

The Ways Of Improving Competitiveness Of Thailand Textile
Industry Enterprises



Miss Chun Zhou

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น.ส.ชุน ใจ

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มหาบัณฑิต

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Thesis Advisor Assistant Professor SAN SAMPATTAVANIJA, Ph.D.

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INDEPENDENT STUDY COMMITTEE

..... Chairman
(Assistant Professor PACHARASUT
SUJARITTANONTA, Ph.D.)

..... Advisor
(Assistant Professor SAN SAMPATTAVANIJA, Ph.D.)

..... Examiner
(Assistant Professor RATIDANAI HOONSAWAT,
Ph.D.)



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COVID-19 has spread globally at an alarming rate, bringing a strong negative impact to the world economy at a time when the global economy is in a long-term downturn and struggling to find growth drivers. The topic of this article is how to improve the international competitiveness of Thailand's traditional industry the textile industry when the tourism economy suffers a severe setback. Thailand's textile industry has grown rapidly as a typical developing country, owing to its unique geographical location and climatic conditions (Vogel & Watchravesringkan, 2019). It has developed a distinct textile culture, and its competitiveness in the international market has been steadily improved. As a result, the textile industry has long played an important role in Thailand's economic development. According to Bisoryabut, (2011), Thailand has a complete textile industry chain and has made a commitment in recent years to becoming the ASEAN fashion and textile industry center. However, the international trade competition faced by Thailand's textile industry has become increasingly tense in recent years, and the pressure of competition is still particularly visible. As a result, how to improve Thai textile export competitiveness in the international market in light of the new international situation has significant theoretical and practical implications for the development of Thailand's textile industry as well as the further consolidation and promotion of Thailand's position in the international textile trade.

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CHULALONGKORN UNIVERSITY

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1. Introduction

Since the 1950s, the textile industry has entered a new age, with major improvements in manufacturing processes and techniques. As a consequence, textile goods have contributed significantly to the economic growth of different textile nations. Most nations have solidified the significance of the textile sector in the national economic building due to their absolute position in the national economy (Ceylan et al., 2021).

To begin with, during a period of economic change, the textile industry reform to drive economic reform is a critical step adopted by all nations. This also supports the textile sector's internationalization process, making the textile industry the first international trade product (Lee et al., 2019). Second, the textile sector has particular national traditional importance for emerging nations, in addition to playing an important role in the development of the national economy. It is an essential material for promoting national unity and preserving traditional culture. Thailand's textile industry has a lengthy industrial chain, which began with the usage of agricultural fibers. The most downstream link in its industrial chain in Thailand's e-commerce operating platform, which involves Thailand's agricultural, processing, and retail sectors. As a result, it has a full industrial chain.

Figure 1:



(Source: World Development Indicators.)

From Figure 1 Thailand has about 2,000 garment companies and a comparable number of businesses flourishing in this sector, most of them located outside of Bangkok and the eastern half of the nation. But the growth rate is decreasing year by year, It has been stable at around 6% since 2014.

During the early stages of industrialization, the textile sector would prioritize development, which will be defined primarily by its labor-intensive fundamental features. The only method to enhance a country's economic transformation and industrialization are via the growth of the textile sector, which provides associated raw materials and primary products for other industrial output (Lombardi, 2011). Finally, the technical content of the textile industry is relatively low, and most emerging nations' economic growth levels are more suitable with the development of the textile industry. As a result, the textile industry is considered a developing nation to increase economic levels and competitiveness. As a consequence, the textile sector is one of the few in which emerging nations have a distinct competitive edge in international commerce.

It offers comparatively plentiful foreign currency for emerging nations' economic growth and has played an important role in balancing international payments and stabilizing exchange rates. Thailand's domestic textile industry has grown quickly as a typical developing nation, owing to its particular geographical position and climatic circumstances, and a distinct textile culture has emerged (Hannel, 2006). As a consequence, its competitiveness in the worldwide market has been steadily increasing. As a result, the textile sector has long played an essential role in Thailand's economic growth. The Thai Textile Industry Association released Thailand's International Trade Profile in April 2021, and the export value of textiles and apparel was US\$516.5 million. The 36.9 percent rise year on year (yoy).

Figure2: Textile and Clothing Exports: Fiber-Yarn-Fabric-Clothing

2021	JAN	FEB	MAR	APR	MOM(APR%)	YOY(APR%)
M-M	63.0	72.0	90.9	75.7	-16.7	+59.8
Fiber						
Yarn	50.6	48.2	60.2	53.3	-11.5	+100.4
Fabric	90.9	85.3	105.2	95.6	-9.1	+45.3
clothing	165.5	187.4	206.8	179.3	-13.3	+26.9

(Data from Thailand Textile institute “Textile and Clothing industrial Situation • April, 2021”)

As a consequence, fabric products were exported in April 2021, with an export value of 95.6 million US dollars. Exports to the three major markets of Vietnam, Myanmar and Bangladesh increased by 45.3% year-on-year, increasing by 34.5%, 271.6% and 632.7%. Fabric product exports for four months were 376.8 million US dollars, a 7.2 percent reduction from the same time last year, owing to a drop in shipments to the ASEAN market caused by the spread of COVID-19 in the nation. The majority of them are still declining (Lee et al., 2019). The economy of all nations is unpredictable as a result of the pandemic, but the strain of competitiveness remains evident (Ceylan et al., 2021). As a result, studying how to improve Thai textile export competitiveness in the international market under the new global situation is critical both theoretically and practically for the development of the Thai textile industry as well as the further consolidation and promotion of Thailand's position in the international textile trade.

After the article, it highlights the route to improving the competitiveness of the Thai textile sector and offers practical remedies and recommendations from the government and businesses. The diamond model will be used in the 4th chapter to analyse the results.

2. Literature review

From the standpoint of international commerce, Adam Smith's Absolute Advantage Theory, David Ricardo's Comparative Advantage Theory, Heckscher-Factor Olin's Endowment Theory, Dunning's Eclectic Theory of International Production, and others have all developed international competitiveness (Park & Kim, 2014). The definition of various degrees has been defined, and continual enrichment and development of global competitiveness have been encouraged. They reflect the classic international trade theory that argues that international competitiveness is embodied as a comparative advantage, which is often shown in productivity, ownership, and factor endowments (Lombardi, 2011). Krugman's new trade theory holds that international competitiveness is usually reflected in the advantages of technology and scale. Markusson defined global competitiveness in 1992 as well. He thinks that a country has international competitiveness if its real income growth in trade is substantially greater than that of other nations.

Some academics used the Thai jewelry sector to present Porter's "five forces model" for industrial competitiveness research. Scholars such as Kittichok Nithisathian and Josu Takala introduced Porter as the article's primary analytic technique. A theoretical framework for describing the macro-trend of the entire industrial economy is developed based on the decision-making environment of a single company (Lombardi, 2011). This kind of industrial analysis model is built on micro-subjects but may create a larger structure that should be utilized as a reference in this article.

Some foreign academics have compiled and evaluated the variables that influence international competitiveness and suggested that in addition to conventional factor endowments, global market environment, and other considerations, natural capital in an area should be given more attention. According to Mariusz Bednarek and Juan Carlos Neri Guzman, the variables influencing an industry's competitiveness are complicated and varied. The international market environment, national policies, regional features, and technical circumstances may all affect a sector's competitiveness.

Armand Kasztelan proposed the idea of natural capital, pointing out that environmental resources affect a region's competitiveness (Sakolnakorn et al., 2011). Today, the price of land components has a growing effect on the cost of investment in the region. This choice has grown more obvious, but relevant academics have not given enough attention to the effect of these variables.

Among the most recent study findings of Chinese academics, the importance of the textile sector in Thailand's national economy has been extensively examined. Tang Lixiao examined Thailand's textile and apparel export business from two perspectives: the percentage of the textile industry in Thailand's domestic industrial economic structure and the position of Thai textiles in the Southeast Asian market. Apparel goods have a strong presence across Southeast Asia. For several years, the other party's output value has accounted for more than 5% of Thailand's total output value, and the output value ranks second among all Thai export goods. According to Liang Xinnuo, the long industrial chain and broad interest in the Thai textile industry indicate the vital importance of the Thai textile sector (Park & Kim, 2014).

Simultaneously, Japan and other high-end countries Pay attention to the Thai textile sector, which hopes to establish an international base for research and development of high-tech textile materials and apparel by leveraging its financial and technological advantages. Scholars such as Fan Penghui and Qi Xin have stated that the critical current trend in the development of Thailand's agricultural industry is to form a comprehensive utilization model of crop fibers through technological advancement, which will help Thailand's agricultural sector to create a docking point with textiles, high-tech materials, and other industries, thereby helping Thailand. The modernization of the farm industry and even the national economic system demonstrates that the textile industry may serve as a new platform and opportunity for the modernization of Thailand's agriculture sector.

Chinese academics have also said unequivocally that Thailand's present textile sector confronts many challenges in the export process. Huang Jiapei said that, although

Thailand's textile exports have helped Thailand establish a distinct position in Southeast Asia and the global market since the 1990s, providing a significant number of taxes and job opportunities, the country's relatively backward manufacturing technology, The route dependency created by long-term reliance on cheap labor input, as well as the intense competition caused by low entry barriers, are limiting Thailand's textile export industry's ability to enhance its competitiveness. According to Hong Weicai (2011), the present growth of Thailand's textile, clothing, and electronics sectors continues to consume more workers. When compared to agricultural output, the greater pay of the manufacturing sector draws more older laborers, and traditional crops such as rice suffer as a result. The level of focus is dwindling.

With this backdrop, Thailand's agriculture sector growth must contend with a more difficult scenario. Agricultural interest groups have expressed their displeasure with the Thai government. This highlights the fact that the Thai textile sector is now experiencing the same issue as other industries: a labor shortage. Chen Ningkai told out that Thailand's leather sector currently depends on a large number of laborers, and technological research and development are slow. At the same time, Thailand's leather sector must import a large number of raw materials, resulting in high manufacturing prices for related goods in Thailand (Sakolnakorn et al., 2011).

Thailand's current manufacturing costs were highlighted in the article. In addition to capacity growth, the textile sector is experiencing comparable issues, which must be addressed by the government via special policy assistance. According to Huang Lihua, Thailand is now encouraging industries that are relatively behind in technology and need a significant quantity of labor to progressively move abroad to address the issue of decreased export advantages caused by increasing labor costs. Textiles and agricultural goods are examples of low-end items in this setting (Shafaei, 2009). To give more money and manpower to create alternative drivers, the planting business should progressively move overseas. In light of this, the original textile industry has to be updated and replaced on a wider scale.

International direct investment is significant to Thailand's textile sector (Waranantakul et al., 2013). China's global direct investment in Thailand has gotten a lot of attention in terms of industrial transfer. The use of global direct investment to facilitate the transition of backward industries has become a paradigm that the academic world now recognizes. As an industry that primarily depends on heavy labor input to accomplish growth, the textile industry may bring foreign capital to technical upgrade and replacement. Deng Zhou said that Thailand presently has a comprehensive infrastructure and a stronger industrial base when compared to other Southeast Asian nations (Taçoğlu et al., 2019). Simultaneously, favorable transportation circumstances may promote the involvement of Thai manufacturers in global commerce.

As a result, China can produce its own. Thailand's heavy and chemical industries' backward production capacity is moved to Thailand and other countries to utilize the foreign direct investment to create an industrial gradient between China and Thailand. This shows the benefits of marine transportation and road infrastructure in improving Thailand's textile industry. It serves as a reminder to Thailand that it is continuously changing its backward production capacity, allowing Thailand's industrial structure to adapt. Zhang Yingying (2018) noted that 10 years ago, Thailand and China still had reasonably close comparative advantages and frequent intra-industry trading. However, the two sides faced intense rivalry in the textile and other sectors in the worldwide market. The chemical industry's overcapacity has progressively widened the industrial gradient. The reason for this is that China has a large economic hinterland that can carry out the continuous industrial transfer, thus giving progressive growth space for high-tech companies. At the same time, Thailand can expand Southeast Asia (Waranantakul et al., 2013). Other nations benefit from China's expertise as the hinterland of experienced industrial transfer to lead the ongoing upgrading of local industry.

3. Research methodology

This article primarily employs the factor analysis technique to describe the

variables influencing Thailand's textile industry's worldwide competitiveness and examines the Thai textile industry's internal and external environments from a relevant viewpoint.

This article primarily employs factor analysis to integrate many indicators for evaluating Thailand's textile industry's international competitiveness. When faced with many hands that can assess Thailand's textile industry's competitiveness, the relevant indicators can be maximized in a linear relationship model. It examines the effect of Thailand's textile trade on international competitiveness using the "Porter Diamond Model" as a theoretical foundation (Waranantakul et al., 2013). Use the value chain variables that influence competitiveness (economic development level, market demand; product quality; technology; human capital; government, and other factors) to evaluate how they affect Thailand's textile trade's international competitiveness. Integrate into a few assessment indicators to avoid rejecting important variables and get a comprehensive evaluation of Thailand's textile industry's competitiveness.

4. Analysis and results

Thailand's textile industry now has a large-scale employment population and a significant number of textile factories; therefore, it has a solid basis in labor and capital supply. Nonetheless, its overall volume has been declining in recent years. The demand for Thailand's textile sector is mostly focused on the European Union and the United States. However, the quantity of Thai textile imports from ASEAN and Japan has increased in recent years (Vogel & Watchravesringkan, 2019).

The Thai textile industry's current competitive strategy primarily relies on investing in many inexpensive laborers for manufacturing, sustaining existing technology and equipment operations, and OEM production. The textile business, being a labor-intensive industry, requires a significant quantity of labor input. Thailand, being a nation with a big labor force, has laid a solid basis for the textile industry's industrialization. Consequently, it has a significant market presence in the United States, the European Union, and other nations. However, due to technological advancements

and upgrades and increasing labor expenses, the number of workers in Thailand's textile sector has been declining in recent years (Waranantakul et al., 2013). As a consequence, the overall number of textile manufacturers is progressively reducing. As a result, the stock of factor inputs is massive, but it is declining, as is the factor supply situation in Thailand's textile sector.

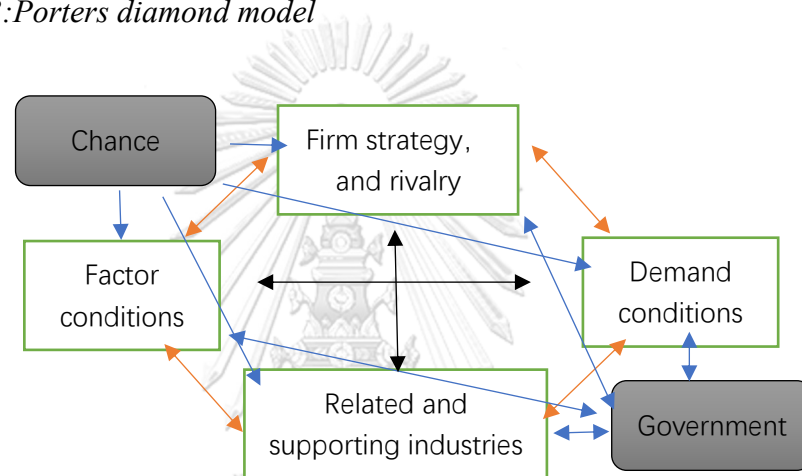
Except for the technical textile industry, where the number of workers has been relatively constant in recent years, the number of employees in other Thai textile industry sectors has decreased (Waranantakul et al., 2013). This represents the industry-wide loss of manpower in the textile sector. We can observe from the movement of pertinent data that the overall population loss of the fabric and fiber manufacturing sector is the most substantial. The home textile and yarn industry's declining trends are reasonably steady. The decrease in total employees in the garment manufacturing sector, which accounts for the lion's share of the Thai textile industry, is much more pronounced. In terms of the present total, different sectors of the Thai textile industry have experienced a somewhat significant decrease in overall employee numbers. Between 2014 and 2019, the total number of Thai textile businesses decreased overall.

According to Ulhas Nimkar's academics study, there is presently no general technical development in the Thai textile sector (Waranantakul et al., 2013). The textile industry's equipment and technologies are currently reasonably mature. In this context, directly monitoring the number of workers in a single Thai textile business allows one to comprehend the variations in its size. The average number of workers in a single Thai textile factory from 2014 to 2019 shows that the size of the plant in the Thai textile sector has not changed substantially. In the fiber, yarn, fabric, home textile, technical textile, and apparel sectors, the number of workers in a single plant is generally constant. Without any major improvements in the technological level, the whole Thai textile sector has accomplished large-scale mergers and acquisitions, resulting in market concentration and enterprise-scale growth.

It may be determined by looking at the overall amount of the business, the

technological condition, and the size of a single plant. The number of textile manufacturers in Thailand is decreasing, as is the total production capacity. In terms of total factor input, both the number of employed individuals, which represents the scale of labor input, and the total number of businesses, which represents the status of capital investment, is gradually declining. This scenario shows the steady decline in the Thai textile industry's overall supply. Without major technical advancements, Thailand's textile industry's supply capacity is presently decreasing.

Figure 3:Porters diamond model



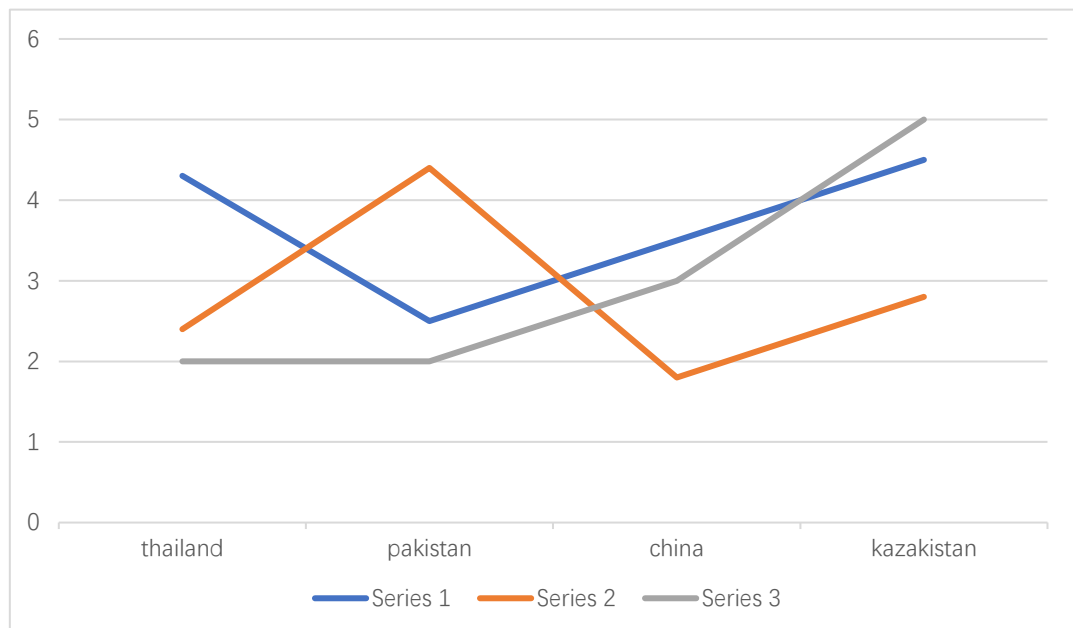
This article analyzes the factors based on the Porter model. The Porter diamond model focuses on explaining how to evaluate the industry's international competitiveness. From the company strategy, structure and competition; factor conditions; demand conditions and other factors to conduct industry analysis.

4.1 Competition in the industry

The Thai textile industry's current competitive strategy primarily relies on investing in a significant number of inexpensive laborers for manufacturing, sustaining existing technology and equipment operations, and OEM production. The adoption of these business methods has had a significant effect on Thailand's textile industry's long-term growth. In terms of competitiveness, Indonesia has expanded chemical fiber production and garment manufacturing via its abundant petroleum resources at a cheaper cost, resulting in great competition in Thailand's completed garment manufacturing sector (Waranantakul et al., 2013). In comparison to Thailand, Myanmar and Vietnam have

cheaper labor expenses. Simultaneously, after reform and opening up, they have gained the chance of the United States and other nations to remove trade barriers, creating strong competitiveness in Thailand's textile goods.

Figure 4



(adopted from <https://data.worldbank.org.cn/indicator/NV.MNF.TXTL.ZS.UN>)

The graph shows Competition in the textile industry between Thailand, China, Pakistan and Kazakhstan in the Asian economy.

Thailand's textile industry's current market demand characteristics can be analyzed from the perspectives of export product structure and export region. The distribution of the total export value of the Thai textile industry among the various export products is relatively even. But in terms of export destination countries, it presents more distinctive features. Among the total export output value of the Thai textile industry in 2014-2019, the proportion of fabrics is relatively high, accounting for 32% of the share. At the same time, the balance of yarn and clothing exports is relatively large, each accounting for 24% of the total value of Thai textile exports. In terms of the total amount, the proportion of primary textile products such as fibers, yarns, and fabrics in the total export value of Thailand's textile industry can accumulate to 71%. The export scale of

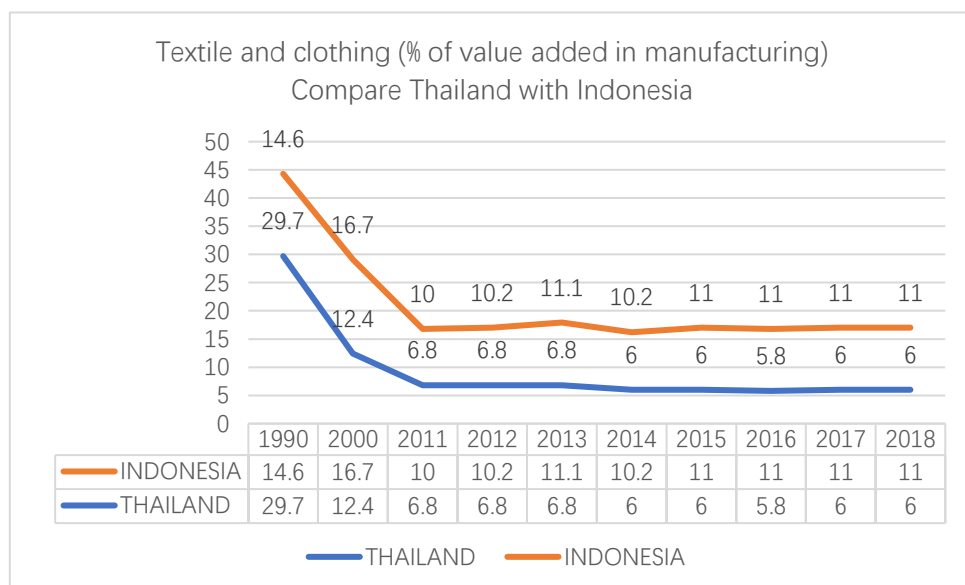
home textile products and apparel products only accounts for 31% of the total export value of the Thai textile industry. Compared with fiber, yarn and fabric products with raw material properties, home textiles and clothing have higher added value and belong to industrial finished products.

In this context, compared to the finished products of the textile industry, Thailand's textile products are more focused on meeting the needs of the international market for raw materials and primary products. For Thailand, due to its good natural conditions for producing textile raw materials and a significant and cheap labor resource, the development of raw material processing and primary finished products industries can better realize its comparative advantages and meet the needs of the international market.

4.2. Potential of new entrants into the industry

Within ASEAN economies, Thailand's textile sector confronts a more complex competitive climate brought on by surrounding nations with similar geographical and natural circumstances.

Figure5:



(Data from world bank)

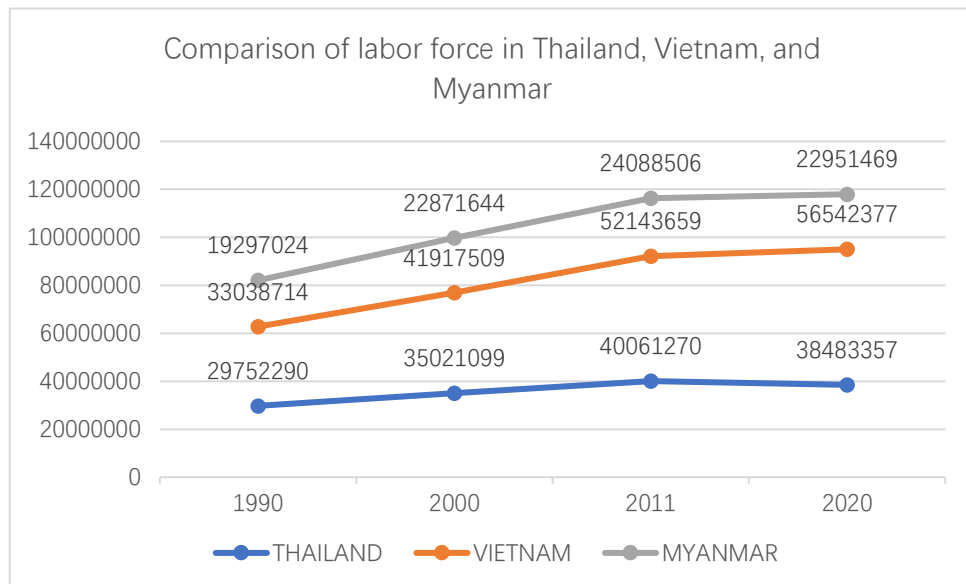
To begin with, Indonesian textile goods have a reasonably high competitiveness versus Thailand. Indonesia has also established an international labor division system,

with the textile and garment sector serving as the primary export product. Indonesia's textile product production and exports have surpassed Thailand's share in Southeast Asia. Unlike Thailand, Indonesia's textile and clothing industry is a petrochemical product processing business backed by the country's large oil reserves. Because the textile sector is situated downstream of the rest of the industry, it may get cheaper textile raw materials. Thailand has a significant problem as a result of this. At the same time, Indonesia, like Thailand, is a low-latitude nation. Even though the nation has a huge population, the hot and humid environment makes it difficult to create a tremendous demand for textiles and apparel goods throughout the year.

As a result, the paradigm of exporting to European and North American markets exists in Indonesia as well. This has resulted in rivalry in the export market between Thailand and Indonesia. Despite the fact that Thailand has a relatively robust. The capacity of primary textile products such as textile fibers, yarns, fabrics, and so on, but the production of finished textile products such as clothing and home textiles necessitates the import of a large number of raw materials, particularly chemical fiber materials that can be obtained inexpensively in Indonesia. As a result, Thailand's textile sector would face significant competition from Indonesia.

Second, labor expenses in countries such as Vietnam and Myanmar are cheaper than in Thailand owing to their low degree of economic development. Moreover, the US government has recently removed import limitations on these two nations' goods, resulting in the immediate availability of markets in the US, EU, and other countries to textile businesses in these two countries, resulting in strong low-end product competitiveness. Vietnam is a nation that is growing and becoming more competitive in the textile and garment industries. A large-scale textile manufacturing cluster has now developed in Ho Chi Minh City, southern Vietnam (Waranantakul et al., 2013). This industrial cluster's goods have entered the marketplaces of more than 100 nations across the globe, presenting a serious threat to Thailand's textile sector.

Figure 6:



(Data from world bank)

At the moment, Vietnam has successfully joined the World Trade Organization, which implies that it may utilize its advantages to access the markets of additional nations. Particularly now that the United States has removed its import quota limitations on Vietnamese goods, demand for similar items in Vietnam will grow even more, providing more great space for growth. Myanmar, on the other hand, is comparable to Vietnam in many ways. In recent years, it has started to take use of its cheap labor costs, governmental assistance from European and American nations, and increasingly expanding technology import channels to acquire possibilities for future growth progressively. Myanmar has progressively received re-recognition and assistance from Western nations such as the United States after the government transition. As a result, the textile sector in Myanmar is no longer a target of Western governments' restrictions and repression.

Furthermore, Myanmar is a country that places a high value on absorbing foreign direct investment. Global direct investment from the Greater China area has provided enormous space and possibilities for the growth of Myanmar's textile sector. At the moment, more than 600,000 workers have joined the garment sector, earning a decent

living via labor in adjacent areas and creating new customer demand.

At the moment, Thailand's textile sector lacks clear technical advantages over Myanmar and Vietnam since Thai textile firms typically retain current textile technology and equipment and depend on a significant amount of extra labor input to accomplish output development. In terms of labor expenses, there is a disadvantage. This will serve as a significant alternative for the growth of Thailand's textile sector.

Thailand's textile industry now has a large-scale employment population and a significant number of textile factories; therefore, it has a solid basis in terms of labor and capital supply. Nonetheless, its overall volume has exhibited a distinct decreasing tendency in recent years. The demand for Thailand's textile sector in the international market is mostly focused on the European Union and the United States. However, in recent years, the quantity of Thai textile imports from ASEAN and Japan has increased. The Thai textile industry's current competitive strategy relies mostly on investing in a significant number of inexpensive labors for manufacturing, sustaining existing technology and equipment operations, and OEM production.

4.3 Threat of substitute products

Because of its abundant petroleum resources, Indonesia has developed low-cost chemical fiber production and garment manufacturing, resulting in great competition in Thailand's completed garment manufacturing sector. Thailand faces competition due to the high cost of exporting textiles. Thailand's labor expenses are cheaper in Myanmar and Vietnam. Simultaneously, after reforming and opening up, they have gained the chance for the United States and other nations to remove trade barriers, resulting in great competition for Thai textile goods. Simultaneously, the garment sector in Singapore and Malaysia started to adopt an industrial transfer model in response to development constraints. Investment in Cambodia, Laos, and other nations will exacerbate the fact that these countries have a lower labor force than Thailand.

The textile business, being a labor-intensive industry, requires a significant quantity of worker input. Thailand, being a nation with a high number of laborers, has laid a

solid basis for the textile industry's industrialization. As a consequence, it has a significant market share in the United States, the European Union, and other nations. However, owing to technological advancements and upgrades, as well as increasing labor expenses, the number of textile workers in Thailand has been declining in recent years. As a consequence, the overall number of factories in the textile sector is progressively diminishing. As a result, the stock of factor inputs is huge, but it is declining, as is the factor supply situation in Thailand's textile sector. Except for the technical textile industry, where employment has been relatively steady in recent years, employment in other Thai textile industry sectors has decreased. This indicates an industry-wide loss of manpower in the textile sector.

According to study done by Ulhas Nimkar academics, there is presently no general technical development in the Thai textile sector. The textile industry's equipment and technologies are now quite established. In this scenario, directly monitoring the number of workers in a single Thai textile business may clearly comprehend the changes in its size. The average number of workers in a single factory in the Thai textile industry from 2014 to 2019 shows that the size of the plant in the Thai textile industry has not changed substantially.

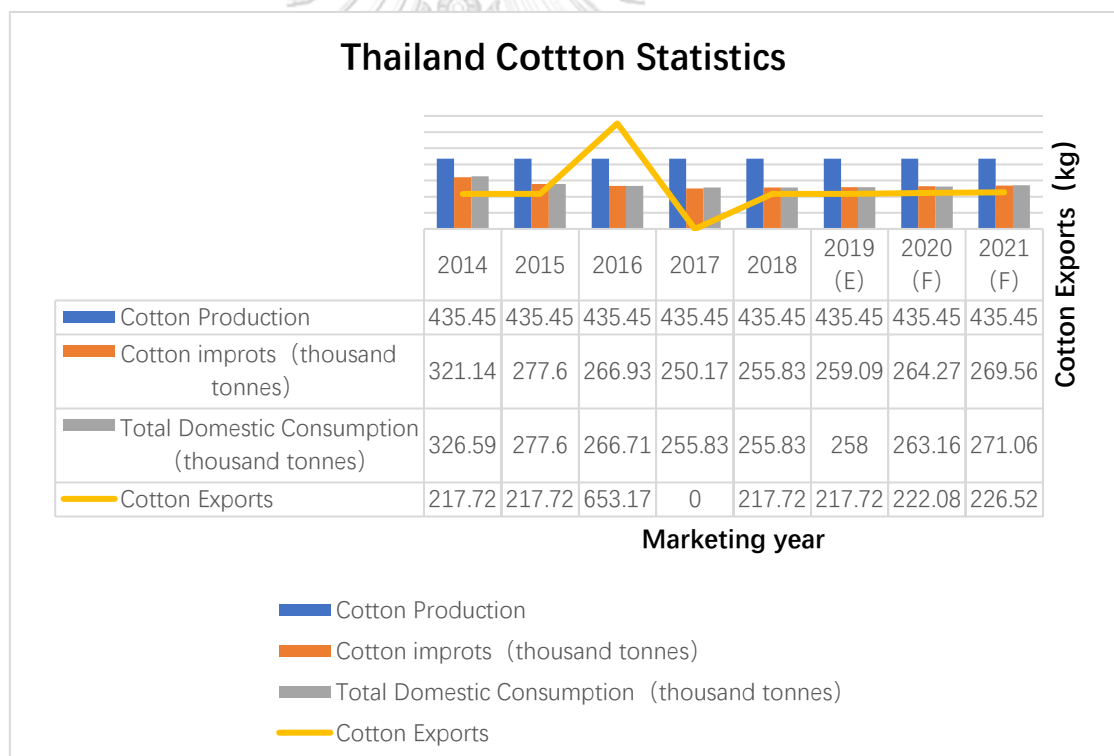
In general, the number of workers in a single plant in the fiber, yarn, fabric, home textile, technical textile, and apparel sectors is generally constant. Without substantial changes in the technological level, the whole Thai textile sector has accomplished large-scale mergers and acquisitions, resulting in market consolidation and enterprise-scale growth.

It may be determined by examining the overall amount of the business, the technological condition, and the size of a single plant. The number of textile manufacturers in Thailand, as well as total manufacturing capacity, is decreasing. In terms of total factor input, both the number of employed individuals indicating the size of labor input and the total number of businesses reflecting the status of capital investment are gradually declining. This scenario indicates the steady reduction in the

overall supply of the Thai textile industry. Without major technical advances, Thailand's textile industry's supply capacity is presently decreasing.

We can observe from the movement of relevant data that the overall population loss of the fabric and fiber production sector is the most severe decrease. The decreasing trend in the home textile and yarn sector is generally steady. The decrease in total employees in the garment manufacturing sector, which accounts for the lion's share of the Thai textile industry, is much more visible (Park & Kim, 2014). In terms of the present total, different sectors of the Thai textile industry have experienced a rather significant decrease in the overall number of workers. Between 2014 and 2019, the total number of Thai textile businesses decreased.

Figure 7:



(Data from Thailand Textile institute)

From the graph Thailand's cotton import was 255,83 thousand tons in MY (commercial year) 2018/19, up from 250,17 thousand tons in May 2017/18 with a rate of growth of 2.26%. However, the overall rise tends to be flat and the growth rate slows

down

4.4 Power of suppliers

Thai textile companies' business strategy is mostly represented in the growth of primary textile and completed goods by depending on a significant number of inexpensive labors. Thai employees' capacity to participate in contemporary garment manufacturing is presently limited due to a lack of professional qualifications. Thailand's textile manufacturing equipment is confronting outdated technology and antiquated equipment after a lengthy period of growth. Simultaneously, contemporary Thai textile firms mostly utilize decks to manufacture completed clothes (Ceylan, Taçoğlu & Kartal, 2021). The businesses have not established intellectual property rights or technological patents. Profitability is low across the industrial chain.

E-commerce and omnichannel marketing chains have emerged as a result of technological advancements in the textile business. Garment manufacturers have had to become nimbler and more capable of manufacturing smaller orders in order to react to this trend. On the other hand, the availability of new internet platforms that allow manufacturers to directly contact customers has improved factories' outreach and communication skills. Digitalization, as well as the increasing use of robotics (AI) and private blockchain, has the potential to alter how manufacturing industries are handled and how and where manufacturing occurs. Digitalization of industrial operations, for example, may aid in the optimization of different processes such as spreading, trimming, bundling, sewing, pressing, and packing. These technologies, if extensively implemented across the distribution network, would need garment manufacturers to be able to react to this increasingly digital paradigm of functioning, communicating, and participating in the procurement process via digital means. The significance of technological innovation in garment production has been emphasized as a crucial component for garment manufacturers to improve their efficiency and create value.

Automation has the potential to improve efficiency and reduce lead times. These tools would have had much consequences for the present, highly worker-dependent

style of production if they were adopted more widely by Asian companies (Waranantakul et al., 2013). However, opinions differ on whether technological advances are going to interrupt and fundamentally alter the way garment manufacturing is carried out. Indeed, the technologies accessible to the sector demand large initial expenditures, and the Asian industrial sector has been sluggish to embrace new innovative technologies, partially owing to low salaries, which provide less incentives, but also due to technical obstacles and finance shortages.

4.5 Power of customers

Trade patterns are being influenced by the characteristics of this emerging globalized world, particularly China's potential position in global manufacturing. The development of consumption economies in Asia, in which the working class is expected to reach 3.5 billion users by 2030, is expected to boost garment demand. While globalization has long supported the existing garment manufacturing paradigm, a new age of globalization has arisen in recent years. With new emerging players and continuing changes in the global order, this new age has brought greater uncertainty to the economic and trade environment. As clothing makers begin to produce for their own local or regional markets then instead of Western markets, regional supply chains may become more prevalent. Furthermore, purchasers may be hesitant to spend significantly in any reshoring efforts since they want manufacturing to be near to Asia's high-growth consumer markets (Waranantakul et al., 2013).

Thai textile businesses are presently concentrating on manufacturing and operation by making extensive use of inexpensive labor. Many operators are employed in the textile and apparel industries. Nonetheless, with the complexities of today's market competitiveness, senior managers, engineers, and skilled employees have become an important fundamental force sustaining the growth of the textile sector. However, Thailand's poor labor skills make it difficult to successfully develop its technical and managerial expertise at the moment.

Current corporate managers in Thailand are unable to interact with foreign

businessmen in fluent English, resulting in a serious lack of contemporary international marketing managers in Thai textile businesses. At the same time, Thailand's textile sector is understaffed in terms of engineers and technicians. The world's textile sector is now undergoing a fast technological upgrade. Professional expertise is required for all types of equipment. Nonetheless, since most machinery operators in textile and garment companies lack professional training, they are unable to repair, install, and debug machinery and equipment efficiently. Talents with experience in the printing and dyeing industries are likewise in limited supply.

4.6 summary of findings

Thailand's textile sector is suffering from terrible working conditions, which has resulted in the departure of many employees to the electronics industry, which offers better working circumstances. Second, most Thai textile businesses have not engaged in technical innovation for a long time, and manufacturing equipment technology has started to become outdated. The overwhelming majority of Thai garment manufacturers produce using old textile equipment, presenting a serious issue of poor production efficiency (Mahalakshmi.T, 2012). Textiles often have a single tone and a rough texture. At the same time, this outdated equipment often wastes raw resources, putting pressure on businesses to raise production costs. However, since Thai clothing company owners are typically averse to new technologies and procedures, and are concerned that new equipment will not function reliably and efficiently, they often take a cautious approach to equipment upgrades. In this environment, the escaping clothing industry chain has developed a working mode characterized by poor raw material quality and low processing technology.

Furthermore, Thailand lacks the required investment in clothing manufacturing technologies (Ganne & Lecler, 2009). Despite the fact that Thailand's textile industry has grown significantly and has reached a large industrial scale, scientific research institutes specialize on textile technology research and innovation. There is a widespread shortage of higher education institutions. Most Thai businesses continue to

operate on the paradigm of paying hefty patent fees and acquiring foreign sophisticated technologies. As a result, the Thai textile sector is at the bottom of the worldwide industrial chain.

5. Recommendations

5.1 Optimize the internal structure of the textile industry

According to the study of the Thai textile industry's growth, the Thai textile industry is still in its infancy, and the outcome is unsatisfactory in the wide process of replacing processing. First, an overall study of the industry shows that the interior of the textile industry is very reliant on the growth of high-tech, and the internal structure must be adjusted significantly. Only with the help of high-tech can the textile industry become a driving force for other industries (Mahalakshmi.T, 2012). The risks and externalities of product research and development are significant in industrial innovation. The issue of market failure can only be addressed with the help of industrial policy. This is a necessary condition for the display, promotion, application, study, and development of scientific and technical breakthroughs.

The government may encourage innovative technology via the protection of industrial policy. The purchase of new technologies, for example, may substantially aid in the growth of technological innovation. If you want to improve Thai industrial goods' export competitiveness, you should start with high-value-added, knowledge-intensive sectors. Tax incentives must be used to promote business innovation and offer industrial, financial assistance. Only in this manner can we encourage the growth of high-value-added, knowledge-intensive enterprises.

It is essential to conduct out rich innovations in product kinds in the manufacturing sector in order to create a more appropriate production chain (Nguyen & Le, 2005). The structure of the industry may be enhanced. In addition, the sector will grow in high-end, complex, and cutting-edge areas. In this process, we should also consider the growth of

small and medium-sized businesses and infuse more energy into the market economy's development.

Thailand government has taken numerous practical steps to promote the growth of the textile sector, but education and people training are the most essential. Talent competition is important in international competition. If you want to be competitive, you must improve your talent training. Based on this, businesses should aggressively promote the entrance of new talent in order to increase their competitiveness. However, contemporary Thai textile businesses do not place significant emphasis on corporate skill development. Many businesses have not established specific institutions for talent investment or have even reduced talent training funding to save expenses (HE, 2011). Corporate talent development is experiencing significant difficulties. Many workers have been dissatisfied as a result of the pay decrease, resulting in the company's long-term talent issue, which is extremely harmful to the company's long-term growth. As a result, the nation should aggressively encourage education and make economic growth more scientific in order to boost industrial development.

First, the government should take an active role in improving the educational environment and aggressively supporting the innovation and growth of research institutes. Starting with university collaboration, it should offer suggestions for academic exchange platform construction and entice business researchers to educational exchange platforms (Park & Kim, 2014). Encourage the synchronization of technology and the market so that the growth of textile businesses is constantly guided by science and technology.

Second, the government should perform an outstanding job of directing talent development. The government should examine its present position, constantly enhance the education system, pay attention to the practicality of colleges and universities, and offer a more favorable talent guarantee for business growth. Third, businesses should make significant efforts to manage talents, prevent skill loss, actively build skill

replacement, and guarantee adequate talent information in information communication to give momentum for enterprise competitiveness.

5.2 Pay attention to the construction of the textile export information platform.

Because Thailand's textile exports are primarily fabrics and fibers for various garments and other downstream products, if companies do not have a clear understanding of changes in supply and demand in the final downstream market, once the form of the final downstream market is transmitted to the upstream, it is easy to miss market opportunities and the latter's product backlog. According to relevant supply chain management theories, the phenomena of rapid amplification of demand fluctuation may represent the upstream product supplier's knowledge disadvantage distant from the end-user. Adequate countermeasures cannot be implemented unless the market supply and demand for its goods alter.

As a result, the demand for information is essential in commerce, particularly in the present globalization process; communication has become a key element in business growth. The textile industry association should play a more crucial information leadership role in the growth of the textile industry and offer more complete information for the national competition of businesses in the building of informatization (Lee, Malerba & Primi, 2020).

First, in the framework of informatization, a reasonably uniform procedure should be created. The relevant industrial agencies should take responsibility for information transmission, rationalization, and legalization should be carried out in accordance with overall planning, and long-term development should be fully considered to promote information. Dissemination: the system's practical construction. Second, the existing information management system must be completely optimized (Park & Kim, 2014). The information management mechanism may realize the building of real-time and legitimacy in the enhancement and optimization of institutional settings. To create a

better textile information dissemination environment, it is essential to enhance the connectivity of information dissemination system departments.

In addition, it is necessary to accelerate the development of professional leading institutions, thoroughly analyze the specific situation of Thailand's textile industry exports, and conduct scientific analysis and decision-making based on relevant conditions to provide basic information for work development and a trade guide. Important considerations They are performing an increasing number of functions against the backdrop of the inexorable trend of globalization. It is essential to fully use information technology's supporting function, to offer more favorable support for the growth of e-commerce, and to rationally disseminate information for information gathering, sorting, planning, and so on. Work to improve managerial effectiveness.

Third, we need to aggressively promote and integrate e-commerce into all areas of the textile business. Expand publicity, offer more complete information for the development of a textile information platform, and combine advertising, collecting, and sorting into one with the assistance of television, newspapers, and other media.

5.3 Promote the development of related industries in the textile industry

Many businesses are intimately connected to the growth of the textile sector. Among them, the growth of the machinery industry is directly linked to the development of the textile industry, particularly for the enhancement of textile industry efficiency. As a result, if the Thai government want to support the growth of the textile industry, it must actively participate in the development of the machinery sector (Smith & Smith, 2020). Only through expanding the machinery sector will it be able to offer better equipment for the textile industry's growth and more efficient textile manufacturing. Inexhaustible motivation is provided by good support.

As a result, Thailand's small and medium credit businesses should offer more easy financial assistance for the textile industry's growth. Of course, the advancement of the communications and transportation industries may also aid in the advancement of the textile sector. It is also critical to increasing the textile industry's competitiveness and

should be given full attention. To ensure the industrialization process, it is also essential to aggressively enhance the building of technical facilities, transportation, public utilities, energy, and telecommunications sectors.

According to competitor study, Thailand's logistics has a very high-cost performance, therefore the advancement of infrastructure building, particularly the development of telecommunications networks, is critical to the growth of Thailand's textile sector. To guarantee power demand and create stable pricing throughout the development process, certain regulations for efficient production should be developed. Simultaneously, prioritize the development of renewable energy (Mahalakshmi.T, 2012). The primary strategy for achieving the growth of associated sectors is to encourage collaboration among textile businesses, textile equipment makers, and raw material supply companies. To that end, Thailand textile companies should adopt Toyota Corporation of Japan's supply chain management model, achieving organic integration among different companies through measures such as actively transmitting upstream and downstream industry information, holding each other's shares, and forming a unified industry standard.

5.4 Enhance the independent innovation capability of enterprises

Traditional competitive advantages have progressively eroded as international rivalry has increased, and the benefits of labor and natural resources have slowly lost their competitiveness in international competition. Raw materials are at the forefront of industrial growth. The present competitiveness of industrial goods may be enhanced if the production and output structure of raw materials can be refined to the greatest degree possible. The particular structural optimization, on the other hand, is not dependent on the compression of industrial materials and the growth of industrial investment (Lee, Wong, Intarakumnerd & Limapornvanich, 2019). Instead, it should be examined through the lens of Thailand's economy and industry features in order to optimize resource utilization and achieve the development of industrial clusters. Specifically, for growing sectors such as Thailand's electronics and integrated circuits, it is essential to

aggressively extend the raw material industry chain, offer convenience for the depth of raw materials, and increase the sales level of raw material goods.

As a result, if Thai textiles wish to acquire a sufficient competitive edge in exports, they must cope with the worldwide political and economic climate, improve their competitiveness, boost investment in R&D, and accomplish product upgrades.

On the one hand, in order to accumulate hard power, the Thai textile industry's brutal regime should be improved through research and development, and the technical level of the Thai textile industry must be actively optimized, beginning with the process and equipment and progressing through enriching the product structure to better compete in the international market. On the other hand, increased investment in research and development is required to provide impetus for the improvement of corporate cultural soft power, actively create a scope of innovation, provide support for the development of corporate innovation capabilities, and actively optimize development models in creation to promote the long-term development of the textile industry.

The following are the important measures: First, we must fully recognize the importance of autonomous property rights. It is essential to cultivate a feeling of autonomous property rights in investment, create technical advantages, break Western technology's monopoly, and improve its worldwide competitiveness. Second, it is essential to encourage the improvement of Thai textile goods' added value (Waranantakul et al., 2013). Tynan's textile sector has already experienced serious challenges in the past, and the labor advantage has vanished. As a result, it is critical to optimize Thailand's textile industry. It is essential to reflect its features in innovation and to forge a better and more innovative route.

6. Conclusion

The smooth and effective growth of Thailand's textile sector has a direct impact on Thailand's position in the global market, the smooth operation of Thailand's national economy, and the successful realization of Thailand's international balance of payments.

At the same time, Thailand's domestic textile sector is confronted with many difficulties and hurdles. The rapid rise in labor costs immediately undermines the benefits of cheap labor on which the textile sector has traditionally depended. In this context, the following findings have been made by summarizing the variables that influence the textile industry's international competitiveness and using factor analysis to evaluate international competitiveness:

First, the Thailand textile industry is presently operating in an objective environment that includes a steady scale of market demand, a slowing of factor input, increased pressure from foreign competition, and the need to modify internal industrial regulations. The overall quantity of labor and capital components in the Thai textile sector is enormous, but the growth in factor input has slowed. Thailand's textile goods are primarily focused on fulfilling the need for raw materials and basic products in the international market. In terms of total export market distribution, the United States and the European Union have clear advantages (Smith & Smith, 2020). Thai textile businesses are now concentrating on production and operation via the huge utilization of inexpensive labor. Because of its abundant petroleum resources, Indonesia has developed chemical fiber production and garment manufacturing at a cheaper cost, resulting in great competition in Thailand's completed garment manufacturing sector.

The second step is to assess Thailand's textile industry's competitiveness in terms of competitive strategy and policy variables, and it can be concluded that Thailand's present textile industry competitiveness is declining sharply. At the moment, factors such as the decline in Thailand's textile industry's factor input, the increasing pressure of competition from Indonesia and Malaysia, and the failure of Thai textile companies to achieve technological upgrades have all contributed to the current decline in Thailand's apparent comparative advantage (Lee, Wong, Intarakumnerd & Limapornvanich, 2019). Thailand's textile export growth advantage index was negative during 2015 and 2016. The textile export growth benefit is not evident and perhaps shows greater drawbacks.

Third, to improve Thailand's textile industry's international competitiveness, countermeasures should be taken from the perspectives of optimizing the textile industry's internal structure, building an export information platform, promoting the development of related industries, enhancing independent innovation capabilities, removing backward production capacity, and reforming internal sourcing. We must begin with clustering and scaling, and then modify the internal structure of the textile sector. The Thai government should implement more favorable policies for guiding and establishing industrial parks. The textile industry association should play a more significant information leadership role and offer more complete information for the national competitiveness of businesses in the development of informatization (Waranantakul et al., 2013). Thai textile businesses begin with technology and equipment and work their way into the worldwide market by diversifying their product offerings. They must also aggressively act on the additional value of their goods. They may offer superior technology for the textile industry's production via the transfer of production bases and the creation of radiation impacts. The novel environment provides greater technical assistance for product updates.

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VITA

NAME Chun Zhou

DATE OF BIRTH 17 October 1998

PLACE OF BIRTH YueYang, China

INSTITUTIONS ATTENDED -Faculty of Economics, Chulalongkorn University, Thailand
-The Master of Arts in Business and Managerial Economics, MABE (International program)

HOME ADDRESS 158 Soi Si Bamphen, Chong Nonsi, Yan Nawa, Bangkok 10120