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Competition Among Domestic Apparel Manufacturers

Mary Simpson
Walden University

Walden University

College of Management and Technology

This is to certify that the doctoral study by

Mary Simpson

has been found to be complete and satisfactory in all respects,
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Dr. Timothy Malone, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Jon Corey, Committee Member, Doctor of Business Administration Faculty

Dr. Richard Johnson II, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University

2017

Abstract

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MBA, Liberty University, 2006

BS, Liberty University, 1986

Doctoral Study Submitted in Partial Fulfillment

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Doctor of Business Administration

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Abstract

Apparel manufacturing characterizes a sustainable means of creating employment and encouraging economic growth; however, 86% of U.S. apparel manufacturing companies and 74.7% in North Carolina have closed since the late 1990s. Less than 3% of apparel bought in the United States is domestic. The purpose of this case study was to explore the strategies used by American apparel manufacturing business leaders who produce competitive products using Porter's diamond theory as the conceptual framework. Data were collected through semistructured interviews of 4 business leaders from an apparel manufacturer that had been in business a minimum of 5 years in North Carolina. Member checking and transcript review were used to ensure the trustworthiness of the findings. Data were coded using a qualitative analysis software. Coded data were analyzed to identify themes. The results led to 3 major themes: technology, time, and brand development. The findings revealed that apparel manufacturing business managers used technology to produce competitive apparel products by owning the fiber, fabric, and technologies in the apparel products and shortened lead-times to the retailer. New knowledge from this study could contribute to social change through improved opportunities for apparel workers, improved business strategies among apparel manufacturing business leaders, and increased demand for apparel products produced in the United States. The findings from this study may also contribute to positive social change by potentially increasing business prospects for apparel manufacturers, suppliers, auxiliary businesses, thereby increasing revenue in North Carolina and the United States.

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Dedication

I dedicate my dissertation to my late parents, C. J. and Melba Simpson. I dedicate this dissertation to Jesus Christ who, through the entire process, helped me persevere every step of the way and through every obstacle. I dedicate this dissertation to my loving husband, Hoyt B. Alford, III, who married me despite working on my doctorate continuously throughout the first 5 years of our marriage. He is a loving and encouraging husband. Thank you to Dr. Timothy Malone and my committee members, without them, I would not graduate.

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Section 1: Foundation of the Study

As competition in global markets continues to expand, leaders of manufacturing organizations must focus on business operations that lead to prevailing over both domestic and foreign rivalries. Apparel manufacturing companies must find ways to gain a competitive advantage in the global markets (Boström & Micheletti, 2016; Chanaka, Srichandr, & Kajornchaiyakul, 2013). Mok, Cheung, Wong, Leung, and Fan (2013) suggested that for apparel manufacturers to compete, leaders should consider investing in technology, be proactive in developments in manufacturing, and keep up with global competition. Also, for apparel manufacturers to handle short lead-times and delivery of apparel products at low-cost, companies should continue to improve production by using algorithms in production planning (Mok et al., 2013). However, outside factors influence apparel production in the United States. Changes include worldwide quotas for textiles and apparel ended under the Multi-Fiber Agreement (MFA) forcing an adjustment in the apparel manufacturing sector (MacCarthy & Jayarathne, 2013). Also, as global competition has increased, so have technological innovation advancements within the industry (Minchin, 2013; Mok et al., 2013). Reviewing datasets collected by U.S. government officials shows there was a decrease in apparel manufacturing companies in North Carolina from 1998 until 2013 (U.S. Census Bureau, 2015). During a 15-year span under the North American Industry Classification Systems (NAICS) 315 code, 545 apparel manufacturers closed in North Carolina (U.S. Census Bureau, 2015).

Background of the Problem

There was a significant and continuous decline in U.S. apparel manufacturing jobs and companies between the late 1990s through the early 2000s (Jewell, 2014; Minchin, 2013). Within a 15-year span (1998–2013), U.S. apparel manufacturing facilities decreased by 63%, and the number of American apparel workers decreased by 83.3% (U.S. Census Bureau, 2015). Leaders seeking to compete in a global economy systematically outsourced jobs in the U.S. apparel manufacturing industry (Boström & Micheletti, 2016). Table 1 shows the systematic decrease in employees and a total number of U.S. apparel manufacturing companies from 1998 through 2013.

Table 1

Decrease in U. S. Apparel Manufacturing Companies and Employees From 1998 Through 2013

Year	Number of Employees	Number of Facilities
1998	671,184	17,432
1999	574,908	16,721
2000	510,482	16,505
2001	441,742	16,152
2002	350,439	13,359
2003	303,654	13,376
2004	280,278	12,314
2005	243,416	11,165
2006	216,238	10,967
2007	197,454	10,368
2008	166,357	7,337
2009	132,922	7,688
2010	120,627	7,206
2011	114,138	7,137
2012	111,973	6,457
2013	111,782	6,449
Totals	(559,402)	(10,983)
Percentage Decrease	(83.3%)	(63%)

Note. Adapted from the U.S. Census Bureau (2015).

Problem Statement

Since the 1970s, apparel manufacturers have been declining in the United States and are losing their competitiveness in the global economy (Minchin, 2013). Less than 3% of all apparel bought in the United States is domestic (Callahan, 2013; Ha-Brookshire, 2015a). From 1998 to 2013, the number of apparel manufacturing companies decreased in North Carolina by 74.7% (U.S. Census Bureau, 2015). The general business problem is apparel manufacturing companies in the United States are not competitive.

The specific business problem is that some U.S. apparel manufacturing business managers lack strategies to produce competitive products.

Purpose Statement

The purpose of this qualitative case study was to explore the strategies that some U.S. apparel manufacturing business managers use to produce competitive products. The target population was business managers in apparel manufacturing companies. My research effort included a purposeful sample of business managers from one southeastern U.S. apparel manufacturer who created strategies to produce competitive products.

The number of U.S. apparel manufacturing companies has decreased, and researchers have identified that products made in the United States account for less than 3% of those bought in the United States (Callahan, 2013; Minchin, 2013). The information from this study may help managers of apparel producers learn strategies to improve efficiency in the U.S. apparel manufacturing industry. This study may contribute to social change through improved opportunities for apparel workers and an increase in demand for apparel products produced in the United States and related services from domestic suppliers and vendors. The findings from this study may also contribute to positive social change by possibly increasing business prospects for suppliers and auxiliary businesses, and thereby increasing revenue in North Carolina.

Nature of the Study

Using a qualitative method, I explored the specific business problem that some U.S. apparel manufacturing business managers lack strategies to produce competitive products. The three possible research methods include qualitative, quantitative, and

mixed methods (Trochim, Donnelly, & Arora, 2016). Qualitative researchers use open-ended questions to discover what is occurring or has occurred (McCusker & Gunaydin, 2015). In contrast, quantitative researchers use closed-ended questions, numbers, and percentages to test hypotheses (Barnham, 2015; Bloch et al., 2014). Mixed methods research includes both qualitative and quantitative components (Trochim et al., 2016). To explore strategies from business managers who produce competitive apparel products, I did not test hypotheses that are a part of a quantitative study or include a quantitative portion necessary in a mixed methods study. Therefore, a qualitative method was appropriate to explore the business problem of this study.

The five possible research designs for a qualitative study are (a) ethnography, (b) focus group, (c) narrative, (d) phenomenological, and (e) case study. Ethnography involves researching a group of people in culture and communication between people (Park & Park, 2016; Robinson, 2013). With this design, business researchers use focus groups to allow participants to express feelings or opinions about particular issues, ideas, or a specific service or product (Krueger & Casey, 2015). A narrative design involves telling a story about individuals (Michie, 2013; Papathomas, Williams, & Smith, 2015). Sousa (2014) described the phenomenological design as describing, understanding, and clarifying human experiences. In contrast, case study researchers use standardized open-ended questions to understand and report the distinctiveness of an instance and link insights from participants (Cavender & Kincade 2014; Park & Park, 2016). Participants can answer open-ended questions more freely, fully express their points of views, and tell real-world experiences (Koro-Ljungberg & Bussing, 2013). A case study design was an

appropriate fit for this study because I explored strategies of apparel manufacturing business managers who produce competitive apparel goods in the United States.

Research Question

The overarching research question for this study was: What strategies do American apparel manufacturing business managers use to produce competitive products?

Interview Questions

To gain an understanding of the strategies business leaders uses to produce competitive apparel products in the state of North Carolina, I asked a series of open-ended questions to the participant. The interview questions were as follows:

1. What makes your products more desirable to domestic consumers?
2. How has the role of government, legislation, and international trade agreements affected your company producing products?
3. Describe how advancements in technology contribute to your ability to manufacture apparel products that are competitive in the United States.
4. What are some examples of technology that support competitive advantages for domestic manufacturers of apparel?
5. How has global competition affected your apparel manufacturing business?
6. How can domestic manufacturers of apparel become more competitive in the world market?
7. How important is it for the company to have a strong cluster of local vendors or suppliers? Please explain.

8. What marketing strategies are successful to create competitive advantage while vying for purchases from domestic retailers and consumers?
9. How are cost factors tallied into competitive apparel-manufactured products your company creates?
10. What additional information, insight, and comments regarding apparel manufacturing would you like to share?

Conceptual Framework

The theory that comprised the conceptual framework of my study was Porter's (2000) diamond theory, developed in 1990 (Zhang & London, 2013). This theory is an extension of Porter's original competitive advantage theory from 1985, explaining industry clustering (Zhang & London, 2013). Porter's diamond theory identifies major components within the competitive advantage theory about a firm's approach, organization, rivalry, chance, factor circumstances, demand situations, government, and related and secondary industries (Zhang & London, 2013). In the competitive advantage theory, Porter (2000) explained the capacity of an industry or business. Competitive advantage refers to the ability that allows a business to more efficiently deal in the marketplace than its competitors do (Porter, 2000; Zhang & London, 2013).

In the diamond theory, Porter (2000) expanded competitive advantage theory, using the four points of a diamond. The four points include factor conditions; demand conditions; related and supporting industries; and the firm's strategy, structure, and rivalry (Porter, 2000; Zhang & London, 2013). Porter also added outside causes to the theory, which includes the role of government and chance (Ha-Brookshire, 2015a; Zhang

& London, 2013). The core of the diamond theory is individual industries or clusters of industries (Porter, 2000). The factors of conditions include demand for the product or products, competition, and the reasons that play into how companies work and compete (Aricioglu, Gökçe, & Koras, 2013; Porter, 2000). In this study, interviews with business leaders from one apparel company located in North Carolina proved the viability of Porter's factors of conditions; demand conditions; related and supporting industries; and the firm's strategy, structure, and rivalry contributing to business success.

Operational Definitions

Apparel forecasting: Computing the future probability value of apparel (Aksoy, Ozturk, & Sucky, 2014).

Drapability: A method in which fabric folds once made into a product (Cohen & Johnson, 2012).

Fast fashion: A business approach that creates an efficient supply chain to make quickly stylish apparel and accessories while responding fast to demands from consumers (Maegan & Yan, 2013).

Hand: The feel of fibers, yarns, or fabric when handled (Cohen & Johnson, 2012; Xue, Zeng, Koehl, & Chen, 2014).

Nanotechnology: The ability to maneuver individual atoms to improve products (Cohen & Johnson, 2012).

Style agencies: Organizations that urge the trend in fashion that allows creating the consumer's mandate rather than toward unpredictability (Dari & Paché, 2013).

Assumptions, Limitations, and Delimitations

Qualitative researchers can provide insights into how working practices and new ways of working evolve in daily business practices to influences at different levels within a corporation or business (Garcia & Gluesing, 2013). Qualitative research bases investigation about human behavior and experiences; however, it does not encompass or condense to numeric or quantitative procedures (Rudnick, 2014). The qualitative researcher provides techniques to research relationships, phenomena, and processes of change developing new investigative tools and practices (Garcia & Gluesing, 2013). The information within this section will include the assumptions, limitations, and delimitations of this study.

Assumptions

Gordon and Patterson (2013) suggested that by clearly defining assumptions supporting a theory behind a study and research, that those assumptions may increase the usability and validity of the results of the study. My assumptions for this study included three elements. First, I assumed that the participants responded honestly to the interview questions. I also assumed that without bias, I understood the participants' responses to the inquiries. Finally, I assumed that I was able to conduct an inductive study to review the data and gain each participant's perspective.

Limitations

Bouzon, Miguel, and Rodriguez (2014) posited that limitations are possible faults that could affect the results of a study. The first limitation of this study was the different business leaders in North Carolina and the Commonwealth of Virginia within the apparel

manufacturing industry who volunteered for this study. The initial proposal was to collect data from business leaders from one company in North Carolina and one company in the Commonwealth of Virginia. There were no apparel manufacturing business leaders in the Commonwealth of Virginia who volunteered for this study; therefore, the study was limited by only including one company with manufacturing facilities in North Carolina. Another limitation of this study was that the company I chose to participate in the study had a minimum of 5 years or more of manufacturing apparel in North Carolina. In this study, I limited myself to collect all of the data under the time constraint of 60 days.

Delimitations

Bouzon et al. (2014) posited that a researcher should place boundaries and delimitations to narrow the focus of the study by using the problem statement. This study included four leaders from one apparel manufacturers in the state of North Carolina. Consequently, a delimitation of this study was the narrowed physical locality. Another delimitation included the fact that participation was limited to apparel manufacturing business leaders (four managers) from this one company. The final delimitation was that the apparel manufacturer had to have been in business for 5 or more years.

Significance of the Study

The significance of this study laid in my attempt to explore apparel manufacturing business manager's strategies used to produce competitive products. The results of this study contribute to the existing literature on the topic. In this study, I discovered new strategies that business leaders use to produce competitive products and sharing these

might expand new business opportunities in North Carolina.

Contribution to Business Practice

Campaniaris, Murray, Hayes, and Jeffrey (2015) discovered strategic implications that led to developing a business model in Canada's apparel manufacturing and retail industries that other firms could follow. Similarly, in this study, I intended to explore the causes of a company that produces competitive domestic apparel products in the North Carolina apparel manufacturing industry. My aim with identifying a means to a competitive advantage was to expand the current manufacturing and production of more competitive domestic apparel products. The findings from this study may result in new business opportunities in apparel production and other areas of manufacturing throughout the United States.

Implications for Social Change

The findings of this study may contribute to a positive social change by possibly leading to the improved economic success of apparel manufacturing companies operating in the state of North Carolina or elsewhere in the United States. In this study, I discovered valuable strategies from business leaders of a manufacturer that produces competitive apparel products. Results from this study may help leaders in apparel manufacturers to preserve and operate in the United States while also being able to compete on a global level. The results from this study may also positively affect communities by expanding jobs for individuals by allowing workers to live in North Carolina and supporting the city, county, and the state, while also supporting and preserving communities and auxiliary businesses.

By understanding key strategies of business leaders in an apparel manufacturing company that produces competitive products, business managers may set up effective practices that contribute to more efficient business operations. The results of this study may include new ideas used as a blueprint for business leaders planning to develop and grow a business in North Carolina and elsewhere in the United States. Exploring successful factors may allow manufacturing companies to expand, develop, and increase jobs in North Carolina and throughout the United States.

A Review of the Professional and Academic Literature

To obtain a better understanding and knowledge of the apparel manufacturing industry and to create a conceptual foundation for this study, I conducted a literature review. During the review of books written by apparel and textile industry experts, peer-reviewed articles, and government websites, I assessed the different perspectives surrounding the main research question: What strategies do American apparel manufacturing business managers use to create competitive apparel products? In this literature review, I synthesized peer-reviewed articles and examined current research about apparel manufacturing and related areas about the apparel industry.

The theory I used as the conceptual framework for this study was Porter's (2000) diamond theory, developed in 1990 (Zhang & London, 2013). This theory is an extension of Porter's original competitive advantage theory from 1985, in which Porter explains industry clustering (Zhang & London, 2013). Porter's diamond theory identifies components in the relationship to a firm's approach, organization, rivalry, chance, a factor of conditions, government, and related and secondary industries. The factors of

conditions include demand for the product or products, competition, and the reasons that play into how companies work and compete (Aricioglu et al., 2013; Porter, 2000).

Lawrence and Tar (2013) suggested that when developing the research inquiry, a literature review offers conditions for expanding the research topic and the foundation for research. The literature review also helps control the audience and the scope of a study to define the research question and aid in discovering gaps in the research (Pautasso, 2013). Analyzing the literature in the field provided me with insight into how researchers, scholars, and business practitioners view the apparel manufacturing industry and the associated processes. I began the research effort with an initial search for peer-reviewed journal articles, doctoral studies, and books written by apparel and textile experts using the Walden University Library databases and the subject of the apparel manufacturing application. My primary search was for journals and peer-reviewed articles available from the Walden University Library. The databases I used to find literature included Academic Search Complete, ProQuest, Emerald, and SAGE Journals. I also used search engines and online databases including Google Scholar, U.S. government websites, the World Trade Organization (WTO) website, as well as books written by apparel and textile experts. The additional websites and sources added the basis for an informative, useful, and comprehensive review of current apparel industry practices.

The literature review process allowed me to examine information from peer-reviewed and professional sources and add validity to this study (see Banerjee & Morley, 2013). My research effort yielded 87% of the peer-reviewed articles and professional literature published within 5 years of my expected graduation. Pautasso (2013) articulated

that during the examination process of literature, a researcher will multitask, find and evaluate pertinent literature, synthesize material from different sources, paraphrase, critically think, use citations, and evaluate information.

Organization of the Literature Review

The literature review I conducted supports the vastness and complexity of apparel manufacturing and supporting industries such as textile manufacturing (see Cohen & Johnson, 2012). I used the following terms and keywords to gather information through my preliminary search: *apparel, apparel algorithm, apparel manufacturing, apparel production, apparel trade agreements, competitive advantage theory, clothing, textiles, consumers, diamond theory, fast fashion, fabric manufacturing, garment, garment manufacturing, sewing machines, slow fashion, three-dimensional (3D) garments, textiles, textile and apparel manufacturing, United States apparel,* and *U.S. apparel.* As a result, my searches yielded several thousand scholarly articles. The articles, websites, and professional literature I used within the literature review ended up totaling 88 references of which, 77 were peer-reviewed and professional references dating from 2013 to 2017. Additional references included three books, one website, and one government website dated before 2013. I also used peer-reviewed references before 2013 for historical purposes. The focus of those articles covered history, apparel manufacturing, and technology in the apparel and textile industry, trade agreements and the role of government, the consumer, fast fashion, and corporate responsibility.

Minchin (2013) concluded that since the 1990s, business leaders in apparel manufacturers in the United States continue to find it difficult to compete with lower

labor costs in other countries and move labor-intensive operations offshore. My findings in the literature review provided evidence of why there has been a decrease in the number of apparel manufacturing companies in the United States (Jewell, 2014; Minchin, 2013). I will begin the literature review with a review of the background of the apparel industry posited by Hiemstra-Kuperus, van Voss, and van Nederveen Meerkerk (2010).

A Brief History of Apparel Globalization and Industrialization

Before the mid-1600s, producing, buying, selling, and use of apparel had been a part of the global trade for thousands of years. Some of the earliest apparel items found are from East Asia, dating to 7710 B.P. to 8215 B.P. (Kuzmin, Keally, Jull, Burr, & Klyuev, 2012). Hiemstra-Kuperus et al. (2010) determined the history of globalization and industrialization has limits from a consensus of historians from the mid-1600s until the present. On a region-by-region and country-by-country basis, there are varying dates regarding when industrialization and global trade began. In the years 1820 to 1913, there was a surge in globalizing textiles and apparels because of many inventions of the 19th and 20th centuries (Hiemstra-Kuperus et al., 2010). Developed transportation systems such as railways, better roads, steamships, and canals allowed goods such as raw cotton to move further distances in shorter times (Hiemstra-Kuperus et al., 2010).

The period after World War I was a time of deglobalization and a decrease in trading apparel that lasted from 1914 until 1945 (Hiemstra-Kuperus et al., 2010). The economic slowdown of postwar reconstruction, repayments, economic, banking, and climate crisis of 1929 to the early 1930s affected trade across continents; the impact

resulted in an increase in border closings, restricted trade barriers, and limited international migration (Hiemstra-Kuperus et al., 2010).

Blewett (2010) suggested apparel manufacturing in the United States was an important part of American history since colonization in the 1600s. Apparel and textile manufacturing began transitioning from Europe to the northeastern United States in the 1700s (Blewett, 2010). The second phase of development took place from the northern United States to the southern United States in the 1800s (Blewett, 2010). The transition was slave labor was more cost-effective for manufacturers within proximity to raw materials (Blewett, 2010).

The MFA dissolved in January 2005 (MacCarthy & Jayarathne, 2013). Many countries, such as Bangladesh, Vietnam, India, and China, both vast and small, relied heavily on this particular trade agreement (MacCarthy & Jayarathne, 2013). Leadership in apparel manufacturing companies in other countries, such as Vietnam, Bangladesh, India, and China, made changes to compete in the global market (Kathuria, 2013). One part of developing the apparel industry that was once under the control of leadership in larger manufacturing companies transitioned into smaller- to medium-sized corporations. Hodges et al. (2015) classified smaller- to medium-sized corporations like those that employ 20–200 people.

Global Competition in the Apparel Industry

Since the 1990s, developing countries have played a critical role in the apparel manufacturing industry. Many U.S.-based manufacturing companies have moved their facilities to Bangladesh, China, Vietnam, and India (Taplin, 2014b). For firms competing

in the global market, understanding the competition, both domestic and international is vital, including supply and demand, resources, vendor relations, and the role of government (Taplin, 2014b).

There is a challenge to distinguish in which countries parts of a product originating from as apparel products have become fragmented and diverse. The U.S. government agency of the Bureau of Consumer Protection is to protect and inform the consumer about goods (Federal Trade Commission, 2006). Leaders within the organization set up laws requiring all apparel items labeled with the country of origin on items sold in the United States (Federal Trade Commission, 2006). The complexity of the issue lies in the diversity of apparel production. For instance, yarns in the cloth produced in one country shipped to a different country to make the material, possibly shipped to another and made into apparel or home products (Federal Trade Commission, 2006).

China is one of the biggest importers into the United States. China's trading to the United States increased from $5 billion in 1981 to $536 billion in 2012, an increase of a staggering 10,620% in 26 years (Kabirou & Gao, 2014). Trade disputes between the two countries are on the rise (Kabirou & Gao, 2014). The concern from leaders is the valuation of the Chinese Renminbi to the U.S. dollar (Kabirou & Gao, 2014). The competitive advantage China holds is that it costs more to ship U.S. goods to China than to ship Chinese goods to the United States (Kabirou & Gao, 2014). The dispute is over the Chinese government officials' refusal to increase the value of the RMB (Kabirou & Gao, 2014). Another argument explaining why U.S. textile factories are closing is because of the decrease in shipping goods from the United States (Kabirou & Gao, 2014).

China employs 1.9 million workers in the textile and apparel industry compared with the United States who employs roughly 700,000 workers (Kabirou & Gao, 2014). One advantage in the textile sector in China is wages. The average U.S. worker is paid $9.70 per hour, whereas Chinese worker's pay is 0.88 cents per hour (Kabirou & Gao, 2014). China also has other advantages, including easy access to raw materials such as domestically made silk, cotton, and wool as well as investments in infrastructures of businesses that allow decreased delivery times (Kabirou & Gao, 2014).

China continues to be a major player in the apparel manufacturing industry. China surpasses the United States in the areas of cheap labor, equipment, and materials. China has also developed a new concept in manufacturing referred to as a factory town (Jiang, Talluri, & Yao, 2012). The mill town includes everything is in one central area to make a product (Jiang, Talluri, & Yao, 2012). China has eight primary factory towns each producing garments to supply the global demands (Jiang, Talluri, & Yao, 2012).

Much scrutiny has surrounded the Asian apparel markets in the 21st century because of concerns of unhealthy working conditions, low wages, and workers' rights (Boström & Micheletti, 2016). Within jean manufacturing, China was notorious for their sweatshop image. On average, a Chinese worker, that makes jeans that sell for an average of $30, would work for less than 0.90 U.S. dollar an hour (Jiang et al., 2012). The Chinese worker may work an average of 24 to 30 hours per week of overtime (Jiang et al., 2012). Facing a lot of criticism from Western influences, Chinese officials set up rules for improved working conditions such as identifying a full day and an increase in wages; however, new laws increased costs, which in turn, were passed on to the buyers

and eventually to the consumer (Jiang et al., 2012). Chow (2017) agreed, also stating that Chinese officials have set up rules and regulations to address unsafe working conditions and long hours. However, officials often do not enforce rules and regulations and continue to ignore unsanitary and dangerous working conditions (Chow, 2017). Jiang et al. (2012) found business leaders in Chinese jean manufacturing companies reported profit margins dropped 25% because of competition. Apparel manufacturing company leaders are finding it difficult to have both humane working conditions and low pricing on output.

Several reasons exist why China is becoming a leader in apparel manufacturing. China's workforce includes low-cost entry level for factories, cheap labor, and fewer restrictions on Chinese government officials for enterprises that are not government owned (Jiang et al., 2012). Between 2001 and 2011, China's manufacturing was the fastest growing in the world (Sodhi & Tang, 2013). China's business leaders carried out partnerships and set up contract manufacturing (CM) that showed more value to existing original equipment manufacturing than other types of partnerships (Sodhi & Tang, 2013). Contract manufacturing provoked value-added solutions to manufacturing as well (Sodhi & Tang, 2013). A new idea created by Luen Thai in China, Design to Store operations for Ralph Lauren increased profits by $332 million in 5 years from 2003 to 2008. Ralph Lauren Corporation leaders shared information with leaders within the supply chain about each step of the apparel process such as textiles used, design, and assembly of apparel, logistics, and results of sales (Sodhi & Tang, 2013).

Another idea for CM in China was exploring growing product groups such as MAS Holding, a contract manufacturer in Sri Lanka. Because of a fierce pricing competition, MAS Holding's manufacturing shifted from general casual wear manufacturing to lingerie for Victoria's Secret and swimwear for Speedo for men and women (Sodhi & Tang, 2013). This shift proved financially successful making MAS Holding one of the world's largest contract manufacturers of activewear and intimate wear. Their revenues exceeded $700 million in 2009, up from $225 million in 2000 for an increase of $475 million dollars or 68% (Sodhi & Tang, 2013).

Sodhi and Tang (2013) suggested that by investing in R&D, the Hong Kong company, Esquel researchers could develop nanotechnologies such as stain repellents and ultraviolet protectants to add to fabrics. They found that by applying stain repellent and ultraviolet protectants to the bale-level of cotton rather than to the batch level, it ensured consistency throughout products. The authors reported that by improving quality and advancing technology of fabrics, Esquel leadership won many awards and apparel contracts from retailers such as Hugo Boss, Nordstrom's, and Brooks Brothers. Sodhi and Tang (2013) found that the motto of *think green* is another concept developed by business leaders in the United States. *Think green* coincides with *GreenCert*, which enables regulatory actions to protect the environment and evaluate greenhouse gasses (Sodhi & Tang, 2013). In turn, Esquel managers thought of ways in fabric finishing to use treated water as well as upgraded water industrial units in China to conform to environmental laws (Sodhi & Tang, 2013).

Sodhi and Tang (2013) suggested another tactic contract manufacturers set up in China was unloading unproductive assets. Two forms of properties are a tangible property such as factories and second is nontangible assets such as human capital. To be a competitive and thriving contract manufacturer, many CMs managers began liquidating underperforming assets and focused on research, development, and service. Li and Fung is an example of contract manufacturing. Li and Fung do not own any manufacturing factories rather the company leader's focus on services from design concept through shipping goods to retail stores. Li and Fung is an adaptive CM. Leaders adapting to the ever-changing markets and demands, the company more than doubles its revenues from 2005 to 2008. Valued in 2005 at $7.1 billion U.S. dollars and 3 years later in 2008, valued at $14.2 billion U.S. dollars with a low operating margin of 2.8% (Sodhi & Tang, 2013). Examining China's successes and influence in the apparel supply chain, companies can seek to understand and be creative in finding new avenues of assets. Original equipment manufacturing company leaders such as Brooks Brothers and Zara can uphold bargaining power by sourcing constant items to Chinese CMs. Producing fashion and more trendy items in-house and enabling every business to diversify and eliminate low value-adding functions (Sodhi & Tang, 2013).

Das and Ha-Brookshire (2014) suggested after removing the MFA quota agreement in 2005; China moved into a strategic place in apparel manufacturing. China's advantage of offering lower prices, moving large amounts of goods is valuable to buyers. In the early 2000s, increased wages, rising cost of logistics, transport costs, and the increase of China's currency have negatively influenced China's apparel industry. In

2011, the United States imported $153 billion dollars of apparel made in China. India exported to the United States $14.4 billion in apparel to the United States, and Bangladesh exported almost $20 billion in apparel to the United States (Das & Ha-Brookshire, 2014).

Wang, Ding, and Wu (2013) determined China be the world's largest exporter of textiles and apparel. China's export of textile and apparel increased once the country joined the WTO in 2001. In 2001, China's export of textiles and apparel improved from $53 billion U.S. dollars to $207 billion U.S. dollars in 2010 (Wang et al., 2013). Many individuals pose concerns with the decrease of fresh water from pollutants in water systems in China. The textile and apparel industry in China was a major contributor to more wastewater and contaminating fresh water. Fresh water is a source used in many facets of the textile and apparel industry procedures. Fresh water is a part of filtration, desizing, scouring, bleaching, mercerizing, dyeing, washing, neutralization, and salt baths; however, wastewater is the byproduct of these procedures. The Chinese government has restricted the use of freshwater and wastewater release (Wang et al., 2013).

India and Bangladesh have shown a rise in competition in the apparel industry. India's competitive ambitions have set forth as a major exporter of ready-made garments, which account for 43% of export earnings and employ 30 million people apparel industry (Kathuria, 2013). India has become a dominating power in apparel manufacturing. Gupta and Dasgupta (2014) reported ready-made apparel accounts for 45% of the total textile exports from India. India continues to show an increase in total exports of apparel from

$1.7 billion U.S. dollars in1980 to 3.6 billion U.S. dollars by 2009. Garment production in India focuses on mass production and includes laborious activities such as cutting, sewing, pressing, and finishing while technology, research, and development are less of a priority. This situation has begun to change in India. The focus on competing in a global market, India has recognized and found it necessary to increase and develop technology within manufacturing of apparel (Gupta & Dasgupta, 2014).

India is one of the largest producers of apparel in the world. Apparel manufacturing continues to be labor intensive, and the barriers to entry are relatively small. India's share in the global trade is 2.5% (Meenakshi, 2014). Competitors in countries such as Hong Kong, South Korea, Taiwan, and China are among the top seven world leaders, together covering nearly 32% of the world trade in apparel. One main importer from India is the United States. Issues surrounding the apparel industry's common problems consist of the small labor productivity, the high rejection rate of garments, and long delivery delays. To compete in the global market, manufacturing leaders must address issues to meet demands of foreign buyers. Indian leadership is in need of addressing many areas of manufacturing including upgrades of technology and educate apparel workers. The increase in exports from India credits to low-cost wages. India's apparel workers earn roughly .20 cents to .60 cents U.S. dollar per hour (Hossan, Sakar, & Afroze, 2012; Meenakshi, 2014).

India is facing many challenges in its region and competition from neighboring countries. Das and Ha-Brookshire (2014) noted that in 2009, the South Asian Free Trade Agreement between Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan,

and Sri Lanka took effect. While some areas of trade may benefit, India's struggles in the apparel sector because of other neighboring countries that have lower wages. India remains competitive in the apparel market and ranks sixth in the world of apparel exporters (Das & Ha-Brookshire, 2014).

Taplin (2014b) posited many developing countries, high exports, and low wages account for a large portion of economics. In the country of Bangladesh, producing apparel is a $20 billion dollar a year industry export, second only to China. A high percentage of exports is because of low wages in Bangladesh. Within the apparel manufacturing industry, the lowest, per hour wages is in Bangladesh. Workers earn between .06 cents to .18 cents U.S. dollar per hour (Meenakshi, 2014; Taplin, 2014b). Meenakshi (2014) reported that Bangladesh apparel workers were the lowest in Southern Asia. Labor wages for Bangladeshi apparel workers to manufacture a shirt was .11 cents (U.S. dollar) per item compared to other Asian workers. Chinese workers earned .40 cents (U.S. dollar) per shirt and .79 cents (U.S. dollar) per shirt in Pakistan. In 2010 – 2011, Bangladesh apparel worker wages per a month made nearly $58 U.S. dollar. Thus, making Bangladesh a country that is attractive to companies seeking to have apparel or other laborious work completed (Meenakshi, 2014).

Indonesia is a promising source for U.S. multinational corporations such as Nike. Hayat (2014) found low wage earning is a significant factor in outsourcing to companies in Indonesia. Low tariffs on products produced in Indonesia and imported into the United States are areas leaders of U.S. multinational companies consider when outsourcing its work to other countries (Hayat, 2014).

A small, underdeveloped country, which has infiltrated apparel production and has become a major player in this industry, is Cambodia. Ghori (2012) found the apparel industry dates back as far as the mid-1800s when the French colonialist occupied the country. Factories are on the increase in this small, underdeveloped country. Since the mid-1990s, only about 20 factories existed in Cambodia. At the beginning of the 21st century, roughly 300 factories exist in Cambodia. Cambodia ranks among the lowest countries in the world for the cost of labor. Workers in the apparel manufacturing industry earn around .33 cents U.S. dollar per hour (Ghori, 2012).

During the late 1990s, Cambodia's apparel industry began to thrive and expand due to the United States - Cambodia textile and apparel trade agreement made during the Clinton administration (Ear, 2013). Ear (2013) stated nearly 90% of all exports from Cambodia are from the apparel industry, however, in 2010, the majority (93%) of apparel manufacturing companies are foreign owned. Chinese investors invested nearly $9.61 billion (U.S. dollar) in direct factory investments in 2010 (O'Neill, 2014). Chinese investors own the majority of Cambodian apparel manufacturing facilities (66), followed by Korea (44), Taiwan (39), Hong Kong (31), and the United States (9). The Cambodian apparel industry employs about 320,000 workers (Ear, 2013).

Leaders are seeking alternative ways to manage changing economies. Kiridena and Senevi (2015) posited operational strategies focused mainly on companies in developing or developed countries. The worldwide apparel industry in 2010 had a value of $490 billion (U.S. dollar). China accounts for 37% of the total global output of apparel. The increase of more skilled and educated laborers has created value-added to

Sri Lanka's garment industry. The government of Sri Lanka has also created attractive packages for manufacturers into the Free-Trade Zone and has allowed tax incentives to companies (Kiridena & Senevi, 2015). However, garment workers in Sri Lanka earn nearly .40 cents U.S. dollar per hour (Meenakshi, 2014).

In the 1980s, Thailand became an important contributor to garment manufacturing (Goto & Endo, 2014). Middle-income traps are more common in countries such as Thailand. The country, once an important player in garment manufacturing and assembly in the 1980s and 1990s; as wages grew, the country (export) decreased. Companies changed from labor-intensive type jobs to more specialized value-added jobs such as original design manufacturing or original brand manufacturing. These types of manufacturing processes entail a more technical approach. In the 1990s, Thailand's assembly of garments slowly began to decrease which needed minimal job skills. Some manufacturing companies transferred to locations that are more rural. By moving, manufacturers can attract unskilled laborers from less populated areas. Apparel workers in Thailand earn nearly .78 cents U.S. dollar per hour (Meenakshi, 2014). Garment manufacturers in Thailand have adjustments to make to change from labor-intensive manufacturing to more skilled manufacturing, which is a need for original design or original brand manufacturing (Goto & Endo, 2014).

Turkey imports 60% of cotton from the United States and the balance of its imports come from 85 other countries (Öz & Özertan, 2013). China is the largest importer of U.S. cotton while Turkey is second, valued at $1.2 billion dollars imported and about 50% of total U.S. cotton agricultural output. Turkey relies heavily on its cotton

production and apparel made from cotton, however, Turkey imports more cotton than the country grows. Between 2001 and 2011, Turkey produced roughly 868 tons of cotton and imported 889 tons of cotton (Öz & Özertan, 2013).

Vietnam is a small but powerfully competitive nation in global apparel production. Vietnam is the 10th largest apparel exporter in the world and exports approximately 2.7% of global apparel exports. In Vietnam, the apparel and textile industry employs nearly 1.6 million people (Drejet & Rappaport, 2014). Ghori (2012) identified Vietnam is one of the world's largest exporter of apparel in the world since 1986. The value of exports of apparel is nearly 9 billion U.S. dollars. While export shares continue to increase, the importance of safety for factory workers is on the rise. Public awareness of unsafe working conditions is at the forefront of humane working conditions. Events that brought the awareness of working conditions to the forefront were fires in Bangladesh in 2012 that killed 100 workers in an apparel factory (Taplin, 2014b). In 2013, 1,127 people died in the collapse of a factory building in Bangladesh (Rubya, 2015).

In 2014, Vietnam apparel factories showed a correlation of better working conditions and energy efficiency (Drejet & Rappaport, 2014). Better working conditions were in a much higher compliance rate with the Better Work Enterprise Assessment. Production costs contain energy costs, which is a factor an investor considers when choosing a location to produce goods. Vietnam is encouraging apparel factories to use renewable sources of energy such as solar, hydroelectricity, and the wind. Investing in sustainable energy sources helps keep energy costs low and allows Vietnam to be more

competitive with neighboring countries (Drejet & Rappaport, 2014). Cost is why so many foreign-owned garment manufacturers are in Vietnam. In 2008, Vietnam offered one of the lowest apparel manufacturing labor costs (converted to U.S. dollars) in the world. The average apparel worker earned nearly .38 cents U.S. dollar per hour in 2008 (Ghori, 2012) and in 2010, apparel workers in Vietnam earned about $85 per month (Meenakshi, 2014).

Apparel production in the United States continues to change since colonization. Improvements in machinery, raw materials, and labor have all been a part of evolutionary changes made in the industry. Inventions such as the cotton gin invented by Eli Whitney and Samuel Slater's spinning mill in the 1790s created improvements to production (Blewett, 2010). The 1700s through the late 1800s, advancements include inventing electricity, which replaced mule-driven, man-powered, and water-powered machinery, which helped improve production of apparel. In the 1800s, the invention of the sewing machine (Seram & Cabon, 2013) increased the speed of sewing apparel. Since the 1980s, developing technologies such as computers and computer programs, advancements in science and mathematics, and research has helped increase the production, as well as the quality of apparel. Subsequently, from the mid-1800s, the United States has seen a roller coaster of changes in the apparel manufacturing industry (Blewett, 2010).

Global Supply Chain

Social and economic changes caused by outsourcing and the rapidly changing manufacturing environment affects the apparel global supply chain (Phau, Teah, & Chuah, 2015). For organizations to be competitive, leadership must focus on global

supply chain management and recognize valuable tools to increase customer satisfaction, quality, and competitiveness. Since the 1990s, the U.S. apparel manufacturing industry has radically changed by developing new strategies and new technology (Phau, Teah, & Chuah, 2015).

For the high-level global competition, leaders focus on an efficient supply chain and quick turnaround time for fashion (Kim, 2013). In the late 1990s, apparel manufacturing leaders adopted quick response manufacturing. Manufacturer leaders adopted small batch orders, re-organization of workplaces, and innovations in logistics handling materials to speed up the process of apparel manufacturing (Taplin, 2014a). In 2010, the value of the fashion industry was near $755 U.S. dollars globally. Company leaders define manufacturing, supply chain management as competitive priorities, and identify companies' target market. Four various companies were a part of the case study, Louis Vuitton, Chanel, Zara, and UNIQLO. Louis Vuitton and Chanel cater to a more targeted market of the high-end (Kim, 2013). Louis Vuitton leaders focus on high-quality raw materials and manufacturers 60% of its products in-house. Chanel management also focuses on high-quality raw materials and manufactures most of its products in-house. Because Chanel and Louis Vuitton make most of their products in-house, both companies can adapt to ever-changing consumer wants. Recognizing Louis Vuitton and Chanel as two of the top five luxury global brands in the apparel industry, leadership from both companies focus on a centralized supply chain and in-house sourcing (Kim, 2013).

Kim (2013) determined the retail stores; Zara, and UNIQLO, target markets have a wider client-base and a lower retail price point that is more attractive to the average

consumer. Leaders in both companies rely on partnerships with manufacturers who can produce goods at the necessary time with a quick response. Each management team has its set of individualized sets of competitive priorities. Zara and UNIQLO are among the top 10 global brands in the fashion industry. Zara and UNIQLO recognize a decentralize supply chain and adopt an outsourcing strategy (Kim, 2013).

Dari and Paché (2013) found the market deemed the fashion supply chain must align to a consumer-focused supply chain rather than a top-down supply chain. For business leaders to compete in a global market, the supply chain must remain agile while keeping costs down. Style agencies have significant influences on the fashion industry. Style agencies trend fashion and promote consumer predictability rather than allowing consumers to create an influx of demands (Dari & Paché, 2013).

Emerging countries such as Brazil, apparel business leaders are addressing issues within short lead times (Pinto & de Souza, 2013). Since the 1970s, the United States and the European Union began moving manufacturing of apparel to other countries because production is cost-efficient. One obstacle for textile mills is the capacity to produce small amounts of fabric with short lead times. Countries, such as Brazil, the phenomenon of cultural and creative expertise is value added to the supply chain in apparel production. Multiple layers of players also drive fashion production and consumption (Pinto & de Souza, 2013).

Within the apparel industry, to predict the consumer's demands can be difficult. Receiving too little of an apparel item or having too much of apparel product the consumer does not want to buy are challenges (Chaudhry & Hodge, 2012). Predicting

about clothing can be tricky for all levels of production management teams to retail shop managers. The postponement is a technique used throughout the supply chain. The changing demands of consumers, shortened lead times for manufacturing and delivery, created the technique that all levels of the apparel industry use. Purchasing postponements, manufacturing postponement, and logistics postponement are three top areas of where the postponement technique is in use to streamline apparel production through each phase of the process. Setting up design postponement is suitable when the delivery time is acceptable (Chaudhry & Hodge, 2012).

Chaudhry and Hodge (2012) stated purchasing postponement is useful when the manufacturer's production and supplier's lead times are less than the market's lead-time. The manufacturing postponement delays the manufacturing progress, and the inventory is on hold in the nonaligned state until the demand formation becomes available. Manufacturing postponement allows businesses to hold inventory in a pre-customized state and not in a final goods inventory. Logistics postponement technique is holding inventory in one central location rather than dispersed to each site or retailer (Chaudhry & Hodge, 2012). Logistics postponement aids in the delay of the final movement of goods until it the information about the apparel products demand is available in each particular location. Depending on the type of apparel or product supply chain, each postponement strategy works best in different scenarios. A larger chain retail store that has multiple retail locations works best with logistic and manufacturing postponement. One major retailer follows product development and purchasing postponement within the supply chain management (Chaudhry & Hodge, 2012).

Zara is a leader among popular fashion retail companies. Chaudhry and Hodge (2012), posited Zara' leadership determines methods to produce apparel with a quick turnaround time. One way Zara's has a faster production cycle is the company purchases more than 50% of its fabric undyed. By creating a means of a more rapid production cycle, company managers will have fewer errors in forecasting, reduces costs, and can respond to market demands more quickly. The apparel industry faces growing competition, fast turnaround times, and short life cycles of apparel. To stay competitive in global markets, apparel manufacturers must match supply and demand (Chaudhry & Hodge, 2012). Zara retailer is a good example of logistics performance referring to short lead times and quick delivery in their supply chain (Ülgen & Forslund 2015).

Leaders of Nike did not explore emerging markets such as Asia, as target markets until the 1990s. Before the 1990s, apparel company leaders did not view them as a possible target market. China, India, Indonesia, and Brazil, together will account for 90% of the world's population by 2030 (Kim & Heere, 2012). The estimated world population will be approximately 9 billion. Global brands, such as Nike, managers have begun to explore emerging markets for new consumers for their products. Consumers can find global brands in multiple of countries with little or no deviations (Kim & Heere, 2012).

Nike penetrated Asian markets in 1995 when Nike supplied uniforms for the new professional basketball league and top athletes (Kim & Heere, 2012). Within these emerging markets transitioned concepts from the emerging market consumer. For example, one concept is a global brand is better quality. Consumers in India, Korea, and China are willing to pay a higher price for a product based on the global brand such as

Nike or Adidas. Consumers in these emerging economies also buy products that their country produces. Consumers in emerging markets such as China and India buy global brands to be a part of a world community not because it may be a “western” brand (Kim & Heere, 2012).

Retail apparel forecasting is challenging (Aksoy et al., 2014). Buyers complete each season by supplying stores with apparel and accessory products for consumers to purchase. Because of variations in consumer demands and trends, forecasting is difficult even with the use of sales tracking systems. To improve competition within global supply-chain and to compete in a world market, apparel companies must have an efficient and accurate forecasting system. An accurate forecasting system helps buyers lessen problems such as having excess inventory, or shortages of stock, lost sales, excessive costs, and lost customers (Aksoy et al., 2014).

The apparel industry is complex, becoming significant and competitive in the world’s markets (MacCarthy & Jayarathne, 2013). The apparel industry involves many processes, which includes manufacturing of yarn and fiber, textile or fabric manufacturing, fabric finishing, apparel assembly, and selling to consumers. The supply chain within the apparel industry needs careful management to reduce lead times and swift responses based on consumer demands. Technology has advanced, and the use of algorithms and computer programs has shown beneficial to the apparel industry. Computer programs to predict or forecast for apparel production have believed to be valuable in the industry. Aksoy et al. (2014) found a program such as adaptive network based fuzzy interference system has proven to aid in the forecasting the demand in the

apparel industry. Adaptive network based fuzzy interference system is new and combines the capacity of neural networks and fuzzy logic generalization capacities to predict or forecast (Aksoy et al., 2014).

Within the supply chain of apparel and textile industry, effective logistics performance management is a part of the flow of product from ordering to delivering. One study suggests performance management is primary to future success in the competitive retail supply chain (Ülgen & Forslund 2015). The textile industry is competitive, and textiles are a part of the apparel supply chain. Textiles are the main ingredient in the variety of steps such as working with different suppliers along the way in creating apparel (Ülgen & Forslund 2015).

Apparel supply networks are comprehensive in the global apparel supply chain (MacCarthy & Jayarathne, 2013). Facets of the apparel supply networks are complex and include designers, merchandisers, yarn and fabric manufacturers, accessories such as trim manufacturers, and apparel manufacturers. Retailers, distributors, logistics and warehousing intermediaries and embellishment services such as decorative attachments, printing, embroidery, and washing are also inclusive of the supply network. There are four classifications of apparel supply networks (MacCarthy & Jayarathne, 2013). The first classification begins with a relationship between managers of leading retailers and manufacturers. The second classification describes the vertical combination of the network; the third classification is the nature of the product. For example, the product needing more attention to detailing involving complicated apparel design such as evening wear or foundation wear; while the other less complicated designs such as a T-shirt. The

last classification, are functional authorities. Functional authorities are managers in retailers, retail agents, or manufacturers who approve decisions in the apparel supply chain (MacCarthy & Jayarathne, 2013).

Many risks are in the apparel global supply chain. Trading houses, wholesalers, and agents are also known as, intermediaries, and are a part of the apparel supply chain (Vedel & Ellegaard, 2013). Intermediary leaders perform as a resource for filtering risks, however; the main objective is the act for the physical flow of inventory, information flow, and housing supply inventories. The global supply chain is vast and complex; many risks involved with moving goods from around the world. Global risks can include lost, stolen, high levels of uncertainty, damaged goods as opposed to local resourcing. Vedel and Ellegaard (2013) suggested three types of sourcing intermediaries, which includes import intermediary, traditional agents, and sourcing agents. All have similar factors to find the appropriate and suitable source. Compatible functions are cultural mediation and preserving a strong relationship between buyer and supplier (Vedel & Ellegaard, 2013).

Small to medium enterprises managers can find it hard to compete in a global apparel industry. By creating a virtual organization are where small to medium enterprises managers combine and collaborate for the best interest of production of apparel. In 2014, a study conducted in Portugal, managers in a brand name supplier of apparel and a manufacturer of textile for apparel collaborated to form a temporary partnership. Within this partnership, the value-added included enhancements to production time, competitive cost, and better quality. By creating a system, all parties involved can collectively see the elements of production. The system is capable of

helping small to medium enterprises managers customize and produce quality apparel products in a shorter amount of time by creating a virtual organization (Carneiro et al., 2014).

Consumers

Hustvedt, Carroll, and Bernard (2013) found the term consumer is complex, however, is the lead instrument, which drives the apparel industry. Consumers can make demands, which include both wants and needs. Needs and wants of consumers can vary based on region, ethics, and consumer resources (Hustvedt et al., 2013). Consumers are a critical part of manufacturing of apparel. Without consumer demands, the predictability of apparel manufacturing would be difficult. Labeling laws require a label on apparel to inform the consumer the country of the manufacturer (Rashid, Barnes, & Warnaby, 2016); however, country of origin of the fiber not always identified on the label. Company leaders are looking for new ways to market their products. The average U.S. consumer is willing to pay a higher price for raw materials made in their state and holistically made in the United States. Wool produced in a customer's region may demand a higher price than wool from another country. Wool product made into products in the United States may also demand a higher price rather than a product made in China (Hustvedt et al., 2013).

Leaders of companies such as Zara that thrive in the global economy find predicting demands of consumers important. The term fast fashion, which explains the ever-changing short life span of apparel. Callahan (2013) stated the average American shopper viewpoint has changed. A term has evolved from cheap fashion and trending

apparel or what is fast fashion. The decline of how consumers view apparel quality, making the apparel item quickly, and fabric used in making the garment, are inclusive of the meaning of fast fashion or cheap fashion. The average American shopper buys nearly 64 pieces of apparel a year. Apparel imports total 365 billion U.S. dollars. Americans spend on average 3% of their annual household income on apparel. Roughly, 2% of apparel items bought in the United States are domestic (Callahan, 2013).

Consumers also take note to brand or brand image. The consumer's view of the brand is an important function in competitive manufacturing companies. Brand extension strategy is a form of marketing where a popular, successful brand seizes an opportunity to create new categories of its products to introduce to consumers (Cho & Fiore, 2015). The brand name encompasses a feeling of how a brand's name integrates into a consumer's feeling. The brand can create either right or wrong emotions (Cho & Fiore, 2015).

Parkvithee and Miranda (2013) suggested many consumers are aware of the country of origin labels. Many international brand leaders are conscious of the waning view of the consumer (Parkvithee & Miranda, 2013). The view in Thailand, customers are more likely to buy apparel items from Thailand rather than from another country. Lower price point items such as shirts, may not necessarily vary in views by consumers in Thailand (Parkvithee & Miranda, 2013).

Cao et al. (2014) found fast fashion plays a role in excess consumption, pollution, depletion of natural sources, and exploitation of human workers. Excess consumption in fast fashion has forced lower prices of apparel products, however; industry, retailers, consumers, and brand owners lead are inclusive of causing an excess. Consumers shop

for many reasons such as, to fill an emotional need, to fit in, buy updated items for the season, occupy fundamental needs, and conspicuous consumption (Cao et al., 2014). Leaders of the fashion industry are taking advantage of wants and needs of consumers. Most consumers do not recognize excess in fashion (Cao et al., 2014).

In the Western hemisphere (Europe and America), materialism is commonplace (Joung, 2013). Consumers in the Western hemisphere buy apparel that the consumer may never wear. The consumer may dispose of usable apparel and buy apparel to fill emotional needs (Cao et al., 2014). Western culture puts pressure on buying and collecting as much as possible (Joung, 2013). By reducing the price on apparel, it fueled consumption. Cao et al. (2014) suggested between 2001 and 2005 in the United Kingdom, price on female apparel dropped by 14%, and sales volume increased by 37%. Within the same timeframe, consumers who spent money on men's apparel grew by 14% and increased spending on women's apparel by 21%.

As reported by Zhou, Zhang, Gou, and Liang (2015) suggested consumer demands are ever changing and in particular, women consumers are updating wardrobes more often. Frequently, consumers who purchase fast fashion tend to overlook the negative aspects of fast fashion such as low quality of the garment and effects on the environment (Boström & Micheletti, 2016; Park & Kim, 2016). Retail companies are introducing apparel products more often because women are changing their wardrobes more frequently. Leadership within Zara and other companies are setting the trend in the market for fast fashion. The average shelf life of apparel products can range from several weeks to half a year. In 2015, the trend for fast fashion companies like Hennes & Mauritz

(H&M) and Zara will continue to launch new products and at the same time will discontinue their previous lines. However, in high-end companies such as Coach and Louis Vuitton will sell their products at outlets (Zhou et al., 2015).

Fast Fashion Versus Slow Fashion

Fast fashion refers to a business concept to producing apparel and accessories in a short amount of time, based on consumer demands. Kozlowski, Searcy, and Bardecki (2015) posited fast fashion is a lucrative business model. Examples of fast fashion retailers include Zara, Forever 21, and H&M (Maegan & Yan, 2013). The term slow fashion coincides with retailers, who produce durable and classic apparel and accessories that are not trendy styles. Slow fashion retailers focus on quality rather than quantity. Slow fashion items include apparel, which a consumer may wear for multiple seasons. Examples of slow fashion retailers include Abercrombie and Fitch, Zoica Mateia, and Burberry (Maegan & Yan, 2013).

In manufacturing, a speed-to-market model for processing apparel from buying to obtaining merchandise in the store is something that is desirable for the apparel industry. A faster turnaround time from buyers to consumers is becoming the trend in global markets. The fast turnaround time worthwhile to consumers. Fast turnaround of apparel is a clear production idea that will allow inventories to stay low (Yeh & Yu-Tang, 2014). Maegan and Yan (2013) stated fast fashion retailers are successful by adopting quickness to market gives strength to these particular retailers and continues to create revenues that surpass specialty and department stores.

Under the business idea speed-to-market, allows lead times from buyer to market to decrease from 104 days to 42 days; a 60% decrease in production time. In the competitive global apparel markets, time is everything (Yeh & Yu-Tang, 2014). Quicker production times are value-added to the supply chain management sequences. Logistics management is possible in the volatile fashion world. Within the fashion world, the predictability of the consumer is low; short life cycles of products are commonplace, and increased impulse buying by the consumer is the trend (Yeh & Yu-Tang, 2014).

As conveyed by Yeh and Yu-Tang (2014), ingredients to a competitive speed-to-market include all areas of the apparel supply chain working together that attributes to a company's success. Three essentials involved in a successful speed-to-market are shorting production time, decreasing inventory, re-engineer supply chain, and product expansion. Company management can streamline and recognize any bottleneck areas in production. Management can examine and improve production time by developing a product, packing, shipping, the layout of production and assembly floors and computerize each step.

Social Responsibility

Social responsibilities can include codes of conduct within a corporation, worker's rights to collective bargaining, and overseeing manufacturing. Since the early 2000s, observations of abuses occurring in producing, distributing, and consuming of apparel goods is becoming an interest to consumer groups, different media channels, and business professionals. Social responsibilities or concerns can include low wages, inhumane working conditions, and safety hazards (Boström & Micheletti, 2016; Rubya,

2015). Reports include long working hours, both physical and psychological abuse, and discrimination (Chow, 2017). The use of heavy chemicals, which end up in rivers and streams, affect the environment and may contribute to climate change (Boström & Micheletti, 2016). Growing cotton and wastewater from textiles have produced run-off chemicals polluting the environment (Arif et al., 2016; Boström & Micheletti, 2016). Leaders in the apparel industry are becoming responsive to environmental responsibilities, which includes the disposal of chemicals and solid waste into the environment and high consumption of energy (Phau et al., 2015).

Knowledge and attitudes are significant in apparel-purchasing behaviors (Kozar & Hiller Connell, 2013). Consumers are more knowledgeable about environmental issues rather than social issues in apparel manufacturing. However, since the catastrophe in Bangladesh in 2013 consumers are more aware of social issues in apparel manufacturing (Phau et al., 2015; Rubya, 2015). Apparel manufacturing leadership can keep a positive relationship with consumers, which include attitudes and knowledge of social apparel issues and socially responsible apparel buying behavior (Kozar & Hiller Connell, 2013).

Since the 1990s, consumers who buy clothing are becoming aware of the social impact in the apparel industry. Consumers are becoming aware of the conduct of the labor that goes behind making apparel. Consumers who purchase brands such as H&M and Nike, and luxury brands, Ralph Lauren, DKNY, and Victoria Secret are aware of pricing and ethical treatment of those who produce apparel (Phau et al., 2015). Consumers are becoming aware of both, environmental and production of apparel (Phau et al., 2015). Phau et al. (2015) found that consumers were not willing to buy luxury

apparel manufactured in sweatshops but were willing to pay a little more for luxury apparel from nonsweatshops.

Overview of Technology and Advancements in Apparel and Textile Industry

In the textile and the apparel industries, management has a continuous relationship between industries. Apparel would not exist without textiles. Technology in textile and apparel manufacturing has many different meanings. In the textile and apparel industries, technology identification is computers, software, information technology, and science inclusive of the development of fabric and fabric applications, mathematics, and advancement of machinery (Kuo & Juang, 2016). The textile and apparel industries are diverse. Technology advancements by researchers have aided in developing many areas of the textile and apparel sectors (Ping, Tao, Yunlong, & Xinxing, 2013; Su, Liu, & Xu, 2015). Science and mathematics play a significant role in the progress of both textile and apparel manufacturing industries.

The literature review completed in this section is a selection of fundamental topics in areas that have most affected the developing and advancing of textile and apparel manufacturing. Technology plays a role in the advancement of both textile and apparel production. Technology has advanced the textile and apparel industry, but current research and development implementing science and mathematics continue to formulate improvements within both industries. Technology is a fundamental part of developing new and improved fibers, yarns, textiles, garments, and improving or developing new processes related to manufacturing of these products.

Lee, Ho, Choy, and Pang (2014) concluded consumers are more demanding than ever. To compete in the apparel market, apparel manufacturers must provide quality products at low costs. To preserve a competitive advantage, garment manufacturers must decrease the time of production and consider the short life of apparel. Technology and algorithms play a significant role in the making of apparel. Before new technologies such as algorithms, to find irregularities in either fabric or garment production, human intervention was necessary for this process (Lee et al., 2014). Production and quality are increasing by applying new technology such as computerized algorithms (Lee et al., 2014). One disadvantage to this computerized technology is an extra cost. Extra costs are for programming and training individuals to handle computerized production machines (Lee et al., 2014).

The Apparel Manufacturing Industry

Characterizations of apparel production are labor-intensive manual tasks, seasonal changes, various style fluctuations, and little production lead times (Mok, Cheung, Wong, Leung, & Fan, 2013). Apparel production involves a series of progressions such as designing, sample approval, merchandising, lay preparation, marking, spreading and cutting, sewing, laundering, and finishing, and preparing the shipment. Apparel manufacturing managers are applying technology to aid in improvements in apparel manufacturing. One such way is implementing algorithms in production planning (Mok et al., 2013).

Creating a garment was time-intensive and costly before inventing computers and computer programs. Designing, making patterns and creating garments used human

labor-power to set up and make apparel. Designing, pattern-making, and creating garments were both labor-intensive using trial and error in fitting, and expensive (Chanaka et al., 2013). Creating apparel made without computers and machines is a lengthy process and requires many steps to completion. Designing a garment meant to create an idea, drawing it, selecting color or colors and finding or creating fabrics with the pattern in mind. Creating a flat pattern for the garment, calculating measurements of individuals consists of various measurements of the body of where the garment is to fit. Next, fabric selection and placing the pattern on top of the fabric and pattern pieces cut from the fabric. The final step is making a garment. To create a garment is to sew pieces of the pattern together in a specific order to create the final apparel product. Inventing the sewing machine in the mid-1800s meant machines did the sewing versus sewing and joining seams by hand (Seram & Cabon, 2013).

Computers and computer programs serve an important role by improving the of production garments. Computer-aided design (CAD) in the use of apparel manufacturing began in the 1980s. Computer designing apparel continues to evolve including all facets of apparel design, from editing that is interactive, computer-generated try-on, and computerization of design, making patterns and making custom apparel (Su et al., 2015). The use of three-dimensional (3D) pattern making continues to evolve as researchers allow for the easement and different sizes of body images (Zhang, Innami, Kim, & Takatera, 2015). The use of algorithms and computer aided design programs to create 3D garments and to predict and customize garments improves the entire process by resizing and editing garments while in the production procedure. Algorithms play a particular role

in pattern making used to create garments such as shirts and undergarments. 3D computer-generated skeleton models are to ensure well-fitted garments on humans (Jituo, Guodong, Zheng, Jioongzhou, & Xiaoyan, 2013).

Technology aids with garment fit and creating 3D images of skeleton models and realistic digital human models. Computer programmers also help with creating 3D avatars or original models of people. Creating lifelike body images, before drawing garments to fit the avatar have many uses. One drawback to using some of the current 3D programs, creating apparel for avatars has limits and does not allow multiple views of garment and fabrics. Avatars can have body features that include hair color, eyes, and specific body characteristics. The final step is the image program placement of the sketched garment. Garment dressing may also be using a scanned body image to fit garments for the body part, such as pants with legs that show in 3D. Garment draping and 3D scanning mesh topology. The use of CAD and the drape simulation to create a flat pattern is a part of calculating the garment's performance (Hlaing, Krzywinski, & Roedel, 2013).

The use of avatars, body scans, creating lifelike computerized human forms, and predicting how the fabric will flow on the human body in a virtual environment is instrumental technology in apparel manufacturing. Computers and computer-aided design programs are also useful in developing flat pattern construction that will lead to garment fit on humans. The use of body measurements ensures proper flat pattern fit (Grimal & Guerlain, 2014). Another useful invention is the seamless warp knitted garment using 3D technology and the computer aided design. This technology is useful in creating a

garment in high production with no additional sewing involved thereby allowing close-fit, and fashionable, up-to-date garment which is comfortable (Dong, Jiang, Wu, & Cong, 2015).

Developers of technology have proven to create new and useful tools for the apparel industry. Such technologies include advancement of the use of CAD, as well as an addition to the use of virtual try-on software, apparel editing, and the fit of the apparel assessment, which increases production (Su et al., 2015). Two distinct types of manufacturing include ready-made and personalized or custom garments. Within CAD, specific areas in which technology that includes, 3D to 2D pattern adaptation, 3D apparel modeling, 3D apparel/pattern design, and 3D uniform mannequin modeling. Nonuniform rational b-spline works in CAD programs by creating styling and tailoring in 3D fashion design. This new technique allows designers more creativity within CAD programs (Jing-Jing & Chia-Hsin, 2013).

Maegan and Yan (2013) suggested management in manufacturers have changed the way they produce textiles and apparel products. Retail managers have also changed the way they buy garments. Many retailer managers such as Zara, Gap, and H&M have changed from seasonal buying (ordering items several seasons ahead of time) to ordering frequently throughout the year. Retailer buyers changed the way they buy apparel; they have also changed how they do business. Retail management teams continue to expand by opening retail brick and mortar stores in other countries. Zara, in particular, is the premier of retailers offering fast and popular fashion trends at a low price to the consumer (Maegan &Yan, 2013).

Grimal and Guerlain (2014) inferred managers must develop innovative methods to sell, buy goods and possess the ability to compete in the global apparel markets. Mass customization is a way apparel industry leaders are seeking to maintain a competitive advantage in developed countries and creating fast fashion in the marketplace. Technology and the extent of the ability to customize apparel design are already available. In mass customization, changing a few features and yet items are mass-produced by manufacturers. Chanaka et al. (2013) found 3Dgarment designs are another way of mass personalization, adding value to the customer in the global markets and creating patterns using the software.

Several company management teams such as Levi and Land's End are carrying out various customizations to suit needs of their customers. Various features include creating customized garments to fit clients. Several inhibitors of large mass production include costs, obtaining suppliers for the fabric and accessories contracted with the retailer. Consumers are accessing a three-dimensional scanner and turn-around time for delivery of the final product. In France, a small percentage of consumers are expecting mass customization of apparel. An expected revenue of nearly $62 million dollars for this growing change (Grimal & Guerlain, 2014).

The design of the garment includes the idea or design of the final garment look. Considerations for the design of a garment include several facets. Design includes the fabric, care of the garment, the drape of how the fabric will lay, and the finish used in the final garment product. The fabric finish is an important feature for some apparel

products. In the United States, as described the Flammable Fabrics Act, children's sleep apparel must use non-flammable fabrics (Cohen & Johnson, 2012).

There are other new technologies in correlation to apparel manufacturing regarding moister wicking and moisture management specific to garments (Duru & Candan, 2013). Consumers are vying for comfort especial with sports apparel and underwear. Wicking or moister management is one feature clothing may have. Wicking enables the fabric that is wet to dry quickly or evaporate while the wearer remains comfortable (Duru & Candan, 2013). Duru and Candan (2013) studied the effects of wicking on multiple types of fabric, different weights of fibers, and stitch lengths, as well as wicking after multiple launderings. Fabrics used were viscose, cotton, and bamboo. The result was moister wicking in viscose garments increased as the length of stitch increased. Cotton and bamboo had the greatest wicking on a medium stitch length. All three fabrics decreased in wicking after laundering (Duru & Candan, 2013).

Another technology that is making progress in apparel manufacturing is radio frequency identification (Nayak, Singh, Padhye, & Wang, 2015). This new technology allows manufacturers to control inventory, warehouse merchandise, distribution, logistics, and assist with supply chain management. RFID does not replace bar coding, however; both manufacturers and retailers are using this new technological innovation to track apparel. Companies are finding new ways to implement new technology such as RFID in the supply chain to decrease the loss of inventory in manufacturing, enhance speed, precision, and proficiency (Nayak et al., 2015).

The Textile Manufacturing Industry

Cohen and Johnson (2012) stated the textile and apparel manufacturing industries have various phases while producing goods. Textiles are an intricate part of apparel manufacturing development. Textiles and apparel production is similar. Procedures in production may vary in each industry, however; both industries include contacts with humans. The first step creating a textile begins with the vision of the use of the textile or the final product. Whether the end use of a product is a sheet, nylon cording for tires, or a pair of trousers for men, the idea starts with human design. Choices in creating the textile follow with identifying types of fibers, man-made or natural fibers, the size of fibers, thread count, knit or woven, and fabric finish. Each choice controls the hand or the drapability of the fabric and is essential for final products such as fabrics for apparel (Cohen & Johnson, 2012).

Cohen and Johnson (2012) suggested textiles have a wide variety of end-uses for many different industries. End-uses of textiles can vary from items such as apparel, outdoor awnings used on homes, buildings or campers, soft luggage, filters, rope, hoses, footwear, and belts. Other end-uses of textiles may include industrial items for stability and reinforcement, erosion control, and moisture barriers (Cohen & Johnson, 2012). The fabric is an essential part of apparel manufacturing. The creating of fabric is either weaving, bonding, or knitting yarns together to create cloth. Yarn quality is an intricate part of the process in textile manufacturing to ensure quality products. Data mining is another technology, which is a technique, used in engineering that predicts the quality of spun yarn (Abakar & Yu, 2013).

The decision-making procedure for a designer of fabric considers the textile end-use. Cohen and Johnson (2012) posited the decision-making includes colors or dyes in the textile; will the textile be a print, embroidered, or woven with dyed threads or the textile piece dyed. Decision-making steps may include choices such as a backing adhered to the wrong side of the fabric and the finish, (stain resistant, water repellant, satin or dull shine), applied to the textile. Kuo and Juang (2016) posited algorithms are a part of phases to create automation within the various steps of creation of a textile.

The use of 3D computer programs to conduct pull-out tests on woven fabrics has also improved the quality of fabrics during production. The use of 3D models for computers, manufacturers, can simulate effects to the weave patterns (Ping et al., 2013). During each test, identify warp threads, weft threads, cross-sectional shape, sizes, and variation of threads or yarns in the affected fabric. With the 3D imaging, algorithms are necessary to solve problems during the production procedures dealing with fabric hand or the touch of the fabric. These features are essential in garment and textile production (Tianyong, Shengxian, Shujuan, & Ya, 2013; Zhaoyang & Hong, 2013).

Ping et al. (2013) suggested applications of analysis computer programs and imaging systems continue to develop in the textile industry. Producing textiles can produce various textiles with small groups. New software and imaging systems can recognize variations in weave patterns during production. Algorithms are a part of developing and improving manufacturing processes and producing textile goods.

The use of technology in the textile and apparel industry using 3D weaving and knitting processes has proven to be an advantage to manufacturers. The use of 3D and

negative Poisson's ratio has shown to be successful in textile production. Negative Poisson's ratio and 3D technology have displayed developing resistance to pressure under compression. In 2012, research about textile composites, 3D knitting, weaving, braiding, and non-woven had also proven to be effective in the textile-manufacturing sector (Zhaoyang & Hong, 2013). 3D structural production is in high demand. 3D production is attractive to the potential end-use or application in specific industries. 3D production is useful where there is a need for collision protection such as auto, aerospace, defense, security, and sports gear (Zhaoyang & Hong, 2013). Tianyong et al. (2013) found new and improved products are applying 3D textile research. Metals and other materials in defense occupations, sports, and other areas that require high impact tolerance are replacing other materials within the textile. The strength of the textile produced is increasing the flexibility of the textile, making it durable, lighter weight, and cheaper to produce.

The textile industry experts continue to create and provide improvements that apply to many aspects of final stages of the end-use of textiles. Advancing technology has provided added means of protection and creation of textiles for the use of apparel and other products. Intellectualizing fabrics continue to grow. Developments in heating and cooling are elements of core fibers for the use of fire-protective textiles for undergarments and outer garments (Lavrent'eva, 2013).

Also heating and cooling of fabrics for clothing, antimicrobial and insect repellents applied to fabrics in creating garments are an added benefit to consumers. The fabric is a carrier of bacterial agents that includes odor-causing bacteria. The best

antimicrobial is zinc pyrithione applied during the making of the textile; is an element that will not wash off during laundering (Walter, McQueen, & Keelan, 2014). Besides zinc pyrithione, a natural chemical found is Chitin. Chitin poses antimicrobial attributes applied to fabric for apparel. Chitin is a natural chemical from marine shells and mollusks (Sunder, Palaniswamy, & Nalankilli, 2014). Silver (Ag), is one of the most used antimicrobial agents used in textiles. Adding Ag during making the fiber will allow the Ag to stay with the lifetime of the textile because Ag is a stable chemical and can withstand high heat (Simoncic & Klemencic, 2016).

Fibers, Yarns, and Finishes Used in Textile Production

Turhan and Toprakci (2013) suggested quality fibers and yarns produce quality textiles. Researching yarn and fiber properties are two areas that scientific researchers are exploring. The final use of products and fiber performance are areas in which researchers are seeking to improve the quality of fibers. Researchers are examining both man-made such as Olefin or Nylon and natural fibers such as cotton and flax. In textile manufacturing, blending fibers allows improvements to final product performance. Fibers are the basis for yarns and fabrics and continue to evolve with the application of technology, such as nanotechnology, and the use of computer programs in fiber manufacturing (Turhan & Toprakci, 2013).

Another fiber development includes fibers in waterproof breathable garments; Kevlar is a specialty fiber that is a part of making tires and bulletproof vests (Cohen & Johnson, 2012). Nanotechnology is the ability to maneuver individual atoms, which can significantly increase a product's performance (Cohen & Johnson, 2012).

Nanotechnology changes molecules to create fabrics, which are oil and water-repellent, wrinkle-resistant cotton, filters for chemicals, radioactive material, and materials that purify toxic gasses. Nanotechnology also changes fibers that change color; communication fabrics create fibers and fabrics that control moisture and that are ultraviolet absorbent (Cohen & Johnson, 2012).

Creating new textiles for apparel is a trend that is growing. The role of nanotechnology is a continuous growing area of research for the apparel manufacturing industry. Making a breathable apparel, which is also waterproof, applies electrospun nanowebs. Garments that are breathable yet waterproof such as uniforms, chemical shielding garments, casual wear for sports, military, and leisure are the most common areas of application (Kim & Park, 2013). The air porousness of fabric is associating air between the environment and the human body through its pores. Moving air enables vaporizing heat and moistness, which is a feature that affects water vapor conduction and the thermal protection. Aluminum electrospun nanowebs textiles for apparel resulted in a more breathable yet thermal insulated garment (Kim & Park, 2013). Novel textiles and green biosynthesis are as another newly developing area of research. Using organic materials from grapefruit, silk, and gold to create a more sustainable procedure used in textile dying (Nolasco-Arizmendi et al., 2013).

Redefined Manufacturing

Within apparel manufacturing, company leaders are redefining their objectives, not just focusing on yarns or producing garments; but also focusing on marketing and advertising consumer products (Kim & Heere, 2012). Apparel manufacturing leaders are

also developing innovations in a fashion that include installing electronic chips into garments that mobile phones can read and inform the consumer about the performance of garments in athletics. Other areas of development include innovations in healthcare, garments that can record the wearer's heart rate, measure a person's temperature, and blood pressure (Cohen & Johnson, 2012).

Trade Agreements for Imports and Exports

Transition and change are unavoidable in society and companies worldwide. Since the mid-1900s, the apparel industry has continued to change, and leaders are adapting to new conditions to survive and compete in a global environment. Apparel manufacturing business leaders are consistently evaluating different causes that alter the competitiveness of this particular industry. Improvements in relationships between the United States, Canada, and Mexico that offer free trading between countries is the North American Free Trade Agreement (NAFTA). Several bilateral trade agreements made between particular countries created many new pressures in the competitive apparel manufacturing industry (Jewell, 2014, Taplin, 2014b).

Fergusson, Cooper, Jurenas, and Williams (2013), free trade agreements are arrangements or agreements made between countries. Free trade agreements remove most or all tariffs on goods between countries. The Trans-Pacific Partnership is one such agreement between the United States and 11 other countries in the Pacific area includes Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. The agreement is debatable especially within the labor-intensive apparel and textile area of negotiations (Fergusson et al., 2013).The Trans-Pacific

Partnership agreement signed in February 2016, is now open for approval among the listed countries. The involved countries have 2 years or until 2018 to approve the agreement. If approved it will be the largest free-trade agreement of products encompassing 40% of the entire world's goods (Chow, 2017).

Tariffs play a significant role in the apparel industry. Tariffs are to protect domestic or encourage domestic production (Dodds & Heisey, 2014; Fergusson et al., 2013). Tariffs considerations include production arrangements with countries that have established trade agreements. In the case of the Trans-Pacific Partnership, countries such as Vietnam are vying for the elimination of tariffs on labor-intensive goods such as apparel exported to the United States (Fergusson et al., 2013). Domestic production is profitable to producers of goods that export with little or no tariffs or the cost to do business outside of the country is low. Lower production costs lead to lower prices for the consumer (Dodds & Heisey, 2014).

NAFTA is an agreement signed by former President Bush in 1992 and approved by the U.S. Congress in 1993, and signed into law by former President Clinton, in 1993. NAFTA includes the United States, Canada, and Mexico. The agreement affects the textile and apparel industry with removing duties and tariffs between the U.S., Canada, and Mexico with some minor stipulations. The stipulation includes Yarn Forward, which means the country that benefit from the good; the yarns must come from that country (Villarreal & Fergusson, 2014).

The WTO started in 1995, is an organization with the purpose to help countries wanting to do business with countries with barriers. Leaders in the WTO help with

negotiations of trade disputes, and renegotiating, and extending current trade agreements (WTO, 2017). One hundred fifty-nine countries are members of the WTO (2017). Among the members are Bangladesh, Cambodia, China, India, Indonesia, Malaysia, Philippines, Sri Lanka, Thailand, the United States, and Vietnam. While the WTO as a group, aids countries with trade agreements; leaders do not directly involve themselves in specific situations. The WTO leaders do not involve themselves in areas such as exploitation of workers and child labor laws. However, many WTO representatives from many countries support policies that protect workers and their rights as human beings (WTO, 2017).

The U.S. government plays a role in the apparel industry. Legislators in the United States have passed laws to protect consumers and identify information about apparel. Legislation such as the Textile Fiber Products Identification Act requires showing identification and producing information of a garment or textile (Cohen & Johnson, 2012). Another piece of U.S. legislation is the Berry Amendment. Congress passed the amendment in 1941, which requires all U.S. Department of Defense to apply funds to purchase goods made in the United States. The amendment includes fibers, yarns, textiles, and apparel. In 1994, the act made permeant in 2002. Adapting the Berry Amendment aided many fibers, yarn, textile, and apparel manufacturers in the U.S. that produce goods for the U.S. military (U.S. Department of Commerce International Trade Administration, 2017).

The apparel industry has division because of globalization. The diversity of the apparel industry and creating each part is complex. Thread made in one country. Fabric made in another country. The garment made in another country. An extensive set-up

makes it difficult to identify the origin of the maker of the textile or garment (Ha-Brookshire, 2015b).

Corporate Social Responsibility: A Global Issue

Because of societal changes, corporate social responsibility continues to evolve and redefine. Corporate social responsibility reflects company management have a duty that goes beyond the legal and economic duty to do good and avoid harm to society (Haque & Azmat, 2015). Corporate social responsibility has four top categories: safety and health, wages, lawful, and humanitarian. In a study completed in 2013, consumers identified with apparel environmental issues more so than apparel social issues (Kozar & Hiller Connell, 2013).

Blewett (2010) discovered that in the United States, it took a long time for improvements and changes to occur in the U.S. apparel industry. Changes, such as safer working conditions, fair wages to workers, and legal limits on working days, working rights of women, and child labor laws in the apparel manufacturing industry. The global dispersion of the apparel manufacturing industry, the Internet, and communication has increased awareness of exploitation and ethical issues in this business. Many companies are producing a profit while preserving societal goals (Young & Makhija, 2014).

Working conditions and leading businesses that use particular factories are in the spotlight focusing on unsafe working conditions, the non-existent child labor protection, and many other violations (Rubya, 2015). Hossan et al. (2012) pointed out Bangladesh is the center of study. Hossan et al. (2012) reported the ready-made garment industry leaders are experiencing difficulty including labor unrest, lack of facilities' infrastructure,

and inadequate sources of materials and accessories. Bangladesh workers have a limited choice of where to work because unemployment is high. Women in the workforce in Bangladesh face wage discrepancies compared to male counterparts and females live below the poverty line (Hossan et al., 2012).

The apparel industry in this region of the world has become a target for concerns about unsafe working conditions and labor rights (Rubya, 2015). Countries such as Bangladesh, labor-intensive occupations are at the end of the value chain. The trend is people work in substandard conditions and for meager wages. In developing countries, laborers do not have contracts. In most apparel manufacturing companies, company handbooks do not exist, and delayed payment to workers with no overtime pay is the norm (Hossan et al., 2012).

Bangladesh is one of the major countries that supply workers for labor-intensive jobs in the apparel manufacturing industry. Bangladesh exports about $4.5 billion U.S. dollars of apparel to the United States. Two accidents took place in Bangladesh that raised awareness of the unsafe working conditions in factories in this country. In November 2012, 112 people died the Tazreen Fashions Factory fire, and in April 2013, 1,127 people perished in the Rana Factory building collapse (Crook, 2013; Rubya, 2015). The U.S. representatives took action to the State Department that encouraged U.S. buyers to coordinate with the Bangladesh government leadership and other groups to help ensure safe working conditions for factory workers. However, in 2013, President Obama took action and removed duty-free sanctions for some imports from Bangladesh because the

country did not recognize international labor rights. Crook (2013) found apparel from Bangladesh does not have a duty-free position in the United States.

Apparel manufacturing company leaders that have outsourced labor-intensive jobs may need to recognize corporate social responsibility for the people who work for them overseas (Boström & Micheletti, 2016; Drejet & Rappaport, 2014). Some suggestions may be supporting people whose jobs are in jeopardy by offering educational opportunities, learning new trades, or transferring if other facilities exist. Government assistant programs and grants, which provide educational opportunities, are available to workers in the apparel and textile manufacturing industry (Drejet & Rappaport, 2014).

Media coverage and organizations have brought concerns and working conditions of the apparel industry in developing countries to the forefront of society. An example was the collapse of Rana Plaza in Bangladesh in 2013 where 1,127 people died, and 2,500 people were hurt (Crook, 2013; Rubya, 2015). Improvements in the international global supply chain and responsible companies that use cheap labor help improve standards of working conditions. Increase wages for workers in the apparel industry (Drejet & Rappaport, 2014; Kozlowski et al., 2015). Bangladesh, Cambodia, Sri Lanka, and Vietnam have accomplishments and improvements in the apparel manufacturing sector from different angles. The accomplishments include strikes, programs started by particular companies, protests in streets, and trade unions forcing governments to increase wages.

Transition

In Section 1, I introduced the problem that some U.S. apparel manufacturing business managers lack strategies to produce competitive products. Section 2 will include the role of the researcher, participants, research method and design, population sampling, ethical research, instruments used in collecting the data, data organization, and data analysis. Section 2 will also include the overarching research question, interview questions, and supporting information for reliability and validity findings. I will discuss the professional practice applications, social change implications, and future study recommendations in Section 3.

Section 2: The Project

The information that I presented in Section 1 supported the idea that there is a problem of sustainability for apparel manufacturing companies trying to maintain operation in the United States and produce competitive products. In this study, I specifically focused on a North Carolina apparel manufacturer. In Section 2, I will describe the project method and procedures and examine the qualitative case study design. Section 2 will also include a discussion of (a) the role of the researcher and participants, (b) the research design and method, (c) the demographic population and sampling, (d) data collection methods, (e) data analysis techniques, (f) ethical and fair investigation, and (g) validity and reliability factors.

Purpose Statement

The purpose of this qualitative case study was to explore the strategies that some U.S. apparel manufacturing business managers use to produce competitive products. The target population was business managers in apparel manufacturing companies. My research effort included a purposeful sample of business managers from one southeastern U.S. apparel manufacturer who created strategies to produce competitive products.

The number of U.S. apparel manufacturing companies has decreased, and researchers have identified that products made in the United States account for less than 3% bought in the United States (Callahan, 2013; Minchin, 2013). The information from this study may help managers of apparel producers learn strategies to improve efficiency in the U.S. apparel manufacturing industry. The results of this study may contribute to social change through improved opportunities for apparel workers and an increase in

demand for apparel products produced in the United States and related services from domestic suppliers and vendors. The findings from this study may also contribute to positive social change by possibly increasing business prospects for suppliers, auxiliary businesses, and thereby increasing revenue in North Carolina.

Role of the Researcher

Specific strategies for a researcher to gain qualitative information include developing a rapport, asking fitting questions, and correctly interpreting participant answers (Trochim et al., 2016; Yin, 2014). I was the research instrument for this study through personal contact with the participants (see Trochim et al., 2016). Setting up connectivity with participants is critical in a case study (Yin, 2014). Yin (2014) posited that the role of a researcher in a qualitative study includes asking in-depth questions, listening to participants, and understanding the problem studied. The role of the researcher should also include member checking to avoid research biases and ethically conducts research (Trochim et al., 2016; Vamsi & Kodali, 2014). When conducting qualitative case study research, the researcher must disregard any prejudice or bias and keep an open mind and be willing to fine-tune to thoughts and dialogues from the data (Trochim et al., 2016; Yin, 2014). The interview process is an important technique to gather data. Because the researcher is a research instrument in semistructured interviews, using an interview protocol helped me to standardize the interview process and reduce interviewer bias (see De Ceunynck, Kusumastuti, Hannes, Janssens, & Wets, 2013).

Researchers must have specific boundaries and respect all parties involved in a study (Adams & Miles, 2013). I carried out the research based on the guidelines of the

Belmont Report (see Adams & Miles, 2013). According to the *Belmont Report*, researchers should avoid exposing participants to undue harm, whether physical or psychological and adhere to the tenets of beneficence, respect, and justice (Adams & Miles, 2013).

As the principal data collector, I could relate to my participants based on my decades of professional involvement in different aspects of the apparel and textiles industries in the United States. My experiences include years of working with consumers; designing and making garments; working with various vendors as a buyer, conveyance assistant, inventory and quality control associate; and production of apparel, accessories, and textiles for interior products. I have 10 years of teaching experience in higher education, which includes creating courses in applied economics, apparel and textile application and construction, retail management, fashion production, and global supply chain management.

Participants

There is not a specific number of participants to interview in qualitative multiple case studies (Fusch & Ness, 2015). The minimum participant size for a case would consist of one to four participants (Yin, 2014). In this study, I followed Yin's suggestion and interviewed a purposeful sample comprised of four business managers from one apparel manufacturing company located in North Carolina.

Turner (2010) recognized the importance of choosing qualified participants and recommended selecting participants who are willing to share information openly and honestly. To begin the search for participants from the target population, I searched for

business managers affiliated with SEAMS.org from competitive apparel manufacturing companies located in North Carolina. SEAMS.org is a nonprofit organization, and the members include manufacturers of sewn items, contract manufacturers, and related suppliers (SEAMS.org, 2017). I conducted an Internet Google search and explored SEAMS.org. Only a small number of the target population responded to my original e-mails, requiring me to use the snowball method to find participants. I contacted potential participants by e-mail (see Appendices B and C), and then I spoke with respondents via the telephone. The respondents knew other individuals within the company who satisfied the criteria for participation. Once I received the signed consent form from participants, I arranged and met face-to-face with two participants for the interviews. Due to time constraints, I completed the other two interviews over the phone.

Research Method and Design

I used a qualitative, single case study research design with a purposeful sampling of managers for this study. A qualitative method offers details, which translate into words from the data (Leedy & Ormrod, 2013). Qualitative data collecting is purposeful and subjective by applying words from participants that translate into rich descriptions rather than statistical measurements (Palinkas, 2014). Hibbert, Sillince, Diefenbach, and Cunliffe (2014) suggested that qualitative research allows researchers to define observable occurring events through critical examination, rational expectations, and conceptual obligations. There are three scenarios in case study research, questions beginning with *how*, if the researcher has no control over participants behaviors, and if the study involves a current event (Yin, 2014).

Research Method

There are three methods in research: qualitative, quantitative, and mixed methods (Trochim et al., 2016). The qualitative method design is best suited for collecting and analyzing data to describe, explain, and explore a phenomenon regarding human behavior and experiences (Yin, 2014). Qualitative research does not encompass or condense to numeric or quantitative measures (Garcia & Gluesing, 2013). In contrast to qualitative research, quantitative researchers use numbers, closed-ended questions, and percentages to test hypotheses (Barnham, 2015; Bloch et al., 2014). Mixed methods research includes both qualitative and quantitative components (Newman, Lim, & Pineda, 2013). To explore strategies from apparel manufacturing business managers who produce competitive apparel products, I did not test hypotheses that would be part of a quantitative study or apply the quantitative portion of a mixed methods study. This study involved the subjective realities of experiences of business managers from one apparel manufacturing company in North Carolina and to understand their behaviors I selected a qualitative approach. Jackson and Wood (2013) suggested that by using a qualitative case study design, researchers could explore experiences of participants.

Research Design

Denzin (2012) posited that the research question should guide the research design, thereby the research question becomes the leading indicator. I considered several qualitative designs for this study. Among the qualitative designs available were the case study, ethnographic study, the grounded theory, the narrative, heuristic, and phenomenological studies (Tracy, 2013). The basis of a case study is the study of human

practice and the course of those experiences based on human consciousness within a real-life situation (Perry, 2013). Cavender and Kincade (2014) found that case studies clarify the complexities of a situation and present opposing viewpoints or opinions about the phenomena. Other qualitative designs were a consideration; however, to identify strategies American business managers use to produce competitive apparel products, the case study design was the ideal choice for this study.

Other designs that I considered for this study included the ethnographic design, grounded theory, and the heuristic design. Zapata-Lancaster (2014) noted that ethnographic research applies social context that enables an in-depth understanding of meaning and experiences. The ethnographic design applies to a social context, which was not the primary goal of this study. The grounded theory emphasizes on discovering or producing theories (Hardman, 2013; Khan, 2014), which was not the intent of this study. The heuristic design, comparable to phenomenology, is for an experience-based or experimental examination of problem-solving, discovery, and learning (Bozkurt & Bozkaya, 2015). As such, the heuristic design was not a suitable choice for this study. The primary focus of a phenomenological design is to explore the lived experiences of different individuals and those living the phenomenon (Tompkins & Eatough, 2013). Tomkins and Eatough (2013) found that a phenomenological design records and describes lived experiences of participants. Interpreting lived experiences, or their meaning was not the intent of this qualitative study.

O'Reilly and Parker (2012) suggested data saturation began within the grounded theory design and continued to evolve when supporting other qualitative research

designs. In this single case study, for saturation or completeness to occur, I used a purposeful sample of four business manager participants from one apparel manufacturing company. For triangulation, I used member checking (see Hertzman, Meagher, & McGrail, 2013; Hoejmose, Roehrich, & Grosvold, 2014), in-depth interviews, and participant observation (see Reilly, 2013) to explore the strategies of business managers who produce competitive apparel products in the United States.

Population and Sampling

The population I selected for this qualitative study included a purposeful sample of business managers from one apparel manufacturer operating in North Carolina. I began my research effort with business managers from one company. There is not a specific, quantifiable number of participants in a case study linked to saturation (Fusch & Ness, 2015); however, my objective was to interview four participants.

A purposeful sampling of several managers or individuals allowed me to explore an in-depth case study (see Malterud, Siersma, & Guassora, 2015). Wang, Zachmann, Sesnie, Olsson, and Dickerson (2014) found a targeted sampling is a practical means of researching and developing ideas from several sources. The inclusion criteria for participants included the location of the apparel manufacturer being in North Carolina, and the manufacturer had to have been in business a minimum of 5 years. The purpose of this study was to gain understanding from a small group of experts from a focused area. Palinkas et al. (2013) suggested that the attainment of an in-depth understanding of participants' information is through purposeful sampling. This information is not always available from random sampling (Reybold, Lammert, & Stribling, 2013). Based on the

qualification criterion, Robinson (2014) assessed that using a purposeful sampling gained by the snowball method separates participants for a specific study.

When choosing a criterion for interviews, the sampling mechanism is appropriate. The snowball method is valuable to contact hard-to-reach potential participants (Perez, Nie, Ardern, Radhu, & Ritvo, 2013). To obtain additional participants, I received recommendations from participants about other leaders they know in the industry that met the criteria of the study, which is called the snowball method (see Trochim et al., 2016). Turner (2010) identified the importance of choosing qualified members and recommended selecting participants who are willing to be open, honest, and share information. Turner also suggested participants should be in a comfortable environment where they do not feel limited. Sampling design and sampling size are both important to establish reliability and validity. In addition, collecting data from two or more individuals in a case study increases the possibility of a direct replication or saturation (Yin, 2014).

The process I used to select business leaders was based on the following choice of parameters from the NAICS Code 315 on apparel manufacturing and narrowed down to the state of North Carolina. My attempts to locate multiple business managers for participants began; however, some leaders may not have been willing to take part because some companies are private or were closing. In 2003, there were 734 companies under the NAICS Code 315 in North Carolina (U.S. Census Bureau, 2015); by 2013, only 189 apparel manufacturing companies remained in North Carolina (see Table 2).

Table 2

Decrease in North Carolina Apparel Manufacturing Companies and Employees From 1998 Through 2013

Year	Number of Employees	Number of Facilities
1998	67,642	734
1999	63,146	694
2000	55,691	669
2001	45,719	606
2002	36,787	514
2003	32,799	491
2004	29,020	449
2005	23,919	405
2006	21,116	371
2007	17,919	326
2008	13,345	250
2009	11,599	242
2010	10,730	229
2011	10,120	217
2012	9,834	194
2013	9,085	189
Totals	(58,557)	(545)
Percentage Decrease	(86.6%)	(74.3%)

Note. Adapted from the U.S. Census Bureau (2015).

Ethical Research

After receiving the approval number 11-04-16-0118080 from Walden University's International Review Board (IRB), I conducted this research study. My research effort included the three basics of research involving human subjects, in accordance with the *Belmont Report* (Adams & Miles, 2013). (a) Kindness, (b) the principles of reverence and beneficence, and (c) justice to each participant in the study. Through e-mail, each participant received a request that describes the objective of the study. The e-mail included a Participant Consent Form for the participant to examine, read, and sign electronically by replying to the e-mail *I consent* and send the e-mail back to me. Sample interview questions and an explanation about the audio-recorded interviews are in the Participant Consent Form. The Participant Consent Form clarifies participants can renounce at any time without any penalty and that participation in the study is voluntary. E-mails followed to the participants who consented, and I scheduled interviews on specific dates and at specific times. There was no payments or incentives for involvement in the study, and I e-mail results and the findings to each participant.

Ethical guidelines are to protect participants and their anonymity throughout the process (Yin, 2014). My research effort was restricted as the participating individual's information was limited to me, and participants have the assurance of anonymity that their names and the name of the company will remain confidential. In the study, for participants to remain anonymous, I assigned identifiers for the company and subcategories for each participant. For example, Company A included Participant A1, Participant A2, Participant A3, and Participant A4. Ethical research includes honesty, not

biased, not fabricating information; evade dishonesty, and acquiescent responsibility for my work in accordance with the Belmont Report (Adams & Miles, 2013).

Interviews took place once business leaders of the selected apparel manufacturing company agreed to participate (Adams & Miles, 2013) and I received approval from the IRB. If participants wish to withdraw from the research project, they may do so by contacting the researcher or Walden University. There was no compensation for any activity related to this project. Compensation may propose bias from participants (Downey & Chang, 2013). For a 5-year period, research documents will remain and be stored in a locked safe at my home. At the end of 5 years, I will destroy all data collected by shredding documents, notes, and deleting information on the flash drive.

Data Collection Instruments

For this qualitative case study, I was the instrument to collect data. To understand strategies that apparel manufacturing business managers use to produce competitive products in North Carolina. I used a Livescribe Echo Smartpen to record interviews. The foundation of any research study is data collection and analysis (Yin, 2014). One technique of data collection researchers can use semistructured interviews to extract a comprehensive understanding of the phenomenon and gaps in the literature (Turner, 2010). Mojtahed, Nunes, Martins, and Peng (2014) suggested preparing semistructured interview questions allows researchers to recognize themes in a reliable and systematic method interrupted with inquiries intended to produce rich replies.

My objective was to interview four apparel manufacturing business leaders from one apparel manufacturing company in North Carolina. I developed a protocol for

interviews with leaders and developed in-depth, open-ended questions for semistructured interviews to gather descriptions of the lived experiences of managers. My research effort included methodological triangulation to ensure reliability and validity of the data collection process and instrument. To confirm reliability and validity, my research effort included triangulation with in-depth interviews, enriched by member checking, and participant observation (Reilly, 2013). The data collection process for my study consisted of interviewing, with member checking and transcript review, and participant observation (Yin, 2014).

Data Collection Technique

The data collection process for this case study consisted of two semistructured face-to-face interviews and two semistructured interviews using the telephone (Doody & Noonan, 2013). I captured each interview on a handheld digital recorder using a Livescribe Sky Wi-Fi smartpen. My research effort included participant observation (field notes) of significant body language and voice intonations documented in a Livescribe journal designated for the research.

After each interview, I transcribed the information and sent a copy of the transcribed interview to each participant for their review with a time-sensitive (4-day turn around) email. One transcript had minor edits. The participant made small changes to the transcript, highlighted each change in yellow on the document, and e-mailed it back to me. Reviewing transcribed data gives participants an opportunity to highlight their experiences and add missing elements or to update the memory of their experiences (Stake, 1995). Nottingham and Henning (2014) found in a qualitative study, using

member checking ensures reliability and validity in research (Reilly, 2013). Kim, Kim, Han, and Chin (2015) posited that member checking ensures the quality of the data and maximizes trustworthiness; member checking will also safeguard interpretations. Advantages and disadvantages of interview data collection exist. One advantage is a participant validation of collecting data. Trochim et al. (2016) and Turner (2010) suggested one disadvantage of qualitative research is the researcher's prior knowledge of the subject. Prior knowledge could lead to research bias however by allowing participants to answer freely will reduce researcher bias within the study. Conducting a pilot study was not necessary.

Data Organization Techniques

After each digitally recorded interview, I organized the information by including field notes, classified all data, and information. All the information gathered was electronically stored on a flash drive in the main folder titled Primary Information. The primary folder identified as Company A, Participant A1, Participant A2, Participant A3, and Participant A4 for participants' anonymity (Haahr, Norlyk, & Hall, 2014). NVivo software organizes the data collected to find common themes to verify the representativeness of the data in its wholeness (Houghton, Murphy, Shaw, & Casey, 2015). All documents and digitally recorded information are in a locked safe within my home and will remain for 5 years. After 5 years, I will destroy data collected by shredding documents, notes, and deleting information on the flash drive. The participants received a summary of the findings and will receive an electronic copy of the completed doctoral study upon approval by Walden University's Chief Academic Officer.

Data Analysis

Researchers use the case study method to understand perspectives of participants (Zachariadis, Scott, & Barrett, 2013). Collingridge (2013) posited that to contemplate data concerning a particular phenomenon, qualitative researchers use data analysis. Malterud (2012) designed systematic text condensation (STC) using Giorgi's psychological phenomenological four-step analysis principles to develop themes and give meaning to responses. Using methodological triangulation aided in recognizing themes and patterns that emerged from data collected using several sources (de Oliveira & Pereira, 2014; Yin, 2014).

The data analysis involved STC coding of interviews and field notes of participants' observations using standard qualitative data analysis software. Participants' responses answered the central research question: What strategies do American apparel manufacturing business managers use to produce competitive products? Qualitative data analysis techniques involve separating data into themes or categories (Yin, 2013). To identify common themes or categories, I used NVivo 11 software. Houghton, Casey, Shaw, and Murphy (2013) stated that NVivo is a valued tool to assist in data analysis during the research process. NVivo is an explanatory approach to examining experiences and information from each participant. My research effort included a comparison of themes and patterns discovered with those in the literature review and conceptual framework, identified any gaps in the literature. During the proposal review, interview process, and while writing Section 3, I continued to explore and added newly published studies to the literature review in this study.

For member checking, I contacted each participant and went through each research question. I gave a copy of the transcribed interview to each participant to review for accuracy for transcript checking. As needed, I made an added appointment for clarification follow-up. If any changes were necessary, I updated the information and resent the information back to each participant via e-mail

Reliability and Validity

Discovering the significance of the research is dependent on the assurance others place in the researcher's results (O'Reilly & Parker, 2012). Qualitative researchers establish confidence and accuracy by expanding on other ideas such as dependability, creditability, and transferability, and confirmability rather than the customary quantitative reliability and validity (Elo et al., 2014). Ensuring trust and rigor while addressing readers' concerns is an important attribute to realize in research (Denzin, 2012; Dolnicar, 2013). Member checking will enhance the validity of a study (Hamilton & Corbett-Whittier, 2013). Readers should determine that the findings from this study are credible because my research effort included methodological triangulation and member checking (see Hamilton & Corbett-Whittier, 2013; Tsang, 2014).

Reliability

To establish thoroughness, dependability, and trustworthiness for this study, I used methodological triangulation and member checking to check data (Cope, 2014). Reliability in qualitative research is the degree to which other researchers can duplicate the study (Zohrabi, 2013). Reliability also indicates that findings are objective and credible across independent researchers and various projects (Yilmaz, 2013; Zohrabi,

2013). Themes emerged supported by coding answers given by the participants; the analysis of themes confirmed the reliability of results.

Thomas and Magilvy (2011) noted that to obtain dependability of a study, another researcher should follow decisions of the original study. Confirmability, which is similar to fairness in qualitative research, might occur only when consistency, creditability, and transferability exist in a study (Thomas & Magilvy, 2011). The protocol is in the procedure. The protocol reassures the objectivity and creditability of the study. Transferability refers to results or findings of a researcher's study and applying the information to other settings or groups (Hays, Wood, Dahl, & Kirk-Jenkins, 2016; Houghton et al., 2013). Findings or results from a researcher's study possibly have meaning or relevance to a specific research group if the intent of the research is to generalize about the phenomenon (Cope, 2014). Cope (2014) suggested readers might associate their experiences with findings.

The collecting and analysis of data are to achieve reliable, trustworthy, credible findings, and assessing the quality of interpretation and inferences is the focus for the validity of a study (Trochim et al., 2016). To accomplish this, my research effort included member checking and methodological triangulation in the single-case study. I (a) viewed through eyes of the participants to review the information gathered; (b) reviewed transcripts for emerging and repetitive patterns, themes, and statements that relate to the specific research question; (c) coded themes; (d) cluster the coded themes by each participant looking for contradictions, context, and complete elements; and (e) synthesized results from the data. Fusch and Ness (2015) suggested there is no specific

number of participants for data saturation in a qualitative case study. To produce a quality in-depth study from apparel manufacturing business managers to achieve data saturation, my research effort included methodological triangulation, which included in-depth interviews, observation of participants, and member checking (Fusch & Ness, 2015).

Validity

Validity communicates honesty and authenticity of research findings (Zachariadis et al., 2013). The degree in which the researcher interprets results of a study will ensure validity or trustworthiness (Zohrabi, 2013). Researchers use validity, to check the accuracy of findings by employing certain procedures (Trochim et al., 2016). Kim et al. (2015) suggested participant validation ensures the accuracy and creditability of a study. Yin (2014) suggested using multiple sources to confirm the validity of the research findings. My research effort followed the recommendations of Yin (2013), by including in-depth interviews and using a population of experts who might offer a complete examination of a topic (Houghton et al**.,** 2013; Marshall & Rossman, 2016).

The small number of decision-making experts for this case study will offer a better understanding of the experience of the phenomenon under examination (Yin, 2014). For internal validity (creditability), I gave each participant their transcribed interview, completed transcript checking, and my synthesis, member checking, and asked each participant to provide information for clarification and contextual depth. For external validity (transferability), I conducted interviews at the business manager's manufacturing location on the same day of the week in an attempt to copy surroundings for each case**.**

Transition and Summary

Section 2 encompassed a detailed review of the qualitative single case study. The material in this section included my role in addressing essential parts of the research, such as the purpose statement, role of the researcher, participants selection, and ethical research. Explanations of data collection, organization, and analysis techniques, allowed me to explain how I addressed the reliability and validity of this research.

In Section 3 of the study, I will summarize the information in the preceding sections. Section 3 will also include (a) an overview of the study, (b) the findings of the research study, (c) how this study may contribute to positive social change, and (d) recommendations for future actions. I will also include a reflection about the research process and end Section 3 with a summary and conclusion.

Section 3: Application to Professional Practice and Implication for Change

Introduction

The purpose of this qualitative case study was to explore the strategies some U.S. apparel manufacturing business managers use to produce competitive products. My data collection included in-depth semistructured interviews of four business leaders from one apparel manufacturing company in North Carolina. To comprehend the managers' understanding of the strategies, I developed one research question and 10 supporting open-ended interview questions. I used triangulation to scrutinize the data sequentially and logically to identify the themes of the findings and draw conclusions. In a review of the emergent themes, I noted that the managers' identification of technology, quick production time, and business models with brand development answered the main research question and subsequent questions regarding the production of competitive products.

Presentation of Findings

My findings from data analysis related to the overarching research question: What strategies do American apparel manufacturing business managers use to produce competitive products? The purposeful sample incorporated four managers from an apparel manufacturing company. I met face-to-face with two managers, explained the research protocol, and presented a letter of information and consent form. The other two interviews were conducted via telephone conversation. Before the interviews, the managers signed the consent form and agreed to have their interviews recorded. The

participants replied to the interview questions and presented practical responses that varied in scope, depth, and attention.

The participants explained their replies as needed for interview transcription and member checking. Member checking formed part of the interview protocol and required all managers first to confirm the resulting transcript of their interview to ensure validation and then accept my interpretations of their responses (see Marshall & Rossman, 2016). After transcribing interviews, transcript review, and member checking, I substituted the names of the participants with the codes A1, A2, A3, and A4. I coded the company name as Company A. In agreement with the suggestion of Legewie (2013), I loaded the documents, including field notes, and participant observation data into the NVivo 11 software for coding to uncover themes and patterns.

Three themes emerged from the data collected: technology, time, and brand/industry. These emergent themes provided me with a configuration for focusing on the strategies used by apparel manufacturing managers who create competitive apparel in the United States. I then applied the conceptual framework of Porter's (2000) diamond theory (Zhang & London, 2013) to the three themes. The four points of the diamond theory included factor conditions; demand conditions; related and supporting industries; and the firm's strategy, structure, and rivalry (Porter, 2000; Zhang & London, 2013). Porter later added the point of outside causes, which includes the role of government and chance (Ha-Brookshire, 2015a; Zhang & London, 2013). The core of Porter's diamond theory is individual industries or clusters of industries (Porter, 2000). The factors of

conditions include demand for the product or products, competition, and how companies work and compete (Aricioglu et al., 2013; Porter, 2000).

Emergent Themes

In this study, I used Giorgi's STC method (see Malterud, 2012) of analysis and NVivo 11 software to develop themes from the four participants' answers to the interview questions. NVivo 11 software creates nodes and word frequencies as the software analyzes the data from each interview gathering information in one place to help the researcher look for emerging patterns and ideas known as nodes (Malterud, 2012). I ran data analysis using the participants' words for topics and discovered three major themes and patterns: technology, time, and brand/industry. I related the themes to the literature review and conceptual framework. Together, the themes delineated actionable steps that might offer strategies for American apparel manufacturing business managers use to produce competitive products.

Theme 1: Technology

Technology was the first theme developed within this study. Theme 1 included two subthemes: (a) nanotechnology, and (b) apparel making process. This theme aligned with one point of Porter's diamond theory and the assertion of other peer-reviewed studies.

Nanotechnology, in the form of moister wicking and antimicrobial technologies, were identified by participants as an effective competitive tool that is used by Company A. The moister wicking and antimicrobial technologies also coincided with the findings from peer-reviewed studies, such as including Ag as an antimicrobial agent (Simoncic &

Klemencic, 2016). Nanotechnology changes the molecules to create a fabric which controls moister within a garment (Cohen & Johnson, 2012). Further studies involved the uses of other natural antimicrobial agents such as an extract from guava leaves and aloe applied to fabric (Katewaraphorn & Aldred, 2016).

The technology advancements also included the apparel making process itself, such as developing faster and more accurate equipment to produce apparel to speed up the processing time of creating garments. Findings from additional peer-reviewed studies included the development of technology in the cutting, sewing, laundering, and finishing of apparel within the apparel manufacturing industry (Gupta & Dasgupta, 2014; Mok et al., 2013). Using technology to create a competitive apparel product identifies with three of Porter's (2000) points within the diamond theory that include a firm's strategy to make products more competitive in the marketplace and creating factor and demand conditions for the apparel products.

Theme 2: Time

The second theme that developed from the data was the time from the manufacturer to the retailer. This theme included three subthemes: (a) lead-times in production, (b) working with local suppliers, and (c) customers/people. Each subtheme related to Porter's (2000) diamond theory that included factors of condition and related and supplementary industries, which supported Company A's manufacturing operations.

Lead-times from the manufacturer to the retailer have become shorter within the industry. Chaudhry and Hodges (2012) posited that the apparel industry faces growing competition and faster turnaround times; therefore, for apparel manufacturers to stay

competitive, a quick turnaround time is necessary. Ghosh, Kumuthadevi, and Jublee (2016) found that Indian apparel manufacturers that exported goods showed similar competitive factors including improvement in quality, reduced production costs, shorter lead times in production, flexibility, and innovations in product design. To create competitiveness, apparel manufacturing business leaders identified competitive factors and found that time or speed to market was the highest priority in manufacturing to create competitive products (Ghosh et al., 2016).

The second subtheme was working with local suppliers. Company A has a group of local companies (within a 2-hour drive) that produce the yarn, make the fabric, print on the fabric, dye the fabric, and apply different finishes to the yarn or fabric. By having local companies be a part of the production, it allows the processing time to hasten so that the finished apparel goods may be shipped quickly. Yeh and Yu-Tang (2014) found that in the competitive global apparel markets, time is everything and that lead times have decreased in apparel manufacturing.

A core of Porter's (2000) diamond theory is the related and supporting industries. Producing apparel products more quickly identifies with fast fashion (Maegan & Yan, 2013). In addition to a quick manufacturing process, the participants' responses indicated that Company A has a return rate of 1/10th of 1% or .0001 for quality issues, thereby aligning with Porter's diamond theory around the firm's strategy. Producing quality products quickly with a little return rate for quality issues may be another reason why Company A can produce competitive products. Apparel manufacturers strive to have a zero return rate; nonetheless, there is no current empirical evidence for an industry

standard rate of return for apparel manufacturers. The overall industry standard rate for returns for online finished apparel products in retail stores is 30% (de Leeuw, Minguela-Rata, Sabet, Boter, & Sigurðardóttir, 2016).

The third subtheme was consumers. Consumers want to purchase fashionable apparel products more quickly (Meagan & Yan, 2013). The data from the interviews revealed that Company A produces apparel goods from start to finish within 3 to 7 weeks. This finding corresponded with Yeh and Yu-Tang's (2014) findings that the speed to market strategy reduces the delivery time from a 3 to 6-month period to approximately 42 days. Yeh and Yu-Tang posited that increasing the speed of manufactured apparel goods to the marketplace is a well-proven strategy. Companies such as Zara's and Forever 21 implemented fast fashion or have a quicker way of delivering to retailers, thereby giving quick access to consumers (Maegan & Yan, 2013). In addition to aligning with the results of other peer-reviewed studies, the ability to ship goods quickly so that consumers have quick access aligns with the firm's strategy point of the diamond theory.

Theme 3: Brand/Industry

The unexpected third theme that developed was competitiveness through two separate business models and two separate brands. Theme 3 encompassed three subthemes: (a) two brands, Brand Y and Brand Z; (b) retail market/marketplace; and (c) garment products made in the United States. The three subthemes correlated to the points of factors of conditions; demand conditions; and strategy, structure, and rivalry of Porter's (2000) diamond theory. The data revealed that by being on the leading edge of

the next fabric, garment technology, and predicting what the consumer wants and needs are examples of ways that Company A may create competitiveness.

The first subtheme was two brands as the data revealed Company A has a specific business model, brand, and specific apparel products for the U.S. military and a business model, brand, and specific apparel for retailers to consumers. Based on two of Porter's (2000) diamond theory points, creating factors of conditions and a firm's strategy, the company might create a competitive product and sell their particular brand (see Aricioglu et al., 2013). Brand Y identifies with apparel designed and made specifically for the U.S military. The professional supporting information in adapting the Berry Amendment aided many fibers, yarn, textile, and apparel manufacturers in the United States that produce goods for the U.S. military (U.S. Department of Commerce International Trade Administration, 2017). Brand Z identifies with apparel for retailers and consumers. By having two separate business models, Company A enacts the firm's strategy and structure point of Porter's diamond.

The second subtheme that emerged was the retail market/ marketplace. The data revealed Company A was able to reach out and identify with what the customers wanted and needed, thereby creating apparel goods for the retail marketplace. Adding technologies to the fabric (antimicrobial, wicking, and insect repellant) may make the apparel Company A produces more desirable in the clothing retail industry. The business leader participants discussed their upcoming strategies in the retail marketplace identifying with Porter's (2000) points of the firm's strategy, factor, and demand conditions. The findings of other peer-reviewed studies also support Company A's retail

marketplace strategies including the ability to create goods that consumers' want or need, or fast fashion (Meagan & Yan, 2013). The use of online retailing is another strategy Company A uses to sell the apparel goods it manufactures. The expansion of the Internet has made it possible to sell apparel goods through online retailers to consumers (de Leeuw et al., 2016). However, de Lewwuw et al. (2016) argued that there be several downsides to online retail, which include the cost of returned goods and speed of goods to the consumer.

The third subtheme that developed was garment products made in the United States. The findings from this study revealed it was easier to sell their apparel products made in the United States to the U.S. military than selling to retailers in the United States. The data revealed several ways Company A could compete. The first is keeping costs to a minimal by owning the fibers and fabrics, and second, fast production to make apparel and shipping completed garments within 30–40 days.

The cost of apparel goods is a concern for most retail managers. Minchin (2013) argued that since the 1990s business leaders in apparel manufacturers in the United States continue to find it difficult to compete with lower labor costs in other countries and move labor-intensive operations offshore. For business leaders to compete in a global market, the supply chain must remain agile while keeping costs down (Dari & Paché, 2013). By creating a means of a more rapid production cycle, company managers will have fewer errors in forecasting, reduces costs, and can respond to market demands more quickly (Chaudhry & Hodge, 2012). Zara retailer is a good example of logistics performance referring to short lead times and quick delivery in their supply chain (Ülgen & Forslund

2015). The data revealed that Company A could compete in the apparel marketplace by the leaders being cost conscience and creating apparel made in the United States aligned with Porter's diamond theory about a firm's strategy, related, and supporting industries.

One of Porter's (2000) points of the diamond theory includes rivalry. The point of the diamond, rivalry, did not emerge within the emergent themes. Company A continues to create quality products quickly that consumers demand and develop advanced technologies within the industry thereby may set Company A apart from other apparel manufacturers.

Application to Professional Practices

The findings from this study revealed how apparel manufacturing business leaders used their strategies to make competitive apparel products in the United States. The four business managers from the U.S. apparel manufacturing company expressed meaningful strategies of producing apparel. Thereby giving a model for other U.S. apparel business leaders to follow and may improve production of competitive apparel products. The results of this study could assist as the foundation for other apparel manufacturing business managers to achieve competitive products by altering operating styles and learn strategies to improve efficiency in the U.S. apparel manufacturing industry.

Each theme and subtheme exposed insights of what strategies are used to make competitive U.S. apparel products. The highest strategic priority was the ability to develop new technology in fabrics for apparel and develop technology in machinery to increase the speed of manufacturing apparel. The second priority was decreasing lead times in production and working with local suppliers. The third priority was the

brand/industry theme, which is described as being able to develop a brand of apparel that is inclusive of specific fabric technologies, high quality, quick delivery, and reasonable prices. Apparel manufacturing business leaders from this case study are continually seeking the next new thing in the apparel industry that the consumer wants and needs. These three factors were strategies that apparel manufacturing Company A business leaders used to produce competitive apparel products in the United States.

The findings are relevant to improved business practice by providing additional insight into the strategies U.S. apparel business leaders could use to produce competitive apparel products. Apparel business leaders in the United States may gain valuable insight from the descriptive findings: (a) develop new technologies that are applied to fiber or fabric for apparel, (b) develop new technologies in machinery that increase speed in manufacturing (cutting and sewing) of apparel. Also, (c) decrease lead-times in production, (d) trust and working relationships with local suppliers, and (e) strategies to develop U.S. apparel brands. The findings from this study may contribute to improved competitive apparel products made by U.S. apparel manufacturing companies.

Implication for Social Change

The implication for social change from this doctoral study incorporates the potential to cultivate strategies for U.S. apparel manufacturers to create and sustain a competitive business environment. Apparel manufacturers that produce competitive products may improve local, state, and national economies by creating jobs. Creating jobs generates better living conditions for employed local individuals, which will allow more money for communities by generating more tax revenue, which add improvements in the

infrastructure of communities. This study may contribute to social change through improved opportunities for apparel manufacturers and may increase demand for apparel products produced in the United States. The research findings from this study may also contribute to positive social change by possibly increasing business prospects for suppliers and auxiliary businesses, thereby increasing revenue in North Carolina, and in the United States. In addition to the direct link of apparel manufacturing companies, textile companies, and auxiliary business, the extension into the marketplace directed towards retail buyers and consumers to understand the benefit of buying local or buying apparel products produced in the United States.

Recommendations for Actions

The research findings from this study may help other apparel manufacturing leaders develop competitive strategies in apparel manufacturing in the United States. I recommend four strategies that emerged from the study. One recommendation is investing in technology, fabric, and finishes. To be competitive in the apparel manufacturing industry, apparel manufacturer managers may consider investing in technology and speed to market. Technologies include the yarn and textile made into a garment, applications such as Ag, seamless garments using knitting techniques (Duru & Candan, 2013). Technologies that involve improvement to equipment used creating apparel at a much faster rate. There are many opportunities in the technology industry to design and improve machines that can increase production in the apparel manufacturing industry such as improving and developing automated sewing.

A second recommendation is creating improved apparel products and delivering

apparel goods with short lead-times as fast fashion. The third recommendation is educating buyers and management leaders at retail companies and why they should invest in American-made apparel products, and aid in creating a brand that is recognized for quality and uses domestic workers. An extension of education retailer buyers and management may help create a made in the U.S.A. image and apparel product that consumers will buy. Retail management and buyers need to explore different approaches to buy apparel goods. Instead of having 6 to 9-month lead-times and allowing an apparel manufacturer to dictate delivery to the retailer because of long production time and shipping from overseas, allow purchases from domestic manufacturers who have short delivery times and quality apparel products. Leadership at retailer stores should consider allowing the retail buyer to purchase garments from domestic apparel. Lastly, the consumer. Educating consumers to buy products made in the United States may create jobs, and buying apparel products produced U.S. apparel manufacturers may help support advancements in apparel technology that creates competitive apparel products.

The engagement of all four factors could be done through several means. The first action would be using retail trade shows and conferences. One source may be the National Retail Federation. Organizational leadership builds bonds between retailers, students, and industry leaders (National Retail Federation, 2017). In addition to different conferences, another engagement could be through higher education. Higher education courses can include retail management, e-tailing, consumers, apparel manufacturing, fashion industry, textiles, and graduate research. In addition to courses, many universities and colleges have student clubs and organizations that students and faculty can invite

guest speakers from different organizational leaders from the apparel manufacturing industry. Utilizing professional people, who work in the fashion and apparel manufacturing industries, may give college students an opportunity to ask probing questions and may gain a further detailed understanding of the industries.

Lastly, using printed and online material such as trade publications, peer-reviewed journals, and magazines using articles and informative ads written about American apparel manufacturing and apparel produced in the United States. Also, writing articles and ads in trade publications such as *Women's Wear Daily* or *W* would be an outlet to reach specific groups of professional fashion people. Another source would be research articles written in peer-reviewed journals. Peer-reviewed journals might include *Journal of Fashion Marketing and Management*, *International Journal of Clothing Science and Technology*, and *Textile Research Journal* to reach faculty and students in the fashion and apparel disciplines. Finally, written articles and ads about apparel made in the United States in periodical magazines such as *Vogue, Glamor, Elle, and Harper's Bazaar* that would appeal to fashion conscious consumers.

Recommendations for Further Research

The purpose of this case study was to explore the strategies some U.S. apparel manufacturing business managers use to deliver competitive products. The findings from this case study helped identify strategies to create competitive products made in the United States. In conducting the research, I discovered that the findings aligned with Porter's diamond theory. The diamond theory may be a good fit for apparel manufacturing business practices. Zhang and London (2013) posited the diamond theory

is the most widespread competitiveness theory presently offered for explaining the success of an industry's competitive advantage.

There were several limitations to this study, however; the main limitation was to focus on one apparel manufacturing company in North Carolina. The limitation became a reality when I did not receive responses back to numerous emails, which were sent and phone calls made to companies in North Carolina and the Commonwealth of Virginia. I also discovered several apparel manufacturing company leaders responded to my initial contact and they did not want to participate in the study. The recommendation for further research is to explore the apparel manufacturing business leaders' strategies in different geographical locations and multiple companies in the United States.

Reflections

In a challenging and ever-changing global apparel market, U.S. apparel business leaders must continually formulate ways to make competitive apparel products. Understanding successful business practices of apparel manufacturers in the United States that have been in business 5 years may help other apparel manufacturing business leaders and other manufacturing industries make better decisions. In this study, four apparel business managers shared their experiences on strategies for producing competitive products.

My experience with the DBA doctoral study was a long but fulfilling journey. I found that trying to recruit participants from the Commonwealth of Virginia poised to be more challenging than I had expected. My original proposal was to interview four participants, two business managers from an apparel manufacturing company in the

Commonwealth of Virginia and two business managers from an apparel company in North Carolina. I found after sending numerous e-mails and making phone calls to try to locate participants in the Commonwealth of Virginia; people either declined or never responded to my e-mails or phone calls. In the end, I had to make a small change. The owner of the company I had secured in North Carolina allowed me to interview four business managers from the company.

Also, receiving e-mails or the signed consent form proved to be another challenge. While more apparel manufacturers exist in North Carolina than in the Commonwealth of Virginia, the challenge was the contacts in North Carolina. I corresponded with several other individuals from apparel companies in North Carolina. When I sent out the paperwork for signatures, I never heard or received anything from the particular contact.

I had no predetermined views regarding strategies U.S. apparel manufacturing leaders used to make competitive apparel products. I did not know any managers before interviews. My approach to the study was to be open minded to avoid bias (Leedy & Ormrod, 2013). I approached each interview with hope to gain new ideas from each participant whom I believed to be authorities in their field. Three participants had decades of experience within the textile and apparel industry. I created a rapport with each of the apparel business leaders and expressed some of my personal business experiences. I expressed that I have taught at a university and taught various college apparel courses. I have decades of professional experiences in the business world, and in the textile and apparel industries. I believed by sharing my information, made each participant feel more

comfortable in speaking with me. Each business leader was appreciative and thanked me that I was interested in finding out more about current U.S. apparel manufacturing strategies. Each participant seemed happy that someone was looking for answers to improve the apparel industry in the United States.

Conclusion

In this study, I explored strategies apparel business managers use to create competitive apparel products made in the United States. I used open-ended semistructured interview questions to collect the data. Data analysis consisted of using NVivo 11. I created a triangulation with in-depth interviews, enriched by member checking, and participant observation (Reilly, 2013). I achieved data saturation when I exhausted all emerging themes. The findings revealed three main themes (a) technology, (b) time, and (c) brand/industry. The research findings revealed the results aligned with Porter's diamond theory: (a) firm's strategy, structure, rivalry; (b) factor conditions; (c) demand conditions; and (d) related and supporting industries (Porter, 2000).

The take-home message from this study is that apparel business leaders in the United States need to place a stronger emphasis on developing technology in fibers, fabrics and invest in machinery to speed up production of apparel products. Apparel business leaders should seek and establish a working relationship with local vendors and suppliers; and finally, use multiple business models and develop several brands within an apparel manufacturing company. The recommendations in this study may encompass teachable manufacturing strategies U.S. apparel business leaders could use to create a competitive position for domestic apparel products and improve profits.

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Appendix A: Sample Letter of Cooperation

Community Research Partner Name

Contact Information

Date

Dear Mary Simpson,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Competition Among Domestic Apparel Manufacturers within the Insert Name of Community Partner. As part of this study, I authorize you to recruit participants, interview, and member check. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include an office or conference room, the use of the e-mail service to which to correspond between the participant and the researcher to schedule or confirm appointments, and time the manager uses for interviewing the researcher's questions. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Authorization Official

Contact Information

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix B: Sample E-Mail Letter #1

Dear Mr. _____,

My name is Mary Simpson, and I am a doctoral student at Walden University and I live in Lynchburg, Virginia. I am proposing to do a multiple case study using two business managers from two companies (one in the Commonwealth of Virginia, and one in North Carolina). I am researching how manufacturers who produce apparel in the United States can remain competitive in the global markets. I am interested to find out if two business managers from your company would take part in my proposed study. If you are interested, please contact me and I will send the additional necessary forms for review and signature. I have attached the initial Letter of Cooperation for your review.

If you have any questions, please feel free to contact me either by phone at XXX-XXX_XXXXX or via e-mail at XXXXXX.

Thank you.

Regards,

Mary Simpson, MBA, DBA-ABD

Walden University DBA Student

Appendix C: Sample E-Mail Letter #2

Dear _____,

Thank you so much for your response to my request. The initial Letter of Cooperation that I sent will need to be signed and sent back to me. The initial Letter of Cooperation will be sent to Walden University's International Review Board for review. If agreed, I would like to request names of two to three managers and their e-mail addresses so that I may contact them directly with the outline of my proposed study. I have also attached the outline of the proposed study for your initial review.

Thank you so much for your time.

Regards,

Mary Simpson, MBA, DBA-ABD
Walden University DBA Student