

ABSTRACT

DANIELS, BONNIE L. DR-CAFTA Opportunities for the U.S. Textile Industry.
(Under the direction of Dr. Nancy Cassill and Dr. William Oxenham.)

In an age of rapid globalization, the worldwide textile and apparel industry has encountered a large variety of challenges, as well as opportunities. The United States textile and apparel industry has faced significant challenges as the volume of imports into the region has increased. In an attempt to maintain the viability of the U.S. textile industry, as well as to foster development in other global regions, the U.S. Government has entered into several trade agreements, extending preferential treatment and allowing quota-free and duty-free access on select products into the U.S. Market (Rees & Hathcote, 2004). The goal of this research is to identify the opportunities presented to the US textile and apparel industry based on select provisions and benefits provided by DR-CAFTA. This study will include the creation of a database and examination of the six DR-CAFTA countries. More specifically, this research will identify opportunities for US textile firms to manufacture or partner within DR-CAFTA countries, and identify opportunities for US textile firms to market products (yarn/fabric) to DR-CAFTA firms. Possible opportunities for U.S. textile firms are identified in terms of: speed, cost savings, time, money, and preferential tariffs.

DR-CAFTA Opportunities for the U.S. Textile Industry

by
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DEDICATION

To my family

BIOGRAPHY

The author, Bonnie Leigh Daniels, was born in Charlotte, North Carolina, on September 22, 1983. She is the daughter of John Y. “Jack” and Marsha R. Daniels. Bonnie grew up in Greenville, SC with her older sister, Laura Jill Daniels. She graduated from Riverside High School in 2001, and went on to study biology at the University of South Carolina in Columbia. After three years she transferred to the College of Charleston, in Charleston, SC. She earned a Bachelor of Science degree from the College of Charleston in 2005. Upon graduation, Bonnie entered the graduate program at North Carolina State University College of Textiles to pursue a Master of Science degree, through a fellowship from the Institute of Textile Technology (ITT). She is completing the requirements for her graduate degree in Textile Management and Technology. Upon completion of her graduate studies, she will pursue a career in textile and apparel sourcing, or brand management.

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CHAPTER I

INTRODUCTION

In an age of rapid globalization, the textile and apparel industry has encountered a large variety of challenges as well as opportunities. The United States textile and apparel industry has faced significant challenges as the volume of imports into the region has increased. In an attempt to maintain the viability of the U.S. textile industry as well as to foster development in other global regions, the U.S. government has entered several trade agreements, extending preferential treatment and allowing quota-free and duty-free access of select products into the U.S. Market (OTEXA, 2008).

The United States-Central America-Dominican Republic Free Trade Agreement (DR-CAFTA) is an agreement between the US, El Salvador, Honduras, Guatemala, Nicaragua, Costa Rica, and the Dominican Republic allowing free trade flows in the region (International Trade Administration, 2008). Due to specific textile provisions requiring the use of U.S. or regional fabric and yarn, a garment assembled in these countries can enter the U.S. marketplace duty and quota-free (USTR, 2007).

This creates numerous opportunities for the U.S. textile industry in terms of both manufacturing and marketing.

Possible opportunities for U.S. Textile firms are in terms of: speed, cost savings, time, money, and preferential tariffs.

Garment factories in the Dominican Republic and Central America combined, represent the 2nd largest buying group of U.S. textiles in the world, next to NAFTA. Ninety percent of apparel exports from CAFTA to the United States are made with U.S. sewing threads. Ninety percent of apparel exports from CAFTA to the United States contain U.S. yarns (USTR, 2007). Eighty percent of apparel exports from CAFTA to the United States are made from U.S. fabric (USTR, 2005).

With the recent passage of the DR-CAFTA, competition has risen. In order for a firm to stay competitive it is crucial to examine the infrastructures within the six DR-CAFTA countries in order to identify opportunities for U.S. textile firms to take advantage of the provisions set forth in this trade agreement.

Purpose of Research

The overall objective of this research is to identify opportunities for the U.S. textile and apparel industry to take advantage of the provisions and benefits provided by DR-CAFTA. The specific research objectives are to:

- 1) Create a database of U.S. textile complex companies with a presence in DR-CAFTA to be used not only for this research project, but also as an ITT resource guide.
- 2) Examine the infrastructures within the six DR-CAFTA countries using Porter's four determinants of competitive advantage as a framework.

❖ **Factor Conditions:** Labor and infrastructure

❖ **Demand Conditions:** Customer (manufacturer) analysis of both the US and Central America marketplace

❖ **Related and Supporting Industries:** Nature of strategic partnerships, raw material availability

❖ **Firm Strategy, Structure, and Rivalry:** Competitive structures that the firms operate (internal structure, plus competitor structures)

- 3) Identify opportunities for U.S. textile firms to manufacture/partner within DR-CAFTA countries.

- 4) Identify opportunities for U.S. textile firms to market products (yarn/fabrics) to DR-CAFTA firms.

Research Objectives

The main research objectives that will be used for this study are as follows:

RO1: Create a database of US textile complex companies with a presence in DR-CAFTA

RO1A. To determine which U.S. companies are in each of the six DR-CAFTA countries

RO1B. To determine what product(s) is being produced by U.S. Companies and six DR-CAFTA countries

RO1C. To determine who the company's partners are (within country, region, and U.S.)

RO2: To examine infrastructure of DR-CAFTA countries in order to:

RO2A. Determine opportunities for U.S. companies based on factor conditions.

RO2B. Determine advantages for the U.S. based on demand conditions.

RO2C. Determine opportunities for U.S. textile companies by means of related and supporting industries.

- R02D.** Determine advantages for U.S. companies based on firm strategy, structures, and rivalry of the country it is operating within.
- R03:** To determine if there are opportunities for US textile firms to manufacture/partner within DR-CAFTA countries.
- R04:** To determine if there are opportunities for US textile firms to market products (yarn/fabrics) to DR-CAFTA firms.

Significance of Study

This research provided insight into opportunities made available through provisions set forth by the DR-CAFTA. The results of the research provided a strategic framework for doing business in the region and to aid ITT members in taking advantage of the DR-CAFTA provisions, via manufacturing and marketing. The results also provided an overview of product categories which justified US or regional production and/or offered export opportunities for the US textile industry.

Limitations of Study

- 1) This research only focused on cotton-rich product categories: While these categories were (representative

of the knit sector), results cannot be generalized to other product categories.

- 2) Data were not equally accessible across all countries.
- 3) Depending on the company interviewed, there could be a potential inability error in that respondents may not have had access to all the necessary data needed to answer select questions.

Nominal Definitions

Competitive Advantage:

A condition which enables a country or firm to operate in a more efficient or otherwise higher – quality manner than its competitors, and which results in benefits accruing (Porter, 1998).

Competitive Strategy:

A strategy which involves positioning a business in order to maximize the value of capabilities that distinguish it from its competitors (Porter, 1998).

DR-CAFTA:

A free trade agreement between the U.S. and Honduras, El Salvador, Nicaragua, Guatemala, Costa Rica and the Dominican Republic.

Demand Conditions:

The nature of home-market demand for the industry's product or service (Porter, 1990).

Developed Countries:

The more industrially advanced and prosperous countries in which a higher level of living is common. These countries account for less than 20 percent of the world's population (Dickerson, 1999).

Developing Countries:

The countries with limited economic progress and limited industrial development, which are typically poorer. These countries account for a majority of the world's population, but only a small amount of wealth (Dickerson, 1999).

Economic Competitiveness:

The ability to sustain and grow a business within the global textile and apparel environment, through optimization of

products, processes, and strategies to gain a competitive advantage (Cesca, 2005; Jones, 2005; Nowell, 2005).

Exports:

Goods or services sold to other countries (Dickerson, 1999).

Factor Conditions:

The nation's position in factors of production, such as labor and infrastructure (Porter, 1990).

Firm Strategy, Structure, and Rivalry:

The conditions in a nation governing how companies are created, organized and managed as well as the nature of domestic rivalry (Porter, 1990).

Global Supply Chain:

A network of factories and material sourcing on a worldwide basis (Klassen, 1994).

Imports:

Goods or services purchased from other countries (Dickerson, 1999).

Lead Time:

The time elapsed in between the receipt of customer order until the delivery of finished goods to the customer (Gunasedaran, 2004)

Logistics:

The part of the supply chain process that plans, implements, and controls the efficient flow and storage of goods, services, and related information from the point of origin to the point of consumption in order to meet customers' requirements (Councils of Logistics Management, 1998).

Market:

The aggregate demand for certain products or services, i.e., all the actual or potential customers who have the means to

purchase the product or service and who actually have access to it should they make a decision to buy (Ostrow & Smith, 1988).

Market Competitiveness:

Having a position of superiority over competitors in satisfying the aggregate demand for certain products or services (Hope, 2004).

Related and Supporting Industries:

The presence or absence in the nation of supplier industries and other related industries that are supplementary (Porter, 1990).

Retailer:

Any business enterprise whose sales volume comes primarily from retailing (Kotler, 2000).

Supply Chain:

The network of retailers, distributors, transporters, storage facilities and suppliers that participate in the sale, delivery and production of a particular product.

Sourcing:

The process of determining how and where manufactured goods or components will be obtained (Dickerson, 1999).

Tariffs:

A tax imposed on imported goods (Dickerson, 1999).

List of Abbreviations

CAFTA:	Central America Free Trade Agreement
CBI:	Caribbean Basin Initiative
CBTPA:	Caribbean Basin Trade Partnership Act
FTA:	Free Trade Agreement
FTAA:	Free Trade Area of the America
GDP:	Gross Domestic Product
GNP:	Gross National Product
NAFTA:	North America Free Trade Agreement
TRQ:	Tariff Rate Quota
UN:	United Nation
U.S.:	United States
WTO:	World Trade Organization

CHAPTER II

REVIEW OF LITERATURE

Conceptual Framework

A traditional definition of competitiveness established that within international markets, competitiveness was shown by rate of participation. At the international level, true competitiveness occurred when several countries won, they had heightened productivity, which allowed them to compete further and better in international markets (Global Competitiveness Report, 2003). "The competitiveness is a dynamic concept. Is a function of many factors, from the macro-economic environment to the quality of the public institutions and the potential technological development as a result of the education and the investment of human capital" (ByoungHo Jin, 2006, p. 96).

According to Porter (1990) the competitive advantage of a country is created, not inherited. A country's competitiveness depended on "creating a business environment, along with supporting institutions, which enable the nation to productively use and upgrade its inputs" (Porter M. E., 1990, p. xii).

Competitive Advantage of Nations

In 1998, Michael Porter wrote *The Competitive Advantage of Nations*. In his book Porter emphasized two key points. First, he accentuated that no advantage is permanent, the only constant was change. Porter's second point was that "the only meaningful concept of competitiveness at the national level is national productivity. A rising standard of living depends on the capacity of a nation's firms to achieve high levels of productivity, and to increase productivity over time" (Porter M. E., 1998, p. 6). Continual upgrade is the only way to uphold competitive advantage.

The conceptual model introduced by Porter in *The Competitive Advantage of Nations* provided a framework used to evaluate economic competitiveness and identified the six DR-CAFTA countries strengths, weaknesses, opportunities, and threats. Porter first introduced this model as a means for analyzing why some nations are more competitive than others. A specific country was selected and served as the model, and the industry to be analyzed was placed in the diamond. Figure 1, depicts the relationship of the constituents underlying Porter's model. The four elements that compose the "diamond" (factor conditions, demand conditions, related and

supporting industries, and firm strategy, structure and rivalry) are direct factors, while the system is affected indirectly by the government and chance factors. Together all elements interact as a system and industry-specific competitive advantages emerge. When different variables are placed within the diamond, it causes the analysis of the country to vary.

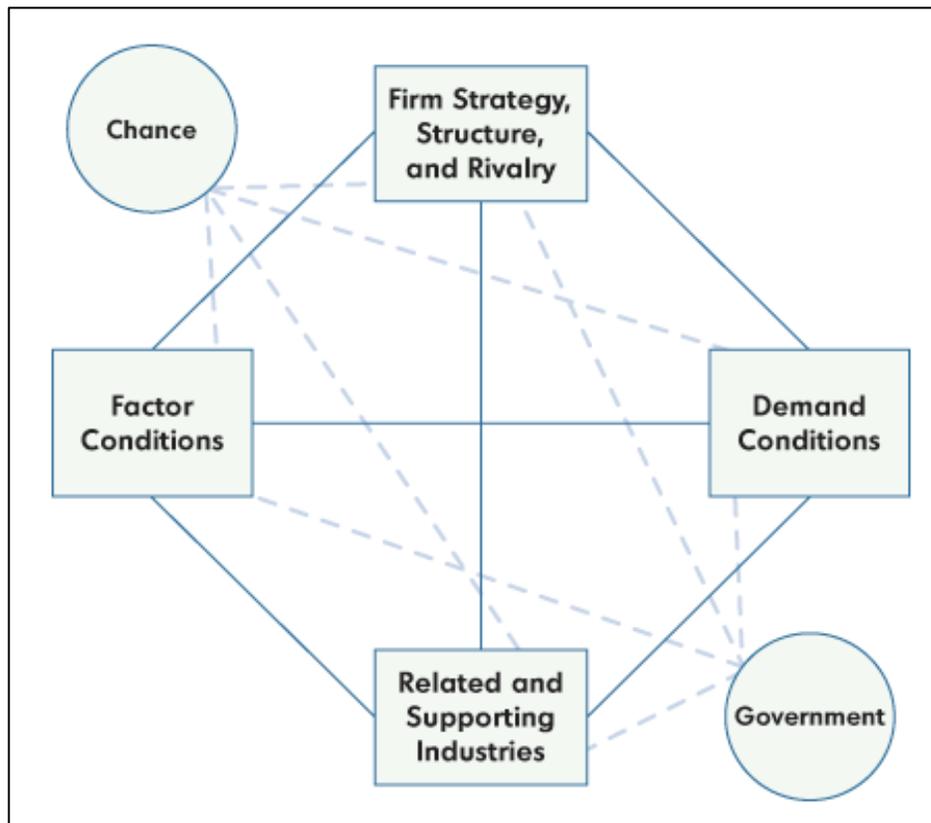


Figure 1: Conceptual Framework

Source: Porter, M. (1998). *The Competitive Advantage of Nations*. The Free Press, New York, NY.

Porter (1998) determined that there are four main determinants of national competitive advantage. These were:

- ❖ **Factor Conditions:** Factors of production, such as productivity, labor supply and infrastructure.
- ❖ **Demand Conditions:** The nature of the demand in both markets (U.S. market; Central American market) will be analyzed.
- ❖ **Related and Supporting Industries:** Which partnerships with world-class suppliers exist with U.S. textile manufacturers? What is the nature of these partnerships? What is the availability of raw materials, component parts?
- ❖ **Firm Strategy, Structure, and Rivalry:** What are the characteristics of Central American firms? What competition exists?

Porter also noted the importance of government and chance on the success of a particular industry within a country. The role government played in the model was that of a catalyst and challenger, because it influenced the four determinants found within the diamond. The main tasks of government were to encourage change, promote rivalry, and specialize in factor

creation. Government influenced the determinants in either a positive or negative manner.

Porter asserted: "Factor conditions are affected through subsidies, policies toward the capital markets, policies toward education, and the like. Government's role in shaping local demand conditions is often more subtle. Government bodies establish local product standards or regulations that mandate or influence buyer needs. Government is also often a major buyer of many products in a nation. Government can shape the circumstances of related and supporting industries in countless other ways. Government policy also influences firm strategy, structure and rivalry, through such devices as capital market regulations, tax policy and antitrust laws" (Kobayashi-Hillary, 2004, p. 26).

Chance, by its very nature, is impossible to predict which led to the creation of discontinuities which allowed for shifts in a nation's competitive position (Kobayashi-Hillary, 2004). Factors of chance included new innovations, war, shifts in exchange rates or financial markets (Katsioloudes & Hadjidakis, 2007).

Factor Conditions

According to Porter (1998), factor conditions were the aspects of production necessary for a firm to compete in any given industry. In essence, factor conditions were the country's endowment of resources (Byoung-ho Jin, 2006). These factors were grouped into the following categories:

- ◆ **Human Resources** – the quantity of workers available, skills possessed by these workers, wage levels and work ethic
- ◆ **Physical Resources** – the availability, quantity, quality, and cost of land, water, minerals and other natural resources
- ◆ **Knowledge Resources** – the availability within a nation of a significant population having scientific, technical, and market-related knowledge
- ◆ **Capital Resources** – the availability, amount, cost, and types of capital available; also includes savings rate, interest rates, tax laws and government deficit
- ◆ **Infrastructure Resources** – these include a nation's banking system, health care system, transportation system, and communication systems (Porter, 1990).

Porter suggested that the above categories could be further discriminated as either basic factors or advanced factors, and could be generalized factors or specific factors. A factor that was passively inherited was deemed as a basic factor; e.g. climate, natural resources, geographic location, or demographics. These factors offered an initial advantage, but needed to be supported by advanced factors in order to maintain success. While advanced factors, were created by the investment of government, people and companies; e.g. highly educated personnel, communications, or research. If a country lacked basic factors, then it was suggested to invest in advanced factors (McCraw, 2008).

In respect to the apparel industry, new competitive factor conditions were believed to be found within advanced or specialized factors. "Basic factors such as cheap labor for production are no longer viable in achieving competitive advantages since those factors can be successfully secured through global sourcing" (ByoungHo Jin, 2006, p. 196). Factor conditions were specific to each particular country; thus, countries develop select industries based on the optimization of their particular set of factor conditions (ByoungHo Jin, 2006).

Porter also noted the possibility of select factor endowments to be comparable among nations.

Demand Conditions

Porter's second determinant, demand conditions, refer to the nature of home-market demands for the firm's services and products. According to Porter (1998) demand conditions can be viewed in terms of the size of the home market and demanding as well as the level of sophisticated buyers.

"Nations gain competitive advantage in industries where the home demand gives their companies a clearer or earlier picture of emerging buyer needs, and where demanding buyers pressure companies to innovate faster and achieve more sophisticated competitive advantages than their foreign rivals. The size of home demand proves far less significant than the character of home demand" (Porter M. E., 2001).

Within the domestic market, demand conditions supplied the primary driver of innovation, quality improvement, and growth. According to Porter a sophisticated domestic market was a chief aspect in produced competitiveness. A firm that faced a sophisticated domestic market was more apt to sell superior products because the market demanded close proximity

and high quality. These consumers provide an advanced comprehension of the desires and needs of the customers. Porter suggested three key aspects that led to the arising of a competitive advantage: demand size, needs and wants, and the internalization of domestic demand (Pienaar, Victor, Day, & Palm, 2007).

Related and Supporting Industries

Key dimensions of related industries included: parts innovation and upgrading, cost effectiveness, and short lines of communication. Home based suppliers created an advantage for advanced downstream industries when they furnished the most effective inputs, meaning they are efficient, flexible, and rapid. Internationally competitive suppliers were those that tendered goods and services of high quality and world standards.

A short line of communication, close working conditions, a quick and steady flow of precise information impact suppliers' technical effort and functions as test sites for innovative technology and the investigative and development work backing it. Therefore these industries were of great magnitude because of the close relationship between one

another. It gave the potential to disclose opportunities and information to one another and fortified a competitive advantage (Pienaar, Victor, Day, & Palm, 2007).

Firm Strategy, Structure, and Rivalry

Competitive advantage developed through a combination of organizational modes and management practices is preferred in the country and a basis of competitive advantage in the industry. How a firm managed, organized, and set goals could have created a national competitive advantage. According to Porter (2001) low rivalry makes an industry appealing. A firm preferred less rivalry, at a single point in time, however; for the long run, greater local rivalry is preferred, because rivalry pressures firms to innovate and improve. In effect, heightened local rivalry resulted in lessened global rivalry (Kaleem, 2006).

The Diamond as a System

The model developed by Porter analyzed the dynamics of a nation. Within the system, it was the four determinants of a nation, that the firms were created and discovered how to compete. Each of the determinants added to the success of a

firm or industry in terms of the national context. However, success was not based on a single determinant; leveraging one or two of the determinants while ignoring the others did not work. Success only came about by paying attention to the system as a whole. The outcome of one factor of the diamond depended on the position of the others. Domestic rivalry and geographic concentration (clusters and competitive industries) were of explicit importance to the dynamism.

Table 1: Traditional Versus New Competitive Advantage Factors

Porter (1998) determinants	Traditional competitive advantage factors	New competitive advantage factors
Factor conditions	Basic factors: such as unskilled labor and raw materials	Advanced factors: skilled human resources such as creative designers. Specialized factors such as production and process technologies that are specific to handling global sourcing and management (e.g. EDI)
Demand conditions	Demanding functionality and availability of apparel items	Demanding higher levels of needs such as brand name and service
Related and supporting industries	Presence of internationally competitive back-end supplier industries (e.g. raw materials producers)	Presence of internationally competitive front-end industries that efficiently coordinate global supply chain management (e.g. buying office, advertising, information technology)
Firm strategy, structure, and rivalry	Organization and strategy of most apparel firms are suited to industries' source of competitive advantage: high quality design	Organization and strategy of most apparel firms are suited to industries' source of competitive advantage: high quality design plus agility

Source: Byoung-ho Jin, & Hwi-Chang Moon. (2006). *The diamond approach to the competitiveness of Korea's apparel industry: Michael Porter and beyond*. *Journal of Fashion Marketing & Management*, 10(2), 195-208.

Based on Porter's diamond model the factors used to create a competitive advantage were classified as either traditional competitive advantage factors or new competitive advantage factors. For the textile and apparel industries, new competitive advantage factors were of greater importance, due to heightened global sourcing.

Global Trade

For nearly 50 years restraints were placed on global textile and apparel exports, enforced by Short-Term Arrangement, Long-Term Arrangement, and Multi-Fiber Arrangement. Upon formation of the World Trade Organization in 1995, a 10-year quota phase out period began, governed by the Agreement on Textiles and Clothing, in hopes of leading to full quota abolition by the end of 2004. January 1, 2005, marked the completion of quota phase-outs. Shifts in exports by developing and developed countries occurred between 1990 and 2004, with an increase in exports by developing countries, which alluded to the possibility of developing countries becoming global leaders in textile and apparel exports, due to the abolishment of quotas (Mehtar, 2007).

A multitude of industries have been studied from a global commodity chain (GCC) perspective, yet the apparel and textile sectors have been given the most study. While a wide range of industries have been studied from the GCC perspective, the apparel and textile sector has embraced the most extensive empirical attention (Blair & Gereffi, 2002). The apparel sector was one of the initial industries to go global, via outsourcing strategies and offshore assembly, meanwhile garment production continued to be one of the most geographically distributed manufacturing activities. The global textile and apparel industries have witnessed several migrations of production over the past several decades. In particular the past 10-15 years have shown considerable declines in growth within global textile consumption, and relocation of production has occurred again, this time positioned in areas of developing economies that have become exporters of apparel goods, mainly countries in Latin America, Eastern Europe, and China.

Table two, lists the top 50 exporters of textile products (yarn, fabric, and garments) to the United States, in millions of U.S. Dollars.

Table 2: Top 50 Countries Exporting Textiles and Apparel to the U.S.

Rank	Country	2006	2007	Rank	Country	2006	2007
1	China	27067	32320	26	Peru	864	832
2	Mexico	6376	5625	27	Malaysia	739	720
3	India	5031	5104	28	Japan	421	459
4	Vietnam	3396	4557	29	Haiti	449	452
5	Indonesia	3901	4206	30	Costa Rica	479	431
6	Bangladesh	2997	3191	31	Columbia	550	427
7	Pakistan	3250	3170	32	France	397	425
8	Honduras	2445	2517	33	Israel	483	411
9	Cambodia	2150	2435	34	Lesotho	387	383
10	Italy	2067	2233	35	United Kingdom	359	357
11	Canada	2587	2201	36	Brazil	347	325
12	Hong Kong	2892	2123	37	Germany	331	323
13	Thailand	2124	2059	38	Portugal	300	297
14	The Philippines	2085	1793	39	Madagascar	238	289
15	Sri Lanka	1702	1590	40	Kenya	263	249
16	El Salvador	1433	1507	41	Belgium	229	227
17	Guatemala	1678	1463	42	Singapore	147	153
18	Taiwan	1497	1365	43	United Arab Emirates	208	149
19	South Korea	1665	1324	44	Switzerland	139	136
20	Turkey	1311	1146	45	Swaziland	135	135
21	Jordan	1253	1146	46	Romania	130	125
22	Dominican Republic	1550	1060	47	Bahrain	113	122
23	Macau	1163	1028	48	Spain	125	116
24	Nicaragua	879	968	49	Mauritania	118	114
25	Egypt	806	869	50	The Netherlands	110	112

Source: U.S. Department of Commerce, 2007

Developing countries had lower wage rates. Lower wages, coupled with the labor-intensiveness of apparel manufacturing, led to a comparative advantage for developing countries in terms of apparel manufacturing as well as an advantage in location for textile manufacturing. Therefore, manufacturing of textiles and apparel has shifted towards developing countries. The textile and apparel exports for developing countries' in 2001 were almost seven times their 1980 level (Gelb, 2007).

Trade Agreements

The United States has relied on unilateral trade preferences in order to foster export-led development within indigent countries, for more than 40 years. These non-reciprocal trade preferences gave market access, lower or duty-free tariffs, to select developing countries. The Caribbean Basin¹ has taken advantage of multiple preferential trade agreements over the last several decades. The most renowned ones came into force during the mid-1980s and can be

¹ Caribbean Basin countries include: Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, Panama, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago.

linked to the agreement known as the Caribbean Basin Initiative (CBI) (Hornbeck, 2007).

Today, one can see that numerous preferential trade arrangements have effectively been replaced by reciprocal U.S. free trade agreements (FTAs) in the region, indicating a shift in U.S. trade policy. Over the past three decades the U.S. Congress has sanctioned several trade preference programs; such as GSP, CBERA, CBI II, CBTPA, and the Hope Act of 2006, each modifying past tariff preferences and trade rule aimed at increasing imports from CBI countries (Hornbeck, 2007). A map of the Caribbean Basin Region is shown in Figure two.



Figure 2: Map of the Caribbean Basin Region

Source: Map Resources. Adapted by CRS. (K. Yancey 6/30/06).

During the early 1980s, the drive behind the creation of the Caribbean trade preference program evolved as political radicalization, and concomitant economic collapse occurred. The instability, proximity, and vulnerability characterizing the Caribbean Basin, has made it of particular strategic interest to the United States for quite some time (Hornbeck, 2007).

On February 24, 1982, while giving a speech to the Organization of American States, President Reagan disclosed the CBI, contending that the political and economic stability found in the Caribbean region was imperative regarding the interests of U.S. security. The recommendation he put forward was for a mix of trade preferences, tax incentives, and general aid. His proposal proved to be rather controversial, and his idea was rejected by most, particularly workers associated with import-competing firms. Consequently, the original text of the bill died in 97th Congress; however Congress was quick to act on the Caribbean Basin Economic Recovery Act (CBERA). At first, it too faced firm resistance from labor interests; but once the bill was cut back, giving only 10% of Caribbean imports duty-free treatment, it was passed with immense support.

Countries currently receiving benefits are shown by Figure four.

Caribbean Basin Economic Recovery Act (CBERA)

CBERA came into force in 1983, and allowed the president to give unilateral duty-free treatment to select imports from eligible countries. This act contained the trade components of the CBI, developed to expand opportunities for private sectors and investment in nontraditional sectors of Caribbean Basin beneficiaries, in an attempt to foster diversification of economies and expand exports. The CBERA was supposed to remain effective until September 30, 1995, but in 1990, it was expanded by the Caribbean Basin Economic Recovery Expansion Act, imposing no statutory expiration date (U.S. Department of Commerce International Trade Administration, 2000).

Table 3: Beneficiary Countries Designated Under the CBERA

Countries Included in CBERA		
Antigua and Barbuda	Aruba	Bahamas
Barbados	Belize	British Virgin Islands
Costa Rica	Dominica	Dominican Republic
Grenada	Guyana	Haiti
Jamaica	Montserrat	Netherlands Antilles
St. Kitts - Nevis	St. Lucia	St. Vincent and the Grenadines
Trinidad and Tobago		

Source: (Hornbeck, 2007)

Caribbean Basin Initiative (CBI) Timeline

CBI, enacted in 1984, is the term used to collectively refer to several U.S. trade programs, including: the Caribbean Basin Economic Recovery Act (CBERA), the Caribbean Basin Economic Recovery Expansion Act (CBERA Expansion Act), and the Caribbean Basin Trade Partnership Act (CBTPA) (U.S. Department of Commerce International Trade Administration, 2000). The goal of CBI was "to assist in the achievement of a stable political and economic climate by stimulating the development of the export potential of the region" (The U.S. – Caribbean Trade Partnership Act of 2000 section 202) (Caglar & Gunjan, 2006).

The essential component of CBI was tariff and quota free market access given to select countries by the U.S. (The World Book Economic Review, 2006). There are four primary classifications of garments that are eligible for inclusion under the CBI, these classifications are as follows:

- ⊙ Garments cut in the U.S. and assembled in the Caribbean from U.S. fabric and U.S. yarn.
- ⊙ Garments cut and assembled in the Caribbean from U.S. fabric and U.S. yarn and assembled with U.S. thread.
- ⊙ Limited quantities (initially 250 million square meter equivalents) of certain garments made from fabrics knitted in the Caribbean from U.S. yarn and garments

(excluding socks) knitted to shape in the Caribbean from U.S. yarn.

- ⊙ A limited quantity of T-shirts (initially 4.2 million dozen) made in the Caribbean from fabric formed in the Caribbean, made from yarns formed in the U.S.

Source: (Cotton Incorporated, 2001)

While the agreement originally stipulated 27 countries as being beneficiary countries in the CBERA; today, only 24 countries receive benefits from the CBI program (USTR, 2007).

Table 4: Summary of the Provisions of the New CBI Legislation or CBTPA

Current CBI or CBERA beneficiary countries must comply with certain eligibility criteria in order to be designated as CBTPA beneficiary country.

- CBTPA is effective beginning October 1, 2000 until September 20, 2008 (8 years).
- Duty-free and quota-free treatment for apparel and textile luggage assembled in a CBTPA beneficiary country from US fabrics wholly formed with US yarns and cut in the US (807A+ Program).
- Duty-free and quota-free treatment for apparel and textile luggage assembled in a CBTPA beneficiary country from US fabrics wholly formed with US yarns and cut in a CBTPA beneficiary country (809 Program), provided they are sewn with US thread.
- Duty-free and quota-free treatment for apparel knit-to-shape (other than socks) in a CBTPA beneficiary country from US yarns, and knit apparel (other than outerwear T-shirts) cut and assembled in a CBTPA beneficiary country from fabrics wholly formed in a CBTPA beneficiary country with US yarns in an amount not exceeding 250 million SME during the one-year period beginning October 1, 2000 and ending September 30, 2001.
- Duty-free and quota-free treatment for T-shirts other than underwear made in a CBTPA beneficiary country from fabrics wholly formed in a CBTPA country with US yarns in an amount not exceeding 4.2 million dozen during the one-year period beginning October 1, 2000 and ending September 30, 2001.
- The law does not specifically describe the implementation of the previous provisions. These levels will be increased by 16% annually in each succeeding one-year period until September 30, 2004. Congress will determine the growth rate for the next one-year periods occurring after September 30, 2004.
- CBTPA allows for post-assembly processing such as stonewashing, enzyme washing, perma-pressing, oven baking, bleaching, garment dyeing, screen-printing, embroidery and other similar processes. It seems that these processes, plus dyeing and finishing of fabric, will be permitted for apparel assembled and cut in a CBTPA beneficiary country from US fabrics wholly formed with US yarns.
- Brassieres cut and sewn in a CBTPA beneficiary country and/or in the US will be duty-free for the period beginning October 1, 2000 and ending September 20, 2001. Effective October 1, 2001, brassieres cut and sewn in a CBTPA beneficiary country and/or the US must contain US fabric equal to or greater than 75% of the aggregate Customs value of the fabric in the article. US Customs will audit imports after October 1, 2001 for verification of the 75% US fabric requirement. If US Customs audit determines that less than 75% US fabric was used on an aggregate basis in the preceding twelve months, that producer or entity will be disqualified from receiving CBTPA benefits for the succeeding one-year period until the aggregate cost of fabric formed in the US and used in the production of the brassieres is at least 85% of the aggregate declared customs value.
- Duty-free and quota-free treatment for handmade, hand loomed and folklore articles.
- NAFTA 7% de minimis rule of origin is included, except for elastomeric yarn, which must be US formed.
- The use of foreign findings, trimmings, and certain interlinings is permitted up to 25% of the cost of the components of the assembled article.
- Certain nylon filament yarns (other than elastomeric yarns) may originate in Israel, Canada and Mexico.
- Those existing quotas for CBTPA beneficiary countries on apparel articles that do not meet the above requirements will remain in force until 2005.
- Illegal transshipment may lead to the suspension of benefits for up to two years for the exporter engaged in such conduct. If the country is not taking necessary and adequate actions to prevent transshipment, US Customs can triple charge a CBTPA beneficiary country's quota for such illegal transshipment.
- Tariffs can be re-imposed according to section 4 of Annex 300-B of NAFTA excluding the ability of a CBTPA beneficiary country to seek compensation for any loss of benefit.
- Duty-free and quota-free for apparel made from fiber, fabric or yarn that has been determined in accordance with NAFTA to not be supplied by US domestic industry in commercial quantities in a timely manner. Interested parties may file petitions to determine that certain yarns or fabrics cannot be supplied by US industry in commercial quantities in a timely manner.
- Additionally, certain tariff benefits are granted to footwear, tuna, petroleum products, watches and watch parts. These tariff benefits are identical to those granted to those products originating from Mexico under NAFTA provisions.

Source: (OTEXA, 2006)

Caribbean Basin Economic Recovery Expansion Act

On August 29, 1990, the CBERA Expansion Act was signed, which extended initial preferences, first brought about by CBERA.

Caribbean Basin Trade Partnership Act (CBTPA)

On October 1, 2000 the U.S.-Caribbean Trade Partnership Act (CBTPA), entered into force. This act expanded the list of duty-free products thus it increased market access opportunities for qualifying CBTPA countries. One requirement of the CBTPA was that all participating countries must also suffice all the CBERA intellectual property rights criteria. In addition to meeting the requirements put forth by the CBTPA by meeting or exceeding WTO TRIPS contract. Lastly the country must be taking steps to give protection equivalent to the principles found in bilateral IPR agreements. The CBTPA will remain in effect until September 30, 2008 or until the FTAA or another free trade agreement enters into force between CBTPA beneficiary countries the United States (IPA, 2008). The countries receiving benefits from CBTPA are identified in Table five.

Table 5: Beneficiary Countries Designated under the CBTPA

CBTPA Countries		
Barbados	Guyana	Panama
Belize	Haiti	Saint Lucia
Costa Rica	Jamaica	Trinidad and Tobago
Dominican Republic		

Source: (Hornbeck, 2007)

Central American Common Market (CACM):

CACM is an economic trade organization, implemented in 1960, by Guatemala, El Salvador, Honduras, Nicaragua, and Managua. Three years later, Costa Rica joined the organization. During the Football War (1969) between Honduras and El Salvador, the organization disassembled, but was reestablished in 1991. CACM was successful in its goal of increasing trade, and removing duties on products moving within the member companies. However, lack of reliable resources and inability to settle trade altercations, prevented the organization from reaching its goals of furthering economic and political unification.

Trade in the Region

Consequences of Implementing New Trade Agreements

"To the extent possible, the United States will seek to create a seamless transition between the Caribbean Basin Initiative/Caribbean Basin Trade Partnership Act (CBI/CBTPA) and the DR-CAFTA. Countries that have ratified the Agreement would retain their benefits under CBI/CBTPA until the DR-CAFTA enters into force for them and would retain their ability to seek retroactive duty refunds for qualifying textiles and apparel. Moreover, U.S. partners for whom the Agreement enters into force by April 1 can retain their full-year agricultural quotas for 2006; treatment of quotas after that date will be determined, as appropriate" (Baker, 2005, p. 1).

The provisions referring to the textile and apparel sector were augmented from those originally put in place by the CBTPA. These provisions impart immediate elimination of duties for textile and apparel products that meet the rules of origin criteria. The rules of origin are more lenient than those imposed by past FTAs and preferential agreements, including the CBTPA. In brief, a finished or fully assembled product, receives duty-free treatment when exporting to the

United States, provided that the product's components are sourced in any one of the signatory countries (the cumulation rule) (Hornbeck, U.S. Trade Policy and the Caribbean: From Trade Preferences to Free Trade Agreements, 2007).

By and large, the agreement is intended to build on past CBI programs; it gives the region's apparel producers a choice of combinations, in terms of materials and production utilized, while maintaining duty-free access to the U.S. market. The United States agreed to harmonize the rules of origin associated with NAFTA and DR-CAFTA in January 2007. Consequently, Central American and Mexican producers are able to utilize inputs of the other, without penalty; thereby further fostering the integration of apparel production within the region (Latin American Newsletters, 2007).

Haiti was not included in this deal to harmonize the rules of origin. Accordingly, this disregard for Haiti later led to the passage of additional legislation which covered Haitian apparel imports. When compared to Haiti, and those countries linked to the NAFTA and DR-CAFTA programs, the CBI countries not included, are at a disadvantage, particularly in terms of apparel trade, but also in respect to trade preferences in general.

United States-Central America-Dominican Republic Free Trade Agreement (DR-CAFTA)

The DR-CAFTA is based on the Caribbean Basin Initiative (CBI), which was enacted in 1984, and the Caribbean Basin Trade Partnership Act (CBTPA) which was enacted in 2000. Through DR-CAFTA, textiles and apparel coming into the U.S. from any of the six CAFTA countries are quota-free and duty-free if rules of origin are met. The "yarn forward" rule of origin requires that a garment be made from fabrics and yarns originating in the U.S. or six CAFTA countries in order to qualify. The fiber forward rule continues for knitted fabric (Hyunjoo & Kim, 2007). Key provisions of the agreement include:

- **Cumulation** allows the use of up to 100 million square meters of Mexican or Canadian product, with the opportunity to grow to 200 million square meters.
- **Tariff preference levels (TPLs)** allow for limited amounts of certain "non-qualifying" products to receive duty benefits. TPLs are given to Nicaragua to use any foreign materials for cotton and man-made apparel duty-free and to Costa Rica to use third-country wool fabrics with 50 percent of the duty rate. According to the recent amendment, Nicaraguan trouser producers who use the TPL have to match their Asian fabric usage with new US fabric usage on a one-to-one basis.
- **Short supply** gives duty-free benefits to apparel made of foreign fabrics and materials that are not commercially available in the US market and participating DR-CAFTA

countries. DR-CAFTA has expanded its short supply list with tighter timelines than the previous short supply processes in NAFTA and CBTPA.

The above provisions are intended to provide the integration and flexibility required in today's business environment. This combination of U.S. and non-U.S. inputs is essential when trying to fulfill the requested orders for retailers. While most of the changes to trade implemented by DR-CAFTA have already been covered in the CBI, the key difference is that through DR-CAFTA, trade becomes bilateral; that is, not only will the U.S. export products duty-free, it will also import products duty-free from qualifying countries (Hyunjoo & Kim, 2007).

The United States-Central America-Dominican Republic Free Trade Agreement (DR-CAFTA) is a free trade agreement between the US, El Salvador, Honduras, Guatemala, Nicaragua, Costa Rica, and the Dominican Republic. The DR-CAFTA countries are shown in Figure three.



Figure 3: Map of the DR-CAFTA Pact Partners

Source: Map Resources. Adapted by CRS. (K.Yancey 9/24/04)

In essence, DR-CAFTA created a free trade zone similar to the North American Free Trade Agreement (NAFTA) and is seen as a predecessor to a larger Free Trade Area of the Americas. While this agreement has only recently been signed into effect, it has created new opportunities for the US textile industry in terms of both manufacturing and marketing. Table six, gives the status of the six DR-CAFTA countries.

Table 6: Status of Implementation for DR-CAFTA Countries

Country	Ratification	Date Effective
Costa Rica	October 7 th , 2007	-----
Dominican Republic	September 6 th , 2005	March 1 st , 2007
El Salvador	December 17 th , 2004	March 1 st , 2006
Guatemala	March 10 th , 2005	July 1 st , 2006
Honduras	March 3 rd , 2005	April 1 st , 2006
Nicaragua	October 7 th , 2005	April 1 st , 2006
United States	July 27 th , 2005	Rolling Schedule

Source: (OTEXA, 2006)

The DR-CAFTA region is the 2nd largest world market for US textile fabrics and yarns (USTR, 2005). Due to the yarn forward provision, garments made in the region can be imported into the US duty-free and quota-free only if they use US or regional fabric and yarn. The Office of the US Trade Representative claims that this provision supports US exports and jobs in addition to creating an advantage for both the US and Central America against Asian imports.

The agreement reinforces the two advantages that the Dominican Republic and Central American suppliers have over Asian and China countries, namely being duty-free access and proximity to the U.S. market. This presented opportunities for US textile firms to take advantage of the provisions set forth in DR-CAFTA. However, more information about the region

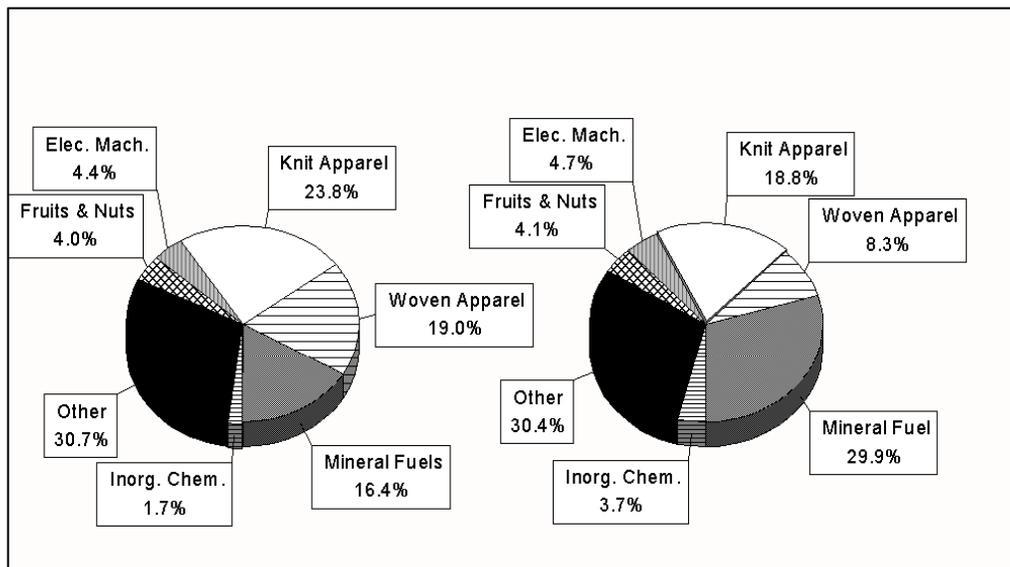
in terms of both manufacturing capabilities and marketing opportunities are needed before the US textile industry can fully benefit from the agreement.

Table 7: Summary of DR-CAFTA Provisions

<ul style="list-style-type: none"> • Signed on August 5, 2005, the beneficiary countries are the Dominican Republic, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the United States
<ul style="list-style-type: none"> • Includes the elimination of tariffs and trade barriers to encourage an increase in regional opportunities for manufacturers, workers, farmers, consumers, and service providers
<ul style="list-style-type: none"> • Immediately tariffs will be eliminated on 80% of industrial and consumer products while the rest will be phased out over 10 years
<ul style="list-style-type: none"> • The DR-CAFTA Trade agreement creates the second largest Latin American export market for the US behind only Mexico and the 10th largest U.S. market in the world. The export growth to the DR-CAFTA countries grew at a pace faster than all of US exports
<ul style="list-style-type: none"> • DR-CAFTA requires important reforms of the domestic legal and business environment that encourage competitive business development and investment, protect intellectual property rights, and promote transparency and rule-of-law in the democratic systems that have solidified in the region over the past decade. DR-CAFTA is an important instrument to support U.S. national security interests; the FTA promotes closer economic cooperation among the Central American countries, thereby advancing regional integration and contributing to greater peace and stability in the region. (www.export.gov/fta)
<ul style="list-style-type: none"> • The DR-CAFTA trade agreement is the tightest textile trade agreement – the Yarn Forward Rule establishes the only qualifiers for the duty-free benefits are those whose yarn and fabric are from one of the specified countries (United States, Central America and the Dominican Republic). No less than 90% of all products are subject to this rule
<ul style="list-style-type: none"> • There is a retroactive duty-free provision added to the agreement beginning with January 1, 2004 – This provision is believed to encourage expansion in the region of US and CAFTA production partners
<ul style="list-style-type: none"> • Tariff preference levels (TPL) were not submitted to El Salvador, Costa Rica, Guatemala, and Honduras (which all constitute over 94% of apparel exports of Central America). This is the first time the United States has negotiated a trade agreement and signed it without applying a TPL to every country
<ul style="list-style-type: none"> • DR-CAFTA establishes stricter customs enforcement – The United States can conduct surprise visits to producers in Central America and undertake other enforcement actions to suspicious goods such as a bar of entry
<ul style="list-style-type: none"> • A cumulation provision will also help to improve customs enforcement and cooperation rules. For Mexico and Canada to gain access to duty free benefits they must actively work with the United States to improve their customs enforcement to help stop those who wish to evade customs rules. A total of 100 million square meters is the beginning annual cap but can increase to 200 million for Mexico and Canada. The growth of this cap is tied directly with the growth of the CAFTA trade.
<ul style="list-style-type: none"> • The United States did establish a textile safeguard provision – if injury should occur due to import surges, the US is allowed to impose certain tariffs on certain textile products
<ul style="list-style-type: none"> • Each party is still confined to the rules and regulations of the International Labor Organization concerning the treatment and rights of their employees and working environment. Enforcement of labor laws will be implemented in every country and these should not be violated.

Region's Product trends

Trade preference programs did not affect all CBI exports, equally. Shown in Figure four, are the major CBI product categories; mineral fuels, woven apparel, and knit apparel, were the three most prominent categories. Mineral fuels, non-knitted, and knitted apparel accounted for 57% of U.S. imports from CBI countries in 2006. The United States market targeted the apparel industry as a fundamental value-added export industry.



**Figure 4: U.S. Imports from CBI Countries, 2000 and 2006
(By Major Product Category)**

Source: Hornbeck, U.S. Trade Policy and the Caribbean: From Trade Preferences to Free Trade Agreements, 2007

As indicated in Table 8, the value of duty-free apparel products entering with CBTPA benefits, have greatly increased from 2000 to 2004. Said increase can be attributed to preferences which promoted alterations in apparel good's declared content mix; noted for allowing fabrics to be cut in the region for the first time. However, the period between 2000 and 2004, can be deemed as rather unchanged.

Table 8: U.S. Imports from CBI Countries by Dutiable Category

Duty Import Category:	2000	2001	2002	2003	2004
- Dutiable Value, all imports (\$ mil)	7,778	5,590	5,462	4,902	5,770
- Calculated Duty (\$ thousands)	915	578	496	513	457
- Average Duty (%)	11.8	10.3	9.1	10.5	7.9
Dutiable Value — All Imports: (%)	35.2	27.2	25.8	20.2	21.0
- Production sharing	12.7	6.8	4.7	3.8	3.8
- Other dutiable	22.5	20.4	21.1	16.4	17.2
Duty-free Value — All Imports: (%)	64.7	72.9	74.2	79.8	79.0
- NTR	30.1	27.3	27.5	33.2	35.4
- Production sharing	21.0	6.7	3.6	2.1	2.2
- CBERA	11.7	12.7	13.7	12.2	11.0
- CBTPA	0.7	24.9	28.6	30.7	28.8
- GSP	0.9	0.9	0.4	1.0	1.3
- Other duty-free	0.3	0.4	0.4	0.5	0.3
Imports entering CBERA/CBTPA (%)	12.6	40.2	47.1	42.6	39.7
Exclusively under CBERA/CBTPA*(%)	6.8	22.9	31.5	30.2	30.1

Source: Hornbeck, U.S. Trade Policy and the Caribbean: From Trade Preferences to Free Trade Agreements, 2007.

U.S. imports of apparel products from CBI countries accounted for 12-13% of the total apparel imports worldwide;

which indicated that, in relation to the world's other apparel producer's, the CBI countries have only been able to sustain their market share, even with their observed growth in imports (Hornbeck, U.S. Trade Policy and the Caribbean: From Trade Preferences to Free Trade Agreements, 2007).

Country Trends

The CBERA had 24 signatory countries prior to the implementation of DR-CAFTA, after implementation, the benefits gained by DR-CAFTA provisions will replace past benefits granted by CBERA and CBPTA. Shown in Table 9 are the U.S. imports for each of the 24 aforementioned countries, between the years of 2000 and 2006. 2005 marked the last year that all 24 countries received preferences under CBI.

Table 9: U.S. Imports by CBI Country, 2000-2006 (\$ Millions)

Country	2000	2001	2002	2003	2004	2005	2006#
Trinidad and Tobago	2,228	2,380	2,440	4,334	5,842	7,891	8,370
Dom. Rep.	4,383	4,183	4,169	4,455	4,527	4,604	4,529
Costa Rica	3,539	2,886	3,142	3,364	3,333	3,415	3,844
Honduras	3,090	3,126	3,261	3,313	3,640	3,749	3,718
Guatemala	2,607	2,589	2,796	2,947	3,154	3,137	3,100
Aruba	1,536	1,034	774	955	1,776	2,920	2,845
El Salvador	1,933	1,880	1,982	2,020	2,052	1,989	1,856
Nicaragua	588	604	680	770	990	1,181	1,526
Neth. Antilles	719	485	362	632	435	922	1,119
Jamaica	648	461	396	423	320	376	520
Haiti	297	263	255	332	371	447	496
Bahamas	275	314	450	479	638	700	453
Panama	307	291	303	302	316	327	378
Belize	94	97	78	102	107	98	147
Guyana	140	140	116	119	122	120	125
St. Kitts/Nevis	37	41	49	45	42	50	50
Barbados	39	40	34	44	37	32	34
Brit. Virgin Is.	31	12	41	35	17	34	26
St. Lucia	22	29	19	13	14	32	30
Antigua/Barbu.	3	4	4	13	5	4	6
Grenada	27	24	7	8	5	6	5
St. Vincent/the Grenadines	9	23	17	4	4	16	2
Dominica	7	5	5	5	3	3	3
Montserrat	0*	0*	0*	1	0*	1	1
Total	22,559	20,911	21,380	24,715	27,750	32,054	33,183

Source: USITC, *The Impact of the Caribbean Basin Economic Recovery Act: Seventeenth Report*, pp. 2-12 to 2-18.

The trends noted are as follows:

- ❖ *51% of U.S. imports originated in only three CBI countries; 90% in the top eight;*
- ❖ *The number one exporter by value is Trinidad and Tobago, which with Aruba's high trade value, is explained by energy exports;*
- ❖ *The other top exporters to the United States (Dominican Republic, Costa Rica, Guatemala, Honduras, El Salvador) are all major apparel manufacturers, with Costa Rica's trade increasingly dominated by semiconductors, which enter NTR duty free (details not shown);*
- ❖ *The top six CBI exporting countries, not including energy producers Trinidad and Tobago and Aruba, accounted for 95.6% of textile and apparel exports to the United States;*
- ❖ *For 2006, the first year that CAFTA-DR was in effect, imports from the five countries that have so far implemented the agreement (bolded in Table 2) were valued at \$14.7 billion, or 44% of total imports from the CBI countries. With the inclusion of Costa Rica (a presumed future CAFTA-DR country), this total becomes \$18.6 billion, or 56% of total imports from the CBI countries;*
- ❖ *If imports from CAFTA-DR and energy exporting countries are not included, the remaining U.S. imports from the region amount to only 10% of the current total from beneficiary countries, and only a portion of that amount would be eligible for tariff preferences.*

In summary, the concentration of benefits lies within a few key beneficiary countries, due to their products having well-endowed energy ties. Exports categorized as being non-energy exports led one to conclude that the CBPTA has in fact

influenced trends in exports for CBI countries. Yet, the data also alluded to an increase in trade volume / value, as well as a shift in duty category. Overall, the total U.S. imports of textile and apparel products, which originated in CBI countries, have maintained 13-14% of the world import total, between 2000 and 2004.

Once DR-CAFTA is fully implemented, select products will no longer enter the market under the CBTPA program; estimated to be in excess of over half of the exports in apparel manufacturing from eligible countries. A phase out of preferences occurred for preferred reciprocal FTAs.

Textile Complex

The United States' textile complex has undergone a great deal of change, particularly with intensified price competition and globalization (Bruce & Daly, 2004). The textile complex is comprised of "the industry chain from fiber to fabric, through end uses of apparel, interior furnishings and industrial products" (Dickerson, 1999). The textile and apparel production distribution chain, as proposed by Dickerson is shown by Figure five.

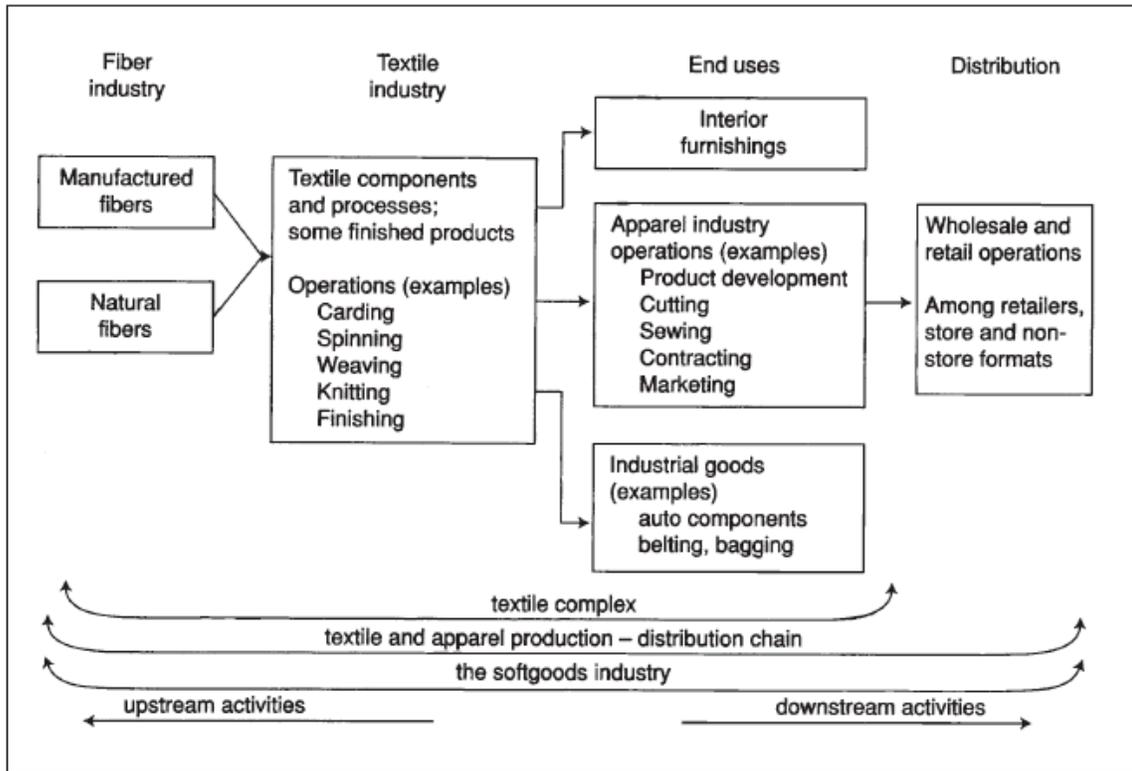


Figure 5: Textile Complex

Source: Dickerson, K. (1999). *Textiles and apparel in the global economy* (3rd ed.). Upper Saddle River, NJ: Prentice-Hall.

Market Overview

Textile and Apparel Industry

The textile and apparel industry is characterized as being highly diverse and heterogeneous, and is identified as being a key sector for both industrialized and developed countries (Bruce & Daly, 2004). Success of the global apparel and textile industry is comprised by the calculation of all

revenues created through the sales of apparel, footwear, accessories and luxury goods, and textiles. By looking at retail selling prices, what the industry is valued as can be determined. Trends affecting the U.S. textile and apparel industries are found to be in the areas of: structure, employment, trade, and retailing decisions.

For the purposes of this study, the CAFTA region was deemed to be that of Costa Rica, Dominican Republic, El Salvador, Honduras, Nicaragua, and Guatemala. Whereas the global market consisted of Asia-Pacific, Argentina, Brazil, Canada, Chile, Colombia, Europe, Mexico, Venezuela, and the U.S.

Market Characteristics:

The textile and apparel markets were characterized by their: high volatility; short product lifecycle; and high level of impulse purchases; thus, issues such as quick response is of considerable importance (Bruce & Daly, 2004).

Strategic Planning:

Two models have been suggested for implementation by the U.S. textile industry. These models are as follows:

1. Shortened supply chain for knitted sportswear and fashionable shirts that can capitalize on time-to-market.
2. Triangular supply-chain networks among U.S. retailers and textile companies, Asian textile manufacturers, and DR-CAFTA apparel manufacturers for fashion basics.

Source: (Hyunjoo & Kim, 2007)

Industry Sectors

The textile and apparel industry was broken into three individual categories, based on the following North American Industry Classification System (NAICS) codes: Textile Mills (313), Textile Product Mills (314), and Apparel Manufacturing (315). Figure six, illustrates the three apparel categories, and their associated product grouping.

Textile Mills (313)

- *Fiber, yarn, and thread mills; fabric mills; textile and fabric finishing and fabric coating mills.*

Textile Product Mills (314)

- *Textile furnishings mills such as carpet and rugs; curtain and linens; draperies; textile bags and canvas; rope, cordage, and twine; tire cord and tire fabric.*

Apparel Manufacturing (315)

- *Apparel knitting mills including hosiery and socks, outerwear, underwear, nightwear. Cut and sew apparel for men, boys, women, girls and infants; apparel accessories such as hats, caps, and millinery, gloves and mittens, neckwear, belts, scarves, and apparel trimming*

Figure 6: Textile and Apparel Industry

Source: The United States Census Bureau 2008.

Country Analysis

Costa Rica

Geography

Costa Rica is in Central America, bordered by both the Caribbean Sea and the North Pacific Ocean between Nicaragua and Panama. There are four volcanoes located in Costa Rica, two that are currently active. It often rains in Costa Rica, and rivers are abundant. Some of the biggest rivers are Tempisque, Sarapiquí, Reventazón, Pacuare, and San Juan, which forms a border between Nicaragua and Costa Rica. After heavy rainfall, these rivers can become avalanches of stones and tree trunks as well as cause large-scale floods (Berrios, 2004).

Size and Population

The Population in Costa Rica is 4.3 million. The total area is 51,100 sq. km, double that of El Salvador. The largest city is San Jose with 343,969 persons. CATECO, the Costa Rican Textile Chamber made significant efforts in training related to human resources. CATECO setup a special program with a private umbrella organization to coordinate

workshops focused on overall improvement of human resources in the textile sector (U.S. Department of State, 2008).

Politics

Costa Rica has a democratic republic, with a strong constitution. The Costa Rican constitution divides the government into independent executive, legislative, and judicial branches. The executive branch has a President, two Vice Presidents, and a cabinet. The legislative branch is composed of 57 elected members. Elections are national and held every four year. The National Liberation Party is the largest political party.

Oscar Arias was the President from 1986-1990, and was narrowly elected again in 2006. The platform he ran on promoted free trade.

In October 2007, the people of Costa Rica approved participation in DR-CAFTA; however, the Costa Rican government has failed to complete all of the steps required for full membership in the agreement. The other five countries involved in the agreement have agreed to give Costa Rica an extension in order to complete all of the steps required to enter the pact. Costa Rica has until October 2008 to complete

all of the legislative and regulatory steps necessary to bring the country into full compliance with the conditions of the agreement. Costa Rica was the last participating nation to ratify the agreement (Morrissey, 2008).

National Economic Performance

GDP and Growth

Costa Rica has a GDP of 21.47 billion. Inflation is estimated at 11.5% with a real growth rate of 7.9 percent. Growth in exports slowed in 2007 due to a decrease in activity within industrial and agricultural exports. The United States is Costa Rica's largest trading partner (U.S. Department of State, 2008).

Economic Profile

The Costa Rican economy had a 6.5% growth in 2007. In relation to the other Central American countries, there is a higher standard of living in Costa Rica, with a per capita income of approximately \$15,100. The unemployment rate is estimated at 4.6 percent.

The main economic resources in Costa Rica were tied to frequent rainfall and fertile land, as well as an educated

population. More than half of the foreign direct investment came from the United States.

Costa Rica has has over 20 years of experience in the clothing industry. The textile industry had annual export levels of \$600 MM. Ninety-five percent of the focus was on the United States.

Factor Conditions

Costa Rica has the highest labor productivity in the CAFTA region, but is also the highest in terms of labor wages. Infrastructure is problematic in Costa Rica. The roads are poor and access to electricity is a challenge. The amount of money spent by government on infrastructures in 2007 had fallen sharply (MCA, 2007).

Firm Strategy

In order to promote it's competitive advantage in the textile and apparel sector, Costa Rica has entered into several trade agreements and preferential programs. Figure seven, visually depicts agreements Costa Rica has entered into force.

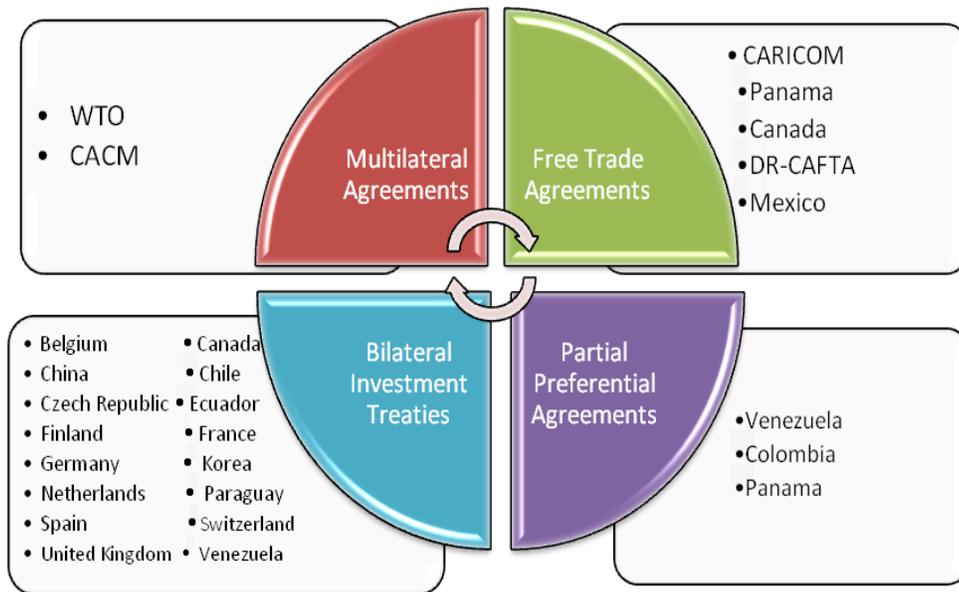


Figure 7: Current Trade Agreements for Costa Rica

1 Trade agreements - negotiations and agreements by country or region. Retrieved 11/1/2007, from <http://www.international.gc.ca/trade-agreements>

2 SICE: Trade agreements. Retrieved 12/4/2007, 2007, from http://www.sice.oas.org/agreements_e.asp

Dominican Republic

Geography

The Dominican Republic is located in the Caribbean. The country is situated east of Haiti and is positioned between the Caribbean Sea and the North Atlantic Ocean. The Dominican Republic lies in the middle of a hurricane belt, and faces severe storms from June to October. The country is subject to occasional flooding as well as periodic droughts (CIA World Factbook, 2008).

Size and Population

The capital of the Dominican Republic is Santa Domingo. There are 31 provinces that make up the country. The population of the Dominican Republic was an estimated 9.2 million in 2006. The majority of the population fell between the age of 15 and 64. The median age was 24 years. The population growth rate was estimated at 1.47% in 2006 (NBN, 2006). The total area is 48, 730 square kilometers, water accounts for 350 square kilometers.

Politics

The Dominican Republic has a representative democracy. The country has independent executive, legislative, and judicial branches. A cabinet is appointed by the president. Constitutional development is poor, the country went through 29 constitutions in less than 150 years of independence (U.S Department of State, 2007).

The government is elected and serve on a basis of four year terms. In 2004 Leonel Fernandez Reyna was elected president, and Rafael Alburquerque de Castro was elected as vice president. Elections are set to be held again in May of 2008 (CIA World Factbook, 2008).

National Economic Performance

GDP and Growth

The Dominican Republic has had a strong GDP since 2005. The GDP experienced a double digit growth in 2006. In 2007 the GDP - real growth rate was 7.2 percent. Exports were heightened in 2007, which was mostly attributed to a 50% price increase of nickel; however, in 2008 prices are expected to fall and to cause a slowdown in GDP growth. In the past the

country has been primarily an exporter of coffee, tobacco, and sugar; but in recent years the service sector became the largest sector, due to free trade zones, and tourism (CIA World Factbook, 2008).

Economic Profile

The Dominican Republic has lost approximately 50,000 jobs in the apparel sector in the last eighteen months. Numerous plant closures and a decline in employment show the weakening position of Dominican Republic exporters in the U.S. marketplace. Apparel exports from the Dominican Republic to the United States fell an estimated 25% between 2004 and 2006. The Dominican Republic was the United States sixth largest supplier of garments in 2002; however, they fell to 15th in 2006.

Factor Conditions

The Dominican Republic has a good transportation infrastructure; however, the civil service infrastructure was poor. The country lacks access to internet and electricity, and is very costly where available. The country has significant foreign investment in its basic infrastructures.

Firm Strategy

In order to promote its competitive advantage in the textile and apparel sector, Dominican Republic has entered into several trade agreements and preferential programs. Figure eight, visually depicts agreements that Dominican Republic has entered into force.

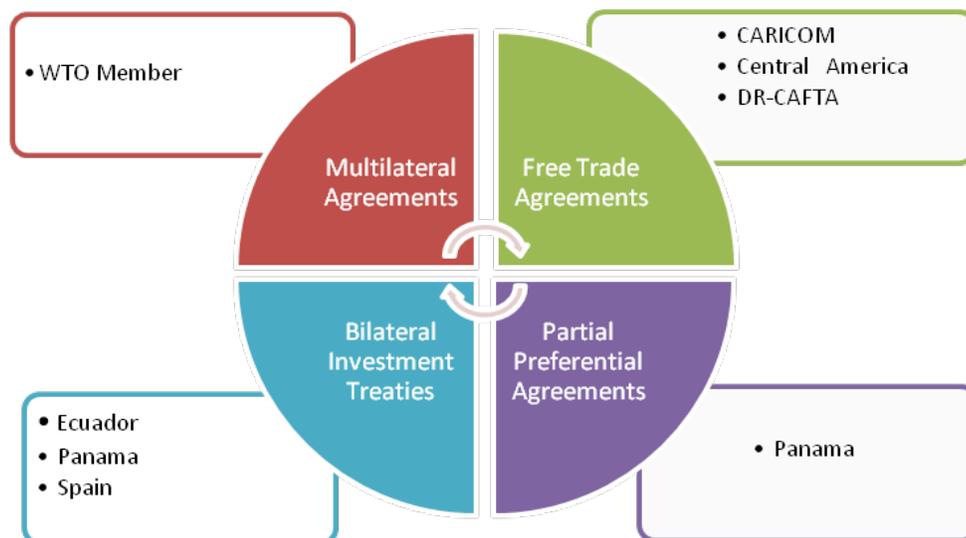


Figure 8: Current Trade Agreements for Dominican Republic

1 Trade agreements - negotiations and agreements by country or region. Retrieved 11/1/2007, from <http://www.international.gc.ca/trade-agreements>

2 SICE: Trade agreements. Retrieved 12/4/2007, 2007, from http://www.sice.oas.org/agreements_e.asp

El Salvador

Geography

El Salvador, is the smallest Spanish-speaking country found in the Western Hemisphere. El Salvador is located in the Central American isthmus, with Honduras to the north and east, Guatemala to the west, and Nicaragua to the southeast. The North Pacific Ocean also borders El Salvador. El Salvador has over 300 rivers, and two parallel mountain ranges.

Size and Population

El Salvador is a small country with an area of only 21,041 square kilometers. The capital of El Salvador is San Salvador. The population of El Salvador was an estimated 7.1 million in July of 2008. The majority of the population, is between the ages of 15 and 64 (male 1,987,671 / female 2,170,620), with a median age of 22 years. The population growth rate was approximately 1.7 percent.

Politics

The legal system in El Salvador is based on civil and Roman law. Elias Antonio SACA Gonzalez was elected president and Ana Vilma Albanez DE ESCOBAR was elected vice president in

June of 2004. Elections are held by popular vote and the president and vice president are elected on the same ticket for a single five-year term. The next election is scheduled to be held in March 2009 (CIA World Factbook, 2008).

National Economic Performance

GDP and Growth

In 2007, El Salvador had an estimated GDP of 20.23 billion, with a GDP - real growth rate of 4.7 percent. Table 10, shows the GDP composition broken down by sector. Expenditures made by government are less than 15 percent of the GDP.

Table 10: GDP - Composition by Sector (2007)

Sector Type	Percentage of Sector
Agriculture	10.20%
Industry	29.30%
Services	60.50%

Source: CIA World Factbook 2008

Economic Profile

In El Salvador the U.S. Dollar is the legal currency and can be used for the majority of financial transactions. Prior to using the U.S. Dollar, the Colon was the official unit of currency. In theory the Colon still exists, but is circulated so little that it is almost nonexistent. By law the exchange rate between the Colon and the U.S. Dollar is fixed at 0.75 Colones per U.S. Dollar (Central Reserve Bank, 2006). The Textile and apparel sector accounted for employment of 90,000 people in 2007.

Factor Conditions

El Salvador has experienced growth within the garment industry for the past 20 years. Services offered and manufacturing capacities have increased greatly over the years. The country offers a wide range services, from yarn spinning to full package garment production.

In 2006 the country boasted over 260 textile and apparel companies. Many of the apparel industry's top brands rely of the high work ethic of Salvadorans in order to competed in today's highly competitive marketplace. Notable services

offered included embroidery, industrial laundry, dyeing and finishing, cutting rooms, and packaging (AAPN, 2007).

Firm Strategy

Development within the El Salvadoran apparel industry has been driven by access preferences, especially to the United States. In El Salvador, 10% of the apparel manufactured used local fabrics, 40% used fabric from Asia, and 50% used fabric from the United States (AAPN, 2007).

In order to promote its competitive advantage in the textile and apparel sector, El Salvador has entered into several trade agreements and preferential programs. Figure nine, visually depicts agreements that El Salvador has entered into force.

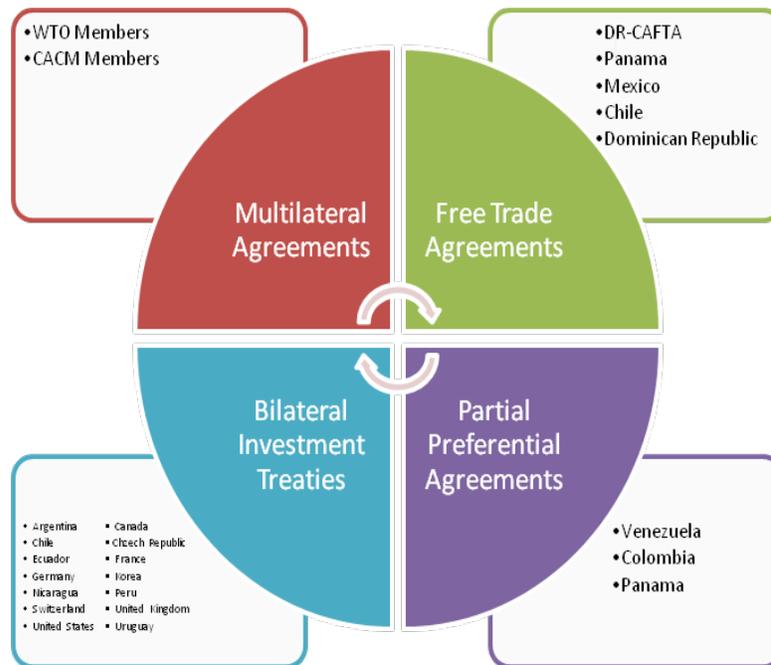


Figure 9: Current Trade Agreements for El Salvador

1 Trade agreements - negotiations and agreements by country or region. Retrieved 11/1/2007, from <http://www.international.gc.ca/trade-agreements>

2 SICE: Trade agreements. Retrieved 12/4/2007, 2007, from http://www.sice.oas.org/agreements_e.asp

Guatemala

Geography

As the northernmost country in Central America, Guatemala, was strategically located having access to the U.S., European, and Central American Markets. Signing of the DR-CAFTA, along with previous agreements formed, such as CBI and GPS, has given Guatemala preferential market access to U.S. and European markets, additionally the country serves as a gateway to the Central American Common Market.

Guatemala was positioned with Mexico to the north, the Atlantic Ocean and Belize to the east, El Salvador and Honduras to the southeast, and the Pacific Ocean to the south (US Commercial Service, 2005).

Size and Population

Guatemala was the largest country in Central America, with a population of approximately 12.7 million (US Commercial Service, 2005). The apparel and textile industry accounted for direct employment of over 124,000 Guatemalans. The breakdown of the textile and apparel sector, by number of companies involved and number of employees associated is shown by Figure 10 (Guatemalan Exporters' Association, 2007).

CONFECTION
202 companies 77,111 sewing machines 90,567 employees
TEXTILE INDUSTRY
50 textile companies 18,500 employees
ANNEXED SECTORS
270 suppliers of accessories and services 15,000 employees

Figure 10: Profile of the Apparel and Textile Industry in Guatemala

Source: Apparel and Textile Industry Commission 2006

The local labor force in Guatemala was distinctly known as being skilled in manufacturing high quality standards and value added products.

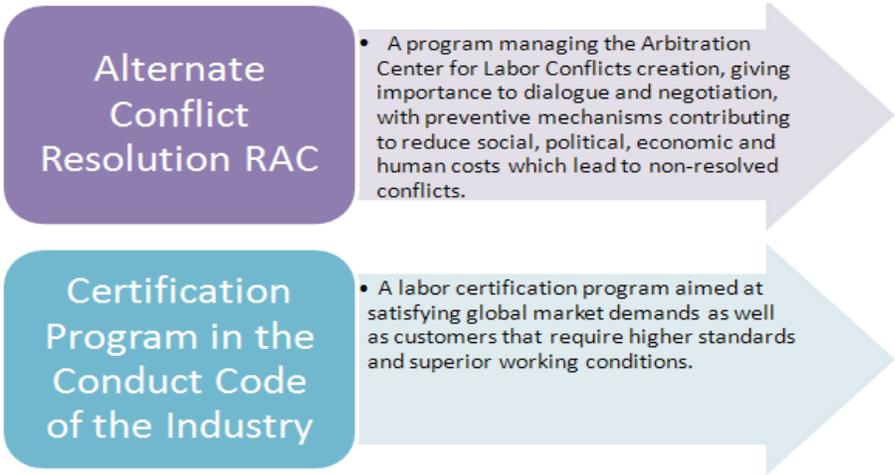


Figure 11: Labor related programs currently ongoing in Guatemala

Source: Guatemalan Exporters' Association, 2007

There were two main labor related programs in progress, shown in Figure 11. Apparel manufacturing companies accounted for 68% of the direct foreign investment.

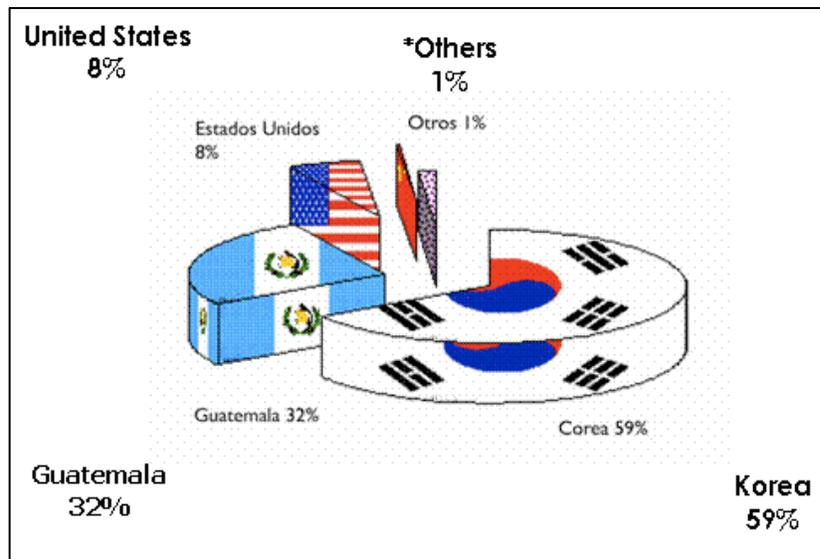


Figure 12: Investment Capital

Source: Clothing and Textiles Industry Commission, 2006

Politics

Guatemala had a Presidential Republic political structure. In 2004, Oscar Berger, represented the centre-right Gran Alianza Nacional (GAN), and was elected president. Berger's victory came with beliefs that he would promote democracy in Guatemala, since his inauguration he has maintained strong support from the business community.

"Berger promised to improve socio-economic conditions and the security environment, both of which need attention due to the ineffectiveness and corrupt practices of the previous administration of President Alfonso Portillo of the Frente Republicana Guatemalteco (FRG)" (EDC, 2006).

National Economic Performance

GDP and Growth

In 2006, Guatemalan GDP, peaked at an estimated \$35 billion; with real GDP increasing by approximately 4.6%. Exports alone, from Guatemala to the United States surpassed \$3.52 billion. Inflation was temperate, increasing 5.79% in 2006, the lowest level since 2000 (US Commercial Service, 2005).

Economic Profile

The Guatemalan economy has steadily risen for several years. Guatemala was an appealing location for foreign investment, regardless of several persisting challenges. If the government continues its persistence towards economic reform, by preserving free trade and liberal markets in addition to imparting investment and personal security, U.S.

companies should anticipate a rising market in Guatemala. (US Commercial Service, 2005)

As the leading textile industry of Central America, overall, 69.73% of textile production was primarily composed of cotton knit fabrics, manmade fabrics and mixes (interlock, rib, and jersey), and 30.27% of production was mainly composed of cotton and manmade woven fabric, and mixes (cotton and polyester).

The textile and Apparel sector extended an assorted chain of supplies. The range of supplies included a sundry of finishes and processes in garments, including dyeing processes, silkscreen printing, and embroideries; this coupled with accessories (zippers, buttons, labels, etc.) and services (washing and drying companies, textile labs, shops for sample making, shipping agencies, etc.) greatly strengthen production of the entire package. Primary garments exported by Guatemala were as follows:

- ◆ Cotton and synthetic fiber knit shirts for men and women
- ◆ Cotton and synthetic fiber pants/shorts for men and women
- ◆ Cotton, wool and synthetic fiber sacks
- ◆ Cotton and synthetic fiber skirts

- ◆ Woven blouses
- ◆ Baby garments
- ◆ Others

Source: Apparel and Textiles Industry Commission

Factor Conditions

Some of the challenges that Guatemala faced were in terms of security and corruption. Guatemala struggled in terms of security, possessing ineffective police and justice systems, with an abundance of violent crime, leading to an environment where impunity is supported. In addition, the country faced societal challenges of widespread corruption.

Guatemala notably had a modern infrastructure. There were two port facilities located in the Pacific and Atlantic Oceans, international and provincial airports, and a railroad system (solely for cargo). Additionally, the country boasted the most developed cross-country highway network found within Central America.

Firm Strategy

In order to promote its competitive advantage in the textile and apparel sector, Guatemala has entered into several

trade agreements and preferential programs. Figure 13, visually depicts agreements that Guatemala has entered into force (AGEXPORT, 2007).

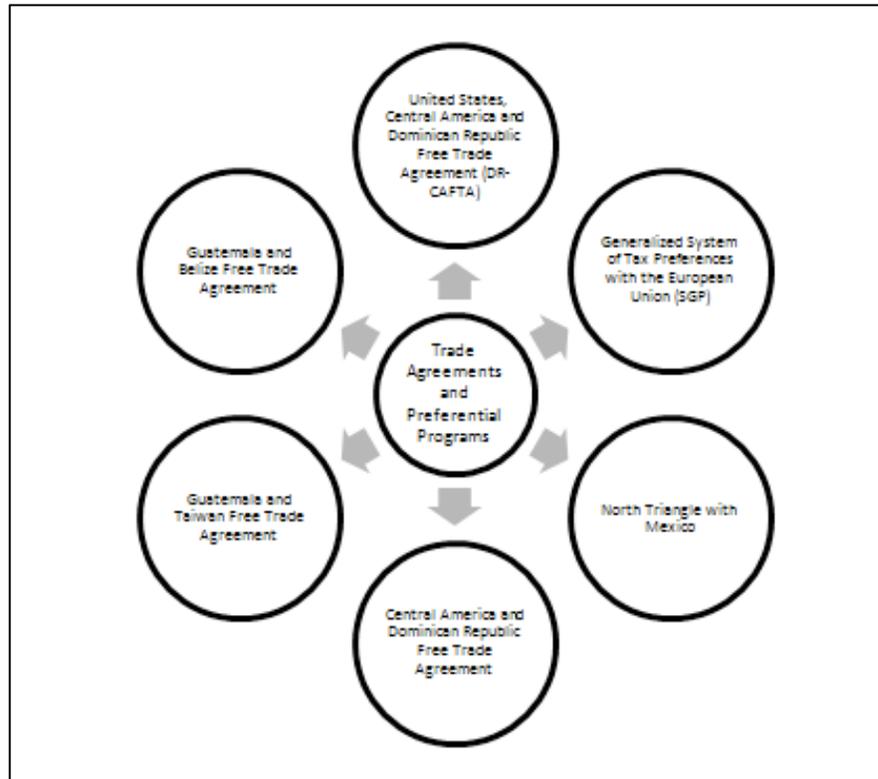


Figure 13: Trade Agreements and Preferential Programs

Source: Guatemalan Exporters' Association, 2007

Another advantage found in Guatemala is the support given to the textile and apparel industry by government entities directly involved with the competitiveness and development of the industry. The Apparel and Textile commission of AGEXPORT was a main participant in public-private commissions involving

labor related issues, customs, monetary and credit policies, foreign investment trade opportunities, and training programs.

The United States was Guatemala's foremost trade partner in apparel and textiles exports. In 2005, sales exceeded \$1.6 billion, of this the U.S. was responsible for \$543 million of the national added value (hand labor and local raw materials). In a ranking of the most important apparel suppliers to the United States market, Guatemala ranked #16 (Guatemalan Exporters' Association, 2007). Figure 14, below graphically depicts apparel and textile exports to the United States.

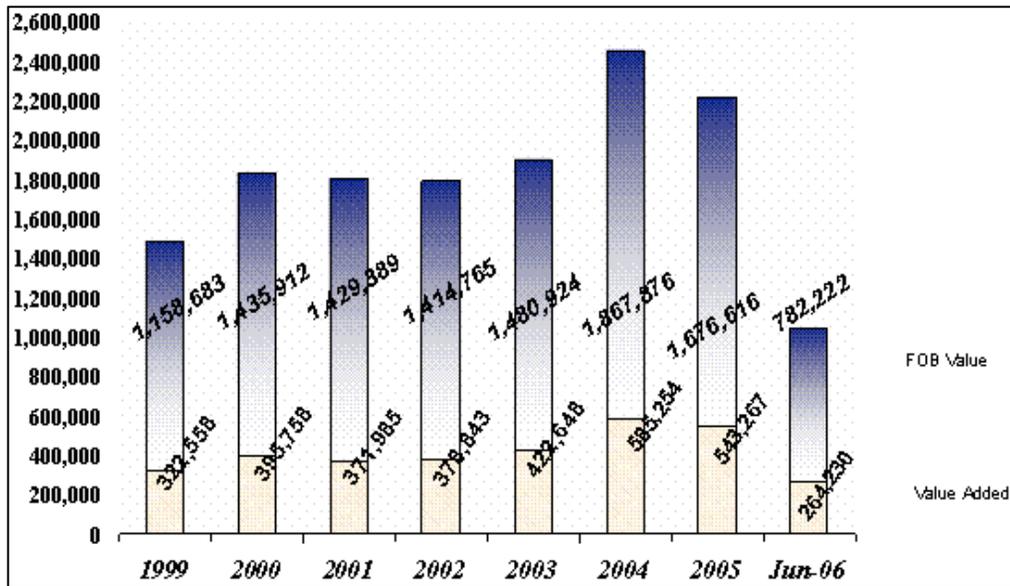


Figure 14: Apparel and Textile Exports to the United States (FOB Value and Added Value in millions of US\$)

Source: Guatemalan Exporters' Association, 2007

Approximately eighty-nine percent of the textile and garment exports were to the United States, two percent were sent to Mexico, and less than two percent went to markets in Canada and Europe. Seven percent were destined to other Central American countries, where they were often manufactured into garments which ultimately are exported to the United States.

The textile and apparel sectors in Guatemala serve as a great means to fill orders featuring differentiated and unique designs of high-quality garments, with flexibility and more added value. In order to further promote the textile and apparel industries a slogan has been created: "Guatemala Delivers: Quick-response: Our competitive advantage" (Guatemalan Exporters' Association, 2007).

Figure 15 gives a visual representation of the overall competitive advantages that can be found in the Guatemalan region.

Proximity to the U.S. market	Flexibility in production volumes	Qualified labor force
Product differentiation	Transfer of technology and knowledge of foreign investors	Superior road infrastructure within the region
The country has positioned itself as the Regional Business Center	Industry focused in offering full package	Annexed sectors and services existence

Figure 15: Overview of competitive advantages found in Guatemala

Source: *Guatemalan Exporters' Association, 2007*

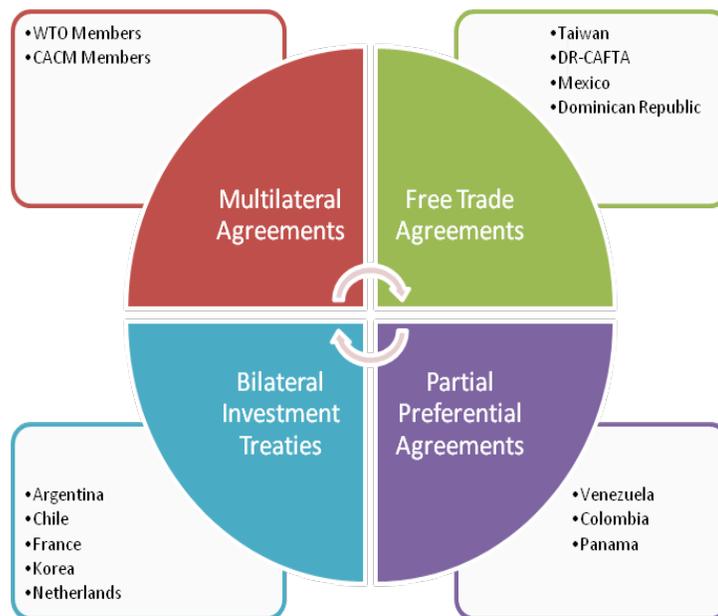


Figure 16: Current Trade Agreements for Guatemala

1 Trade agreements - negotiations and agreements by country or region. Retrieved 11/1/2007, from <http://www.international.gc.ca/trade-agreements>

2 SICE: Trade agreements. Retrieved 12/4/2007, 2007, from http://www.sice.oas.org/agreements_e.asp

Honduras

Geography

Honduras is located in Central America, has direct access to the Atlantic Ocean, and borders fellow CAFTA partners; Guatemala, El Salvador, and Nicaragua. While the location of Honduras promotes trade activity, it also leaves the country exposed to floods, hurricanes, and other natural disasters.

Size and Population

Honduras is the second largest country in Central America, following Nicaragua. With a population of 7.3 million people, it also ranks second most populated in the region, after Guatemala.

Politics

The government of Honduras is that of Democratic Constitutional Republic. Jose Manuel "Mel" Zelaya Rosales of the liberal Party won the 2005 presidential election, with a campaign theme of "Citizen Power". In his campaign he vowed to "increase transparency and combat narcotrafficking while maintaining macro-economic stability (US Department of State 2007).

While there are five registered political parties, for the last several decades, the Liberal Party of Honduras and the National Party of Honduras have "ruled alternatively". The election swings and policy inconsistency between these two parties have made policy reform progress very difficult.

National Economic Performance

GDP and Growth

With a GDP of \$9.2 billion in 2008, Honduras has the second lowest GDP per capita in the region. Honduras has one of the lowest compound annual growth rates with an average growth of 2.9 percent. Particularly low growth is attributed to natural disasters, international crisis, political cyclicity, and volatility in growth of GDP.

Economic Profile

Honduras exhibits a poorly diversified export portfolio. Apparel and accessories account for the largest value industries.

Corruption and policy uncertainty are main constraints placed on the Honduran Economy. "Corruption and miss-governance are regarded as the most serious problem in

Honduras" (World Bank Institute, 2002). In terms of corruption, Honduras ranks 107 out of 158 countries (Transparency International, 2006). Furthermore, the country loses approximately \$500 million annually to corruption (Villalobos, 2006).

Factor Conditions

Some of the challenges that Honduras endures are in terms of connectivity and technology, road infrastructure, and electricity. Subscription to cellular service is a rarity (3% of total population), and only 20% of all the roads are paved. Electricity outages are common occurrence among local companies.

Advantages for Honduras included their above average air transport and port infrastructure, as well as their "close proximity" to the United States. Honduras ranked 57th in air transport infrastructure quality and 37th in port infrastructure quality (World Competitiveness Report, 2006).

Firm Strategy

From 2003–2006, Honduras marked an increase of more than five percentage points in terms of business costs to

corruption and additionally had an increase of more than 10 percentage points for labor-employer relations (World Competitiveness Report, 2006).

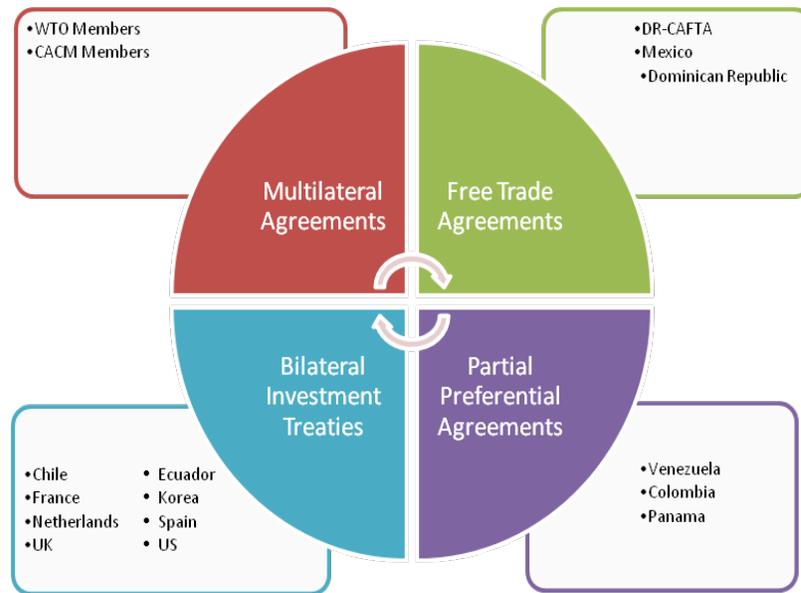


Figure 17: Current Trade Agreements for Honduras

- 1 Trade agreements - negotiations and agreements by country or region. Retrieved 11/1/2007, from <http://www.international.gc.ca/trade-agreements>
- 2 SICE: Trade agreements. Retrieved 12/4/2007, 2007, from http://www.sice.oas.org/agreements_e.asp

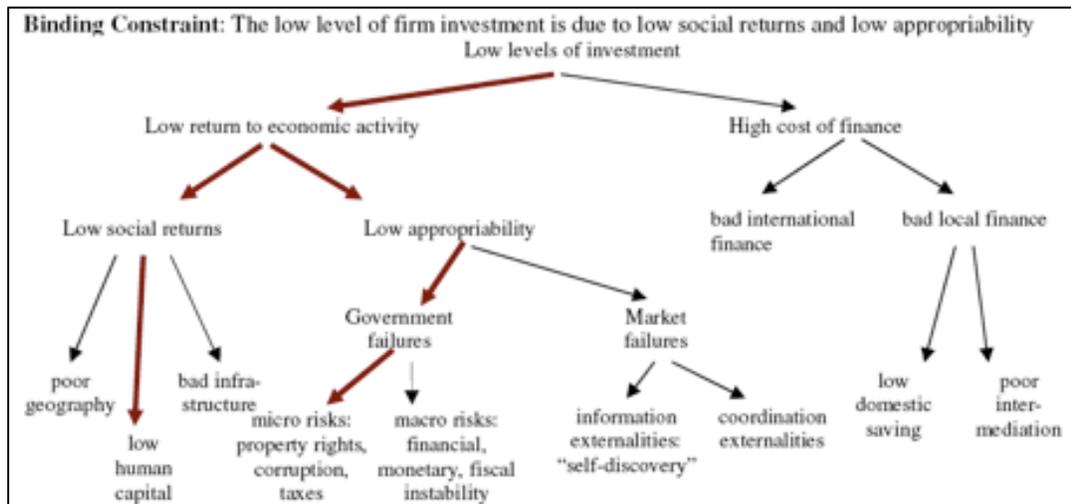


Figure 18: Binding Constraints to Honduran Growth

Source: Bilandzic, N., Feinzaig, L. Kafie, D., Neto, J. and Peia, L. (2007). *The Apparel Cluster in Honduras. Microeconomics of competitiveness.*

Nicaragua

Nicaragua was one of the most cost competitive locations in the western hemisphere, offering several complimentary services for the textile and apparel industry; such as industrial laundry, dyeing and finishing, embroidery, cutting rooms, thread, labels , and packaging materials.



Figure 19: Map of Nicaragua and its Relative Proximity to North America

Source: (UNC Global 2007)

Geography

Strategically located in the heart of the Americas, Nicaragua was located in the center of the Central American isthmus which concocted a land bridge between North and South America. It was bordered by the Atlantic and Pacific oceans, on its eastern and western shores; to the north lies Honduras, and to the south Costa Rica. As the largest country in Central America it extended over approximately 130,600 square kilometers (ProNicaragua, 2007). Managua, was the capital city of Nicaragua.

Nicaragua was in a prestigious location; it was only three days by sea and two and a half hours by air to the United States, which facilitated access to the world's largest market. It is also an excellent export platform for the extensive markets of Central America, Mexico, South America, due to its favorable cost structure and location (ProNicaragua, 2007).

Size and Population

Nicaragua was considered "home" to over five million people, from which 70% were under the age of thirty. Figure 20 depicted the age structure of the population. Sixty-five

percent of the population was located on the Pacific Coast and 2/3 live in a city.

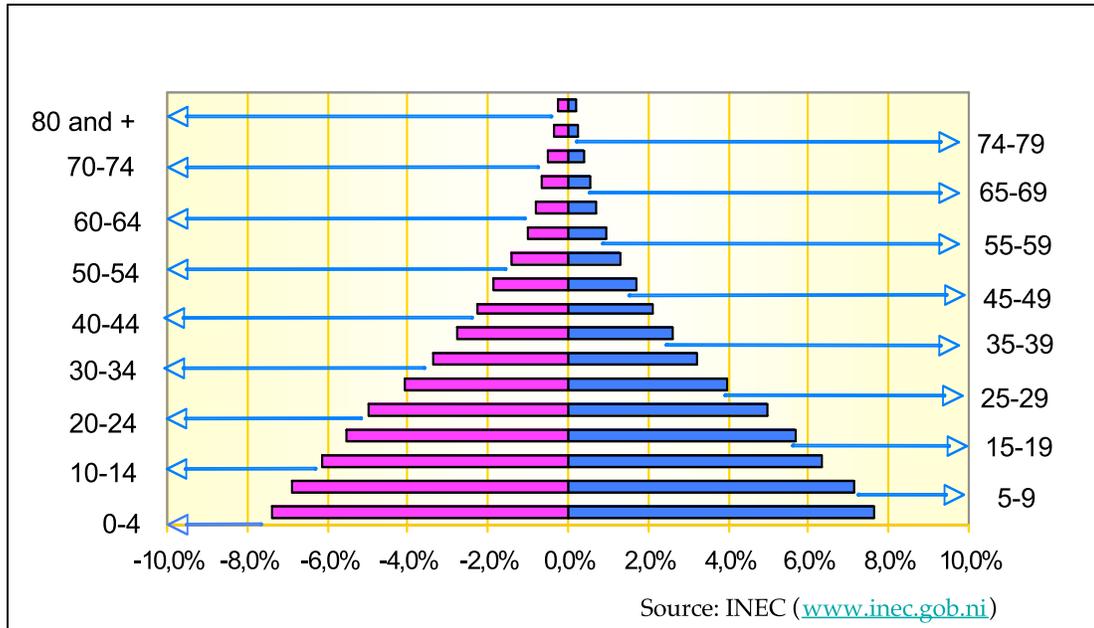


Figure 20: Age Structure of Population

Source: Nicaragua: The Golden Opportunity ProNicaragua

Workforce

The Nicaraguan workforce was known for its productivity, flexibility, capacity to learn quickly (when properly trained), and their good work habits. There was an abundance of readily available workers seeing as the underemployment rate is over 40% and the unemployment rate is over 15%. Within the Free Zones, the employee turnover was estimated at

3.2–4.7%, with absenteeism being less than five percent. The large pool of available workers included a wide variety of workers including multilingual managers (foreign or U.S. trained) as well as those classified as low skilled labor (ProNicaragua, 2007).

Labor Costs

The cost of labor within each of the Central American countries is shown in Figure 21.

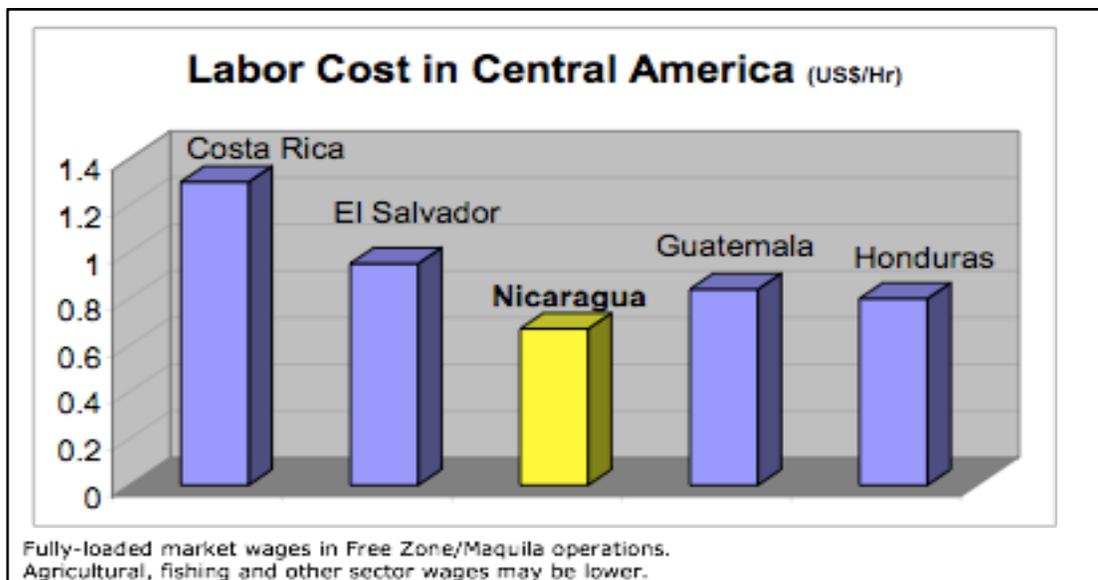


Figure 21: Labor Costs

Source: Nicaragua Investment Guide ProNicaragua

The cost of labor was significantly higher in Costa Rica, than any of the other CAFTA countries. Labor cost in El

Salvador, Guatemala, and Honduras were fairly similar to one another; while Nicaragua had a significantly lower labor cost than any of the other countries.

Figure 22 compared labor productivity for Costa Rica, Nicaragua, Guatemala, and Honduras. The highest labor productivity was seen in Costa Rica, the second highest being in Nicaragua, and the lowest labor productivity was found in Honduras.

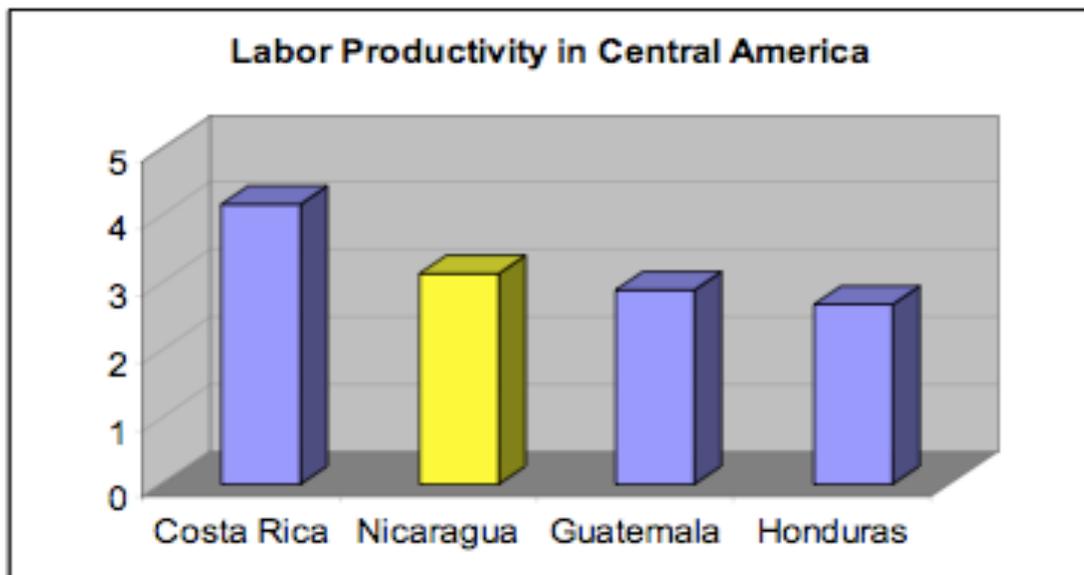


Figure 22: Labor Productivity

Source: (Nicaragua Investment Guide ProNicaragua)

Market Access

Nicaragua Enjoys Favorable Proximity to U.S. Markets

Following a decade of civil war and revolution, Nicaragua marked the 1990s with movements towards rapid integration and notably increased export activities in textiles, apparel, and simple manufactured goods. However, as the millennium approached, the Nicaraguan economy, was still unable to grow even with expanded trade, shown by the country's decrease in per capita GDP (CEPAL, 2006). Since 2000; Nicaragua has overturned this pattern; though, still not to the level of its fellow globalizers. For instance, Costa Rica's GDP increased by over seven percent, while Nicaragua's only increased by less than five percent.

For the most part this contemporary growth displayed by Nicaragua occurred through the regime of export processing zones (EPZs), under direction of the Comisión Nacional de Zonas Francas (CNZF). The number of companies operating in EPZs increased from five in 1992 to almost 100 by mid-2005 (ProNicaragua, 2006).

Nicaragua's Trade Policy

For the past several years the focus of trade policy was placed on promoting entry into international markets. Nicaragua entered into numerous commercial and Free Trade Agreements. During the study, Nicaragua was part of four Free Trade Agreements, including: DR-CAFTA, Mexico, Europe, and CACM. A depiction of Nicaragua's current Free Trade Agreements is shown by Figure 23.

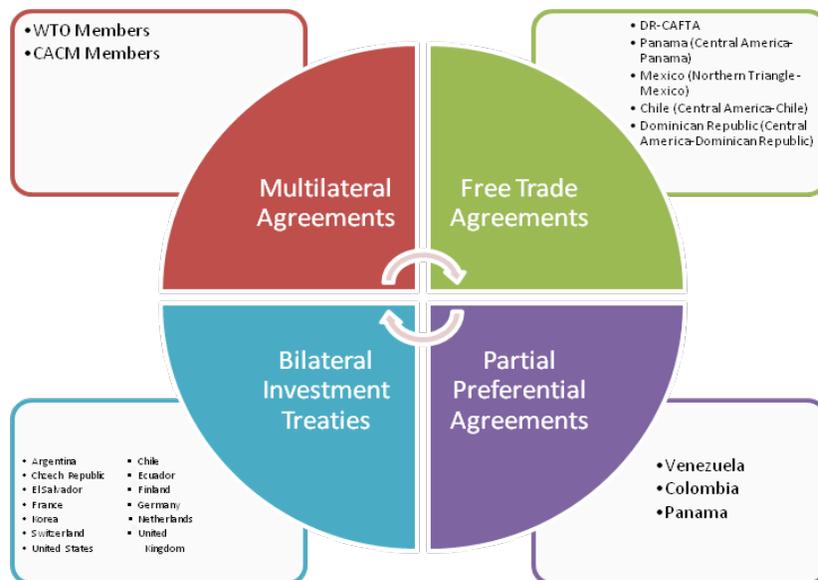


Figure 23: Current Trade Agreements for Nicaragua

1 Trade agreements - negotiations and agreements by country or region. Retrieved 11/1/2007, from <http://www.international.gc.ca/trade-agreements>

2 SICE: Trade agreements. Retrieved 12/4/2007, 2007, from http://www.sice.oas.org/agreements_e.asp

CHAPTER III

RESEARCH METHODOLOGY

Research Statements

Purpose of Research

The purposes of this research study were to:

1. Create a database of U.S. textile complex companies with a presence in DR-CAFTA to be used not only for this research project, but also as an ITT resource guide.
2. Examine the infrastructures within the six DR-CAFTA countries using Porter's four determinants of competitive advantage as framework.
3. Identify opportunities for U.S. textile firms to manufacture/partner within DR-CAFTA countries.
4. Identify opportunities for U.S. textile firms to market products (yarn/fabrics) to DR-CAFTA firms.

The overall research question for this study was: What opportunities are there for the U.S. textile and apparel industry to take advantage of, given the provisions and

benefits provided by DR-CAFTA? Specific research questions developed from the overall research question are as follows:

1. Which U.S. textile complex companies have a presence in DR-CAFTA?
2. What types of competitive advantages are the countries' infrastructures providing?
3. Are there opportunities available for U.S. textile firms to manufacture/partner with DR-CAFTA countries?
4. What opportunities are there for U.S. textile firms to market products (yarn/fabric) to DR-CAFTA firms?

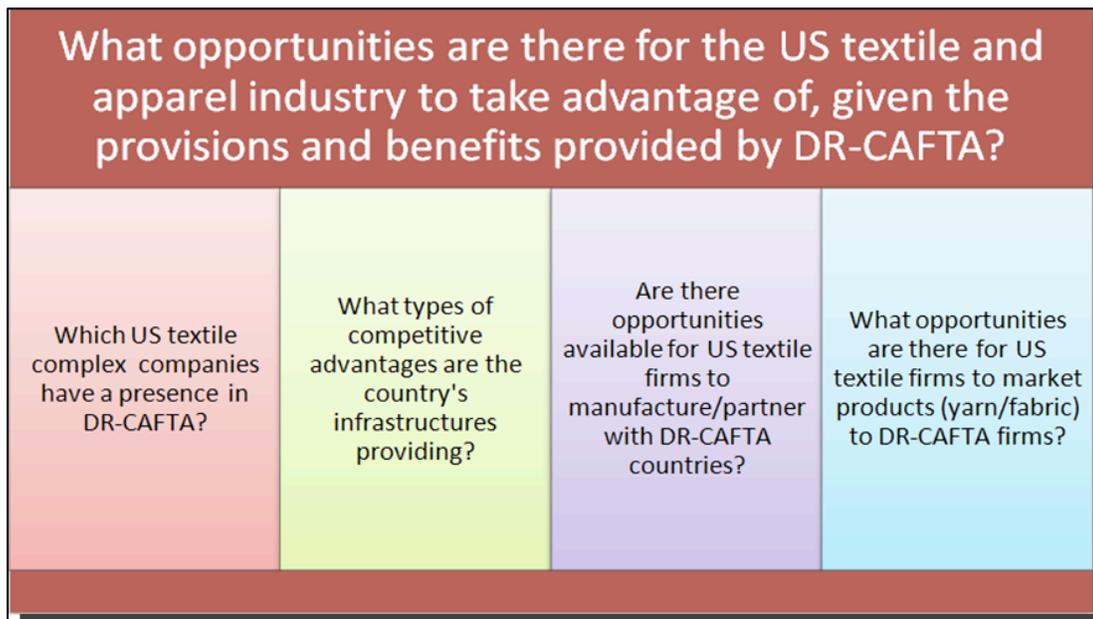


Figure 24: Visual Depiction of the Research Questions

Source: B. Daniels (2007).

Figure 24 gives a visual depiction of the overall research question and more specific research questions, developed by the researcher, in order to guide the research.

Research Objectives

The main research objectives used for this study are as follows:

- RO1:** Create a database of U.S. textile complex companies with a presence in DR-CAFTA.
 - RO1A.** To determine which U.S. companies are in each of the six DR-CAFTA countries.
 - RO1B.** To determine what product(s) is being produced by U.S. companies and six DR-CAFTA countries.
 - RO1C.** To determine who the company's partners are (within country, region, and U.S.)
- RO2:** To examine infrastructure of DR-CAFTA countries in order to:
 - RO2A.** Determine opportunities for U.S. companies based on factor conditions.
 - RO2B.** Determine advantages for the U.S. based on demand conditions.

- R02C.** Determine opportunities for U.S. textile companies by means of related and supporting industries.
- R02D.** Determine advantages for U.S. companies based on firm strategy, structures, and rivalry of the country it is operating within.
- R03:** To determine if there are opportunities for U.S. textile firms to manufacture/partner within DR-CAFTA countries.
- R04:** To determine if there are opportunities for U.S. textile firms to market products (yarn/fabrics) to DR-CAFTA firms.

Research Design

Strategy

Mixed Methods

A mixed-methods research approach was utilized, using both qualitative and quantitative data. Secondary resources included International Textile Manufacturers Federation (ITMF) data, Cotton Inc. data, OTEXA import/export data as well as consulting reports. Additional data sources were added as found. In addition, the researcher used primary resources, particularly case study interviews. The researcher worked

closely with the NC State Burlington library, and contacts within the Office of Textiles and Apparel and the North Carolina Department of Commerce also willing to assist with data procurement. Figure 25, gives a visual depiction of the criteria used to determine the mixed methods strategy to be used for data collection.

Implementation	Priority	Integration	Theoretical Perspective
No sequence Concurrent	Equal	At Data Collection	Explicit
Sequential- Qualitative First	Qualitative	At Data Analysis	
Sequential- Qualitative First	Quantitative	At Data Interpretation	Implicit
		With Some Combination	

Figure 25: Mixed Methods Strategy

Source: Creswell, J. (2003). Research Design: Qualitative, Quantitative, and Mixed Method Approaches, 2nd ed. Thousand Oaks, CA: Sage Publications, pg. 211.

Concurrent Triangulation

For this study, a concurrent triangulation strategy was used, which is illustrated by Figure 26. The model shown on

the following page visually depicts that both qualitative and quantitative data were collected simultaneously, and then the results from an analysis of each data type were compared. A concurrent triangulation strategy was chosen, because it allowed the researcher to confirm, cross-validate or corroborate findings within a single study (Creswell, 2003).

In this study quantitative methods were used when analyzing statistical data on the imports and exports of the CAFTA countries, and when analyzing results from a questionnaire. Qualitative methods were applied in the form of case studies and interviews.

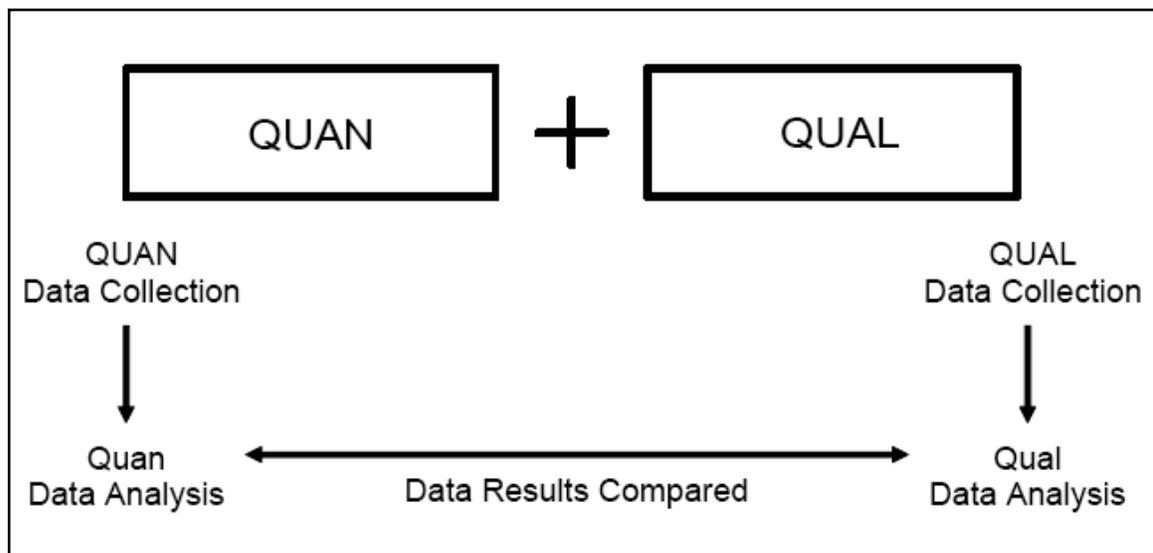


Figure 26: Concurrent Triangulation Strategy

Source: Creswell, J. (2003). Research Design: Quantitative, qualitative, and mixed methods approaches. Thousand Oaks, CA: Sage Publications.

Phase I:

Secondary sources were used to compile information on each country. A listing of textile and apparel companies found within each of the six DR-CAFTA countries was collected for the database. Once developed the database also served as a means of sample selection for the surveys and interviews. Additional country specific information was also collected and then subdivided based on Porter's four determinants. The data was then analyzed in order to develop the research instrument.

Data Collection: Phase I

Secondary sources were used to collect information and data, which gave the researcher a more in depth understanding of the subject at hand. Data compiled from secondary sources were in the form of published materials, syndicated services, and databases. More specifically, qualitative data were obtained from journal articles, industry analyses and opinions, trade associations, and white papers. Quantitative data were compiled from manufacturing, and production data. An outline of the instrument and methodology used to complete phase I is shown in table eleven.

Table 11: Database Instrument

Step 1	Process	Sources Used	Contribution
Step 1	Determine if similar databases are already in existence	<ul style="list-style-type: none"> • Librarian • Industry Contacts • Internet Searches • Government Associations • U.S. Associations 	<ul style="list-style-type: none"> ➤ Recommended sources to review ➤ Suggested Davison's Textile Blue Book ➤ Informed of CBI Sourcing Kit ➤ Provided two reference booklets ➤ Partial Listings
Step 2	Authenticate partial listings	<ul style="list-style-type: none"> • Online • Company Webpages 	<ul style="list-style-type: none"> ➤ Revealed its existence/nonexistence
Step 3	Use associations to add to listings	<ul style="list-style-type: none"> ➤ Vestex ➤ Proesa ➤ CNZFE ➤ CINDE ➤ ProNicaragua 	<ul style="list-style-type: none"> ➤ Added to listing
Step 4	Check Free Trade Zones for client listings		<ul style="list-style-type: none"> ➤ Added to listing
Step 5	Analyze Steps 1-4	<ul style="list-style-type: none"> • Excel • Discussions • Meetings 	<ul style="list-style-type: none"> ➤ Validation of data

Source: B. Daniels, 2007.

About the Database

Prior to this study an up-to-date, comprehensive, unrestricted database of the companies with a presence in the

region did not exist. The existing databases were out of date, limited in scope, often inaccurate, and not comprehensive.

The database provided basic and detailed information on companies, including, general, supply chain, geographic, electronic, and historic information. It was used for market analysis of the textile complex within the CAFTA region. The database is fully searchable and sortable by a variety of components.

Resources for the Database

- Chambers of Commerce
- Trade Associations
- Investment Promotion Agencies
- Hoovers Online
- Company Websites
- Internet Sources
- Referrals

Sample Selection

In order to complete the primary research conducted in Phase III, the sample population first needed to be selected. This study used the following process for sample selection.

1. The sample selection process began with the identification of the six DR-CAFTA countries.

2. The researcher identified U.S. companies that currently have a presence in the CAFTA region through secondary research.
3. The researcher identified the population for the knit goods supply chain. The population included firms in all knitted goods segments; fiber/yarn, textile, apparel, and retail.
4. The researcher examined each member of the knit goods population to determine if each was qualified to be included in the sample for this research.
5. Each company within this population underwent a subjective analysis, given by the researcher, based on company website, trade journals, and government data.
6. Members of the population were disqualified if their product mix lacked cotton-based products. Cotton-based products are those containing at least 50% cotton.
7. NAICS codes specific to knit goods were compiled.
8. The researcher then consulted individual company's websites, online databases, trade associations' websites, and Commercial Services to determine companies competing in the knit apparel sectors.
9. The researcher conducted a final subjective analysis of the companies; companies were chosen for the sample selection if they met at least one of the following requirements:

- Leadership in their respective market
- Significant market share
- Compete in the textile and apparel markets
- Involved in color and quality control measures

Table 12: NAICS Codes: Knit Market

Fiber/Yarn	
NAICS Code	Description
31324	Knit Fabric Mills
313241	Weft Knit Fabric Mills
313249	Other Knit Fabric and Lace Mills
Apparel	
NAICS Code	Description
315191	Outerwear Knitting Mills
315192	Underwear and Nightwear Knitting Mills
315211	Men's and Boys' Cut and Sew Apparel Contractors
315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors
315221	Men's and Boys' Cut and Sew Underwear and Nightwear 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
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
315291	Infants' Cut and Sew Apparel Manufacturing
Retail	
NAICS Code	Description
448110	Men's Clothing Stores
448120	Women's Clothing Stores
448130	Children's and Infants' Clothing Stores
448140	Family Clothing Stores
448190	Other Clothing Stores
812331	Linen Supply
812332	Industrial Launderers

Source: B. Daniels, 2007.

Sample 1: Fiber/Yarn Population- Knits

1. Identify companies competing in the chosen NAICS sectors as fiber/yarn producers of knits.
2. Determine company location, to determine whether it falls within the regions of investigation.
3. Determine sample for primary research in the CAFTA region meet the following requirements:
 - a. Leadership in their respective market
 - b. Significant market share
 - c. Compete in the textile and apparel markets
 - d. Involved in color and quality control measures

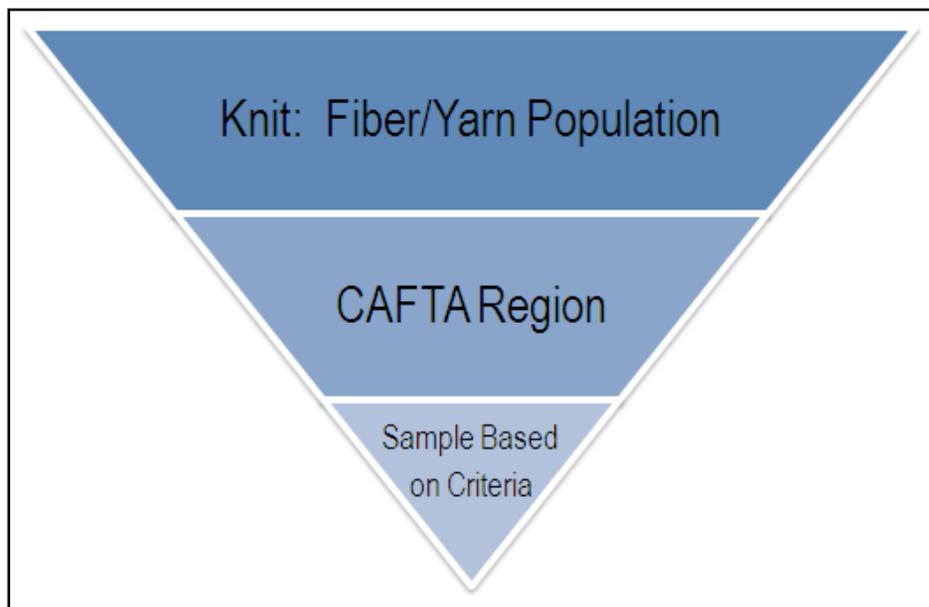


Figure 27: Fiber/Yarn Sample Selection Process - Knits

Sample 2: Apparel Population- Knits

1. Identify companies competing in the chosen NAICS sectors as apparel producers of knits.
2. Determine company location, to determine whether it falls within the regions of investigation.
3. Determine sample for primary research in the CAFTA region meet the following requirements:
 - a. Leadership in their respective market
 - b. Significant market share
 - c. Compete in the textile and apparel markets
 - d. Involved in color and quality control measures

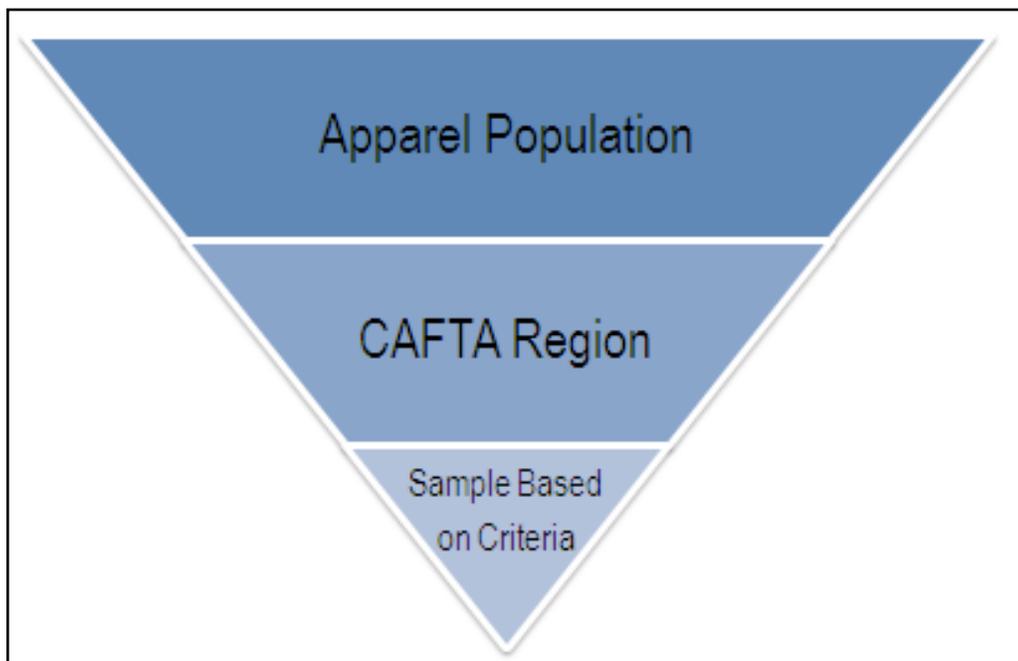


Figure 28: Apparel Sample Selection Process - Knits

Sample 3: Retail Population- Knits

1. Identify companies competing in the chosen NAICS sectors as retail producers of knits.
2. Determine company location, to determine whether it falls within the regions of investigation.
3. Determine sample for primary research in the CAFTA region meet the following requirements:
 - a. Leadership in their respective market
 - b. Significant market share
 - c. Compete in the textile and apparel markets
 - d. Involved in color and quality control measures

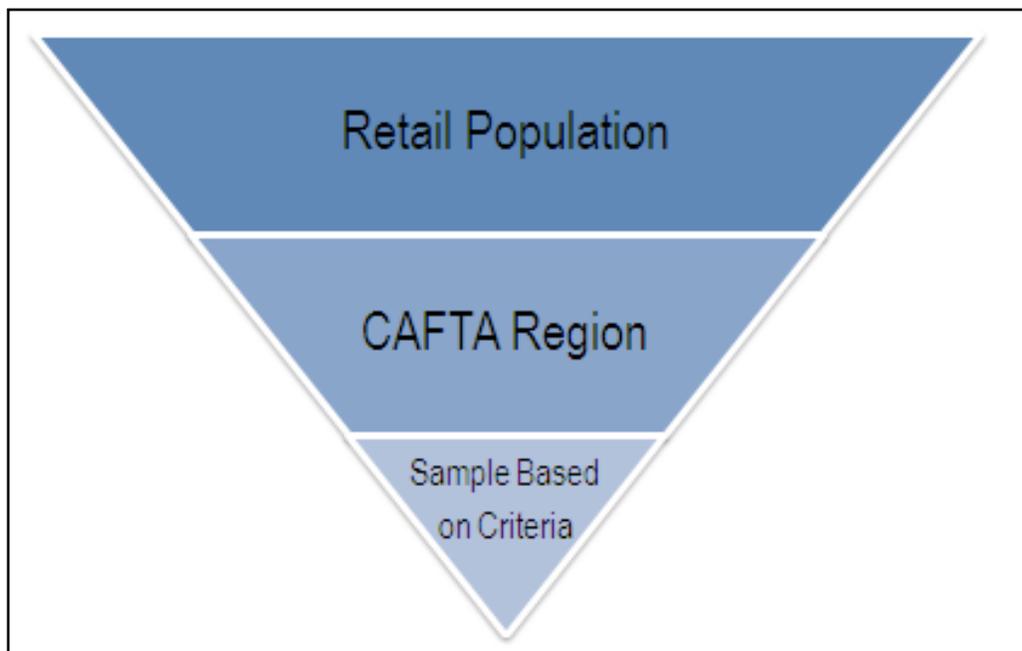


Figure 29: Retail Sample Selection Process – Knits

Phase II:

Data Collection: Phase II

Secondary sources were used to compile information on each country. Country specific information was collected and subdivided based on Porter's four determinants. The data was then analyzed in order to develop the research instrument. This phase looked specifically at:

- ❖ **Factor Conditions:** Factors of production, such as productivity, labor supply and infrastructure.
- ❖ **Demand Conditions:** The nature of the demand in both markets (U.S. market; Central American market) was analyzed.
- ❖ **Related and Supporting Industries:** Which partnerships with world-class suppliers exist with U.S. textile manufacturers? What is the nature of these partnerships? What is the availability of raw materials, component parts?
- ❖ **Firm Strategy, Structure, and Rivalry:** What are the characteristics of Central American firms? What competition exists?

Secondary sources were used to collect information and data, which gave the researcher a more in depth understanding of the subject at hand. Data compiled from secondary sources were in the form of published materials, syndicated services, and databases. More specifically, qualitative data were obtained from journal articles, industry analyses and opinions, trade associations, and white papers. Quantitative data were compiled from manufacturing, and production data. An outline of the instrument and methodology used to complete the research study is shown in table thirteen.

Table 13: Research Instrument: Data Collection

Step	Process	Sources Used	Contribution
Step 1	Define infrastructure, nature of the demand, world-class suppliers, and competition	<ul style="list-style-type: none"> • Marketing Textbooks • Marketing Journals 	<ul style="list-style-type: none"> • Clarified conceptual model used for framework
Step 2	Survey the current competitive environment in the textile and apparel industry for each of the CAFTA countries, based on the four determinants proposed in Porter's model.	<ul style="list-style-type: none"> • Internet research • ITMF Data • Market research reports • Industry literature/textbooks • International trade data • Industry Associations • Commercial Services 	<ul style="list-style-type: none"> • Identified advantages and disadvantages associated with each of the country's infrastructures
Step 3	Secondary research to locate U.S. and international production, sales, import/export, and shipment data for textile and apparel markets.	<ul style="list-style-type: none"> • Census Bureau data • OTEXA data • International Cotton Advisory Committee • Industry Associations • Commercial Services 	<ul style="list-style-type: none"> • Identified trends in the apparel and textile industry in terms of: <ul style="list-style-type: none"> • Production • Exports • Imports
Step 4	Perform market analysis of the textile and apparel industries to determine population and top candidates for the survey sample	<ul style="list-style-type: none"> • Trade Journals • Company websites • U.S. Census Bureau data • NAICS website • Industry Associations • Commercial Services 	<ul style="list-style-type: none"> • Identified NAICS codes for major sectors in textile and apparel • Identified company information in terms of: <ul style="list-style-type: none"> • Location • Product Mix • Partners • Supply Chain
Step 5	Analyze findings from steps 1-4	<ul style="list-style-type: none"> • Meetings and discussions with government officials, companies, and trade associations 	<ul style="list-style-type: none"> • Assisted in sample selection for phase II • Contributed toward the development of questionnaire and database <ul style="list-style-type: none"> • Company Information
Step 6	Formulate database	<ul style="list-style-type: none"> • Internet research • Trade Associations • Market research reports • Industry literature/textbooks • Government websites • Data from step 4 • Industry Associations • Commercial Services 	

Source: B. Daniels, 2007

Phase III:

Data Collection: Phase III

The third phase entailed interviews and case studies with U.S. textile firms that currently have business relations in the DR-CAFTA region in addition to companies that would like to, but do not yet have plans. The purpose of interviewing the firms that did not currently have a presence in the region was to ascertain their concerns and questions in order to provide a more comprehensive and relevant framework. A number of companies had already been identified through previous research, including ITT and non-ITT members. These interviews were used to evaluate the current business environment in the DR-CAFTA region in addition to challenges and opportunities. This phase was also used to gather information for Phase I and II.

Phase I identified the companies selected for participation in the study, and during phase III these companies were contacted via email and phone. The research sample consisted of companies involved in the fiber/yarn, apparel, or retail segment of the knit products supply chain. During phase III, both qualitative and quantitative data were

collected, through the utilization of a questionnaire developed by the researcher. Primary research was conducted to gather confidential company information as well as opinions on business relations in the CAFTA region. A mixed methods approach was taken for development of the questionnaire so that structured, close-ended and non-structured open-ended questions were asked. The researcher was able to obtain both qualitative and quantitative data during phase three.

Sample Completion

The sample population was identified in phase one. Once the sample was selected, a course of action was determined for contacting the sample. The researcher obtained contact information for key executives within each of the companies, from her thesis committee, and John Y. "Jack" Daniels (Executive Vice President of AATCC), and Peggy J. Pickett (Education Director). If a contact could not be obtained from the aforementioned group then an online search was conducted to obtain email or phone numbers for the missing contacts.

The company was initially asked to participate, either by an email explaining the study (appendix A) or via telephone call. The researcher sent an email or placed a phone call in

order to set up a meeting so as to conduct the questionnaire. Meetings were setup as either face-to-face interviews or via phone conference, based on the respondent's preference. An example of the survey to be conducted during the interview was sent to each of the contacts in a follow-up email.

Survey Development & Data Collection

Primary data were collected during interviews by utilization of a questionnaire. Members of the sample either represent a fiber/yarn, apparel, or retailer group; therefore, a survey encompassing all sample members was developed (Appendix B). Data collection took place from March through April of 2008.

Instrument Development

A questionnaire utilizing comparative and non-comparative techniques was developed by the researcher in order to test variables. Open-ended questions were used as a means of gathering qualitative data on the subject matter at hand. For these questions, respondents were required to answer using his or her own words. These unstructured questions allowed the respondents to express their view on the subject of

investigation. The researcher then developed questions to test the competitive advantage variables.

Inductive and Deductive Logic

When conducting research for this study, both inductive and deductive logic were used. The model for inductive logic is illustrated by Figure 30. The purpose of the inductive research was to gain a better understanding of the subject at hand. Therefore, inductive logic was used in phase one and two of the study, when secondary data were being collected. Deductive logic, depicted by figure 31, was used during primary data collection, for further clarification of the subject matter. Part of the questionnaire involved rank order and Likert scales.

In Phase III, inductive logic was used for qualitative data collection. The researcher developed questions in order to address each of the components found within the *Determinants of a National Competitive Advantage* (1990). In order to determine supply chains of the firms, respondents were also asked to depict the flow of goods from their suppliers to their customers.

Instrument Development: Inductive Questions

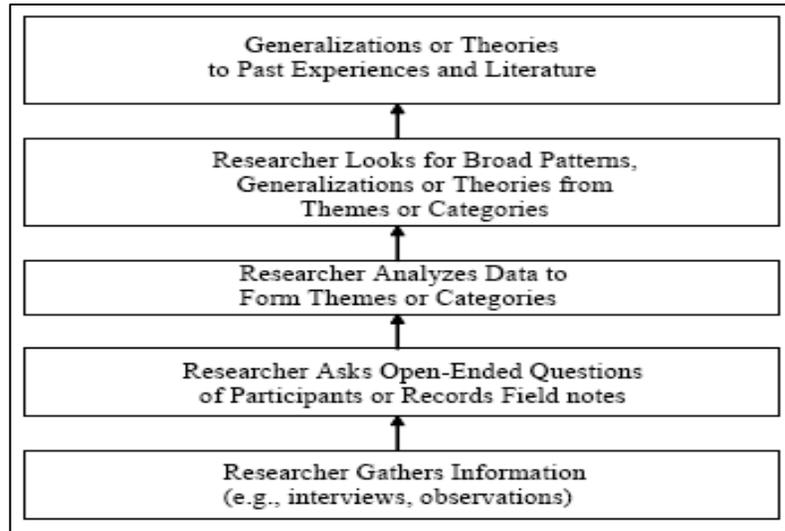


Figure 30: Inductive Model of Research

Source: Creswell, J. (2003). Research Design: Qualitative, Quantitative, and Mixed Method Approaches, 2nd Ed. Thousand Oaks, CA: Sage Publications.

Open-ended questions were used as a means of gathering qualitative data on the subject matter at hand. For these questions, respondents were required to answer using his or her own words. These unstructured questions allowed the respondents to express their view on the subject of investigation.

Instrument Development: Deductive Questions

During phase III of the study, deductive logic was used for collection of quantitative data. The variables identified

in Porter's *Determinants of a National Competitive Advantage* (1990) were tested using deductive logic. As set forth by Porter, a firm's competitiveness was influenced by the presence or absence of these variables.

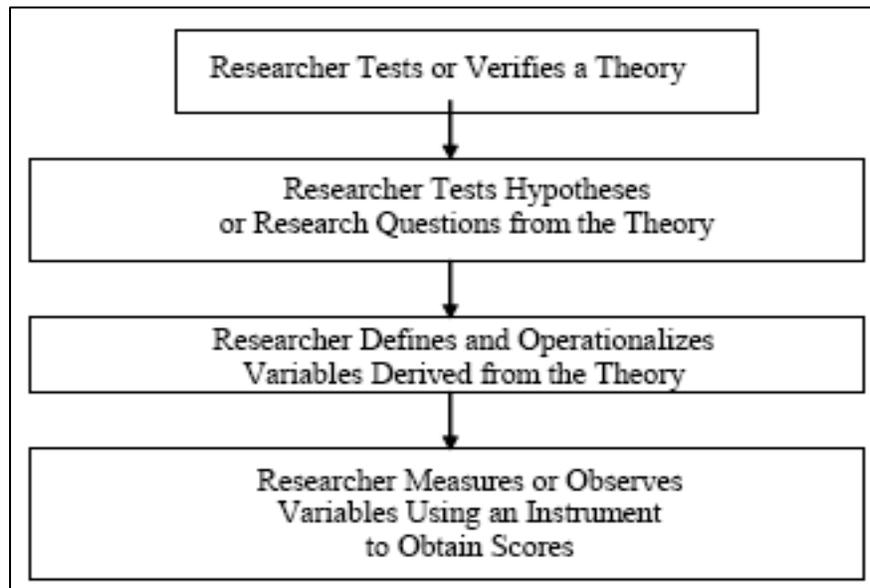


Figure 31: Deductive Model of Research

Source: Creswell, J. (2003). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*, 2nd ed. Thousand Oaks, CA: Sage Publications.

Deductive logic was also used to test the factors of competitiveness; indicated by the United States International Trade Commission in *Textiles and Apparel: Assessment of the Competitiveness of Certain Foreign Suppliers to the U.S. Market* (2004).

Competitive Advantage Variables:

- Marketing
- Location
- Customer Service
- Production Efficiency
- Research & Development
- Relationship with Suppliers

Factors of Competitiveness:

- Business Climate
- Infrastructure and Proximity to Markets
- Market Access
- Labor and Management
- Raw-Material Inputs
- Level of Service Provided and Reliability of Supplier

<p>Business climate</p> <ul style="list-style-type: none"> • Political stability • Safety of personnel • Security of production and shipping • Transparent and predictable legal, commercial, and regulatory system • Minimal administrative burden and corruption • Compliance with internationally recognized health and labor standards • Subsidies and tax credits • Free trade zones • Real exchange rates • Market demand and economic growth <p>Infrastructure and proximity to markets</p> <ul style="list-style-type: none"> • Roads, ports, rail, and airports for moving goods into and out of the country • Shipping and other transportation times and costs • Proximity to major markets • Access to reliable sources of energy, water, and telecommunications <p>Market access</p> <ul style="list-style-type: none"> • Preferential access in major markets 	<p>Labor and management</p> <ul style="list-style-type: none"> • Availability of workers and competition for workers from other sectors • Compensation rates • Labor skills and productivity • Availability of qualified managers, including middle management <p>Raw-material inputs</p> <ul style="list-style-type: none"> • Access to quality and cost-competitive domestic or regional yarn and fabric production • Tariffs on imports of raw materials • Rules of origin for trade preferences • Cost and availability of capital to invest in new machinery and purchase raw materials <p>Level of service provided and reliability of supplier</p> <ul style="list-style-type: none"> • Reputation for quality and on-time delivery • Existing business networks (supply chain linkages, relationship with customers) • Level of service provided (e.g., full-package versus assembly) • Flexibility and variety in styles or products and lot sizes offered • Lead time and flexibility to respond to quick turnaround orders
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Figure 32: Factors of Competitiveness

Figure 32 gives a more detailed explanation of the specific variables that fall under each of the factors of competitiveness.

A questionnaire utilizing comparative and non-comparative techniques was developed by the researcher in order to test variables. Part of the questionnaire involved rank order scaling. This approach was comparative in nature, and

resulted in ordinal data. Furthermore, rank order scaling was chosen, because it forces the respondent to discriminate among the selected attributes. This strategy was used to test the six central factors of competitiveness. The respondent was presented with a list of the competitive advantage variables and was asked to rank said variables in terms of importance for the overall success of their company.

The survey also included questions aimed to measure data on an interval level. A Likert response scale was used for this type of measurement; wherein, an opinion question was asked using a one to five bipolar scale. Likert scales were also used in the study in order to obtain non-comparative information. A Likert scale was used to determine the respondent's degree of agreement or disagreement with the Competitive Advantage Variables.

The survey also included a matrix. The matrix was used for a group of questions that had identical response scales. Variables were placed one under the other, so that the respondent could rank factors, on a comparative basis between Asia and the CAFTA region.

Table 14 presents a cross reference between the research

variables, scaling technique, and the corresponding question number used to evaluate these variables in the instrument.

Table 14: Research Variables- Scaling Technique Cross Reference

Variables	Multiple Choice	Likert Response Scale	Rank Order Scaling	Matrix
Competitive Advantage Variables			Q16	Q15
Factors of Competitiveness	Q12	Q9, Q11	Q14	Q13

Source: Daniels, B. (2008).

Table 15: Research Objectives – Questionnaire Cross Reference

Question #	Question Type	Instrument Question Related to Research Objectives			
		RO1	RO2	RO3	RO4
1	Validation	X			
2	Open-Ended		X	X	X
3	Open-Ended			X	X
4	Open-Ended			X	X
5	Open-Ended		X	X	X
6	Open-Ended		X	X	
7	Open-Ended			X	X
8	Multiple Choice			X	X
9	Likert Scale		X		
10	Open-Ended		X		
11	Likert Scale		X	X	X
12	Multiple Choice		X	X	X
13	Matrix		X	X	X
14	Rank Order		X	X	X
15	Matrix		X	X	X
16	Rank Order	X			

Source: Daniels, B. (2008).

Phase IV:

Data Analysis

During the final stage, the findings were analyzed. Data analysis of both primary and secondary data was completed. During phase four, all of the information collected during the previous three phases were combined in order to draw

conclusions in regards to the original research objectives. A strategic framework for doing business in the region was developed to aid ITT members in taking advantage of DR-CAFTA provisions. In addition, the researcher provided an overview of product categories which could justify U.S. or regional production and/or offer export opportunities for the U.S. textile industry.

Data analysis was conducted in four stages.

1. The data collected from interviews were transcribed and coded.
2. Data was organized / grouped based on sector category, location, and product category.
3. Entry of company into database, including companies: location, product mix, partnerships, and supply chain.
4. Each of the CAFTA regions were compared.

Operational Definitions

Clusters:

Geographic concentrations of interconnected companies and institutions in a particular field, which constitute a critical mass (Porter, 1990).

Competitive Strategy:

A strategy which involves positioning a business in order to maximize the value of capabilities that distinguish it from its competitors (Porter, 1998).

Demand Conditions:

The nature of home-market demand for the industry's product or service (Porter, 1990).

Factor Conditions:

The nation's position in factors of production, such as labor and infrastructure (Porter, 1990).

Firm Strategy, Structure, and Rivalry:

The conditions in a nation governing how companies are created, organized and managed as well as the nature of domestic rivalry (Porter, 1990).

Lead Time:

Lapse between submitting a purchase order and receiving the ordered product.

Product Lifecycle:

The prediction of the life of a product or brand. Stages are described as Introduction, Growth, Maturity and finally Sales Decline (Plunkett, 2007).

Related and Supporting Industries:

The presence or absence in the nation of supplier industries and other related industries that are supplementary (Porter, 1990).

Retail Chain:

A firm that consists of multiple retail units under common ownership and usually has some centralization of decision-making in defining and implementing its strategy.

Sourcing:

The process of determining how and where manufactured goods or components will be obtained (Dickerson, 1999).

CHAPTER IV

RESULTS

The results of the Phase I secondary data collection was analyzed in relation to the aforementioned steps outlined in Tables 11 and 12.

Phase I Results

Research Objective 1

Database

Key Findings

Six databases were created, one for each of the CAFTA countries. Each database contains the textile and apparel companies with a presence in that particular country. Each countries' database contained approximately seven different variables. The databases were compiled from primary and secondary data sources.

Variables

There were five main categories of data identified for each country: general, geography, supply chain, web presence,

and historic. Each of these categories includes several subcategories.



Figure 33: Possible Factors Identified for Each Company²

Source: Daniels, B. (2008).

Figure 33 identifies some of the factors that can be found within each category. It should be noted that all

² Found within the general category, are factors such as: contact name, telephone number, and fax number. The supply chain category, distinguished where the company falls within the supply chain. The location of the company, in terms of address and presence within a free zone can be found under the geographic category. Found in the web presence category are; websites and email addresses. Possible factors found within the historic category are: sales figures; year established; number of employees; number of machines; partners; brands produced; and whether it is a public or private company.

factors are not listed, and that available factors vary by country or company type.

Table 16 indicates the number of listings available for each country. The country with the most companies identified in the textile complex was Guatemala, with 590 entries.

Nicaragua had the least entries, with a listing of 97 companies in the textile complex. Guatemala had 590 entries, the highest amount of textile and apparel companies found in the DR-CAFTA region.

Table 16: Number of Companies Identified for Each Country

Country	Apparel Companies	Textile Mills	Other	Total
Costa Rica	30	5	120	168
Dominican Republic	-----	-----	-----	321
El Salvador	117	84	91	300
Guatemala	223	56	311	590
Honduras	111	20	231	362
Nicaragua	17	10	70	97

Source: Daniels, B. (2008).

Phase II Results

Research Objective 2

Country Profiles

Key Findings

Overall the DR-CAFTA countries shared many similarities in the four determinants for the diamond models. Costa Rica and Nicaragua stood out because they were noted as having the highest labor productivity. It should also be noted that Costa Rica had the highest labor wages, while Nicaragua had the lowest. All of the countries had a preexisting apparel and textile industry. While full package options were found to be limited in the DR-CAFTA region, it was however an available service in each of the countries.

Table 17 shows the top 25 countries exporting textiles and apparel to the United States. As can be seen in table 15, five of the six CAFTA countries are in the top 25, Costa Rica being the missing country.

Table 17: Top 25 Countries Exporting Textiles and Apparel to the U.S

Rank	Country	2006	2007	Rank	Country	2006	2007
1	China	27,067.60	32,320.40	14	The Philippines	2,085.10	1,793.90
2	Mexico	6,376.30	5,625.50	15	Sri Lanka	1,702.80	1,590.50
3	India	5,031.10	5,104.00	16	El Salvador	1,433.20	1,507.40
4	Vietnam	3,396.10	4,557.90	17	Guatemala	1,678.30	1,463.20
5	Indonesia	3,901.50	4,206.10	18	Taiwan	1,497.00	1,365.50
6	Bangladesh	2,997.90	3,191.30	19	South Korea	1,665.80	1,324.50
7	Pakistan	3,250.20	3,170.30	20	Turkey	1,311.70	1,146.70
8	Honduras	2,445.40	2,517.90	21	Jordan	1,253.80	1,146.00
9	Cambodia	2,150.80	2,435.50	22	Dominican Republic	1,550.50	1,060.80
10	Italy	2,067.90	2,233.50	23	Macau	1,163.10	1,028.20
11	Canada	2,587.00	2,201.50	24	Nicaragua	879.4	968.2
12	Hong Kong	2,892.70	2,123.80	25	Egypt	806.2	869.9
13	Thailand	2,124.10	2,059.20				

Source: U.S. Department of Commerce, International Trade Administration (2008).

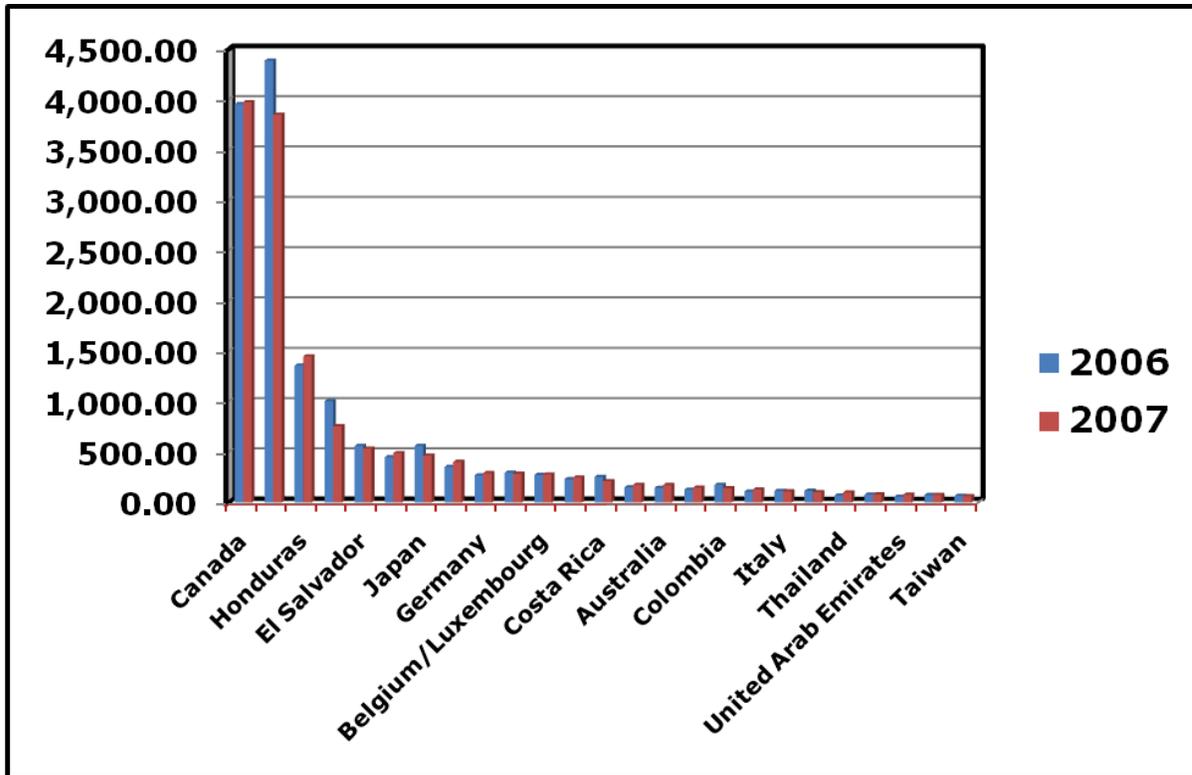


Figure 34: Top 25 Destinations of U.S. Textiles and Apparel: 2006-2007

Source: U.S. Department of Commerce, International Trade Administration (2008).

Figure 34, shows the top 25 destinations of U.S. textiles and apparel during the years of 2006 and 2007. Data for the figure is based on millions of U.S. Dollars. All six of the CAFTA countries can be found on this chart. It should also be noted that three of the six CAFTA countries are found in the top five; with Honduras ranked as number three, Dominican Republic four, and El Salvador five.

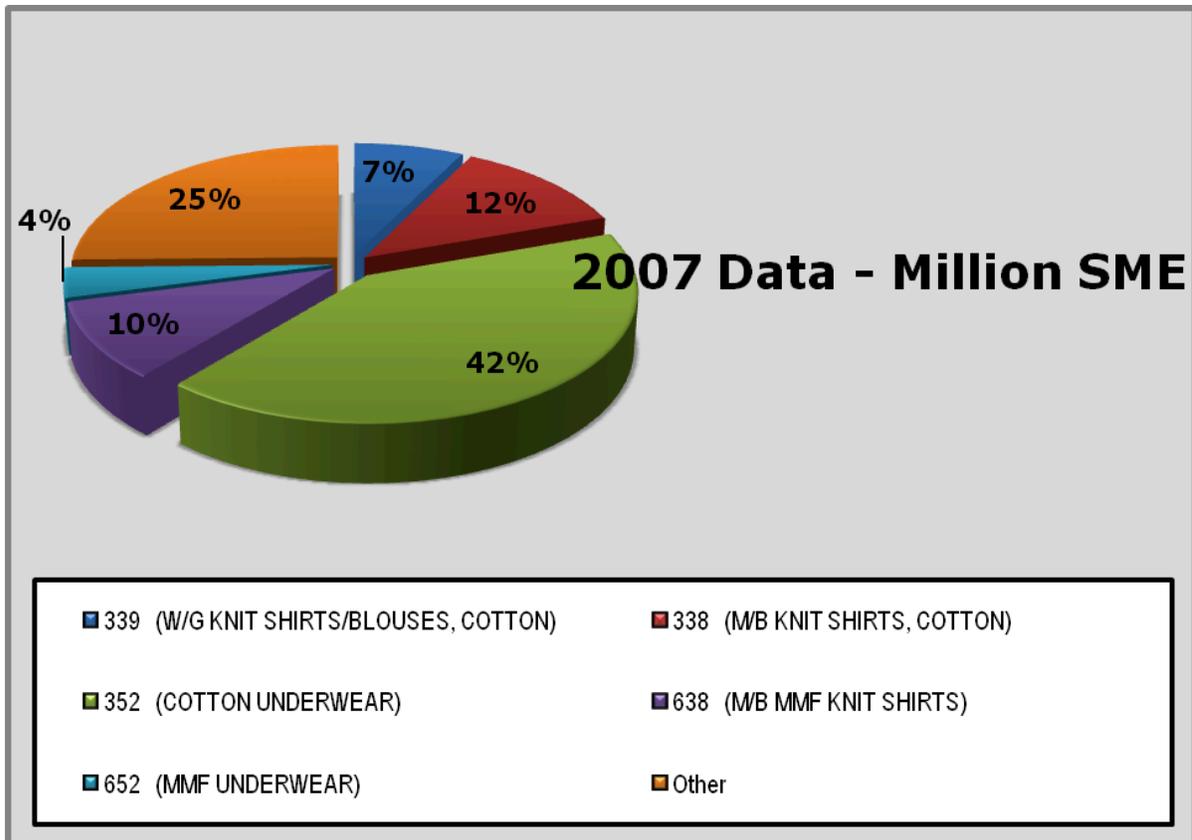


Figure 35: Major Apparel Categories Imported from DR-CAFTA to the U.S.

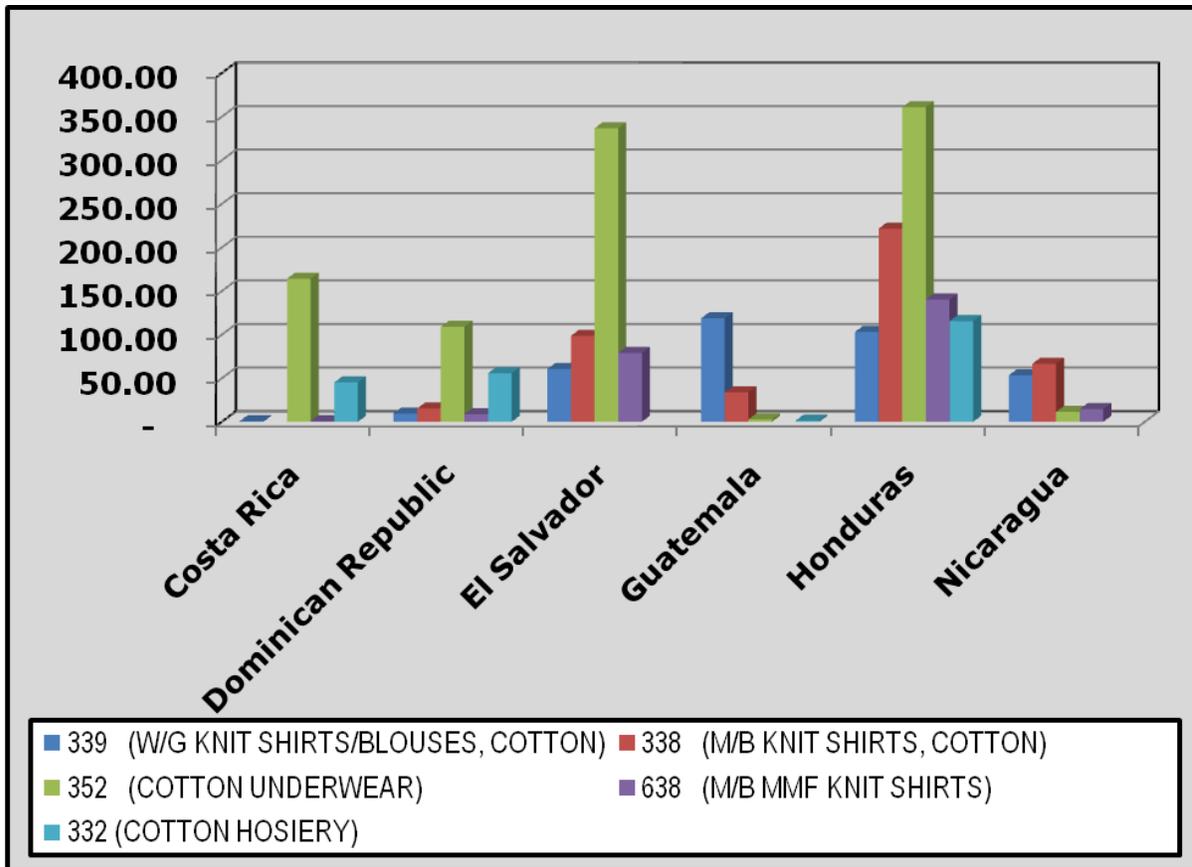
Source: *Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).*

Figure 35, represents the top five apparel categories imported from DR-CAFTA to the United States, based on unit sold, during the year 2007. Overall, the largest apparel category was found to be 352, cotton underwear, representing 42% of the total imports. A combination of the other top four apparel categories represented 13%, and the other category represented the final 25 percent. With the exception of the

other category, all of the other categories represented either underwear or knit shirts. Knit shirts, of either cotton or synthetic base, represented 29% of the total, while underwear represented 46 percent.

Figure 36: Top Apparel Categories Imported from DR-CAFTA to the U.S.

Broken Down by Country



Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 36, shows the 2007 data for the top five apparel categories imported from DR-CAFTA to the U.S. broken down by country. Honduras dominates four of the five categories. Guatemala dominates the remaining category; 339, women and girls cotton knit shirts or blouses.

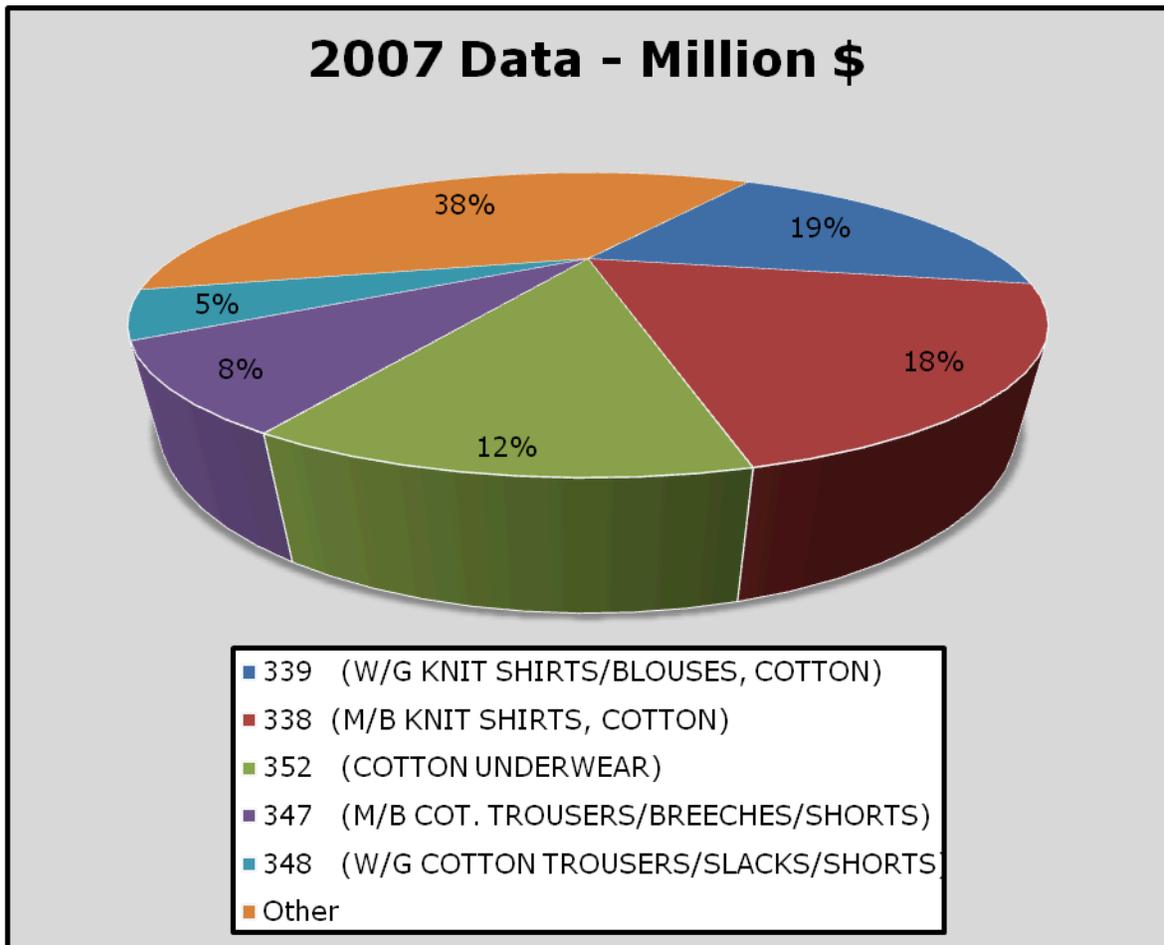


Figure 37: Major Apparel Categories Imported from DR-CAFTA to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 37, represents the top five apparel categories imported from DR-CAFTA to the U.S. based on dollar values. Three of the five categories were the same as those found in the figure representing the top five apparel categories based on unit values. The two different categories were 347 (men/boys cotton trousers, breeches, and shorts) and 348 (women/girls cotton trousers, slacks, and shorts). All five categories were cotton based. The product categories were fairly equally distributed between male and female categories.

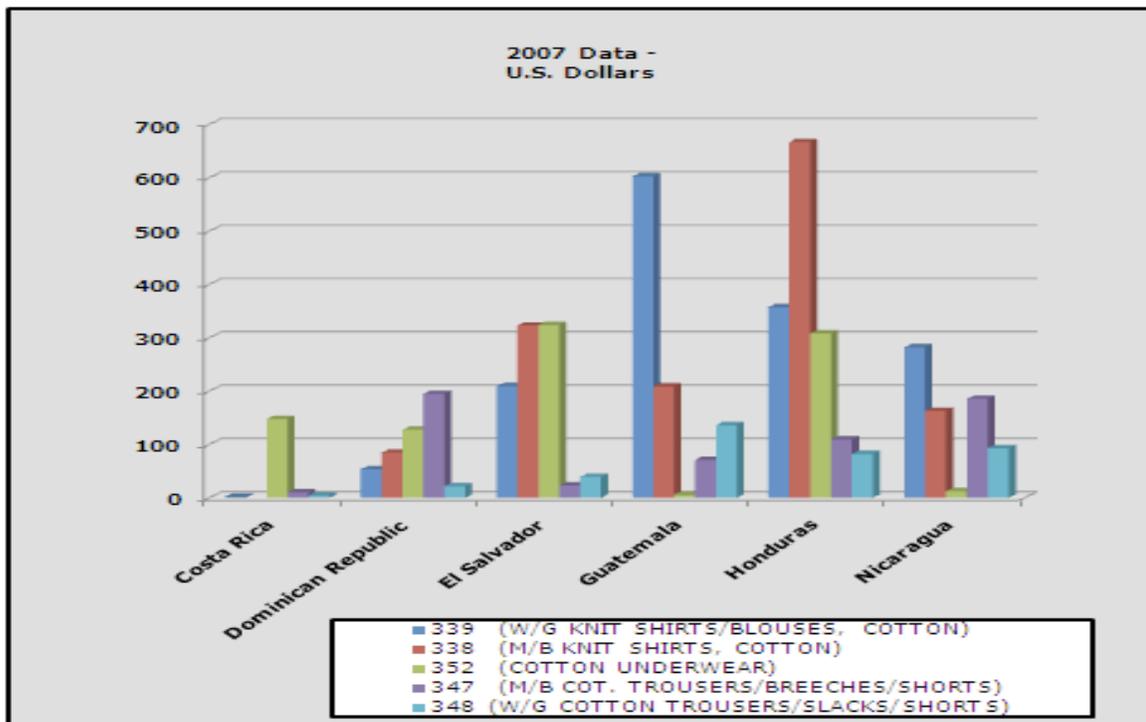


Figure 38: Major Apparel Categories Imported from DR-CAFTA to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 38, shows the top five apparel categories in 2007, based on U.S. dollars. Guatemala dominated two of the categories; 339 (women and girls cotton knit shirts or blouses) and 348 (women and girls cotton trousers, slacks, or shorts). It should be noted that Guatemala dominates the female categories. Honduras took the lead in category 338, men and boys cotton knit shirts. El Salvador barely dominated category 352, with Honduras being a very close competitor. Dominican Republic took the lead in category 347, men and boys cotton trousers, breeches, or shorts.

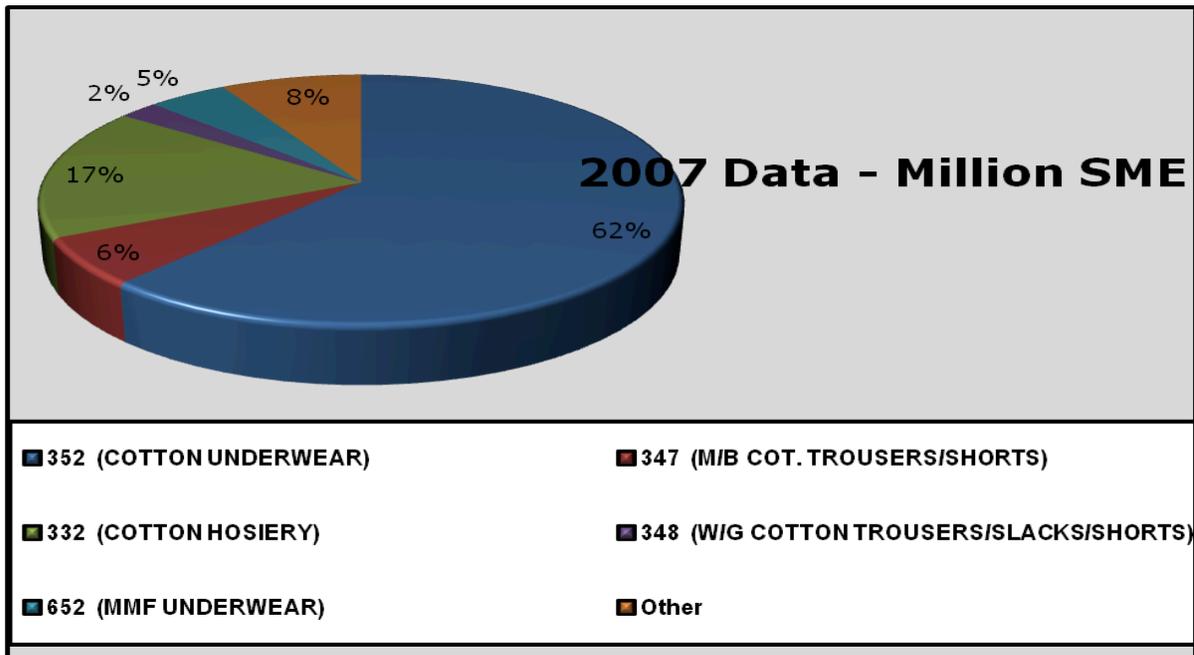


Figure 39: Major Apparel Categories Imported from Costa Rica to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 39, shows the top five apparel categories in unit values, for Costa Rica during 2007. The main apparel category for Costa Rica was 352, cotton underwear, representing 62 percent of the total. Four of the five categories were cotton based, with the exception of category 652 (MMF Underwear), which only represented five percent of the total. All together underwear represented 67% of the top five apparel categories imported from Costa Rica to the United States.

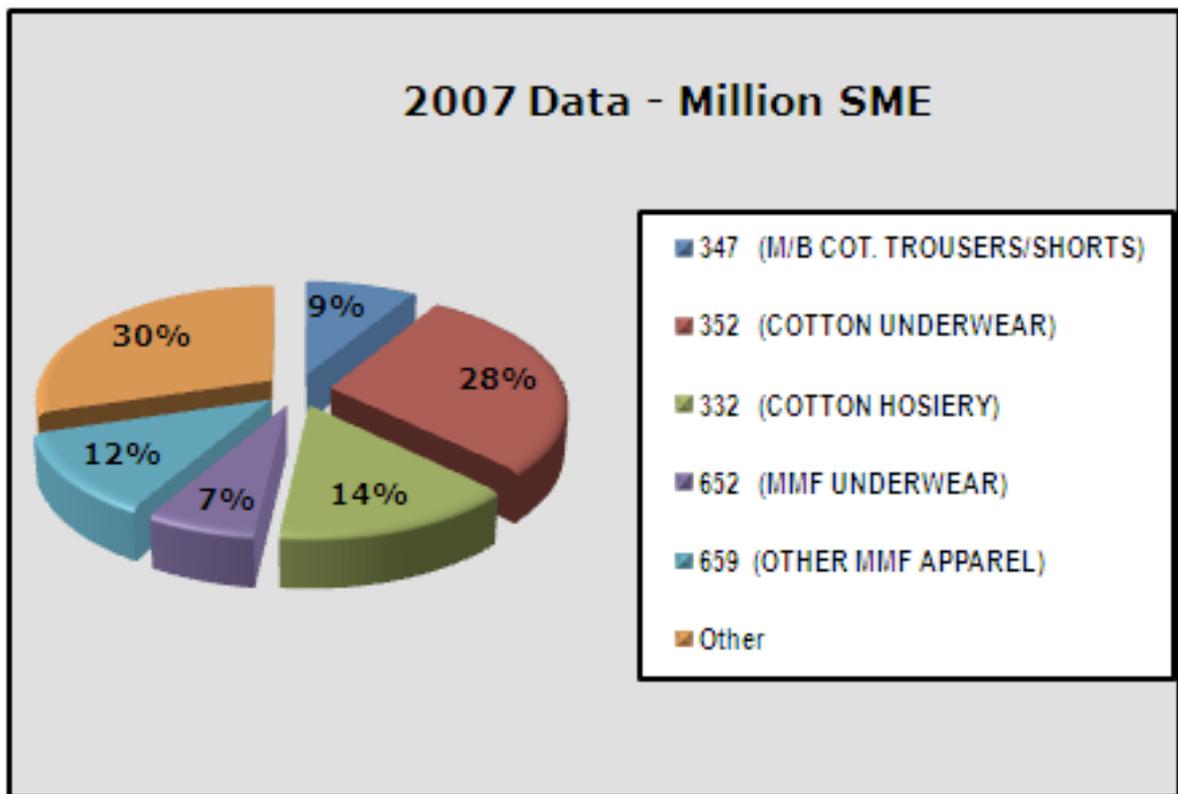


Figure 40: Major Apparel Categories Imported from Dominican to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 40, shows the top five apparel categories imported from the Dominican Republic to the U.S. in 2007, based on unit values. With the exception of the other category, category 352, cotton underwear, was the largest category. Dominican Republic's top five apparel categories were more diverse than the other CAFTA countries. Synthetics represented 19%, while cotton based products represented 51% of the total.

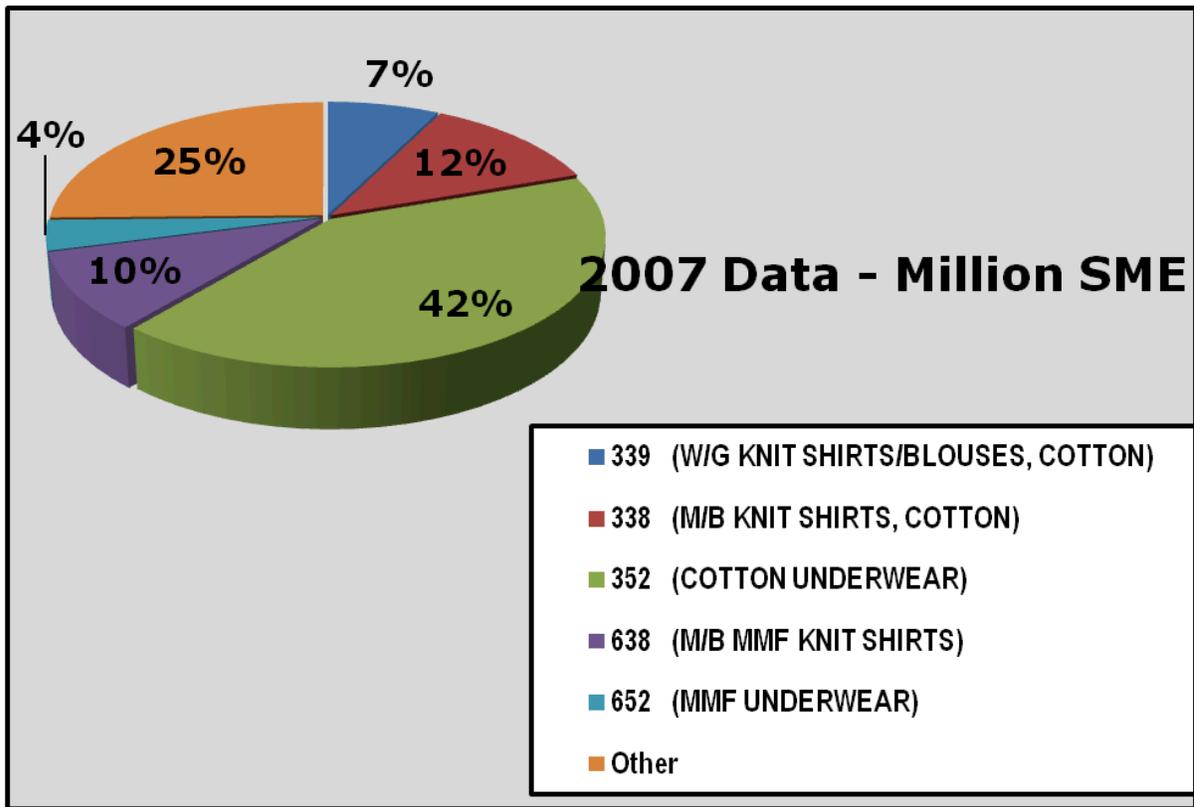


Figure 41: Major Apparel Categories Imported from El Salvador to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 41, shows the top five apparel categories in unit values, for El Salvador during 2007. The main category was 352, cotton underwear, which represented forty-two percent. Almost half of the products were underwear, at 49 percent. Twenty-nine percent of imports were for knit shirts, of either cotton or synthetic base. All together cotton products represented 61%, and synthetics represented 14% of the total.

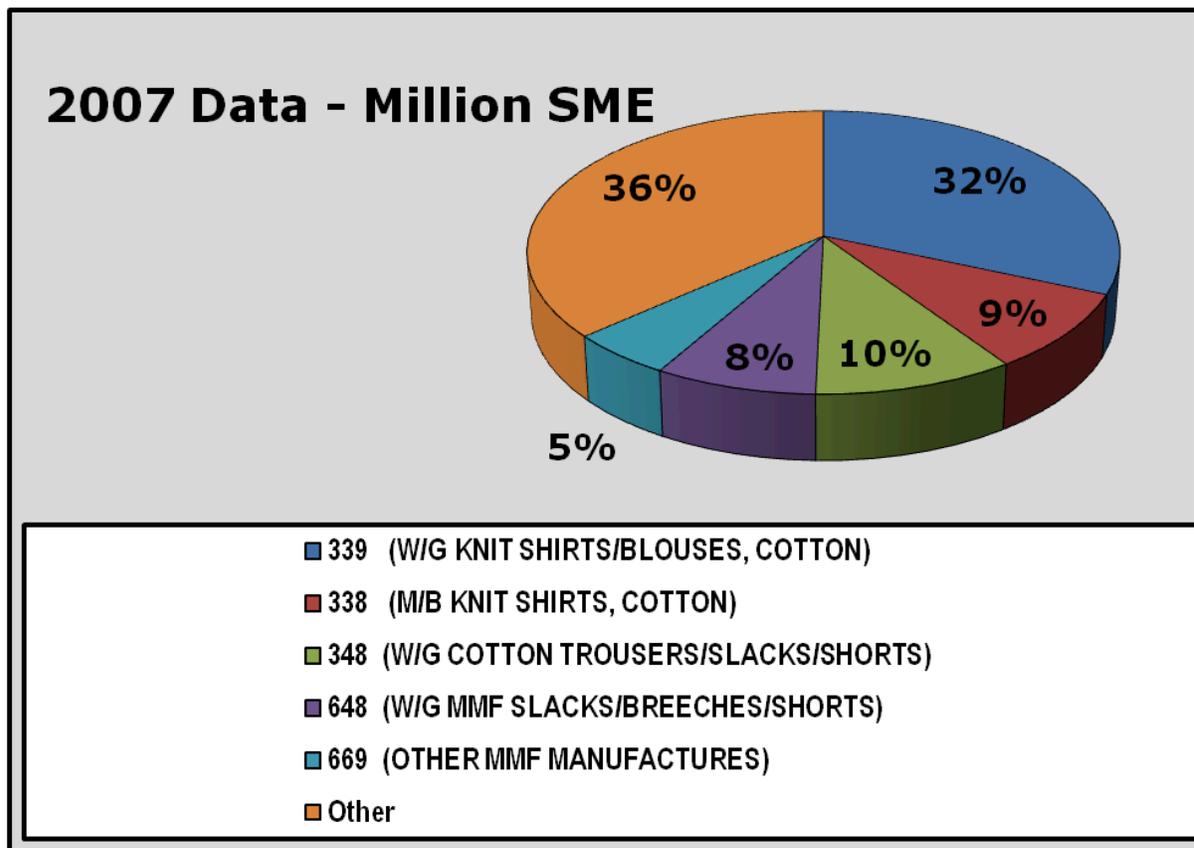


Figure 42: Major Apparel Categories Imported from Guatemala to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 42, shows the top apparel categories imported from Guatemala to the U.S. in 2007, based on unit values. The main category was found to be the other category, at thirty-six percent. The largest distinguished category was 332, women and girls cotton knit shirts or blouses, which represented 32% of the total. Female categories were found to be representatives for 50% of the total imports; whereas males only represented 9% of the total.

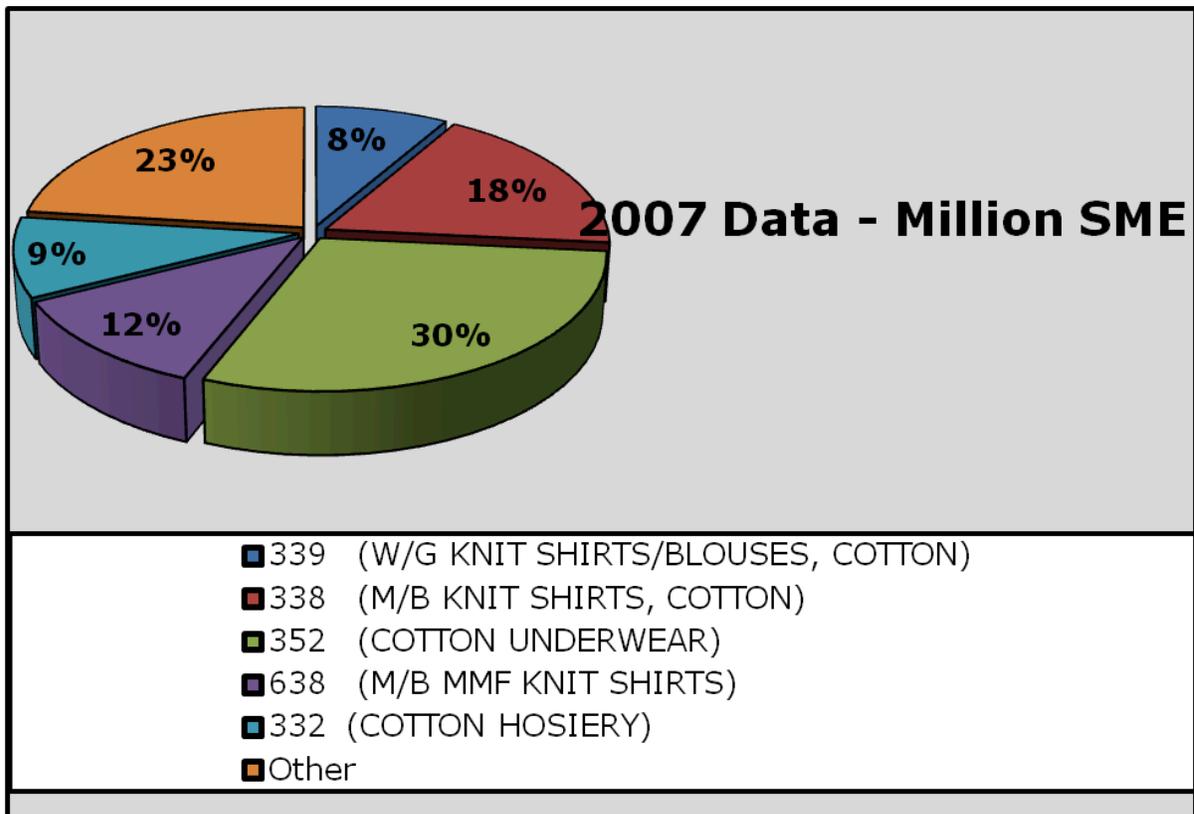


Figure 43: Major Apparel Categories Imported from Honduras to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

Figure 43, illustrates the top apparel categories imported from Honduras to the U.S. in 2007, in terms of unit value. The most significant category was 352, cotton underwear, at 30 percent. Thirty-nine percent of the total was for knit shirts of either cotton or synthetic distinction. The only category represented by synthetics was 638, men and boys knit shirts, at twelve percent. Cotton products represented 65% of the total, and included knit shirts, underwear, and hosiery.

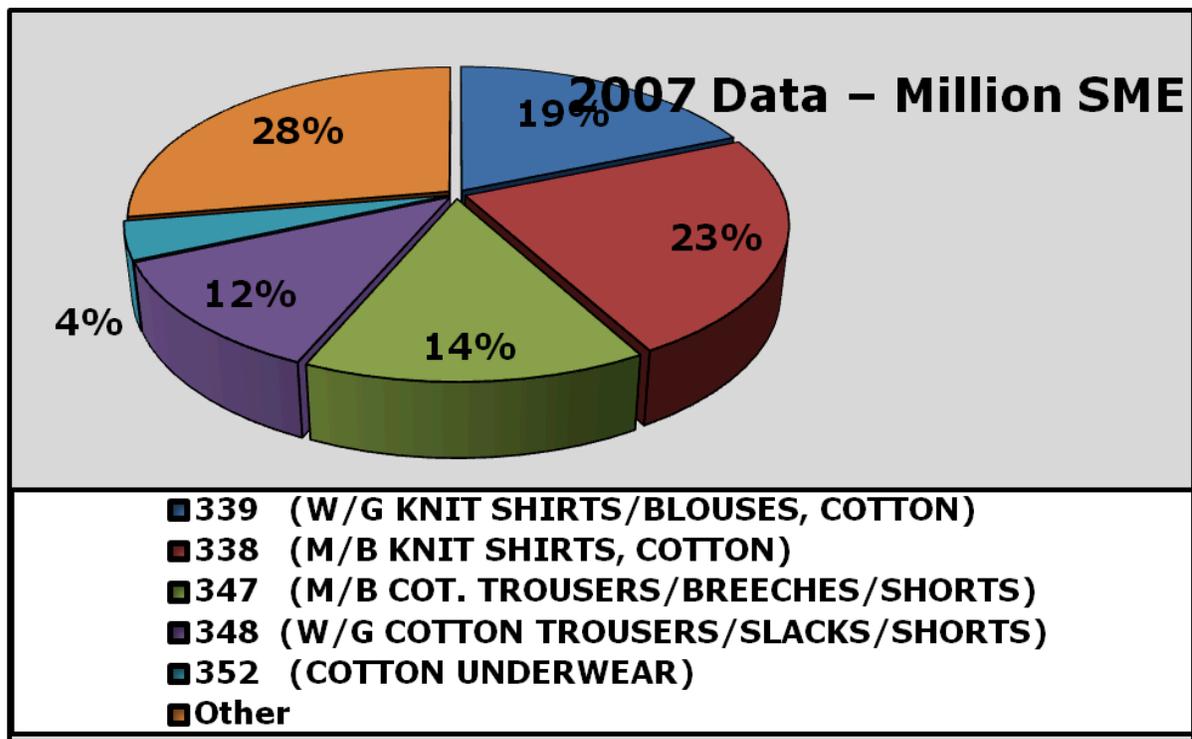


Figure 44: Major Apparel Categories Imported from Nicaragua to the U.S.

Source: Office of Textiles and Apparel (OTEXA), International Trade Administration, U.S. Department of Commerce (2007).

When looking specifically at the top apparel categories imported from Nicaragua to the U.S. based on data value as shown in Figure 44, one can see that all of the distinctive categories were for cotton based products. All of the categories were for knit shirts, underwear, or trousers. Knit shirts were the largest combined category at 42%, and underwear was the smallest category which accounted for four percent of the total.

Trends in Major Apparel Categories

Major trends found when analyzing the major apparel categories for each of the CAFTA countries were as follows:

- Cotton underwear was found in five of the six CAFTA countries top apparel categories.
- Cotton based products were more prevalent than synthetics.
- Knits were more prevalent than woven products.

Diamond Models

A diamond model based on Porter's Four Determinants of a Competitive Advantage was created for each of the CAFTA countries. The diamonds were created based on information

collected during the literature review as well as from the questionnaires and interviews conducted.

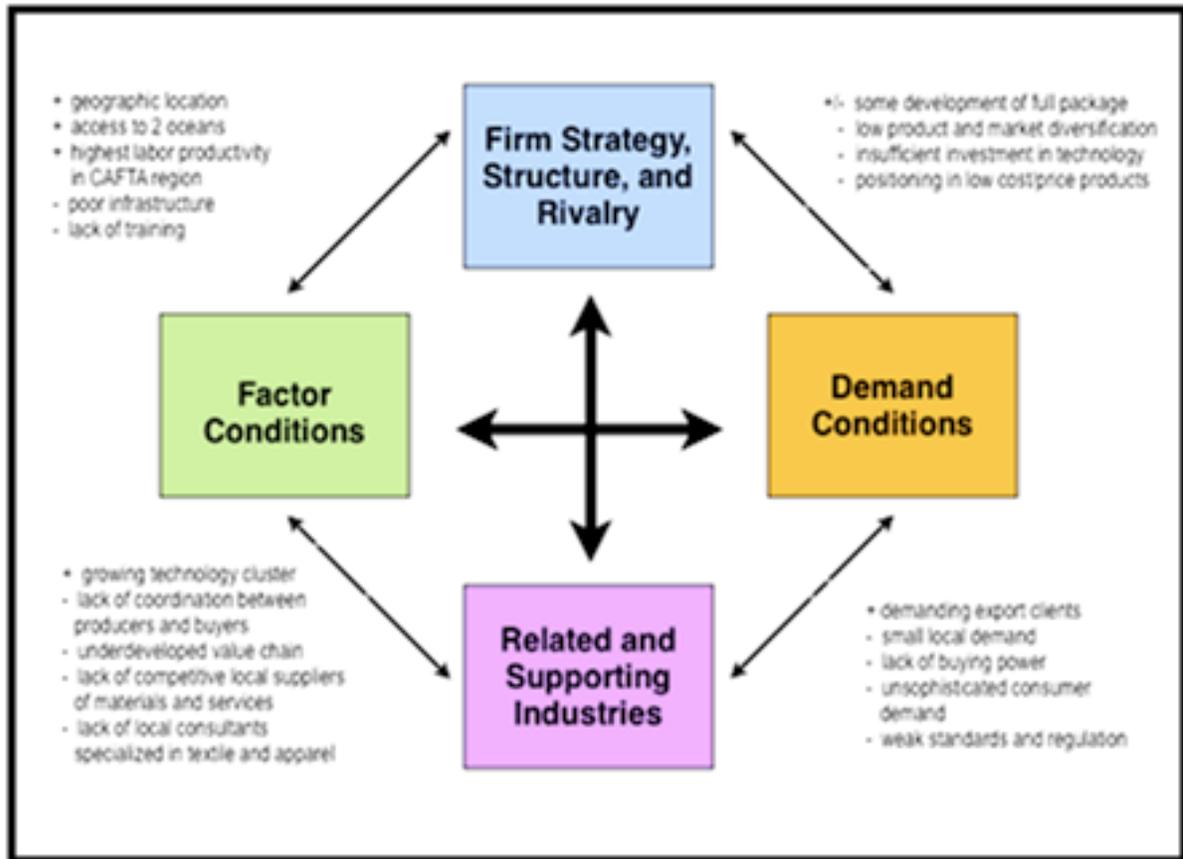


Figure 45: Costa Rican Apparel and Textile “Cluster”

Source: Daniels, B. (2008).

Figure 45 displays an overview of the textile and apparel sector in Costa Rica. Secondary research found the transportation infrastructure rather poor; however, interviews and questionnaires did not find transportation to be a problem. Costa Rica was found to have the highest labor

productivity, but was also the most expensive labor in the CAFTA region. There was a lack of trained workers which may be the reason labor was so costly.

There was growth in the technology cluster, but is still viewed as having insufficient investment (CINDE, 2008). Local suppliers and materials were in demand. The value chain lacks development, and coordination between buyers and suppliers needed improvement. Overall there was a significant demand for consultants in the textile and apparel sector.

A low consumer demand for goods and services was found in the domestic market, in addition to an overall lack of buying power. Export clients were noted as being demanding and main consumers were characterized as being unsophisticated.

Some developments in full package services were noted. Product and market diversification was seen as weak, and current positioning was in low cost products.

Figure 46 illustrates an overview of the textile and apparel sector in Dominican Republic. As seen in Figure 46, the transportation infrastructure was seen as being in good condition. While the transportation infrastructure was viewed in a positive light, there was need for improvement in civil service infrastructures. In general internet access was seen

as being poor, because it was unavailable in many areas. High cost of electricity was another major weakness found in factor conditions.

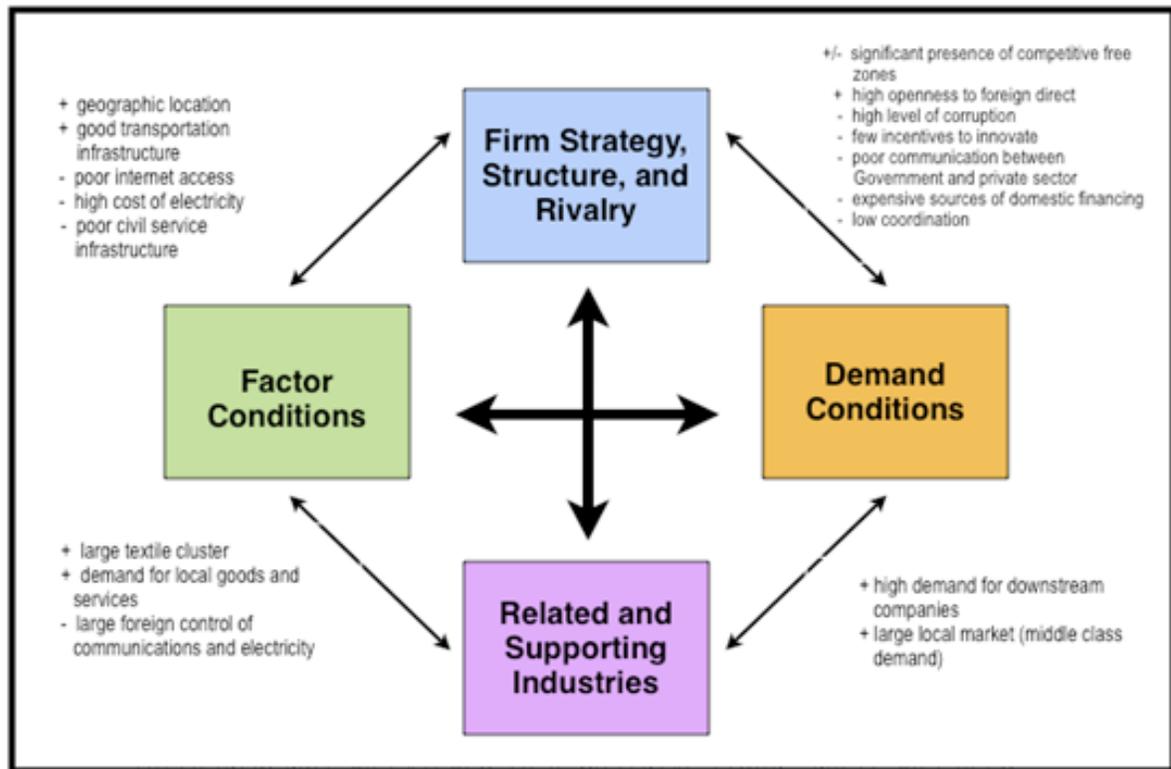


Figure 46: Dominican Republic Apparel and Textile "Cluster"

Source: Daniels, B. (2008).

A large textile cluster was found in the Dominican Republic. The local demand for goods and services was seen as a positive factor. A weakness was found in the heightened control of communications and electricity by foreign companies.

The heightened presence of competitive free trade zones was viewed as both a negative and positive factor. The demand for downstream companies was high in the Dominican Republic. Part of this demand is due to the large local market which consisted mostly of middle class consumers. Additional negative factors included: high levels of corruption, few incentives for innovation, and poor communication and coordination especially between the Government and private sectors.

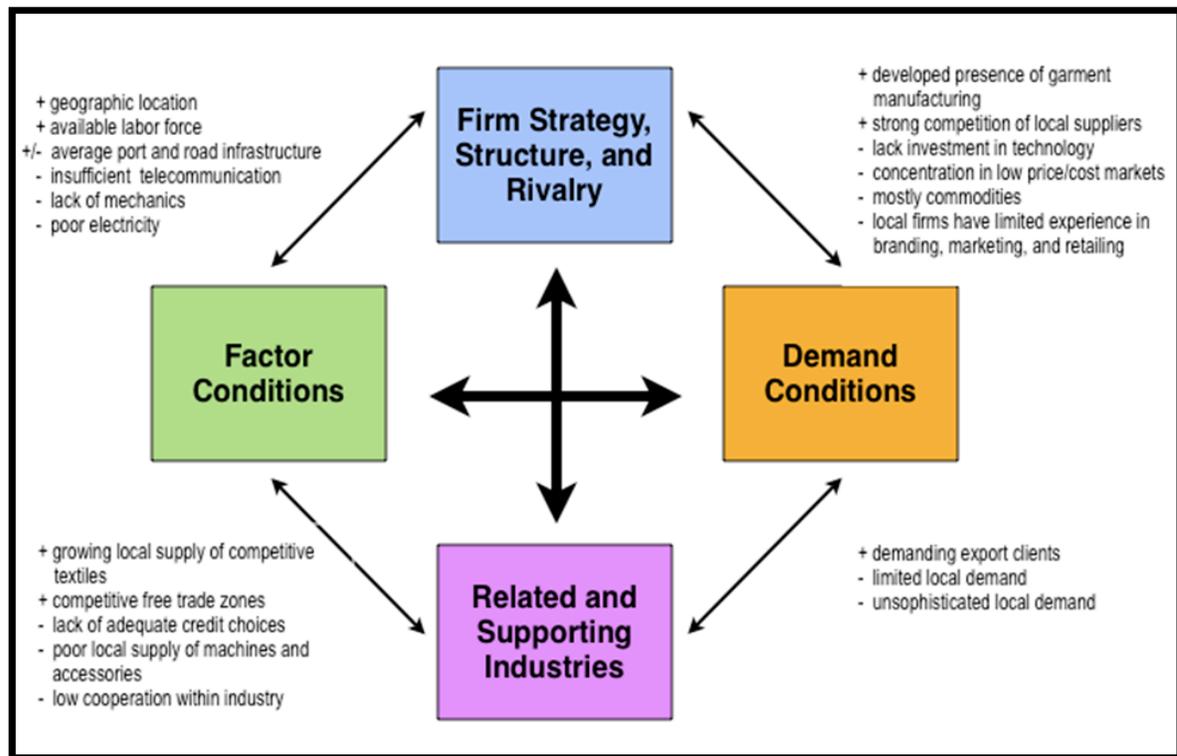


Figure 47: El Salvador Apparel and Textile “Cluster”

Source: Daniels, B. (2008).

Figure 47 is a visual depiction of the textile and apparel sector in El Salvador. El Salvador's was found to have a readily available labor force, with the exception of having a lack of mechanics. The electricity in El Salvador was found to be poor, especially when compared to that of the other CAFTA countries.

The textile sector has shown growth, especially in terms of competitive firms. The free trade zones were also found to be competitive in El Salvador. Local supply of machines and accessories as well as credit choices was found to be inadequate. Overall there was found to be low cooperation within the textile and apparel industry.

There has been an increase in the level of garment manufacturing. With the exception of suppliers of machines and accessories, there has been strong competition of local suppliers. As seen in the other DR-CAFTA countries, El Salvador also had a lack of investment in technology. The local firms in El Salvador were limited in their knowledge and experience in branding, marketing, and retailing.

In terms of demand conditions, El Salvador was found to have demanding export clients. However, local demand in the

area was limited and the local consumers were characterized as being unsophisticated.

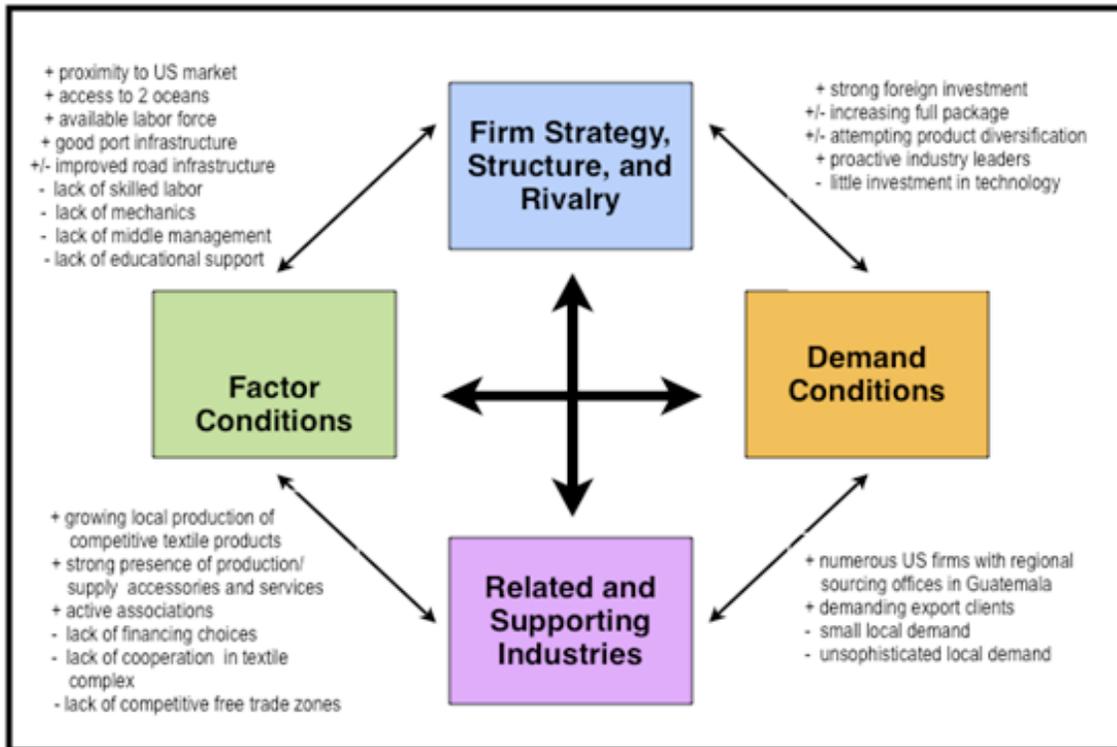


Figure 48: Guatemala Apparel and Textile “Cluster”

Source: Daniels, B. (2008).

An overview of the textile and apparel sector in Guatemala is shown by Figure 48. Guatemala’s transportation infrastructure was fairly strong, the ports were in good shape, and the roads had been improved. Labor, while mostly unskilled, was readily available with the exception of mechanics, and middle management.

There has been growth in local production of competitive products, especially in terms of accessories. This growth could be due to the very active associations found in Guatemala. Financing options were limited and there was a lack of competitive free trade zones.

Local demand was seen as small and unsophisticated, while export clients were viewed as being demanding. A number of US firms were found to have opened sourcing offices in Guatemala.

Expansion of full package services was found, along with attempts in product diversification. A large portion of investments were made from foreign countries, yet investment in technology was limited.

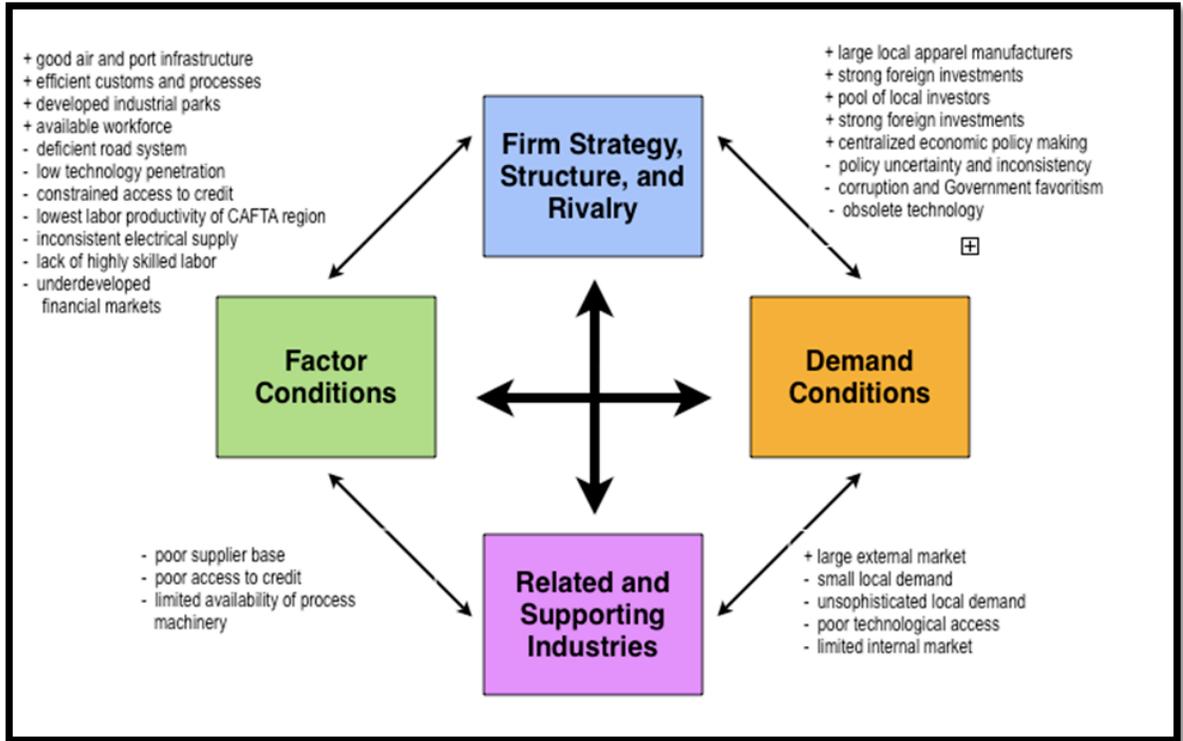


Figure 49: Honduras Apparel and Textile "Cluster"

Source: Daniels, B. (2008).

An overview of the textile and apparel sector in Honduras is illustrated by Figure 49. Honduras was found to have a good air and port infrastructure, but a deficient road system. The customs and processes were found to be efficient. The workforce in Honduras was found to be readily available, but lacked highly skilled labor. The country was also found to have the lowest labor productivity in the CAFTA region. As noted in the other CAFTA countries, technology was limited, and the financial markets were underdeveloped.

The related and supporting industry factors were found to be poor in Honduras. Overall the supplier base was poor, in particular, there was a limited availability of process machinery. There was also poor access to credit.

Honduras had a large external market, yet a limited internal market. The local demand was small and of unsophisticated nature.

There was a significant presence of apparel manufacturers. A large portion of investments in the industry were made by foreign countries. In addition to the current foreign investments there a large pool of local investors was found. The government was found to be highly corrupt, and showed many signs of favoritism.

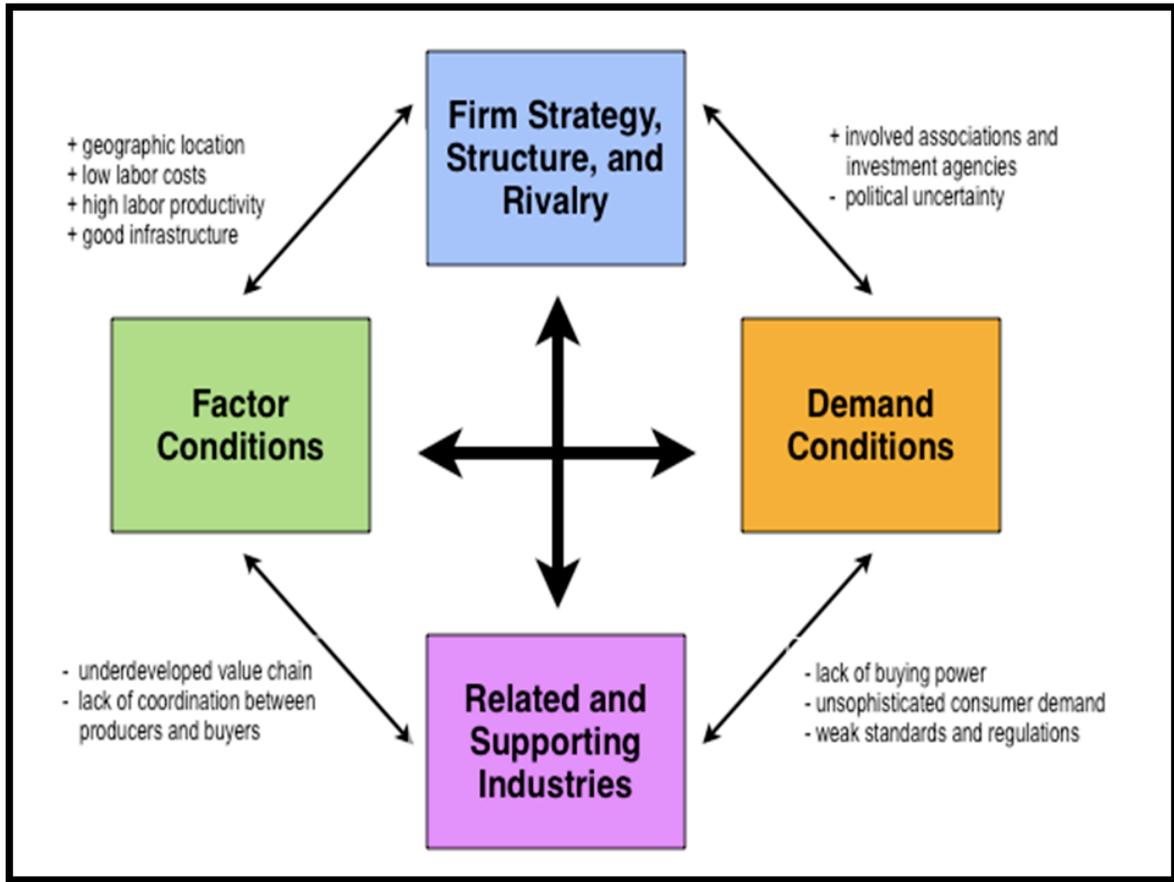


Figure 50: Nicaragua Apparel and Textile "Cluster"

Source: Daniels, B. (2008).

Figure 50 visually depicts an overview of Nicaragua's textile and apparel sector. Nicaragua was found to have the lowest labor costs, but coupled with the highest labor productivity. Overall the infrastructure was found to be in good shape.

Nicaragua and Guatemala were found to have the most involved associations. However, Nicaragua was found to have high political uncertainty.

The textile and apparel value chain was underdeveloped in Nicaragua. Another major issue found in Nicaragua was the lack of coordination between buyers and producers.

Phase III Results

Sample Description

The research sample consisted of 22 companies from the fiber, textile, apparel, or auxiliary sectors who are considered to be leaders in the United States textile and apparel industry. The sample was broken down into three categories: (1) manufacturers, (2) retailers, and (3) trade associations. The sample represented 11 manufacturers and 7 retailers. The total included four trade associations, with expert knowledge on the region. For the remainder of the table, and figures; manufacturers will be represented by a "M", retailers "R", and trade associations will be abbreviated as "TA". Table 18, provides additional information about the sample including category and position of respondent.

Table 18: Sample Description

Company Code	Category	Position
Company A	Manufacturer	
Company B	Manufacturer	President
Company C	Manufacturer	
Company D	Manufacturer	VP Purchasing/Procurement
Company E	Manufacturer	
Company F	Trade Association	
Company G	Trade Association	
Company H	Retailer	Associate Sourcing Specialist
Company I	Retailer	Sr. Technical Manager
Company J	Manufacturer	EVP Product Development
Company K	Retailer	Sourcing Director
Company L	Trade Association	Managing Director
Company M	Retailer	Sourcing Manager
Company N	Manufacturer	
Company O	Manufacturer	
Company P	Retailer	Sr. Manager
Company Q	Manufacturer	
Company R	Retailer	
Company S	Manufacturer	
Company T	Retailer	
Company U	Trade Association	
Company V	Manufacturer	

Source: Daniels, B. (2008).

Primary data were gathered from each of the sample companies. A questionnaire was used to administer the interviews. The questionnaire was developed using a combined deductive/inductive process. Deductive logic was used to query the competitive advantage variables and the factors of competitiveness. Inductive logic was used in order to analyze the four fundamental determinants (factor conditions; firm structure, strategy and rivalry; demand conditions; and related and supporting industries) from Michael Porter's, *Competitive Advantage of Nations*.

Interview Results

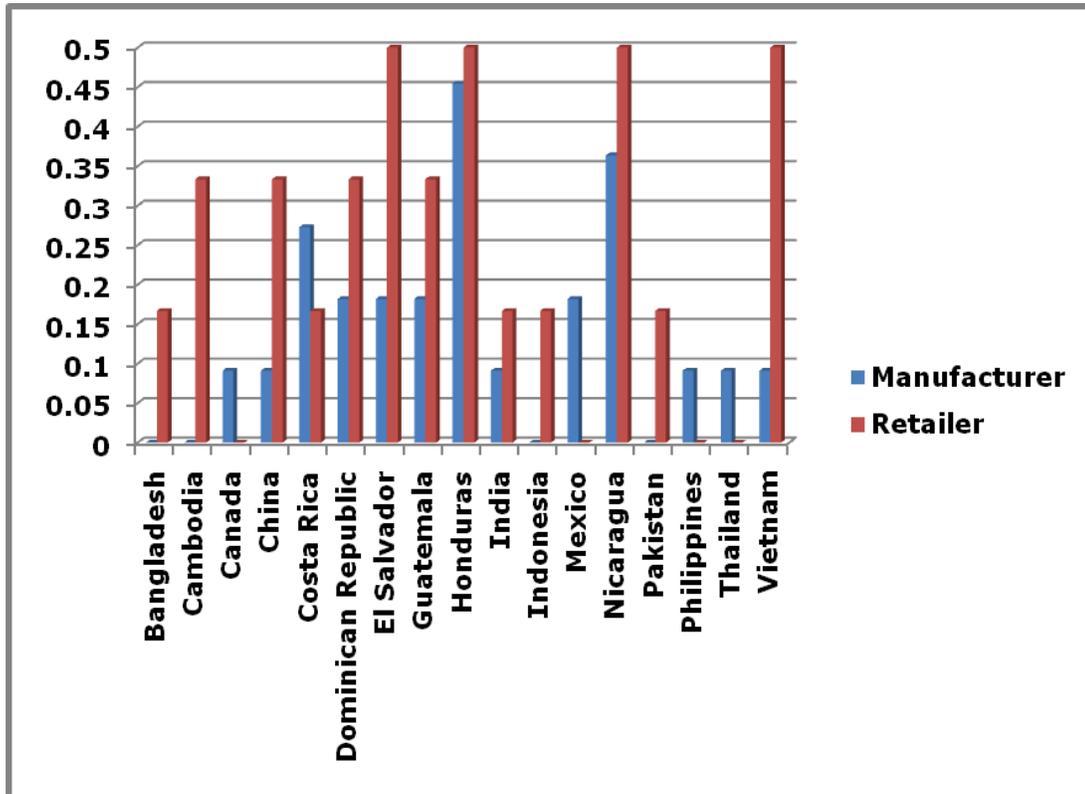


Figure 51: Countries Most Favorable to Include in Supply Chain

Source: Daniels, B. (2008).

Figure 51, shows a comparison of the countries that were found to be most favorable to include in the company’s supply chain. All together, seventeen countries were viewed as being most favorable to include in a company’s supply chain. Manufacturers stated 13 different countries as being most favorable, and retailers also stated 13 countries. Eight of

the countries were only seen as being favorable by either the manufacturers or the retailers.

Manufacturers found Honduras to be the most favorable country to include in the supply chain. The second most favorable country for manufacturers was Nicaragua, and Costa Rica was third.

Retailers equally found El Salvador, Honduras, Nicaragua, and Vietnam to be the most favorable countries to include in their supply chain. Overall, Honduras was the most favorable, and Nicaragua was the second most favorable country to include in supply chains.

Table 19: Comparison of Average Lead Times for Companies

Company Code	Lead Time	Category
Company A	2-10 Days	Manufacturer
Company B	14-21 Days	Manufacturer
Company D	15-25 Days	Manufacturer
Company H	150 Days	Retailer
Company J	49-98 Days	Manufacturer
Company K	97 Days	Retailer
Company M	90-120 Days	Retailer
Company O	90-120 Days	Manufacturer
Company P	40-90 Days	Retailer
Company Q	84-168 Days	Manufacturer
Company R	90-105 Days	Retailer
Company V	14 Days	Manufacturer

Source: Daniels, B. (2008).

Table 19 is a comparison of average lead times stated by companies. The lead times ranged from 2 days to 168 days. The large range in lead times was because companies were involved in different processes and segment in the supply chain. In addition some companies viewed lead time as beginning with placement orders, while other saw it as beginning once raw materials had been obtained.

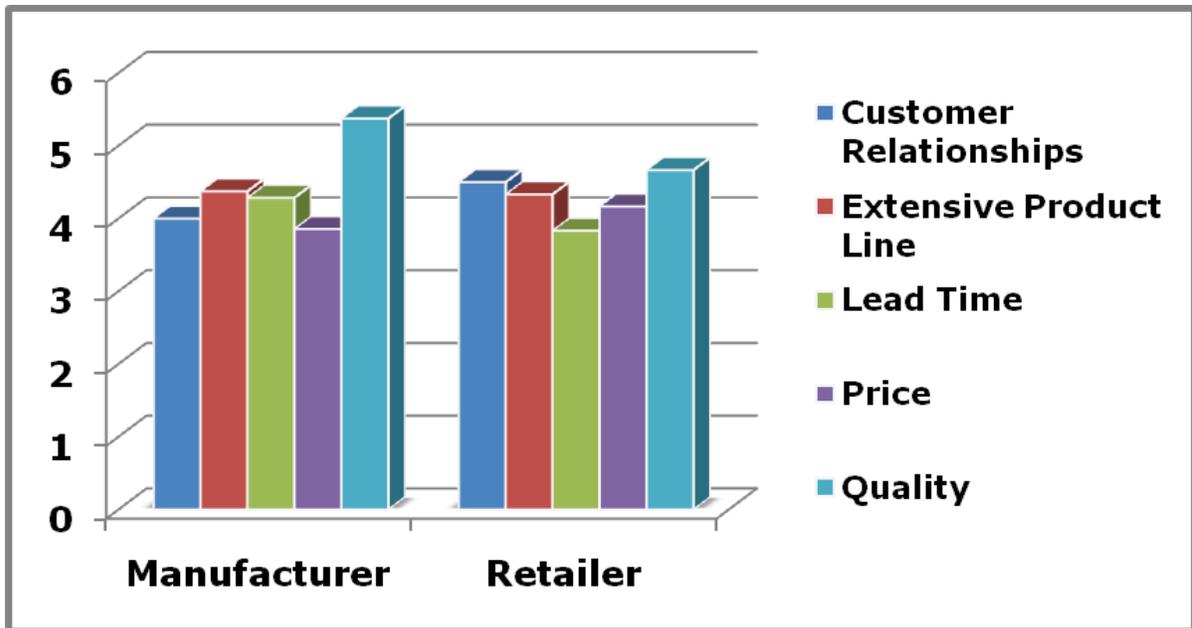


Figure 52: Comparison of Competitive Advantage

Source: Daniels, B. (2008).

Figure 52, gives a comparison of the degree of perceived competitive advantages. Overall quality was the factor perceived as being the competitive advantage for both manufacturers and retailers. For retailers the second highest factor stated to be a competitive advantage was customer relationships, which ranked in second to last for manufacturers. In each group, extensive product was viewed as being a higher competitive advantage than lead time.

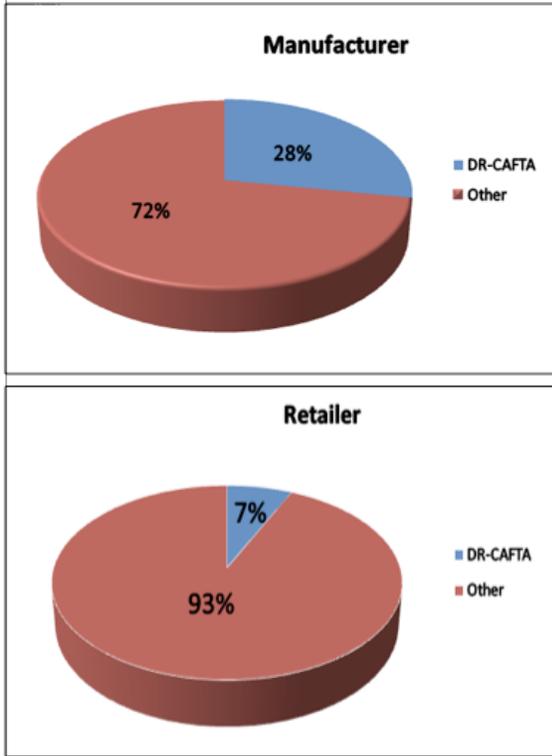


Figure 53: Percentage of Business Transactions in the CAFTA Region

Source: Daniels, B. (2008).

Figure 53 is a comparison of the percentage of business transactions that take place in the CAFTA region. As one can see from the pie chart above, 28% of business transactions for manufacturers take place in the CAFTA region. On average the retailers only conduct 7% of their business transactions in the CAFTA region. None of the persons surveyed said they conducted more than half of their business transactions in the DR-CAFTA business region.

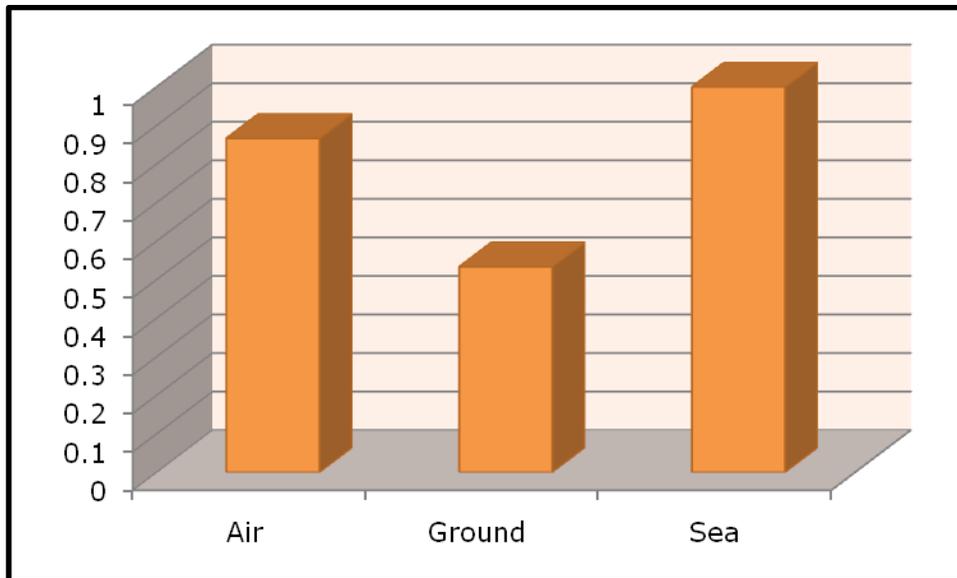


Figure 54: Comparison of Methods used for Transportation

Source: Daniels, B. (2008).

Figure 54, represents the type of transportation that companies are using when sourcing goods. All companies stated the use of air transportation; however, even more notably, all but two companies said they used air transportation on a normal basis.

The following four tables (19-22) represent responses from one of the questions in the survey. Respondents were asked to place an X by each factor that caused a particular action. There were 11 possible factors conditions and four actions as, shown by Figure 54:

Conditions	Actions
<ul style="list-style-type: none">• Access to major public utilities• Access to capital• Advanced services• Flexibility• High speed-to-market• High defect rate• Inadequate workforce• Low labor cost• Low production cost (excluding labor)• Poor infrastructure• Superior product quality	<ul style="list-style-type: none">• Select a country for facility• Withdraw from Country• Select a partner• Terminate relations with partner

Figure 55: Possible Conditions and Actions

Source: Daniels, B. (2008).

Table 20: Comparison of Factors that have Led Company to Select a Country for Location of Facility

Company Code	Category	Access to Major Public Utilities	Access to Capital	Advanced Services	Flexibility	High Speed to Market	Low Labor Cost	Low Production Cost	Superior Product Quality
Company C	M						X	X	
Company D	M					X	X		
Company H	R	X	X	X	X	X	X	X	X
Company I	R						X	X	
Company J	M		X				X		
Company K	R	X					X	X	
Company L	TA								
Company M	M			X	X		X		X
Company P	R				X				
Company R	R			X		X	X	X	
Mode		2	2	3	3	3	8	5	2

Source: Daniels, B. (2008).

Table 20 represents the factors that have led a company to select a country to be the location of their facility. The factor selected the most was low labor cost; while factors

such as: access to major public utilities, access to capital, and superior product category were chosen the least.

Table 21: Comparison of Factors that have Led Company to Withdraw from a Country

Company Code	Category	Lack of Access to Major Public Utilities	Lack of Access to Capital	Low Flexibility	High Defect Rate	Inadequate Workforce	Poor Infrastructure
Company G	TA						X
Company H	R					X	X
Company J	M					X	X
Company L	TA				X	X	X
Company P	R			X			
Company R	R						X
Mode		0	0	1	1	3	5

Source: Daniels, B. (2008).

There were six possible factors as to why a company withdrew from a country. Table 21 represents which factors were the cause of a company's withdrawal from a particular country. The majority of companies said withdrawal was due to poor infrastructure; while the lack of access to major public utilities and the lack of access to capital were not once mentioned as a contributing factor. Inadequate workforce was

noted three times for causing a withdrawal, in addition to low flexibility and high defect rate each being noted once.

Table 22: Comparison of Factors that have Led Company to Select a Partner

Company Code	Category	Access to Major Public Utilities	Access to Capital	Advanced Services	Flexibility	High Speed to Market	Low Labor Cost	Low Production Cost	Superior Product Quality
Company C	M						X	X	
Company H	R			X	X	X	X	X	X
Company I	R	X	X	X	X	X			X
Company J	M		X	X		X	X		
Company K	R			X	X	X			X
Company M	M			X	X			X	X
Company N	M	X	X		X				
Company O	M				X	X	X	X	X
Company Q	M			X		X			
Company R	R			X	X	X			X
Mode		2	3	7	7	7	4	4	6

Source: Daniels, B. (2008).

From Table 22, one can see that three factors (advanced services, flexibility, and high speed to market), were equally found to be factors that led a company to select a partner.

Superior product category was another common factor chosen, in addition to low labor cost and low production cost. The least chosen factors were access to major public utilities and access to capital.

Table 23: Comparison of Factors that have Led Company to Terminate Relations with Partner

Company Code	Category	Access to Capital (e.g. banks)	High Defect Rate	Inadequate Workforce	Poor Infrastructure
Company H	R		X		X
Company I	R		X		
Company J	M		X	X	
Company K	R	X	X		
Company M	R		X	X	
Company O	M		X		
Company Q	M				X
Company R	R				
Mode		1	6	2	2

Source: Daniels, B. (2008).

Table 23 is a comparison of the factors which caused a company to terminate a partnership. There were four possible factors responsible for relations to be ended. The majority of people said high defect rate was the factor condition that caused the company to take action. Four companies said inadequate workforce and poor infrastructure caused this action. Only 1 company said lack of access to capital caused a partnership to come to an end.

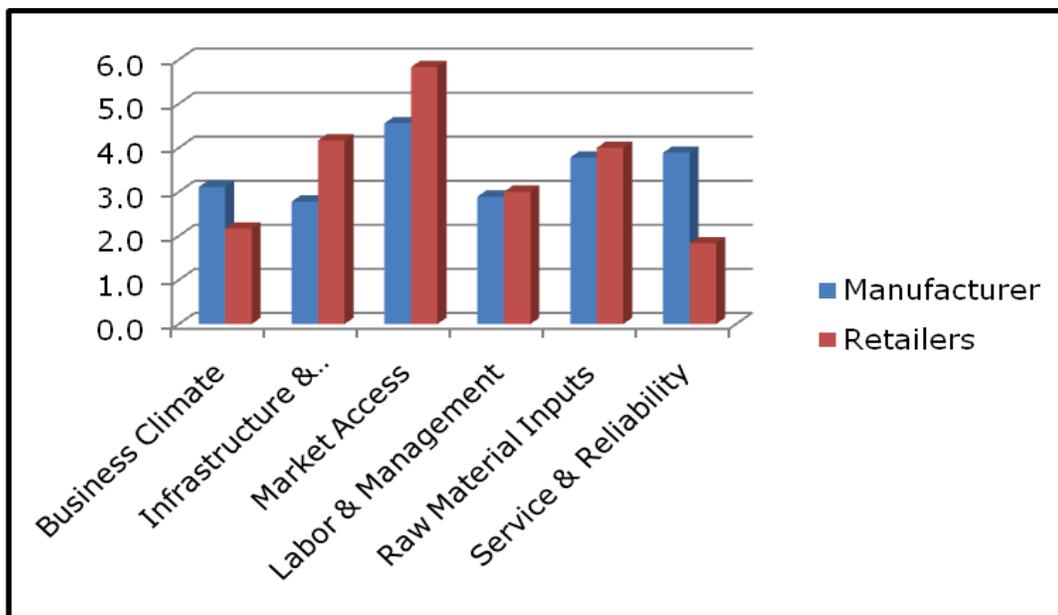


Figure 56: Comparison of Factors Important in Overall Success

Source: Daniels, B. (2008).

Figure 56 shows a comparison of factors important in overall success from both retailers and manufacturers

standpoints. Market access was most important for manufacturers and retailers. Raw material inputs and service and reliability were the second and third most important factors for manufacturers. Whereas infrastructure and proximity, and raw material inputs were the second and third most important factors for retailers.

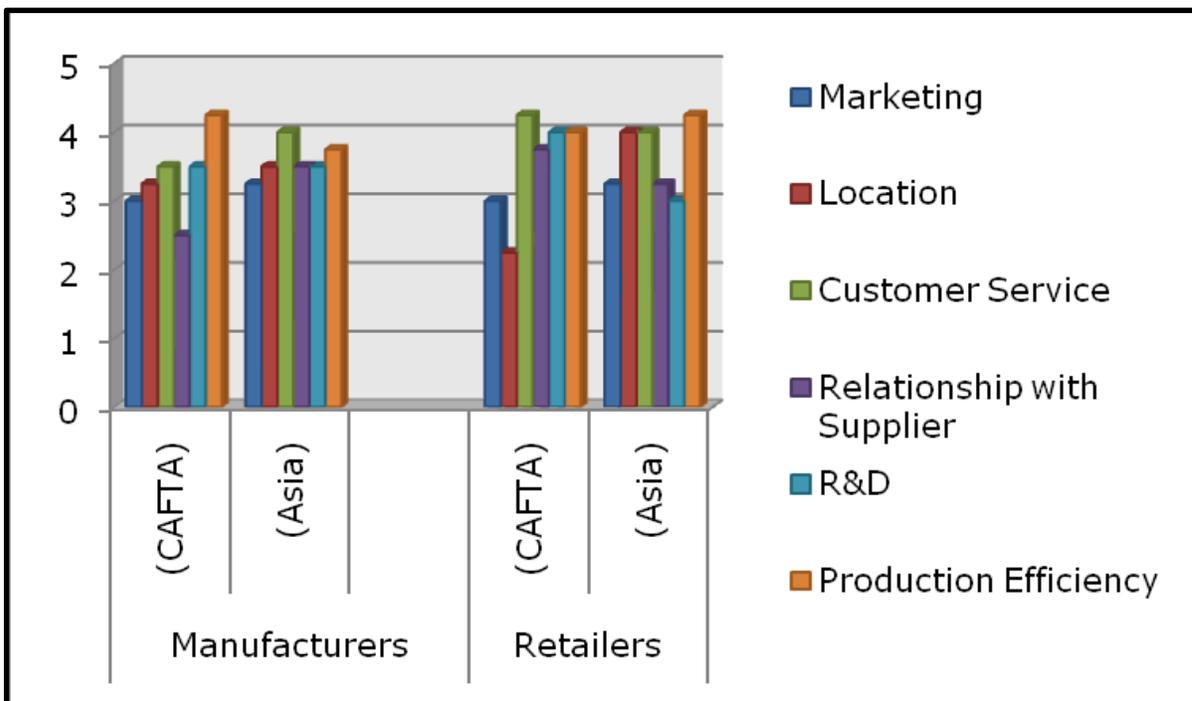


Figure 57: Comparison of Satisfaction with Select Business Factors

Source: Daniels, B. (2008).

Figure 57 shows the results from one of the questions in the survey. The respondents were asked to keep one business relationship in mind, and rate their satisfaction level with

six business factors, in regards to decisions made in the DR-CAFTA vs. Asia regions. Manufacturers were more satisfied with production efficiency in the CAFTA region than in Asia. Manufacturers were the least satisfied with relationships with suppliers in the CAFTA region and least satisfied with marketing in Asia. Retailers were least satisfied with location in CAFTA and the most satisfied with customer service. In Asia retailers were least satisfied with research and development and most satisfied with production efficiency.



Figure 58: Comparison of Factors Important in Sourcing

Source: Daniels, B. (2008).

Figure 58, shows a comparison of the factors important in sourcing. One can see that customer service and price were most important to retailers. Location was the least important factor for retailers. The most important factors in sourcing for manufacturers was price, lead time, trade agreements, labor costs, government regulations, location, and workforce.

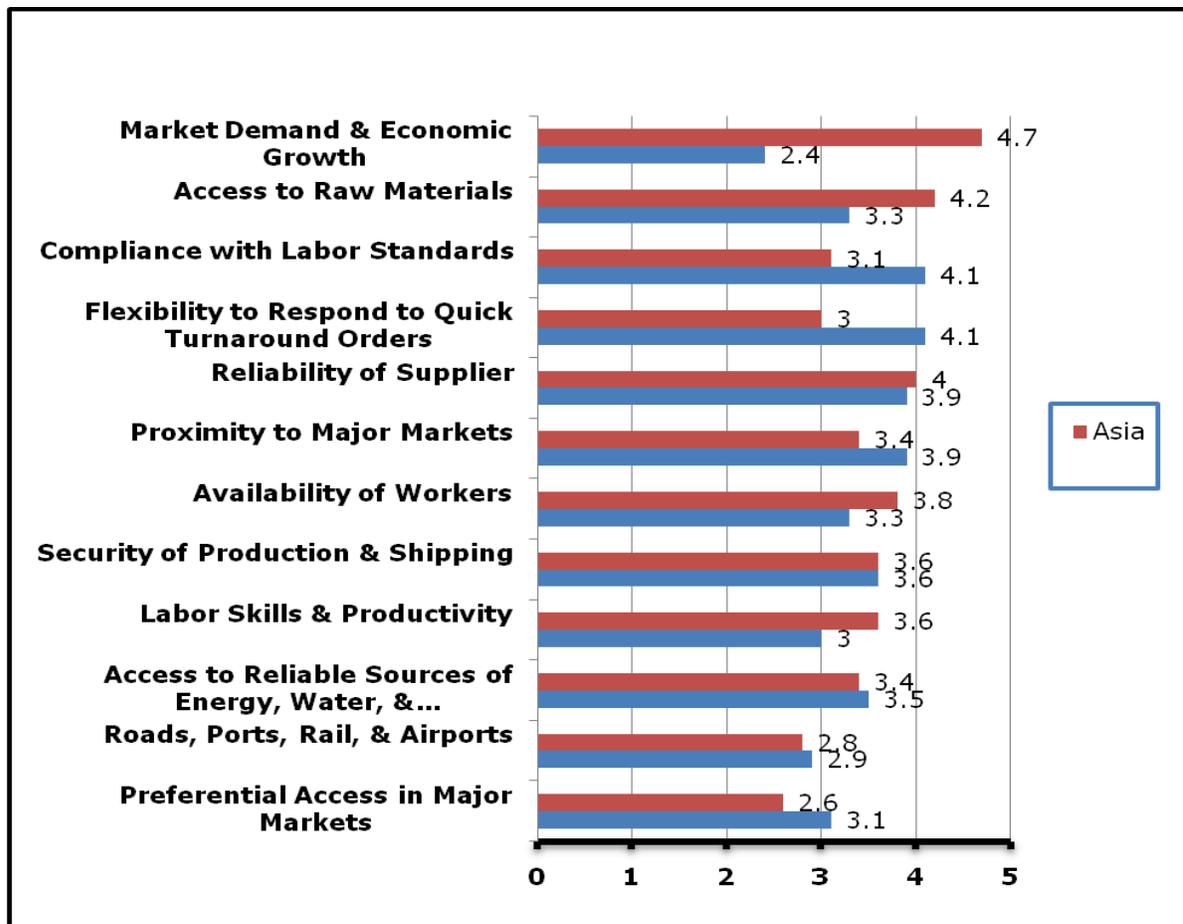


Figure 59: Comparison of Satisfaction of Factors in Asia Versus the CAFTA

Region

Source: Daniels, B. (2008).

Figure 59, visually depicts the results from a question asked in the questionnaire. Respondents were asked to compare specific factors in the DR-CAFTA versus Asia region. As one can see market demand and economic growth received the highest score for the Asia factors. Transportation infrastructures and preferential access in major markets received the lowest scores for Asian factors. The top rated factors in the CAFTA region were: compliance with labor standards; flexibility to respond to quick turnaround orders; reliability of supplier; and proximity to major markets. The lowest rated factor in the CAFTA region was market demand and economic growth.

Phase IV Results

Research Objective 3

Key Findings

This research found that there are opportunities for the US textile firms to manufacture/partner within DR-CAFTA countries. One main opportunity arises from the lack of raw materials in the CAFTA region. The CAFTA region imports a majority of yarns and fabrics for manufacturing productions. These materials could be imported from the US faster than from Asia.

Overview

Research objective three was to determine if there are opportunities for the US textile firms to manufacture/partner within DR-CAFTA countries. As stated in chapter III deductive logic was used to test the factors of competitiveness. Previous research found six main factors of competitiveness: business climate; infrastructure and proximity to markets; market access; labor and management; raw-material inputs; and level of service provided and reliability of supplier.

<p>Business Climate</p> <ul style="list-style-type: none"> +/- Political Stability + Safety of Personnel + Security of production and shipping - Transparent and predictable legal, commercial, and regulatory system - Minimal administrative burden and corruption + Compliance with internationally recognized health and labor standards + Free Trade Zones - Market demand and economic growth <p>Infrastructure and Proximity to Markets</p> <ul style="list-style-type: none"> - Roads, ports, rail and airports for moving goods into and out of the country + Shipping and other transportation times and costs + Proximity to major markets - Access to reliable sources of energy, water, and telecommunications <p>Market Access</p> <ul style="list-style-type: none"> + Preferential access in major markets 	<p>Labor and Management</p> <ul style="list-style-type: none"> + Availability of workers and competition for workers from other sectors +/- Compensation rates + Labor skills and productivity - Availability of qualified managers, including middle management <p>Raw-material Inputs</p> <ul style="list-style-type: none"> - Access to quality and cost-competitive domestic or regional yarn and fabric production + Tariffs on imports of raw materials + Rules of origin for trade preferences - Cost and availability of capital to invest in new machinery and purchase raw materials <p>Level of Service Provided and Reliability of Supplier</p> <ul style="list-style-type: none"> + Reputation for quality and on-time delivery + Existing business networks (supply chain linkages, relationships with customers) - Flexibility and variety in styles or products and lot sizes offered + Lead time and flexibility to respond to quick turnaround orders
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Figure 60: Comparison of the Factors of Competitiveness from Manufacturers Perspective

Source: Daniels, B. (2008).

Figure 60, visually depicts how U.S. manufacturers ranked the aforementioned factors of competitiveness in the DR-CAFTA region.

Based on the Figure 60, one can see that manufacturers considered business climate, market access, labor and

management, and level of service provided and reliability of suppliers as positive factors. Infrastructure and proximity to markets as well as raw material inputs were factors that were overall neither positive nor negative. While proximity to markets received positive notes, infrastructure received negative notes. During interviews, infrastructure was not viewed as a major problem; however, questionnaires and secondary research viewed this as an area in need of improvement.

Access to quality and cost competitive raw material inputs was seen as a negative factor. There is a need for raw materials in the DR-CAFTA region. Countries in the CAFTA region are importing the majority of the yarns and fabrics used in apparel production. Guatemala and Honduras are the only two countries that have their own cotton supply. Currently a lot of the materials are being sourced from the Asia region. These same materials are produced and readily available in the United States. It was also found that the time to source materials was important to the CAFTA region. U.S. textile and apparel manufacturers have many opportunities to set up partnerships with those companies already operating in the CAFTA region, because they already have the product

that CAFTA countries need and can get it to them faster than an Asian company can in most cases.

Research Objective 4

Key Findings

Research objective four found that there are opportunities for the U.S. textile firms to market products (yarn/fabrics) to DR-CAFTA firms. Secondary and primary research found that there was a demand for textile and apparel materials in the DR-CAFTA region, and that there was an interest in buying these materials from U.S. companies.

Overview

Research objective four was to determine if there are opportunities for the U.S. textile firms to market products (yarn/fabrics) to DR-CAFTA firms.

<p>Business Climate</p> <ul style="list-style-type: none"> +/- Political Stability + Safety of Personnel + Security of production and shipping - Transparent and predictable legal, commercial, and regulatory system - Minimal administrative burden and corruption + Compliance with internationally recognized health and labor standards + Free Trade Zones - Market demand and economic growth <p>Infrastructure and Proximity to Markets</p> <ul style="list-style-type: none"> - Roads, ports, rail and airports for moving goods into and out of the country + Shipping and other transportation times and costs + Proximity to major markets - Access to reliable sources of energy, water, and telecommunications <p>Market Access</p> <ul style="list-style-type: none"> + Preferential access in major markets 	<p>Labor and Management</p> <ul style="list-style-type: none"> + Availability of workers and competition for workers from other sectors - Compensation rates + Labor skills and productivity - Availability of qualified managers, including middle management <p>Raw-material Inputs</p> <ul style="list-style-type: none"> - Access to quality and cost-competitive domestic or regional yarn and fabric production + Tariffs on imports of raw materials + Rules of origin for trade preferences - Cost and availability of capital to invest in new machinery and purchase raw materials <p>Level of Service Provided and Reliability of Supplier</p> <ul style="list-style-type: none"> + Reputation for quality and on-time delivery + Existing business networks (supply chain linkages, relationships with customers) - Flexibility and variety in styles or products and lot sizes offered + Lead time and flexibility to respond to quick turnaround orders
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Figure 61: Comparison of the Factors of Competitiveness from Retailers Perspective

Source: Daniels, B. (2008).

Figure 61, shows how U.S. retailers ranked the previously mentioned factors of competitiveness in the DR-CAFTA region. Overall manufacturers and retailers ranked the DR-CAFTA region the same for the factors of competitiveness. The only notable differences were found during interviews. Retailers also

found the availability of raw materials to be a negative factor. However, lack of raw material inputs were not as large of a problem for retailers, because they are often not directly involved in this process and allow someone else to worry about this problem.

There is a need for raw materials in the DR-CAFTA region. Countries in the CAFTA region are importing the majority of the yarns and fabrics used in apparel production. Guatemala and Honduras are the only two countries that have their own cotton supply. Currently a lot of the materials are being sourced from the Asia region. These same materials are produced and readily available in the United States. It was also found that the time to source materials was important to the CAFTA region. U.S. textile and apparel retailers have many opportunities to market their products to companies already operating in the CAFTA region, because they already have the product that CAFTA countries need and can get it to them faster than an Asian company can in most cases.

Chapter V

Summary, Conclusions, and Recommendations

Summary

The purpose of this research was to determine opportunities for the U.S. textile industry based on provisions from the Dominican Republic Free Trade Agreement. Michael Porters *Determinants of a National Competitive Advantage* (1990) was the conceptual framework used in this study. The research used a three-phase methodology. The first phase was exploratory in nature and involved an analysis of the trade patterns between the U.S. and DR-CAFTA regions.

A concurrent triangulation strategy was used in the second phase of the study in order to gather both quantitative and qualitative data. Interviews and questionnaires were conducted during the second phase. Companies with and without a presence in the DR-CAFTA region were part of this study.

Summary of Results

RO1: Create a database of U.S. textile complex companies with a presence in DR-CAFTA

Six databases were created, one for each of the DR-CAFTA countries. Primary and secondary research was used to create the databases. The database shows what products are being produced by companies in the six DR-CAFTA countries.

RO2: To examine infrastructures of DR-CAFTA countries

Secondary and primary research was used to look at the infrastructures on each of the DR-CAFTA countries. A diamond model was created for each of the countries. Each diamond had four categories of information: (1) factor conditions, (2) demand conditions, (3) related and supporting industries, and (4) firm strategy, structure, and rivalry. Factor conditions included factors of production such as productivity, labor supply and infrastructure. Demand conditions included the nature of demand in U.S. and Central American markets. Related and supporting industries included factors such as which partnerships with world-class suppliers exist with U.S. textile manufacturers. The nature of these partnerships, and

the availability of raw materials and component parts. Firm strategy structure and rivalry provided information on factors such as: the characteristics of Central American firms, and what competition exists.

RO3: To determine if there are opportunities for U.S. textile firms to manufacture/partner within DR-CAFTA countries

Overall, secondary and primary research showed that the main opportunities for U.S. textile firms to manufacture/partner within DR-CAFTA countries can be found by using the database. The database shows which companies are already setup in the area. Any of the companies already located in any of the DR-CAFTA countries can be seen as a potential company to form a partnership.

RO4: To determine if there are opportunities for U.S. textile firms to market products (yarn/fabrics) to DR-CAFTA firms

Through secondary research, interviews, questionnaires, databases, and country profiles it was determined that there are opportunities to market products (yarn/fabrics) to DR-CAFTA firms. The DR-CAFTA countries were fairly strong in most areas investigated with the exception of raw-material

inputs. The DR-CAFTA countries are greatly lacking in local production of yarns and fabrics. Currently a lot of yarn and fabric is being sourced from Asia, and the United States. Both the cost benefits from DR-CAFTA and the close proximity of the United States to DR-CAFTA are significant reasons as to why the United States should market more products to the DR-CAFTA region.

Conclusions

1. Cotton underwear was found in five of the six CAFTA countries top apparel categories.
2. Cotton based products were more prevalent than synthetics in the DR-CAFTA region.
3. Knits were more prevalent than woven products in the DR-CAFTA region.
4. The conceptual framework by Porter was proven to be beneficial in accessing the CAFTA textile and apparel industries competitive advantages.
5. A wide variety of companies were found that are already conducting business in the DR-CAFTA region, any of these companies can be seen as potential partnerships for U.S. textile firms.

6. The DR-CAFTA region is limited in availability of raw materials. U.S textile firms can market yarn and fabric to the DR-CAFTA region.
7. Costa Rica and Nicaragua had the highest labor productivity levels.
8. Costa Rica had the highest labor wages.
9. Nicaragua had the lowest labor wages.

Limitations of Study

1. Research was focused on cotton-rich product categories: While these categories are representative of the knit sector, results cannot be generalized to other product categories.
2. Data were not equally accessible for all countries.
3. Depending on the company interviewed, there could be a potential inability error in that respondents may not have had access to all the necessary data needed to answer all questions.

Recommendations

1. Future research could examine more of the local companies currently operating in the DR-CAFTA region.

2. Future research could focus on additional product categories.

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APPENDIX A: INITIAL CONTACT LETTER

Date
Contact Name
Company
Address
City, State Zip

Dear Contact Name:

<Reference name, company>, suggested that I contact you regarding my research study. My study focuses on DR-CAFTA, and the opportunities it presents to US textile and apparel companies. You have been selected to participate in this study due to the nature of your company, and if you agree to take part, your confidentiality will be secured.

Your participation is voluntary. I will be conducting informational interviews in your area the week of _____. I would like to set up a time to speak with you or other members of your company involved in global trade, sourcing, strategy, or merchandising as soon as possible, If an on-site visit is not possible, then I would like to arrange a conference call when convenient.

I have attached a survey to this email, it will give you a better idea of the project. I will follow-up with you via email or by telephone to discuss a possible meeting time. Your cooperation is greatly appreciated. If you have any questions concerning the study, please contact me via email at the address below.

Thank you for your time, and I look forward to hearing from you.

Sincerely,

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APPENDIX B: INTERVIEW INSTRUMENT

Interview Questions

Respondent Information

Name: _____

Company/Title: _____

Questions

1. My research indicates that your company currently (does/ does not) conduct business in the CAFTA region but has in the past, and that your product line includes; (XXXXXXXXXXXXXX), is this true? Are there any other of your projects which involves business in CAFTA (please list them)?

2. Which country(ies) is/are most favorable for you to include in your supply chain, and why? (IE: "favorable" being in terms of: speed, cost, established networks, partnerships, tax breaks, reliability, quality...etc.)

3. What is the average lead time of your company, and what is the goal for the future?

4. In your opinion what do you consider to be the competitive advantage of your company, and to what degree?

5. With one business relationship in mind, please indicate with an X which of the following conditions (if any) has led your company to take action.

Condition	Action			
	Select a Country for Facility	Withdraw from Country	Select a Partner	Terminate Relations with Partner
Access to Major Public Utilities (e.g. energy)				
Access to Capital (e.g. banks)				
Advanced Services (e.g. full package)				
Flexibility				
High Speed-to-Market				
High Defect Rate				
Inadequate Workforce				
Low labor Cost				
Low Production Cost (excluding labor)				
Poor Infrastructure				
Superior Product Quality				

6. How do you feel that the resources and relations available in your CAFTA location(s) enable your production unit to be more efficient, innovative, or productive?

7. What percentage of your business transactions take place in the CAFTA region?

8. Do you import any raw materials or components to your CAFTA facilities? If so, what, why, and where from?

9. Indicate which of the following options your company uses for transport of goods when conducting business in the CAFTA region (more than one may apply).

- Air
 Multimodal
 Ground
 Sea

10. Keeping the CAFTA region in mind, in your opinion what would you consider to be the biggest challenge your company faces?

11. Keeping one business relationship in mind, please mark with an X how important the following criteria are in regards to your sourcing decisions with the designated DR-CAFTA country (and company).

Criteria	Importance				
	Strongly Disagree 1	Disagree 1	Neutral 3	Agree 4	Strongly Agree 5
Corruption					
Customer Service					
Government Regulations					
Labor Cost					
Lead Time					
Location					
Political and Economic Stability					
Price					
Relationship with Suppliers					
Productivity					
Research and Development					
Social and Environmental Standards and Practices					
Trade Agreements					
Workforce					

12. Rate your satisfaction level with the following business factors, in regards to decisions made in the DR-CAFTA vs. Asia regions. If applicable, please circle one number for each region, with 1 being not satisfied and 5 being very satisfied.

	DR-CAFTA					Asia				
	Not Satisfied		Very Satisfied			Not Satisfied		Very Satisfied		
Security of Production & Shipping	1	2	3	4	5	1	2	3	4	5
Compliance with Labor Standards	1	2	3	4	5	1	2	3	4	5
Market Demand & Economic Growth	1	2	3	4	5	1	2	3	4	5
Proximity to Major Markets	1	2	3	4	5	1	2	3	4	5
Access to Reliable Sources of Energy, Water, & Telecommunications	1	2	3	4	5	1	2	3	4	5
Roads, Ports, Rail, & Airports	1	2	3	4	5	1	2	3	4	5

Preferential Access in Major Markets	1	2	3	4	5	1	2	3	4	5
Availability of Workers	1	2	3	4	5	1	2	3	4	5
Labor Skills and Productivity	1	2	3	4	5	1	2	3	4	5
Access to Raw materials	1	2	3	4	5	1	2	3	4	5
Flexibility to Respond to Quick Turnaround Orders	1	2	3	4	5	1	2	3	4	5
Reliability of Supplier	1	2	3	4	5	1	2	3	4	5

13. If your company does not currently have, or has removed a CAFTA facility, which factors would be most likely to cause your company to relocate to the CAFTA region? Please rank order the following factors from the one that would most likely to the one that would least likely cause your relocation. Fill in the “1” by the most preferable, the “2” by the next most preferable, and so on until you have filled in a number by each factor. Please use each number only once.

- ❖ Business Climate
 1 2 3 4 5 6
- ❖ Infrastructure and Proximity to Markets
 1 2 3 4 5 6
- ❖ Market Access
 1 2 3 4 5 6
- ❖ Labor and Management
 1 2 3 4 5 6
- ❖ Raw-Material Inputs
 1 2 3 4 5 6
- ❖ Level of Service Provided and Reliability of Supplier
 1 2 3 4 5 6

14. Keeping one business relationship in mind; rate your satisfaction level with the following business factors, in regards to decisions made in the DR-CAFTA vs. Asia regions. If applicable, please circle one number for each region, with 1 being not satisfied and 5 being very satisfied.

	DR-CAFTA					Asia				
	Not Satisfied				Very Satisfied	Not Satisfied				Very Satisfied
Marketing	1	2	3	4	5	1	2	3	4	5
Location	1	2	3	4	5	1	2	3	4	5
Customer Service	1	2	3	4	5	1	2	3	4	5
Relationship with Suppliers	1	2	3	4	5	1	2	3	4	5
Research & Development	1	2	3	4	5	1	2	3	4	5
Production Efficiency	1	2	3	4	5	1	2	3	4	5

15. Rank order the following terms in order of importance for the successes of your business. Fill in the “1” beside the most important, the “2” beside the second most important, and so on until you have filled in the “6” beside the least important. Please use each number once.

❖ Marketing	<input type="checkbox"/>					
	1	2	3	4	5	6
❖ Location	<input type="checkbox"/>					
	1	2	3	4	5	6
❖ Customer Service	<input type="checkbox"/>					
	1	2	3	4	5	6
❖ Relationship with Supplier	<input type="checkbox"/>					
	1	2	3	4	5	6
❖ Research and Development	<input type="checkbox"/>					
	1	2	3	4	5	6
❖ Production Efficiency	<input type="checkbox"/>					
	1	2	3	4	5	6

16. Do you have any suggestions of other people I should speak with regarding DR-CAFTA opportunities?

Name _____

Title/Company _____

Contact Information _____

Additional Comments: