

The Competitive Position of Thailand's Apparel Industry: Challenges and Opportunities for Globalization

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Abstract:

Purpose – Recent liberalization of the world's textile and apparel trade policies and the consequent changes in trade patterns posited threats to smaller textile- and apparel-exporting nations, including Thailand. Thus it is important to understand how the new trade environment affects the competitiveness of Thailand's apparel industry. This study seeks to provide insights into how Thailand's apparel industry has responded to increasingly fierce global competition by drawing on Porter's theory of *The Competitive Advantage of Nations*.

Design/methodology/approach – To assess the competitiveness of the Thai industry, the study triangulated data from various sources, including secondary statistics, media reports, and relevant industry publications. In-depth, semi-structured interviews were also conducted, and participants included key executives from Thailand's apparel industry, government officials, and academics. The interviews were conducted at various locations in three Thai provinces: Bangkok, Nonthaburi, and Samutsakorn, over a two-week period.

Findings – Findings revealed the existence of four determinants supporting the Thai apparel industry: basic v. specialized factors; sophisticated and demanding consumer market; the presence of interdependent economic agents; and strategies and structure of Thai companies and domestic rivals. These four determinants are identical to the “diamonds” outlined in Porter's theory of *The Competitive Advantage of Nations* and a new source of competitiveness. Furthermore, the Thai government was found to play an important role, by providing support to enhance the global competitiveness of Thai companies.

Originality/value – The study is among the first to attempt to provide insights into the competitive national advantage of the Thai apparel industry. Based on the findings, the outlook is positive for the continued success of Thailand's apparel industry in the global arena.

Article:

Over the past five decades, Thailand's apparel industry has enjoyed continual growth and success. Owing to increased global trade activities, the apparel industry has contributed significantly to the country's economic and social development. Together, the textile and apparel sectors make for the top revenue generating industries in Thailand, employing more than one

million workers. In 2007, these industries accounted for 4.5 percent of the total GDP and employed approximately 20 percent of the total industrial labor workforce (Thailand Textile Institute, 2009; *TTIS Textile Digest*, 2008; WTO, 2008). In the early 2000s, the Thai apparel industry performed strongly, securing a solid spot as a major exporter of textile and apparel products and ranking among the top 15 world exporters in both categories (De Bassompierre, 2005; Kunz and Garner, 2007; WTO, 2008). But in addition to offering new opportunities (e.g. expanding to the ASEAN market), globalization and textile and apparel trade liberalization have posed many challenges to the industry, particularly regarding fierce competition from China and other Asian countries (e.g. India, Vietnam). Moreover, the elimination of the Multi-Fiber Agreement in 2005 may result in changing competitiveness for many national industries (Appelbaum, 2008; Curran, 2007).

Concerns have been raised regarding how on-going trade liberalization has created consternation within the Thailand's apparel industry, causing the industry to lose its competitiveness (*TTIS Textile Digest*, 2008; Ushiyama, 2005). In response to severe global competition, Kosit Punpiemras, Thailand's Deputy Prime Minister and Minister of Industry, suggested that “[a]t a time when there is more intense competition in the global market, there is a need for Thai [textile and apparel] entrepreneurs to adjust and make strategic changes as well as to develop new products and the increase of value added through innovation [...] to be competitive in the world market” (10th Anniversary Thailand Textile Institute Book, 2007, p. 7). Therefore, it is important to understand how globalization and trade liberalization shape the future of Thailand's apparel industry and what strategic adaptations the industry has been employing in response to global competitiveness.

This study focused on Thailand's apparel industry because of its long history and its position as a key player in the global market. The research aims to provide insights into the strategic responses of the major players in Thailand's apparel industry by drawing on Porter's (1990) theory of *The Competitive Advantage of Nations*. Specifically, the study attempts to:

- explore the current status of the industry;
- examine the determinants of the nation's competitive advantages and the role of the government in assisting the industry to remain globally competitive; and
- suggest strategies for Thai apparel companies to deal with increasing global competition.

In the next section, an overview regarding the current situation of Thailand's textile and apparel industry is provided. These two industries were discussed together, as one provides support for another. Following this, Porter's (1990) theory of *The Competitive Advantage of Nations* is outlined. Next, the methodology is described, followed by the results from a qualitative analysis of interview data supplemented by secondary data (e.g. government and media reports). The final two sections present the conclusion and discuss possible strategies for Thai apparel companies to meet future challenges in a dynamic and highly competitive environment.

BACKGROUND

Overview of Thailand's textile and apparel industry

Over the years, the success of Thailand's textile and apparel industry can be attributed in large part to the country's comparative advantages in terms of labor and low-priced property, as well

as the Asian economic crisis of the 1990s that made Thai products favorable to world buyers. The Thai industry has particularly excelled in the production of fabric, children's wear, sportswear, casual wear, and women's wear. The development of the industry's structure has fully integrated downstream and midstream manufacturing bases (10th Anniversary Thailand Textile Institute Book, 2007), forming a cluster that was established on the outskirts of Bangkok, and in the Nonthaburi and Samutsakorn provinces of central Thailand. A recent report from Thailand's Textile Institute (2009) notes that there are more than 3,500 textile mills and apparel manufacturers in the country, and most of them are small and medium sized enterprises (Thailand Textile Institute, 2009).

The textile and apparel industry is one of Thailand's largest revenue generators in terms of GDP, exports, and employment (Supachalasai, 1998). According to a recent Thailand Textile Institute (2009), overall textile and apparel exportation has increased slightly from 2005 to 2007 at 2 percent to 6 percent a year. Likewise, in each category of woven fabrics, which includes cotton, man-made fiber, silk or silk waste, and other textile material, there was positive growth.

In contrast, apparel exports displayed a slightly different pattern: the growth rate fluctuated over a three-year period, increasing by 2.2 percent from 2005 to 2006, then declined by 5.0 percent from 2006 to 2007 (Thailand Textile Institute, 2009). The sub-categories that showed consistent growth were silk or silk waste garments, brassieres, corsets and parts thereof, and gloves. Other garments such as cotton, man-made fiber, wool or fine animal hair, and baby garments fluctuated in export levels or consistently declined.

The US market has been the top importer of Thai textile and apparel products, with a total value of \$1,606 billion in 2008, followed by the EU, ASEAN, and Japanese markets (\$1,144 billion, \$872 billion, and \$402 billion in 2008, respectively). Since 2005, Thailand's exports to the US market have steadily declined. However, exports to the Japanese, EU, and ASEAN markets have steadily increased. The Japanese market showed the highest growth rate at 31 percent (see Table I) (Thailand Textile Institute, 2009).

Trade data further reveal that overall textile and apparel imports steadily increased over the three-year period from 2005-2007 (see Table I). While Thailand's importation of yarn and fibers has decreased over the past three years, importation of fabrics, particularly silk and wool/animal hair products, have consistently increased. Textile imports were predominantly from the USA, China, Japan, Taiwan, and Australia. In addition, apparel imports have increased significantly: almost 50 percent from 2005 to 2007, due to increased demand in the domestic market. The highest import categories were underwear and bathrobes, trousers, skirts, accessories, and shirts and blouses. These garments were mainly imported from China, Hong Kong, Italy, Japan, and Spain (Thailand Textile Institute, 2009).

Despite several factors that have negatively affected the global textile and apparel industry in the past few years (e.g. reduced total productivity, increased global competitiveness, and fluctuating world economies), Table I indicates that the Thai industry has been performing relatively well. That is, overall, Thailand continued to display a trade surplus in both industries from 2005 to 2007. In addition, the value of Thailand's textile and apparel exports is predicted to increase by almost 17 percent in 2009 due to continued depreciation of the US dollar. However, the value of

textile and apparel imports is predicted to increase in the same year by almost 30 percent, a trend that seems to signal slow improvement in the Thai economy (*TTIS Textile Digest, 2008*).

Porter's theory of competitive advantage of nations

Porter (1990, p. 5) contended that because most trade theories looked only at cost, a new theory was necessary that “should reflect a rich conception of competition that includes segmented markets, differentiated products, technology differences, and economies of scale”. He further argued that this new theory should be able to explain why firms from particular nations choose better strategies than those from others competing in particular industries. With that in mind, Porter (1990, p. 1) carried out a four-year field study involving ten countries (eight developed countries and two newly industrialized countries: South Korea and Singapore) to gain a better understanding of “why particular industries (or industry) segments in particular nations obtained and sustained competitive advantages against competitors in the rest of the world”. Porter suggested that “the only meaningful definition of competitiveness at the national level is national productivity” (Porter (1990, p. 6). According to Porter (1990), for a nation to maintain competitive advantage, that nation has to possess certain degrees of economies of scale and literacy. However, while Porter (1990, p. 383) was optimistic about South Korea's future economy, arguing that South Korea “may well reach true advanced status in the next decade”, he was less optimistic about Singapore, stating that the country will likely remain in an early stage of economic development as a factor-driven economy. It is important to examine the validity of Porter's determinants relative to the competitiveness of the Thai apparel industry, as it is a nation that has been classified as a newly developing country (Lehner, 1991).

Porter's proposition, based on the theory of comparative strategy, was called “the competitive advantage of nations” and was later known as Porter's (1990) theory of competitive advantage of nations or the diamond model. The model's underlying assumption was that a nation cannot succeed based on the isolation of industries; rather, clusters of related industries will foster the success of nations. According to Porter (1990), a nation's success in a particular industry is driven by four interrelated determinants of competitive advantage. These four determinants include: factor conditions; demand conditions; related supporting industries; and firm strategy, structure, and rivalry. These four interrelated factors constitute a firm's global competitiveness in a given industry and “form a unitary whole so that weaknesses in one part of the system can undermine the whole” (O'Shaughnessy, 1996, p. 12). The theory also suggests that the government should act as a catalyst or challenger for companies to aspire to higher levels of competitive performance.

Factor conditions: This determinant refers to a nation's position on the production factors necessary to compete in a given industry (Porter, 1990). These factors include human resources, physical resources, knowledge resources, capital resources and infrastructure. He stated that the factor conditions can be classified into two major categories: basic or generalized factors versus advanced or specialized factors. While basic or generalized factors refer to those that are passively inherited such as natural resources, climate, location, and unskilled and semiskilled labor, advanced or specialized factors refer to those that have to be created through educational institutions such as highly educated personnel (e.g. skilled human resources, creative designers, etc.). He suggested that a nation's competitive advantage cannot be driven by just basic or generalized factors because such factors are unsophisticated and often fleeting. Rather, advanced

or specialized factors are needed to facilitate competitive advantage of a nation over its rivals. Sledge (2005) empirically reported that advanced factor conditions in the domestic market positively influenced a firm's global competitiveness. Porter (1990) argued that the standard for what accounts for advanced or specialized factors develops continuously as the state of knowledge, science, and practice progresses.

Demand conditions: Demand conditions refer to the nature of home-market demand for an industry's products or services; these depend on demand quantity as well as the level of consumers' sophistication in the home market. Thus, the more the demanding the home market is, the better the national competitive advantage. Generally, this determinant is associated with a nation's level of economic development. According to Porter (1990), domestic demand is a primary source of a firm's competition in a given industry. The degree of sophistication and level of local consumer demand are the driving forces for firms to manufacture quality products that meet or exceed consumers' standards at the highest level of efficiency and productivity and raise incentives to pursue globally novel innovations (Sakakibara and Porter, 2000). Furthermore, Porter (1990) suggested that unusual demand might be generated through social norms, distribution channels, and national passions (e.g. Italians are passionate about high quality, fashionable apparel products) that may help the nation secure a competitive position.

Related and supporting industries: The third determinant of the diamond model is known as related and supporting industries; this refers to the national presence or absence of suppliers and related industries that are internationally competitive (Porter, 1990). The underlying assumption is that highly competitive related and supporting industries will drive the focal industry to be more competitive through innovation, upgrading, information flow, and shared technology development (Porter, 1998). As such, these benefits create advantages in downstream industries. The relationships among these clusters of industries are critical to the success of a given industry within a nation because “they drive learning, innovation and competitiveness, and are considered to produce the maximum synergies when all requisite institutions necessary to drive learning, innovation, and competitiveness and economic agents are connected” (Rasiah, 2009, p. 151). As such, an apparel industry is likely to sustain its competitiveness with support of an advanced textile industry as well as educational institutions and related research organizations and consulting firms.

Firm strategy, structure, and rivalry: The last determinant is the strategies, structure, and rivalry of home-based firms. Firm strategy, structure and rivalry refer to “the conditions in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry” (Porter, 1990, p. 71). Sledge (2005, p. 25) described strategy as “the types of actions firms utilize to achieve both long-range and short-range goals” and structure as the industry composition, which is the “degree to which an industry is concentrated or dispersed, competitive or monopolistic, or global or domestic”. Strategic growth should be associated with higher competitiveness since the ability to pursue growth domestically or internationally would be an indicator of the health of the business (Sledge, 2005). Porter (1990) contends that a nation's success in industries tends to rely on favorable management practices and organizational modes suited to the industries' sources of competitive advantage. He further stated that domestic rivalry is a major motivation for firms to be innovative and hence succeed internationally. Rivalry is an indicator of an underlying competing firm's structure and strategy. Companies in proximity to

each other tend to create competitive pressure, motivating each other to actively search for internationally competitive products and practices (Sakakibara and Porter, 2000).

Chance and governmental role: Porter (1990) further contended that chance and government may alter the conditions of the relationships among the four determinants in the diamond model. Chance refers to unpredictable technological discontinuities, political uncertainties and other chance events. A government has a major role to serve as a catalyst and challenger and thus encourage companies to move to higher levels of competitive performance (Porter, 1990). A government can positively or negatively influence each determinant that contributes to a nation's competitive advantage. For instance, a government may help to improve the quality of advanced factors (i.e. skilled laborers such as designers, merchandisers) via educational training and seminars and improve the quality of infrastructure necessary to support the growth of an industry. A government can also push global and local demands for goods through various activities such as developing free trade zones with other nations and promoting a national campaign to encourage consumption of local brands. For related and supporting industries, a government may want to bring together the enterprises (e.g. suppliers, distributors, research institutions) that serve the industry. Lastly, a government may stimulate domestic rivalries by limiting direct cooperation and enforcing anti-trust laws. It can also emphasize globalization in the areas of firm structure and rivalry by alleviating entry barriers against foreign companies (Moon *et al.*, 1998) which in turn may require that a firm revisit its strategy. However, a government's intervention related to industry policy may also have negative consequences, which can discourage a nation's competitiveness (Porter, 1990; Rasiah, 2009).

METHODOLOGY

Procedure

The study adopts a qualitative approach to data collection in the form of in-depth, semi-structured interviews with key personnel, including executives from Thailand's apparel industry, government officials, and academics. Sampling decisions were made with regard to interviewees, settings, and processes. For a qualitative approach, probability sampling is rarely employed; therefore, deliberate and/or purposive sampling was used (Punch, 1998). The interviews were conducted over an intensive two-week period in July 2008 in three different Thai provinces: Bangkok, Nonthaburi, and Samutsakorn. The unit of analysis for the study was the Thai apparel industry as a whole. The interviews were designed to capture informants' perspectives and experiences in their own words (Taylor, 1994). Thus, informants' beliefs, attitudes, and reactions relative to competitive advantage in the Thai apparel industry were explored.

Prior to the interview, the researchers introduced themselves, explained the purpose of the study, and asked the informant's permission to audiotape the interview. To create a comfortable interview environment, the researchers began by asking general questions about the company/institution, followed by more detailed questions. For example, questions assessing "factor conditions" included "What resources do you use to produce your products and where do they come from?" Questions pertaining to "demand conditions" included "What do you think is the most important about the shopping behaviors of Thai consumers? and What are the industry competitive strengths?" Questions related to "related and supporting industries" included "Describe your business relationships with other Thai apparel companies." Lastly, questions addressing "firm strategy, structure, and rivalry" included "What do you think about domestic

competition? What are the major challenges you are facing? How do you envision the Thai apparel industry will change over the next few years?" Interviews lasted from 45 to 90 minutes. Although the majority of the informants were native Thai (with one exception), they were, for the most part, comfortable with being interviewed in English. However, some participants went back and forth between Thai and English in their responses. Interview data were transcribed in either Thai or English, depending on the language used by the participants and all Thai transcripts were translated into English for the purposes of the analysis.

Sample

Interviews were conducted with eight organizations, including five private sector companies one governmental institution, one higher education institution, and one non-profit organization, resulting in a total of eight interviews with thirteen participants. Five of the eight interviews were conducted one-on-one (three interviews with private sector companies, one with a governmental institution, and one with the non-profit organization), two of the eight interviews were conducted one-on-two (one interview with a private sector company and one with higher educational institution), and one interview was conducted one-on-three (a private sector company). Participants were selected from leading Thai textile and apparel companies as well as educational and governmental institutions and were recruited through personal contacts of one of the authors. These interviewees included one chief executive officer (CEO), one director-general, one managing director, three general managers, one executive director, one senior export director, one sales director, one department manager, one central management manager, one Associated Professor, and one Assistant Professor. Most had worked in the area of their specialty (i.e. textile and apparel businesses, academia, or government) for more than ten years. To preserve their anonymity, participants have been assigned a pseudonym (see Table II).

Analysis

Data were analyzed by identifying general patterns from which recurrent themes were extracted (Miles and Huberman, 1994). The focus of the analysis was the four determinants identified in Porter's (1990) Theory of Competitive Advantage of Nations, the role of government, as well as the potential for new determinants of competitive advantage. Key issues that emerged from the interview data were interpreted alongside information collected from secondary data through government publications as well as industry, media, and trade reports. To achieve strong internal validity, participants were asked to review the interpretation (Nelson *et al.*, 2002). The findings were then interpreted within Porter's theoretical framework in order to assess the applicability of the framework for the Thai apparel industry.

FINDINGS

Porter's (1990) theory of the competitive advantage of nations as well as the role of government was used to frame the following discussion of findings.

Basic v. specialized factors

Natural resources as basic factors of competitive advantage: Thailand's competitive advantage is the diversity of its natural and human resources (e.g. land, climate, water, natural gas and oil, unskilled and semiskilled labor). Interviewee A commented on the country's abundance of natural resources as a reason for its continued growth:

We know that Thailand's industries have traditionally been closely linked with agriculture. Our country has been an agrarian-based economy, but we are moving slowly but surely toward an industrial-based economy. We believe that we have an abundance of resources to support our growth and diversification of industries [...] for instance, in the northeastern part of Thailand, we have plenty of mulberry plantations that have traditionally sustained the cultivation of silkworms which is used to produce silk [...] natural gas deposits in the Gulf of Thailand that we discovered 40-50 years ago are also used to supply energy for various industrial projects.

Recent infrastructure developments, such as transportation and telecommunication have also driven changes in the production and distribution of apparel exports. As such, Thailand was described in the early 1990s by *The Wall Street Journal* as one of the world's fastest-growing economies and strongest newly industrialized countries (NICs) (Lehner, 1991).

Kunz and Garner (2007) assert that in Thailand, apparel production offers better quality and shorter lead times compared with its neighboring countries. This may be due partly to the fact that raw materials, such as man-made fibers and silks, are locally produced. In addition, the industry maintains a full spectrum of operations, ranging from yarn spinning to apparel design and production (Kunz and Garner, 2007). Thailand has also been home to some important industry innovations. For example, since Thailand is the global leader in silk production, Thai silk has been the focus of the country's OTOP (One Tumbon One Product) project (Yukimatus *et al.*, 2008). OTOP is a stimulus program designed by the government to support unique, locally made products and promote them nationally and internationally ("About OTOP", 2008). Despite growing competition from China and India, Thai silk is well-known globally in terms of its quality and distinctive characteristics, especially when yarn-dyed. Thus, it is important that private and public sectors continue product development and innovations with silk (*TTIS Textile Digest*, 2008).

Upgrading basic factors to specialized factors: rural laborers as new source of competitive advantage: Thailand has long been known as a source of inexpensive labor, which was the initial catalyst for the nation's economic growth (Supachalasai, 1998). Later, many other developing countries followed suit (Supachalasai, 1998). However, basic factors, such as low-cost labor, cannot be the only source of a national industry's competitive advantage because it can easily be secured through global sourcing (Jin and Moon, 2006). Kunz and Garner (2007) posit that pay rates are not the only indicator of labor costs. Productivity rates such as "sewing skills, cultural work patterns, and availability of viable production equipment" also contribute to labor costs (p. 257). In recent years, Thailand has attempted to improve wages and working conditions, thereby hoping to attract skilled technical workers (Thailand Textile Institute, 2009). However, these factors may cause Thailand to lose its competitive position to lower-cost countries such as China, Vietnam, or India. Currently, the minimum hourly wage for apparel workers in Thailand is US\$0.80, which is higher than in China, India, and Vietnam. A skilled workforce usually means higher wages. As Interviewee F stated:

We are actively searching for skilled workers by making them a good offer, enticing them to come to work for us [...] you know, it is very difficult to find good pattern-makers or skilled fabric cutters [...] so we have to pay more.

Interviewee I echoed this fact, saying:

We are also recruiting these workers by providing them [...] good working condition[s] [...] you know many of these factory girls work in the open-air facility with big fan[s]. However, our facility offers them [air-conditioning].

Despite increasing labor-costs, Thailand still possesses advantages in the labor-intensive apparel industry, particularly in rural areas. Recently, these rural workers, usually unskilled or semiskilled, have been recruited by some apparel firms without being relocated to metropolitan areas like Bangkok. Instead, they work from home, earn extra income and become self-sufficient. Interviewee D explained how his company successfully employs rural workers, which allows him to keep his production costs low:

We are a fabric hand-bag company based in Bangkok. We produce products entirely in Thailand, using production labor in our Bangkok headquarters as well as training cooperative groups located throughout rural Thailand [...] we are managing the business like family...we trained these rural labor workers and send them back to their hometown [...] we later send them work assignments to complete and they are required to ship us back the finished products. This is how they get paid.

The product has to meet company's quality standard [...] the amount we pay these rural-labor workers is cheaper than those we pay at our Bangkok location because we do not have to worry about their housing and living expenses are cheaper in the rural area [...] at the present, we employ about 500 workers who live in the rural villages throughout Thailand.

Often, these unskilled or semiskilled workers need to learn more than just production process and skills, but how to make the work effort a successful household endeavor. As Interviewee E explains:

We also teach them how to read the code number and document number. For example, “s” means for our shop and “e” means for exports [...] you have to know that these workers, they do not speak and understand any English [...] we also ask them whether they have any children in school that may be able to help the family to gain additional income [...] these children can help their family when they are not in school [...] some even smaller that can be trained [...] these children can cut the fabric for money [...] I know that this is not the way we see in Europe or in America [...] however, they are family and are working in the house so they work hard to contribute [...] the child labor idea is [...] an idea of cooperating in the family business.

Despite the differences in levels of economic development as compared to countries like the USA, many interviewees believe that their operations reflect high levels of knowledge, resources and technology, and are competitive with these global markets. As Interviewee K stated with confidence:

I think in terms of technology, what America has, we also have it [...] in terms of technology, we don't think we are inferior to any other countries [...] because if we have money, we can buy [...] land/skilled labor. I don't think also that we are less knowledgeable than other countries.

Sophisticated and demanding consumer market

Demand for fashionable and diverse products: Research participants argued that the Thai consumers of today are sophisticated and demanding. They know what they want and are willing to pay for the right products. As Interviewee J observed, the increasing sophistication of the country's consumers drives industry innovation, resulting in products that are competitive in the global market:

Today's Thai consumers are so demanding [...] they are not only searching for high fashion apparel, but apparel that serves [a] functional purpose as well [...] thus, we need to focus on the design area [...] product development [...] use our innovative idea[s], otherwise we cannot compete in the world market.

According to a recent interview with a retailer published in a Thai industry magazine, consumers are demanding more apparel choices and expects to see new merchandise every time they walk into a store:

Our store always has new arrival[s] displayed [...] we do research all the time...as long as demand is there, we continue to supply [...] [the] apparel market is dynamic and continues to change all the time, depending upon time and consumer's lifestyle [...] we want to produce fashion products with high quality at affordable prices (FashionBiz, 2009).

The Thai apparel industry reflects this growing sophistication in terms of the complexity of the items being offered. Thai consumers look for a variety of colors, patterns, and textures when purchasing garments. This trend is reflected in recent fabric orders by major suppliers. These suppliers have reduced their fabric orders, for example, from 1,500 yards to 800 yards. However, the diversity of fabric orders has also increased (*Textile Digest, 2008*). The textile industry is no longer focusing on fabric development solely for fashion purposes; instead, the industry is paying more attention to the functional aspects of the fabric. It is believed that “the garment should [be more than] just wearable, it should serve multi-functions” (*TTIS Textile Digest, 2008*, p. 25). For example, many Thai consumers want apparel products that are “wrinkle free” to reduce product care. They also prefer apparel products such as “silk-plus” with added effects, like anti-bacterial qualities or UV protection (*TTIS Textile Digest, 2008*). Recently many textile and apparel companies have employed nanotechnology, such as DuPont's Teflon® to develop fabrics with stain release capabilities. These benefits are strong selling points and have been well-received by Thai consumers (*TTIS Textile Digest, 2008*).

Serving the niche apparel market: Thai consumers are becoming more concerned about global warming and the environment. As a result, they are interested in eco-friendly apparel products (Pornpitakpan, 2002; *TTIS Textile Digest, 2008*). According to Cotton USA's Thai representative:

Amid rising concerns over global warming, consumers are looking for clothing made from natural fibers such as cotton” (*TTIS Textile Digest, 2008* , p. 16).

Thus, niche apparel is gaining popularity in the domestic market since many textile and apparel companies believe that they cannot compete with the enormous apparel manufacturers in China on a mass scale (*TTIS Textile Digest, 2008*). Niche markets may therefore serve the Thai apparel industry well by helping sustain its competitive advantage. As the Managing Director of Pracha-Arporn Clothing and Textile Company notes:

We are targeting our niche, domestic market with high-quality merchandise [...] we are developing high-technology fabric along with our brand [...] this, I believe, is key to success in the competitive global apparel market [...] the intense competition of the industry has motivated us to be innovative and keep us moving (*TTIS Textile Digest, 2008* , p. 24).

Increasing domestic market demand: is this a way to stay competitive?: Overall, domestic apparel demand is increasing in Thailand and the country's industry is trying to keep pace. For example, Pena House, a Thai apparel brand, is aggressively expanding to cities across Thailand by opening more outlet stores (FashionBiz, 2009). This will eventually lead to oversaturation of the market and intensify domestic rivalry; thus, securing an advantage in the domestic market alone may be insufficient to stay competitive. The Thai apparel industry is taking its cue from some of its competitors, such as Korea and Japan, who market their brands internationally in order to sustain global competitiveness. For example, AIIZ, a successful Thai brand that has been known as the “ZARA of Asia”, has successfully captured both domestic and Asian markets, including Indonesia, Brunei, Cambodia, United Arab Emirates, and Kuwait. Sales are projected to increase by 20 percent by the end of 2009 (FashionBiz, 2009). Jaspal (Thailand) Group is also expanding to Southeast Asian markets under the brand names of CPS and CHAPS in Malaysia and the Philippines, and is planning to open more outlets in Hong Kong, Taiwan, and Vietnam in the next few years (FashionBiz, 2009). Interviewee D shared a similar business strategy:

We started off our business by selling these products in local markets with our main customers, [who] back then were college students [...] later we have grown and our market has expanded to female customers [...] our products have been well-received and become visible in many Asian markets [...] we have trademarked the brand in Singapore, China, Malaysia, Vietnam, and Taiwan [...] we are opening our first international shop in a few months in Macau [...] we create our own brand name so we create the demand for Naraya.

Developing Thai-identity brand: Brand identity is critical for apparel business to succeed in the hypercompetitive retail marketplace and, ideally this identity should resonate with Thai culture and society. Mr Inkawat, Creative Director for the Greyhound brand, recommends that companies focus on creating a “Thai-identity” through branding:

We want Thailand to be a fashion hub for Asia [...] we need to search for Thai-identity which will reflect in terms of the clothes we wear [...] thus, the country brand should be associated with our Thai-identity [...] we need to find out what we want to be known for

in terms of our Thai fashion [...] look at Scandinavia [...] they are very clear in terms of minimal identity concept which tends to reflect their choice of clothes they wear, their architecture [...] we have Thai brands like Jim Thompson that were very well known internationally [...] we have an organization called Bangkok Fashion Society (BFS) that consists of many Thai designers who design for a number of Thai apparel brands [...] we work very hard together to push Thai fashion to be known internationally [...] we have seminars, workshops, trying to educate each other and I believe that we are doing quite well (*BrandAgeEssential*, 2008, p. 51).

The presence of interdependent economic agents supporting Thai apparel industry:

Thailand's apparel industry has many related enterprises that provide it strong support and enhance production. While some are front-end industries that aid in sourcing, buying, advertising, information technology applications, logistics, and supply chain management, others serve as the back-bone of the business such as the fiber, fabric, and garment manufacturers.

Such interdependent and interactive economic agents form a cluster that, according to Porter's theory, is one of necessary factors for industry competitiveness. This cluster facilitates the flow of knowledge and information among people, enterprises and institutions. For example, Interviewee J explained how the Thailand Textile Institute offered multiple avenues of knowledge developed through:

a variety of educational and training services to entrepreneurs through a series of seminars, workshops [...] we provide them knowledge in terms of human resources, marketing strategy [...] we also provide R&D as well.

Similarly, a Thai apparel designer described how interdependence within the industry helps to benefit everyone:

As a designer, I would love to work with fabric suppliers to produce quality and unique fabric [...] I used to work with embroidery business, asking them to develop fabric for us, well, they did not sell us lots of yards of fabric because we make sure that they know we want our fabric to be exclusive only for us [...] but what they gained from us is an innovative idea that they can develop further on their own [...] so when they went for international conference to showcase their products [...] they received positive comments and orders from customers about new embroidery patterns and techniques [...] which they told me later [...] then I know that we are helping them [...] sort of indirectly [...] we both benefited from each other [...] I think this is important [...] and I would suggest those fabric producers to work closely with apparel designer to strengthen our innovative idea [...] we know that we want to support and use fabric made from our country (*TTIS Textile Digest*, 2008).

Those Thai advertising and marketing research companies that are internationally known provide invaluable expertise and support to apparel companies that are looking to expand domestically and internationally (Punyapiroje *et al.*, 2002). Likewise, a well-developed network of retailers in Thailand, including hypermarkets (e.g. Tesco-Lotus), department stores (e.g. Central department

store, The Mall department stores, The Emporium), specialty stores and outlet stores, helps to support apparel industry growth.

Thailand Textile Institute has worked with different entities, such as leading apparel companies, educational institutions, and the Thai government, to increase industry visibility through a series of well-publicized activities, such as the Asian Young Fashion Designer Contest and the Thailand Fashion Branding Contest. Moreover, academia has long provided support for the industry, resulting in benefits for both parties. For example, Interviewee I explains how she relies on her relationship with university faculty members to solve production problems:

When we have problems with sizing or pattern making [...] or even some technical problems, we always call her for help [...] we have developed a good working relationship and also personal relationship over years.

Interviewee B, the faculty member, concurred and adds:

Yes, I have been working with them for a while now [...] in different areas such as sizing.

Similarly, Interviewee G described how her company regularly offers summer internships, and permanent jobs upon graduation to local college students, “We always offer students a summer internship ... and many of them have been offered a permanent job upon graduation.”

Johansson (2006) posits that for a nation to sustain its advantage, upgraded machinery and technological development and expertise are needed so that home market demand can be further expanded. Interviewee J commented on plans for incorporating technological development to continue market growth:

We have created a loan project for improving efficiency of production [...] the project came from the government policy to increase the production efficiency [...] the bank of Thailand allocated money borrowed to the Industrial Finance Corporation (IFCT) and Export-Import Bank of Thailand (EXIM Bank) [...] we have approved loans for many factories to upgrade their machines and technology.

Strategy and structure of Thai companies and domestic rivalry

Firm strategy: agility response to markets: To enhance global competitiveness, firms need to focus on strategies that ensure high quality design and agility (Christopher and Towill, 2002). Some Thai apparel firms have employed the concept of agile strategic management, which emphasizes flexibility and timely action in response to customer demands (Christopher and Towill, 2002). Agility is a company's ability to quickly modify its strategy and product offering depending on market changes (Bhatia, 2008). It is an effective, flexible accommodation of unique customer demands (Christopher, 2000). Agility is a recognized and commonly-adopted strategy among Thai companies, because, as Interviewee I notes:

We are in the fashion business [...] this type of business is very dynamic [...] we cannot afford to produce many garments and have them available at the stores without knowing

the right quantity [...] this is important [...] otherwise we will have many of them sit in the stock, unsold [...] we will produce more if we know that kind of style is still in high demand [...] we send our sales people to check the store every week so that we know what should be produced [...] we have to get very quick response to our demand [...] we work closely with our retailers [...] fabric suppliers [...] and our designers.

Clustered network: Thailand's textile and apparel industry tends to be geographically concentrated or clustered in specific areas, such as Petchakasem Road (which runs from Bangkok to Nakorn-Pathom), Samusakorn, and Ratcahburri. More than a thousand textile and apparel manufacturers are located in these areas (10th Anniversary Thailand Textile Institute Book, 2007). The concept of an enterprise network has been developed by Thailand's Minister of Industry in an attempt to stimulate the country's competitive capacity. As a result, textile and apparel manufacturing and its supporting industries are often located in single areas, such as Petchakasem Road. These cluster networks can be classified into two main types; vertical and the horizontal (Christopher and Towill, 2002). The vertical cluster includes the first stage industry, i.e. fabric production, to the final stage industry, i.e. clothing production. The horizontal cluster type includes service businesses such as logistics, IT, in-house enterprise, financial institutions, educational institutions and related government authorities (10th Anniversary Thailand Textile Institute Book, 2007).

Innovation usually occurs as a result of a dynamic cluster, consisting of a set of interrelationships among firms located among a range of enterprises, universities, and research institutes. Thailand has a dynamic cluster of economic agents, including education, training, and research institutions, and can therefore support industry innovation. Interviewee J, for instance, noted that the cluster concept can provide a nation with a competitive advantage. Having proposed a project to study the impact of enterprise alliance, this interviewee notes:

We've learned a great deal [about the] advantages of clustering [...] such as reducing production costs, enhancing productivity, developing a new product [...] and more importantly [...] forming business alliances.

Likewise, according to Phongsak Assakul, President of Thai Textile Manufacturing Association:

[...] Survival must come from goods enhancement with the supply chain as a tool. The entrepreneurs have to understand why we cannot work alone. Cluster is the answer to form value chain. It helps small entrepreneurs survive and improve from OEM [original equipment manufacturer] to ODM [original design manufacturer] to and finally OBM [original brand manufacturer] (*10th Anniversary Thailand Textile Institute Book*, p. 33).

Domestic rivalries: Domestic rivalries in the apparel business are fierce. However, this intense competition is a driving force behind improving response time to satisfy increasingly demanding consumers. Interviewee L notes that, in comparison to foreign businesses, Thai companies may have an advantage because they better understand local consumers, can cater to their demands more effectively, and thereby enjoy customer loyalty:

We are not only competing with local Thai brands in our market such as Triumph [...] but in the past few years, we are seeing some imported premium brands as well [...] we

have to manage in-between to survive [...] we have brand identity and brand recognition among Thai consumers [...] that is quite fortunate [...] we depend on customer loyalty [...] if they become our customers, most of the time they stay with us [...] because we always try to improve and stay on top.

The role of government: Governments can play a significant role in enhancing the degree of quality and complexity of a nation's comparative advantages (e.g. improving workers' skill sets, generating domestic demand for national brand apparel products, improving infrastructures, etc.). Governments can also create engaging, quality environments for apparel operations. For example, Suwit Khunkitti, the Thai Minister of Industry, is currently trying to revive the Bangkok Fashion City project. This twice-yearly project is expected to strengthen cooperation between the public sector and private firms, and particularly between small-and medium-sized businesses (*TTIS Textile Digest, 2008*). Interviewee A commented that the Bangkok City project's attempt to introduce new Thai products will “show the knowledge and strength of the industry” and that “At least to our society, we believe that Thai designers are good.”

The textile and apparel industry strongly supported by the Thai government, who decided that 2008-2009 would be the year for investment, and arranged training seminars and workshops for the industry leaders. Another area that has received support is logistics and transportation. The Thai government has several ongoing projects designed to improve the efficiency of Thai exports, including road expansion and improved transportation options (*TTIS Textile Digest, 2008*).

The Thailand Textile Institute, a non-profit organization under private-public cooperation, has worked diligently to “promote efficient development of the domestic textile and apparel industry to attain global competitiveness”, according to the chairman of the Foundation of Industrial Development (10th Anniversary Thailand Textile Institute Book, 2007, p. 13). This organization has provided consultation to the apparel industry in such areas as human resource management, technology management, and product development in order to facilitate industry growth. Interviewee J describes some of the areas emphasized by the organization:

With the support from Minister of Industry, we develop[ed] a software called ERP (Enterprise Resource Planning/Quick Response) for the Textile and Garment Industry that can help the logistics and supply chain management in the industry [...] we also have the textile laboratory for testing and inspection [...] recently we focus[ed] on the development of technical textiles which have multiple functions [...] we are trying to be a leader in this area [...] we even want to be a center of intelligent information agent in Asia [...] this is why we are working very closely with academia on curriculum development [...] we want our new graduates to be better equipped with the knowledge that will further our industry in order to be competitive in the global market.

As shown in Table III, the emergent themes, when discussed relative to Porter's determinants of competitive advantage, provide support for the existence of those factors, including the support of the government, that are necessary for Thailand's apparel industry to sustain a global competitive edge.

CONCLUSIONS AND IMPLICATIONS

This research examined the current state of Thailand's apparel industry and investigated the factors relevant to sustaining its competitive advantages in a global market. To our knowledge, this paper is one of the first to provide insights into the competitive advantage of the country's apparel industry. Analyses of primary and secondary data established the existence of the four determinants necessary for competitive advantage: factor conditions; demand conditions; related and supported industries; and firms' strategy, structure, and rivalry. These factors are central to Porter's (1990) Theory of Competitive Advantage of Nations and support the industry's competitiveness. It can therefore be concluded that the potential for its continued success in the global arena is positive.

Thailand possesses sufficient “factor conditions” related to the country's natural and human resources, which are necessary to enhance the country's competitive advantage in the apparel industry. Particularly, the generalized factor of unskilled and semiskilled rural workers can be transformed to skilled and educated workers through appropriate and rigorous training without having to relocate them to urban areas where the majority of apparel companies are located (i.e. Bangkok, Nonthaburi, and Samutsakorn). The government-supported OTOP project is just one example of this educational approach. In addition, Thailand's infrastructure – its transportation, technology, and telecommunication – is strong compared to neighboring countries like Vietnam and Cambodia. As such, global apparel buyers sourcing from Thailand can expect efficient lead times and on-time shipments (Kunz and Garner, 2007).

Westernization and the country's economic development have impacted the “demand conditions” factor of Thai market, resulting in a high level of consumer sophistication and demand for product diversification within the domestic market. Thai consumers are not only price conscious, but also value conscious as well as variety seeking when it comes to apparel shopping (Watchravesringkan *et al.*, 2008).

Turning raw textiles into garments that can serve multiple functions has become important in the Thai market. Global warming concerns have received considerable attention among Thai consumers, pointing to the likelihood that apparel firms will continue to use natural fibers such as cotton for apparel products (*TTIS Textile Digest, 2008*). Finally, creating apparel brands that reflect a national “Thai-identity” could become an innovative way of ensuring Thailand's competitive advantage.

Thailand's related supporting industries assist apparel businesses in international competitiveness. The presence of interdependent economic agents that support the Thai apparel industry creates synergy effects that result in innovation. The willingness of one industry (e.g. apparel manufacturing) to cooperate with other industries (e.g. fabric producers) to develop and implement innovative ideas could become a new source of competitive advantage for the Thai industry. Research and development-related institutions (such as the Thailand Textile Institute and universities) should cooperate closely with private sector textile and apparel enterprises and engage in activities like technology transfer and innovation diffusion to reinforce Thailand's competitive advantage.

Fierce global and local competition in the apparel industry has altered the strategy and structure of Thai apparel firms. Many have adopted agility as a strategic approach in response to unforeseen apparel market demands. A cluster network initiative sponsored by the Thai government, has proven to be beneficial to the industry, resulting in lower production costs, a high degree of productivity, and continuous innovation. Consequently, Thai apparel companies can transform themselves; from engaging in the simplest production operations (OEM), to more complex operations involving design and manufacture (ODM), to, ultimately, full-fledged product development of their own brands (OBM). Intense domestic competition has also forced these apparel firms to constantly improve the quality and design of their products in order to maintain a competitive in the market.

This study revealed the important role of the Thai government in assisting the apparel industry to sustain its competitiveness, as supported by Porter's (1990) framework. The Thai government has long recognized the potential of the textile and apparel industry and has thus been committed to enhancing its efficiency and effectiveness by providing support through capital, knowledge resources, and infrastructure. The government has revisited the possibility of launching the Bangkok Fashion City Project as a means to promote Thai apparel industry domestically and internationally, and has provided capital investment to boost research and development through the Thailand Textile Institute, which will improve the quality of export goods and develop new products (e.g. functional and technical textiles). In addition, the government has foreseen the importance of marketing and entrepreneurial knowledge, therefore, educational seminars are provided to private enterprises to enhance their marketing (e.g. branding) and entrepreneurial knowledge so that the industry can move from being predominantly OEM focused to more OBM driven.

Despite the competitive advantages of the Thai apparel industry and continuous support from the government, the industry should be aware of new international commercial laws related to regulations of chemicals and their safe use in fabrics and apparel exported to EU markets (Registration, Evaluation, Authorization and Restriction of Chemical Substances, or REACH) and the US market (The Consumer Product Safety Improvement Act of 2008 or CPSIA). An ongoing project using traditional Thai herbs on fabric through a “microencapsulation technology” process (e.g. the use of lemon grass to prevent fungus) instead of traditional pesticides is an example of an innovative way of complying with new guidelines. Also, such projects may offer Thailand a competitive advantage among the environmentally conscious Western consumers. This, in turn, may help the Thai companies to gain effective access to the US and EU market.

In sum, regardless of fierce competition in the global apparel market, application of Porter's (1990) Theory of Competitive Advantage of Nations to the Thai apparel industry illustrates that, even despite rising production costs, the industry can remain globally competitive with continued support from the government. Porter's “diamonds” (i.e. determinants) suggest that competitive rivalry and capable business management can help Thailand's apparel industry develop new skills and resources to sustain its competitive advantage. These diamonds show how, by creating favorable conditions, Thailand can remain competitive in the global apparel industry for many years to come.

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Table 1: Thailand's exports and imports of textile and clothing by selected category in millions of US dollars

Items	2005	2006	2007	% Change (2006/2005)	% Change (2007/2006)
<i>Exports</i>					
Overall textile and clothing products	6,693.5	6,834.6	6,967.2	2.11	1.94
Textile products	3,224.5	3,289.3	3,599.6	2.01	9.43
Fabric (cotton, silk, man-made)	1,078.9	1,104.0	1,162.5	2.33	5.30
Fiber and filament (cotton and man-made)	754.0	718.8	842.9	-4.67	17.27
Clothing products	3,469.0	3,545.3	3,367.6	2.20	-5.01
Finished garments (from cotton, man-made, silk, wool/animal hair)	3,150.2	3,198.8	2,987.1	1.54	-6.62
Brassieres, corsets, and parts thereof	249.9	277.4	308.9	11.00	11.25
<i>Imports</i>					
Overall textile and clothing products	2,931.0	2,974.5	3,126.3	1.48	5.10
Textile products	2,637.6	2,624.9	2,692.5	-0.48	2.58
Fabric (cotton, silk, man-made)	1,339.4	1,368.5	1,437.8	2.17	5.06
Fiber and filament	1,298.2	1,256.4	1,254.7	-3.22	-0.14
Clothing products	293.4	349.6	433.8	19.16	24.09
Finished garments (suits, shirts/blouses, trousers, skirts, and accessories, children's wear etc.)	148.3	200.0	248.6	34.86	24.30
<i>Trade balance</i>					
Trade surplus					
Overall textile and clothing products	3,762.5	3,860.1	3,840.9		
Textile industry	586.9	664.4	907.1		
Clothing industry	3,175.6	3,195.7	2,933.8		

Source: Thailand Textile Institute's (2008) Report

Table I.
Thailand's exports and imports of textile and clothing by selected category in millions of US dollars

Table 2: Description of research participants

Type of organization	Description of business	Location of business	Title of the interviewees	Gender	Pseudonyms
Private sector	Women's wear	Bangkok	Sales Director	Female	I
Private sector	Textile printing and dyeing	Samutsakorn	General Manager	Male	K
Private sector	Fabric handbag and accessories	Nonhaburi	CEO General Manager	Male Female	D E
Private sector	Children's wear, women's wear, and school uniform	Nonhaburi	Managing Director General Manager Senior Export Manager	Male Female Male	F G H
Government University	Support small-to-medium business enterprises Higher educational institution	Bangkok Bangkok	Director-General Associate Professor Assistant Professor	Male Female Female	A B C
Private sector	Women's lingerie	Bangkok	Department Manager Central Management Manager	Female Male	L M
Non-profit organization	Research and development, and consultation	Bangkok	Executive Director	Male	J

Table II.
Description of research participants

Table 3: Summary of emergent themes corresponding to Porter's theory

Determinants	Emergent themes and samples associated with interviews	Themes associated with sources
Factor conditions	<p><i>Basic v. specialized factors</i></p> <p>Natural resources as basic factors of competitive advantage Abundance of resources to support growth and diversification of industries such as natural gas, mulberry plantations for silk industry and OTOP products</p> <p>Upgrading basic factors to specialized factors: rural laborers as new source of competitive advantage Transformation from unskilled and semiskilled, cheap labor located in rural villages to skilled workers via education provided by specific industry</p>	<p>Governmental sector and <i>TTIS Textile Digest</i>*</p> <p>Private sectors (i.e. fabric handbag and accessories, children's wear, women's wear, and school uniform)</p>
Demand conditions	<p><i>Sophisticated and demanding consumer market</i></p> <p>Demand for fashionable and diverse products</p> <ul style="list-style-type: none"> Sustaining competitive advantage through product development with innovative ideas and design to meet demanding consumers Continuing supplying fashionable new merchandises for variety-seeking consumers <p>Serving the niche apparel market</p> <p>Providing eco-friendly apparel products to the specific market</p> <p>Increasing domestic market demand? Is this a way to stay competitive?</p> <p>Expanding markets domestically (e.g. Pena House, Naraya) and globally (e.g. AIIZ, CPS, Naraya)</p> <p>Developing Thai-identity brand</p> <p>Suggesting for developing strong brand identity associated with Thai culture and society</p>	<p>Non-profit sector and <i>TTIS Textile Digest</i>*</p> <p><i>TTIS Textile Digest</i></p> <p>Private sector (i.e. fabric handbag and accessories) and FashionBiz*</p> <p><i>BrandAgeEssential</i>*</p>
Related and supporting industries	<p><i>The presence of interdependent economic agents</i></p> <ul style="list-style-type: none"> Seminars offered by non-profit organization for educational and training services to the industry Aid offered by higher educational institution to solve technical problems related to sizing or pattern making Summer internships and permanent jobs upon graduation offered, facilitating the growth of business Financial supports from major financial institutions to the industry for the project to improve production efficiency (e.g. upgrading machines and technology) 	<p>Non-profit sector, private sector (women's wear), private sector (children's wear, women's wear, school uniform)</p>
Firm strategy, structure, and rivalry	<p><i>Strategy and structure of Thai companies and domestic rivalry</i></p> <p>Firm strategy: agility response to markets</p> <p>Agility strategic approach to customer demands</p> <p>Clustered network</p> <p>Textile and apparel and other supporting industries geographically concentrated in one area, thus enhancing productivity and reducing production cost</p> <p>Domestic rivalry</p> <p>Intense competition among domestic brands drives brand identity development</p>	<p>Private sector (women's wear)</p> <p>Non-profit sector</p> <p>Private sector (women's lingerie)</p>
The role of government	<ul style="list-style-type: none"> Promote collaborative project between public sectors and private firms to introduce new products Develop solid infrastructure to support the industry Provide support for technological development (e.g. ERP software), product development (e.g. laboratory for testing and inspection) for the industry 	<p>Government sector, <i>TTIS Textile Digest</i>, non-profit sector</p>

Table III.
Summary of emergent themes corresponding to Porter's theory

Note: *Indicates secondary sources