management), PLM (Product Lifecycle Management) (DesMarteau, 2002; DesMarteau et al., 2002; Kusterbeck; Seibert, 2005, Tait, 2001)	Computer technologies applied Two-dimensional (2-D) mapping technique (Collier & Collier, 1990) Ink jet technology (Byrne, 1995) Body scanning 3-D pattern development	Tension-free spreading, self powered devices, electric knives, electric-eye edge control, catcher blades (Gilbert, 1988) Computer-driven knives, lasers, water jets (Office of Technology Assessment, 1987) Automatic placing of pattern pieces Lasers, water, and plasma jets (limitedly used), laser technology (widely used in detecting fabric fault and managing systems) (Byrne, 1995) Programmable spreading Powered scissors, computerized cutting via CAM system (Cooklin, 2006)	Programmable sewing, embroidery and monogramming, pocket setting, new shirt mechanization, blindstitch hemming, insert elastic and hem waistband, attaching strips to track suites, belt loops attaching (Cooklin, 1997; Office of Technology Assessment, 1987) Pre-programmable using microprocessors or responding to barcode or smart card signals sewing machine (Byrne, 1995) Sewing machine with a sensor technology and fabric manipulation, three-thread overlock with a microprocessor, automatic seaming machine (Byrne, 1995; Cooklin, 2006)

From 1970 to 2005, technology implementation became an essential part of the U.S. apparel business with increasing globalization and growing consumer power, which brought about the changes in production alignment of partnership and consumer market. Multiple retail channels involving new technologies (e.g., Internet) made competition stronger with apparel companies having to compete not only with multiple companies but also with multiple distribution channels. These changes mean that the technologies implemented by U.S. apparel companies have become more and more important as the technologies are used to managing globally distributed supply chains. As a result of this data analysis on technology in the U.S. apparel industry, technology is redefined as both the equipment and technical method for production of apparel products and the system for distribution and selling of finished apparel products

Consumer

The apparel industry has strived to attract consumers especially starting from the decade of 1960s and going to 2005 and beyond and has been getting more concerned about their consumers over the more recent decades (Kim & Kincade, 2005). Because the ultimate goal of the apparel industry is to provide products for consumers, considerations of consumers have always been at the center of decision making processes of the apparel business (Gunasekaran, Patel, & Tirtiroglu, 2001; Mueller & Smiley, 1995). In this section, consumers, operationally defined as a group of people who have the money and the desire to purchase apparel products (Mueller & Smiley, 1995) were explored as one of the major environmental factors that have affected the apparel industry. Data was analyzed based on the following three issues about consumers, identified in Chapter 2: (a) demographic shifts, (b) change in consumers' demands for new products, and (c) changing shopping channels.

Demographic shifts

Population growth in the United States during the 1960s and 1970s noticeably slowed; this era was marked as a "zero population growth period" (Mueller & Smiley, 1995, p. 59), with the lowest birth rate in the country's history. The 1980s, however, were characterized by a "baby boomlet" (p. 59) because a large number of Baby Boomers began to have children. These children by the late 1980s were called the echo generation of the Baby Boomers, whose shopping

and patronage behavior greatly affected the apparel market (e.g., increase in children's wear) (Daddi, 1989; Rudie, Newman, and Bobbin Consulting Group, 1987). Slow population growth continued into the 1990s and the 2000s (see Figure 10); this trend is expected to continue to the year of 2030 or beyond (Mueller & Smiley). Being aware of the slow population growth rate, Mueller and Smiley predicted that population expansion, although important in previous years, would not be an important determining factor of future fashion business for a while.
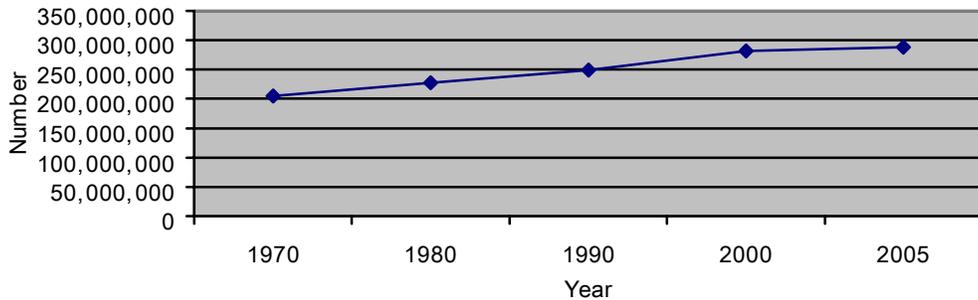
Figure 10. U.S. population 1970-2005

Note. From "Historical National Population Estimates," by U.S. Census Bureau, 2007. Retrieved July 26, 2007, from http://www.census.gov/popest/archives/

While the population growth rate has slowed, life expectancy is getting longer (Shrestha, 2006). The lower birth rate and the increased life expectancy have significantly affected the U.S. population age (Mueller & Smiley, 1995). The median age of the U.S. population has continuously increased since the 1970s (see Figure 11).

	1970	1980	1990	2000	2005
U.S. median age	28	30	32.8	35.3	36.2
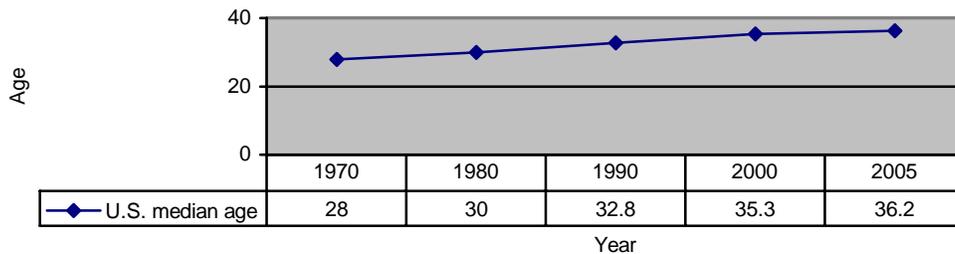
Figure 11. U.S. population median age 1990-2005

Note. The number for 1970 was drawn from "Population, by sex, residence, and median age: 1790 to 1973" from *Statistical Abstract of the United States* 1954, 1974. Washington, DC: U.S. Bureau of the Census. The numbers from 1980 to 2005 were drawn from "Resident Population by Age and Sex: 1980 to 2005" from *Statistical Abstract of the United States* 2007. Washington, DC: U.S. Bureau of the Census.

Norum (2003) stated that the one of the biggest reasons for this rise in median age or the graying of America is the aging of Baby Boomers. This shift in age is important because Baby Boomers have reached their peak in earnings and now have the biggest purchasing power among consumer groups (Misonzhnik, 2006; Norum), which can considerably affect the apparel industry (Dickerson, 1995; Norum). Including the Baby Boomers, there are in the 2000s four major age cohort groups, which largely affect the apparel industry in the United States; those are Senior, Baby Boomer, Generation X, and Generation Y (Carpenter & Moore, 2005). Table 6 summarizes the characteristics, core values, and shopping behaviors of these four age cohort groups. Although different in many characteristics, each of the four groups shares experiences and events, so they are likely to have similar attitudes and behaviors (Carpenter & Moore; Norum).

Table 6. Summary of Major Age Cohort Groups

Cohort group	Year born	Characteristics	Core values	Shopping behavior
Senior	1933 to 1945	Concerned with health and financial independence	Respect for authority; Adaptive personality; Realistic attitude	Pay reasonable price for products; value quality highly; frequent department store
Baby Boomer	1946 to 1964	Fear of technology; High divorce rate	Realistic attitude; Individualistic attitude; Concern for personal fulfillment	Very sensitive to sales promotions; have brand loyalty; consider product assortment, convenient locations, and price competitiveness
Generation X	1965 to 1976	Wealthy; childless; embrace change; prefer living in downtown areas	Pessimistic; individualistic; independent; fear of commitment; diversity	Spend more on necessary items than luxury goods; have skeptical buying habits
Generation Y	1978 to 1994	The most racially diverse generation; interested in environment; politically active; value education highly; unrealistic; bored easily; highly knowledgeable in technology	Optimistic; globalization	Brand conscious; perceive shopping as a fun experience; value products with cool images

These age cohorts, which can be considered as consumer segments from a marketing perspective, often have different perspectives and preferences for apparel products, and their apparel purchase behavior is also different. In the 2000s, the number of people over 65, the Senior group, has been gradually increasing, and, by 2005, the number of people in this cohort group reached 35.1 million, representing 12.4% of the U.S. population (Shrestha, 2006). Baby

Boomers, whose age ranged from 40 to 60 in 2005, represented 26.3% of the U.S. total population (Misonzhnik, 2006). Misonzhnik stated that the Baby Boomers' purchasing power is $2.1 trillion annually. This is more than seven times the sum of the purchasing power of both Generation X and Generation Y. Noticing the rapid aging of population and the increasing importance of these older generations or cohort groups, Behling (1999) stated that the apparel industry could set their business strategies to refocus on this demographic change. The industry could consider designing and manufacturing of the clothing for a more mature market rather than the younger generation, which as a cohort group has been gradually decreased in number.

Generation X consumers, whose age in the 2000s ranges from 31 to 42, have $125 billion in annual buying power (Misonzhnik, 2006). Slight differences in their apparel purchase behavior or attitude were found across research studies, but in general, this group is characterized as realistic shoppers (Carpenter & Moore, 2005). One magazine article reported that Generation X was the only age cohort to spend less on apparel in 2005 than spent in the years previous to 2005 (Seckler, 2005). Compared with Baby Boomers, Generation X consumers shop apparel more on impulse (Anonymous, 2005). Generation X (47%) shoppers are also reported to have loved or enjoyed apparel shopping more than Baby Boomers (36%) (Anonymous, 1999a).

Generation Y is currently the youngest group among the consumer segments that are considered as major cohorts in the industry. They have an annual buying power of $172 billion (Misonzhnik, 2006) and spend $40 billion on apparel products (Anonymous, 1999b). By 2005, this group rose to 72.7 million consumers, rivaling Baby Boomers in population size of the group (Misonzhnik). Although their purchasing power is less than that of Baby Boomers, Generation Y has a huge influence on the apparel industry (Anonymous). *Textile Consumer* research found that the Generation Y consumer (49%) prefers to shop apparel products rather than other categories of products compared with shoppers in Generation X (38%) and Baby Boomer (34%) groups. In addition, the frequency of their shopping for apparel was twice of Baby Boomers, which was 2.6 times per month. Generation X, in contrast, is much more concerned about other's opinion on their clothing than other age groups (Anonymous).

While these research results show a cross section of current consumers in the United States and their shopping behaviors, much historical evidence was found that the Baby Boomer generation has had specific characteristics as a consumer group prior to the 2000s. Rosenau and Wilson (2001) noted that, in the 1960s, the new demands of Baby Boomers, who at that time

were reaching their teenage years, created new demands for the apparel industry. Baby Boomers, the younger generation at that time, demanded lower-priced but fashionable apparel, and this demand significantly affected the apparel industry including its transformation to a consumer-driven industry. To serve Baby Boomers, the industry started to provide new products (i.e., less formal clothing, designer brands at lower price points), and new formats of retailers (e.g., designer brand, discount department store) also emerged. A *Bobbin* magazine article in 1969 depicts the new, consumer-driven view of the apparel business as following:

> The key to profits today is market acceptance. You have to produce what people will buy now, today, and do so in a way that at least brings you your proper profit margin, regularly… What do people buy? They buy fewer staple or unchanging garments and more and more styled wear… How can you compete?... You must make styled wear . . . (as cited in Rosenau & Wilson, 2001, p. 12)

Later in the 1980s, more affluent Baby Boomers began to spend their money on their children's clothing (Rudie et al., 1987). At this time, children's wear manufacturing was an area where new profits were expected, and with the fascination of the Baby Boomers with designer products, manufacturers explored the viability of higher priced children's wear. Additionally, the trend that Baby Boomers placed high priorities on their children's needs and wants created new demands for traditional or classic looks and higher percentage cotton fabric (Daddi, 1989). Daddi reported that increased interest in traditional looks were reflected in the prints and styles of children's wear, and the movement toward more cotton in children's wear fabrics was evident with the increased sales of high percentage cotton children's wear.

Change in consumer demand for apparel products

Changes in the spending power of consumers have constantly affected the U.S. textile and apparel industry over the decades. The power of the consumer and the reciprocal nature of the relationship between the consumer and the retail environment are delineated by Kim and Kincade (2005) in their study of retail evolution. Peter and Olsen (1999) stated that during the 1960s and 1970s U.S. apparel consumers were willing to buy the products that the U.S. apparel companies produced rather than expressing their own demands to the industry. With the high demand and low production levels for many consumer products, U.S. consumers also accepted those products and services without much expectation.

However, since the 1970s, the consumer to company relationship has changed; consumers began to be considered as an important factor in business by the U.S. companies. Peter and Olsen (1999) stated that this change was, in part, a result of the changes in consumers' awareness of inferior product quality produced in the United States compared with imported products. U.S. consumers began to realize that the U.S. products that they had bought had inferior quality and value, compared with foreign products, especially many Japanese or Korean products that started to be introduced in the U.S. market at this time.

Consequently, consumers began to demand improved products and achieved more dynamic relationships with the apparel industry through some business efforts of U.S. companies to emphasize the importance of consumers. Increasing consumer and marketing research, which were generated by changes in the U.S. companies' perspectives about consumers, provided the foundation for U.S. consumers to gain more power to influence the industry than previous decades. The transition of perspective by manufacturers and retailers about the value of the consumer and his/her behavior in the 1970s is well described in the book by Hicks, Pride, and Powell (1977):

Historically, the consumer has been described in a number of ways simple, apathetic, stupid, predictable, and easily manipulated. Today's consumer is different! He or she is complex, better educated than ever before, unpredictable, active, and sometimes hostile. Consumers are major environmental forces which business must deal with effectively. (p. 104)

Increased consumers' interest in forcing change by using their buying power can be illustrated with changes in their expenditure of apparel and sales of apparel over the decades. Although tracking consumer expenditure of apparel products from 1970 to 2005 is difficult because of the changing industrial codes for government data, several relevant data (e.g., personal expenditure on clothing and accessories, consumer apparel expenditure) confirmed that U.S. consumer expenditure of apparel has continuously increased since 1970. Figure 12 also shows the average annual expenditure of all U.S. consumer units of apparel and services increased from 1984 to 2004, although it was sluggish in the 1990s reflecting the economic slump in the 1990s (Dickerson, 1995). On the other hand, household expenditure for apparel has declined over the decades. Dickerson stated that this decline resulted from the following:

consumer expenditure of other products (e.g., housing, medical service) increased, and the price of apparel relative to the prices of other products declined due to increased imports of apparel with lower costs than those of domestically produced products. With these changes in consumer demand, apparel sales continuously increased from 1970 to 2005 (see Figure 13).
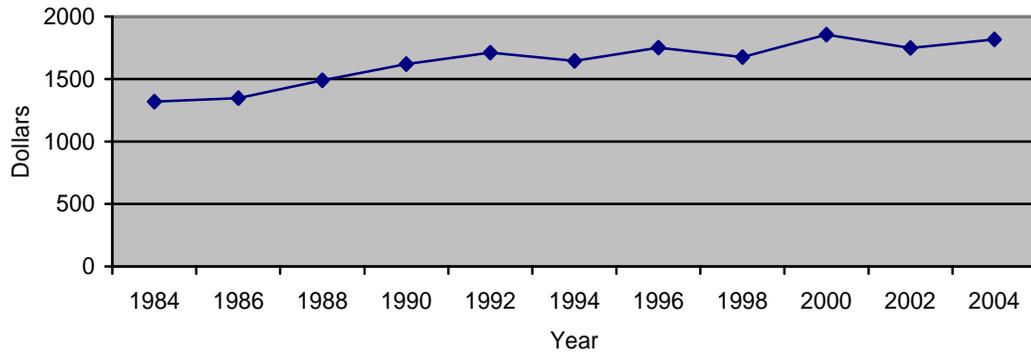
Figure 12. Average annual expenditure of all U.S. consumer units of apparel and services consumers 1984-2004

Note. From "Average annual expenditure of all consumer units by type of expenditure", Bureau of Labor Statistics, U.S. Department of Labor, 2004.
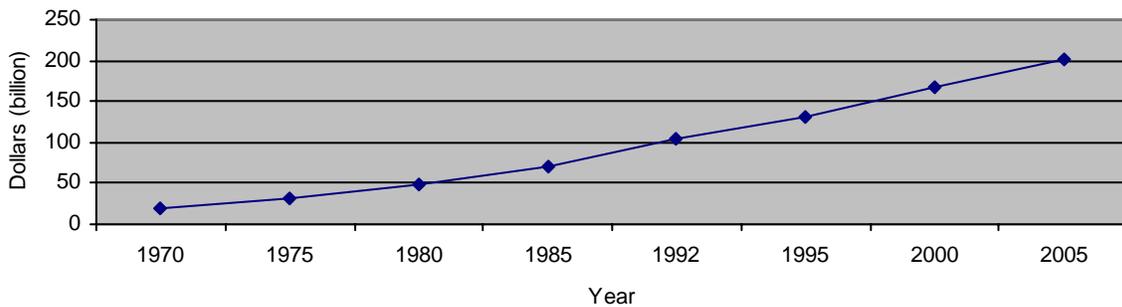
Figure 13. Retail sales of apparel 1970-2005

Note. "Retail trade sales" from *Statistical Abstract of the United States* 1987, 2006. Washington, DC: U.S. Bureau of the Census.

Other factors are also important when considering changes in U.S. consumers' demands and expenditures for apparel and in their market power. Over the decades, U.S. consumers have gained power in the industry for several reasons. Moran and McCully (2001) indicated the

following reasons for this growing consumer power: increasing affluence, changing demographics, technological innovations, and changing tastes and lifestyle. They stated that increasing real income encouraged U.S. consumers in spending more on discretionary items (e.g., home furnishings, motor vehicles). Demographic changes including increasing numbers of elderly consumers with higher home ownership rates and increasing ethnic diversity also contributed to the expenditure growth of U.S. consumers. In addition, technological innovation created numerous new product and service categories that people wanted to buy (e.g., television, computers, Internet services, video rentals). U.S. consumers' changing tastes and lifestyles also affected consumer spending patterns. Increased affluence and range of activities for U.S. consumers created many new kinds of demands such as restaurants, child care service, various kinds of vehicle, and different types of clothing. Moreover, increased employment and education of women encouraged women consumers, who shopped most for apparel for men, women, or children, to demand more products and shopping venues.

Consumer shopping channels

Consumers have continuously shaped the retailing industry, influencing it to develop new retail formats and business. At the same time, the changes in retailing also have led the consumer to change (Dunne & Kahn, 1997). This reciprocal relationship between consumers and retail channel has been indicated by many researchers (e.g., Dunne & Kahn; Johnson et al., 2006; Kim & Kincade, 2005; Steidtmann & Kutyla, 2006).

Dunne and Kahn (1977) contended that two consumer-changing factors affect the changes of retailing. The first factor is the consumers' growing willingness to trade their money for convenience as they are more time-pressed. Consumers consider not only the price of products but also their real costs such as their time and effort when they shop. Their point is, thus, that if a retailer fails to satisfy either of these consumer values for costs (i.e., time and effort), newer formats of retailer using newer technology (e.g., Internet) can emerge to compete with existing retailers. The second consumer factor is an increased level of consumer sophistication. Consumers are becoming more knowledgeable about products by obtaining information from many sources, not solely from retailers; consequently, providing right products that consumers really want become more important to retailers. Increasing consumer sophistication means to retailers that some of the traditional perceptions–for example, value and price meaning the same

thing to all consumers–are not accepted by consumers any more. Thus, only retailers, understanding what good value is from the consumer's perspective, can survive in the market (Dunne & Kahn).

With this in mind, especially in the apparel industry, the interaction between consumer behavior and retail channel has been very important to marketers (Goldsmith & Flynn, 2004b). Looking back at the history of the apparel-retail channel, consumers traditionally have shopped in brick-and-mortar stores, such as department stores and national chains. In the 1960s and 1970s, most of the apparel sales were actually made in department stores (Abernathy, Dunlop, Hammond, & Weil, 1999). However, later in the 1980s, these conventional department stores began to decline dramatically in sales. Economic recession in this period contributed to this decline of the traditional retail channel (Anonymous, 1996; Rogers, 1991). Indicating a declining share of aggregate consumer spending, Roger reported that the percentage of disposable personal income spent on both durable and non-durable goods declined from 52.5% in 1965 to 43.1% in 1988.

In place of the department store, specialty stores and discount stores, which provided more value-oriented products, began to emerge (Abernathy et al., 1999; Anonymous, 1996; Rogers, 1991). This channel change mainly resulted from changes in consumer needs. As reported in the *International Journal of Retail & Distribution Management* journal*,* consumer needs and wants became more sophisticated, and department stores had a difficulty in carrying enough merchandise to meet their requirements (Anonymous, 1996). To adapt the market and to better serve the consumer, traditional department stores started to concentrate on the high-margin fashion product, a narrow product line, instead of carrying a wide selection of products.

With this competition among the channels, retail store construction (e.g., shopping malls) boomed in the 1980s. Abernathy et al., (1999) indicated that the success of retail in this period primarily resulted from the marketing efforts of retailers trying to understand consumers' tastes. A private label program was one of those efforts that retailers made to try to understand and meet their consumers' demands (Abernathy et al., 1999; Rogers, 1991). At this time, consumers also started to get more actively involved in the apparel business, by creating and following fashion trends. The advances in mass media and the new retail channels (e.g., discount department stores, national chains) stimulated these changes (Mueller & Smiley, 1995; Rosenau & Wilson, 2001). At the same time, retailers also created new demand for more various apparel products with new

silhouettes, fabrics, prints, and colors (Rosenau & Wilson, 2001). Noticing this increasing interaction between consumers and suppliers, Weller (1987) noted in his special report for *Bobbin Magazine* that the importance of consumers in the apparel industry shifted from simple recognition of customer service to "actual discussion between suppliers and customers" (p. 65). All of these changes in the apparel industry in the 1980s were the results of the dynamic process of communication between the consumers and the companies' efforts to meet their target consumers' needs.

In the 1990s, consumer changes in ethnicity and lifestyle, which were at their sharpest in the 1970s and 1980s, continued (Rogers, 1991). Rogers stated that the "Grey 90s" (para. 13) stimulated better service to old consumers while the decline of the number for the population aged between 20 and 44 relatively reduced the number of fashion-oriented products in the apparel sector. However, growing diversity of consumer ethnicity, demographic, and lifestyle forced retailers to fragment the market and diversify the retailing format. As consumers' lifestyles changed, the profitability of traditional brick and mortar stores began to decline in the 1990s (Rogers). Morganosky (1997) stated that the trend toward diversification and proliferation of retail formats were prevalent at this time. Direct channel retailers, which markets directly to consumers via mail, telephone, and door-to-door, notably increased their sales (Kwon, Paek, & Arzeni, 1991). Moreover, discount stores, outlet stores, and off-price retailers also significantly grew in their market share, and other retailers including category killer and super centers were experienced sales increase. This abundance of retailers resulted in consumers having a wide retail choice and more demanding requests to various retailers (Morganosky).

In the 1990s, a notable change in retail channel was the huge growth of direct channel retailers. Kwon et al. (1991) indicated that the factors that resulted in this growth were the convenience of in-home shopping, decreases in consumers' flexible time, and improved product offerings in catalogs. Lewis (2005) reported that the sales growth of e-commerce and catalog businesses between 1992 and 2003 were 244% while that of department stores were only 1%. Catalog only sales between 1998 and 2003 increased 9% on average, reaching $132.8 billion in 2003; this number is projected to increase to 108 billion in 2008 (Anonymous, 2003). Catalog shopping was one of the major consumer direct channels in the 1990s, which filled the gap between traditional retailers and the new format of the e-commerce retail channel. It was reported that, until the end of 1999, the majority of consumers using consumer direct channel

shopped with catalogs and television home shopping while 25% of them shopped online (Peppers and Rogers Group & Institute for the Future, 2000).

However, in the late 1990s, e-commerce and the Internet brought even more convenient ways to shop and purchase products to consumers (Kim, Kim, & Kumar, 2003). With the advent of Internet retailers, Shim (1998) noted that consumers have not only an extreme number of products from which to select but also various shopping modes from which to purchase those products. In addition, technology and electronic communication provided access to information about products. Through the information provided by the Internet, people were becoming familiar with each other, accessing the same information at the same time (Shim). Because the Internet will provide consumers chances to have access to the widest product selection with the lowest prices, they will have the biggest bargaining power in the FTAR supply chain (Kilduff, 2001b).

Goldsmith and Flynn (2005) stated that the online channel has replaced the catalog, which was the traditional consumer direct channel. With the huge growth of e-commerce, apparel purchases through online greatly increased in the new millennium (DesMarteau, 2004a; Goldsmith & Flynn, 2004a). Goldsmith and Flynn stated that apparel composed 13.3% of the online purchases in 1999, but in 2001, it increased to more than 33% of the entire online sales. By 2006, online sales of the apparel, accessories, and footwear category reached $18.3 billion, and for the first time, this number surpassed the $17.2 billion online sales of computers, which had ranked in first place (National Retail Federation, 2007).

This section discussed the three sub-components of the consumer variable as identified in the review of literature (i.e., demographic shifts, consumer demand changes, channel changes). In this review of the consumer variables from 1970 to 2005, these sub-components were verified as important forces in describing the consumer impact on industry and are closely interrelated with each other. As a major consumer group of the overall market, particular consumer segments from Senior to Generation Y have continuously affected the U.S. apparel industry over the decades, creating their own unique demands. In addition, changes in demographics (e.g., increasing elderly or growing diversity) affected the retail channel, impacting growth or decline of retailers and creating a new format of retail channel (i.e., online shopping). These channel changes caused more competition among companies and channels, and it allowed U.S. consumers to demand better quality apparel products with lower prices. With increasing

spending power, U.S. consumers have increasingly influenced the apparel industry. From this analysis, consumers can be seen as not only selectors of products but also drivers of product and retail change.

Business Strategies

Strategy was operationally defined in Chapter 2 as the overall plans and purposes dominating a company's decision making processes and functions (Hamermesh, 1983). As explored in the previous three sections about environmental factors, many turbulent changes have occurred in the U.S. apparel business environment from 1970 to 2005. These environmental changes proposed in Figure 2 have significantly affected the apparel companies' overall plans and major policies, demanding changes in business strategies in response to changing environment for any company that wished to survive (Christopher, 2000; Pan & Holland, 2006; Rollins et al., 2003). This section contains the results of an exploration about the main business strategies in the U.S. apparel industry from 1970 to 2005 with discussion of how the strategies have been evolved over these decades.

Automation with Introduction of Technologies

The Office of Technology Assessment report (1987) outlined the primary goals of apparel industry according to the perceived technological revolution in the apparel industry from the mid-1960s to the 1980s. To compete with growing imports from developing countries in this time, the overall aim of apparel industry in the 1970s was achieving economies of scale (KSA, 1977). Industrial efforts for economies of scale resulted in improvements in productivity and product quality, which were made with automation and computerization of apparel manufacturing process from the mid-1960s to the emergence of QR in the mid to late 1980s.

Productivity in the apparel assembly portion of the apparel production process and in the spinning, knitting and weaving processes in the textile mill industry sharply increased between 1975 and 1985 (Office of Technology Assessment, 1987). The Office of Technology Assessment report indicated that high productivity during this period was the result of modernization and automation throughout the manufacturing processes for both apparel and textile products. Additionally, the apparel industry achieved better information flow and improved quality

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standards by implementing cost-reducing techniques, ensuring the use of agreed-upon standards and communication protocols, improving communication links, and using new batch production strategies (Office of Technology Assessment).

At this time, to many managers and owners of companies in the U.S. apparel industry, automation seemed to be the only way to achieve labor cost parity with developing countries whose imports had flooded the U.S. market as a result of the globalization of the industry (KSA, 1977). Yet, many complicated issues arose around the strategies of automation and increased standardization. Plant managers in U.S. textile and apparel companies had no choice but to replace a significant number of jobs in manufacturing area with automation. In addition, the economics of full automation was still questionable at this point of time because of the nature of the raw materials and the variability in the finished product.

Byrne (1995) noted that the apparel industry in the 1970s started to implement "an extreme division of labor" (p. 127) by fragmenting manufacturing process into many specialized operations. This effort was also supported by automation of specific processes, which replaced manual labor with technology.

KSA (1977) identified the degree of mechanization as four groups: non-automated operation, semi-operational automation, full operational automation, and full sequential automation. Non-automated operation is a conventional state of manual tasks. Semi-automation is the state of a "combination of conventional sewing machine and selected sewing and peripheral attachments" (KSA p. 126), requiring more complex and automated attachments than those found in non-automated operations. Full operational automation is referred to as a "hands off situation in which all cyclic work functions are performed automatically for a specific operation" (KSA, p. 126). In this group, automated sewing machines stitch and turn fabric parts although operators are needed to load and position the fabric. While these two levels of mechanizations still need sewing operators, full sequential automation is "a completely automatic sequential assembly process in which a series of machine perform all work functions" (KSA, p. 126). In the 1970s, semi-operational and full operational automation were not common to most of apparel production. As previously discussed in the technology section, most operations with complex handling and simple sewing (i.e., the majority of apparel products) could not be changed to achieve these high levels of mechanization economically. In fact, the production of most apparel products remains as non-automated operations into the 2000s. Full

sequential automation was also not achieved because of the technical problems including handling parts between operations.

Limited academic research focused on business strategies in the apparel industry before the emergence of "the new generation of equipment" (Office of Technology Assessment, 1987, p. 110). In the early 1980s, the U.S. apparel industry became more pressured to reduce costs, to improve quality of products and service, and to develop new markets (Ghadar et al., 1987). Consequently, the U.S. industry needed the coordination of research and development departments (R&D) with industrial capabilities employing those R&D efforts to gain competitive strength. In addition, more applied research on business strategies for the apparel industry began to be implemented.

Several researchers listed the business strategies in use for the apparel sector industry for the 1980s. Ghadar et al. (1987) summarized apparel business strategies of the 1980s as an industrial response to the environment and itemized the following strategies: implementing automation, lowering indirect overhead costs, moving toward privatization, achieving diversification, outsourcing, and using computerized communication. Emphasizing technology as outstripping strategy for importance in the 1980s, AAMA (1991) listed the following strategies for applying technology within each manufacturing process: CIM network for product development, CAD technology application for design, and distribution center efficiency for distribution. Similarly, Byrne (1995) stated, in his report on the apparel industry in the 1980s, that there was considerable progress in implementing computers and automatic systems into pattern making, cutting, and materials transport between workstations. The primary strategy for the 1970s and into the early 1980s was the use of technology with increasing achievement of automation and computerization. The major driving force of this strategy was the import surge during this time. This environmental change continuously exerted new pressures on company performance (Rollins et al., 2003). At the same time, the U.S. apparel industry strived to achieve automation and computerization with a technology innovation strategy to respond to their drastically changing environment.

Quick Response

Environmental changes for the apparel industry from the late 1980s to the early 1990s included "the areas of acceleration of fashion change, increase in global competition, decrease in

labor force, dissatisfaction of retailers, and availability of new technology" (Kincade & Cassill, 1993, p. 23). In response to these changing environments, various efforts to adjust companies' plans for operations or strategies were made in the apparel industry. Kincade and Cassill stated that the adoption of Quick Response (QR) was one of those efforts for companies in the U.S. apparel industry. QR was originally developed in the 1980s by the continued need to improve efficiency for the U.S. apparel manufacturing process (AAMA, 1987; Barns & Lee-Greenwood, 2006; Kincade, 1995). Since its first discussion at the Textile Apparel Linkage Council (TALC) meeting in 1985, efforts to implement QR were made by many associations and companies (AAMA; Kincade). Trade associations (e.g., TALC, AAMA, Textile Clothing Technology Corporation ([TC]²)) tried to provide accurate information and standards about what QR was and how it worked. Pilot projects of QR for leading companies (e.g., Dillards, Burlington, J.C. Penny) were implemented and confirmed its financial benefits (AAMA; Office of Technology Assessment, 1987). Kincade stated that the evidence of QR implementation was shown in most industry publications since 1988.

QR is referred to as a general business strategy, emphasizing the importance of timely flow of information and merchandise and mainly focused the linkage between apparel manufacturers and retailers (Lee & Kincade, 2003b). In the early academic discussion of QR, there were attempts to adjust some misunderstanding and confusions about QR, by defining what QR was, exploring supporting technologies, and investigating actual implementation for selected companies (e.g., Fernie, 1994; Kincade, 1995; Kincade & Cassill, 1993; Sullivan, 1992).

Most researchers see QR as an overall business strategy or relationship in order for manufacturers to provide products and services to their final consumers more efficiently (see Table 7). For the strategy to be functional, supporting technologies were essential, as seen in the definitions cited in Table 10. In their definition, three of the eight researchers use the word technology or technologies (e.g., Braithwaite, 1990) and three other researchers identify specific technologies used in QR (e.g., Fernie, 1994; Sullivan, 1992); therefore, six of the eight researchers stressed technologies when defining QR. The importance of technologies in QR operation was supported by Kincade's (1995) empirical research with apparel manufacturers. Kincade defined the QR management system and associated technologies by identifying technologies closely related to the QR management system as documented by U.S. apparel manufacturers' operational practices. It was found that the technologies linked to partnerships

between apparel manufacturers and retailers were most closely related to QR implementation. The research result also revealed that the technologies, such as Electronic Data Interchange (EDI), Computer Aided Design (CAD), bar coding, forecasting, and flexible manufacturing were also significantly related to QR for apparel manufacturers.

Table 7. QR Definitions in Academic Discussion

Researchers	QR definitions
Braithwaite (1990)	Integrated relationships between suppliers and customers; better flow of information; flexible technology in manufacturing
Fernie (1994)	A series of technologies comprising scanning at the checkout to give data on customer choice, as well as EDI links and scanning of goods to allow tracking through the supply chain
Gunston & Harding (1987)	A mode of operation in which a manufacturing or service industry strives to provide products or services to its customers in the precise quantities, varieties and within the time frames that those customers require
Kincade (1995)	A business strategy which focuses on the linkage among supply chains
Larson & Sijbrands (1991)	A technology driven, cooperative retailer/supplier relationship
McMichael, Mackay, & Altmann (1997)	A demand driven business strategy of cooperative planning by supply chain partners, to ensure the right goods, are in the right place, at the right time, using IT and flexible manufacturing to eliminate inefficiencies from the entire supply chain
Sullivan (1992)	A strategy that uses Universal Product Codes (UPC) for inventory control and electronic information sharing among textile mills, apparel manufacturers, and retailers; a business philosophy that incorporates a just-in-time approach to manufacturing
Voluntary Interindustry Communications Standards (VICS) (1989)	The establishment of new business strategies, new relationships, and new procedures to speed the flow of information and merchandise between retailers and manufacturers of apparel and textiles

QR implementation and associated technologies in the apparel industry were studied in several different contexts in the 1990s. Kincade and Cassill (1993) investigated the relationship

between selected companies' demographics and their adoption of QR technologies. They found that the demographic information (i.e., size of operation, type of retail customer) was significantly related to adoption of QR technologies. More specifically, Ko and Kincade (1998) examined the product line characteristics (i.e., product category, fashion change, seasonal change) as determinants of implementation QR technologies for selected apparel manufacturers. Their research found that fashion change factors (i.e., highly fashionable, fashionable, basic, highly basic) were related to the implementation level of QR technologies. The results from these researchers confirm the relationship of the consumer and technology factors to the implementation of strategy for U.S. apparel manufacturers as well as the impact of company factors on the use of QR.

QR adoption and implementation were also studied in several theoretical frameworks covering a broader perspective but also relating the implementation of the strategy to environmental influences and to company factors. Martin, Horridge, and Craig (1998) assessed QR adoption based on the diffusion theory. The diffusion of innovation (i.e., QR) for a social system (i.e., Texas sewn products manufacturing industry) was examined within several variables including company demographics, production characteristics, and strategic posture toward risk. Relationships were found between company demographics, production characteristics, and strategic posture toward risk, and QR implementation. Ko and Kincade (1998) identified the implementation of QR technologies for selected apparel manufacturers based on the environmental interpretation model. Environmental interpretation model explaining the relationship between organizational characteristics and their response to an environment supports the research hypothesis on the relationship between product line characteristics and QR technology implementation. Ko et al. (2000) explored three stages of QR adoption based on Roger's (1983) innovation decision process model. Roger's theory provided the framework for companies' decision making process of QR adoption. Ko et al. found the significant relationship between business type and perception of QR benefits. Also, companies' perceptions of QR benefits significantly influenced their adoption of QR strategies. They also found that it was obvious that the more apparel companies perceived themselves as adopting QR strategies, the more they utilized QR technologies. These empirical studies verified some of the factors, which were provided in Chapter 1 as variables of model for the study. Individual companies had different levels of QR adoption and implementation as a result of different interpretation

processes according to the particular factors (e.g., organizational age, perceived organizational characteristics).

Clear evidence in previous academic research shows that the apparel industry was developing strategies in response to the environmental changes and as appropriate for their company characteristics. From the development of QR to its actual implementation, environmental changes continuously affected the industry as a major driving force. This finding supports the model shown in Figure 2. Increasing global competition with declining domestic production and technological availability during the 1980s and early 1990s accelerated the use QR strategy; this strategy was the primary effort that the U.S. apparel industry used to respond to these environmental forces.

Supply Chain Management

The philosophy of QR was extended into the strategy of Supply Chain Management (SCM) in U.S. apparel industry (Lee, 2000). Lee and Kincade (2003b) stated that SCM is a broader concept of an overall business strategy covering activities from suppliers to final consumers, while QR is focused more on the linkage between apparel manufacturers and retailers. SCM has become a subject of increasing interest for many manufacturing industries and has been greatly emphasized both in academia and practice since it appeared in the mid-1980s (e.g., Cooper, Lambert, & Pagh, 1997; Croom, Romano, & Giannakis, 2000; Kotzab & Otto, 2004; Lee & Kincade; Storey et al., 2006). Some previous researchers identified and described the domain and scope of SCM, and have provided the definition and key components of SCM through their empirical research studies (Chen & Paulraj, 2004; Cooper et al., 1997; Lee & Kincade; Mills, Schmits, & Frizelle, 2004; Storey et al.). However, some confusion continues to exist concerning the definition of SCM and the appropriate scope of what constitutes a supply chain and how to best implement it (Bechtel & Jayaram, 1997; Bowersox, Closs, & Cooper, 2005; Croom et al.; Lee & Kincade).

Cooper et al. (1997) and Croom et al. (2000) noted that, although the concept of SCM first appeared in the literature in the mid-1980s, the fundamental assumptions of SCM can be tracked back to the studies about channels and system integration in 1960s. This body of literature introduced the concepts of partnerships between channel members, channel captains, and power and interference in the channels (e.g., managing inter-organizational operations,

system integration, sharing information, exchange of inventory for information, physical distribution and transport). The main thrust of SCM was initiated with the idea that a single element in a supply chain cannot assure the effectiveness of the whole system, with a focus on a reduction in inventory within and across firms.

Through a study of U.S. apparel manufacturers and their operational practices, Lee and Kincade (2003b) identified three groups of apparel manufacturers based on their SCM activity levels and identified the following six SCM activity dimensions: (a) partnership, information technology, (b) operation flexibility, (c) performance measurement, (d) management commitment and leadership, and (e) demand characterization). Each of the six dimensions of SCM activities identified by Lee and Kincade (2003b) are defined in their study. Partnership is an agreement between chain members that includes the sharing of information, and even risk and reward of the relationship. Information technology can be computer-to-computer communication, electronic data interchange (EDI), POS data communication, and bar-coding. Operation flexibility is described as "an ability to vary production volumes economically in response to market demands, to implement minor changes in product design for customization purposes, and to reduce delivery lead times" (Lee & Kincade, p.33). This dimension is important to achieve agile manufacturing especially for frequent style changes in the production line including apparel industry. Performance measurement is the dimension used to monitor SCM performances. Examples of key performance indicators are supplier reliability and supplier lead-time. The top management's commitment and leadership dimension is top management's awareness of SCM benefits, their willingness to implement SCM, and desire to continue change. Demand characterization is the knowledge of demand characteristics, such as certain and uncertain, dependent or independent, seasonal or staple.

According to the six dimensions identified in the Lee & Kincade's (2003b) study, Table 8 summarizes the SCM concepts and characteristics presented in four studies (i.e., Chen & Paulraj, 2004; Cooper et al., 1997; Mills et al., 2004; Storey et al., 2006). Because each of these four studies contains comprehensive literature reviews or in-depth detailed studies covering SCM concepts or theories, organizing the contents of these studies into one table covers extensive amounts of SCM literature.

Table 8. SCM Activities and Academic Studies

Dimension	Measurement activities	Chen& Paulraj (2004)	Cooper et al. (1997)	Mills et al. (2004)	Storey et al. (2006)
Partnership	Consolidation in supplier base Collaboration with suppliers and customers in forecasting and production planning Active information and relevant technology sharing Conversion to long-term relationship with suppliers and customers		*	*	*
Information technology	Use of computer-to-computer communication Use of EDI Use of POS data communication Use of bar-coding	*		*	*
Operation flexibility	Ability of volume flexibility Ability of product flexibility Ability of delivery flexibility JIT practice	*	*	*	*
Performance measurement	Establishment of performance measurements with customers and suppliers		*		
Management commitment and leadership	Top management's awareness of benefits Top management's desire to change	*	*		
Demand characterization	Knowledge of demand pattern Aligning supply capabilities with demand cycles Applying the uncertainty in demand to operational decisions	*		*	*

Table 8 shows that operation flexibility appeared in all four studies as a main concept of SCM. Partnership among the supply chain partners, information technology, and demand

characterization were also found essential SCM activities (i.e., each appearing in three of the four studies).

Related strategies of Demand Chain Management (DCM) and lean manufacturing versus agility in manufacturing were studied by several researchers in the 2000s (Bruce & Daly, 2004; Christopher, Lowson, & Peck, 2004; Jacobs, 2006; Walters, 2006a, 2006b). The concept of agility has been recognized in the late 1990s and early 2000s as an important issue in the study of supply chain strategy. Agility as a business concept originated from flexible manufacturing systems (FMS), and later, it was extended into an organizational orientation (Christopher, 2000). It is especially important in the apparel industry, where volatile and unpredictable consumers' needs are ever present in the business environment. Therefore, the need and potential of creating an agile supply chain has been introduced as a strategy for the U.S. apparel industry. The idea of Demand Chain Management (DCM) is also proposed in the late 1990s and early 2000s as an effective channel management. While SCM, as a strategy, is the manufacturing perspective focused on efficient production based on past inventory information, DCM, as a strategy, is the retail perspective focused on effective management responding consumers' needs with flexibility (Jacobs). Several studies have been documented about the overview of DCM with a discussion of the role of DCM.

All of these studies are summarized by their variables and study methodology in Table 9. Multiple studies confirmed that various company factors (e.g., organizational age and size, resource dependence characteristics of the organization, perceived organizational characteristics, a manager's previous interpretation experience) affect apparel firms' decisions for SCM adoption and implementation.

Table 9. Summary of Studies about Supply Chain Management in the Apparel Sector

Author	Study type	Sample profile	Sample size	Sample selecti on method	Variables
Barns & Lee-Greenwood (2006)	A qualitative study using in-depth interviews	Companies involved in the fashion supply chain and retail in the U.K.	15	Non-probability and sequential sampling	Impact of fast fashion on the supply chain
Birtwistle, Fiorito, & Moore (2006)	Face-to-face interviews	Scottish suppliers	33	Random sample selection	SCM issues (company awareness of AR systems, QRI, and relationship within the supply chain)
Bruce, Daly, & Towers (2004)	Case study using semi-structured interviews	Companies that represented different facets of the textiles and apparel supply chain	4	Purposefully selected sample	Characteristics of the textiles and apparel industry, the perspectives of lean, agile, and leagility
Christopher, Lowson, & Peck (2004)	A qualitative study based on literature review	-	-	-	Products, demand, and replenishment lead times (basic taxonomy of global supply chain strategy)
Daly & Bruce (2002)	Case study	UK and US textiles and clothing companies	3	Purposefully selected sample	Use of e-commerce, e-commerce benefits, salient issues for company moving into e-commerce
Jacobs (2006)	A qualitative study based on literature review	-	-	-	Actual state of demand chain management
Kincade, Vass, & Cassill (2001)	Mixed-method study using interview and survey	US apparel manufacturers	105	Random sample selection from two US states	Changes in products and services associated with implementation of new technologies
Ko & Kincade (1998)	A qualitative study using the mail survey	US apparel manufacturers	103	Stratified random sample selection	Implementation of level of selected QR technologies, product categories
Lee & Kincade (2003a)	A quantitative study using the mail survey	US apparel manufacturers	93	Stratified random sample selection	Inventory performance of apparel manufacturers (fabric supplier characteristic, finishes goods inventory performance)

Author	Study type	Sample profile	Sample size	Sample selection method	Variables
Lee & Kincade (2003b)	A quantitative study using the mail survey	US apparel manufacturers	93	Stratified random sample selection	SCM activity, company characteristics
Pan & Holland (2006)	Qualitative action research using non-participatory observations	Textile suppliers and garment manufacturers	12	Purposefully selected sample	Implementation strategies for products at the fashion apparel supply chain upstream
Simatupang, Sandroto, & Lubis (2004)	A qualitative study based on literature review	-	-	-	Determinants of supply chain
Sridharan, Caines, & Patterson (2005)	Case study	Two firms implementation SCM	2	Purposefully selected sample	Effect of supply chain implementation on firm value
Tyler, Helley, & Bhamra (2006)	Case study	UK fashion companies participating at different stages of the supply chain	3	Purposefully selected sample	Factors that constrain company activities in supply chain
Walters (2006)	A qualitative study based on literature review	-	-	-	The notion of demand chain

As seen in the variables in Table 12 that all these studies included, SCM has played an important role in business performance of apparel companies while emphasizing various elements (e.g., partnership, lean and agile manufacturing, firm value). As the concept of SCM was grounded in the optimum of business performance in the channels, SCM, as a business strategy, has potential to the U.S. apparel industry's competitive performance in the global environment. As an example of the potential for SCM, changing environments (e.g., growing consumer and retail power) can stimulate apparel companies to adapt and modify their efforts for a flexible supply chain in response to those changes so as to survive in the market.

Mass customization

Mass customization is referred to as one of the new business strategies to increase competitiveness of companies in the U.S. apparel industry. Companies benefit from mass

customization by adapting to market changes and better responding to the consumer market, following previous efforts, such as by Just-In-Time (JIT), and QR (Bae, 2005; Pan & Holland, 2006). Mass customization was first predicted in 1970 by Alvin Toffler in his book, *Future Shock*, and later in 1987, it was identified as a more specific concept by Davis (1987) in *Future Perfect* (Anderson & Pine, 1997; Lee, Kunz, Fiore, & Campbell, 2002).

Defining mass customization as "mass production of individually customized goods and services" (p. 4), Anderson and Pine (1997) also stated that mass customization would be the new strategy in business. They stated that companies, which had been market-focused, did not fully satisfy individual customer's demand in spite of modernized business efforts, such as predicting consumer demands and quickly responding to the market with a streamlined supply chain. However, changing market demands (i.e., changes in consumers) and revolutionized business capabilities (e.g., new technologies, manufacturing capacities, management techniques) have facilitated companies' ability to be customer-focused (Anderson & Pine; Lee et al., 2002). Mass customization as a business strategy is understood to be about "embracing both efficiency and customization" (Anderson & Pine, p. 4).

In the late 1990s and early 2000s, increasing numbers of apparel companies have implemented this new business strategy (Lee & Chen, 1999; Pan & Holland, 2006). Companies in the apparel industry, which have the most turbulent and unpredictable changes in consumer demand, must understand their changing consumer demands to have competitive advantage in the global industry. This volatile consumer demand was discussed in the consumer factor section, which reviewed that consumers are becoming more sophisticated with differentiating needs and wants toward products and services (Anderson-Connell, Bae, 2005; Lee & Chen; Ulrich, & Brannon, 2002). When mass customization is implemented, customers can be involved in the design, production, or delivery process of products so that they can obtain the product that is exactly what they want when they want it (Davis, 1987; Kamali & Loker, 2002). The success of this kind of implementation for mass customization is supported by the research findings that apparel consumers are also strongly interested in the collaborative process of mass customization including changing design details or fit (Anderson-Connell et al., 2002; Fiore, Lee, Kunz, & Campbell, 2001; Ives & Piccoli, 2003; Lee et al., 2002).

Gilmore and Pine (1997) identified four different approaches to mass customization: collaborative, adaptive, cosmetic, and transparent. Each of type can be solely used or mixed

together to better serve customers. Collaborative customization, the highest level of customization, allows customers to express their needs (e.g., design, attributes, other options) and produces the products to fulfill those needs. Adaptive customization offers standard, but customizable products that are designed to be used by customers in different ways or different situations. A windbreaker or a jacket that is designed with a taped seam, adjustable or attached hood, waistband, or interchangeable logo crest can be the example of this.

Cosmetic customization provides standard products with different packages to different customers. For example, differentiating the quantities and packages of socks that go to Wal-Mart and JC Penney can be a cosmetic approach to mass customization. Transparent customization offers products meeting customers' specific needs as the result of monitoring customer behavior. With this customization, consumers acquire products that they need but they do not know those products are specially customized for them.

Several researchers identified the level of mass customization from different perspectives (e.g., types of involving customers, customer involvement and modularity, involving customers) (see Table 10). Because the four approaches identified by Gilmore and Pine are not necessarily the level of customization, their findings were not incorporated in this table. While they did not specify the level of each concept, several other researchers identified the level of such concepts as transparent or adaptive. The researcher found that some concepts (e.g., transparent, adaptive) can be interpreted as a different level by different researchers. However, the basic idea of multiple levels of customization was basically the same across the researchers even though they named the levels differently. The researcher also noted that a higher level of mass customization is not necessarily superior to a lower level of that. Individual companies will decide the most suitable level, which can bring the most beneficial outcomes, according to their business characteristics (e.g., product type, retail channel, consumer characteristics) and their abilities (e.g., availability of supporting technologies and system). These multiple levels are summarized into the following three levels by Burns and Bryant (2002): fit, design, and personalization.

Table 10. Level of Mass Customization from Various Perspectives

Researchers	Anderson et al. (1997)	Duray, Ward, Milligan, & Berry (2000)	Pan & Holland (2006)	Silveria, Borenstein, & Fogliatto (2001)
Variable	Consumer driven	Consumer involvement, modularity	Level of involving customers	
High level	Design options	Fabricator	Collaborative	Design
	Co-design			
	Totally custom	Involver		Fabrication Assembly
		Modularizer Assembler	Self-adaptive	Additional custom work
				Additional service
			Transparent	
			Cosmetic	Packaging and distribution
	Cloth clone			Usage
Low level			Alteration	
			Push-through	Standardization

Technologies, which facilitate flexible manufacturing processes and effective communication between suppliers and consumers, are also essential in utilizing mass customization. Much evidence of research and development in supporting technologies and its industry fit was found. Based on the three levels of mass customization identified by Burns and Bryant (2002), technologies required in mass customization utilization were summarized (see Table 11). In addition to these technologies associate with producing mass customization, the Internet also provides an important communication channel between companies and consumers for the strategy of mass customization (Bae, 2005; Kamali & Loker, 2002).

Table 11. Supporting Technologies of Mass Customization

Level of customization	Provided options	Technologies
Fit customization	Customized fit	3-D scanning system, computer application (citation)
Design customization	Co-design (e.g., color, pattern, size) of products	CAD, CAM, ink jet printing, single-ply cutting (citation)
Personalization	Modification of finished products (e.g., embroidery, laser etching, fabric ornamentation)	B-to-C communication through Internet

Increasing global competition has increasingly forced apparel companies to compete within different channels as well as different countries. This competition created multiple producers and allowed consumers to demand better quality products with greater variety at lower prices. Pan and Holland (2006) stated that these fragmented and complex consumers' demands are the major drivers of mass customization. To satisfy customers' real demands and preferences, effective communication among supply chain minimizing the time from design to production is essential in implementing mass customization (Pan & Holland). Mass customization is clearly a strategy developed in response to and because of the three environmental forces.

Summary

This chapter explored the business environments for the U.S. apparel industry from 1970 to 2005, in terms of globalization, technology, and consumer. Additionally, business strategies of U.S. apparel companies in response to those environments were investigated, along with the effect of company factors, and the relationship was verified. Based on the collected data from this chapter, major issues and concepts regarding each variable (i.e., globalization, technology, consumer, business strategy) were coded, taken apart and recombined. The analyzed data, which are presented and discussed in the preceding sections, were organized into the coding table (see Figure 14). The key issues for each variable are listed so that the relationship among the variables can be displayed.

	Globalization	Technology	Consumer		Business Strategies
1970 2005	• Over capacity for apparel production • Increasing import from low-wage countries • Multilateralism • Import surge due to the U.S. dollar appreciation and the strong recovery of U.S. economy from recession • Protectionism and regionalism • Increasing imports • NAFTA became effective • Elimination of all quotas and tariffs • Severe decline of economic and political conditions	• Quality and productivity improvement • Manufacturing cost Reduction • Building supplier-retailer relationship • Improved service to consumers • Higher retail profitability • Global sourcing • Lean retailing	• General attention of the importance for consumer • Consumers more actively involved in apparel business • More knowledgeable, sophisticated, and demanding consumer • Consumer with biggest bargaining power • More diverse and fragmented consumer demand	→ → → →	• Product quality control • Automation • Quick Response • Supply chain management • Mass customization

Figure 14. Business environments and business strategies

CHAPTER 5. CASE STUDIES

This chapter presents the case studies for the two selected U.S. apparel companies (i.e., Nike, Inc., VF Corp.). The data, mainly about the business strategies of the sample companies in response to their business environments from 1970 to 2005, were collected through a variety of newspapers, academic journals, and other sources. While Chapter 4 discussed the general business strategies of U.S. apparel companies, this chapter explores specific business strategies for two major U.S. apparel companies. By investigating specific cases, the perceptions of apparel manufacturers about the changing environment and their organizational reactions to these changes are explored.

As discussed in Chapter 3, the cases of the two sample companies, which can be generalized to a certain extent, provide meaningful and useful evidence in understanding the U.S. apparel manufacturing industry. After examining the case for each company, the researcher discusses the variables each company had in common to determine the patterns of the two companies' business strategies.

Nike, Inc.

Since founded in 1962 and later incorporated in 1968, Nike, Inc. (Nike) has been the world's largest designer, marketer, and distributor of athletic footwear, apparel, equipment, and accessories. In 2005, its revenues reached $13.7 billion, which was a 12% increase from 2004, and net income reached $1.2 billion, which was a 28% increase from 2004. It was ranked as the first company by revenues in the apparel industry by *Fortune* magazine in the same year (see Figure 15).
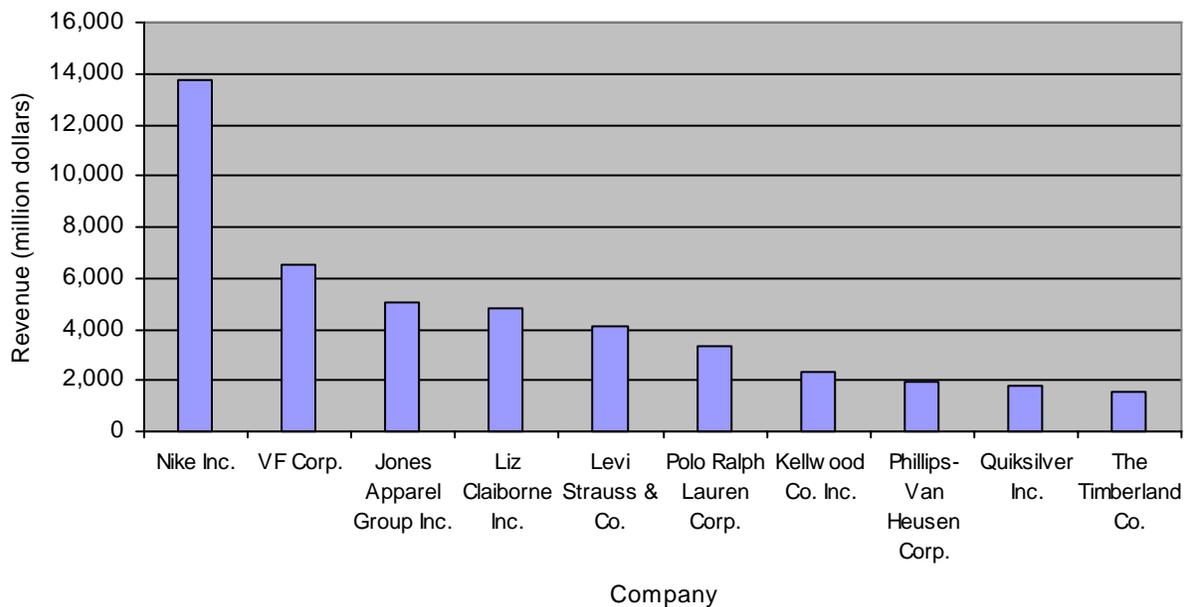
Figure 15. Top Fortune 1,000 companies that included primarily apparel in 2005

Note. From "Top Fortune 1,000 Companies in Apparel, 2005." *Fortune*, Fortune 1,000 (annual), April 17, 2006, p. F-45. Business Rankings Annual 2007. Thomson Gale, 2007. Reproduced in Business and Company Resource Center. Farmington Hills, Mich.: Gale Group, June 2002. http://galenet.gale.com/servlet/BCRC/

According to a literature review, this gigantic success of Nike has been attributed to its key business strategies in the following three areas: global sourcing, product strategy, and aggressive marketing. Based on these three key strategies, this section explores related business activities to each of three strategies from 1970 to 2005.

Global sourcing

According to the company's annual report in 2005, all of Nike's products, excluding some sports and other equipment products, were produced outside the United States. These outsourced products, produced by independent contractors, accounted for approximately 93% of Nike's total revenue.

For footwear production, they have major contract suppliers in China, Vietnam, Indonesia, and Thailand (see Figure 16). For apparel products, they have a more dispersed array of contractors, covering 38 countries (e.g., Bangladesh, China, Honduras, India, Indonesia, Malaysia, Mexico). Other equipment products (e.g., golf clubs, eyewear, and electronic media devices) were either produced domestically with U.S. contractors or produced in overseas

factories. As of February 2007, Nike has a total of 652 contract factories within 47 countries including the United States (see Table 12). While Nike manufactures almost all of their products outside the United States, other core business functions including management, research, design, development, marketing, finance, and other administration, are operated in the United States with their world headquarters located in Beaverton, Oregon.
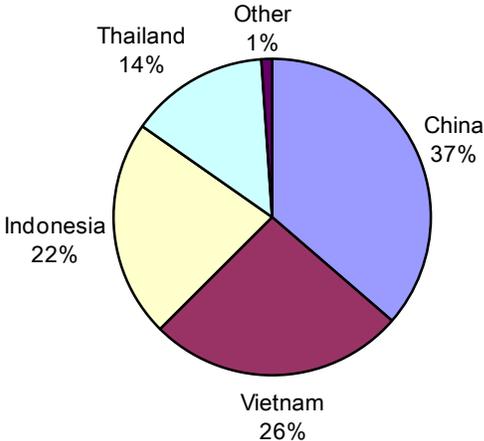
Figure 16. Major suppliers of Nike footwear products in 2005 by country

Note. From Nike Annual Report, 2005

Table 12. Nike's Contract Factories as of February 2007 (n=652)

Country	Number of factories	Country	Number of factories
Argentina	7	Japan	28
Australia	5	Jordan	3
Bangladesh	6	Korea	29
Belgium	1	Lithuania	2
Bosnia	1	Macau	4
Brazil	26	Malaysia	34
Bulgaria	1	Mexico	20
Cambodia	3	Moldova	2
Canada	7	Morocco	3
Chile	1	Pakistan	2
China	132	Philippines	1
Colombia	1	Portugal	8
Ecuador	1	Singapore	3
Egypt	3	South Africa	4
El Salvador	2	Spain	4
Fiji	1	Sri Lanka	18
Greece	1	Taiwan	24
Guatemala	1	Thailand	63
Honduras	9	Tunisia	4
Hong Kong	12	Turkey	22
India	21	UK	2
Indonesia	38	USA	47
Israel	4	Vietnam	35
Italy	6		

Note. From Nike FY 05-06 Corporate Responsibility Report

Initial operation with global sourcing

As Nike identifies itself as a designer, marketer, and distributor, the principal business activities, which it does in its own corporate facilities, are designing and selling the products; and the remaining part, manufacturing, is outsourced. This type of company, focusing more on designing and selling the products, was defined as a marketer in the Chapter 2 literature review

about the U.S. apparel manufacturing industry. Since the beginning of its business in the early 1960s, Nike has done global outsourcing, which "most other companies would gradually follow in the course of the decades" (Korzeniewicz, 1994, p. 259). Todaro (2006) cited that Nike reported its initial business model as follows:

> Nike has been a global company from the beginning. Our business model in 1964 is essentially the same as our model today: We grow by investing our money in, and then contract with other companies to manufacture our products. (para. 6)

Nike's initiative in its business model can be explained with the concept of organizational intrusiveness, identified by Daft and Weick (1984). According to their theory, the company such as Nike can be categorized as "test makers" (p. 288), which develop and interpret the environment differently from most of other organizations. They stated that this kind of organization "may leap before they look, perform trials in order to learn what an error is, and discover what is feasible by testing presumed constraints" (p. 288) by actively intruding into the environment. Explaining the different level of intrusiveness, Daft and Weick also stated that a young organization generally tends to try new things and to seek environmental information. Nike's early business activities typify the performance of test makers and represent the active intrusiveness of its business environment.

The initiation of Nike's global outsourcing strategy can be tracked back to 1962 when Philip Knight, co-founder of Nike, got an idea that he could import low-cost shoes from Japan and sell them in the United States (Hays, 2000). He decided that athletic shoes produced with Japanese cheap labor cost could rival the Adidas brand shoe made by higher paid workers in Germany. Adidas shoes were known to be the best athletic shoes at that time and were expensive and hard to obtain in the United States (Strasser & Becklund, 1991). In the same year, Philip Knight ordered athletic shoes from the Japanese athletic shoe company, Onitsuka Tiger Co. (Tiger), and sold those shoes in the United States. For this small business operation, he created Blue Ribbon Sports (BRS), which became the precursor of Nike. This was Nike's first outsourcing contract, which eventually evolved into their global outsourcing with 652 contractors. Derdak (2006) reported that BRS sold 1,300 pair of shoes with gross profit $8,000 in its first business year, 1964.

BRS went through a big transition in its business operations in the 1970s. It underwent major changes from being an importer of Tiger shoes to becoming a private company, which sells their own product lines. The biggest factor that brought about this change was the difficulty BRS had from poor delivery of Tiger, which created inventory control problems for BRS. Also, when considering other financing components involved in the business with Tiger, BRS concluded that it needed an intermediary for a more stable business relationship between the two companies. Political and economic forces of the United States in the early 1970s (e.g., recession, U.S. dollar depreciation) exacerbated the operational difficulties. With these exchange rate problems affecting the BRS contract with Tiger (i.e., the Japanese company) BRS no longer had the privilege of using cheap Japanese labor (Locke, Qin, & Brause, 2006).

With all these factors, BRS decided to contract with Nissho Iwai Corporation, one of the largest Japanese trading companies, for more systemic and stable international business. Through the extended financing from Nissho Iwai (i.e., $650,000 worth of credit), BRS could arrange for the manufacture of its own line products, making a new brand name, Nike, and a new logo, the Swoosh mark. In 1971, the first Nike shoe went on sale in the United States. Since that time, Nike has had its own products manufactured overseas through independent contractors and has sold the products in the United States. This was the beginning of Nike's global sourcing.

Nike's international operation system for flexibility

Nike started to expand its production operation in the 1970s because the demands for athletic shoes increased extremely fast in this period. The main reason for this demand increase was the jogging boom in the United States, which will be discussed in the next section. Korzeniewicz (1994) stated that the increased demand for athletic shoes in the 1970s changed the pattern of Nike's outsourcing contract. To meet the growing market demands, Nike needed suppliers that could provide bigger volume with lower price. Also, it noticed the rising labor cost in Japan and needed more control of the manufacturing process.

Thus, in 1974, Nike opened its first domestic factories in Exeter and Saco, New Hampshire. In 1977, they added production facilities in Taiwan and Korea. By 1980, almost 90 percent of Nike's production was in Korea and Taiwan (Strasser & Becklund, 1991). Later in the 1980s, however, as labor costs rose in those two countries (i.e. Taiwan, Korea), Nike again sought another location of suppliers such as China, Thailand, and Indonesia. NAFTA and GATT

treaties allowed Nike and other global corporations to move their production even easier than in periods prior to these treaties (Kellner, 2001).

In the mid-1980s, Nike partly shifted its production back to Korea and Taiwan from China because it realized several disadvantages from manufacturing in China in such areas as production flexibility, quality, raw material sourcing, and transportation (Korzeniewicz, 1994). Especially when it introduced the Air-technology for the Nike-Air model, it needed more experienced sewing operators with sophisticated skills and reliable and trustworthy suppliers (Donaghu & Bariff, 1990). Thus, Nike had another relocation of production in this period (Locke et al., 2007).

According to the classification by Donaghu and Bariff (1990), Nike's suppliers or producers can be categorized into three classes: developed partners, volume producers, and developing sources. Developed partners are the upper level of Nike's suppliers, located in Taiwan and South Korea. They produce the most expensive and latest products, which require more advanced technology to produce. While developed partners manufacture high-end products with smaller volume (e.g., 10,000 to 25,000 pairs of shoes per day), volume partners manufacture more standardized footwear for which demand is more fluctuating with bigger volume (70,000 to 85,000 pairs a day). Because developed partners usually contract with other companies as well, Nike does not develop any of its innovative products through these partners for the protection of its technology. Developing sources are mainly located in China, Indonesia, and Thailand, and they produce the volume products with low labor costs. Nike benefits from this group of suppliers by diversifying its production in addition to obtaining low cost production. Through this complex system of stratification among its suppliers based on the business relationship, Nike was able to gain the control over its suppliers and also to make a strong partnership with them (Donaghu & Bariff; Locke, 2003). Nike has continuously renewed its contracts through this particular mix of partners and the partners' capability changes, in response to the environmental changes (e.g., factory improvements, market fluctuations, technological progress) (Donaghu & Bariff). Through this systematic effort, Nike tried actively to control and manipulate the critical factors (i.e., suppliers) of its business environment (i.e. global sourcing). This is also explained as Nike's active interpretation of the environment in terms of organizational intrusiveness as identified by Daft and Weick (1984).

Korzeniewicz (1994) stated that this "geographical dynamism" (p. 256) of Nike's shifts in subcontracting arrangements were important because of two reasons. First, some of Nike models required more sophisticated technology with production flexibility, and they still needed older, more reliable suppliers. Second, Nike tried to use the older partners to bring the newer suppliers up to its standards, through joint ventures between the older and newer production facilities. In a flipside of this expansion, however, Nike was often criticized for its global capitalism, which exploited cheap labor with minimum wage in developing countries (Kellner, 2001; Locke, 2003; Wilson & Sparks, 2001). At the end of the twentieth century, Nike received serious criticism by media regarding the low wages it paid in Indonesia, the use of child labor by its contractors in Cambodia and Pakistan, and the poor working conditions (e.g., health and safety problems) in the factories it used in China and Vietnam (Locke).

In 1993, *Fortune* magazine introduced Nike as a leading company of modular corporations, which had a network of suppliers in the world and receive their services (i.e., modular) (Shawn, 1993). Discussing that many companies' traditional corporate structures changed during the 1990s, Shawn reported that outsourcing was a key strategy for a company to achieve flexibility with the following two advantages. First, outsourcing holds down the unit costs and investment when companies need to produce new products rapidly. Second, it allows companies to focus on the area where they have a competitive advantage. Nike has exemplified the global outsourcing company, which has innovated through the new operation system of flexibility.

In summary, during the decades from the 1960s to the 2000s, Nike became a world leader among corporations, through its global outsourcing strategy. Based on the spheres of Nike's control of business operation, Korzeniewicz (1994) classified the Nike's business years from 1960s to 2000s into three periods (see Figure 17). In the first period from 1962 to 1975, its main activities were import and distribution of Japanese made products. In the second period between 1976 and 1984, Nike extended its control to the marketing area by rearranging its contracts with its suppliers, from an exclusive contract with Japan to contracts with more diverse contractors in several countries. In the third period after the mid-1980s, Nike diversified its business areas to product design and advertising. Figure 17 diagrams these three periods based on the traditional FTAR structure (see Figure 3), which was previously presented in the literature review section (see Chapter 02).

Process	Business Area within FTAR Structure	Industry Level	Period 1 1962-1975	Period 2 1976-1984	Period 3 Post 1985
	Design	Apparel		(grey)	(grey)
↓	Product development				(grey)
	Cut and sew				
	Wholesale / retail operation	Retail	(grey)	(grey)	(grey)
	Marketing	Marketing		(grey)	(grey)
	Advertising				(grey)

Figure 17. Nike's business operation based on its control of operation (data obtained from Korzeniewicz, 1994)

Note. The business areas that Nike operated are shaded in grey.

Product strategy

The consumers of Nike range from people enjoying jogging to professional athletes. Pribut and Richie (2002) stated that the athletic footwear industry is driven not only by performance but also by design and product features. Nike, which has footwear as more than half of its products (see Figure 17), is largely affected by this type of design and feature based demand with its short product life cycle. This section discusses Nike's product strategies in three parts: targeting a niche market, product development with advanced technology, and its recent product diversification.
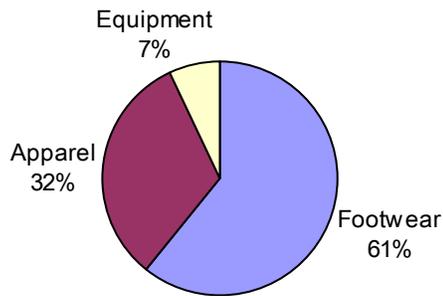
Figure 18. Product composition of Nike in 2005, based on revenues generated in U.S. region, Europe, Middle East, and Africa region, Asia pacific region, and Americas region

Note. From Nike Annual Report, 2005

Niche market

To explore Nike's product strategy, the athletic footwear industry and market in the 1970s must be discussed first. When Philip Knight started his business, the athletic footwear market had been dominated by Adidas, the German footwear company (Strasser & Becklund, 1991). Strasser and Becklund stated that the German companies, such as Adidas and Puma, remained the most competitive brands for decades at that time because Germany had more sophisticated machinery, more skilled and experienced craftsmen, and the best raw materials. The situation of the U.S. footwear industry at this time is well-described in the book of Strasser and Becklund as follows:

> While Knight was waiting for delivery of his sample Tigers, Adidas had seven hundred workers in four factories making shoes to export to fifty-eight countries. Adidas so dominated the world athletic shoe market that its products were worn by every team in the 1962 World Soccer Championship . . . The most popular sports shoe in the middle of the twentieth century was the black canvas hi top [by Converse, which] had over 90 percent of the market. Not until 1968, when Adidas came to America with a high-performance leather basketball shoe, was Converse's domination of the field seriously challenged . . . Puma and Adidas moved into the American market in the late 1950s . . . Puma got a reputation in America as the German shoe that was cheaper, but not quite

cheap enough to justify buying it instead of Adidas. Adidas was far more successful, selling shoes for almost every sport. (p. 49-50)

To enter the market, BRS, first targeted a niche market for school track coaches with its experimentations on innovative technology (Korzeniewicz, 1994). Later, however, the changing market situation helped Nike to expand the market, during the fitness and jogging boom in the United States. By 1975, a lot of American people became interested in fitness and jogging (Hays, 2000; LaFeber, 2002). Korzeniewicz stated that Nike was "shaped" (p. 254) by this boom and "capitalize[d] on this phenomenon by outperforming competing brands" (p. 255). Consequently, increased demands for athletic shoes made a larger market for Nike. Katz (1994) stated that the American people's jogging boom helped Nike to drive its sales from $10 million $270 million during the last half of the 1970s. Nike tried to meet the new demands by developing and producing shoes, which were able to compete with the German brands.

Beginning of innovation

Nike's innovation in product design started with Philip Knight's early business partnership with Bill Bowerman, his former running coach. Bill Bowerman, who was very interested in assessing every single factor of his athletes' performances, was also interested in their shoes. His efforts on testing shoes with his athletes and offering design ideas were an essential part of Nike's product development. While continuously applying Bill Bowerman's innovative ideas to its products, Nike experimented on the function of and improvement to running shoes.

In 1980, the company's investment in research led Nike to open its own Sport Research and Development Lab in Exeter, New Hampshire. Strasser and Becklund (1991) reported that the lab was "the most advanced biomechanical research lab of any shoe company in the world" (p. 361). It utilized treadmills, high-speed cameras and computers to study how an athlete's body works with its shoes. Later it housed CAD/CAM design equipment, a pattern department, a sample room for designing the shoes, manufacturing facilities for producing the shoes, and a set of labs and facilities for wear testing the shoes including a track for running, an air lab to test wind resistance, a fabrics lab, and a chemistry lab (Strasser & Becklund).

In the early 1980s, Nike introduced the high-performance, sophisticated footwear model, Air, which later pulled the company from a continuous decline into a huge success (LaFeber, 2002). Until Nike introduced the Air model, it had serious trouble in its business in the early 1980s for several reasons (Korzeniewicz, 1994). Most of all, other competitors (e.g., Reebok, L.A. Gear) did better jobs in selling shoes for the female and aerobic market segment, which was becoming a growing market (LaFeber). Also, many endorsement contracts with athletes were canceled due to Athletic West's reduction of its sponsored athletes. In addition, its influence among sports coaches and agents was declining.

However, when its new Air model was introduced in the market with an innovative advertising campaign in 1986, the declining financial situation was reversed. LaFeber (2002) stated that Nike's sales doubled to $1.7 billion between 1987 and 1989. From that point until 1993, Nike dominated the athletic footwear industry with the soaring sales corresponding with its new model releases (Goldman & Papson, 1998). The Air model had a cushioning device within the sole so that it reduced shock and protected the body; the shoe compressed a type of gas within the sole with technological innovation. This air technology allowed the company to continuously develop the next models, such as Air Force 1, Air Pressure, and Visible Air. Since Nike came into the market in 1968, it has continuously developed new products through innovative technology. Table 13 summarizes the model of Nike products from its beginning year to 2005.

Table 13. Nike Model Developed 1970-2005

Year developed	Model name	Character
1968	Boston shoes	Cushioned mid-sole throughout the entire length of a shoe, which became a cornerstone of Nike shoe innovation
1972	Moon shoes	Waffle-like sole which increases the traction of the shoe without adding weight
1979	Nike-Air shoes	Cushioning device
1982	Air Force 1, Air Ace shoes	
1989	Air Pressure shoes	Basketball shoes with an inflatable collar around the ankle
1990	Air Jordan basketball shoes	
1991	Visible Air shoes	
2003	Goddess Gear – Air Max Plus 5 shoe	Performance running shoe with tuned air in the heel and a flexible, soft upper
	Goddess Gear – Vizi Mazy shoe	Sling-back style sneaker shoe in woven fabric
	Goddess Gear – Sphere Apparel	Three-dimensional fabric, creating air between garment and body to enhance the body's own cooling and heating apparatus

Note. From Buss, D. (2002, October). Nike's feminine side. Potentials, 3(10), 16-20.; Gale Research, Inc. (2007). Notable corporate chronologies. Detroit, MI: Thomson Gale.; and International Directory (2003). VF Corporation, International Directory of Company Histories 54, St. James Press. (Reproduced from Business and Company Resource Center, Farmington Hills, Mich.: Gale Group, June 2007)

Diversification of Product

In 1997, Nike's sales began to slow while its sales in 1996 had doubled from 1995 (Anonymous 1997) (see Figure 19). During the late 1990s, Nike went through more difficulties in its business operations for several reasons: inventory problems, marketing mistakes, changes in footwear fashion, bankruptcies among retailers, the revival of competitors such as Reebok and Adidas, and bad media exposure regarding their labor practices in the Asian countries (Buss, 2002; Rapaport, 2002).
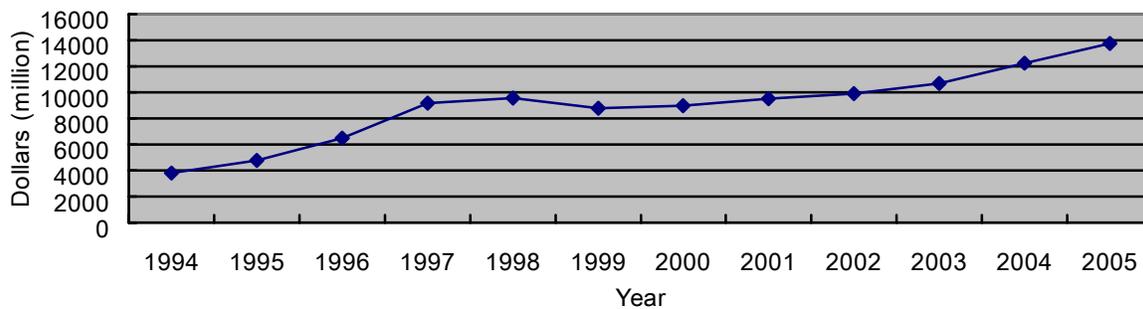
Figure 19. Nike's revenue 1994-2005

Note. From Nike Annual Report, 2005

The key strategy among the Nike's plans to overcome this stagnation was to diversify its product line through brand segmentation (Buss, 2002; Evans, 2002; Lefton, 1998; Rapaport, 2002). Line expansion into new markets, such as casual apparel for women, golf shoes, and tennis gear, which they had done since mid-1980, was more aggressively developed (Gale Research, Inc., 2007). Especially, Nike started to focus its business on the women's market. They wanted to regain the power in this growing, big market, which they had significantly lost the ground to Reebok since mid-1980 (Buss; Goldman & Papson, 1998).

As an example of product diversification, Nike tried to differentiate the focus of its product development for women from its traditional products for the men's market, emphasizing more sophisticated design and fashion. In addition to the aesthetic design elements, Nike also aggressively employed advanced technology to new athletic products using innovative materials especially for women's needs, such as providing extra cushioning as protection for the body and other features for enhancing women's workouts (see Table 18). Also, for women's apparel, they reduced the product development cycle from 12 months to nine months to produce more styles and colors within a selling period (Buss). Extensive marketing to support the new line products (e.g., advertising, launching website, opening retail stores) was also essential part for its effort.

In summary, Nike's product strategy has been closely connected with its consumers and was formed by its intrusive response to the market. As previously discussed, when Nike first entered the athletic footwear market, competitive German brands dominated the market. Nike first targeted a niche market, which existing brands had overlooked, and shaped its own market. Later, with changes of market environment, Nike achieved the market domination through

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product innovation. In addition, the operation system for its global outsourcing and a supporting marketing strategy were essential in its success. Since the 1990s, Nike has tried to expand into a wider market by product diversification. Nike's product strategies from its market entry to the present are summarized in Table 14.

Table 14. Nike's Product Strategy According to the Marketing Phase

Marketing phase	Entry	Domination	Expansion
Product strategy	Niche market	Product innovation	Diversification
Date	1970 →		2005
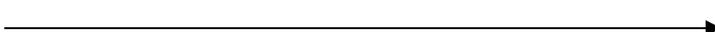
Aggressive marketing

Philip Knight, Nike CEO, stated that the primary reason for Nike's success in sales of U.S. athletic apparel was in creating the powerful brand equity (Gallagher, 1996). Goldman and Papson (1998) also stated that the real value of Nike products is the Swoosh, Nike's logo, and its representation of meaning to consumers. Because most athletic footwear companies now provide parity products in quality and design under similar production conditions, something in marketing must be used to differentiate products and provide companies with a competitive difference. Goldman and Papson indicated that the key factor contributing to differentiate Nike from others was building powerful brand equity by its Swoosh logo and the brand name, Nike.

In 2005, Nike spent $608.6 million in its advertising including TV, magazine, newspaper, outdoor, radio, and Internet. It was ranked 56th among top advertisers in the United States, making it the highest ranked apparel company in the list (Anonymous, 2006). If this number is added to its endorsement payment, Nike's overall marketing expenditure reaches into astronomical figures. Nike spent $1.7 billion in its marketing including endorsement deals of $476 million in 2006 (Rovell, 2006). Nike uses the term "demand creation" (Nike, Inc., 2005, p. 16) in its annual report to explain its advertising and promotion efforts. This term well represents Nike as a forceful organization in its interpretation and response of the environment (i.e., the change or sometimes manipulation of business environment), which Daft and Weick (1984) recognized as an organization with a high intrusiveness into the environment. Management at Nike stated that its aggressive marketing was developed to influence its consumers' sports and fitness preferences so as to more effectively respond to consumer preferences and trend shift.

In this section, Nike's major marketing activities including endorsement and advertising are mainly explored. Nike has closely incorporated its promotional marketing, mainly endorsement with celebrity athletes, into its advertising campaigns; thus, each of the two cannot be explained separately. However, considering Nike's endorsement marketing started much earlier than advertising campaign, and its endorsement with athletes, especially basketball player, Michael Jordan, brought a groundbreaking trend in U.S. marketing industry, the two marketing activities are individually discussed.

Endorsement

Richards (1998) stated that endorsements with athletes are the core of Nike's success. Since Nike made its brand name and the Swoosh logo in 1971, it has continuously tried to expose them to the public so as to increase the visibility of its products. In 1972, Nike's first endorsement marketing of its own product started at the U.S. Olympic Trials (Derdak, 2006; Gale Research, Inc., 2007; Korzeniewicz, 1994). It attempted to attach Nike's name and logo to the careers of famous athletes by putting its products on them – in other words by giving the athletes Nike shoes, and later apparel items, to wear when competing. Through this early endorsement marketing, Nike had been convinced that the association of its shoes with reputable athletes was a very effective way of marketing (Korzeniewicz, 1994).

This effort was extended to the 1976 Olympics when well-known athletes including tennis player Ilie Nastase and Jimmy Connors wore Nike shoes. Later in 1978 with the opening of Athletics West, Nike made an endorsement contract with tennis player, John McEnroe. Nike's endorsement marketing with athletes went about in earnest at the L.A. Olympics in 1984. Strasser and Becklund (1991) reported that in 1983, Nike had two goals: rejuvenating the brand and cutting back expenses; and marketing was the key for Nike to achieve those two goals. Thus, the Los Angeles (L.A.) Olympic event was a very important chance for Nike not only because of its vital timing but also because the Olympics is a big venue, which provides huge opportunities to market the athletic products. During the L.A. Olympics, Nike made contracts with the best athletes participating in the Olympic events (e.g., Mary Decker, Joan Benoit, Alberto Salazar, Carl Lewis) with included advertisement as well as endorsement activities; athletes were required to wear Nike products in advertisements and if needed, to allow Nike to use its names on apparel items.

In 1984, Nike also made one of the most profitable contracts in U.S. marketing history with the famous NBA athlete, Michael Jordan. Goldman and Papson (1998) stated that this contract was beyond the traditional endorsement strategy. Through the huge contract, paying $2.5 million for five years, Nike created the product line named after Jordan, and paid him royalties on the sale of the Jordan shoes and apparel to provide Jordan with an added incentive in promoting Nike products. Cole (2001) stated that the enormous growth of Nike during the 1980s cannot be explained without Michael Jordan's contribution. Marketing Nike shoes with Michael Jordan not only boosted Nike's declining sales during the early 1980s but also created huge market demands from American consumers (Korzeniewicz, 1994). Throughout the 1990s since Nike contracted with Jordan, it was estimated that the Jordan products have grossed $2.6 billion; if Jordan's impact on Nike's image and brand equity was also calculated, this figure would be doubled (Anonymous, 1999d). Nike's marketing success with Michael Jordan led competitor brands (e.g., Reebok, Adidas, Fila) to aggressively sign celebrity athletes.

Advertising

Nike's first major advertising campaign through national TV and magazines ran in 1984 during the L.A. Olympics (Gale Research, Inc., 2007). This method of marketing was given a relatively late start when considering Nike's other promotions (e.g., athlete endorsement, distributing t-shirts), which started early in the 1960s. Giving the reason that Nike mainly focused on promotions and not advertising for its marketing, Philip Knight stated that he was convinced that the promotions were a much more cost-effective way in terms of money and time than advertising (Katz, 1994; Strasser & Becklund, 1991).

Nike's early advertisements, thus, borrowed the idea of its athlete endorsement. For example, in the 1981, the headlines of Nike advertising with tennis player McEnroe were: "McEnroe Swears by Them" and "McEnroe's Favorite Four-Letter Word" (Strasser & Becklund, 1991). This campaign combined the known hot-tempered personality of McEnroe with the Nike brand. Nike extended this kind of advertising format to its L.A. Olympic marketing. Considering its brand power was not very strong at this time, Nike decided to use the strategy to expand its market by focusing on the brand, itself, rather than the quality or character of the products. For the TV advertisement, targeting L.A., they made the "I Love L.A." concept to coordinate with filming famous athletes. This advertising campaign was inspired by the music video of the song

"I Love L.A." by the singer, Randy Newman. This 60 second commercial did not show any explicit or specific Nike endorsement but a flash of a logo at the ending spot. For outdoor advertising through Billboards and printed buildings, Nike created the images with athletes, barely showing a Nike logo; this advertising was done "in a subtle but dramatic way" (Strasser & Becklund, 1991, p. 519). The result of these advertising efforts was a big success in getting attention from people and media including, receiving Los Angeles' advertising awards (Strasser & Becklund).

Looking at the U.S. advertising industry before the 1980s helps to understand Nike's innovative advertising strategy at this time. Discussing the Nike advertising, Goldman and Papson (1998) described the U.S. advertising before the 1980s as follows:

Since the 1960s advertising has grown reliant on formulas for branding goods with the imagery of individual identity and well being. But as the number of consumer products has steadily increased, so has advertising clutter. Ads became predictable and boring, and what is worse, too many of them looked the same. Hence, though every advertiser seeks to differentiate their product name and symbol from competitors, when they use the same formulas and clichés everyone else uses, they thwart their own purpose. Every once in a while, someone will break away from the pack, but competitors usually respond by imitating the innovative look or style until it is no longer distinctive. By the early 1980s, widespread consumer discontent with the recipes of advertising had developed. By the late 1980s, a few leading edge advertising agencies recognized that media-literate baby boomers and post-baby boomers had grown alienated from slick ads built around appeals to consuming individualism and status through commodities. (p. 2-3)

Nike's innovative advertising strategy came into another period through the contract with Michael Jordan in 1984. Nike made the athlete (e.g., Michael Jordan, Penny Hardaway, Deion Sanders, Ken Griffey, Jr.) to be cultural heroes through its advertising campaign and attempted to convey the athletes' images (e.g., success, speed, confidence) to those of Nike's brand and products (Goldman & Papson, 1998). Thus, as Jordan and other athletes' careers grew, Nike's image that was associated with these images also improved (Goldman & Papson; Kellner, 2001).

In the advertising campaign featuring Jordan, Nike focused on Jordan's magnificent talent and celebrity status through several product series, such as Jordan Flight. Meanwhile, Nike

also kept Jordan human, and connected to the ordinary consumer, by showing his self-reflexivity or his humanness including weaknesses (Goldman & Papson, 1998) (see Table 15). For example in the inner-voice series, Nike featured Jordan's willingness to take a failure for his success, and embrace criticism as another source of challenge. By highlighting Jordan's consumer-appealing demeanor and personality in addition to his ability, Nike tried to balance his celebrity with his humanity (Goldman & Papson).

Table 15. Nike's Advertising Series Featuring Michael Jordan

Title	Image	Message
Jordan Flight	Jordan moves towards the basket like exploding into the air	"Who said a man was not meant to fly?" "Just do it"
Mars	Jordan stands with his arm around Nola Darling. Mars asks why she prefers Jordan to him and finally declared it is because of Jordan's shoes.	"It's gotta be the shoes, the shoes!"
Inner voice of Jordan 1	Jordan, dressed for success, reflects on his past experience.	"I've missed more than 9,000 shots in my career. I've lost almost 300 games . . . I've failed over and over and over again in my life. And that is why I succeed."
Inner voice of Jordan 2	A sweat drenched Jordan sitting on a weight bench talks to the audience about his message.	"Challenge me, doubt me, disrespect me. Tell me I'm older, tell me I'm slower, tell me I can no longer fly. I want you to."

Note. From Goldman, R. & Papson, S. (1998). Nike culture. London: Sage Publications; Kellner, D. (2001). The sports spectacle, Michael Jordan, and Nike: Unholy alliance? In Andrews, D. L. (Ed.), Michael Jordan, Inc.: Corporate sport, media culture, and late modern America (pp. 65-106). New York: State University of New York Press.

The images and messages of all of Nike's advertising were reinforced by its Swoosh logo by presenting it at the ending spot. Goldman and Papson (1998) stated that the greatest

achievement of Nike's advertising is its "ability to attach the aura of a philosophy to its name via its sign and slogan" (p. 19). Nike's logo, the Swoosh mark, turned out to become one of the icons of American and global cultures, beyond the business or corporate cultures (Kellner, 2001), and its slogan "Just do it" became the most frequently stated saying conveying Nike's basic philosophy (Goldman & Papson). And especially when the logo and slogan were combined with the images of a sports hero, they achieved the most effective marketing power for Nike. These images acquired the meaning and value in association with those athletes and provided the company with maximum brand equity (Goldman & Papson; McDonald, 2001).

With these unrivaled advertising strategies, Nike has led the athletic shoe industry. In 1991, Nike's advertising was ranked as the most influencing advertising in the survey for the advertising campaigns of the athletic footwear companies by *Sporting Goods Business*. When the retailers were asked the most effective television advertising for selling the products in their shelves, Nike was rated 84.3%, followed by 12.4% of Reebok and 1.3% of L.A. Gear (Carr, 1991). In 1999, Nike was also ranked, as fifth among companies, with the greatest return on advertising in miscellaneous industries by *Advertising Age* survey. The findings revealed that Nike earned $8 per advertising dollar (Anonymous, 1999c). Again, the intrusiveness and test marketing profile is noted for Nike's business strategies. They are often in the forefront of marketing.

In summary, this portion of the chapter examined the key business strategies of Nike in terms of three areas: global outsourcing, product strategy, and its marketing strategies. Examining Nike's organizational strategies, Korzeniewicz (1994) concluded the factors of Nike's success as follows:

> Nike's uncommon success and growth is due in part to social and cultural trends that have made leisure and fitness more important in our contemporary society. It is also the outcome of Nike's strategy of responding to these trends by accumulating expertise and control over the increasingly important service nodes of the athletic footwear commodity chain: import, distribution, marketing, and advertising. (p. 261)

As discussed throughout this chapter, Nike is a good example for a company incorporating external business environments (e.g., globalization, jogging boom, American culture for media) into its internal corporate strategies (e.g., global outsourcing, product strategy,

aggressive marketing). While employing innovative strategies in the three business areas of outsourcing, product development, and marketing, Nike has dominated and led the apparel shoe industry, and in many aspects, the entire apparel industry. These three areas for Nike strategies are parallel to the three environmental factors (i.e., globalization, technology, consumer) identified in the previous chapters. Over the decades from 1970 to 2005, these three environmental factors have continuously changed and transformed the market. This study confirms that responding those changes dynamically and, if needed, taking the lead in changes through an intrusive approach are the keys for Nike's success.

VF Corporation

VF Corporation (VF) is one of the world's leading corporations in the manufacturing and marketing of branded life style apparel and related products. Since organized in 1899, for over 100 years, it has grown to the world's largest publicly owned fashion apparel firm. In 2005, it was selected as the first largest company in the apparel and other fabric products industry by employees by *Business Rankings* (2006), with its total number of employees, 53,200. It was also ranked as the second company by its revenues in the apparel industry by *Fortune* magazine at the same year, following Nike (see Figure 15).

The predecessor of VF was a company producing and selling knitted silk gloves, named the Reading Globe and Mitten Manufacturing Company. In 1899, with a total investment of $11,000 and a 320 square foot factory, it was first incorporated in Pennsylvania (VF history, n.d.). Since its beginning, VF has been a manufacturer, as defined in Chapter 2, by owning the manufacturing facilities where its products were produced. In 1944, the company expanded its business into the manufacturing of silk lingerie, and it succeeded in its sales with the brand name, Vanity Fair. This success led the company to change its name to Vanity Fair Silk Mills, Inc. From this time, the company devoted itself exclusively to the manufacturing of undergarments (i.e., lingerie and foundation products). In 1951, Vanity Fair went public for the business expansion. Throughout the 1950s and into the mid-1960s, the company constantly grew as a manufacturer of lingerie and foundation (e.g., bras, girdles) products; foreign expansion with U.K. and Australian firms was also achieved.

The company changed its name to VF Corporation (VF) after completing two major acquisitions in 1969. Based on this background of its business, this chapter explores VF Corporation's business strategies from 1970 to 2005. A literature review revealed that VF has achieved numerous acquisitions and subsequent restructuring during these 30 years for its competitive business. For efficient organization of the chapter, the researcher divided VF's business years into three periods according to the following criteria: (a) 1970-1985 - when the VF Corporation emerged, (b) 1986-1996 - when it expanded its business and became an industry leader, and (c) 1997-2005 - when it introduced coalition management for more efficient and effective business. Along with these three periods, this chapter explores what business efforts VF has made with its acquisition and restructuring from 1970 to 2005.

Emergence of VF Corporation: 1970-1985

The emergence of the VF Corporation began with Vanity Fair Silk Mills' first two acquisitions in 1969. Two companies, H.D. Lee Company, a manufacturer of branded men's and boys' jeans and casual pants, and the Berkshire International Corporation, the fifth largest producer of women's hosiery in the nation were acquired in the same year, 1969. These two major acquisitions meant, to the Vanity Fair company, a manufacturer of lingerie and foundation products, the beginning of an evolution into a multi-brand clothing company. As a means of reflecting its diversity of business through expansion, the company changed its name to VF Corporation (VF).

New corporate concept

These acquisitions brought about several changes to VF's business, and the changes eventually created the new corporate concept. With the acquisition, VF first became the parent company of H.D. Lee and Berkshire International and it created a new subsidiary under the brand name, Vanity Fair for its original business of lingerie and foundation products more recently known as intimate apparel. This organizational structure with sub-division became the initiation of VF's constant business expansion throughout the thirty years. Second, with the acquisition of Berkshire, VF obtained a large amount of real estate that the hosiery manufacturer had previously used but no longer needed. In 1970, some of Berkshire's unused factory spaces were renovated as VF's first outlet store; at the beginning, the space was set up with tables with

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overstock and factory seconds. This channel of sales eventually became the predecessor of VF's outlet stores, of which the number has increased to 110 outlets around the world in 2005.

One year later in 1971, VF acquired Kay Windsor, Inc., a manufacturer of women's dresses and sportswear, which became its fourth division, with Vanity Fair, Lee, and Berkshire. VF intended the interrelationship strategy with four non-competing divisions as its stable business and not relying only on one division. Regarding this corporate concept, VF's chairman, Manford O. Lee stated in the company's annual report as follows:

> VF Corporation is a profit-oriented company. As such, we have evolved a concept designed to further our opportunities and at the same time diminish the risks inherent fashion. Our corporate concept is this: that a broad-based international apparel complex, consisting of related lines, will produce consistent results while minimizing the impact of fashion change. We evolved this concept in 1969 and put it into effect in 1970. And, consistent with the concept, VF Corporation acquired Kay Windsor, Inc. in 1971 . . . The questions: is this concept itself sound? . . . For our member companies are interrelated in the apparel field. They can, and do, contribute to and benefit from highly sophisticated management techniques and financial controls. As a result, we have been able to reduce costs, reduce inventories, increase our total corporate efficiency . . . VF Corporation, by hewing to its corporate concept, is structured achieve profit. (VF Corp., 1971, p. 1)

VF's this strategy relates to the resource dependence characteristics of the organization, which identified as one of the factors that affect organizational interpretation process by Daft and Weick (1984). Daft and Weick stated that when organizations have more hostile and threatening environment, or an organization depends heavily on the environment, the organizations allocate more resources into interpretation-related functions. VF's decision of making an alternative plan and, not solely relying on any one market can be explained as the result of VF's interpretation and response to its environment; it might conclude that the business environment was not benevolent and more actively sought the solution for the potential problems than other competitors.

In 1971, VF's total revenue increased 8.1% to $276 million from $255.3 million in the previous year. The company understood this result as the soundness of its business concept and continued to seek marketing opportunities with this concept (VF Corp., 1971). In 1977, it established a new division, VF Corporation International Division, to manage its growing foreign

business. Its overseas operation was for the export of Vanity Fair intimate apparel to Europe and the Far East, which later grew to include the export of the Lee and Berkshire products. During the 1970s demand for foundation products greatly diminished in size in the United States, and VF sought other consumers for this product. This five unit structure continued until 1976 when VF sold the Berkshire domestic hosiery operation.

Beginning of success in 1980s

VF's continuous success, establishing a consistent record of strong financial performance, accelerated when it entered the 1980s (see Figure 20). In 1980, its revenue reached to $633.8 million, which was a 16% increase from $544.3 million in 1979; sales rose 18% to $746 million in 1981. And in 1982, VF became a billion-dollar corporation with $1.1 billion sales.
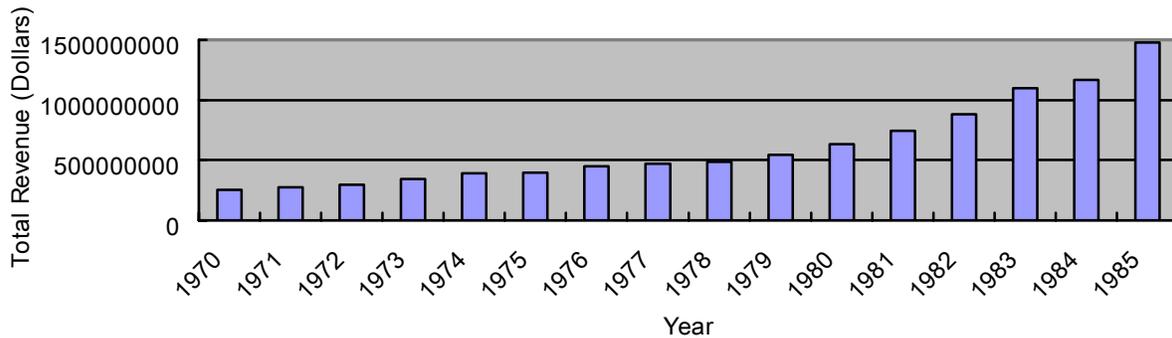
Figure 20. VF's total revenue 1970-1985
Note. From VF Annual Report, 1970-1985.

The success of VF at this time was attributed to several factors. The *International Directory* (2003) indicated that those factors included less dependence on foreign markets; earnings from non-competing product segments; major investments in capital improvements; tighter inventory controls; and its marketing strategy especially for Lee jeans. Although highlighted in the *Company Histories*, the evidences for these business strategies were found in many records.

First, VF was not as dependent as its two larger competitors (i.e., Levi Strauss & Co. Blue Bell [predecessor of Wrangler]) on weaker foreign markets (Gordon, 1981). At this time, there was an economic recession and difficult markets in Europe and Canada, which affected apparel companies' business operations. VF controlled this adverse influence by not relying

entirely on its export sales and implementing programs for cost reduction. Thus, approximately 30% of its profits came from abroad in 1980 while those of Levi's were 34% and Blue Bell's were 37% (Gordon, 1981).

Second, VF had another advantage in its diversification of product groups, which was parallel with its corporate concept. As the company identified itself as a "profit-oriented company" (VF Corp., 1971, p. 1), VF attempted to maximize its profits by operating multiple lines. Related but non-competing product segments enabled the company to minimize its business risks and to increase efficiency as well. Table 16 summarizes VF's three brands, which were it held in the early 1980s.

Table 16. Three Brands in the Early 1980s

	Vanity Fair	Lee	Kay Windsor
Product segment	Intimate apparel	Jeans and casual apparel for men, women, and children	Women's apparel
Value position	Style	Quality	Value
	"Style catches the eye – it is the essence of fashion's appeal." (annual report, 1981, p. 4)	"Quality builds trust – it is the commitment to excellence that creates confidence in our brand names." (annual report, 1981, p. 5)	"Value produces a satisfied consumer – especially when it includes fashion with flare and lasting quality." (annual report, 1981, p. 6)
% of net sales in 1983	18%	79.8%	2.2%

Third, VF made significant capital investments in modernization of its plants and equipments. Starting in 1979, it completed the $50 million capital improvements program including installation of automatic sewing equipment, computerized control fabric handling and sewing equipment, wet-processing machinery for denim products, and related preproduction and production equipment. These efforts provided the company with control over the manufacturing process for increased productivity, efficiency, and better quality of products. The biggest portion of these investments was in the domestic and international operations of Lee primarily for computerized marking and cutting, automatic belt loop machines and wet processing facilities

for finishing (VF Corp., 1981). Inventory control with improved forecasting techniques enabled the company to provide better service and products to its customers.

Fourth, VF established the marketing strategy, especially for Lee, to compete with other major jean brands (e.g., Levi's, Wrangler). VF's segmenting production into men's and women's lines was the biggest factor of its success; this strategy was definitely a way to have non-competing product lines (*International Directory*, 2003). VF first introduced stretch jeans and dressier blue jeans for women, competing with the previously popular designer jeans (Walbert, 1984). It also developed the Ms. Lee brand, which became the best selling jeans line in the United States (*International Directory*). By introducing these new products, VF attempted to increase its market share in the jeans market, which had flattened at approximately $5 billion annually at this time. As a result of this marketing strategy, VF's share of the U.S. jeans had risen from 2.5% in 1980 to approximately 11% in 1984 (Walbert). VF's efforts to remake a traditionally manufacturing-oriented company into one that is marketing oriented was also shown in the following excerpts from the interviews in *Forbes* and *Business Week*, respectively, with the chairman and CEO of VF, Larry Pugh: "There has been a transition within the apparel business . . . Apparel makers are recognizing that they need a marketing approach, not just a manufacturing approach to merchandise" (Walbert, 1984, para. 1). "The jeans business is a mature business . . . The success stories will be those companies that take market share" (Anonymous, 1983, para. 2).

VF continued to diversify the company with acquisitions. In 1984, it acquired Modern Global, Inc., a manufacturer of women's cotton panties and sleepwear and men's cotton tee shirt and undershorts, for $37.4 million. Although these items were intimate apparel items, they were sold to a different market from the Vanity Fair products. It also purchased Troutman Industries, Inc., a manufacturer of men's and boy's casual slacks and shorts. With these two private companies, VF also acquired the common stock of Bassett-Walker, Inc., a leading manufacturer of knitted, fleeced activewear for men, women, and children, for $293.3 million.

The VF reported the three basic criteria for the company's acquisition strategy (VF Corp., 1986). First, each brand had to be in the basic or basic-fashion segment of the apparel industry. Second, each brand had to be located in a different but compatible market position with the existing brands. Third, each brand had to have a similar operating concept with VF or be easily converted to VF policies. Consistent with these criteria and with its business strategies of

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resource dependence, VF attempted to obtain more strength to its business by adding the new three brands that had a synergic fit with its existing brands.

Industry Leader: 1986-1996

International Directory (2003) stated that in 1986 VF became the U.S. largest apparel company when it acquired the Blue Bell Holding Company, Inc. for $762 million. Starting with this acquisition in 1986, VF entered the second phase of its business, securing its position as an apparel industry leader. The company reported that it doubled its size with the purchase of Blue Bell in 1986 (VF history, n.d.). From this time to the mid-1990s, VF continued growth by its ongoing acquisitions and subsequent restructuring. This period is characterized by three business activities: further diversification through its acquisition of Blue Bell, market segmentation with a new series of acquisitions, and the initiation of market-driven business.

Further diversification: Acquisition of Blue Bell

Beginning operation in 1904, Blue Bell Holding Company was, in the 1980s, one of the United State's leading manufacturers of casual clothing and western-style wear (i.e., rodeo jeans, cowboy shirts). Among its products, it produced Wrangler jeans, one of the big three jean brands in the 1980s, with Levi's and Lee. Reporting the union of the second and the third largest jeans manufacturer, Forman (1986) stated that this acquisition would create an apparel company with previous year sales of over $2.5 billion in total.

The acquisition of Blue Bell brought several changes to VF. First, it provided an opportunity to further diversify the VF's business line, with the multiple brands of Blue Bell's other holdings (e.g., Rustler, Jantzen, JanSport, Red Kap), and it brought about the company's considerable growth in size. Although Wrangler and Rustler were brands of jeans, Jantzen and JanSport were sportswear brands, and Red Kap was a work clothing brand.

In addition, these acquisitions broadened the distribution channels including mass merchants and discount stores, which VF had not reached before this acquisition (Anonymous, 1986a). Lee, Wrangler, and Rustler were different price points of jeans brands, which had different target consumers and retail channels. Lee was mostly sold through VF outlets, department stores including Sears Roebuck & Co. and specialty stores, including, JC Penny Co. while Wrangler and Rustler were carried in mass merchants including Wal-Mart and K mart.

With this acquisition, VF had a chance to significantly deepen its market penetration (Freedman, 1986; Ruben & Palmieri, 1986).

With this acquisition, VF also gained more power in the jeans industry, which enabled VF to secure its position as a leader in apparel industry (Anonymous, 1986b; Forman, 1986). The U.S. jeans market prior to this acquisition had Levi's brand accounting for 24% market share followed by Lee brand with 14% and Wrangler brand with 10% (See Figure 21). Forman predicted that VF would obtain a 20% to 25% share of the $5.5 billion in the U.S. jeans market, combining about 12% from the Lee brand and about 12% from the Wrangler brand. The largest jeans manufacturer, Levi Strauss & Co. had approximately a 23% share of the market at this time (Barrett, 1986; Forman; International Directory, 2003). Agins (1988) reported that VF obtained 29.5% of the U.S. jeans brands market share in 1988, compared with Levi Strauss & Co.'s 23% and the predicted 25% share (see Table 17).
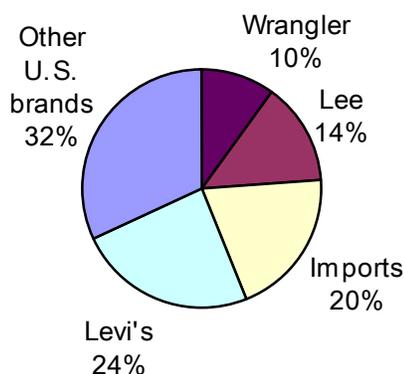
Figure 21. Market share of U.S. jeans market in 1986

Note. From "Jeans makers' task is to find the best fit VF, Blue Bell must meld Lee, Wrangler lines," by A. M. Freedman, 1986, Wall Street Journal (Eastern edition), Jul 31, p. 1.

VF obtained the three jean brands including Wrangler, Rustler, and Girbaud with its acquisition in 1987 and became one of the two largest national jeans company. The addition of three jean brands made VF serve various consumer segments, and at the same time, the four

different complementary, not competitive brands (i.e., Lee, Wrangler, Rustler, Girbaud) brought VF profits from a marketing viewpoint. For example, Lee brand was a leader in the women's and youth wear markets while Wrangler and Rustler appealed men's and boys' market. And Wrangler and Rustler brand were sold at a lower price point in mass merchants primarily targeting rural consumers; whereas, the Girbaud brand was sold in upscale department and specialty stores with its innovative in-store presentation and merchandising for suburbanites (VF Corp., 1986; VF Corp., 1989). While VF managed four brands separately, it attempted production synergies among them. Also, VF attempted to serve its customers more effectively by having more leverage over suppliers and retailers, gained through this acquisition (Freedman, 1986; VF Corp., 1986). With this advantage of jeans market domination, however, VF also had a difficulty in the management of several jeans brands, especially the brands of Lee and Wrangler.

Table 17. Jeans Brands Market Share in 1988

VF Corp.		Levi Strauss & Co.	
Lee	13%	Levi's	22%
Rustler	8%	Brittania	Less than 1%
Wrangler	7.5%		
Marithe & Francois Girbaud	Less than 1%		
Total market share	29.5%	Total market share	23%

In the 1980s, the company had to establish a marketing strategy for the different major jeans brands in distinctly separate ways while maintaining each brand's own identity. At the same time, it needed to convert Blue Bell into a more market-driven company (Anonymous, 1986b; Freedman, 1986). VF's consideration of managing the combined businesses at this time was stated in the report of *Wall Street Journal* as follows:

> Most difficult of all, VF will have to juggle some seemingly conflicting objectives. The company says it wants to sharpen the distinctive identities of Wrangler, which is popular with real cowboys and rural consumers, and of Lee, which thrives among stylish suburbanites, especially women. The goal of deliberately preserving this segmentation is to guarantee the loyalty of these very different customers. At the same time, however, VF will seek to immerse Blue Bell in its own hands-on operating philosophy . . . The biggest

coup for VF would be to convert Blue Bell into a marketing powerhouse. Blue Bell is

still considered a much stronger manufacturer than marketer. Particularly with Wrangler,

the company traditionally hasn't placed as much emphasis on targeting specific

consumers. Lee sells on factors such as style, fabric and fit. But wrangler is sold mostly

to a mass market on the basis of price . . . VF will push Blue Bell to define more sharply

its target markets. "We would like for it to be a little more focused without loosing its

cost competitiveness." says VF's Mr. Gregory. "You can be all things to all people."

(Freedman, 1986, para. 5, 13, 14)

Market segmentation: New series of acquisitions

In the early 1990s, VF attempted to operate its market segmentation strategy through

further acquisitions. This decision for market segmentation was the company's strategy

responding to the difficulty generated from the sluggish jeans market. A declining demand for

jeans had begun the late 1970s, and the decline continued into the late 1980s. In addition to

declining demand, the U.S. jeans industry had also experienced overcapacity in manufacturing

by the late 1980s. With the diminishing attraction of jeans, which were associated with the 1970s

hippies and rural lifestyle, and the increasing preference for preppie or more dressy styled

clothing in the United States, the revival of other casual slacks let consumers, especially women,

turned to softer and lighter casual clothes (Agins, 1988; Anonymous, 1986a).

VF had previously managed its business by balancing the sales of denim products with

the sales from other divisions, such as intimate apparel. However, in 1989, VF eventually had

been caught by financial difficulty. The main reason was its marketing decision in 1986 to

expand Lee jeans' distribution to mass merchandisers and discount outlets. This decision made

department store buyers refuse to carry the Lee brand because of the low-quality image

generated from the distribution in discount channels. *International Directory* (2003) stated this

problem as follows:

Without the aid of department and specialty stores, VF found itself amidst a marketplace

already dominated by low-cost importers with widely recognized brand names and large

consumer advertising budgets. The Lee division traditionally had not given retail stores

significant advertising support and found itself at a sizable disadvantage. As a result, both

sales and profits in the jeans area fell significantly. (para. 22)

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In addition, VF's business problems were exacerbated by increasing popularity of the Dockers brand, which Levi introduced in 1986. The *International Directory* (2003) stated that the popularity of the Dockers brand severely affected the decrease of VF's jeans sales in the 1990s. Thus, VF had to face the problem generated by remaining in its traditional jeans business while other manufacturers were expanding their various trouser lines and catching new trends.

The strategies that VF established to deal with this difficulty were as follows: segmenting markets into more distinct and separate units and rejuvenating its jeans sales. Thus, VF started to focus more intently on its market segmentation – through advertisements and acquisitions. It attempted to increase its women's apparel sales especially for the market segment of women aged 25 to 44 with increased promotions for its jeans line (*International Directory*, 2003).

For instance, Lee jeans, competing in all segments of the market, were especially advertised for the female through TV and magazines (e.g., Elle, Cosmopolitan). Its ads also emphasized the product benefits including fit, comfort, and finish, which were the main criteria of the women's market (Bagot, 1990).

Its continuous acquisition program in the 1990s also contributed to the company's further market segmentation as well as growth in size. During the early and mid-1990s, VF purchased seven companies including manufacturers of intimate apparel, children's wear, and licensed sports apparel (see Table 18).

Table 18. VF Acquisitions in the Early and Mid-1990s

Year of acquisition	Company name	Company business	Brands
1990	Munsingwear, Inc.	Intimate apparel	Vassarette, Form-O-Uth
1991	Healthtex, Inc.	Leading manufacturer of children's wear	Healthtex
1992	Valero Group	Paris-based firm	Variance, Siltex, Bolero, Silhouette
	Vives Vidal, S.A. (Vivesa)	Spanish intimate apparel company	Intima Cherry, Lou, Carina, Gemma
	Jean Bellanger Enterprises	French affiliate of Vivesa	
1994	Nutmeg Industries, Inc.	Manufacturer of licensed sports apparel	No recognized brands but carried university and professional sports logos
	H.H. Cutler Company		

Market-driven business in the 1990s

With the diverse range of products and multiple brands, VF needed its own strategies to manage all these divisions under its corporate umbrella. Two major efforts during this period were taken: (a) extensive market research and (b) more responsive business systems with cutting edge technology (Bamford, 1992). Because of VF's corporate orientation of resource dependency as defined by Daft and Weick (1984), new corporate-wide resources were needed to address the new acquisitions and marketing strategies.

First, VF invested more time and money in its consumer research. It attempted to research the characteristics of each consumer group for its multiple brands and to understand what the consumers want from each branded product, so that the product and promotions could satisfy those demands. For instance, its consumer research revealed that the consumers for the Vanity Fair products perceived that Vanity Fair was a sensual brand. Through this research, the company confirmed the design identity of the brand, and tried to incorporate the tactile sensation as design elements into every product. As a similar example, the company found that Jantzen was recognized as a young, fun, and active brand by consumers; therefore, it attempted to

integrate trendy fabrications such as lace insets or dynamic floral prints into the Jantzen product design. In addition, in the late 1980s after Lee jeans abandoned its traditional "jeans that fit" motto and followed the trends for fashion-jeans, research showed that consumers wanted Lee to come back to its classic origins. The company modified its marketing strategy including advertising as well as the design of product line in response to the consumers' demands (Underwood, 1993).

Second, VF established a business system for efficient, just-in-time (JIT) product supply to its customers. The Market Response System (MRS) was an automatic inventory management system, which VF developed in 1989 as part of a corporate reengineering effort. This system was designed to gather POS information from retail stores and to share the information with VF's designers, fabric buyers, manufacturers, and retailers (Kolodziej, 1995). This system was essential for VF's business to stay competitive in the 1990s. The company's effort toward consumer-driven marketing through this system was well-described in the following excerpt from an interview with Lawrence Pugh, then chairman and CEO of VF (Cafasso, 1993):

> Pugh says the strategy–which was officially launched in 1989, before he says VF had even heard the term "re-engineering"–was really a no-choice decision for the company . . . As the 1980s came to a close, the company's revenue had leveled off in the $2.5 billion range. When Pugh looked to see what was wrong, he zeroed in on his Lee division . . . The jeans business was dabbling in fashion trends and not keeping up with the competition or delivering what its customers wanted . . . Lee was the primary cause for near-stagnant revenue. "They had gotten big, sloppy and arrogant, and they weren't listening to the consumers." . . . "At that time, I woke up and looking out into the '90s, I recognized we had to do business differently than in the '80s." . . . he realized that the problems with Lee were signing a bigger issue, even though the other businesses showed no signs of trouble. Lee had lost track of what consumers wanted, in part because it didn't have effective tools to collect data on sales and buying trends. Furthermore, when it responded to changes, it was hung up by the traditional long production cycles the apparel industry had relied on for decades. Pugh says VF needed to fundamentally change its business processes and devise a more aggressive information systems strategy to become a more responsive and competitive company. "We've had to switch from just maintaining programs to finding ways to develop competitive advantage," adds H. Lynn

Hazlett, vice president of business systems . . . the company established a corporate
strategy in 1989 to redefine the core processes. It calls the mission the Market Response
System (MRS) . . . The other two are continuous merchandising, with a goal of more
frequent shipments to retailers, and flexible manufacturing, which would enable VF to
produce smaller but quicker production runs. (para. 4-11)

Pugh (1991) stated that MRS enabled VF to produce the apparel products with a better
quality but at a lower price in a more timely basis. With this revolutionary custom-driven,
integrated business system, VF could achieve continuous merchandising and steady
replenishment paralleled with the philosophy of Quick Response (QR) and with the inventory
responsiveness of JIT (Kolodziej, 1995; Rouland, 1992; Weber, 1995). Caffaso (1993) reported
that the sales of VF in 1992 reached to $3.8 billion, which was a 30% increase from 1991, as a
result of this inventory management system (see Figure 22).
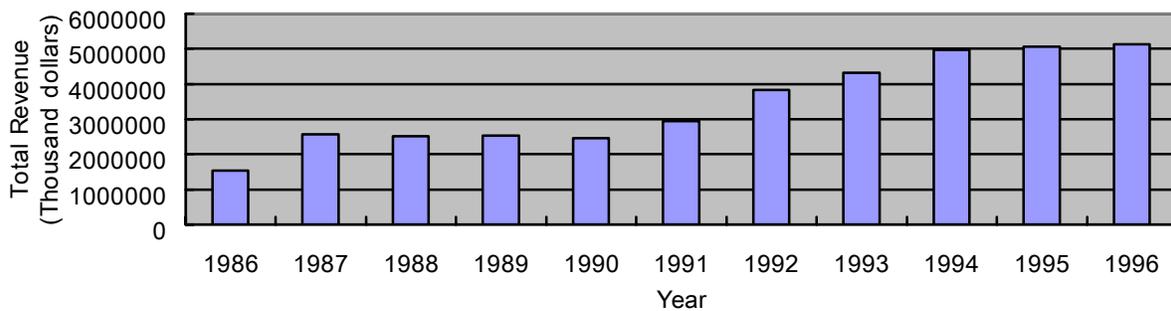
Figure 22. VF's total revenues 1986-1996
Note. From VF Annual Report, 1986-1996.

Introduction of VF Coalition Management: 1997-2005

VF, which had recorded a significant growth in sales since the early 1990s through its
market-driven business strategies, began to experience stagnation again starting in 1994 (see
Figure 22). A sluggish market was prevalent in the U.S. apparel industry at this time, which was
not limited to VF (Malhotra, Cowen, Selinger, Mook, Moran, & Kalin, 1995). Higher costs from
vendors and weak demand from customers were major factors influencing this market change
(Anonymous, 1995; Malhotra et al.). VF's third business period, the years from 1997 to 2005,

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was a transitional time for the company to respond to these changes, and a time when the company changed its organizational structure (e.g., manufacturing, operation systems) in response to the market changes. From 2002, VF gradually recovered the pace of growth through on-going acquisitions and subsequent restructuring efforts, which often happened simultaneously or reciprocally.

Lean retailing revolution

VF suffered a huge decline in net income in 1995, which decreased from $274.5 million to $157.3 million (Brady, 1995; *International Directory*, 2003). Lawrence Pugh, CEO of VF, stated in his interview with the *Daily New Record* that changes in the business environment including consumer buying habits, high raw materials costs, and competitive retail pricing severely affected industry profitability (Anonymous, 1995). In particular, increased consumer power in the 1990s was significantly highlighted as a key factor in the apparel business. Noticing this change of paradigm for the apparel industry, Mackey McDonald, president and CPO of VF stated as follows:

> "For some years now, the retailers have been calling the shots. That has ended now. The consumer is really the center of the decision-making process for the textile, apparel and retail industries . . . Consumers have changed. They are time-poor, aging, have less money, are very, very value and quality-driven, seek personalized products and what is very important, are faced with lot of shopping alternatives. The effective of this on retailers has been a slower market growth, too much retail space, population diversity and the biggest problem for retailers, no pricing elasticity. For the first time in years, we have had a deflation in retail apparel prices." (Maycumber, 1995)

As the power of consumers significantly grew during the decades of the 1990s, the U.S. apparel industry transformed itself with dynamic channel integration to better serve the consumers (Abernathy et al., 1999). Apparel manufacturing was no longer organizationally located solely in the production area but was viewed as an integral part of a distribution channel. The growth of private label programs among apparel retailers, such as Gap's jeans and Sears' Canyon River Blue line, accelerated this industry trend of consumer-driven market. By providing the products that corresponded to consumer tastes, retailers showed an understanding of

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consumer wants and could achieve market share with the distinctive product line under their exclusive brand name and license. The key to this business (i.e., meeting most consumer demands) was providing better products with a lower price, which continuously demanded cost cutting efforts from apparel manufacturers.

VF was in the center of the change of this retailing practice, which Abernathy et al. (1999) called as "lean retailing" (p. 3), and was a competitive player in the market (Abernathy et al.; Ryan, 1995). VF was one of a few manufacturers, which embraced the opportunity to work with retailers (e.g., L.L. Bean, J.C. Penney, Sears, Mervyn's, Nike) at this time. Abernathy et al. stated that, to meet retail requirements, apparel manufacturers must have the following capabilities: to respond to product orders in real time, to communicate efficiently with retailers on an electronic basis, and to distribute products to retail stores in a professional manner. VF attempted to innovate its production processes to achieve these manufacturing capabilities and to improve its resources. With the initiation of MRS, VF increased spending on adding value to the consumer. VF focused on what it called consumerization, where the company reduced or eliminated any process that did not directly add value to its consumers (Black, 1997). Those efforts included investing in engineering value-adding processes (e.g., information systems, engineered product development, performance management), establishing good partnership with suppliers, and building efficient internal communications (Maycumber, 1995). Through these efforts for efficient manufacturing and organizational restructuring, VF strove to improve its resources because of its major dependence of company owned manufacturing facilities.

Acquisitions and new organizational structure

In support of its consumerization, VF built a new organizational structure by reorienting all of its operation including manufacturing, marketing, and systems technology in order to meet the consumer needs (*International Directory*, 2003). In 1994, the company reorganized into five new strategic business groups, which it called a coalition. The five groups included Jeanswear, Decorated Knitwear, Intimate Apparel, Playwear, and Specialty Apparel. The company reported that with this new coalition management, it charged to each coalition the additional responsibility to maximize the skills and resources within each coalition while maintaining its previously operated divisions (VF Corp., 1995). The company also moved its production to overseas plants for further cost reduction. In 1995, it closed nine U.S. plants and opened new VF-owned plants

in Mexico and Central America. At the time, VF operated with approximately 80 percent of its manufacturing in domestic manufacturing facilities, but it planned to reduce the percentage to 65% (*International Directory*, 2003).

VF's acquisitions continued into the late 1990s simultaneous with its restructuring efforts. As the company acquired more brands and thereby more resources, it needed more systemic management, and VF continuously restructured the organization in response to these changes. In 1997, it purchased Maidenform Worldwide Inc., a manufacturer of intimate apparel with annual revenues of $400 million. Later in 1998, it purchased another intimate apparel maker, Bestform, which had annual revenues of $270 million. These acquisitions to VF meant a major expansion of its intimate apparel business. With these acquisitions, VF became one of the top three intimate apparel makers in the United States, achieving approximately 11% of the market share. In addition, with the acquisition of North Face and EastPak in 2000, the company created its Outdoor coalition. Table 19 summarizes VF's acquisitions in the late 1990s.

Table 19. VF's Acquisitions in the Late 1990s

Year of acquisition	Company name	Company business	Brands
1997	Maidenform Worldwide Inc.	Manufacturer of intimate apparel	Maidenform, Oscar de la Renta, Self Expression
	Levi's		Brittania
1998	Bestform Group Inc.	Manufacturer of intimate apparel	Bestform, Lily of France, Josie, Natori, Oscar de la Renta
	Penn State Textile Manufacturing, Inc.	Manufacturer of restaurant apparel	Products not branded
1999	Horace Small	Manufacturer of public safety and postal apparel	Products not branded
	Todd Uniform	Manufacturer of custom-designed business uniforms	Products not branded
	Fibrotek	Manufacturer of clean-room apparel	Products not branded
2000	Eastpak	Manufacturer of backpacks and daypacks	Eastpak
	Chic by H.I.S., Inc.	Manufacturer of casual apparel	Chic, H.I.S. jeans
	Fruit of the Loom, Inc.	Manufacturer of underwear and activewear	Gitano jeans
	The North Face, Inc.	Manufacturer of outdoor apparel and gear	North Face

Note. From VF Annual Report, 1997-2000.

During 2001, VF initiated a Strategic Repositioning Program, discontinuing underperforming operations to reduce the company's overall cost structure. In this effort, VF closed and divested three underperforming business operations (i.e., the company's private label knitwear operation, the Fibrotek workwear unit, the Jantzen swimwear business). The company also further reduced its domestic production facilities and opened VF-owned plants overseas. In 2001, the company closed more than 30 plants located in the United States, eliminating 13,000

jobs, which was 18 % of the company's total workforce. *International Directory* (2003) reported that in 2002 only about 15 % of the company's products were manufactured in the United States (in contrast to 80% in the mid-1990s); the rest was produced in non-U.S. countries, such as Mexico, Central America, and countries in the Far East. The company reported that in 2005, only 1% of domestic net sales were produced in the United States while 31% were manufactured in VF-own facilities in Mexico and the Caribbean Basin and 68% were manufactured from contractors, primarily in Asia (VF Corp., 2005).

Although the company experienced a decline of total revenue in the early 2000s due to the difficult economic environment of that time and to its restructuring costs, it has recorded gradual growth since 2002 (see Figure 23). In 2005, its revenue reached $6.5 billion, which was a 6% increase from 2004 (VF Corp., 2005).
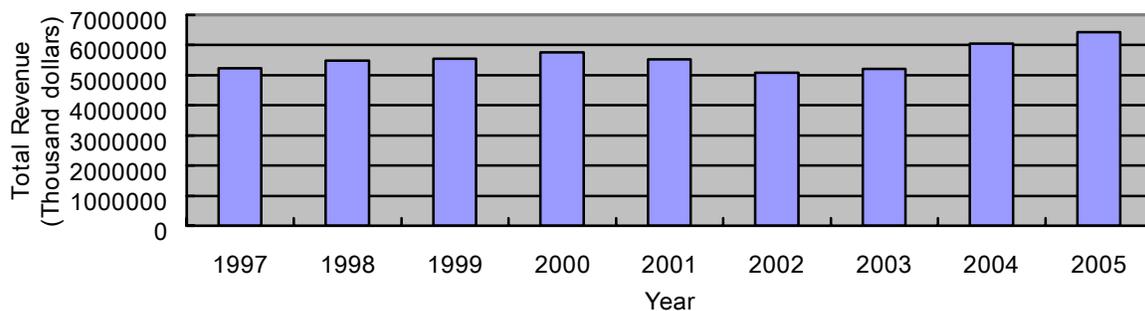
Figure 23. VF's total revenues 1997-2005

Note. From VF Annual Report, 1997-2005.

This portion of the chapter explored the VF Corporation's business strategies from 1970 to 2005. Over the thirty years, VF has grown by responding to changing business environments through continuous and often simultaneous company acquisitions and organizational restructuring. Although the analyzed data revealed various business activities implemented by VF during the thirty years, all those activities were implemented under the frame of the two key strategies: acquisition and organizational restructuring. After review of the data, the researcher concluded that these two themes (i.e., acquisition, restructuring) are intertwined and the acquisitions and divestitures of brands and business units are part of and caused by the reorganizational structuring. VF has as its origins the ownership of company manufacturing facilities and has retained this resource throughout its company history. Its choices in business

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strategies and its reactions to the changing business environment are revealed in this review as impacted by this dependency. Figure 24 describes the VF's corporate portfolio from 1970 to 2005.

Date	Brand or Division											
1970	Vanity Fair	Berkshire International	Lee Company									
1971	Vanity Fair	Berkshire International	Lee Company	Kay Windsor								
1976	Vanity Fair		Lee Company	Kay Windsor								
1977	Vanity Fair		Lee	Kay Windsor	International Division							
1984	Vanity Fair		Lee		VF International		Bassett-Walker	Modern Globe	Troutman			
1985	Vanity Fair		Lee		VF International		Bassett-Walker	Modern Globe	Troutman	Wills & Geiger		
1986	Vanity Fair		Lee				Bassett-Walker	Modern Globe		Wills & Geiger	Wrangler Rustler Girbaud Jantzen JanSport Red Kap Big Ben by Wrangler	
	Vanity Fair	Modern Globe	Lee	Wrangler	Rustler	Girbaud	Bassett-Walker	Jantzen	JanSport	Wills & Geiger	Red Kap	Big Ben by Wrangler
1987	Vanity	Modern Globe	Lee	Wrangler	Rustler	Girbaud	Bassett-	Jantzen	JanSport		Red	Big Ben

Year														
	Fair							Walker				Kap	by Wrangler	
1989	Vanity Fair	Modern Globe	Vassarette	Lee	Wrangler	Rustler	Girbaud	Bassett-Walker	Jantzen	JanSport		Red Kap	Big Ben	
1993	Vanity Fair	Barbizon	Vassarette	Lee	Wrangler	Rustler	Girbaud	Bassett-Walker	Jantzen	JanSport		Red Kap	Big Ben	International & Other Apparel

Year						
1994	INTIMATE APPAREL Vanity Fair, Vassarette, Lou, Bolero, Silhouette, Cherry, Belcor, Variance, Carina, Siltex	JEANSWEAR Lee, Wrangler, Rustler, Riders, Lee Casuals, Timber Creek by Wrangler, Marithe & Francois Girbaud, Maverick		DECORATED KNITWEAR Bassett-Walker, Nutmeg, Lee Sport, JanSport		SPECIALTY APPAREL Red Kap, Jantzen	PLAYWEAR Healthtex, Fisher-price, Nike
1998	INTIMATE APPAREL	JEANSWEAR	WORKWEAR	KNITWEAR		INTERNA-TIONAL	PLAYWEAR
1999	INTIMATE APPAREL	JEANSWEAR & RELATED PRODUCTS	OCCUPATIONAL APPAREL	SWIMWEAR		ALL OTHER (Knitwear, Daypack, & Related product)	CHILDREN'S PLAYWEAR
2000	INTIMATE APPAREL	JEANSWEAR & RELATED PRODUCTS		SWIMWEAR		ALL OTHER (Outdoor clothing & equipment, knitwear)	CHILDREN'S PLAYWEAR
2001	INTIMATE APPAREL	JEANSWEAR &	OCCUPATIONAL	SWIMWEAR	ALL OTHER	OUTDOOR	CHILDREN'S

		RELATED PRODUCTS	APPAREL			APPAREL & EQUIPMENT	PLAYWEAR
2002	CONSUMER APPAREL Segment Jeanswear & related products Intimate apparel Children's playwear Sportswear (2003)		OCCUPATIONAL APPAREL Segment	ALL OTHER Segment		OUTDOOR APPAREL & EQUIPMENT Segment	
2004	INTIMATE APPAREL Vanity Fair, Vassarette, Lily of France, Bestform, Curvation	JEANSWEAR Wrangler, Wrangler Hero, Lee, Riders, Rustler, Timber, Creek by Wrangler	IMAGEWEAR Red Kap, Lee Sport, Bulkwark, NFL (licensed), MLB (licensed), Harley-Davidson, (licensed)	SPORTSWEAR Nautica, John Varvatos		OUTDOOR APPAREL & EQUIPMENT JanSport, Wrangler Hero, Lee, Riders, Rustler, Timber Creek by Wrangler	

Figure 24. VF's corporate portfolio 1970-2005

Note. From VF Annual Report, 1970-2005.

Its dynamically changed corporate portfolio shows that VF has constantly strived to embody its corporate vision, which is growth. Its huge growth from 1970 to 2005 was possible because the following efforts in responding to changing business environments: (a) significant investment in consumer knowledge and understanding, (b) product development to provide right product to its consumers, and (c) global sourcing to implement efficient SCM and lean retailing and to achieve cost competitive pricing (Anonymous, 2004). These efforts are in correspondence to the three environmental factors (i.e., globalization, technology, consumer), which were identified in Chapter 2. As stated in the following quote from *International Directory* (2003), VF represents a company, which achieved competitiveness by actively responding to changing environments:

> Having reacted quickly to reign in costs in the highly competitive marketing environment of the early 21st century, and with a history of being extremely adept in reacting to industry occurrences in positive and productive ways, VF Corporation appeared to possess the potential for continued growth and success (para. 39).

Patterns or themes found in changes of the business strategies for two sample companies

This chapter was Part 2 of data analysis presenting the specific business strategies for two sample companies in response to business environments from 1970 to 2005. Analyzed data revealed that the changes in business strategies for the two companies were generally corresponding to the changes in business environments for and general strategies of the U.S. apparel industry, which were investigated in Part 1 of data analysis.

In the case of Nike, its three business strategies (i.e., global outsourcing, product strategy, aggressive marketing) were implemented by the company in operations that were parallel to the three environmental factors (i.e., globalization, technology, consumer) identified in this study in the review of literature and expanded in the historical review of the industry. From 1970 to 2005, Nike has led the U.S. apparel market with continuous efforts in these three areas. In the case of VF, its key business strategies (i.e., acquisition, restructuring), have also been employed to accomplish its business purposes to market efficiently, including its branding strategies with an extensive market research system, and to manufacture efficiently with cost considerations

through global outsourcing. The business strategies of each company were found to be different according to the way each company had done its interpretation and response to environmental factors. However, it was found that the dissimilar strategies for the two companies were basically influenced by very similar environmental driving forces.

In addition to the comparison of the strategies, the two case studies revealed data that the two companies started their businesses in two different positions of the U.S. apparel industry. The massive Nike Corporation was initiated from a small business operation of import and distribution of Japanese products without owning any production plants, and, in contrast, VF was a traditional apparel manufacturer owning its own manufacturing facilities. However, the two apparel companies originating in diverse positions have shown the trend of convergence into a marketing-oriented firm, which is very consumer-centric mainly operated by global outsourcing. Although their interpretations and responses to the changes of business environments were different from each other, their reactions to the common environmental forces from 1970 to 2005 continuously transformed the two companies into apparel firms with similar characteristics. The three main environmental elements were increased globalization, availability of technology, and growing consumer power.

CHAPTER 6. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to examine the impact of environmental factors on business strategies for U.S. apparel manufacturing companies. Three research objectives were established to achieve this study purpose: (a) to explore the business environment of the U.S. apparel manufacturing industry from 1970 to 2005, (b) to investigate the business strategies for selected major U.S. apparel manufacturing companies in response to the environment from 1970 to 2005, and (c) to determine if patterns or themes are found in changes of the business strategies for the selected U.S. apparel manufacturing companies.

To explore the business environment of the U.S. apparel manufacturing industry and the resultant interpretations and reactions of apparel firms, two theories were used as a framework for this study: organizational interpretation process (e.g., Daft & Weick, 1984; Milliken, 1990) and organizational adaptation theory (e.g., Miles & Snow, 1978; Zeithaml & Zeithaml, 1984). Based on these two theories, a model for the study explaining the process of apparel firms' interpretations and responses to the environmental changes was proposed (see Figure 2). Based on this framework, general business strategies of the U.S. apparel industry and specific business strategies for selected major U.S. apparel manufacturing companies were investigated.

Qualitative analysis was conducted for data analysis. Part 1 of data analysis was the in-depth exploration of the business environment for the apparel manufacturing industry in terms of globalization, technology, and consumer; and apparel firms' business strategies that have been implemented in response to these environments, from 1970 to 2005. Part 2 of data analysis was the case studies of two sample apparel companies (i.e., Nike, Inc., VF Corporation). The business strategies of the two companies in response to their business environments from 1970 to 2005 were investigated.

Summary of Results

Business environment of the U.S. apparel manufacturing industry from 1970 to 2005
Globalization

Globalization in the U.S. apparel industry has continuously increased from 1970 to 2005, with increasing import pressure and declining domestic production. Reviewing trade agreements

that have regulated or encouraged the textile and apparel business among involved countries revealed that many countries have played increasingly bigger roles in the production aspect of the textile and apparel business (Shim, 1998). This increasing global business has continued to disperse apparel manufacturing, previously done in the United States, to lower wage countries including China, India, and many countries in South America (Kunz & Garner, 2006).

Consequently, from 1970 to 2005 the United States experienced "the transformation of a traditional, locally based, production-centered industry into a creative and knowledge-based feeder for a consumer-centric retailing business" (Cooklin, 2006, p. ix). Thus, the international interconnectedness through increasing economic activity across the world's countries (Hirst & Thompson, 2003), which was operationally defined in Chapter 3, was found to have clearly occurred in the textile and apparel industry and within the United States.

Technology

Technology implemented by the U.S. apparel industry began primarily in the early 1970s when the U.S. apparel industry needed to have automation of the manufacturing process to compete with imports from developing countries with low cost labor (KSA, 1977). Since this time, technology implementation has been an essential part of the U.S. apparel business with increasing globalization and growing consumer power. In the 1980s, the introduction of the computer with multiple applications moved the emphasis of technology in the apparel industry from production only to all other operations throughout the manufacturing process, including preproduction activities and post production sales. Throughout the 1980s and 1990s, technologies were involved with overall business strategies, such as QR and SCM, to facilitate those management systems. In addition, multiple retail channels involving new technologies (e.g., Internet) made competition stronger with apparel companies having to compete not only with multiple companies but also with multiple distribution channels.

As the area of technologies usage has widen from production facilities to globally distributed supply chains, the importance of technologies has also increased in the U.S. apparel industry. The technologies implemented by companies in the U.S. apparel industry from 1970 to 2005 range from automation of production facilities, to installation of computer software (e.g., CAD, CAM), and finally to use of Information Technologies, such as Web-based platform for design and pattern work. Technology was narrowly defined by Ko et al. (2000) as including new processes as well as new equipment (Ko et al.). However, based on the specific data analyzed in

the current study, the researcher redefined technology as follows: the equipment and technical method for production of apparel products; and the system for distribution and selling of finished apparel products.

Consumer

For this study, consumers were defined as a group of people who have the money and the desire to purchase apparel products for their own use or use of their friends and family (Mueller & Smiley, 1995) Three sub-components (i.e., demographic shifts, consumer demand changes, channel changes) of the consumer market for the U.S. apparel industry from 1970 to 2005 were analyzed. As a major consumer group of the overall market, particular consumer segments from Senior to Generation Y have continuously affected the U.S. apparel industry over the decades, creating their own unique demands (Moran & McCully, 2001). In addition, consumers in general have become smarter and more sophisticated as they have gained bigger spending power and have faced broader product selection (Dunne & Kahn, 1977). Especially in apparel industry, consumers achieved great power because their demands toward apparel products became very volatile and unpredictable. Changes in demographics (e.g., increasing elderly or growing diversity) as well as the general growth in consumer power have affected retail channels, impacting the growth or decline of retailers and creating a new retail channel format (i.e., online shopping). These channel changes have caused more competition among companies and channels, and allowed U.S. consumers to demand better quality apparel products with lower prices.

In summary, from 1970 to 2005 consumers have formed particular consumer segments who have been vocal about their own demands and have continuously affected the U.S. apparel industry including influencing the formation of various apparel retail channels. Their influences on the U.S. apparel industry have significantly increased over the past 35 years, and finally have become one of the most important environmental factors for the apparel business. Considering this change of consumers, revealed during the data analysis, the definition of consumer was refined from being the final customer in the supply to the following: A group of people who have the money and the ability to affect both production and retail sale of apparel products.

Business Strategies

       Business strategies implemented by the U.S. apparel industry from 1970 to 2005 were reviewed in this study. Throughout the 1970s and 1980s, the overall goal of the U.S. apparel industry was improvements in productivity and product quality (see Figure 25). To achieve this goal, automation of manufacturing process was implemented. This automation mainly resulted as a reaction to the growing import level from developing countries with lower cost labor. Later in the 1980s, the QR effort was made by U.S. apparel companies as the importance of fashion and final consumers was raised and an improvement in the efficiency of the apparel manufacturing process was needed. QR was the timely flow of information and merchandise, and mainly focused on the linkage between apparel manufacturers and retailers (Lee & Kincade, 2003b). The philosophy of QR was extended to SCM in the 1990s, which was a broader concept including final consumers into the strategy. Increased demands for product variety, increased intensity in competition, and the improvement of associated technologies were the main reasons for the emergence of SCM.

1970

Growing import level → Product quality improvement

Tension-free spreading, self powered devices, electric knives, and electric-eye edge control computer-assist marking system programmable sewing

↗ Quality and productivity improvement

↘ Manufacturing cost reduction

Exponential growth in imports → Automation

CAD/CAM
Computers & automated system to patterning

↗ Quality and productivity improvement

↘ Manufacturing cost reduction

More accessible technology

New awareness of ultimate consumer

Growing influence of retailers

Global sourcing

→ Quick Response

Automated sewing operation
Bar coding, CAD/CAM
JIT shipping, EDI,
Robotics

↗ Building supplier-retailer relationship

↘ Improved service to consumers

Higher retail profitability

Increasing competition among companies, channels, and countries

Increasing demand for product variety

→ Supply Chain Management

CAD, CAM, CIM, EDI
PDM, PLM
Body scanning
Digital fabric printing

↗ Global sourcing

↘ Lean retailing

2005

Figure 25. Driving environmental forces, business strategies with associated technologies, and results of the U.S. apparel manufacturing industry 1970-2005

All of these business strategies were directly connected to the overall goal of the U.S. apparel industry (i.e., competitive success) and were closely linked to business environmental factors at each period of time. Many U.S. apparel companies have continuously tried to develop and evolve new business strategies in response to changing business environments. All the business strategies found in this study were paralleled with the definition of business strategy, the overall plans and purposes dominating the company's decision making processes and functions (Hamermesh, 1983). Table 20 summarizes the refined definitions of variables as a result of data analysis.

Table 20. Refined Variables

Variables	Operational Definition
Globalization	Growing international interconnectedness in terms of increasing economic activity across the world's countries
Technology	The equipment and technical method for production of apparel products; and the system for distribution and selling of finished apparel products
Consumer	A group of people who have the money and the ability to affect both production and retail sale of apparel products
Business Strategies	The overall plans and purposes dominating the company's decision making processes and functions

Business strategies for selected major U.S. apparel manufacturing companies in response to the environment from 1970 to 2005

Nike, Inc.

Global sourcing. Since the beginning of its business in the early 1960s, Nike has done global outsourcing. Starting with the import and distribution of Japanese made products in 1962, Nike gradually extended its operations to more functional areas (e.g., product development, marketing). When the demand for athletic shoes increased dramatically as a result of the jogging boom in the United States in the 1970s, Nike began to increase its number and scope of suppliers

that could provide bigger production volume with lower prices. Noticing the rising labor cost in Japan, Nike began to contract with production facilities in other countries such as Korea and Taiwan. By 1980, almost 90 percent of Nike's production was through contract agreements with suppliers in Korea and Taiwan (Strasser & Becklund, 1991). Later in the 1980s, however, as labor costs rose in those two countries, Nike again sought another location of suppliers such as China, Thailand, and Indonesia. Nike has continuously renewed its contracts through a particular mix of partners so that the partners' capabilities change in response to the environmental changes (e.g., factory improvements, market fluctuations, technological progress) (Donaghu & Bariff, 1990).

Product strategy. The biggest reason that Nike was able to enter the athletic shoe market in the 1970s, which was dominated by German brands, was its innovation in product design. The co-founder of Nike, Bill Bowerman's effort on testing shoes with athletes and offering design ideas were an essential part of Nike's product development. Nike's efforts toward product research and development led the company to open its own Sport Research and Development Lab in 1980. In the early 1980s, Nike introduced the high-performance, sophisticated footwear model, Air, which later pulled the company from a continuous decline into a huge success (LaFeber, 2002). This air technology allowed the company constantly to develop the next models. Since Nike came into the market in 1968, it has continuously developed new products through innovative technology. Nike's product strategy effort from the late 1990s to the present has been focused on the diversification of its product line through brand segmentation (Buss, 2002; Evans, 2002; Lefton, 1998; Rapaport, 2002). For example, creating the women's line emphasizing more sophisticated design and fashion and developing extensive marketing of the line was a major effort of its brand segmentation.

Aggressive marketing. Building powerful brand equity by its Swoosh logo and the brand name, Nike, was one of Nike's key strategies differentiating it from others (Goldman & Papson, 1998). Nike's marketing was categorized by its two major activities: endorsement and advertising. Since its first endorsement marketing of its own product at the U.S. Olympic Trials in 1972, it has continuously tried to expose the Nike brands to the public so as to increase the visibility of its products. Through many efforts including contracts with well-known athletes, Nike had been convinced that association of its shoes with reputable athletes was a very effective way of marketing (Korzeniewicz, 1994). In 1984, Nike made a huge contract with the famous

NBA athlete, Michael Jordan, paying him $2.5 million for five years. This contract included promotion, advertising, and creating a product line named after Jordan. Throughout the 1990s since Nike contracted with Jordan, it was estimated that the Jordan products have grossed $2.6 billion. If Jordan's impact on the overall Nike image and brand equity was calculated, this figure would be doubled (Anonymous, 1999d).

VF Corporation

    Acquisition. VF Corporation emerged from the merger of Vanity Fair with two major acquisitions in 1969. This multi-brand clothing company continued to expand by purchasing a manufacturer of men's jeans and casual pants and a manufacturer of women's hosiery. Maintaining a stable business, while not relying on only one division, with multiple non-competing divisions through acquisitions was VF's key business strategy as well as its corporate concept. With each acquisition, VF acquired not only the brands but the manufacturing facilities of the acquisition. Its acquisition strategy was summarized as follows: (a) each brand had to be in the basic/basic fashion apparel industry, (b) each brand had to be located in a different but compatible market position with the existing brands, and (c) each brand had to have a similar operating concept with VF or be easily converted to VF policies (VF Corp., 1986). In 1986, the company made another major acquisition with the addition of Blue Bell, which owned multiple brands (e.g., Rustler, Jantzen, JanSport, Red Kap). This brought about further diversification of the company's product line as well as its considerable growth in size. VF continued to acquire many brands throughout the 1990s. The intimate apparel divisions (e.g., Maidenform Worldwide, Inc., Bestform) and outdoor apparel divisions (e.g., North Face, EastPak) were added. With the five product groups (i.e., Jeanswear, Decorated Knitwear, Intimate Apparel, Playwear, Specialty Apparel), VF has recorded gradual growth since 2002.

    Restructuring. VF's acquisitions were accompanied with continuous organizational restructuring. Its organizational structure of parent company with subsidiaries has been in place since its first acquisition in 1969. This organizational structure with sub-divisions became the model for VF's constant business expansion throughout the thirty years reviewed in this study. As previously discussed, it attempted to minimize its business risk and to increase efficiency through the interrelationship of its sub-divisions. Operating multiple brands required VF to make significant capital investment in modernization of its company-owned plants and equipment.

Starting in 1979, it completed a $50 million capital improvements program. Also, its brand segmentation strategy, mainly focused on Lee (e.g., segmenting men's and women's line), triggered its transformation to a marketing-oriented company from a manufacturing-oriented company that was driven by ownership of its facilities. In the 1990s, VF in response to changing environments (i.e., higher costs from vendors, weak demand from customers) made the following two major efforts: extensive market research for its brand adjustment strategy and more responsive business systems (e.g., developing MRS) (Bamford, 1992). As the company acquired more brands, it also needed more systemic management. For efficient management, in 1994, VF reorganized into five new strategic business groups, which it called coalition. In 2001, it initiated a Strategic Repositioning Program, discontinuing underperforming operations to reduce the company's overall cost structure. Shifting domestic production facilities to VF-owned plants in overseas locations (e.g., Mexico, Central America) was also included in this cost cutting program.

Patterns or themes in changes of their business strategies

The business strategies of the two case study companies (i.e., Nike, VF) were found to be different, and were deemed to be impacted by the way each company had interpreted and responded to the environmental factors. Although dissimilar in interpretation and strategies, the two companies were basically influenced by very similar environmental driving forces, which can be categorized into three things (i.e., globalization, technology, consumer).

In addition, it was also found that the two apparel companies originating in diverse positions (i.e., Nike from a small business operation of import and distribution, VF from a traditional apparel manufacturer with ownership of production facilities) have shown the trend of convergence into a marketing-oriented firm, which is very consumer-centric and operated primarily by global outsourcing. The three main environmental elements (i.e., increased globalization, availability of technology, growing consumer power) continuously interpreted by the companies and helped transformed the two companies by the 2000s into apparel firms with similar characteristics.

Conclusions

The impact of environmental factors on business strategies for U.S. apparel manufacturing companies has constantly changed from 1970 to 2005. In addition, the three main environmental factors (i.e., globalization, technology, consumer) have an increasingly stronger interrelationship with these business strategies and have required more sophisticated business strategies.

Based on the analyzed data about the business environments of the U.S. apparel manufacturing industry and the general business strategies that have been implemented from 1970 to 2005, the researcher investigated the impact of environmental factors on business strategies in selected major U.S. apparel manufacturing companies from 1970 to 2005. To understand each company's specific strategies in response to environmental changes, the two theories about organizational interpretation process and organizational adaptation were employed.

The model of the study (see Figure 2-B in Chapter 1) provided the support for the idea that companies interpret business environments in their own way, and the interpretation process, in turn, influences the company's response to the environment. From 1970 to 2005, environmental changes have significantly affected U.S. apparel companies' overall plans and major policies, demanding changes in business strategies in response to a changing environment. Additionally, the framework suggested that the response or results for individual companies can be different according to a company's internal resources.
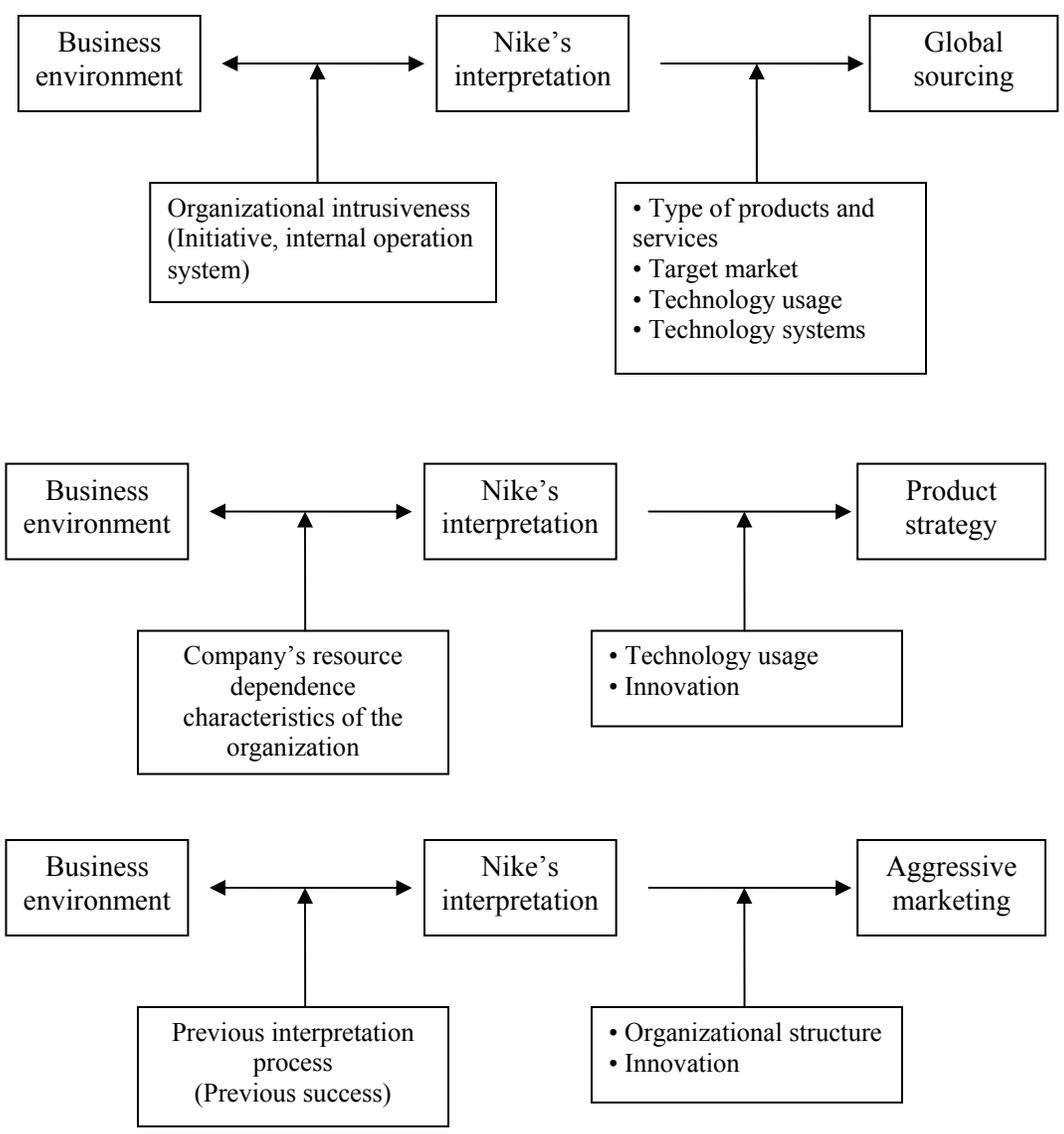
Figure 26. Nike's business strategies in response to business environments
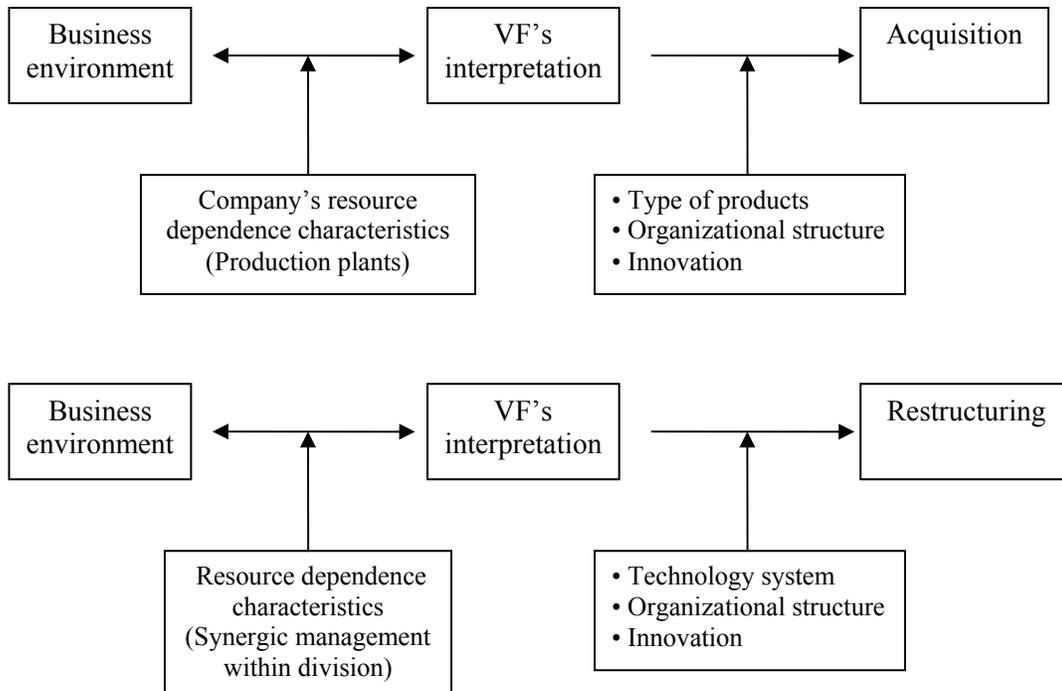
Figure 27. VF's business strategies in response to business environments

The analyzed data confirmed the proposed model for the study. The in-depth exploration of general business strategies of the U.S. apparel industry and the case studies of two sample companies' specific business strategies revealed that U.S. apparel manufacturing companies have gone through the process that was proposed in the model of the study; they have been significantly affected by the environmental changes and have made changes to their business strategies in order to survive. These changes did vary between the two companies in the case study and were related to the original organization of the companies showing a variation in interpretation of the information. The confirmed model of study is shown in Figure 28.
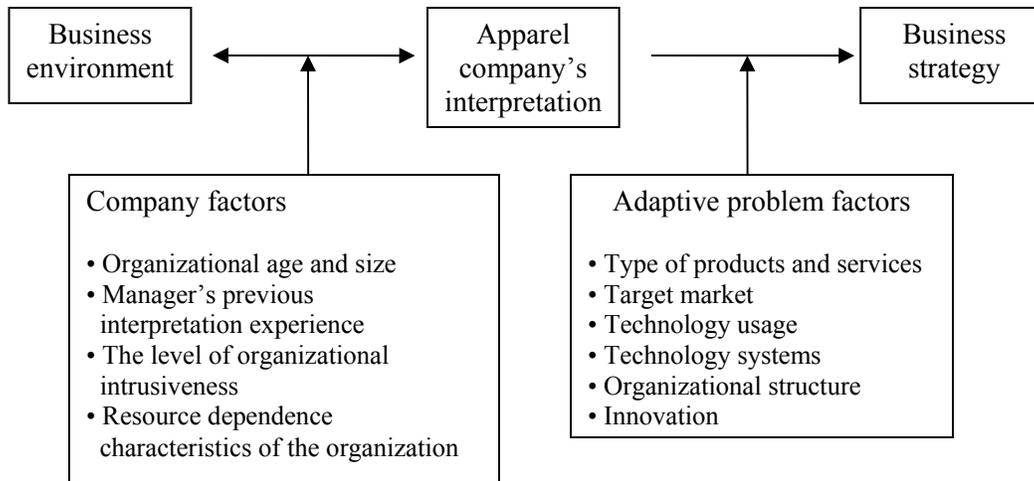
Figure 28. Confirmed model of study

Recommendations

This study was designed to explore the business environment and general business strategies of the U.S. apparel manufacturing industry from 1970 to 2005 and to investigate the specific business strategies for selected major U.S. apparel manufacturing companies in response to the environment from 1970 to 2005. Based on the current study, a number of recommendations are made for future studies.

First, this study employed a qualitative method using content analysis and case studies. With limited previous research on the U.S. apparel industry, the researcher concluded that it was more appropriate to use a theoretical approach at this point than an empirical approach in exploring the two main issues (i.e., business environment, business strategy) as applicable to the time frame from 1970 to 2005. With the conclusion of this study, a quantitative study using a large sample of apparel companies could be also conducted. Research using more samples in various industry groups besides the two major companies studied in the current study could provide a more comprehensive and inclusive perspective of the U.S. apparel industry.

Second, this study explored the issues of environmental factors and business strategies in a historical context. Based on the result of this study, a cross-sectional study at a point in time to investigate the same or similar issues more deeply could be conducted. In particular a study with a survey using the variables identified in Figure 25 could be made.

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Third, case studies of this current research employed unobtrusive observation measures, mainly content analysis of archival or secondary data within the frame of historical analysis. Future studies could investigate the U.S. apparel business environment and strategies with case studies using additional methods, such as in-depth interviews with current or past company employees.

Fourth, three independent variables of business environments (i.e., globalization, technology, consumer) were identified in the current study. Additional business environmental variables could be investigated such as the inclusion of competitive firms, currency values, and political status (e.g. instability resulted from terrorism), or a more in-depth exploration of one variable could be provided in future studies.

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Education
- Virginia Polytechnic Institute and State University, Blacksburg, VA
    · M.S. in Business and Economics of Apparel & Textiles, 2007

- University of Wisconsin-Milwaukee, Milwaukee, WI
    · Exchange Student, 2005
    · Major in Business Administration

- Keimyung University, Daegu, South Korea
    · B.S. in Fashion Marketing, 2003
    · Co-operative major in Fashion & Textile International Business

Academic Awards and Scholarship
- *Kappa Omicron Nu Omicron Beta Zeta Scholar Award*, Virginia Tech, Blacksburg, VA, 2007
- *Fashion & International Specialist Education Program (FISEP) scholarship*, Keimyung University, Daegu, South Korea, 2004
    · 2 years of full scholarship for studying abroad to acquire a Master's degree
- 2nd prize at *Academic Contest held by Fashion Department,* (Group Project), Keimyung University, Daegu, South Korea, 2003
- 2nd prize at *1st Fashion Store Suggestion Contest* (Group Project), Daegu, South Korea, 2002
- *Fashion & International Specialist Education Program (FISEP) scholarship*, 2001
    · 4 years of full scholarship, Korean government-run program for international specialist cultivation project

Presentations
Park, H. & Kim, J. (2007, March). *Exploratory Study of College-Licensed Apparel Purchase Behavior: Comparison of the U.S. and Korean College Students*. Presentation at the 2007 Graduate Research Symposium, Virginia Tech, Blacksburg, VA.

Park, H. & Kim, J. (2007, November, planned). *Exploratory Study of College-Licensed Apparel Purchase Behavior: Comparison of the U.S. and Korean College Students*. Presentation at the 63rd ITAA Conferences, Los Angeles, CA.

Academic Experience
- Graduate Assistantship, Virginia Tech, Blacksburg, VA, 2006-2007
    · Performed research, graded class project, proctored examinations
    · Administrative upkeep of The Center for Real Life Kitchen Design and Resource
      Room in the department
- 2005 International Textile Apparel Association (ITAA) Design Exhibition, Alexandria,
  VA, 2005
    · Volunteer work

Fieldwork, Internships, and Special Training
- Fashion column contribution on a culture portal web site at www.enolja.com, South Korea,
  2004
- Internship at a merchandising & marketing department of *Pierre Cardin*, Seoul, South
  Korea, 2003
- Trained at a fashion institute, *Image School*, Milan, Italy, 2002
- Trained language learning at Australia National University, Canberra, Australia, 2002
- Completed the "GGC; Getting Globalized Course" at Samsung Co., Yong-in, South Korea,
  2001
- Completed "English Intensive Course" at LG Co., O-san, South Korea, 2001
- Worked at a production, planning, & control department, *IWISH Co*. (company for bags
  and shoes), Daegu, South Korea, 1999-2000
- Part-time work for *La-clé* (fashion accessory brand), Dong-A department store, Daegu,
  South Korea, 1999

Professional Association and Committee Leadership Activities
- Kappa Omicron Nu Honor Society, member, 2006-present
- Korean Student Association (KSA), Public Relations (PR) officer, 2006-2007

Volunteer Work
- Auxiliary aid for Services for Students with Disabilities (SSD), volunteer note taker,
  Virginia Tech, Blacksburg, VA, 2006
- Australian Trust for Conservation Volunteers (ATCV), Canberra, Australia, 2002