

THESIS

FACTORS AFFECTING CHINA'S APPAREL MANUFACTURING INDUSTRY'S  
INTERNATIONAL COMPETITIVE ADVANTAGE

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## ABSTRACT

### FACTORS AFFECTING CHINA'S APPAREL MANUFACTURING INDUSTRY'S INTERNATIONAL COMPETITIVE ADVANTAGE

Since the early 1980s, China has grown its apparel manufacturing export industry by utilizing a large labor pool, low wages, and its access to a significant amount of raw materials (Zhang, Kong, & Ramu, 2015; Zhang & Hathcote, 2008). A world leader in apparel exports, China exported US \$153.2 billion of apparel products in 2012 ("2016 Top Markets," 2016). In recent years, China's international competitive advantage in the apparel manufacturing export industry has faced a variety of challenges. China attributes its loss of competitive advantage in the global apparel manufacturing industry to increased costs of labor and raw materials ("2016 Top Markets," 2016). With an awareness of these challenges, China's new strategy for establishing competitive advantage has been to reposition itself in the global value chain and to become a stronger industry in the international marketplace (China National Garment Association, 2013). Challenges to China's world-renowned apparel manufacturing export industry, and the industry's awareness of the need to implement new strategies to meet these challenges, provided direction for this study.

The purpose of this study was to analyze the economic, government, and social factors that were affecting national competitive advantage in China's apparel manufacturing export industry, as well as the competitive advantage of individual

businesses as perceived by industry executives. Nine Chinese apparel manufacturing business executives were interviewed for this study and a qualitative research method was employed to capture the perspectives of the business executives, who were asked to respond to open-ended interview questions.

The findings from this research study aid in better understanding two research questions. The first research question focused on what and how factors affect China's international competitive advantage in the global apparel manufacturing export industry. The second research question focused on the changes Chinese apparel export manufacturers made in order to maintain their international competitive advantage in the global apparel manufacturing export industry.

The findings from this study revealed that three main factors were influencing China's international competitive advantage in the global apparel manufacturing industry: labor and wages, China's apparel manufacturing supply chain and raw material suppliers, and the government's policies, actions, and improvements. Findings revealed the following changes in production processes and strategies as primary ways our participants were maintaining international competitive advantage: increased focus on research and design, efficiency and productivity, customer service, and increased focus on opportunities in producing apparel goods for China's domestic market.

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## DEFINITION OF TERMS

1. Apparel brand: A company that designs and sells clothing and accessories to the end consumer, often contracting production from an apparel manufacturer.
2. Apparel manufacturer: A company who owns a factory in which it produces apparel and accessories for purchase by a consumer. Export-oriented apparel manufacturers produce goods mainly for sale in other countries, while domestic-oriented apparel manufacturers produce goods primarily for sale within the home country.
3. Competitive advantage: An attribute of a business which is in a superior position to or has a benefit over another business (Porter, 1990).
4. Corporate social responsibility (CSR): Business practices that provide benefit beyond the investors and stakeholders. Benefits can be to employees, the environment, society, etc. (Carroll, 2015).
5. Gross domestic product (GDP): The monetary measure of all goods and services produced by a country in a year.
6. Manufacturing/production cluster: A geographic concentration of similar companies as well as other businesses within the same supply chain.
7. Piecework pay system: Individual workers are paid based on units produced, rather than paid an hourly wage.
8. Value chain: Set of activities that a business performs to provide a more valuable product, service, or experience for the consumer (Porter, 1990).

9. Vertical integration: A company's ability to perform multiple steps in the production process rather than the steps be completed by separate companies.

## CHAPTER 1: INTRODUCTION

Over the past forty years, China's apparel manufacturing industry has experienced exponential growth and a significant advantage over apparel manufacturing industries in other countries. In 1978, China's apparel manufacturing industry exported 6.7 million apparel items and by 2000 China exported 10 billion apparel items each year to more than 220 countries and regions (Zhang, Kong, & Ramu, 2015). Additionally, China's apparel industry employed 1.8 million individuals in 1980, a number that grew to 6.2 million people by 2008 (Zhang et al., 2015).

China's total export share peaked from 2000 to 2007, and since that time its total export share has dropped (Zhang et al., 2015); nevertheless, China remains a leading producer of apparel, and by 2010 China was producing 40% of the world's textile and apparel exports ("Textile and Apparel," n.d.). In 2012, China exported US \$153.2 billion of apparel (China National Garment Association, 2013). In 2016, the United States continued to import more apparel products from China than from any other country ("2016 Top Markets," 2016). Even after a decline in China's exports, 35% of the United States' apparel imports came from China between October 2015 and October 2016 (Belgum, 2016b).

China was able to grow its apparel industry extremely fast and gain competitive advantage over other countries because of its low cost of labor and its access to an expanse of resources (Zhang et al., 2015). With the world's largest population of laborers, China achieved high levels of productivity that other countries could not match (Zhang & Hathcote, 2008). Additionally, China has primarily focused on producing low

to medium quality apparel (“2016 Top Markets,” 2016), which allows for high levels of production and export (Zhang et al., 2015). Research and development of more complex or new products was never China’s focus as that strategy did not allow for fast, mass production (Eloot, Huang, & Lehnich, 2013).

China also experienced success from establishing clusters of textile and apparel manufacturers in various locations throughout the country, which have provided increased productivity, lower acquisition costs for machines and technology, and support for new business (Lau, To, Zhang, & Chen, 2009). Clusters often contain more than 100 manufacturers that specialize in the same sector of the industry (“Textile and Apparel Market,” 2011) and over 146 apparel clusters exist in China (Zhang et al., 2016). Clusters also have provided easier access to raw materials which can reduce or eliminate transportation and import costs (Lau et al., 2009).

Over the last few years, China has experienced a challenge to its competitive advantage in apparel manufacturing. China attributes its declining competitive advantage mainly to the rising costs of labor and raw materials (“2016 Top Markets,” 2016), two of the factors that contributed to its fast economic growth. Other factors affecting China’s competitive advantage include a general decline in economic growth, consumers’ increased demand for higher quality products, and value chains becoming more complex (Eloot et al., 2013). Rising numbers of domestic Chinese consumers, e-commerce businesses, and diverse product lines all contribute to the rising complexity of the once simpler value chains (Eloot et al., 2013). Chinese companies also tend to lack an orientation toward corporate social responsibility (Cooke & He, 2010), which is

an increasingly important component of competitive advantage in the global apparel industry (Dickson & Chang, 2015).

There are a wide variety of economic, government, and social factors affecting China's competitive advantage in apparel manufacturing. A critical review of the literature examining the diverse factors affecting China's international competitive advantage follows. This critical analysis of the literature will serve as a foundation for the development of the present inquiry.

### **Purpose**

The purpose of this study is to analyze the diverse factors that are affecting the international competitive advantage of China's apparel manufacturing export industry, both positively and negatively. Specifically, this study will explore the perceptions of business owners and upper-level managers engaged in apparel manufacturing regarding the economic, government, and social factors that are affecting China's competitive advantage in the global apparel industry, as well as their own businesses. This study also will explore the actions these owners and/or managers of apparel manufacturing businesses in China have taken, or are taking, to maintain a competitive advantage in the industry.

### **Justification**

So, the question is, can China maintain its international competitive advantage in the apparel manufacturing export industry going into the future? China has always been very competitive, primarily due to their abundance of cheap labor (Zhang, et al., 2015), but can the country sustain its low wages and low raw material costs? Or, will Chinese

manufacturers need to shift their focus to other, more sustainable ways, of maintaining their competitive advantage in this industry?

According to Friedman and Ellis (2012), China will never be the lowest wage country for apparel manufacturing again, as Southeastern Asian countries, such as Vietnam and India (Belgum, 2016b), provide a lower wage alternative to China. Further, wages in China's manufacturing industry are increasing while global demand for product is decreasing (Zhu & Pickles, 2014). For many Chinese manufacturers, profit margins are shrinking owing to the rising labor costs and the declining demand for products (Magnier, 2016b).

On the other hand, there are findings to suggest that China's apparel manufacturing industry may be more competitive now than ever before. China still maintains a competitive labor wage even though the increase in wages has been significant (Yang, Chen, & Monarch, 2010). As China's wages have risen, the wages of other surrounding countries have risen as well (Yang et al., 2010). Therefore, the increases will not likely cause China to lose its labor advantage over other countries (Yang et al., 2010). Although China's wages may be higher than some Southeast Asian countries, its wages are still significantly lower than developed Asian countries including Hong Kong, South Korea, Singapore, and Japan (Yang et al., 2010). Knowler (2015), states that despite the challenges that China's apparel industry is facing, China will continue to be a leader in the global apparel industry in the coming years.

This is only a brief overview of the conflicting findings from the last decade. Conflicting perspectives suggest a need for more research into manufacturers' perceptions on the stability of China's apparel manufacturing industry's international

competitive advantage. As such, the following two research questions have been developed to guide this study:

***RQ1: What are the perceptions of Chinese apparel export manufacturers regarding what and how factors affect China's international competitive advantage in the global apparel manufacturing export industry?***

***RQ2: What changes have Chinese apparel export manufacturers made in order to maintain their international competitive advantage in the global apparel manufacturing export industry?***

The following literature review further explores the span of findings regarding the factors currently affecting China's international competitive advantage in the apparel manufacturing export industry. Owing to China's significant role in apparel production and export in the global economy, understanding the future of China's apparel manufacturing export industry is important to all industry stakeholders around the world.

## CHAPTER 2: REVIEW OF LITERATURE

### **China: The Big Picture**

China has the world's largest population with 1.4 billion people living on a land area similar to the size of the United States (Kroeber, 2016). In the 1980s China's manufacturing began to rise and by 2010 China became the world's industrial leader (Wen, 2016). China's large land size and population allowed for a fast economic growth model that focused more on the quantity rather than the quality of items produced (Kroeber, 2016). Prior to the 1980s, China's economy focused on agriculture, but a major, rapid shift to manufacturing occurred in the early 1980s, owing to a significant change in national policy in 1978 that allowed for intensive manufacturing and export, and attracted foreign direct investment (Lewin, Kenney, & Murmann, 2016).

**Industrial China.** During its transformation to an industrial economy, China's workforce shifted from 80% of the population working in agriculture to only 30% working in agriculture (Lewin et al., 2016). Between one-fourth and one-third of China's workforce is now employed in manufacturing (Kroeber, 2016). This major shift in the workforce has impacted the family unit, causing family separation as migrant workers often move to the city to work in the manufacturing industry (Lewin et al., 2016).

In 2015, China's GDP was US \$10.866 trillion (World Trade Organization, n.d.), which accounts for 17.53% of the world economy ("Trade Economics," n.d.). This amount is more than double China's GDP in 2008 when it was US \$4.558 trillion, and it represents a significant increase since 2012, when the country's GDP was US \$8.461

trillion (“Trade Economics,” n.d.). China has the second highest GDP in the world as of December 2016, following only the United States (“World GDP Ranking,” n.d.).

**Export-oriented manufacturing.** China’s economy is focused on export-oriented manufacturing (Kroeber, 2016), and the country ranked number one in the world for overall merchandise exports in 2015 (World Trade Organization, n.d.). China’s major exports span a wide variety of merchandise products, such as iron and steel, chemicals, office equipment, and textiles and apparel (“World Trade Statistical Review,” 2016).

As the overall world leader in merchandise exports in 2015, China exported goods valued at US \$2.27 trillion, which accounted for 14% of total world exports (“World Trade Statistical Review,” 2016). The second largest exporter of merchandise was the United States, which exported US \$1.5 trillion of merchandise (“World Trade Statistical Review,” 2016). Many emerging countries experienced significant declines in their exports in 2015, most notably Russia, India, and Brazil, which experienced export declines of 32%, 17%, and 15%, respectively (“World Trade Statistical Review,” 2016). In comparison, China experienced only a three percent decline in exports in 2015 (“World Trade Statistical Review,” 2016). Bangladesh and Vietnam both experienced increases in merchandise exports in 2015, amounting to six percent and eight percent, respectively (“World Trade Statistical Review,” 2016).

**Trade agreements and quotas.** Since 1975, China has been a member of the Asia-Pacific Trade Agreement (APTA), a free trade agreement between countries in East and South Asia (“Asia-Pacific Trade,” n.d.). It is the only trade agreement that allows free trade between China and India (“Asia-Pacific Trade,” n.d.). This agreement

encourages economic development from a web of regional trade in this region (“Asia-Pacific Trade,” n.d.).

In 1995, the United States and EU began making changes to existing quotas and agreements that limited global trade (Fugazza & Conway, 2010). This was the beginning of the WTO’s Agreement on Textiles and Clothing (ATC) ten-year transition aimed at the removal of quotas in global trade of textiles and apparel (World Trade Organization, n.d.). Prior to this transition, most clothing and textile exports from developing countries were subject to quotas that fell outside of the General Agreement on Tariffs and Trade (GATT), an agreement that dictates the international trade of goods (World Trade Organization, n.d.).

In 2001, China gained access into the World Trade Organization<sup>1</sup> (WTO), which allowed China to increase its apparel and textile exports (Welters & Mead, 2012) as a result of the removal of quotas. As of 2005, the U.S., EU, and Canada removed the bilateral quota system on imports of textiles and apparel (Fugazza & Conway, 2010), and clothing and textile exports became integrated into the GATT guidelines. More recently Lu (2015) explored the potential negative impacts of the Trans-Pacific Partnership (TPP) on China and other Asian countries, concluding that China may experience a negative impact on textile and apparel exports owing to the TPP (Lu, 2015b). Therefore, China may greatly benefit from United States not proceeding with the proposed TPP. These recent developments in trade have provided many developing

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<sup>1</sup> Although the World Trade Organization replaced the General Agreement on Tariffs and Trade (GATT), causing GATT to no longer be an international organization, the General Agreement still exists under the World Trade Organization (World Trade Organization, n.d.).

countries, including China, the opportunity to exponentially grow their exports in the textile and apparel industry (Fugazza & Conway, 2010).

**The Chinese government and policy influence on the textile and apparel industry.** Since 1949, China has operated under a communist system, however, after the Cultural Revolution in 1976, government rule has become less restrictive (Beam, 2010). China operates under a socialist market economy, which is an economy that lies between communism and capitalism (“Socialist Market Economy,” 2010). Therefore, rather than businesses being primarily government owned, many businesses are now partially privatized (Beam, 2010). Prior to 1976, everything from farms, business, banks, and schools were controlled by the Chinese government (Beam, 2010).

Communism is still very prevalent in China’s politics and the Chinese government continues to hold a very important place in the Chinese economy (Beam, 2010; Lu & Dickson, 2015). As reforms continue to separate the government from business, the government currently has more influence in certain provinces over others (Fan, Huang, Morck, & Yeung, 2014). In regions with less government and business separation, the government still maintains authority and keeps a closer eye on businesses (Fan et al., 2014).

The Chinese government benefits greatly from exports, including apparel exports, as it receives foreign income that can be exchanged into local currency (Ruffier, 2012). To maintain growth in apparel manufacturing in China, the Chinese government is increasingly focused on shifting the industry to include more technological upgrades, improving the industry’s environmental impact, and moving apparel manufacturing inland (Lu & Dickson, 2015).

In terms of upgrading the apparel industry, the Chinese government is working to establish a higher position in the global value chain by focusing more on research and design (i.e., technical textiles) and by increasing the number of Chinese-owned apparel brands (Lu & Dickson, 2015). The government also is focusing on improving the environmental impact of the textile and apparel industry by reducing emissions, pollutants, and energy and water consumption as well as by increasing its use of recycled textiles, in order to decrease its use of new natural resources for textile and apparel production (Lu & Dickson, 2015). And, to maintain apparel production and profit within the country, the Chinese government is providing incentives for manufacturers to move their operations to inland China (Lu & Dickson, 2015).

According to Simmons (2014), over 75% of the Chinese population believe that the socialist market economy that China has embraced over the last few decades is beneficial to the Chinese people, and 85% believe that the next generation also will benefit from this economy, ultimately earning more money than the current generation. On the other hand, 43% believe that inequality between the rich and the poor in China can be attributed to the government's economic policies (Simmons, 2014).

### **China's Apparel Manufacturing Industry**

According to China's National Garment Association (CNGA), there are approximately 100,000 prominent garment manufacturers in China, most of which are located on the country's eastern coast. Over the past forty years, this region has become a world center for apparel exports (Ruan & Zhang, 2014). As of 2013, China was exporting 43.1% of the world's apparel ("Made in China?," 2015), and by 2015 China was the world's leading exporter of both textiles and apparel, exporting US \$109

billion of textiles and US \$175 billion of clothing (“World Trade Statistical Review,” 2016).

The apparel manufacturing industry in China initially gained its competitive advantage from producing goods at an extremely fast rate (China National Garment Association, 2013), owing to an abundance of labor, low wages, and easy access to inexpensive raw materials (Zhang et al., 2015). As China’s apparel manufacturing industry strives to remain the world leader in apparel manufacturing, speed of production is no longer its major focus, but rather, new emphasis is being placed on technology and collaboration, with the goal to establish “a new position in the global economy, create new competitive edge in the international cooperation and competition, and grow from a big industry into a strong one through continuous innovations” (China National Garment Association, 2013, p. 5).

As China’s apparel manufacturing industry seeks new focus to maintain a now uncertain competitive advantage, it is important to take an in-depth look at the factors that have supported its rapid growth over the past 40 years, and how those factors have shifted in recent years. The following section will focus on the major factors that contribute to China’s apparel manufacturing competitive advantage.

### **Factors Impacting China’s Apparel Manufacturing Industry’s Competitive Advantage**

Over the last few decades academic researchers, economists, and industry experts have examined various aspects of China’s apparel manufacturing industry’s competitive advantage. Collectively, this work attributes the following factors to having an impact on China’s competitive advantage: labor, wages, value chains, production

capacity, clusters, other economic and government factors, corporate social responsibility, and sustainability.

**Labor.** China's apparel manufacturing sector frequently employs low-skilled laborers who do not have a high school education and who frequently move from working in one factory to another ("Bleak Times," 2016). A recent development in China's apparel manufacturing industry is its shrinking labor pool (Li & Edwards, 2008). Three major factors contribute to China's shrinking labor pool: a shortage of migrant laborers (i.e., number of Chinese workers who are willing to move from rural to urban locations in search of work), an increase in young adults pursuing a college education, and China's one-child policy (Farrar, 2014; Yang et al., 2010; Wildau, 2015).

The first reason for the shrinking labor pool is the shortage of migrant workers. Economists in China thought the labor supply would always be unlimited, but now China is having difficulty finding laborers as there is a shortage of migrant Chinese laborers (Li & Edwards, 2008). Urban industrial clusters in various regions across China have created too much demand for labor and have over utilized the labor market in those regions (Zhu & Pickles, 2014). As these regions experience less available labor, manufacturers continue to rely on laborers who are willing to relocate to these regions from the countryside (Zhu & Pickles, 2014).

Since 1980 and the decline of agriculture in China, many Chinese have found living in rural communities and providing for a family to be extremely difficult; therefore, they move to urban areas to work in factories as a way out of poverty ("Sweatshops in China," n.d.). However, leaving the countryside to work in urban manufacturing jobs puts a strain on families as children are left to be raised by their grandparents (Wildau,

2015). For this reason, China is experiencing a reversal in urban migration; today an increasing number of Chinese prefer to remain in their rural communities and care for their families (Wildau, 2015). The labor shortage is further exacerbated by the fact that many low-skilled laborers are currently reaching the age of retirement and younger people are not as interested in moving to urban areas to work in manufacturing (Farrar, 2014), as they have seen what their parents' generation has experienced working in factories (Jiaxing & Yangon, 2015).

The second reason for the shrinking labor pool is an increase in the percentage of the Chinese population that is pursuing a university education. In the late 1990s the Chinese government expanded college enrollment and the number of Chinese college graduates increased from 1.08 million in 1998 to 5.59 million in 2008 (Yang et al., 2010). As of December 2014, 25.5 million young, adult Chinese were enrolled in a university, which represents approximately one quarter of the Chinese population that was of university-age (Bradsher, 2015). Many Chinese students also are attending universities overseas and returning with degrees, proficiency in English, and international work experience, which make them qualified for more sophisticated jobs (Yang et al., 2010). Further, Confucian tradition dictates that educated individuals do not work in manual labor positions (Bradsher, 2015).

The third factor contributing to the declining labor pool is China's one child policy<sup>2</sup>, which has reduced the number of laborers entering the workforce in recent years (Mooney, 2008). From 1980 through 2014, the Chinese population declined as

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<sup>2</sup> This policy was instituted in 1980 and was phased out as of 2015 ("China's One-Child," 2015)

the government restricted families from having multiple children (Wildau, 2015). Owing to this reduction in childbirth, the Chinese working age population percentage peaked in 2010 and has since declined (National Bureau of Statistics, 2017). Although China now allows for couples to have two children, it could take more than two decades before the population begins to increase (Senthilingam, 2016). Additionally, China's population of individuals over the age of 65 has tripled in the last fifty years from 3.36% of the population in 1965 to 9.55% in 2015; therefore, 90 million Chinese people will be of retirement age in the next thirty years (Senthilingam, 2016).

The shrinking labor pool may cause difficulties for manufacturers because with fewer laborers, lead times to produce orders generally increase and the ability to produce the large quantities of products that are being demanded often becomes more difficult (Farrar, 2014). Also, as the labor pool shrinks, laborers have more leverage and their confidence with respect to job negotiation is rising (Li & Edwards, 2008). Laborers who plan to continue working in factories are negotiating for better wages and benefits, and individuals working together from the same village were found to have "more bargaining power" (Li & Edwards, 2008, p. 309). In a study of young migrant workers (under 28 years of age), Wang (2016), found that migrant workers are willing to participate in strikes, and 39% of laborers stated 'wage increase' as the reason that most often led them to go on strike (15% of the 2,166 survey participants worked in the apparel and textile sector).

One segment of China's population is benefitting from the changing labor climate, however; laborers over the age of 35 who typically have experienced difficulty in obtaining or retaining employment are gaining new opportunities for employment as

the supply of young migrant workers decreases (Ngai, 2005; Yang et al., 2010).

Furthermore, older workers are typically more loyal to factory employers than are young migrant workers who frequently work at one factory for a short time before moving on to work at another factory (Ngai, 2005).

**Wages.** International businesses no longer view China as a source of cheap labor (“Wages and Employment,” 2016). Industrial wages<sup>3</sup> in China have increased 12% a year since 2001 (“Bleak Times,” 2016); however, the average wages paid in the industrial sector are still lower than the average wages in other employment sectors in China (Holz & Mehrotra, 2016). China’s apparel manufacturing industry wages rose 124% from 2001 to 2011, but even with this large increase, laborers in the apparel industry do not earn a living wage (“Global Wage Trends,” 2013). In 2011, the apparel manufacturing industry wages accounted for only 36% of a living wage (“Global Wage Trends,” 2013). According to the Worker Rights Consortium, with continued wage growth at this rate, Chinese laborers in the apparel manufacturing industry would attain a living wage by the year 2023 (“Global Wage Trends,” 2013).

Many laborers in the global apparel manufacturing sector are paid on the piecework system and piecework rates are typically set by manufacturers based on their professional experience in the industry (Li & Edwards, 2008). However, Li and Edwards (2008), discovered that 43% of the Chinese laborers that they interviewed had

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<sup>3</sup> Wages in the apparel manufacturing industry in China are inconsistent and/or unavailable, so industrial sector wages are provided. Manufacturing industries makes up a large portion of the industrial sector in many developing countries (“Manufacturing Industry,” 2010)

successfully bargained for higher piece rates, especially in situations when a production job needed to be completed in a set time frame.

In many cases, labor cost increases are not passed through to prices, so profit margins have decreased over time for many Chinese apparel manufacturers (Holz & Mehrotra, 2016). Magnier (2016b), found that the rising cost of labor and weak demand for products (owing to the great recession in 2008) have contributed to shrinking profit margins. Some Chinese companies have begun manufacturing in neighboring countries to capitalize on cheaper labor costs (Farrar, 2014). As manufacturers move their businesses to other countries, or flee their failing businesses leaving unpaid debts, skilled but uneducated laborers lose their jobs and become unemployed (“Bleak Times,” 2016). These unemployed laborers sometimes have no choice but to settle for working in smaller, illegal, and less regulated factories (Ruffier, 2012).

Labor costs in China are now higher than those in surrounding countries (“Chinese Textile Industry,” 2014), and, as previously mentioned, are rapidly rising (“Bleak Times,” 2016). For example, in 2012 China’s monthly wage rate was US \$561, more than double that of Vietnam, which was US \$217 per month (Farrar, 2014). Wages in Bangladesh and Cambodia were drastically lower, at US \$123 per month in 2012 (Farrar, 2014). Nevertheless, even as wages increase, Chinese labor wages are still lower than many other countries. Chinese wages remain just a fraction of the labor cost in the United States and remain quite low compared to European countries owing to the recent appreciation of the euro (Ceglowski & Golub, 2012).

Further, although China may no longer have the capability to provide inexpensive goods for lower end brands, China continues to appeal to brands that produce

moderate to higher end products (Farrar, 2014). Chinese manufacturers have years of experience, so intricate production will likely remain in China even as wages increase (Farrar, 2014). Multinational companies also see Chinese value chains as less-risky, so for brands with higher profit margins, it is more feasible to sacrifice a small amount of profit in order to continue producing goods in factories that operate in established Chinese supply chains (Farrar, 2014).

As the labor supply shrinks and wages increase, one option for apparel manufacturers has been to replace laborers with robots (“Wages and Employment,” 2016). Although this appears to be a good alternative, the move toward using robots and automation has been difficult (“Wages and Employment,” 2016). Robots are currently limited in their abilities to perform simple tasks such as moving parts or unpacking boxes; however, one manufacturing company recently developed robots that can perform the more difficult task of sewing garments (Hagerty, 2015).

Although it is unclear as to what percentage of China’s apparel industry is automated (i.e., utilizes robots), Chinese manufacturers purchased 20% of all robots made during 2013 and has a ratio of approximately 30 robots per 10,000 manufacturing laborers across all manufacturing sectors (Jiaxing & Yangon, 2015). The jobs most likely to be replaced with robots are those that require low-skill labor and low levels of education; therefore, apparel manufacturing jobs have a high risk of being replaced by robots (Hagerty, 2015). Integrating robots into production systems is an expensive undertaking, but for many companies it can ultimately be more affordable than paying rising wage costs (Bradsher, 2015). According to Rob Sinclair, the CEO of a global

apparel manufacturer, China is staying price competitive with their advances in technology, specifically their ability to automate labor and utilize robots (Young, 2016).

A second option in response to the shrinking labor supply and rising wages among apparel manufacturers on China's eastern coast is factory relocation within China. Many apparel manufacturers who are choosing to maintain operations in China are moving manufacturing facilities westward to central and western China (Lau et al., 2009). Wages and land prices differ across regions in China, so businesses operating in western and interior regions can be more profitable than those located on the eastern coast (Ruan & Zhang, 2014). Moving operations to western regions is often easier than relocating to other countries as the culture and laws are the same or similar, and it still allows the manufacturers the opportunity to lower the cost of wages (Zhu & Pickles, 2014). Unfamiliar laws and regulations, cultural habits, and unstable political arenas are all factors that deter Chinese manufacturers from relocating to other countries (Zhu & He, 2013).

The Chinese government also is providing incentives for factories to move to inland China in order to keep apparel manufacturing in the country (Magnier, 2016a). For example, the Xinjiang province is offering both tax benefits and price reductions on resources (i.e., electricity) to entice factories to relocate to the west (Magnier, 2016a). Xinjiang, a province in the northwestern corner of the country is a large producer of cotton, which can be used as a major draw for apparel manufacturing companies, and the government has planned additional investments in the region to increase technology (i.e., 3D printing capabilities, specialty textile equipment, etc.) ("China Will Invest,"

2016). The Chinese government's plan is to make Xinjiang the main production area for Chinese apparel and textile manufacturers by 2030 ("China Will Invest," 2016).

Regardless of these changing conditions, neighboring regions along the eastern coast are often preferred over moving inland or to other countries (Zhu & He, 2013). One reason is that inland China is isolated and often unfamiliar to manufacturers from the eastern coast. A second reason is that moving inland or to southeast Asia may reduce the amount of support and suppliers available to manufacturers (Zhu & He, 2013). The decision is not always within the manufacturer's complete control, however, as the apparel brands who contract the work put pressure on the factory to cut costs (Zhu & He, 2013), and as the Chinese government is shaping locational and organizational decisions by encouraging relocation to parts of China other than the eastern coastal region (Zhu & Pickles, 2014).

A third option is moving manufacturing from China to other countries and therefore women in surrounding countries, such as India, gain employment ("Apparel Manufacturing has Potential," 2016). Myanmar is one country that appeals to Chinese manufacturers for multiple reasons including the government's focus on industrial expansion, trade agreements, labor supply, and cheap wages ("Myanmar Rising," 2016). Additionally, some Chinese manufacturers are outsourcing apparel manufacturing to countries in Africa, which provide low-skill labor at lower wages than China, and, in turn, provide industrial development and income to regions that otherwise would not have these opportunities (Young, 2016).

In a case study of 20 Chinese apparel manufacturers examining factory relocation, Zhu and He (2013) discovered how important manufacturing/production

clusters can be to the success of factories. One general manager expressed that moving manufacturing too far away from the Ningbo (a city on the eastern coast of China) cluster would stretch their supply chain and increase transportation costs as well as increase risk (i.e., not meeting delivery deadlines) for the business (Zhu & He, 2013). Another factory manager considered the company's relocation a failure, as the low labor it had pursued did not outweigh the increased transportation costs incurred from relocating (Zhu & He, 2013).

Although many Chinese manufacturing firms are relocating some, or all, of their production to other regions of China or surrounding countries, other firms realize benefits to keeping their production facilities in regions on China's eastern coast by maintaining their integration in supply chains and clusters. For some firms, the strong connection to other firms within a cluster provides enough of an advantage to withstand relocation (Zhu & He, 2013), which is reviewed in the following section.

**Value chains, production capacity, and clusters.** Strong networks of suppliers and manufacturers in various regions of China provide support to manufacturers and allow for high levels of productivity (Lau et al., 2009). As such, during two major shifts in the global apparel value chain over the last twelve years, specifically the Multi-Fiber Arrangement phase out in 2005 and the great recession in 2008, China has maintained its dominance in apparel manufacturing (Gereffi & Frederick, 2010).

The apparel industry's value chain is buyer-driven (Gereffi, 1999), meaning the value chain is led by the retailers, marketers, and apparel brands who design apparel and accessories and contract manufacturers to create the product (Gereffi, 1994). There are five major parts of the global apparel value chain: raw material supply (i.e.,

fibers), provision of components (i.e., yarns and textiles), production networks (i.e., factories), export channels, and marketing networks (i.e., retailers) (Gereffi & Memedovic, 2003).

One hundred and forty-six apparel clusters exist in China, 25% of which are located within the Zhejiang province on the eastern coast (Zhang et al., 2015). Clusters often specialize in certain aspects of production such as spinning, dyeing, and packaging (“Apparel and Textile,” 2011). Clusters provide manufacturers with many benefits including supply of laborers, enhanced competitiveness, and lower transaction costs (Zeng, 2011).

China produces and exports everything from fibers, yarns, textiles, and garments (Young, 2016). China has historically been the world’s leading producer of cotton; it produced 33 million bales of cotton on average from 2010 to 2012, followed by India which produced 26.8 million bales, on average, during the same three years (National Cotton Council, 2013). However, in 2015 India surpassed China as the world’s leading producer of cotton (Belgum, 2016a). China also produces approximately 70% of the world’s polyester fibers, the most dominant synthetic fiber in the industry (“Man-Made Fibers,” 2015), and over 60% of all manufactured fibers (Bulloch, 2017). Overall, China performs 43% of the global fiber spinning production (“China Will Invest,” 2016).

China also is the world’s leading producer of yarns and fabrics (Belgum, 2016a). China produced three million tons of yarn in 1980, and 14 million tons of yarn in 2005 (Tao & Xu, 2007). Since 1985, China has been the leading producer of fabric (Tao & Xu, 2007). Owing to this abundance of materials and the large Chinese workforce which

has already been discussed, China's apparel production capacity is significantly larger than any other country's (Tao & Xu, 2007).

China has an established a manufacturing network that provides an economy of scale and stability (Young, 2016). Since the great recession, large apparel brands find more security working with larger, more established suppliers, which is a benefit to China (Gereffi & Frederick, 2010). China's supply chain provides a major advantage for the country in regard to exports, as its manufacturing clusters provide high productivity, lower costs, improved logistics, and shorter lead times for production and shipping (Young, 2016; Lau et al., 2009; Farrar, 2014). Although surrounding countries, such as India, have large labor forces and low wages, they do not have the sophisticated supply chain that China has built over the years (Young, 2016).

**Other economic & government factors.** Other major factors affecting the apparel industry's competitive advantage include: the value of the yuan, high levels of debt, increased raw material prices, and China's growing domestic consumer market.

Since the 1990s, China's government has used the U.S. dollar as a standard to establish the value of the yuan rather than using the world market to determine the value (Doerer, 2015). However, over the past few years as the Chinese economy has slowed down and the U.S. dollar has appreciated, the Chinese government has not been interested in keeping the value of the yuan in line with the U.S. dollar (Doerer, 2015). The U.S. has pressured the Chinese government over the years to increase the value of its currency as the low valuation provides China with a competitive advantage over other countries (Ellis, 2014). The yuan steadily declined in value from 2009 to 2014, but since 2014 it has steadily risen ("Trade Economics," n.d.)

The appreciation of the yuan is highly concerning to business owners. Fifty one percent of respondents in a study conducted by Lau, Zhang, & Chen (2009), believed the appreciation of the yuan was the external constraint that would most affect their business. China's relative unit labor costs, or how much output an economy receives relative to wages, have been rising due to the appreciation of the yuan (Ceglowski & Golub, 2012). From 2003 to 2009, China's unit labor cost (ULC) increased faster than productivity for the same period (Ceglowski & Golub, 2012). According to Jiang Hui, head of the China Chamber of Commerce for Import and Export of Textiles and Apparel, for every one percent that Chinese currency appreciates, there is a 2.8% reduction in profit margins for manufacturers (Ellis, 2014).

Another implication is that companies are utilizing cheap credit to take on debt to remain in operation (Schuman & Jiang, 2012). In 2016, debt in the private non-financial sector in China rose at a rate two times faster than growth of the country's GDP ("China's Impact," 2017). Although the government is attempting to lower levels of debt, it appears that debt within Chinese corporations will continue to grow through 2017 ("China's Impact," 2017), which can be very dangerous for China's future economy.

In China, banks prefer to lend to state-owned firms over private firms (Wildau, 2014). As the economy slows and private-owned companies seek credit, banks request other manufacturing firms to back the loan, ultimately putting the other manufacturer at risk if the loan holding company goes bankrupt (Wildau, 2014). If one firm is unable to repay its loans, many firms may be affected by a chain reaction phenomenon (Wildau, 2014). For example, one Chinese yarn manufacturer, who had backed another textile firm's debt, was liquidated after the loan holding company went bankrupt, and ultimately

the bankruptcy affected six more companies that were also backing the debt (Wildau, 2014).

The increased price of raw materials (Lau et al., 2009) is another financial factor impacting the price of apparel production and resulting in loss of profit (Zhu & He, 2013). For example, in a study conducted by Zhu and He (2013), one factory's general manager explained that profit margins significantly decreased in 2009 owing to a 100% increase in the price of cotton. In early 2011, the price of cotton reached an all-time high, selling for US \$2.27 a pound, and then maintained a price between US 60-65 cents a pound for multiple years before increasing to US 72-85 cents a pound in early 2016 (Belgum, 2016a).

Many factors contribute to the changing price of cotton, including environmental impacts on crops as well as general supply and demand (Belgum, 2016a). For example, bad weather and bugs caused a loss of two million bales of cotton in Pakistan during 2015, resulting in a lower global supply, and thereby shifting where manufacturers imported their raw materials from (Belgum, 2016a). Although China is the leading producer of cotton, its supply has lessened owing to increased land used for food crops (Belgum, 2016a). In recent years, the price of manufactured fibers has increased as well, owing to rising crude oil prices ("Synthetic Fiber Prices," 2017). In November 2016, the price of synthetic fibers increased across the globe, rising by two percent in Asia, after the industry had not seen an increase in price in over three years ("Synthetic Fiber Prices," 2017).

Another economic factor affecting China's global competitive advantage is China's growing domestic apparel market. By decreasing export production, China has

the opportunity to focus on production for its growing domestic market in order to capitalize on profit from Chinese consumers (Lu & Dickson, 2015). Female laborers are becoming more independent and are purchasing higher-end clothing, so local demand for apparel in China's own economy is increasing (Lau et al., 2009). Additionally, factors such as increased birthrate in China provide opportunities to sell more clothing to Chinese mothers and children ("Textile and Apparel Market," 2011).

Overall spending on clothing in the Chinese market increased 15% from 2006 to 2009, that is, from US \$513 billion to US \$778 billion, respectively ("Textile and Apparel Market," 2011). Additionally, online apparel consumption in China has increased 100% yearly between 2005 and 2010 ("Textile and Apparel Market," 2011). Research suggests that more than 50% of the Chinese population will enter the middle class by 2020, which represents a drastic increase in purchasing power among Chinese consumers as the middle class was almost nonexistent prior to the year 2000 (Elout et al., 2013). Also, individuals in the rising middle class desire products of higher quality and innovation than did previous generations of Chinese consumers (Elout et al., 2013).

To capitalize on the growing domestic apparel market, China may need to focus on creating its own brands through research, design, and innovation (Welters & Mead, 2012). Currently, Chinese apparel manufacturers rely heavily on major apparel brands to provide them with design ideas, and they generally copy designs rather than participate in their own research and design of new products (Ruffier, 2012). Under this structure, the apparel brands designing and purchasing the goods limit the Chinese manufacturers' ability to compete as the apparel brands maintain control and have more advanced design capabilities (Ruffier, 2012). However, apparel manufacturers in China

may realize benefits from increasing their design capabilities in order to help sustain the industry (Welters & Mead, 2012).

In an interview with an Australian manager, Gerhard Flatz, of a Chinese apparel manufacturing facility, Young (2016), discovered that Flatz was shifting his business to become a more design-focused, specialty manufacturer. Flatz had initiated a five-year plan with the goals to reduce migrant labor to only 20% (to improve labor rights) and reduce minimum orders to 20 pieces per style (to move from mass production to boutique or niche manufacturing). In doing so, Flatz could focus more on research and development and ultimately achieve higher profitability (Young, 2016).

**Corporate social responsibility (CSR).** For decades many well-known apparel brands, such as Gap and Nike have been criticized for utilizing sweatshops<sup>4</sup> to manufacture their products (Barboza, 2008). Common accusations against these apparel brands include the use of child labor, not paying fair wages, and forced overtime (Barboza, 2008). Over the last decade many large brands have chosen to implement labor standards and maintain regular labor/safety audits in the factories in which they produce goods (Barboza, 2008). However, as some factories implement changes in the areas of labor rights and factory working conditions, many do not (Barboza, 2008).

Cooke and He (2010) found that many Chinese manufacturing firms do not have a formal CSR policy and that they tend to perform especially poorly on the labor standard aspects of CSR. Business owners tend to be much more interested in improving product quality than in improving working conditions (Lau et al., 2009). To

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<sup>4</sup> Factories in which laborers experience poor working conditions and limited rights

make sufficient earnings, laborers are often required to work long hours in order to produce large quantities of garments (“Case Studies: Garment Workers,” n.d.). Ngai (2005) found that two apparel manufacturers, which were the subjects of a case study, followed corporate codes of conduct (ethical standards held by a transnational company applied to the factories it works with), but realistically showed no desire to improve labor rights for their factory workers, neither by increasing wages nor by reducing overtime work.

From 2001 forward, many CSR guidelines and policies have been enacted in China (Noronha, Tou, Cynthia, & Guan, 2013). As of 2006, the Chinese government has focused on creating a more harmonious society that includes newly established CSR guidelines, through its 11<sup>th</sup> Five-Year Plan (Marquis & Qian, 2014). The goal of the new CSR guidelines is to create a balance between economic development and environmental impact (Marquis & Qian, 2014).

In 2008, China established a Labor Contract Law (LCL) to protect laborers by decreasing their initial probation period, requiring written employment contracts, and allowing collective bargaining (Lan, Pickles, & Zhu, 2015). This contract coincided with the 2008 global financial crisis which decreased demand for Chinese exports; therefore, it may be difficult to determine if changes in China’s manufacturing industry after 2008 are a result of the LCL or the global financial crisis (Lan et al., 2015). Lan et al. (2015) conducted interviews in 2012 with apparel companies in the Zhejiang Province to explore the effects of China’s LCL. Their research revealed that the 2008 LCL’s effects varied by sector, size, and production network (Lan et al., 2015). Overall, the added

regulation did signify the Chinese government's desire to shift away from being a primarily low wage, fast paced, export-oriented economy (Lan et al., 2015).

Unfortunately, the establishment of these CSR policies has not resulted in full compliance with these policies (Noronha et al., 2013). For example, Marquis & Qian's (2014) study of Chinese firms listed on the Shanghai or Shenzhen stock exchanges (between 2006 and 2009) revealed a need for more monitoring from a government standpoint if firms are going to become more socially responsible. State-owned firms, that is firms that are partially or wholly owned by the government, are more likely to be aware of and to practice CSR as the Chinese government is able to directly enforce these firms' participation in CSR (Zhu & Zhang, 2015).

Marquis & Qian (2014), also discussed two main explanations for China's limited implementation of CSR policies and practices. First, as China is a country that follows trends that are happening globally, government regulations pertaining to CSR lag behind those of many other countries. Second, there are minimal CSR reporting standards in China, and the decision to comply is often voluntary because legal enforcement is lacking. Often companies individually select which CSR initiatives to highlight and which practices to leave out of the report (Marquis & Qian, 2014).

The Chinese government is experiencing pressure to address corporate social responsibility issues (Cooke & He, 2010), which has resulted in the Chinese government creating incentive policies for firms to participate in CSR practices (Xie, Jia, Meng, & Li, 2017). The government has heightened CSR standards, however, the implementation of standards by manufacturers remains limited (Cooke & He, 2010). For example, China has strong regulations for work hours, but many workers are still forced

to work overtime by manufacturers who often disregard the laws; also, it is common for companies to not adhere to labor policies (e.g., allowing laborers to rest) or to not pay required overtime earnings (“Case Studies: Garment Workers,” n.d.; “Wages and Employment,” 2016). Ngai’s (2005) case study of Chinese apparel manufacturers revealed that laborers could not support their basic needs without working overtime and on weekends (Ngai, 2005).

One major factor that limits the implementation of CSR standards in Asian factories is the transformation of the fashion industry into a consumer-focused industry (Taplin, 2014). Today many apparel brands operate under a fast-fashion model that drives consumer expectations for trendy and inexpensive apparel items at the detriment to improved labor standards (Taplin, 2014). Ngai (2005), found that one Chinese apparel factory staff member felt she had no choice but to violate labor regulations when pressured by the apparel brands to meet short-lead times. This inherent conflict between instituting labor codes for the factory and meeting demand for low-cost, fast-produced goods creates a dilemma for the factories, as they cannot meet both the price and ethical demands of apparel brands (Ngai, 2005). This conflict often leaves the factory no choice but to cut-corners, either in its product quality or labor codes (Mooney, 2008).

Further, Knorringa and Nadvi (2014) found that monitoring CSR in countries across other regions of the world can be difficult for multiple reasons. One reason is that western perspectives on CSR may vary greatly from Asian perspectives. Additionally, each manufacturing cluster in China may have its own version of CSR that is native to a given region. China’s horizontal integration also poses an issue, as portions of

production are completed at various factories, therefore complicating the ability to assess the extent of CSR policies being implemented at each location in the supply chain (Knorrington & Nadvi, 2014).

**Sustainability.** China's apparel manufacturing industry has historically produced high levels of various pollutants (i.e., air pollution and water pollution), but it is at a point in time where reducing the industry's impact on the environment is now a focus of change (Chu, 2015). The main focus in China's 13<sup>th</sup> Five-Year plan (2016-2020) is the environment, with emphasis on becoming more energy-efficient; protecting the air, water, and land; and reducing poisonous and harmful chemicals and hazardous waste ("China Approves," 2016). Li Keqiang, Premier of the State Council of the People's Republic of China, expressed that a good environment will lead to developed productivity and is important to people's living standards ("China Approves," 2016).

Pollution has been an increasing problem in China's textile and apparel industry. In 2008, Chinese textile manufacturers violated wastewater pollution guidelines 302 times, and in 2013 there were 1,497 recorded violations (Chu, 2015). Although pollution has increased for decades, China's apparel manufacturing industry is engaged in shifting its energy use, investing billions of yuan to create a "greener" industry ("Textile Excellence," 2016). The Jinsheng Group, China's largest textile company, has created an enormous textile manufacturing plant that focuses on being "green" ("Textile Excellence," 2016). The company's attention has shifted to using natural plants as dyes, recycling textiles, improving energy efficiency in manufacturing, and producing high end materials ("Textile Excellence," 2016).

Reducing a textile and apparel company's negative environmental impact is an expensive undertaking (Chu, 2015). Technology, such as that to treat polluted water, is expensive, and can cost companies hundreds of thousands, to millions, of dollars (Chu, 2015), which not all manufacturers are capable of paying. With new laws and regulations, many small manufacturing companies face the challenge of affording to upgrade facilities to meet new regulations (Chu, 2015). Multinational companies also are increasing pressure on manufacturers to improve their technology and reduce their environmental impact (Chu, 2015).

### **Theoretical and Empirical Examinations of Competitive Advantage in Global Apparel Manufacturing Industry**

Past empirical studies have focused on various aspects of competitive advantage in the apparel manufacturing industry. Jin's (2004) synthesis of previous research on Hong Kong's, South Korea's, and Taiwan's apparel industries, suggested that obtaining competitive advantage in the global apparel manufacturing industry requires three criteria: global brand, global sourcing, and agility. Establishing a strong global brand means creating unique designs, global sourcing involves the integration of all production facilities across the entire business, and agility refers to adapting and responding to changes within demand in the industry (Jin, 2004).

Berdine, Parrish, Cassill, and Oxenham (2008) examined the competitive advantage of the textile and apparel manufacturing industry in the U.S. Twenty interviews were conducted with 13 companies in the U.S. textile and apparel industry. Overall, findings revealed that three factors provided the U.S. competitive advantage in the industry: research and development, marketing, and customer service. The U.S.

maintains position at the front of the supply chain and creates value throughout the supply chain with design capabilities and the ability to create high-value products. Marketing includes participating in market research, understanding trends, and marketing directly to apparel brands to create demand for the product. Lastly, customer service allows the U.S. manufacturers to maintain a relationship with the apparel brands beyond the sale of the product (Berdine et al., 2008).

Watchravesringkan, Karpova, Hodges, and Copeland (2010) interviewed individuals from eight apparel organizations in three Thai provinces: Bangkok, Nonthaburi, and Samutsakorn regarding competitive advantage in the apparel industry. The research revealed that going forward, the Thai government will play a very important role in maintaining competitive advantage (Watchravesringkan et al., 2010). As Thailand's production costs continue to rise, the government's involvement (i.e., creating clusters to lower production costs, improving efficiency, and providing capital to invest in the industry) will help the industry obtain new ways to sustain its competitive advantage (Watchravesringkan et al., 2010).

Kenya's apparel manufacturing industry is important to the country's economic development and the country's apparel industry has gained a competitive advantage in Africa owing to its central location and large supply of skilled garment workers (Mastamet-Mason & Ogembo-Kachienga, 2012). Since 2005, Kenya's competitive advantage has weakened owing to the elimination in quotas that allowed for export growth among developing countries in the global market, specifically China and Southeast Asia (Mastamet-Mason & Ogembo-Kachienga, 2012). Mastamet-Mason & Ogembo-Kachienga (2012) analyzed the apparel industry in Kenya by applying Porter's

(1990) diamond and business value chain models. The authors suggested that advancing technology, restructuring manufacturing processes, and developing industry clusters will provide Kenya's apparel industry with a regained competitive advantage (Mastamet-Mason & Ogembo-Kachienga, 2012).

Buchanan, Anwar, and Tran (2013), interviewed 21 executives in the footwear and apparel industries in Vietnam, and discovered that these individuals believed that rising wages in Vietnam would lead to a loss of competitive advantage over time. The current production model in these Vietnamese industries is to utilize expensive, imported raw materials to create finished products, without providing much added value; that is, to contribute only low wages to the production cost. If wages rise and the price of important raw materials remain high, or increase in price, Vietnam's competitive advantage will no longer exist as profits shrink; therefore, the authors concluded that these industries should shift their focus toward implementing more product design and stronger control over the cost and supply of raw materials (Buchanan et al., 2013).

Furthermore, in a study of seven export apparel manufacturers in Sri Lanka, Perry, Wood, and Fernie (2013), found that implementing CSR practices in Sri Lankan apparel factories appeared to support the country in gaining competitive advantage in the global apparel manufacturing industry. Interviews with CSR professionals from the United States, Europe, and Asia, provide consensus in the belief that apparel manufacturers who implement high CSR standards will experience a competitive advantage (Dickson & Chang, 2015).

Based on a study of 238 manufacturing firms located in China and Vietnam, two transitional economies (economies shifting from politically-oriented to market-oriented,

experiencing disorder in doing so), Xie et al. (2017) concluded that firms can improve their financial performance by improving their CSR practices. More specifically, by improving their CSR practices, firms can improve the work environment for laborers as well as satisfy customers (Xie et al., 2017).

Researchers have also examined how trade regulations and agreements may impact competitive advantage. Yeung and Mok (2004) interviewed owners of 15 Chinese textile and apparel firms and concluded that accession to the WTO would improve productivity and create increased competition for many textile and apparel firms in China. Additionally, Lu (2015b) found that the potential TPP, which excluded China, would negatively impact Chinese exports in the textile and apparel industry. He concluded that the TPP would result in declined exports from China to the U.S., Japan, and the NAFTA region (Lu, 2015b).

### **Theoretical Framework**

An integrated theoretical framework will be employed to better understand the factors affecting competitive advantage in China's apparel manufacturing industry. The theoretical frameworks that will inform the development of this research are Porter's diamond theory of national advantage (1990) and Freeman's stakeholder theory (2001).

**Porter's diamond theory of national advantage.** Michael Porter's diamond theory of national advantage (1990) provides a foundation for comprehending a firm's competitive advantage in a global industry (Smit, 2010). In order to understand a company's level of competition one must first understand the industry (Porter, 1990). Competitive strategy poses two major concerns: first, the structure of the industry in which the company competes, and second, the profitability of the company's position

within the industry (Porter, 1990). Porter (1990) identified five competitive forces that affect competition in any industry: (1) the threat of new entrants, (2) the threat of substitute products or services, (3) the bargaining power of suppliers, (4) the bargaining power of buyers, and (5) the rivalry among the existing competitors. Overall, these five factors affect a firm's profitability (Porter, 1990).

Porter's (1990) five competitive forces can be applied within the global apparel manufacturing industry. First, the threat of new entrants is considerable owing to the availability of low-skill laborers in other countries and the low cost of producing apparel. Second, the threat of substitute products or services is also significant as consumers have an extensive array of brands available to purchase products from. Suppliers have the potential to hold bargaining power, especially if the supplier produces specialty fibers or textiles. Large apparel brands hold power in setting manufacturers' prices because they can easily contract manufacturing with another factory if the supplier does not meet the price the brand is requesting. Lastly, with an immeasurable competitive arena in the global apparel manufacturing industry, rivalry among competitors is substantial.

Porter also explained how value chains are critical to the competitive advantage of firms (Porter, 1990). A value chain refers to a set of activities that a business performs to provide a more valuable product, service, or experience for the consumer (Porter, 1985). Firms gain competitive advantage and create value for customers either by providing lower costs to customers, or selling goods at a premium price because they offer differentiation in delivering a unique product or experience by using new procedures, implementing new technology, etc. (Porter, 1990).

According to Porter (1990) two major categories of factors affecting competitive advantage exist: basic factors and advanced factors. Basic factors are the characteristics that are inherent to a country, such as labor, climate, and natural resources, while advanced factors include factors such as communication, technology, research, and higher-education. Porter's diamond model focuses on the advanced factors that a company should strive to achieve in order to gain competitive advantage (Porter, 1990).

The model identifies four attributes of a nation that may drive competitive advantage in a given industry: (1) factor conditions, (2) demand conditions, (3) related and supporting industries, and (4) firm strategy, structure, and rivalry (Porter, 1990). Factor conditions include all components of production, such as labor and infrastructure (Porter, 1990). Demand conditions refers to the demand for the product within the nation in which the product is being produced or service is being provided (Porter, 1990). Related and supporting industries are associated industries within the country, such as suppliers, as well as direct competitors who are rivals in the global marketplace (Porter, 1990). Firm strategy, structure, and rivalry involves the dynamic global competition and direct rivalry which results in productivity (Porter, 1990). In addition to the four factors, Porter points out that local government policy also is an important aspect that affects competitive advantage (Porter, 1990).

As business has become increasingly global, Porter's model provides a foundation for understanding global competitive advantage and the development of industries (Grant, 1991). Porter's model has been widely accepted and is often applied in a business school context as well as in academic research (Grundy, 2006). However,

some have argued that the model is overly focused on the home nation and therefore difficult to apply to globalization (Liu & Song, 1997). For example, Dunning (1993), criticized Porter's model for underestimating the interactions that occur across markets, from one country to another, that affect competitive advantage and value. As Gundry (2006) acknowledges, there is opportunity for the model to be developed to broaden its view to grasp the larger dynamics of competitive advantage; however, he agreed Porter's model makes a significant contribution to the field and that managers in all industries should have a strong understanding of Porter's concepts of competitive advantage.

Porter's diamond theory of national advantage has been applied to studies of competitive advantage across numerous industries, including multiple sectors within the textile and apparel industries. For example, Liu and Song (1997) applied Porter's diamond model to an examination of China's top 15 export industries, which included five textile and apparel categories: (1) textile yarn and thread, (2) cotton fabrics, woven, (3) woven textiles non-cotton, (4) textile products etc., and (5) clothing not of fur. Findings from this research suggest that, at the time the study was conducted, China's competitive advantage in textile and apparel categories was attributed to low-cost, unskilled labor in labor-intensive manufacturing (Liu & Song, 1997). Based on their findings, Liu and Song (1997), concluded that, in the long-term, China's textile and apparel manufacturing industry would not be able to rely on basic level factors (i.e., low skill labor) to maintain its competitive advantage, but rather, it would need to focus upon advanced factors such as investment in infrastructure, technology, and education (Liu & Song, 1997).

Subsequently, researchers have applied Porter's diamond model to empirical studies of competitive advantage in the apparel manufacturing industries within varied countries. For example, Berdine et al. (2008), applied Porter's model to the U.S. textile and apparel industry and concluded that the U.S. industry's competitive advantage is based upon its ability to provide product differentiation (Porter, 1990). A study of Thailand's apparel industry (Watchravesringkan et al., 2009) revealed that Thailand's ability to maintain competitive advantage in this industry will be dependent upon the continued support of the government, which Porter (1990) articulates is an important factor to competitive advantage. The government is highly involved in supporting the apparel industry through increasing efficiency and productivity by increasing capital investment for research and design, providing the industry with knowledge of skills in marketing and entrepreneurship, and improving infrastructure (Watchravesringkan et al., 2009). Mastamet-Mason and Ogembo-Kachienga (2012), applied Porter's model to Kenya's apparel manufacturing industry in order to examine strategies by which the country might re-gain its competitive advantage in the industry. The researchers identified demand conditions, specifically broadening appeal to the domestic market through marketing to Kenyan consumers, as the main factor that the industry should focus upon to strengthen its competitive advantage in apparel manufacturing (Mastamet-Mason & Ogembo-Kachienga, 2012).

**Stakeholder theory.** Stakeholders are "groups and individuals who benefit from or are harmed by, and whose rights are violated or respected by, corporate actions" (Freeman, 2001, p. 41). Stakeholder theory posits that groups of individuals internal and external to a corporation or organization may include owners, management, employees,

suppliers, customers, and the local community, and suggests that these groups are of equal value to the company. Owners are individuals who are financially vested in the company and whose livelihood, in some way, depends upon the success of the company. Management includes those individuals who have the responsibility to oversee the corporation, including employees as well as all other stakeholders. Employees are individuals who work for the company and provide their skills and labor to the company in return for payment and benefits. Suppliers are the individuals and companies who provide raw materials and intermediary goods to the company. Customers purchase goods and services from the company and therefore provide revenue to the company. And lastly, the local community and the company must coexist, and each may benefit the other (Freeman, 2001). For example, the community is important to the company because it provides a workforce, consumers, and business regulations, whereas the company provides jobs, tax revenue, and philanthropy/service to the community (Freeman, 2001; Harrison & Wicks, 2013).

Stakeholder theory focuses upon building relationships in order to achieve long-term success for the corporation or organization and to provide mutual benefits for all parties, when possible (Freeman & Mcvea, 2001). As such, corporations and organizations must engage in strategic decision-making to simultaneously meet their own goals and sustain the needs of a variety of stakeholders; although it is often difficult to satisfy all stakeholders with each decision (Freeman & Mcvea, 2001). As stakeholders not only seek economic benefits from the corporation, it may be difficult to measure stakeholder satisfaction (e.g., customers may find satisfaction in things such

as a firm's position on societal issues or if the company treats them respectfully/fairly) (Harrison & Wicks, 2013).

To date, research demonstrates that the adoption of a stakeholder orientation among Chinese industries is limited. For example, in a comparison of Chinese and U.S. business managers'/part-time MBA students' personal values related to ethics and social responsibility, Shafer, Fukukawa, and Lee (2007), found that Chinese managers adhered more strongly to a stockholder view (see Friedman, 1962) than a stakeholder view of business. For example, the Chinese managers indicated stronger agreement with the statement, "if the stockholders are unhappy, nothing else matters" than did the U.S. managers (Shafer et al., 2007, p. 274). Yin and Zhang (2012) found that firms operating in the Chinese textile and pharmaceutical industries demonstrated a desire to satisfy a variety of stakeholders by engaging in responsible business practices and policies; however, the two stakeholders they desired to please the most were international buyers and the Chinese government (Yin & Zhang, 2012).

Taken together, Porter's diamond theory of national advantage and stakeholder theory provide a theoretical foundation for analyzing the factors that contribute to China's competitive advantage in the global apparel manufacturing industry. The two theories inform the factors that affect global competitive advantage as well as provide understanding of the various stakeholders that are involved in China's apparel manufacturing industry's competitive advantage. The theories also provide a structure for developing the interview protocol for this study.

## CHAPTER 3: METHODS

### **Research Design**

A qualitative research approach was utilized in this examination of competitive advantage in China's apparel manufacturing export industry. More specifically, interviews were conducted with nine professionals in China's apparel manufacturing export industry. The data for this analysis was comprised of one personal interview and eight Internet-based interviews. Qualitative research methods allow for deeper understanding of what individuals are experiencing by capturing feelings, thoughts, and emotions of the interviewees (Strauss & Corbin, 1990).

### **Participants**

To explore the factors that affect global competitive advantage, the sample for this study was obtained from the population of business executives of apparel manufacturing export facilities (i.e., factories) in mainland China. To ensure that participants understood global competitive advantage, the identified manufacturing facilities were, primarily, engaged in export-oriented apparel manufacturing, rather than in manufacturing for domestic Chinese retailers only. This population was of interest because large Chinese apparel and textile factories that focus primarily on exports (over 80% of goods), were experiencing difficulty maintaining competitive advantage in the global apparel manufacturing industry (Ruffier, 2012).

Initially, purposeful random sampling (Patton, 2002) was attempted. The e-commerce site, Alibaba, served as the sampling frame from which potential participants were identified from the population of apparel manufacturing export facilities in mainland

China. Alibaba is a Chinese company that provides an online platform for global suppliers and buyers to buy/sell an array of merchandise, including apparel, and, thus, provided access to Chinese apparel manufacturers that were interested in the export of products (“About Alibaba,” n.d.). Two hundred and thirty-five potential participants were contacted via messages through Alibaba’s website; however, only one individual responded and indicated willingness to participate in a phone interview using this sampling approach.

Due to the difficulty in obtaining participants through the initial method, an additional eight participants were recruited using a convenience sampling method. The researcher requested Chinese apparel manufacturing contacts from a variety of colleagues who assisted in connecting the researcher with Chinese apparel manufacturing business executives. For the participants who were comfortable with having their identities exposed to the researcher, the researcher directly contacted the participants with the recruitment materials. For the participants who were not comfortable with the researcher having direct contact, the researcher’s colleagues sent the recruitment materials, and after the interview was completed, returned the completed materials to the researcher.

All nine participants were business executives in Chinese apparel manufacturing export facilities. Participants’ job titles included factory owner, factory manager, sales manager, and merchandiser. At the time of data collection, the factories all exported at least 50% of the merchandise they produced and all focused on production of apparel goods. The factories varied in size, location within China, type of business ownership, export percentage, and categories of apparel products. Additionally, the participants

varied in age and years spent in their current positions. Participant and factory information is presented in Table 1.

Recruitment materials (see Appendix A), including a consent to participate in research form, a short questionnaire, and an interview schedule, were provided to these individuals in both English and Mandarin when they were contacted initially. This information was provided to ensure that all contacted individuals had a full understanding of the research and interview process as well as to confirm that each individual met the criteria of the study prior to scheduling an interview or having them respond to interview questions.

To encourage participation in the study, the researcher offered each individual \$20 for his/her participation, and this incentive was communicated upon initial contact. However, none of the business executives accepted the offered payment. Additionally, participants were offered an executive summary of findings from this study for their participation.

## **Instruments**

An interview protocol was created by the researcher (see Appendix B). All recruitment and data collection materials were approved by the Institutional Review Board at Colorado State University (IRB) prior to data collection.

Back translation, the process of having a second translator translate the first translation back to the original language, was used to develop the materials (Paegelow, 2008). First, the materials for recruiting participants were written by the researcher in English and then translated by the data collector into Mandarin. The original translation from English to Mandarin was reviewed by a second Mandarin speaker to back

**Table 1. Participant and Company Profile**

Participant Information			Company Information				
Participant Number	Title	Years in current position	Type of business ownership	Location	% of exports	Years the business has been operating	Number of employees
1	Manager	3	Private enterprise	Guangdong	51-75%	14	200
2	Owner	12	Private enterprise	Guangdong	51-75%	30+	1,300+
3	Manager	10	Private enterprise	Guangdong	91-100%	47	n/a
4	Merchandiser	15	State owned	Jiangsu	91-100%	40	40
5	Owner	20	Private enterprise	Zhejiang	91-100%	20	60
6	Manager	9	Hong Kong joint venture	Guangdong	91-100%	19	900
7	Owner	40	Partnership	Guangdong	51 - 75%	40	400-500
8	Owner/ Manager	16	Private enterprise	Guangdong	91-100%	17	1000
9	Owner/ Manager	10	Private enterprise	Guangdong	76%-90%	10	200

translate and confirm the accuracy of the translation. The researcher then compared the two documents to confirm the accuracy of the original translation, and the researcher worked with the original translator to make the needed revisions. Back translation helps to eliminate major errors, and ensure clarity of meaning, but does not provide two exact documents (Paegelow, 2008).

### **Procedure**

The first participant in this study engaged in a semi-structured in-depth phone interview. All subsequent interviewees responded to the same interview questions via e-mail. Each participant was given the option to participate in the language they felt most comfortable with, either Mandarin or English. For those participants who responded in Mandarin, the data collector translated the responses into English for the researcher. The first interview was completed in Mandarin, translated into English by the data collector, and was back translated by a second Mandarin translator to confirm accuracy. The translation was found to be accurate, and therefore, the additional translations were not audited by a second translator.

An experienced researcher, who also is a native Mandarin speaker, and who has expertise in qualitative research (i.e., experienced in conducting interviews), assisted the data collector during the first interview that was conducted by phone. By partnering with an experienced researcher on the interview, the primary data collector received guidance (especially with respect to asking follow-up questions) that thereby strengthened the quality of the interview.

## **Data Analysis**

The data collected for this study included participants' responses to the initial questionnaire, one transcription of a personal interview and eight written e-mail responses to the interview questions. Constant comparison (Strauss & Corbin, 2008) was employed to analyze the interview data for emergent themes related to competitive advantage in the Chinese apparel manufacturing export industry. To initiate this process, the researcher read the interview text multiple times and engaged in reflective note taking to discover and understand meaning or concepts conveyed within the data (Corbin & Strauss, 1990). Meaning or concepts drawn from the data were then compared and contrasted in order to establish categories and subcategories that are representative of meanings in the data (Corbin & Strauss, 1990).

Next, the researcher developed a coding guide from the established categories and subcategories that were applied to all of the data. The researcher analyzed blocks of text (i.e., chunks of data) for meanings signified by the concepts and categories in the coding guide and established labels for the coded data. During this open coding process, the researcher explored relationships between concepts, categories, and subcategories as well as more abstract themes within the data. When new meanings were identified during this stage of data analysis, the coding guide was revised as necessary. During the next stage of the process—axial coding—the researcher explored connections among themes as well as patterns within the data. Lastly, the researcher employed selective coding to synthesize and refine meanings and relationships identified within the data. Constant comparison requires continuous review of the data and theories, which helps to eliminate researcher bias (Corbin & Strauss, 1990).

Several measures were taken to ensure the quality of the data analysis process. First, the researchers discussed the themes that emerged from the interviews to ensure accuracy of the data analysis. Second, an audit coder verified the coding of the data. Using the established coding guide, the auditor coded approximately 30% of the data. An inter-rater reliability coefficient was calculated by dividing the total number of agreements (i.e., instances in which the researcher and the audit coder were in agreement about the interpretation of the meaning) by the total number of decisions made (i.e., decisions to assign a specific code to a unit of text). Disagreements in decision-making between the researcher and audit coder stemming from the analysis of the first 30% of the interviews were negotiated prior to subsequent data analysis. The inter-coder reliability was 87%. Disagreements occurred most often when additional codes were designated to a chunk of data by one person that represented similar meaning to the code given by the other person.

## CHAPTER 4: FINDINGS AND DISCUSSION

From the data, four major themes emerged regarding the apparel manufacturing export industry in China. One important theme was the changes in labor and wages of laborers (i.e., sewers) in the industry and the business executives' perception of the impact these shifts have on competitive advantage. China's apparel manufacturing supply chain and raw material suppliers was another central theme. The influence of government policies, actions, and improvements on the business' competitive advantage from the perspective of the business executives was a third key theme found in the data. The final theme was shifts in production processes and strategies.

### **Labor and Wages**

The first theme revealed from the data analysis was changes in labor and wages in China's apparel manufacturing export industry. Subthemes related to labor and wages included a decreased labor pool, increased workplace demands of laborers, and increased wages (attributed to increased laborer demands and/or government wage requirements). The majority of interview participants expressed concern that the labor and wage changes in China have had a negative impact on China's apparel manufacturing export industry's international competitive advantage in recent years. This appears to be a cause for concern among participants because China's apparel manufacturing export industry's strategy in past decades was to capitalize on its large labor pool and low wages (Zhang et al., 2015).

**Decreased labor pool.** The first subtheme of labor and wages is the decreased labor pool. One significant factor contributing to the decreased labor pool is the reduced

number of migrant workers. With all participants' main factory locations on the eastern coast of China, all of the participants employed migrant workers as laborers; more specifically, six of the participants employed over 60% migrant workers (participant average was 65% migrant workers of total employed laborers at time of interviews). The only participant that did not specifically mention a labor decrease, or wage increase, only employed two percent migrant workers, significantly less than any of the other participants. Overall, the reduced availability of migrant workers is a significant factor in the apparel manufacturing export industry because the majority of China's 100,000 prominent garment manufacturers are located in provinces on China's eastern coast (China National Garment Association, 2013). The following quote demonstrates the importance of migrant workers from the perspective of one participant.

It is about the region. Because Guangdong province, where I work now, is in the southeast of China, and in the Dongguan city. There is a small number of people who are local residents, and there is a larger amount of people who come from the other provinces. Thus, our company basically has 90% to 95% of people are migrant workers. It is like they migrated here from the other provinces, and then start the business, work and so on here. (Participant 1)

As businesses rely heavily on migrant workers, shifts in the availability of individuals from inland China can have a substantial impact on staffing apparel manufacturing export facilities. In the 1980s, as China shifted from an agricultural-focused country to manufacturing-focused, China's workforce shifted as a result, leading many who were living in rural areas with high levels of poverty to migrate for better opportunities in these manufacturing-focused, urban regions (Lewin et al., 2016; "Sweatshops in China," n.d.). In past decades, economists have believed China would always have an unlimited supply of laborers (Li & Edwards, 2008); however, the Chinese working age population

(ages 15-64) peaked at 74.5% of the total population in 2010 and has been subsequently declining (National Bureau of Statistics of China, 2017).

As demonstrated in the following quote, the migrant workers' appeal of staying in their hometowns in the western regions of China has increased in recent years. "Their [migrant workers] living standards are continuing to improve. More of them willing to stay in their hometown, and do not want work and live in other cities" (Participant 5). This quote reflects a more recent phenomenon in China, a reversal in urban migration wherein individuals are content to stay in their rural communities with their families (Wildau, 2015). Migrant workers who have experienced the social impact of migration on their families have recently returned to their hometowns from urban areas to support both their children and aging parents (Roberts, 2016). Additionally, more individuals who are now of working age are choosing to remain in their hometowns and never migrate, owing to the fact that they experienced the social impacts of migration from the perspective of being a child to parents who were migrant workers (Roberts, 2016).

Beyond the desire to reduce the impact migration has on the family unit, there also are other incentives keeping workers in more rural areas. The gap between wages in rural and urban areas is shrinking, and although not as high in rural areas, they are now significantly closer to the wages of urban areas (Wildau, 2015). Poverty levels in Chinese rural areas are considerably diminishing, reduced from 82.9 million people in 2013, to 30.46 million people in 2017 (National Bureau of Statistics of China, 2017), making it increasingly plausible for individuals to stay in their rural hometowns. Another significant factor, infrastructure development in China, also has led to increased business opportunity in more rural, inland areas of China (Roberts, 2016). China's State

Council is offering incentives for people who have migrated and obtained new skills in industrial regions to return and start businesses in inland regions (Roberts, 2016).

With the lack of interest in migrating for work, there also is an increase in age of factory workers. A few participants also spoke specifically to the difficulty of hiring younger laborers and the subsequent increased average age of laborers in their factories. The following quote demonstrates the impact of decreased migrant workers on the business and its efficiency, as well as the shift in age of available laborers. “Workers are old and can hardly hire younger workers & less migrant workers” (Participant 4).

Traditionally, in China’s apparel industry, workers over the age of 35 have more difficulty obtaining jobs than do younger workers because the industry’s focus has been on speed of production (Ngai, 2005; Yang et al., 2010). Business owners perceive older workers as less efficient, and owing to this belief, typically replace workers as they age with younger workers. As the average age of laborers in factories increases, this may signify a decrease in efficiency as well as concern for factories in maintaining employees, as current, veteran laborers become interested in retirement (Farrar, 2014). As mentioned, China’s working age population has significantly decreased. One of the main contributing factors to this decrease is the increased population of individuals who are 65 and older, which increased from 8.4% of China’s total population in 2010 to 10.1% in 2016 (The World Bank, 2018).

As the following quote demonstrates, one participant directly attributed the difficulty of hiring young, migrant workers to the increased desire and opportunity for a university education among the current generation of young adults. “People getting

good education not willing to work as a sewing girl” (Participant 7). Historically, China’s apparel industry has employed individuals without a high school education (“Bleak Times,” 2016), so as the economy grows and the percentage of the population with high school degrees and university education has increased, it is not surprising that the number of individuals interested in working as apparel laborers has decreased.

Further, the middle-class population in China is increasing and research suggests that more than 50% of the Chinese population will be considered middle class by 2020 (Elout et al., 2013). The increase in wealth within the growing middle class has resulted in shifts in opportunity that impact the economy. One new opportunity is that many middle-class youths are increasingly interested in attending universities in the United States; between 2008 and 2014, the number of Chinese students that attended U.S. universities tripled (Chen & Jordan, 2016). With increased skills, knowledge, and networks as well as an increased global perspective, university aged individuals are prepared to do more than the simple task of sewing garments, therefore leading to an increase in the average age of laborers (Yang et al., 2010).

According to the literature, the decreased labor pool can be attributed to a decrease in migrant workers, an increased number of Chinese pursuing college degrees, and the one-child policy (Farrar, 2014; Yang et al., 2010; Wildau, 2015). Both decreased migrant workers and increased desire for university education were evident in the findings; however, none of the participants specifically mentioned the one-child policy as a reason for the decreased labor pool. This was surprising given that the Chinese working age population percentage peaked in 2010 and has declined in the years since (National Bureau of Statistics, 2017), and the one child policy has been an

important contributor to the decreased labor pool. In 2015, China lifted the one-child policy, and couples now have the opportunity to have two children (“China’s One-Child,” 2015); however, it will be years until there is an increase in the population of working age individuals. With a strengthened economy, along with the current trends in migration and education, the increase in population is unlikely to increase the labor pool for apparel manufacturing export facilities.

**Increased workplace demands.** A second subtheme was the change in workplace demands among the new generation of laborers. The new, young laborers workplace demands have increased, and they have more power over the executive employees than before. Participants discussed younger workers’ decreased interest in working overtime, and increased demand for vacation time, and shared their perceptions of the younger generation’s priorities as significantly different than previous generations, as evident in the following quotes: “[Young] workers don’t want to work overtime, they have to enjoy their life” (Participant 9). Another participant explained:

Because of the 1990s...their current family environment has changed, improved. Basically, the 1990s generation just needs a job with relaxed [atmosphere], and no pressure. Work with more leisure, and then they may be willing to work for a long time. (Participant 1)

This participant employed individuals who were mainly born prior to 1990 (individuals aged 38 - 58), a mentioned age shift from previous years. Data analysis also suggested a redistribution between the importance of lifestyle among younger workers and commitment to developing skills and working. The implication here is that the generation of the Chinese population born during the 1990s has an increased desire for pursuing happiness and enjoyment than previous generations (Orr, 2017). Owing to this shift, this generation is now balancing their increased desire for enjoying life with their desires for

success (Orr, 2017). The following quote demonstrates that the relaxed lifestyles of the new working generation have become of greater importance. “Workers’ skill goes to a lower level than before and most workers won’t do overtime work” (Participant 4). This quote implies that as lifestyles shift, labor productivity is reduced.

In past generations, when the industry was still developing, laborers were leaving behind extreme poverty in their rural communities for the hope of success in the new manufacturing sector (“Sweatshops in China,” n.d.). Therefore, these individuals were more willing to work quickly and endure long hours to make money to send home to their families (“Sweatshops in China,” n.d.) This also was during a time when the labor pool was expansive, and laborers could be easily replaced. This increase in work place demands and decreased effort is likely a direct result of the diminishing labor pool; unmet demand for workers subsequently leads to laborers having more leverage and an increased ability to negotiate for improved wages, benefits, and work hours (Li & Edwards, 2008).

**Increased wages.** Another subtheme, increased wages, was a concern voiced by many of the participants. Participants perceived that increased minimum wages reduced profits, contributed to production instability (i.e., loss of business or decrease in orders), and decreased China’s international competitive advantage in the global apparel manufacturing export industry. One participant directly voiced his/her perception by simply stating that, “Increased minimum wages reduces product profits” (Participant 2).

Participants also related increased wages to production instability and decreased orders for China’s apparel manufacturing export industry. One participant

stated, “Cost increase will affect our competition [*sic*]” (Participant 9), which indicates the perspective that China is less competitive in the global market owing to increased costs. Participants also addressed the impact on China’s apparel manufacturing export industry’s international competitive advantage from countries that pay their workers lower wages. The following quote reflects that concern:

There is a decrease [in production orders from international brands], because with the increasing labor costs in China, more international apparel brands tend to work with smaller countries in Southeast Asia, due to their lower labor costs and tariffs. So, international apparel brands can get higher profits. (Participant 5)

This shift in production from China to other Southeast Asian countries has resulted in shifts in strategies among Chinese apparel manufacturing exporters. For example, another participant expressed the same concern, but also offered a strategy to counter the impact of higher wages. “Apparel business will go to the poor countries, because of cheap labour cost. China nowadays is not cheap; we can only survive by changing to accept small quantity of orders and fast production time” (Participant 7). This participant appeared to be resigned to China’s inability to compete on wage but mentioned one feasible way to maintain competitive advantage by making changes to processes. Shifts in production strategies will be discussed further in a following theme; however, it is evident that participants have attempted to change their strategies as they are aware that low wages are no longer providing them with competitive advantage over many countries.

The countries directly mentioned by participants as posing a threat to China’s competitive advantage included Southeast Asian, Middle Eastern, and African countries, specifically Vietnam, Cambodia, Bangladesh, India, and Turkey. Participants’ recognition of the growing competition from these countries is evident in the following

quotes: “Yes, competitors have increased, like Africa, India, Cambodia, and other countries, because their labor costs are generally lower than China, so it is very competitive” (Participant 5) and “[There is] increased [competition] because there are more companies in Southeast Asia” (Participant 6).

These countries’ apparel manufacturing industries are not as developed as is China’s (i.e., clusters and supply chain), however, they offer lower wages in the apparel manufacturing export industry. As implied in the following quote, countries can develop apparel markets owing to their ability to offer low prices, “Material costs increase, buyers will shift their orders to other countries once the workmanship has been improved” (Participant 9). Although low wages can initially help a country build its industry, attract new customers, and provide competitive advantage, this quote suggests that a low price and large labor pool strategy can only be sustained for so long. Findings from the present study suggest that rising wages may lead to reduced competitive advantage, which aligns with the findings from a study of Vietnamese footwear and apparel manufacturers (Buchanan et al., 2013). The findings from their study suggest that increased product design and increased control over supply chain would be the best strategies for the Vietnamese footwear and apparel industries to take in reaction to increased wages (Buchanan et al., 2013).

Three participants noted that apparel manufacturers already pay laborers higher wages than the required minimum wage, owing to both the shrinking labor pool and increased demands of laborers. Another participant specifically stated that wages have not risen enough in the coastal regions to provide sufficient incentive for migrant workers, thus contributing to the declining labor pool.

In general, the salary will rise every year, but the salary will not increase a lot in the coastal areas. So, it led to some people who come here to work feeling not as well as to stay at home. (Participant 1)

As previously mentioned, the gap between wages in rural and urban areas in China is shrinking (Wildau, 2015) and rural poverty levels are decreasing (National Bureau of Statistics of China, 2017), which led to decreased ability to entice workers to migrate for work. This has resulted in the apparel businesses being positioned between customers who are uninterested in spending more to purchase goods and workers who are not interested in migrating to be apparel industry laborers without higher wages.

Although there are differences in the specific experiences of the various participants, overall, it is evident that recent changes in the availability of laborers, their workplace demands, and increased wages have had a negative effect on the majority of the participants' businesses.

### **China's Apparel Manufacturing Supply Chain and Raw Material Suppliers**

The expansive and established supply chain in China's apparel manufacturing industry providing security for Chinese apparel manufacturing export businesses was another central theme found in the data. In addition, it was apparent that Chinese apparel manufacturing export firms' access to raw materials and relationships with raw material suppliers was perceived to be a significant aspect of the apparel manufacturing supply chain.

Half of the participants directly addressed the idea that the apparel manufacturing supply chain in China was stable and provided businesses with a competitive advantage over other countries. The Chinese apparel manufacturing supply chain and clusters (regions with strong networks of garment producers and raw material

suppliers) have been established over many decades, allowing manufacturers to work with the same suppliers and build long-term relationships over many years.

These long-term relationships and mature supply chain provided apparel manufacturers with confidence and recognition, as exemplified in the following quotes: “No change in supplier because of confidence in our long-term business” (Participant 7) and, “Quality control and delivery period could win the recognition of foreign markets, mature industrial chain [*sic*]” (Participant 5). These quotes suggest that China’s developed supply chain has played a significant role in supporting manufacturers’ ability to obtain international orders. The apparel manufacturing supply chain in China has endured major shifts in the global supply chain over the last thirteen years (Gereffi & Frederick, 2010); moreover, it appears to be a positive factor that, to some degree, compensates for the current shifts in labor and wages that are negatively affecting China’s industry.

China’s mature supply chain offers a competitive advantage that is not easily replicated in other countries. Although other countries, such as India and Vietnam, have expanded their apparel manufacturing industries (and the volume of global output), owing to low wages and large labor pools, it will take decades for these countries to establish apparel manufacturing supply chains that are comparable to China’s. The five significant parts of the global apparel value chain include raw materials, components (i.e., yarns and textiles), production networks, export channels, and marketing networks (Gereffi & Memedovic, 2003). China maintains expansive resources in the first four parts of the global apparel value chain (the four components that make up the production portion of the global apparel value chain). China’s supply chain and clusters

have been developing over the past forty years to a point where they are now well-established and cannot be easily or quickly replicated by other less-developed countries entering the apparel industry.

Participants also noted how China's supply chain benefits customers by saving time and money. The close proximity of the apparel factories to material suppliers saves time, which provides reduced costs and/or increased profits for both the apparel manufacturer and the customer, as conveyed in the following quotes: "The complete supply chain is the advantage; you can find all materials/capacity in this area..." (Participant 4) and "The new material and technology can be purchased and absorbed quickly" (Participant 2). The inference here is that proximity, created through the development of industry clusters, provides easy access to a variety and quantity of materials and technologies that can be expediently obtained and implemented into the production process. Clusters (mainly located on the eastern coast where the participants' main factories are all located) have historically provided the aforementioned advantages for manufacturers (Zeng, 2011), and similarly, improved infrastructure continues to benefit operation of the supply chain across China.

As previously discussed, many manufacturers have experienced loss of orders to other countries in recent years, owing to increased wages and raw material prices in China; however, some manufacturing facilities in China are experiencing renewed opportunity as customers are recognizing the benefits inherent in China's mature supply chain.

...with Vietnam, India or other countries and regions where labor costs are relatively low. Perhaps is the impact of their low cost, their labor force. It [demand for product] may have been reduced before, and now it has rebounded. This is because the other countries and regions' apparel production facilities are not

perfect. Therefore, some of the other countries and regions' orders transferred to China. This is because China has very strong apparel production facilities, and then the orders should not have any big problem. Generally, if there are problems, there are some very small problems, and it can be solved at any time. (Participant 1)

This quote suggests that although costs in China may be higher, the risks associated with production in China may be lower when compared to other countries. Similarly, Gereffi and Frederick (2010), discovered that apparel brands felt more secure working with larger, more established suppliers, especially after the significant recession in 2008. As such, China's supply chain may contribute to the competitive advantage of its apparel manufacturing export industry by providing high levels of productivity, lower procurement costs (e.g., shipping of raw materials), and thus, shorter leads times and improved logistics (Young, 2016; Lau et al., 2009; Farrar, 2014). Although some countries may pose threats to specific sectors of China's industry, such as India becoming the world leader in cotton production, no other country can currently compete with China's established supply chain (Young, 2016).

One participant expressed two concerns about the stability of China's apparel manufacturing supply chain; the first concern was the uncertainty over whether or not a factory will be in operation from one day to the next and the second concern was the negative effects of relocation from coastal areas to inland China. The following statement demonstrates these concerns:

Yes, garment factories are now unstable, today it is open but maybe tomorrow it is closed due to workers' leave or not enough margin to support, so we have to keep seeking for new factories for back-up... government encourage textile industry immigration from current area to the middle/west area of China, but it takes time. During this period, we have to suffer from capacity limitation and bad quality. (Participant 4)

It is evident from the first statement that some factories are struggling to survive amidst the current industry shifts and negative factors that have diminished China's competitive advantage. Although advancements in infrastructure have improved transportation throughout the country, thereby allowing apparel manufacturers the option to move inland, it will still take time to adjust to businesses relocating within China. After decades of relying on the proximity of suppliers and other factories in nearby clusters, the shift to a more expanded supply chain may add increased risk and unfamiliarity (Zhu & He, 2013).

The direct relationship between apparel garment manufacturers and raw materials suppliers was significant to the participants. Eight participants spoke to the importance of raw material suppliers to their apparel manufacturing export businesses, suggesting that suppliers are critical stakeholders in the supply chain. Collectively, these two quotes provide evidence of the perceived importance of raw material suppliers. "Each single supplier is important, same importance then a customer [*sic*]" (Participant 8), and "[We] look for smarter customers which think the same way in good partnership and not customers shopping around. Same applies for suppliers" (Participant 8). Participants explained suppliers' importance with respect to raw materials cost, quality, and timing of delivery, as these attributes of raw material production directly impact the garment producers' cost, quality, and timing for delivery of finished apparel goods.

**Cost of raw materials.** Eight participants discussed the increase in raw material prices over the past five years. This increase in raw material costs had a direct impact on the profitability of the participants' businesses. The following quote suggests that

apparel manufacturers were fearful of the impact that increased raw material prices may have on their competitive advantage. “Material cost increase, buyer will shift their order to other countries once the workmanship had been improved” (Participant 9). This remains a valid concern because increased prices of raw materials lead to increased costs for apparel garment manufacturers, and therefore apparel brands, which may negatively impact apparel manufacturing export firms in China (Lau et al., 2009); since profit margins for many apparel goods are very minimal, any increase in cost impacts profit. For example, in 2016, the price of synthetic fibers increased by two percent in Asia, which had a substantial impact on the profits of apparel manufacturers (“Synthetic Fiber Prices,” 2017). Thus, it is likely that the combination of the increased price of raw materials and the increased wages for laborers are collectively responsible for loss of competitive advantage and loss of profits throughout China’s apparel manufacturing export industry.

One reason for increased raw material prices specifically noted by participants is China’s environmental control policies. “Environment control impacts the dyeing/printing mills which caused termination of mills of limitation of production capacity [*sic*], so it takes much longer time to produce fabric and costing is increased due to this too”

(Participant 4). Another participant shared a similar observation:

Increase [raw material cost] annually is a trend, especially last year, because of the environmental protection. To achieve the environmental protection is to improve the production quality requirements, to provide the working standards. And then, the price of those raw materials rose a lot, increased a lot. Almost rose around 8% to 11% or 8% to 15%. Give them a different material, quality.  
(Participant 1)

It is apparent that the new focus on environmental policies by the Chinese government was one factor influencing the rise in raw material costs. These quotes reflect industry

realities of China's new environmental policies implemented to reduce the negative impact of the apparel manufacturing industry, and other industries (Lu & Dickson, 2015), as China's apparel manufacturing industry has historically produced significant amounts of pollution (Chu, 2015). The government's new environmental requirements often involve expensive upgrades to processes, machinery and facilities, which makes it difficult for the manufacturing firms to remain in operation and/or to maintain the same level of profitability (Chu, 2015).

Another factor influencing the rise in raw material costs is the increased number of customers who are demanding more environmentally friendly products, as demonstrated in the following quote: "Raw material prices generally rose, because both domestic and foreign pay more attention to environmental protection in recent years. So, we turn to buy more environmentally friendly materials, and the price will be high too" (Participant 5). Although customer demands for improved (and therefore more expensive) raw materials has increased, their willingness to pay manufacturers more for products has not increased. This quote implies that the apparel manufacturing export facilities are experiencing the burden of reduced profits in the apparel industry.

**Quality of raw materials.** The quality of raw materials was another subtheme related to apparel manufacturing raw material suppliers. Seven of the participants discussed the quality of the raw materials, and in particular, their perceptions of fabric suppliers' direct impact on the quality of the overall garment. "Fabric suppliers [are most important], because it will directly affect the basic quality of the product" (Participant 5). Another participant shared the same perception, "Materials and accessories suppliers directly affect the production period and product quality" (Participant 3). These quotes

convey the essential role of fabric suppliers as stakeholders in the apparel manufacturing supply chain and imply the need for apparel manufacturers to establish supportive relationships with suppliers that can deliver quality materials.

One participant specifically noted that his strategy with respect to raw materials was to “continue to develop more suppliers with competitive prices and quality” (Participant 3). This quote reinforced the need for manufacturers to build supportive relationships with suppliers who can assist in balancing the quality vs. cost dilemma inherent in developing a sustainable competitive advantage. This may imply that the relationships they have built with suppliers over the years are not as important as cutting costs on raw materials by finding alternative suppliers.

A few participants specifically stated that the quality of the raw materials from their suppliers had declined over the past five years: “Quality getting worse [*sic*]” (Participant 8), and “Price [of materials] increase and quality is drop [*sic*]” (Participant 9). One explanation for this lower quality may be the increased wages of laborers; raw material suppliers may be cutting corners on quality or speeding up production to reduce costs and maintain profitability. Apparel garment manufacturers’ success is significantly compromised when materials cost more and are of lesser quality.

**Timing of delivery of raw materials.** Another subtheme related to China’s apparel manufacturing raw material suppliers was the timing of delivery of raw materials. The speed of production of the raw materials can significantly impact the competitive advantage and success of the apparel manufacturer as they are tied to deadline agreements with customers.

Fabric suppliers play an instrumental role in production efficiency, specifically with respect to meeting deadlines; any delays or quality issues that need to be addressed are likely to push back delivery dates for garment manufacturers. This concern is evident in the following quotes: “Fabric suppliers [are most important], once they delay sending goods to us, we can’t start production” (Participant 9) and “Fabric/material supplier [is most important]. The quality of major fabric/material will impact on [*sic*] production speed” (Participant 2). Although clusters may provide convenience and easy access to raw material suppliers, participants conveyed significant concern regarding raw material quality and delivery time and the impact that these factors have on the production of finished apparel products.

As some national brands choose to shift production to low-wage countries, China’s raw material suppliers and supply chain will likely continue to have a significant role in supplying raw materials to the global industry. Raw material supply and production networks are vital parts of the global apparel value chain (Gereffi & Memedovic, 2003). Although other countries could build infrastructure to compete with China’s manufacturing supply chain, China will continue to be an industry leader in the production of both natural fibers, such as cotton, hemp and silk, and manufactured fibers (Bulloch, 2017; National Cotton Council, 2013). Most countries (other than India who surpassed China as the leading producer of cotton in 2015) (Belgum, 2016a) will never be able to compete with China in its level of production of raw materials. Although other countries may develop more mature supply chains in coming years, China’s supply chain will likely continue developing during that time as well.

Studies of Thailand's and Kenya's apparel manufacturing industries have demonstrated the value of industry clusters for reducing production costs and increasing competitive advantage (Mastamet-Mason & Ogembo-Kachienga, 2012; Watchravesringkan et al., 2010). Similarly, a study of Vietnamese footwear and apparel industry executives concluded that Vietnamese apparel manufacturing firms should focus on controlling both the cost and supply of raw materials (Buchanan et al., 2013). Observations shared by participants in the present study provide additional evidence that a well-developed supply chain and greater control over raw materials (cost, quality, and timing) may provide significant competitive advantage in the global apparel manufacturing industry.

### **The Influence of Government Policies, Actions and Improvements on the Business' Competitive Advantage**

The third theme revealed from the data analysis was the influence of government policies, actions and improvements on the competitive advantage of China's apparel manufacturing export firms. Participants presented a variety of perspectives on how the government plays a role in defining the competitive advantage of apparel manufacturers and the impact of its policies on business strategies and success. Three subthemes related to government policies included government has little or no impact, the government has a positive impact, and the government has a negative impact on the success of the business.

The government is a central factor in China's apparel manufacturing export industry for two reasons. First, China's economy previously operated under a communist system (Beam, 2010); however, it now operates under a socialist market

economy (“Socialist Market Economy,” 2010). Although businesses now have more freedom from government control and regulation in the socialist market economy, the Chinese government and economy greatly benefit from exports, including apparel exports (Ruffier, 2012). For this reason, the Chinese government has utilized a variety of strategies to upgrade the industry and to establish a stronger position in the global apparel manufacturing value chain by supporting increased focus on design, Chinese owned-brands, and industry upgrades (e.g., advancing technical expertise, mitigating environmental impacts, and moving the industry inland) (Lu & Dickson, 2015). Second, government policy is an important factor with respect to establishing national competitive advantage (Porter, 1990). Empirical studies (e.g., Watchravesringkan et al., 2009) employing Porter’s (1990) diamond model of competitive advantage provide evidence in support of the significant impact government policies can have on competitive advantage in the apparel manufacturing export industry.

Participants addressed a variety of government policies and regulations, including changes in the value of the Chinese currency as well as policies related to labor and wages, environmental protection, corporate social responsibility, relocation within China, and the overall impact of government policies on the success of their business.

**Little or no government impact.** Eight participants shared the perception that some government policies have had little or no impact on their businesses and that the government’s overall influence on competitive advantage was minimal. The participants attributed this to two factors: reduced government influence as the market shifted

toward a more capitalistic system and the government's new focus on the technology industry.

***Shift toward capitalism.*** Multiple participants spoke to a free-market industry in which businesses have primary control over their own success, as demonstrated in the following quote. "Actually, this industry in China is a fully competition [sic] one and government plays a very tiny roll. What we have here is free market for garment industry" (Participant 4). Another participant stated, "Government is only to give some macro-policy, and companies need to decide their own development strategy. There is no impact on business' competitive advantage" (Participant 5). Similarly, the following quote addresses one participant's perception of the degree to which the government influences overall business operations: "Nothing, each company must set up all works in competitive way to catch orders" (Participant 8).

These quotes demonstrated perception of the growing separation between apparel manufacturing export businesses and the Chinese government's policies. Although government policies have changed over the last five years, the majority of participants did not believe that these policies had affected their business' success. A recent study indicated that the majority of the Chinese population holds positive feelings about the country's shift toward a socialist market economy and 75% of the population believes that this shift in the economy is beneficial to the Chinese people and will help future generations to earn more money (Simmons, 2014).

***Government focus shifts toward technology industry.*** Two participants attributed the minimal government influence on their businesses to the government's decreased interest in apparel manufacturing and increased interest in technology

businesses, as conveyed in the following quotes: “Not very much [impact], as government focus on hi-tech industry but not in garment field” (Participant 7) and “They [the government] don’t want manufacturer, they just want IT business” (Participant 9). This finding aligns with China’s “Made in China 2025” initiative established in 2015 to increase China’s production efficiency and quality in response to competition from increased low-cost production in other countries as well as to compete more strongly with further industrialized economies (Kennedy, 2015). “Made in China 2025” focuses on upgrading technology and increasing innovation that will likely benefit the apparel industry in the future as its aim is to provide improved technological development for all industries (Kennedy, 2015).

**Positive government impact.** Eight participants noted a variety of positive impacts that government policies have had on their apparel manufacturing export businesses. Positive perceptions of government policies appeared to be related to government incentives and/or participants’ personal agreement and previous compliance with government policies.

**Government incentives.** A few of the participants claimed that government incentives, including tax deductions for job creation, incentives for migrant workers, and support for upgraded automation, have benefited the success of their own businesses. The following quote addresses the value of government incentives for job creation:

Basically, for Dongguan culture is that we do the business is to create the job opportunities for domestic people, and then the government is basically tax-free. For example, for the amount of taxes that are generated from us, the government can either waive or refund the tax to us. (Participant 1)

Similarly, the following quote demonstrates the perceived value of government incentives offered to migrant workers in order to increase the labor pool: “The

government is actively providing school admission conditions for the migrant workers' children to reduce labor loss, and it brings the positive impact on production stability" (Participant 2). The support of automation was perceived to be another positive government incentive as noted in the following quote: "Government supports upgrade the automation" (Participant 6). Taken together, these quotes suggest that the government has implemented incentives to combat the impact of the reduced labor pool and increased wages on apparel manufacturing export businesses, helping to alleviate some costs for the participants' businesses.

Another government incentive that state-owned businesses may benefit from is easy access to credit (Wildau, 2014). One participant who categorized his factory as state-owned offered the following response when asked about the ease of obtaining credit: "We are a state-owned company and we can access credit much more easily than those small private companies" (Participant 4). Four of the eight participants who categorized their factories as privately-owned businesses indicated that it was difficult to obtain credit. Two other privately-owned businesses stated that they possessed the monetary resources needed for their businesses and thus were not interested in credit. The other two participants stated that it was easy to obtain credit (one specifically stated that this was due to their good performance, which provided them an advantage).

In recent years, the Chinese government has offered a variety of incentives to support the success and global competitiveness of apparel manufacturing firms, including support for the relocation of factories from the coastal regions to inland locations (Lu & Dickson, 2015). The participants in this study, however, did not convey interest in moving their operations inland or in benefitting from such relocation

incentives. As demonstrated in the following response, multiple participants expressed indifference toward the government incentivizing factories to move inland because they believed that these incentives did not apply to them. “Generally, relocation is no effect for us, because we just need a place to production [*sic*] and processing” (Participant 1).

***Agreement and previous compliance.*** Many of the participants indicated that they were happy with the changes the government was implementing in the apparel manufacturing industry and that they agreed with the government policies and regulations. Others alluded to the fact that they were already in compliance with government regulations and that they have already experienced the benefits of being in compliance.

One government action acknowledged by two participants was improved infrastructure in China. The following quotes demonstrate the participants’ positive responses toward these improvements. One participant stated that, “Now traffic is very convenient, the surrounding traffic is very convenient, so moved [*sic*] from this place to that place is not much impact” (Participant 1). Another stated, in response to a question about the factors that will most positively affect businesses’ competitive advantage in the future, “the implementation of the Belt and Road Initiative” (Participant 6). The Belt and Road Initiative is a foreign policy that aims to better connect countries in Asia and Europe’s trading area with improved infrastructure (“What is China’s Belt,” 2017). It requires significant investment from China and other involved countries (“What is China’s Belt,” 2017). These quotes imply that improvements in China’s transportation infrastructure, specifically improvements in China’s roads, may enhance business efficiency with respect to the transport of goods (e.g., faster delivery times), which, in

turn, may contribute to the efficiency of one's supply chain and overall competitive advantage. In 2016, China's infrastructure development was found to be superior to India, Vietnam, and Bangladesh, all major competitors in the apparel manufacturing industry (Knack, 2017).

In addition, participants expressed positive feelings toward government policies that directly affected the apparel manufacturing industry. For example, the following quote praises government policies related to labor: "It's not hard to see that a good labor protection policy can enhance the cohesion of the enterprise" (Participant 5). Environmental policies and subsequent improvements also were discussed as a positive shift that offered benefits to businesses. One participant stated that "after upgrading the environmental protection facilities, the cost is reduced" (Participant 6). Further, when asked about corporate social responsibility policies, one participant provided the following response: "For our company positive [impact] since we do this from the beginning so no trouble now comparing other operators" (Participant 8).

Most of the participants expressed positive feelings toward the government and the implementation of new policies which is interesting because it appears that not all Chinese apparel manufacturers successfully adapted their businesses to meet such policies. Five participants noted the declining competition within China, owing to the many businesses that have closed, some of which likely have closed as a result of their inability to adhere to new government regulations. One participant stated that "factory is more competitive. The competitors decreased, and the competition decreased too" (Participant 3). Another participant stated that "fewer smaller companies, and the competition is decreased" (Participant 6). Yet another participant noted that "our

company pays all costs as per law already in the past and other companies cannot follow” (Participant 8). These quotes imply that government policies may benefit sound, healthy businesses, but may harm less sound businesses; thus, suggesting that government policies may result in a ‘survival of the fittest’ outcome. This outcome of less competition and more opportunity for the surviving businesses likely adds to the positive outlooks on government regulation expressed by the participants in this study.

**Negative government impact.** Eight of the participants indicated that government policies and actions have had some negative impact on their business success. These participants specifically noted government policies and actions that increased business costs and, thus, reduced profits.

The majority of participants expressed concerns over the appreciation of the Chinese currency, the RMB (yuan), which the Chinese government controls in order to provide advantage for its export industry (Doerer, 2015). As the following quotes imply, participants observed a direct correlation between the appreciation of China’s currency and their own decrease in profit. One participant said, “If the RMB appreciation [*sic*], and then we do not export that much, also a lot of customers will cancel a lot of styles, and then it is not conducive to our export” (Participant 1). Another participant stated, “RMB (yuan) appreciation, leading to compression of export profits” (Participant 2). A third participant expressed concern over appreciation of the RMB in the following manner:

In year of 2016, yuan is devaluated than 2015 and we earned extra money. But in the last two months yuan is appreciated about six percent, so we almost lost all profits. Yuan’s value is key point that decides the success of the export business like ours. (Participant 4)

A fourth participant expressed concern in respect to competition, stating the “up-value of yuan had made us lost competition our export [sic]” (Participant 7). Although appreciation of the yuan is not a government policy directed at the apparel industry, it greatly affects export businesses, which clearly explains participants’ negative responses to this particular government action.

These negative responses to the appreciation of the yuan are not surprising given that for every one percent increase in the value of the yuan, there is approximately a 2.8% loss in profit margin for apparel manufacturing firms (Ellis, 2014). Participant 4 stated that the yuan appreciated by six percent over two months. Using Ellis’ (2014) figure, this calculates to a 15% decrease in profits for the firm over that same time period. Likewise, participants’ responses are consistent with findings from an investigation into factors related to competitiveness in Chinese apparel manufacturing clusters, which revealed that over half of the 51 participants were concerned that the value of the yuan would be the most influential factor on their business success (Lau et al., 2009).

As aforementioned with respect to the previous two themes (labor and wages and China’s apparel manufacturing supply chain and raw material suppliers), many participants have experienced other negative impacts of government policies and actions (e.g., increased minimum wage and increased stringency in environmental policies). This perspective can be summed up in the following quote:

There are two main impacts: social insurance requirement and strict environment protection control. Quite a big part of factories, especially the private factories are not willing to cover their workers with social insurance, which is more than 30% of wages, means a big burden. (Participant 4)

Government regulations that increase wages and other policies related to laborers (e.g., increased requirements for offered insurances) as well as increased environmental regulation, add additional costs to factories with already minimal profit margins. This reduction in profits likely causes factories to have negative perceptions of government regulations.

Although the average profit margin of Chinese apparel export manufacturers is unclear, it has been declining in recent years (Xiaomin, 2012; Jingjing & Jun, 2017) and most manufacturers would likely be happy with a 3% profit margin (Anjoran, 2013). Additionally, many factories have closed due to loss of all profit margins (Jingjing & Jun, 2017). It is apparent that the participants in this study recognized that their own companies', and industry-wide, profit margins have declined in recent years, owing to a combination of new government policies, changing laborer and customer demands, and increasing raw material prices. This finding supports previous research concluding that apparel manufacturers are experiencing declining profit margins owing to rising labor costs and decreasing demand (Magnier, 2016b); rising labor costs are not always passed on to customers through higher priced goods, thereby further decreasing profit margins (Holz & Mehrotra, 2016).

### **Production Processes and Strategies**

A final theme revealed from the data analysis was production processes and strategies and the need to adapt such processes and strategies in order to maintain sustainable competitive advantage within the apparel manufacturing export industry. Subthemes related to production processes and strategies included greater focus on research and design, efficiency and productivity, customer service, and domestic

market opportunity. Discussion of improved efficiency and productivity centered upon reduction in the number of laborers needed to complete manufacturing tasks as well as increased use of technology, whereas discussion related to improved customer service focused upon smaller quantity orders and improved quality.

**Research and design.** All of the participants addressed research and design as a strategy they had previously implemented or were interested in implementing in the future. They discussed a variety of approaches to implementing this strategy, including developing more styles, innovation, using new materials, setting up design centers and hiring more talented designers. It was clear that research and design was perceived to be a viable growth strategy for businesses in China's apparel manufacturing export industry.

As the following quote suggests, one participant viewed research and design, supported by automation, as the only feasible strategy for businesses in China's apparel manufacturing export industry. "In China, [there is] no way but to enhance design/development ability and increase automation percentage for a better efficiency to stay alive longer" (Participant 4). The implication here is that China's industry had no choice but to adapt; prior strengths (e.g., large labor pool and low wages) and production models (e.g., fast production of large quantities), which could be easily replicated in other countries, no longer afforded China a competitive advantage within the global apparel manufacturing export industry.

Another participant discussed the opportunity to advance China's reputation for design and fashion and to enhance customers' perceptions of the "Made in China" label. "Made in China will be more and more famous, we will continue to enhance our own

fashion taste” (Participant 5). This quote implies that establishing their own strong global brand, rather than only producing products to order for national brands, may create a competitive advantage (Jin, 2004). Additionally, it implies that product differentiation, in which the factory is able to provide unique items for their customers, may ensure competitive advantage over other manufacturers (Porter, 1990).

Participants expressed a shared understanding of the potential of research and design to support a sustainable competitive advantage within the global apparel manufacturing industry. “Competitive advantage should be the strength of the enterprise, we have been working on the production, design, innovation” (Participant 1); however, not all participants had easily achieved the desired outcome from the implementation of this strategy. One participant specifically stated that his company had “increased [its] focus on design but had not seen a good result yet” (Participant 6).

The observations shared by participants with respect to research and design are similar to findings presented in prior examinations of competitive advantage in the global apparel manufacturing industry. Prior studies of apparel manufacturing in the United States revealed that one of the three factors that leads to a competitive advantage for the United States’ textile and apparel manufacturing industry is research and development, which includes design abilities and creation of high-value products (Berdine et al., 2008). Also, research and design were found to be a viable strategy for Chinese manufacturers that could lead to higher profitability going into the future (Young, 2016). Creating a strong global brand in which a business creates unique designs also was found to support increased competitive advantage.

**Efficiency and productivity.** A second subtheme related to production processes and strategies was increased efficiency and productivity, which was addressed by all participants. The following quote expresses one participant's stated desire for increased efficiency in production: "Try to reduce our cost and improve our productivity" (Participant 9). The implication here is the need to produce a greater number of goods, while at the same time, reducing costs (e.g., cost of wages). As summed up in one simple quote, "reduced manpower operation and increased automation" (Participant 6), participants' views related to increased efficiency centered on two approaches or solutions: a reduction in the number of laborers working in the factories and the use of automation (i.e., machinery and robots).

**Reduced number of laborers.** When discussing production processes and strategies, the majority of participants addressed the cost, rather than the contribution, of employees. Participants' comments suggested that laborers were generally viewed as easily replaceable and their skills and work as transferable; the importance of efficiency, productivity, and profitability appeared to outweigh the importance of relationships with laborers. This view of laborers was conveyed in the following quote: "Worker salary to be more expensive, try to find some automatic machine to help [in] producing garments" (Participant 9). Participants often directly attributed the need to reduce laborers to increased wages and need to reduce other costs.

The following quote provides additional evidence of the perceived need to address the cost vs. contribution of laborers in apparel production: "Less people, more output... this is working for us so far... for companies to keep all investment, training of people and improving systems to make more output with less people. Companies

cannot change, no future” (Participant 8). This quote suggests that Chinese apparel manufacturers must invest in new production methods (e.g., replace laborers with automated machinery or robots), train employees to increase productivity, and streamline systems to enhance efficiency (i.e., generate more output at a lower cost); specifically, if they want to remain profitable, they must reduce the cost of labor by reducing the number of laborers.

The need to improve production efficiency is related to both the number of laborers employed at the production facility and the increased workplace demands of laborers (that may be coupled with limited skills), a previously discussed theme. Although, in some instances, it may be possible to train individuals in order to provide them with the required sewing skills; in other instances, it may be more beneficial, with respect to efficiency and profitability, to replace employees who do not demonstrate a strong work ethic, as suggested in the following quote: “Company is pushed to do better and reduce unproductive people” (Participant 8). These labor and wage developments may require manufacturers to evaluate employee costs and productivity more closely or more frequently.

When asked specifically about the most influential stakeholders in the business, only one participant noted the value that employees contributed to the business. “Employees, because good employees are the company's wealth. Try to improve employees’ salary and working environment as much as possible” (Participant 2). With only one participant expressing the value of employees (i.e., importance as a stakeholder group), it is apparent that Chinese executives do not place high value on employees as stakeholders, and often do not have laborers’ well-being at the forefront

of their decision-making. This finding supports results from prior studies conducted in China, which revealed that Chinese executives value stockholders over stakeholders (i.e., employees) and that Chinese executives' primary goal was to satisfy international buyers and the government (Shafer et al., 2007; Yin & Zhang, 2012).

***Increased use of automation.*** A second subtheme related to production processes and strategies was increased use of automation. All of the participants spoke to the strategy of increased use of technology to manage costs and/or sustain one's competitive advantage. As one participant stated:

...if you improve the production, the production equipment, the production management, and then simplify the management ... on the one hand, it will increase productivity, on the one hand, it will save the costs. This is something that must be done every year. (Participant 1)

Another participant shared his company's decision to replace workers with automated machines. "Before each process required several people to complete, now only need one to two people to operate. We bought a lot of automated machines to do the assembly line" (Participant 5). As the new generation of working age Chinese individuals is less productive than previous generations (Orr, 2017), paired with increased advances in technology, it may be possible that automated machinery is able to work faster, and more accurately, than the Chinese laborers. Owing to the low-skill and low-complexity associated with apparel production, tasks previously performed by laborers are now easily completed by machines (Hagerty, 2015; Manyika et al., 2017). Automation can provide a variety of benefits beyond the reduction of labor costs, including increased output, improved quality, and fewer errors (Manyika et al., 2017).

There are difficulties and costs associated with using machines and robots, rather than humans, for apparel production, however. Companies must decide if

investing in automated machinery will result in increased competitive advantage over companies that operate in low-wage countries. Additionally, not all steps or tasks within the apparel production process can be completed by machines or robots.

This industry is a traditional one and technology plays a small role. Automation only applies for some simple products like jeans pants/polo shirts/shirts. Actually, some of the factories have been starting with this kind of trial now. However, with this trial, China can hardly compete with other countries with lower labor costs. (Participant 4)

The use of automation and robots is a recent development in China, and thus, it may be too soon to understand if initial investments in technology will outweigh paying increased wages to laborers. It also is imperative to realize that the integration of robots in apparel manufacturing is still in the developmental stage and, at present, they are only able to perform a limited range of tasks. In the shift toward increased research and design, robots may not be a feasible option in all instances owing to their limited abilities; however, many apparel manufacturers produce simple garments and the production processes or tasks required for these items may be easily replicated by robots. Factories that are willing to invest in robot technology may improve their positions in the global value chain (Young, 2016).

The discussion here reflects the general increase in automation in China's apparel manufacturing industry; Chinese manufacturers have significantly increased their purchases of robots in recent years (Jiaying & Yangon, 2015) and it is one of the strategies that apparel manufacturers have implemented to combat rising wage costs (Bradsher, 2015). There is little evidence, however, as to whether automation and robots are ultimately more cost effective than paying laborers to complete the same tasks. At present, robots are most suited to replace laborers with low levels of skill and

low levels of education (Hagerty, 2015), which are fairly common among workers in the apparel industry; thus, future advancements in the ability of robots to replicate human movements and functions will likely lead to even greater replacement of laborers in the coming years.

**Customer service.** A third subtheme revealed from the content analysis of the interview data was customer service. Seven of the participants in this study discussed the importance of customer service and the following quote expresses the perception that improved customer service provides a competitive advantage for one participant's factory: "Better service (good communication/professionalism) helps us on competition with others" (Participant 4).

In the apparel manufacturing export industry, Chinese factories contract primarily with large brands headquartered in the United States, Europe, and/or other countries with large domestic markets. The distance between the manufacturers in China and the headquarter locations often presents challenges with respect to providing appropriate customer service to existing customers as well as to securing new customers. One such challenge is the difficulty in communicating directly with international customers as stated in the following quote:

There are very few opportunities to contact them [potential customers] ... because to do foreign trade in China, like the small and medium-sized enterprises are basically through the network, the B2B e-commerce platform, and [we] communicate with the customers through that. Since we cannot have face to face communication with the customers, they will not easily place their orders. So, it needs a long time, maybe a month or six months or more than a year to chat, [become] familiar with them. (Participant 1)

In previous decades, Chinese apparel manufacturers received repeat mass orders, sometimes for millions of pieces, and could barely keep up with the production

requirements (Young, 2016). In the past five years, however, many of the orders for large quantity, low quality, or basic goods, have shifted to countries with lower wages (Young, 2016), as mentioned previously. This shift has resulted in China's apparel manufacturers becoming more dependent upon customers who place smaller, higher quality orders, and the need to implement new strategies to retain these customers.

The two main approaches to improving customer service, as observed in the data, were acceptance of smaller quantity orders and improved product quality. Apparel brands are able to reduce the risk of surplus inventory if they can purchase smaller quantities of goods and multiple participants alluded to the likely implementation of small quality production strategy to meet the needs of international apparel brands. One participant implied that his company's strategy going forward would be to accept smaller quantity orders. "Simple style and large quantity plan to de-emphasis" (Participant 7). This quote also references the de-emphasis on the production of simple styles, again suggesting an increased focus on research and design. The implication here is that an integration of multiple strategies may be necessary to provide better customer service and enhanced competitive advantage.

Five participants emphasized improved product quality as a second approach to improving customer service and satisfaction. Participants also recognized the need to balance the cost of improved product quality and buyers' desires to limit the costs of production. "To give buyers good quality and not expensive prices and looking for future business, then all parties have benefits" (Participant 7). This quote implies that efforts to improve product quality are somewhat constrained by cost and that future business may depend on the manufacturer's ability to strike the right balance between quality and

cost. Another consideration here is how efforts to improve product quality may affect the profitability of the Chinese apparel manufacturers. Multiple participants, both factory owners and business managers alluded to the importance of profitability for their own companies; participant 1, a sales manager, provided his perspective on the importance of satisfying the needs of both the customer and the company.

As far as possible [the strategy] is to meet our customers and our boss requirements. Customers want low prices, want good quality. The boss hopes that the standard will be able to reduce, and then it will conducive to production, faster the speed, and increase the price. Our job is to play a coordinating role and communicate with our customers and our boss. After the final accepted agreement between these two, and then the orders can be completed.  
(Participant 1)

This quote implies that negotiation is an important aspect of the manufacturing process as well as factory-customer relationship building. The transaction must be satisfactory for both parties by meeting the customers' expectations for service and quality and the factory's expectations for price. As China's apparel manufacturing export industry shifts toward the production of higher quality goods, its prices remain relatively low compared to other countries that can produce apparel items of the same quality (e.g., United States, Europe). However, the prices are higher than what national brands have historically paid for items produced in China. This implies that the customer service and improved quality in China are perceived to be worth the higher cost; if this was not the case, apparel brands would move their manufacturing to lower wage countries.

The majority of participants discussed the growing demands of customers and the difficulty associated with satisfying these demands. For example, the following quotes reference the challenge of meeting customers' quality expectations, owing to a limited ability or willingness to pay more and/or a tendency to place fewer orders. "[The

customers] expect excellence [*sic*] quality but cannot pay more to factories” (Participant 7). “Customers have higher and higher product requirements, and service requirements, but [place] fewer and fewer orders” (Participant 5). Taken together, these quotes suggest that participants perceive that there is growing demand on manufacturers to provide improved product quality, while the reward for doing so appears to be diminishing.

There is evidence that apparel and textile industries in developed countries, such as the United States, maintain competitive advantage by focusing on research and development, marketing, and customer service (Berdine et al., 2008). Thus, the adoption of one or more of these strategies among companies in China’s apparel manufacturing industry is a likely result of economic development, and more specifically, increased labor costs that have necessitated shifts in production processes and strategies. For example, improved customer service has allowed U.S. manufacturers to build relationships with customers after the sale of products (Berdine et al., 2008) and an increased emphasis on customer service may afford Chinese apparel manufacturers the same opportunity to build relationships and ensure future business. In turn, this strategy may provide an opportunity for Chinese apparel manufacturers to build and sustain their competitive advantage within the industry.

**Domestic market opportunity.** Another subtheme related to production was China’s growing domestic market (i.e., spending power) and the opportunity to produce more goods for domestic consumption. Seven of the participants conveyed positive perceptions about the opportunity to increase production in order to meet the needs of the domestic market. Although most of the participants stated that this strategy would

not replace export production, they did acknowledge that the domestic market provides opportunity for additional production capacity and higher profit margins than does export production.

As one participant simply stated, “Chinese manufacture [*sic*] will gradually shift to the Chinese market” (Participant 5). Other participants discussed the gradual shift they expect to take place in the coming years; that is, increased spending on consumer goods within the Chinese market (National Bureau of Statistics, 2017) will gradually create increased opportunity for production of goods for this market. The following quote demonstrates one participant’s hope that production for the domestic market will present new opportunity:

...and then turn to the domestic market for us in the next three to five years. It is hard to say in the next ten or five years’ development time. We may be developing the domestic market as a new direction, but we will not give up the foreign markets, and it will be getting better and better. (Participant 1)

This participant appeared to view the domestic Chinese market as a new direction or growth opportunity that may add to, but not supplant, its success in existing export markets, whereas another participant suggested that production for the domestic market might be the only practical option in the near future. “It seems the management is trying to develop domestic market, as nobody can see a brilliant future for overseas orders” (Participant 4). This quote implies that the production of goods for the domestic market might be the only viable strategy for mitigating the loss of competitive advantage in the international apparel manufacturing export market.

Recent growth in consumer spending lends support to apparel manufacturers’ decisions to produce apparel goods for the domestic market. Chinese consumers are increasingly spending a greater amount of money on apparel goods; consumer

spending on apparel goods increased 7.1% between December 2015 and 2016 (National Bureau of Statistics, 2017). This growth in apparel consumption has been attributed to a variety of consumer or market trends, including two driven by the removal of government restrictions: increased purchases of baby and children's clothing owing to the elimination of the one-child policy and increased purchases of casual wear owing to increased personal freedoms related to appearance and dress (He, Ling, & Li, 2013).

Other consumer or market trends driven by economic and technological advances include increased disposable incomes and lower poverty rates among the Chinese people as well as and increased opportunities for ecommerce that allows for more consumption among rural consumers (He et al., 2013). Prior research lends further support to the production of goods for the domestic market as viable growth strategy for China's apparel manufacturing industry. For example, researchers previously concluded that an increased focus on its domestic market might enable Kenya to establish competitive advantage in the apparel manufacturing industry (Mastamet-Mason & Ogembo-Kachienga, 2012).

Increased emphasis on production processes and strategies, such as research and design, efficiency and productivity, customer service and/or domestic markets, may enhance Chinese manufacturers' abilities to compete with national brands from more developed countries (Welters & Mead, 2012). The implementation of new production processes and strategies also may enhance the industry's competitive advantage in both international export and domestic markets.

## CHAPTER 5: CONCLUSIONS

The present study employed a qualitative research method to examine Chinese apparel manufacturing executives' perceptions of the factors that were affecting their international competitive advantage during the time of the interviews. Findings from this study are discussed in relation to the research questions and prior knowledge of factors that impact competitive advantage in the global apparel manufacturing industry. Practical and theoretical implications are provided, and limitations of the research and suggestions for future examinations also are addressed.

### **Summary of Findings**

This study addressed two main research questions. The first research question was: What are the perceptions of Chinese apparel export manufacturers regarding what and how factors affect China's international competitive advantage in the global apparel manufacturing export industry? The second question was: What changes have Chinese apparel export manufacturers made in order to maintain their international competitive advantage in the global apparel manufacturing export industry?

This study contributes new understanding of China's apparel manufacturing export industry by employing an integrated theoretical framework and a qualitative research method. Although a few studies have applied Porter's (1990) diamond model of competitive advantage (Liu & Song, 1997; Berdine et al., 2008; Watchravesringkan et al., 2009; Mastamet-Mason & Ogembo-Kachienga, 2012) or Freeman's (2001) stakeholder theory (Shafer et al., 2007; Yin & Zhang, 2012) to examinations of the apparel manufacturing export industries in China and other countries, no such study has

examined the competitive advantage in China's apparel manufacturing export industry, specifically. Furthermore, previous studies of China's competitive advantage have utilized a quantitative research method (Lau et al., 2009); whereas a qualitative approach to data collection was applied in the present study to gain more in-depth responses from the participants, thereby providing comprehensive insights into the strategies that Chinese apparel manufacturing business executives have adapted, or may adapt in the future, to maintain competitive advantage in the global market.

At the time of data collection, decreased availability of Chinese laborers and increased wages presented a challenge for China's apparel manufacturing export industry, and negated the advantages that China's industry had benefited from for multiple decades, a large labor pool and low wages (Zhang et al., 2015). This increase in wages over a five-year period (prior to data collection) had a significant impact on the strategies that participants employed, or considered employing, to maintain competitive advantage in the global apparel manufacturing industry. Specifically, strategies used in response to labor and wage changes included improved efficiency through decreased number of laborers (needed to complete tasks) and increased use of technology (i.e., automated machinery).

Findings from the present study reflect Porter's (1990) explanation of value chains; that is, the notion that firms may gain competitive advantage either through low prices, or through premium prices by offering product differentiation (e.g., unique products or experiences, new technologies). Participants noted the opportunity to achieve product or service differentiation through increased research, design, and development; improved production efficiency and productivity; and better customer

service (including the acceptance of smaller orders and greater emphasis on product quality). Participants also noted challenges associated with achieving product or service differentiation, however, including customers' hesitancy to pay higher prices for finished apparel products even with the added value.

Further, findings align with an earlier study of the Vietnamese apparel and footwear industries (Buchanan et al., 2013), in which the researchers concluded that Vietnam's low wages would provide temporary competitive advantage, but that low wages would not be a sustainable strategy for maintained competitive advantage. In other words, over time, Vietnam's apparel industry will likely experience the general pattern of economic development (i.e., increased wages) experienced by other Asian countries (e.g., Hong Kong, South Korea, Taiwan, and China). This finding is consistent with Porter's (1990) argument that countries should strive to shift their production focus from basic factors (i.e., labor, natural resources) to advanced factors (i.e., technology, research, higher-education) in order to gain or maintain competitive advantage.

In previous decades China's apparel manufacturing industry focused upon the production of large quantities of goods at high speeds (China National Garment Association, 2013), and research and design, or designing more complex apparel items, was not a strategy employed to achieve competitive advantage (Eloot et al., 2013). Participants in the present study, however, spoke directly to changes in their production focus to move up in the global value chain (e.g., increased research and design, improved product quality).

One facet of China's apparel manufacturing industry that appears to support increased production of value-added products is China's developed supply chain. As

Porter's (1990) diamond model of competitive advantage suggests, related and supporting industries is one of four attributes that are significant to a country's competitive advantage within a global industry. In the apparel manufacturing industry, related and supported industries refers to other entities or suppliers within the supply chain, such as cotton growers, polyester producers, textile mills and transportation services (Porter, 1990).

Although increased wages in China have resulted in some customers moving their apparel production to low wage countries with less developed apparel manufacturing industries (e.g., Vietnam, Cambodia), participants spoke with confidence about the competitive advantage China's supply chain offered over other countries' supply chains. And, in fact, some participants stated that they had experienced a return in orders from customers owing to the efficiency, security and reduced risk afforded by China's mature supply chain. This finding is consistent with prior research (Gereffi & Frederick, 2010) suggesting that, since the recession in 2008, many large apparel manufacturers feel more secure working with countries that have more established supply chains. This finding also implies that the benefits associated with China's mature supply chain, such as higher productivity, lower costs (i.e., transportation), improved logistics and faster delivery times (Young, 2016; Lau et al., 2009; Farrar, 2014), may outweigh the disadvantage of increased labor costs in China.

Findings suggest that related industries in China (i.e., supply chain and raw material suppliers) provide China with a competitive advantage over new entrants into the global apparel manufacturing industry; however, participants also experienced increased challenges in working with raw material suppliers specifically related to

increased costs, decreased quality, and delays in the manufacturing and delivery of raw materials. Findings clearly indicate that Chinese apparel manufacturers view raw material suppliers as critical stakeholders (Freeman, 2001), who have a direct impact upon a manufacturer's ability to maintain competitive advantage. To maintain this competitive advantage, apparel industry manufacturers must increase control over the cost and supply of raw materials (Buchanan et al., 2013). Although long-term relationships between apparel manufacturers and raw material suppliers generally provide stability and confidence, maintaining international competitive advantage may mean finding raw material suppliers that can produce goods for lower costs at higher quality, and/or with faster delivery times.

Another key theme revealed from the data analysis that impacts competitive advantage in China's apparel manufacturing industry are China's government policies, actions, and improvements. Participants offered a variety of views on how the Chinese government impacts the industry, but it was evident that participants did not believe that the Chinese government played a significant role in determining their competitive advantage. This finding is contrary to a prior study of Thailand's apparel manufacturing industry that revealed government involvement could enhance the industry's competitive advantage; specifically, the government could help to lower production costs by developing clusters, improving efficiency, and investing capital into the industry (Watchravesringkan et al., 2010).

Some participants, however, suggested that many apparel manufacturers and raw material suppliers, who were not previously complying with government regulations, were not able maintain operations when faced with new government policies or

regulations (e.g., increased environmental protection policies). The present analysis captured the perceptions of individuals whose businesses continued to operate throughout the implementation of new policies and regulations. It is also important to note that the Chinese government spent decades providing incentives and resources for Chinese apparel manufacturers but has more recently shifted its focus toward the “Made in China 2025” plan that is intended to increase efficiency and technology across all industrial sectors (Kennedy, 2015). Further, China’s continual shift away from communist beliefs and regulations has lessened the government’s control over, or involvement in, the apparel manufacturing export industry. Taken together, these developments may contribute to participants’ perceptions of the limited influence that the government has with respect to competitive advantage in the apparel manufacturing export industry.

The fourth theme revealed from the data analysis was production processes and strategies, which relates directly to the second research question, what changes have Chinese apparel export manufacturers made to maintain their international competitive advantage in the global apparel manufacturing export industry? Findings indicated an increased shift toward research and design, increased efficiency and productivity (including increased use of technology), and improved customer service (including improved product quality) as well as the opportunity for increased production of apparel goods for China’s domestic market.

Increased research and design, increased efficiency and productivity, and increased customer service, through improved product quality, were previously discussed in relation to China’s shift from a low wage strategy to increased product

differentiation (Porter, 1990). Improved customer service can also be viewed from the lens of Freeman's stakeholder theory (2001). The application of stakeholder theory in China has been limited, however, prior findings have suggested that Chinese managers tend to embrace a stockholder rather than a stakeholder orientation toward business (Shafer et al., 2007). A study of Chinese textile and pharmaceutical industries, revealed that business executives most greatly desired to please their customers and the Chinese government (Yin & Zhang, 2012). By comparison, in this study, participants' narratives clearly suggested that business owners, suppliers, and customers were perceived to be of the most valued stakeholders in the apparel manufacturing process. It was evident that the Chinese business executives' emphasis on satisfying the customer had increased over time to help maintain competitive advantage, even among those who previously viewed customers as important stakeholders.

Given that there are multiple factors affecting profits in the apparel manufacturing export industry (e.g., changing value of RMB, changes in trade agreements and tariffs), improved customer service to international apparel brands (i.e., buyers) is not likely a viable strategy for all Chinese companies to maintain competitive advantage in the apparel manufacturing export industry. The aforementioned opportunity to increase research and design may be a viable strategy for other companies, which also may support increased production of Chinese brands for the domestic market. With China's growing middle class (Elout et al., 2013), increased consumption of apparel goods among China's population (National Bureau of Statistics, 2017), this strategy may allow companies to move up the value-chain by designing and developing their own apparel brands for domestic consumption (Lu, 2015a). Researchers have concluded that the

Kenyan apparel manufacturing industry also would likely benefit from increased focus on production of products for the domestic market (Mastamet-Mason & Ogembo-Kachienga, 2012).

Overall, the analysis of participants' narratives suggests that those Chinese apparel manufacturing export businesses that will maintain international competitive advantage in the future are those who are best able to implement necessary upgrades (e.g., improved technology) and to incorporate needed changes to production processes and strategies (i.e., meet the government's increased regulations or deliver improved customer service). It is likely that those apparel manufacturing firms that are not able to move up the value chain will cease to operate. An increased focus on managing raw material costs, quality, and delivery may add to the success of China's apparel manufacturing industry as its mature supply chain provides security for customers. An increased focus on the customer as a valued stakeholder, as demonstrated through improved customer service, also may support China's ability to maintain competitive advantage. Lastly, a shift in orientation toward the growing middle-class consumer in China through the research and design of apparel goods informed by the needs and preferences of this consumer group also may benefit Chinese apparel manufacturers.

### **Implications**

The findings from this study provide implications for China's apparel manufacturing industry, as well as for other countries whose apparel manufacturing industries are not yet as developed as China's. Although China's apparel manufacturing industry was able to maintain competitive advantage through access to a large labor

pool and low wages for many years (Zhang et al., 2015), many apparel manufacturers have closed operations owing to an inability to develop new strategies to overcome these changes. The participants in this study represented manufacturers that had survived these shifts, and thus demonstrated previous compliance with government regulations, and had changed production processes and strategies to maintain their competitive advantage. Further, these manufacturers' efforts were supported by China's apparel manufacturing industry's mature supply chain during this period of significant changes.

Findings suggest that the shifts in production processes among Chinese apparel manufacturers aided in maintaining international competitive advantage. Focusing on product differentiation with increased use of technology, increased research and design, and improved quality and customer service, will likely allow manufacturers to maintain competitive advantage with higher-end brands. Continued focus on building or maintaining strong relationships on both end of the supply chain (suppliers and customers), and valuing both as critical stakeholders, may help to increase profits for China's apparel manufacturers.

China was in a unique position during the time of this study. China's apparel manufacturing industry rose in the early 1980s, and the industry was able to maintain competitive advantage for over three decades with a low wage, high productivity strategy. However, the industrial rise in China led to decreased poverty levels (National Bureau of Statistics of China, 2017) and subsequent growth of the middle class (Elout et al., 2013). These changes led to higher workplace and wage requirements (Li & Edwards, 2008) and increased consumer spending (National Bureau of Statistics,

2017). For countries that are not yet as developed as China, the apparel industry provides opportunity for economic development, as the apparel manufacturing industry is an inexpensive industry (i.e., relatively low cost and technology) that allows countries to establish international investment and grow their economies.

Many developing countries (e.g., Southeast Asian and African countries) have had success in attracting customers owing to their ability to provide low cost, mass production of apparel. These countries, however, must understand the need to develop a prominent, stable, supply chain in order to sustain international competitive advantage. Modeling their supply chain development after that of China's may help these countries to develop industries with strong competitive advantage in the future.

### **Limitations**

Limitations of this study include the method of obtaining participants and the limited number of participants. Initially, an attempt was made to obtain a random sample, however, many potential participants who were contacted about the study indicated that they did not have time to participate or that they were concerned about participating in the study (i.e., about sharing company information). Thus, a convenience sampling approach that identified potential participants through U.S. contacts was employed. This helped to alleviate the concerns of participants who may have been uncomfortable disclosing business name and information to strangers, because participation was initiated through a contact in the U.S. who they trusted. This resulted in a relatively small participant number; although small, the sample size was considered appropriate given the level of difficulty in obtaining responses to open ended

questions from business executives in China's apparel manufacturing export industry (Boddy, 2016).

Additionally, since participants were more comfortable with, and had more time to respond via e-mail (as compared to a phone or video interview), it was not possible to ask follow-up questions to ensure clarity of meaning or to delve deeper into their responses. More comprehensive responses would likely have been obtained if face-to-face interviews were conducted with participants in China. The study also was limited by the fact that meaning may have been lost or affected by the translation from Mandarin to English. However, the use of back translation (Paegelow, 2008) minimized the number of potential mistranslations. Lastly, the participants were all business executives who were operating successful apparel manufacturing facilities despite factors that have negatively impacted China's national competitive advantage in the industry. The perspectives of business executives whose companies are no longer in operation owing to these factors were not captured in this study.

### **Future Research**

The findings from this study point to multiple opportunities for further study. One area that researchers may study in the future is the manufacturing of apparel products for consumption by the domestic Chinese market, as the Chinese population's spending on apparel goods increased 7.1% between December 2015 and 2016 (National Bureau of Statistics, 2017). More specifically, researchers may choose to investigate how a greater emphasis on research and design may impact the apparel manufacturing industry's ability to develop products and brands that would be appealing to the domestic Chinese market.

A second research topic that would benefit from further research is the impact of the progression of “Made in China 2025,” and the technological benefits to support the apparel manufacturing export industry (Kennedy, 2015). This policy will likely continue to create significant changes in China’s apparel manufacturing industry as manufacturers increase use of automated machinery and robots to replace laborers and increase productivity (Kennedy, 2015). Understanding, in the future, if investment in technology outweighs the increase in wages would be important.

Third, future research might specifically examine the continued changes in China’s labor pool and increased wages. In the coming years research could be conducted to examine the impact of the elimination of the one child policy on China’s labor pool; however, as aforementioned, it will be many years before the increased population will be of working age (Senthilingam, 2016). Additionally, researching the continued effects of changing lifestyles (e.g., increased desire for balance between happiness and success) (Orr, 2017), and opportunities for laborers who are remaining in their hometowns to work, rather than choosing to migrate (e.g., increased business opportunities) (Roberts, 2016), would be beneficial.

In terms of research of apparel industries in countries that are currently using large labor pools and low wages (i.e., India or countries in Africa), future research could study the development (or lack thereof) of a sustainable supply chain that can provide the country with more sustainable competitive advantage going into the future. Although many low-wage countries (i.e., India, Vietnam) are creating increased competition with China in the global apparel manufacturing industry, other countries have not yet demonstrated the development of a supply chain that can compete with China’s (Young,

2016). Continued research on the sustainability of China's supply chain would be beneficial as well and would provide other countries with further understanding of the benefits of increased focus on supply chain development (Gereffi & Memedovic, 2003).

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## APPENDIX A: RECRUITMENT MATERIAL

Dear factory owner or manager,

My name is Morgan Brubaker and I am a graduate student researcher from Colorado State University in the Department of Design and Merchandising. With guidance from my faculty advisors, I am conducting a research study on the economic, government, and social factors affecting the international competitive advantage of China's apparel manufacturing industry. The title of the project is Factors Affecting China's Apparel Manufacturing Industry's International Competitive Advantage. The Principal Investigator for this project is Dr. Karen Hyllegard (thesis advisor), Department of Design and Merchandising, and the Co-Principal Investigators are Morgan Brubaker, Department of Design and Merchandising, and Dr. Anna Perry (thesis advisor), Department of Design and Merchandising.

Based upon your experience in China's apparel manufacturing industry we would like to invite you to participate in this study. First, we request that if you are interested in participating, you complete and return the short questionnaire attached to this e-mail to ensure you qualify to participate in the study. If you qualify, we will request that you participate in a video or phone interview. The researcher who will interview you will be in Fort Collins, Colorado in the United States, but you may participate in the video or phone interview from any location that is convenient for you; no travel is necessary. The research team may interview up to 50 participants that meet the study criteria. Participation in this study will take approximately 1 hour and 45 minutes. Your participation in this research is voluntary. If you decide to participate in the study, you

may withdraw your consent and stop participation at any time without penalty. With your permission, the researcher will audiotape the interview. The audiotape will be destroyed after it has been transcribed; no identifiers will be on the tape.

Only the data collector and principal investigators will have access to the information that you provide. You will be de-identified from your interview responses and the information provided by all participants will be combined and reported without any individual or company names associated with the information. Therefore, your information will be confidential. Although there are no direct benefits to you, we hope to gain more knowledge on your perceptions of the factors affecting competitive advantage in China's apparel manufacturing industry. You will be compensated with \$20 (U.S.) for your participation in this study. Also, upon completion of the project, we will share an executive summary of the research findings with all participants.

There are no known risks to participating in this study.

If you would like to participate in this study, or if you have any questions, please contact Morgan Brubaker at [Morgan.Brubaker@colostate.edu](mailto:Morgan.Brubaker@colostate.edu) or Karen Hyllegard at [Karen.Hyllegard@colostate.edu](mailto:Karen.Hyllegard@colostate.edu). If you have any questions about your rights as a volunteer in this research, contact the CSU IRB at [RICRO\\_IRB@mail.colostate.edu](mailto:RICRO_IRB@mail.colostate.edu) or 970-491-1553.

Sincerely,

Karen Hyllegard, Ph.D.  
Principal Investigator

Morgan Brubaker  
Co-Principal Investigator

Anna Perry, Ph.D.  
Co-Principal Investigator

## APPENDIX B: INTERVIEW PROTOCOL

### Background Information

- In which province is your factory located? Do you own any manufacturing facilities in other locations in China or in other countries?
- How long has the factory been in business?
- How long have you been the owner or manager of this facility? How long have you worked in the apparel industry?
- What category of products do you produce?
- How many employees work for your company?

### Factor Conditions

- Have you experienced any shifts in the labor pool in your region in the last five years? For example, changes in age of laborers, less migrant workers, etc. Please explain.
- Currently, approximately what percent of your laborers are migrant workers?
- Have you experienced a shift in laborers demands, such as increased wages, etc.?
- Have laborers in your factory attitudes or behaviors changed in the last five years? Please explain.

### Demand Factors

- Have you experienced increase or decrease in the demand of your products from multinational brands in the last five years? How so?
- Have you experienced different expectations for your factory from multinational brands/your buyers? How so?
- Have you experienced increase or decrease in the demand of your products in the domestic Chinese market in the last five years? Please explain.

### Related and Supporting Industries

- Who are the most important suppliers in your business? Why?
- Are you located within an apparel manufacturing cluster? What aspects of the cluster (or not being in a cluster) provide benefit or difficulty for your business?
- Have there been any changes in the raw materials you use, such as change in availability or price, in the last five years? Please explain.
- Have you experienced shifts in your supply chain in the past five years? Please provide examples.

## Firm Strategy, Structure, and Rivalry

- How have you experienced increased or decreased competition with your competitors within the apparel manufacturing industry in China?
- How have you experienced increased or decreased competition in the global market (i.e., with other countries)?
- Do you believe cultural expectations or beliefs in your region provide your business with an advantage or disadvantage? Why/how?

## Government

- How has the value of the yuan impacted the success of your business in the last decade? Please explain.
- How have government policies related to labor impacted the success of your business in the last decade? Please explain.
- How have government regulations in regard to wages impacted the success of your business in the last decade? Please explain.
- How have government incentives related to relocation impacted the success of your business in the last decade? Please explain.
- How have government regulations regarding corporate social responsibility impacted the success of your business in the last decade? Please explain.
- How have government regulations regarding environmental impact impacted the success of your business in the last decade? Please explain.

## Maintaining Competitive Advantage

- How has your use of technology shifted in the last five years (i.e., use of robots, automation, etc.)?
- Have you increased focus on research and design? If so, how?
- How have the trade agreements that China is a part of impacted your competitive advantage?
- Who are your most important stakeholders? What strategies have you implemented to satisfy those stakeholders?

## Overall Competitive Advantage

- Overall, do you believe the apparel manufacturing industry in China is more or less competitive in the global industry now than five years ago? Please explain.
- Overall, do you believe your factory is more or less competitive in the global industry now than five years ago? Please explain.

## Overall Factors Affecting Competitive Advantage

- What factors which affects your competitive advantage do you believe will most negatively impact the success of your business in the next five years? Why?
- What factors which affects your competitive advantage do you believe will most positively impact the success your business in the next five years? Why?
- What changes have you made/tried to make to improve or maintain your competitive advantage? How have these changes been successful or not?
- What factor most limits the growth of your business?
- What is your biggest concern regarding your business going into the future?
- What business strategies do you believe will be most successful for your industry going into the future?