Garment Industry in CLMV Economies

Executive Summary

Advantages and Challenges of Cambodia's Garment Industry

Advantages of Cambodia's garment industry are as follows:

- 1. Political and macroeconomic stability.
- 2. Strategic location: Cambodia is strategically located in the center of the east-west corridor of the Greater Mekong Sub-region (GMS), providing access to key world markets. This helps businesses take advantage of low-cost manufacturing in Cambodia as well as huge demand for its products in Asia.
- 3. Competitive labour force: Cambodia has sufficient young workforce with relatively low labour cost. Labour in Cambodia is cheaper than most regional competitors, except Lao and Myanmar.
- 4. Mature and stable industrial relations: there are 760 garments registered in the Cambodian Ministry of Labour's National Social Security Fund. 494 factories are export-oriented factories registered with the Garment Manufacturer Association in Cambodia.
- 5. Incentives for Export-Oriented Qualified Investment Project: Cambodia provides several special economic zones exclusively established to promote manufacturing across the country. Some of the many incentives offered by the government of Cambodia include 100 percent foreign equity ownership, tax holidays of up to 9 years, and exemption from import duty on machinery and equipment.
- 6. Better International Market Accesses: Cambodia benefits from several preferential trade agreements, such as the ASEAN Free Trade Area (AFTA), the World Trade Organization (WTO) and the Multi-Fiber Arrangements (MFA).

Challenges of Cambodia's garment industry are as follows:

- 1. Raising wage due to annual minimum wage increase (see Figure 2.2).
- 2. Workforce skills is limited, thus impact on productivity.
- 3. Lack of local supplies of raw materials and support industries, thus impact on lead time. Cambodia's garment industry relies its supplies mainly on China.
- 4. Lack of investment in technologies.
- 5. Fast changing world, new trend of fast fashion really requires factories to respond faster with shorter lead time. Higher requirement in social compliance, thus higher cost.

Advantages and Challenges of Lao's Garment Industry

Advantages of Lao's garment industry are as follows:

- Better International Market Accesses: One of the most influential factors supporting garment exports was the special tariff granted by developed countries such as the United States and those in the European Union. In 2018, Lao received the Generalized System of Preferences (GSP) from 36 countries worldwide.
- Competitive labour force: Lao has relatively low labour cost. Labour in Cambodia is cheaper than most regional competitors, except Myanmar.
- Political stability: Lao has been ruled by a one-party Communist Government since 1975.

Challenges of Lao's garment industry are as follows:

- Lacks domestic upstream industries: most garment factories in Lao rely heavily on orders from third parties. The industry depends on imported fiber, yarn and fabric for assembling finished textiles or clothes that are then reexported. These imported inputs accounted for more than half of total production costs.
- Geographical constraint: Lao is a landlocked country which offers a sufficient disadvantage for Lao exporters.
- Unproductivity: the productivity of Lao's garment industry is relatively low in comparison with its competitors due to the lack of training, skills, labour and management. In addition, the bureaucratic procedures caused difficulty for the manufacturer and export inefficiency.
- Competitive advantages: the Lao' garment industry is not in the right position to face the coming competition. Lao garment companies are likely to face a considerable level of competition from larger economies such as China, Vietnam, India and Pakistan, which have the comparative advantage of a large pool of cheap labour and the production of high-quality garments.

Advantages and Challenges of Lao's Garment Industry

Advantages of Myanmar's garment industry are as follows:

- Competitive labour force: Myanmar has a large group of working age population with multi language skills including English, Chinese, Japanese, and Korean.
- Geographic advantages: Myanmar location is proximity to major garment partners: China, Bangladesh, Vietnam, India, etc.
- Upstream of the chain: Myanmar is the 13th largest cotton producer in the world.
- Infrastructure and facilities: Myanmar government supports the foreign direct investment and provides quickly modernizing port infrastructure. Industrial zones are being setup in new cities and regions.

Challenges of Myanmar's garment industry are as follows:

- Political and humanitarian situation in either country and region level.
- Low productivity: the labour are lack of knowledge and skills to work with new technology.
- Environmental issues: due to weak regulatory, some manufacturers caused negative environmental impacts. In addition, inadequate safety standard in some factories threaten the reputation of the industry.
- Incomplete value chain: the industry depends on imported fiber, yarn and fabric for assembling finished textiles or clothes that are then re-exported. These imported inputs accounted for more than half of total production costs.

Advantages and Challenges of Lao's Garment Industry

Advantages of Myanmar's garment industry are as follows:

• Political and economic stability.

- Geographic advantages: Vietnam is a long-stretched country along the eastern coast of the Indochinese Peninsula. It can be reach easily by the sea. In addition, it borders to China, the largest supplier of textiles in the world.
- Access to the global markets: Vietnam's bilateral and multilateral FTAs continue to provide Vietnamese manufacturers access to new markets, minimizing the effect of growing trade protectionism. With new FTAs in effect such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and Vietnam-EU FTA (EVFTA), new markets will lead to higher exports and push manufacturers to develop the industry's supply chain so that they can take full advantage of the preferential tariffs and increase the competitiveness of their products.
- Made in Vietnam: As for the free trade agreement between the EU and Vietnam, it strongly encourages European brands to embark on "Made in Vietnam".
- Cheaper labour cost: labour cost in Vietnam is lower than in China. In addition, the advantage and skilled workers will also help expand the textile and garment industry.

Challenges of Myanmar's garment industry are as follows:

- Limited to CMT: The only black spot in the Vietnamese factories is that, up to now, they have been doing mainly "CMT" (cutting, sewing and finishing), that is to say, no technical textiles or fabrics or accessories. Modernize little by little and incorporate processes allowing the making of more complex and technical garments.
- Dominant by FDI: the export turnover of Vietnam's garment industry is dominant by FDI enterprises. Thus, there is a small room left for local players to grow.
- Scarcity of human resources: despite being in the golden population period, each year the labour market receives 400 thousand new workers, the textile and garment industry still faces a shortage of human resources, including technical and labour workers.
- Supporting industries in the garment industry have not been developed: the supporting industry for garment industry has not been attracted by neither the domestic nor foreign enterprises. It led to a scarcity of domestic raw materials, a great dependence on imports, and the difficulties in meeting the industrial requirements for rules of origin. The textile dyeing industry is underdeveloped and difficult to attract investment because of low investment in infrastructure, unclear location for industrial parks, and lack of industrial clusters.

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Chapter 1 CLMV Economy

CLMV Economy

Prior to the Asian financial crisis in 1997, rapid and dynamic economic growth in East Asia was facilitated through market-driven forces. Rising regionalism in the other parts of the world as well as increasing competition from the regional giants China and India spurred ASEAN efforts at economic integration in 1992. The impact of ASEAN-initiated regional cooperation was negligible, because ASEAN economies were basically competing on the same product range and their main export markets were non-ASEAN countries. Clear evidence has been recently identified, which indicates that the impact of AFTA has encouraged production networking on some intermediate and consumer goods in Thailand, Viet Nam, and other ASEAN economies. These integration efforts accelerated especially after the admission to ASEAN of the CLMV countries, namely Cambodia, Laos, Myanmar, and Vietnam.

The CLMV countries started becoming members of ASEAN from the mid-1990s onwards, just about when ASEAN economic integration was accelerating. For ASEAN economic integration to proceed smoothly and effectively, however, there is a need to narrow the existing development gap between the older ASEAN6 and the newer members. Before the admission of the CLMV countries into ASEAN, there had already existed economic disparities within and between the six older members. Economic disparity, perceived to be a hindrance to economic integration, grew larger within the enlarged grouping with the admission of the CLMV countries, raising concerns about difficulties arising out of a two-tiered ASEAN. There are fears that the grouping may become irrelevant in the global economy if effective economic integration cannot take place because of the regional economic divide. The CLMV countries have also realized that they must progressively and steadily integrate their economies with those of the older members if they do not want to be left behind (Lim, H., 2008; Quah, B. H., 2008). The chart in Figure 1.1 clearly represents the gap in economy size between A6 and CLMV.



Figure 1.1 Nominal GDP comparing between ASEAN A6 and CLMV.

Source: (Leelafaungsilp, 2019)

The Gap between ASEAN A6 (Singapore, Malaysia, Thailand, Philippines, Indonesia, and Brunei) and ASEAN CLMV is relatively high. The nominal GDP contributing by the A6 accounted for 90% whereas that by the CLMV is responsible for only 10% (see Figure 1.1). However, ASEAN has resolved to assist its less developed newer members to achieve their

economic potential, with a view to ensuring effective economic integration. This will in turn better equip ASEAN to face the increasingly stiff economic headwinds of global competition. In the process, the less developed members will also be able to reap the benefits of ASEAN's economic integration process more equally as compared to the more developed members, and therefore ensure that prosperity is shared among the grouping's more than 550 million inhabitants. The group of four least developed nations in ASEAN have strongly enhanced their economic prosperity not only in terms of GDP value but the growth rate has also outperformed other giant countries in the region (Leelafaungsilp, 2019; Lim, H., 2008; Quah, B. H., 2008).

Growth Projection for ASEAN member indicates that Vietnam and Cambodia, the CLMV countries, could integrate well with the existing developed ASEAN A6 in term of growth (see Figure 1.2). Some economic indicators in Figure 1.3 pointed out that Lao and Cambodia couldn't equip with the other A6 in terms of current account balance and foreign exchange reserve. However, Cambodia have been excellent in tourism industry development (see Figure 1.4).



Figure 1.2 Economic Growth Projection of ASEAN Member from 2020 to 2023



Source: Talaengsatya (2021)

Figure 1.3 Economic Indicators of ASEAN Member

Source: Talaengsatya (2021)



Figure 1.4 Tourism Revenue of ASEAN member in 2019

Source: Talaengsatya (2021)

The most dominant advantage of CLMV countries is low-cost labour with the high proportion of working age. This advantage attracts investors from developed countries to invest in high labour-intensive industry in CLMV countries. Garment industry is one of those that move its manufacturing with the cut-make-trim model into CLMV countries. Most of its manufacturers do not provide design, product development, marketing, sourcing, financing and procurement functions or services. It could create lot of jobs to local people especially women who mostly come from rural areas of the country but most of them are unskilled jobs, which is only small amount of money they could earn from. However, Vietnam, Cambodia, Lao and Myanmar are trying to upgrade their local enterprises by linking them with the FDI large enterprises. The result of garment industry development in CLMV countries cause the countries benefit from high export turnover and employment rate. However, the rivals in the global market are severe and fast changing. It is necessary to study, monitor, and maintain the network in the industry among the ASEAN member in order to compete successfully.

Chapter 2 Cambodia

Economic Outlook in Cambodia



Figure 2.1 Map of Cambodia

Source: Nations Online Project (n.d.)

Cambodia (kh, khm) is located in the southeastern part of the Indochina Peninsula in Southeast Asia. It is bordered by Vietnam to the east and south, Lao in northeast, Thailand in west and northwest, and by the Gulf of Thailand in west (see map of Cambodia in Figure 2.1). Capital city is Phnom Penh. Spoken languages are predominantly (90%) Khmer, a Mon-Khmer language, and Vietnamese (5%) (Nations Online Project, n.d.). Cambodia has a population of around 16.8 million people (DITP, 2022). Demonstrating the importance of Cambodia's pivotal sectors, around 10% of the labour force or 800,000 people (90% are women), are employed in the garment and footwear sectors, 620,000 are employed in Tourism, and another 2.8 million are employed in agricultural sectors. As a result, the unemployment rate in Cambodia remained steady at 4% (see Figure 2.4). Cambodia still remains a predominantly rural country with 76% of the total population living in rural areas. The kingdom is experiencing a rapid urbanization (around 3.3% per year) and the population is increasing (1.5% increase in 2018). (Eurocham Cambodia, 2021). In 2016, the World Bank formally reclassified Cambodia as a lower middle-income country. The average income (GDP per capita) of Cambodian people in 2021 was 1,770 USD per person (International Monetary Fund, 2022). The minimum wages in Cambodia were increasing dramatically from 70 baht per day in 2014 to 229.28 baht per day in 2021 (see Figure 2.2).



Figure 2.2 Minimum daily wage in Cambodia

Source: Adapt from ASEAN Briefing (2021)

Cambodia is strategically located in the heart of Southeast Asia. The country is popular for providing a low-cost manufacturing base for several industries. Among the many advantages that the country offers to investors are duty-free access to some large and developed markets, a stable economy, and several government incentives. Additionally, there are several special economic zones exclusively established to promote manufacturing across the country (Rastogi, 2018). Thus, Cambodia has experienced rapid economic growth over the last decade; GDP grew at an average rate of over 7% per year between 2011 to 2019, before dipped down to -3% in 2020 due to COVID19 and then jumped back to 3% in 2021 (see Figure 2.3). These statistics place Cambodia as the 6th fastest economy in the world. Cambodia's economic growth has been driven by 4 key sectors: tourism, garments, construction and real estate, and agriculture. (Eurocham Cambodia, 2021). Inflation rate in Cambodia was fluctuated around 2 to 3 percent per year (see Figure 2.4).



Source: Adapt from International Monetary Fund (2022)



Figure 2.4 Inflation Rate and Unemployment Rate in Cambodia during 2012-2021

Source: Inflation rate from International Monetary Fund (2022) and unemployment rate from DITP (2022)

The rapid economic growth in Cambodia has been underpinned by the export-oriented garment and footwear sectors which represent around 70% of total exports. However, although garment and footwear will remain pivotal sectors, future GDP growth is expected to be less reliant on them. Increased domestic revenue generation through more robust taxation, a push towards SME formalization, and a diversification of Cambodia's manufacturing base towards other sectors (electronics, bicycles, agroprocessing) are hoped to support the Kingdoms future growth. Indeed, Promising investments have already occurred in this direction with the opening of several electronics factories for brands such as Nintendo supplier, Minebea Mitsumi Inc. (Eurocham Cambodia, 2021). The export growth of Cambodia is continuously increased from 9.32% in 2012 to 16.03% in 2019 and eventually exceeded 25% in 2021 despite the pandemic impact and fluctuated exchange rate (see Figure 2.5 and Figure 2.6). The main export markets were USA, Europe, China, and Singapore whereas the import countries were Thailand, Vietnam, and China. The most important export products are garment, footwear, rice, rubber, pepper, and seafood, whereas the most important import products are construction materials, textiles, petroleum, foods, and drinks (DITP, 2022).



Figure 2.5 Export Growth of Cambodia during 2012 – 2011

Source: Adapt from DIPT (2022)



Source: Adapt from Bank of Thailand (2022) and baht365.com (n.d.)

International Trade between Cambodia and Thailand

Intertrade between Thailand and Cambodia has been established for more than thousands of years. During the last decade, the AEC facilitated the engagement in intertrade between both countries. The intertrade value between Cambodia and Thailand gradually increased from 6,453.75 million USD in 2012 to 7,973.7 million USD in 2021 (see Figure 2.7 below).



Figure 2.7 International Trade between Cambodia and Thailand

Source: Adapted from DIPT (2022)

	IMPORTS TO CAMBODIA
China	6,141.438
Thailand	3,132.756
Viet Nam	2,214.983
Taiwan	775.818
Japan	740.347
Hong-Kong	602.419
Singapore	572.579
Korea, Republic of	569.011
Indonesia	522.424
Malaysia	356.975
United States of America	277.908
Denmark	228.916
India	157.056
Germany	110.097
Others	990.324
Total	17,393.051

	EXPORTS FROM CAMBODIA
United States of America	3,044.576
Germany	1,098.440
Japan	1,076.032
United Kingdom	1,015.995
China	863.317
Canada	776.812
Spain	513.619
Belgium	495.021
Netherlands	426.706
France	426.042
Viet Nam	361.704
Thailand	312.631
Hong-Kong	310.672
Italy	290.583
Others	1,695.758
Total	12 707 908



Figure 2.8 Export – Import Value of Cambodia in 2018

Source: Eurocham Cambodia (2021)

Based on the data in 2018, Thailand was the second largest importer to Cambodia responsible for 18% of total import value of Cambodia following China whose took part on more than one-third of the total import (see Figure 2.8). On the other hand, Cambodia could export its products to Thailand only 2.5% of total export value. The main export markets of Cambodia are USA, Europe, UK, China and Japan consecutively. The top 10 imported product from Thailand to Cambodia in 2021 were fuel, drinks, cars and car parts, jewelry, Chemicals, sugar, mechanics, motorbike and its parts, cosmetic and machine. The top 10 exported products from Cambodia to Thailand in 2021 were fruits and vegetable, minerals, wired and cable, electric machines, garment, metals, vehicle parts, iron, textiles, and shoes (see Figure 2.9).

Top 10 Imported Thai products		Top 10 Exported Cambodian Products			
to Cambodia in 2021			to Thailand in 2021		
Products	Value	% of	Products	Value	% of
	(M.USD)	Total		(M.USD)	Total
		Import			Export
1. Fuel	1,916.01	27.07	1. Fruits and vegetable	280.34	31.32
2. Drinks	437.53	6.18	2. Minerals	256.92	28.70
3. Cars and its parts	398.48	5.63	3. Wires and cables	100.84	11.27
4. Jewelry	271.57	3.84	4. Electric machines	65.28	7.29
5. Chemicals	261.88	3.70	5. Garment	41.01	4.58
6. Sugar	249.62	3.53	6. Metals	23.44	2.62
7. Mechanics	217.32	3.07	7. Vehicle parts	23.01	2.57
8. Motorcycle and parts	182.08	2.57	8. Iron	20.88	2.33
9. Cosmetics	172.79	2.44	9. Textiles	12.97	1.45
10. Machines	162.27	2.29	10. Shoes	9.98	1.11
Total Import	7,077.24	100	Total Export	895.15	100

Figure 2.9 Top 10 export and import products between Thailand and Cambodia

Source: Adapted from DITP (2022)

Garments Industry in Cambodia

Textile and Garment industry has been of the 4 pillars of Cambodia's economy since the late 1990s up to the present day. The garment industry continues to drive the Cambodian economy through human capital development, employment generation and foreign direct investment (FDI). Cambodia has a large pool of low-cost, and low-skilled workers. The garment industry in Cambodia is essentially based on low-skilled, labour-intensive activities. Thus, Cambodia's garment industry already employs over 750,000 people, making the sector the biggest employer in the country. The vast majority of workers employed in the garment factories are women with minimum skills. Only a small proportion of the workforce includes higher skilled workers and professionals; these are mostly managers, supervisors, or members of the operations department (Rastogi, 2018; Turton, 2022).

The textile and garment industry has a significant role in the growth of the Cambodian economy. Cambodia's garment manufacturing industry is mainly export-oriented and highly integrated into the global supply chains. However, Cambodia's garment factories are generally based on the principle of cut-make-trim model. Under this method of production, the raw material, machinery and the design of the garments are imported from abroad, while the assembly of the product is outsourced to the labour-intensive factories in Cambodia. The cut-make-trim model

implies cutting and sewing of material according to the clothing brands' specifications. The garment industry is essentially dominated by foreign owned firms, mainly from the neighboring countries such as China, Hong Kong, Singapore, Malaysia, Japan and Republic of Korea. The association with foreign-owned garments firms or brand names provide Cambodia's garments industry an important channel into the garments global value chain (Rastogi, 2018).

Cambodia started the production and the export of garment in the 1990s. By 2019, garment and textile products made up almost 60% of Cambodia's total exports, the ratio among the highest in the world. The country exported over 8 billion USD of garment and textile, of which 99% was garment mainly to EU (35%), the largest market for Cambodian garment exports, followed by US (30%), Canada (10%), and Japan (10%). Cambodia benefits from duty-free and quota-free market access through several Generalized System of Preference (GSP) schemes, including EU's EBA scheme, initiated in 2001 to give least developed countries full duty-free and quota-free access to EU for all exports except arms. Cambodia's garment exports rose 11% year-on-year and the country increased its market share in most of its export destinations. In 2020, Europe plus Britain imported 35% of the garment, footwear, and travel goods from Cambodia, while U.S. imported 37%. However, Cambodia relied on imported fabric, more than 60% of it from China.

Cambodia's garment industry contributes more than a third of the country's gross domestic product and 70 percent of Cambodia's export earnings (see Figure 2.10). Garment exports have risen around 6 - 11% year-on-year (see Figure 2.11). In addition, the Cambodia has increased its market share in most of its export destinations. Regional trends have also given Cambodia a boost. Supply chain rerouting because of U.S.-China trade frictions, the coup in Myanmar, and severe COVID19 outbreaks in rival garment producing countries Vietnam and Bangladesh led to increased orders in 2021, effectively neutralizing the impact of European Union trade sanctions levied on the Southeast Asian country in 2020 (Rastogi, 2018; Turton, 2022).

Cambodian garment industrial development was supported by the Multi-Fiber Arrangements (MFA) quotas and other preferential trade agreements implemented by developed countries like the US and EU. At the other end of the supply chain, Cambodia also faces the vulnerability of being entirely reliant on imported fabric, more than 60% of it from China (Garment Manufacturer Association in Cambodia, 2022; Rastogi, 2018; Turton, 2022). In 2005, EU and US limited quotas on exports from China, which prompted many Chinese producers to relocate some of their production to Cambodia. Though quotas on China were lifted in 2008, the increase of wages of Chinese workers allowed Cambodia to remain competitive for garment production. With the combination of initial lack of quotas, open trade regime, attractive investment environment, and preferential access to EU and other markets, Cambodia became an interesting destination for investment in garment manufacturing. However, Cambodia will have to struggle to comply with new trade conditions if it graduates from UN-assessed LDC status in 2024. If Cambodia loses its LDC status, its garment exports must contain more locally made textile before enjoying duty-free market access to key markets such as EU, Japan, and Canada.



Figure 2.10 Contribution of Garment Industry to Cambodian Economy



Source: Garment Manufacturer Association in Cambodia (2022)

Figure 2.11 Export Value of Cambodia's Garment Industry

Source: Garment Manufacturer Association in Cambodia (2022)

Cambodia's garment industry consists of 3 features:

1. The prevalence of CMT companies having very limited opportunities for domestic value added. Under this method of production, producing companies take orders from buyers who

provide the design and/or specify the source inputs. The raw material, machinery, and design of the garment are imported while the assembly of the product is outsourced to labour-intensive factories. Approximately 60% of producers work on a CMT basis, operating at low profit margins as it is financially and technologically undemanding. Companies based in Cambodia import materials and inputs mainly from China, Hong Kong, Taiwan and South Korea.

2. The reliance on foreign capital. Approximately 90% of the garment companies in Cambodia are foreign, with the majority coming from China, Taiwan, Hong Kong, South Korea, Singapore, and Malaysia. Foreign companies succeed in Cambodia as they enjoy access to capital and expertise that Cambodian companies lack and also have access to networks of clients and sources of inputs. The association with foreign-owned garment companies or brand names provide Cambodia's garment industry an important channel to the garment's global value chains.

3. The lack of domestic textile industry has prevented the development of more integrated production.

The garment industry in Cambodia is principally based on low-skilled, labour-intensive activities. The majority of workers employed in the garment factories are women with minimum skills. Only a small share of workforce is higher skilled workers and professionals, mostly managers or supervisors. In terms of global garment division of labour, Cambodia is still in the lower rank of the global garment industry and it seems that Cambodia will continue to specialize in low-cost garment production.

In the early 1990s, the Cambodian government undertook various measures to boost the industry's competitiveness in the international market, including opening up to FDI. Foreign investors could enjoy the same benefits as domestic producers. The 1994 law on investment granted tax concessions and incentives including tax holidays, low corporate tax rates, tax-free reinvestment of profits and tax-free repatriation of earnings, and import duty exemptions. Moreover, the government facilitated the acquisition of work permits for foreign experts. Market access, followed by low wages, were the most important reasons for foreign investors to invest in Cambodia. The biggest investor in Cambodia's textile industry was China, followed by Japan and Vietnam. Although certain challenges remain while doing business in the country such as infrastructure development and high energy costs, investors overcome this disadvantage due to largely labour-intensive industry.

There are more than 600 textile and footwear factories in the country which work for about 200 foreign brands, employing up to one million people. Approximately 90% of all labour involved in the garment industry are women with limited labour market opportunities due to lack of economic diversification. Some 90% of these young women are from rural areas. Nearly one in five employed women in Cambodia work in the garment sector. In turn, hundreds of thousands of their families as well as those involved in service sectors depend on these workers including food vendors, clothes sellers, transport operators, etc. As of June, 2022, the total number of garment factories in the country stood more than 800 factories. There are 760 garments with 520,000 workers registered in the Cambodian Ministry of Labour's National Social Security Fund. 494 factories are export-oriented factories registered with the Garment Manufacturer Association in Cambodia (Garment Manufacturer Association in Cambodia, 2022). More than 60 percent of Cambodia's garment factories are located within or in close proximity to the capital city - Phnom Penh. The finished products are transported from the factories in Phnom Penh by train to the seaport of Sihanoukville where the garments are shipped to other countries. Other key locations of garment factories are Kompong Som, Kompong Speu, Kompong Cham, Kompong Chhnang, Svay Rieng, Takeav and Kandal provinces (Rastogi, 2018). Many companies in the country operate as

contract manufacturers for major multinational brands such as Adidas, Gap, H&M, Marks & Spencer, and Uniqlo. In the early 1990s, the Cambodian government took various measures to boost the industry's competitiveness in the international market, which prompted foreign investors to direct their attention to the country.

Nowadays Cambodia mainly assembles imported materials and parts into finished products for exports. Its domestic supply chain and supporting industries for the garment sector are insufficient. However, there is a huge potential for growth if Cambodia could bring more stages of the global value chain into the country.

Advantages, Challenges, and Sustainability of Cambodia's Garment Industry

Advantages of Cambodia's garment industry are as follows:

- 1. Political and macroeconomic stability.
- 2. Strategic location: Cambodia is strategically located in the center of the east-west corridor of the Greater Mekong Sub-region (GMS), providing access to key world markets. This helps businesses take advantage of low-cost manufacturing in Cambodia as well as huge demand for its products in Asia.
- 3. Competitive labour cost: Cambodia has sufficient young workforce with relatively low labour cost. Labour in Cambodia is cheaper than most regional competitors, except Lao and Myanmar. In 2017, Cambodia's monthly minimum wage of workers in the garment industry increased to 153 USD, a double of the 2012 level. However, the country's monthly minimum wage remains very competitive when compared to Thailand (250 USD) or Vietnam (166 USD). Rising labour costs in China make the textile manufacturers in the west shift their focus on other countries such as Cambodia with cheaper labour. It has been estimated that Cambodian labour prices are almost three times cheaper than China. In the past decades, garment buyers facing margin erosion and price increases usually shifted their sourcing to lower-cost countries. In terms of global buyers' diversifying garment sourcing from Asia, global garment value chains are quite firmly rooted in Asia in terms of the scale of operations, proximity to raw materials, developed infrastructure and supply chain linkages, and productive labour. The companies operate the supply chain, from design, retail and marketing, procurement of all necessary inputs, to assembly of the lowest cost garment. Then, Asia's middle class is growing and thus it represents a major market for global brands and retailers. But with the textile companies under pressure in the present economic situations, there is new focus on proximity sourcing and reshoring. Factors other than price include strategic collaboration with suppliers and end-to-end process Cambodia is one of the most sought-after destinations for the management. outsourcing. With rising production costs in China and Vietnam, Cambodia would become an increasingly popular destination for low-cost, labour-intensive manufacturing.
- 4. Competitive labour skill: the Cambodian Garment Training Institute is well recognized among stakeholders, collaboration with China to train workers and local management talent, and support received from the Skills Development Fund. The technical and vocational education and training (TVET) is crucial to upgrade the skill levels of the workers in the country. Recently, the government has doubled funding for upgrading the public TVET institutes. The 38 state-run TVET schools and over 100 private centers have also been the centers supported with 45 million USD by the Asian Development

Bank Programme to improve Cambodia's workforce. However, according to the 2018 ADB report, TVET centers lacked qualified teachers, relied on outdated equipment, leading to low enrollments.

- 5. Training center: Cambodian Garment Training Institute (CGTI) set up in 2017 with the assistance from Singapore's Textile and Fashion Industry Training Center. The institute has organized onsite short courses for factory workers with subjects ranging from technical sewing to management skills and has provided scholarships for students to pursue diplomas as well as long-term programmes customized to the industry's needs. Additionally, CGTI's approach is to develop local capacity by 'Training the Trainers.' It also runs the 'Train & Place' programme, which offers university graduates a scholarship to join a three-month full-time diploma. After successful completion of their diploma, they are guaranteed jobs in a middle management or supervisory role. The Institute's already initiatives include the focus on skills development for garment construction experts (pattern making and adaptation), garment production engineers (manufacturing processes), apparel merchandisers (garment designers), and quality assurance specialists (quality controllers). Moreover, there is cooperation with development partners such as Germany who has high-quality vocational training system. Other organizations also play an important role in providing training and helping companies to comply with standards and certification. They include industry associations such as the Garment Manufacturers Association in Cambodia (GMAC) and international organizations such as the Asian Productivity Organization (APO). Foreign companies seemed to be better equipped than domestic ones to adopt new technologies and train their workers. Foreign countries usually receive support through industry associations and research organizations of their country of origin such as the Chinese National Textile and Apparel Council (CNTAC).
- 6. Mature and stable industrial relations: there are good relationships with stakeholders in the value chain, flexible regulation for foreign investments, and fiscal incentives for innovation, jointly formulated industrial standards and related systems by the public and the private sectors for development of the textile industry, and Ministry of Economy and Finance (MEF)'s announcement of the five-year development plan (2020–2025) to increase the value added of the sector and improve its productivity. There are 760 garments registered in the Cambodian Ministry of Labour's National Social Security Fund. 494 factories are export-oriented factories registered with the Garment Manufacturer Association in Cambodia.
- 7. Incentives for Export-Oriented Qualified Investment Project: Cambodia provides several special economic zones exclusively established to promote manufacturing across the country. Some of the many incentives offered by the government of Cambodia include 100 percent foreign equity ownership, tax holidays of up to 9 years, and exemption from import duty on machinery and equipment. Moreover, investors can repatriate profit freely and reinvestment of earnings is encouraged.
- 8. Better International Market Accesses: Cambodia benefits from several preferential trade agreements, such as the ASEAN Free Trade Area (AFTA), the World Trade Organization (WTO) and the Multi-Fiber Arrangements (MFA). As a member of the ASEAN Free Trade Area (AFTA), Cambodia benefits from the Common Effective Preferential Tariff (CEPT) agreement that reduces or eliminates tariffs on the manufactured goods traded between the ASEAN countries. ASEAN makes Cambodia

an attractive investment destination because of its low-cost manufacturing, large regional markets, and easier sourcing of raw material within the ASEAN Economic Community. As a member of the World Trade Organization (WTO) since 2004, Cambodia has increased its trade integration with US and EU.

- 9. Market opportunities in garment value chain: there are diversification towards more capital-Intensive activities; and for production, there are development of the accessories supply chain and the use of technologies to improve the environmental sustainability of the industry. The global garment industry is changing. Manufacturers are increasingly part of larger transnational corporations or manufacturing (TNCs). These TNCs and global buyers are increasingly co-dependent upon one another as buyers' supplier base also continues to consolidate. Some garment TNCs are highly profitable and are making investments in production technology and also have the capacity to employ workers on better terms. However, many manufacturing TNCs will continue to utilize the sweatshop strategy to remain competitive.
- 10. Opportunity to upgrade: Cambodia gains a large extent of experience in the garment value chain. It can move from low-cost commodities to higher value-added fashion goods that give higher returns. For the textile value chain, the more complex products are printed and dyed fabric, as well as fabric parts such as embroidery and labels and badges. For the garment value chain, opportunities lie not only in higher-value finished products such as specialized sportswear, but also accessories and parts such as zippers or slide fasteners.
- 11. Industry 4.0: the industry 4.0 applications have become more accessible and opened up opportunities for Cambodia's garment industry in the last decade. The benefits of the technologies in the garment industry are numerous. Data analytics improves decisionmaking and increases productivity, application of sensors in product quality, autocutters, automated hanger systems, fabric spreading machines, semi-automated sewing machines increasing efficiency, connected enterprise resource planning (ERP), predictive maintenance enabling new customization-based business models, 3D design and prototyping, computer-aided design (CAD), e-commerce platforms skills for production diversification, augmented reality (AR) and virtual reality (VR) applications for training workers to perform new and more complex tasks, cloud-based production tracking systems, Radio-frequency identification (RFID) tags to improve supply chain management, blockchain applications for greenhouse emission monitoring, digital dveing and printing, and energy, water, and waste management solutions. The industry 4.0 applications also provide the opportunity to improve decision making to increase productivity, increasing efficiency, enabling new customization-based business models, skills for production diversification, improving supply chain and resilience for market diversification, production control, supply chain traceability, as well as workers' safety and environmental sustainability. Companies tend to rely on their headquarters to adopt new technologies. However, some garment companies in Cambodia are already using several industry 4.0 applications including autocutters, automated hanger systems, barcode systems, fabric spreading machines, production planning systems, and RFID applications for production tracking and supply chain management. The applications such as autocutters also reduced the exposure of employees to workplace hazards.

- 12. Internet infrastructure: fast internet (mobile and fixed broadband) and reliable, affordable and accessible energy will become increasingly important in order to facilitate further automation and Industry 4.0. A solid digital infrastructure is the backbone of Industry 4.0, which requires big data from machines in the manufacturing process to communicate and work in real time with each other, with logistics and with customers. With a highly competitive market, Cambodia has achieved a high rate of Internet coverage and access to the cheapest mobile Internet prices in the world. Cambodia could even roll out the 5G technology much faster than its neighboring countries. However, there were just 117,049 fixed broadband subscriptions or just over 1% of total Internet subscriptions in the country in 2017.
- 13. Post COVID19 pandemics: regional events also boosted the country's industry. Supply chain changes due to US-China trade war and the serious outbreak of COVID19 in competing garment producing countries such as Vietnam and Bangladesh led to increased orders for Cambodia in 2021 and contributed to the country's bouncing back from the decrease in global demand.

Challenges of Cambodia's garment industry are as follows:

- 1. Insufficient infrastructure: there are limited physical infrastructure and costly and unstable electricity supply. The degree of electrification was still low (60% in 2017). Cambodia already has some of the highest electricity rates in Southeast Asia, which makes industry, especially those in the electricity-dependent manufacturing sector, less competitive. At the same time, today's road infrastructure is still poor. Rural areas are difficult to access and therefore have poor market connectivity and low development opportunities. The number of internet users per 1,000 inhabitants was 256 (in 2016).
- 2. Raising wage due to annual minimum wage increase (see Figure 2.2).
- 3. Workforce skills is limited, thus impact on productivity: the biggest challenge is that Cambodia still lags behind in its ICT infrastructure within education due to the lack of trainers, network infrastructure, and technological equipment. For the textile and garment industry in Cambodia, the overall poor quality of primary and secondary education is a grave challenge. The industry lacks graduates for senior positions in factories. The country's largest industry requires graduates in industrial engineering and apparel merchandising. If Cambodia fails to strengthen the local textile manufacturing capacity or move up the value chain, the competitiveness of its garment export could be negatively affected in the long term. According to the Global Education Monitoring Report, only 8% of public primary and secondary schools had access to stable electricity in classrooms and only 7% were connected to the internet in 2014. While higher education institutions are generally better equipped, the use of ICT tools in teaching and learning is still limited by regional standards. In 2015, the government took its first steps in piloting New Generation School scheme, a programme designed to advance STEM (Science, Technology, Engineering, and Mathematics) education. This initiative aimed to help young Cambodian students build and improve their basic skills in relevant fields and to further prepare them for the newest waves of technology. Moreover, a 2020 World Bank report revealed that Cambodia failed to make substantial improvement in learning. Its students performed lower than the ASEAN average in disciplines such as reading, mathematics, and science, leading to the country's long-standing low-quality learning. The current

situation in higher education reveals mismatch between education and employment. Only a small number of students are studying science, engineering and agriculture, which are considered to be key skills to foster the growth of the Cambodian economy. There ought to be more international exchange of students and researchers. With higher automation in the garment sector, newer skills are required in the factories as the tasks are getting more demanding. More engineers and IT experts are needed. In the long run, Cambodia would face challenges moving up value chain because of lack of skilled labour.

- 4. Managerial skills: there are skilled workforce shortages, particularly in management, supervisory and technical positions. The garment industry in Cambodia is essentially based on low-skilled, labour-intensive activities. As a result, the country has a large pool of low-cost, and low-skilled workers. The vast majority of workers employed in the garment factories are women with minimum skills. Only a small proportion of the workforce includes higher skilled workers and professionals. But Cambodian workers were increasingly in supervisory and managerial ranks although they mostly failed to reach top positions still held by foreigners mainly from China, Taiwan, South Korea, Singapore, Thailand, and Malaysia.
- 5. Lack of local supplies of raw materials and support industries, thus impact on lead time. Cambodia's garment industry relies its supplies mainly on China. On the supply side, the role of China as the primary source for raw material supply in Asia was felt most severely in 2020. Since over 60% of Cambodia's textile imports came from China, garment factories reported shortages of supplies, primarily because of the closure of factories in China. Countries such as Cambodia that lack downstream capacities in textile and raw materials and that specialize in cut-make-trim were particularly susceptible to such supply disruptions. Although some companies involved in producing personal protective equipment (PPE) and face coverings, these activities did not seem to compensate for the big losses in the usual orders.
- 6. Lack of investment in technologies: the main technologies driving the developments of the garment sector involve product customization technology such as additive manufacturing, body scanners, computer-aided design, smart apparel, nanotechnology, automated sewing machines, and robotic automation. Automated sewing and cutting machines are becoming widely available for garment manufacturing as these machines are able to automatically sew garments on a continuous basis without human operators. However, the garment sector in Cambodia is reluctant to adopt technical innovations because the business model still mainly relies on cheap labour. Garment factories are still at the beginning of their digitalization both at the procurement stage and at the end product development process. As the wage levels are relatively low compared to other countries in the region, technology is perceived as expensive. But this can change as technology costs decline while labour costs increase. Therefore, technology upgrade in the Cambodian garment sector is primarily occurring in enterprises that are connected to the global value chain, and work for big international retailers.
- 7. Automation threat: on one hand, increasing automation is replacing jobs with robots, artificial intelligence, and new machinery. On the other hand, there will be demands on highly qualified workforce to operate and maintain the automation technology. As companies at present tend to relocate their production closer to consumer markets, this could impact almost half a million sewing machine operators who primarily perform

manual tasks. ILO estimated that 57% of Cambodian workers (or over 4 million jobs) faced high risk of automation, especially women, young workers, and primary school graduates.

- 8. Fast changing world: new trend of fast fashion really requires factories to respond faster with shorter lead time. There are increasing regional competition, increasing trade preferences of neighboring countries, strengthening production capacity in neighboring countries, lower production costs and better infrastructure in neighboring countries, partial withdrawal of preferential access to the EU market, increasing demand from global buyers, higher prices of fabrics, and significantly, growing quality and sustainability demands from global buyers.
- 9. Higher requirement in social compliance, thus higher cost. Moreover, increasing quality and social and sustainability compliance demands from global buyers stress the need to explore new drivers of competitiveness beyond low wages. The COVID19 pandemic has imposed new challenges including disruptions in the supply of raw materials and drops in demand and prices. These negative impacts have been intensified by the partial withdrawal of Cambodia's duty-free, quota-free access to EU market. Despite this challenging landscape, the industrial upgrading opportunities for Cambodia are identified. Increased production of more capital-intensive goods, development of the supply chain, improvement of the sustainable production processes, compliance with labour and environmental standards, reduced lead times, and increased responsibility over the manufacturing process have become more important than competitive wages.
- 10. COVID19 pandemics: Cambodia's garment export decreased by approximately 9% year on year in 2019. During the COVID19 outbreak, many buyers and suppliers reduced the number of orders, the quantities per order, and cancelled the orders outright. Many suppliers were forced to accept prices for orders below the costs of production which was a common practice in the industry heightened during the pandemic. Issues such as compliance with labour laws or codes of conducts were considered secondary concerns. As the COVID19 first hit the fabric supply from China and then hit global demand, the crisis made Cambodia exposed to supply chain disruptions and external forces. The fact that Cambodia managed to maintain production could be attributed to continued demand for low-cost garment which is the main production. The COVID19 pandemic on sourcing and employment in Cambodia impacted both demand and supply. On the demand side, import of garment in Europe declined by 25% in 2020 compared with the same period in 2019, with similar declines in US and Japan imports (26% and 17% respectively). EU and US markets comprised approximately 43% and 30% of Cambodia's garment, textile and footwear exports. It was estimated that the revenues from the sectors would contract by 27-30% in 2020 year-on-year. Despite the relatively moderate production disruptions, the impacts have been quite severe for hundreds of thousands of workers. In 2020, an estimated 35,000-40,000 workers out of some 800,000 lost their jobs.

Sustainability of Cambodia's garment industry.

Government agencies and NGOs are now driving sustainable changes across Cambodia. Better Factories Cambodia (BFC), established in 2001 as a partnership between the International Labour Organization and the International Finance Corporation, seeks to engage with workers, employers, and the government to improve working conditions, to enhance accountability and transparency through regular reports, and monitoring subcontracting, etc. With regards to the environment, efforts targeting waste reduction and sustainable production of garments through recycling and innovative design have progressed rapidly through the consortium of brands, designers, local communities, and NGOs.

Mith Samlanh's home-based production project, launched in 2005, engages with homeless families and seek to enable participants to afford permanent housing by designing, producing, and selling fashion items recycled from waste materials. Rajana, The Stung Treng Women's Development Center, and the Institute for Khmer Traditional Textiles have established collaborative initiatives with local producers in the efforts to revive traditional production methods, provide people with vocational skill trainings and education on the issues of health, management, and accounting. Designer establishment Tonlé has focused on reusing materials that would otherwise end up in landfills or incineration. The company has managed to reutilize more than 16,000 kilograms of materials, reduce nearly half a million kilograms of CO2 from entering the atmosphere, and reduce the consumption of nearly 200 million liters of water through their sustainability strategy. Dorsu is another Cambodian manufacturing brand founded on sustainable principles. By utilizing deadstock fabrics for design and production onsite, the company seeks to move towards the change in Cambodian manufacturing and global clothing consumption. Ease of wear, quality, and intelligent use of resources characterize the company's garments, designed to be used across seasons.

Recommendation and Conclusion

Recommendations

The COVID19 reiterates the fact that workers need protection from labour market uncertainties and improved quality of life based on safety-net schemes for those losing their jobs. The following measures are recommended to overcome various gaps and to ensure competitiveness of the industry and wellbeing of the workforce in Cambodia's garment sector.

1. Policy recommendations should be prioritized, and implementation roadmaps should be developed in collaboration with government, industry, academics, and development partners.

2. Cambodia's post-COVID agenda needs to focus on diversifying its export destinations beyond the major EU and US markets. There are opportunities through the ASEAN Economic Community. Cambodia's trade increased exports to the ASEAN market to 10% in 2017. Although the percentage remains low, the booming ASEAN market holds great potential for Cambodian exporters. This will also reduce transport and logistic costs.

3. The COVID19 pandemic also accelerates digitalization trends. In fact, technology transfer can take place through different mechanisms such as information exchange, labour mobility, imports of capital goods and technical services, collaborative and contract research, licensing, joint ventures, and FDI. But technology transfer also requires the coordination of efforts between government, entrepreneurs, and technology organizations to assist companies in improving their production capabilities, strengthening the innovation ecosystem, and investing in digital infrastructure. Additionally, e-government could be used to expand the value chain in Cambodia, attract new investments, diversify and enhance access to markets by making administrative processes easier for garment businesses and facilitating investment processes through apps or websites. Digital technologies could provide and improve the financial services. Financial technology (or FinTech) could allow people and businesses to transact digitally in addition to improve access to financial services.

4. Lifelong learning, online learning especially in rural areas, company training, and professional courses should be adopted in education and vocational training. Curricula have to be updated to catch up with the needed skills. Universities should not serve as merely teaching institutions but also research institutions that drive innovation. Product Design should also serve as one target for R&D to create Cambodian brands.

5. Investment in physical infrastructure as in today's garment sector roads, rails, and ports are crucial for export of goods.

6. Compliance with labour regulations, and international standards to address safety and health hazards of workers.

7. Reformulating FDI attraction strategies based on international trends and prioritizing investments especially for the development of local SMEs. The government could introduce policies to set capital and fiscal incentives to attract further investment. A key for success could be to attract more Cambodian investments, and create and commercialize local brands and designs. This could foster competitive edge instead of high dependence on international brands.

8. SME support is needed for the adoption of affordable industry 4.0 technologies and facilitating financial access. Although improvements to physical and digital infrastructure have been made in recent years, more efforts are needed to ensure that SMEs can participate in the benefits of industry 4.0 technologies and facilitate the upskilling and reskilling of low- and highskilled employees. In order to facilitate the digitalization of SMEs, government and development actors could join forces with industry associations and technology providers to deliver measures that will help SMEs to benefit from the industry 4.0 technologies. Funding support targeted at SMEs could help to reduce the burden of the costs involved in technology adoption. Technology transfer programmes should also be in collaboration with universities and research organizations, and to provide support for the development and provision of tailor-made and low-cost solutions. Industry 4.0 adoption should go hand-in-hand with the development of essential managerial and production capabilities among SMEs. Business consulting firms, industry associations, international organizations could provide business advisory services, particularly sector-specific and technology advisory services to address companies' capability gaps, as well as develop supplier development programme in collaboration with foreign companies and development partners.

9. As factors such as value chain remote management, sustainability, and social responsibility increasingly drive competitiveness in the export-oriented industry, policy responses could consist of the establishment of industry–government–university dialogues to monitor and anticipate skills mismatches, and deliver training and education programmes that are relevant to companies.

10. The active participation of the private sector is important in the design, delivery, and funding of innovation support programmes. Business consulting firms, private training providers, foreign companies, and industry associations are key actors in advancing local companies' managerial, production and innovation capabilities. The growing local base of software developers could also play an essential role in adapting and developing tailor-made and low-cost industry 4.0 solutions. The private sector could contribute to funding the development of local entrepreneurs to adapt and develop technology solutions that respond to the specific needs of Cambodian companies.

Conclusion

The Cambodian garment sector is at high risk vis-à-vis the numerous future side-effects such as digitalization, LDC graduation, global trend of sustainability among others. The consequences for the economy and the labour market will be great. Many jobs will disappear in this sector but new jobs will need to be created as well. As Cambodia is heavily reliant on this sector, it is important to keep the sector competitive to avoid significant setbacks in socioeconomic development. Policymakers, employers, training institutions, and development partners need to work together in order to improve the skills of the workforce. Promotion of the STEM will be vital in meeting the higher skill demands required to operate and maintain automated machines.

Education has always been crucial for innovation and economic development as well as infrastructure. Transport routes such as roads are important but fast glass fiber internet or a 5G mobile connection are also required to allow connected machines which need to transfer big amounts of data just in time. While education and infrastructure are essential for economic success, digital transformation provides the opportunity to catch up. Importantly, digitalization must be strategically shaped to avoid the negative impact from disruption. Equally important, competitiveness must be maintained through sustainable production, market diversification, and more value-added products.



Chapter 3 Lao People's Democratic Republic

Economic Outlook in Lao

Figure 3.1 Map of Lao

Source: Nations Online Project (n.d.)

Lao is a landlocked country in Southeast Asia on the Indochinese peninsula between Thailand and Vietnam, and north of Cambodia. It shares also short borders with China and Myanmar (see map on Figure 2.1). The country covers an area of 236,800 km². Capital and largest city is Vientiane (Viang Chan). The country's landscape is mostly mountainous; along the Mekong River extend fertile plains. The river forms a long section of the Thai-Lao border. The Khone Phapheng Falls south of Si Phan Don and near the border to Cambodia is the largest waterfall in all of Southeast Asia; the falls are the main reason that the Mekong is not fully navigable into China. Mountains and plateaus make up three-quarters of the country's total area. Lao has been ruled by a one-party Communist Government (Nations Online Project, n.d.).

Lao has a population of 7.48 million inhabitants. The average income (GDP per capita) was 2,170 USD per person, the least developed Asian country. The minimum wage was 170 baht per day in 2021 (see Figure 3.2). From 1 August 2022, the minimum wage was increase to 1,200,000 LAK, and will be 1,300,000 LAK on 1 May 2023. The working rate in Lao is quite high at around 60% of its population, mostly in agricultural sector. Thus, the unemployment rate in Lao is steady at 4% based on the DITP (see the orange line in Figure 3.3). Spoken languages are Laotian (official) and Thai. The majority of the Laotian people (67%) are Buddhists (Association of Lao Garment Industry, 2022; DIPT, 2022; Nations Online Project, n.d.).



Figure 3.2 Minimum daily wage in Lao

Source: Adapt from ASEAN Briefing (2021)



Figure 3.3 Inflation Rate and Unemployment Rate in Lao during 2012-2021

Source: Inflation rate from International Monetary Fund (2022) and unemployment rate from DITP (2022)

The Gross Domestic Product (GDP) in Lao was worth 18.55 billion USD in 2021 (see Figure 3.4). Most Laotians are subsistence farmers, and rice is the principal crop. Forestry is economically important, but mining and manufacturing are limited. Barter is the prevalent method of exchange in rural commerce. The most important agriculture products include rubber, coffee, rice, sweet potatoes, vegetables, corn, sugarcane, tobacco, cotton, and tea. The main but limited industries in the country are electricity power, tin and gypsum mining, gold mining, timber, agricultural processing, construction, garments, and tourism. (Nations Online Project, n.d.; Association of Lao Garment Industry, 2022)



Source: Adapt from International Monetary Fund (2022)

As a landlocked communist state, Lao has a relatively closed economy and engages in trade with only a few neighboring countries esp. Thailand and China. Lao consistently runs trade deficits due to its underdeveloped infrastructure and undiversified export base. The total export value in Lao in 2021 was 7,525.83 million USD, decreasing 12.12% from 2020 (see Figure 3.5). Agricultural products and natural resources account for the bulk of Lao's exports. Lao's main exports are wood, clothing, coffee, electricity, tin, copper, gold, corn and rubber. Its main export partners are Thailand (32%), China (31%), and Vietnam (17%). Lao mainly imports fuel, machinery and equipment, vehicles, iron and steel, telecommunication equipment, beverages and cement. Its main import partners include Thailand (66%), China (18.6%), Vietnam (7.3%) (Association of Lao Garment Industry, 2022; VNA, 2022; Nations Online Project, n.d.; Trading Economics, 2022)



Figure 3.5 Export Growth of Lao during 2012 – 2011

Source: Adapt from DIPT (2022)



Source: Adapt from Bank of Thailand (2022) and baht365.com (n.d.)

Trade Balance with Thailand

Thailand and Lao PDP. has been established a strong profound trade relationship. During the last decade, the AEC officially facilitated the engagement in intertrade between both countries. The intertrade value between Cambodia and Thailand gradually increased from 5,039.08 million USD in 2012 to 7,261.41 million USD in 2021 (see Figure 3.7 below).



Source: Adapted from DIPT (2022)

Thailand was the main importer to Lao responsible for 66% of total import value of Lao following China and Vietnam (Trading Economics, 2022). On the other hand, La0 could export its products to Thailand only 33% of total export value. The main export markets of Lao are Thailand, China, Vietnam, Australia, Cambodia, Switzerland, Singapore, Hongkong, Japan and Germany consecutively. The top 10 imported product from Thailand to Lao in 2021 were fuel, jewelry, cars and components, chemicals, cosmetics, iron and steel, plastics, machinery, other industrial products, and sugar. The top 10 exported products from Lao to Thailand in 2021 were electricity, precious stone and metal, edible fruits and vegetable, electric machine, home appliances, cement, minerals, fertilizers plants, and organic chemicals (see Figure 3.8).

Top 10 Imported Thai products to Lao in 2021			Top 10 Exported Products from Lao to Thailand in 2021		
Products	Value (M.USD)	% of Total Import	Products	Value (M.USD)	% of Total Export
1. Fuel	648.92	16.22	1. Electricity	1,994.36	61.18
2. Jewelry	403.40	10.08	2. Precious stones, metal	448.16	13.75
3. Car and components	241.99	6.05	3. Fruits and vegetable	254.11	7.80
4. Chemicals	188.84	4.72	4. Electric machines	127.74	3.92
5. Cosmetics	159.78	3.99	5. Home Appliances	79.79	2.45
6. Iron and steel	140.23	3.50	6. Cement	59.70	1.83
7. Plastics	119.26	2.98	7. Minerals	58.07	1.78
8. Machinery	116.55	2.91	8. Fertilizers	33.81	1.04
9. Industrial products	110.02	2.75	9. Plants	22.12	0.68
10. Sugar	65.37	1.63	10. Chemicals	7.56	0.23
Total Import	4,000.97	100	Total Export	3,259.90	100

Figure 3.8 Top 10 export and import products between Thailand and Lao

Source: Adapted from DIPT (2022)

Garments Industry in Lao

Garment Industry is an important economic sector in Lao PDR. It is a significant sector that attracts foreign direct investment (FDI) as the majority of garment factories are FDI both in the form of foreign owned and joint venture. Since 1995, garment sector has been accounted at top three industry of export value in Lao PDR, which considerably as important source of national income. In 2021, the garment industry contributes to export value around 198.78 million USD (see figure 3.9) or 2.65% of total export value including tanning and dyeing extracts, tannings and their derivatives, articles of apparel, footwear, manmade stable fibers, cotton, manmade filaments, and silk. (Association of Lao Garment Industry, 2022; Oraboune, 2006; Trading Economics, 2022)



Figure 3.9 Export Value of Garments in Lao during 2010 - 2021

Source: Association of Lao Garment Industry (2022)

As Lao PDR does not produce significant amount of yarn or textile, its textile and garment industry is basically garment industry. The country has to rely on the import of almost all of its raw materials while yarn and fabric make up of approximately 60% of the costs of most garment factories in the country. Most of the necessary raw materials are generally procured from abroad through parent companies, contractors, and buyers. There is no noticeably developed fiber or textile producing capacity, as well as bleaching, dyeing or finishing capacity, and very few printers. Most of garment manufacturers in Lao PDR are basically subcontractors who could only offer cut-make-trim (CMT) with no backward linkages to fabrics and accessories and most of its export relies on general system of preferential (GSP) which is a main factor for FDI inflow in this sector. Most of its manufacturers do not provide design, product development, marketing, sourcing, financing and procurement functions or services. Although, garment industry could create lot of jobs to local people especially women who mostly come from rural areas of the country but most of them are unskilled jobs, which is only small amount of money they could earn from. Most of garment factories are located in city areas especially in Vientiane, but most of

workers are women from rural areas who have to migrate into city areas to work. About 25,000 people are employed by the factories in garment industry, 90% of them women. These factories produce a variety of clothes, including uniforms, shirts, T-shirts, polo shirts, office wear, coats, jeans, blankets, shoes, and other items. According to the Association of Lao Garment Industry, the association now has 77 factories under its wing, 50 of which make goods for export and the other 27 produce garments for local consumption. There are 72 factories in Vientiane capital, two in Champasak, two in Savannakhet province and one in Vientiane Province (Association of Lao Garment Industry, 2022; Oraboune, 2006; VNA, 2022).

Exporting garment factories are often subcontractors of larger companies. The textile and clothing industry in Lao PDR is fundamentally export-oriented, small garment industry, and mostly with foreign or joint venture ownership. Domestic backward linkages are practically nonexistent. However, the garment industry has been one of the key driving forces of contributing to an important share of export and FDI, expanding the manufacturing sector, and a major provider of employment in Lao PDR. The garment industry consists of a considerable number of handicrafts, family, village, artisanal units, as well as micro, small and medium enterprises (MSME) and a limited number of major factories. The MSME and handicraft operations mainly sell to domestic and niche markets as well as to tourists such as souvenirs, and interior decoration while some of them export products such as scarves, home textiles, pillow covers, and other accessories to the EU, Japan, and ASEAN. Most companies produce garment such as T-shirts or work gear. Despite new trends, fundamental product changes are few. As in general the industry has small-size companies, it struggles to cope with large orders which consequently would go to other countries. At the same time, some companies turn their small size to a distinct business advantage in response to customers' specific needs.

The industry is integrated in the global production network. Most of the garment firms are either directly linked with the global market such as through FDI or through affiliations with overseas companies. Companies engaged in mergers or acquisitions and affiliates with foreign companies appear to perform relatively better in terms of productivity and value added. Evidence shows that foreign affiliated companies rely on product technology from their parent companies while local companies rely on know-how provided by their foreign buyers. These characteristics support the ownership specific know-how. Despite being integrated in the global production network, the activities of Lao garment companies remain CMT (Cut-Make-Trim) operations and concentrated in the low-value added and low-technological activities of the industry. Most exporting Lao garment factories provide cut, make, and trim (CMT) services and are often subcontractors of larger companies. This lack of domestic raw materials limits the potential to incorporate upstream industry. Most imports for the domestic garment industry come from China (29%), Thailand (23%), Japan (11%). Apart from Thailand, Malaysia and Vietnam are important sources of raw materials from ASEAN, accounting for the combined 10.5% of Lao imports of fibers, fabric, wadding, and yarn. The domestic companies that exclusively rely on other sources of raw materials such as Japan or Thailand usually have their parent companies in these countries.

Almost all garments are exported to the countries that grant Lao products preferential market access due to its LDC status with EU as the most important export market and Japan. If Lao PDR loses its current trade privileges of the quota free and tariff free regime of the EU's EBA (Everything But Arms), its export will be greatly affected. However, even if Lao PDR attains a GSP+ arrangement with the EU, it will be difficult for Lao PDR to comply with the rules of origin since the country has to import most raw materials for the industry. Lao's garment export industry registered a trade surplus of about \$85 million, which grew to a record \$120 million in 2017. One

of the most influential factors supporting garment exports was the special tariff granted by developed countries such as the United States and those in the European Union. In 2018, Lao received the Generalized System of Preferences (GSP) from 36 countries worldwide. Foreign investors also play a crucial role in developing Lao's textile and garment sector, with some textile factories owned by foreign investors in countries such as China, Pakistan, Australia, Vietnam, France, Taiwan, Netherlands, Denmark, Italy, Thailand, and Japan. (Association of Lao Garment Industry, 2018). In the year 2021 the total value FOB of garment exported from Lao in 189,777,000 million USD. However, the export value is expected to decrease 8.44% in 2022. The main export markets for Lao's garment industry are shown in Figure 3.10. Lao still has no upstream suppliers in fabrics, threads, accessories and trims. Most fabrics and accessories come from China, Thailand, Vietnam and other countries (Association of Lao Garment Industry, 2022).



Figure 3.10 Lao's Garments Export Value by Destination during 2018 - 2020

3.72

2.00

1.72

3.96

8.95

79.65

Source: Association of Lao Garment Industry (2022)

100.00

%

In 1988, the investment law was enforced in 1988 and in the early 1990s, the first foreign investors came to invest mainly in the garment industry. In terms of ownership structure, in 2015 Laos had 92 garment factories of which 78 were operational in 2019, with 7 of the operating companies were locally owned, another 7 joint ventures, and the rest foreign owned, with 28 of the foreign owned companies were subcontractors. The most significant investors in terms of the numbers of companies include Japan, the EU, and Thailand. Although there are several Lao owned garment companies, they tend to be comparatively small. Few garment manufacturers employ more than 1,500 workers. The sector is therefore dominated by companies which are wholly or partially foreign owned. Currently, the total investment in the textile and clothing industry accounts for over 450m USD.
In terms of labour, wages, and productivity, the value-creation of the industry is rather low. The industry is labour- intensive and thus an important source of employment. With approximately 26,000 workers (2019), the industry is still the most important employer among the manufacturing industries of the country. Approximately 85-90% of the workers are women, most under the age of 25 and often from rural areas. Whereas most workers on the shop floor are Lao citizens, the middle management, with the exception of HR management, is dominated by foreigners, in particular South Asian countries, the Philippines, and Thailand.

The Lao garment industry has traditionally suffered from a chronic shortage and a high labour turnover. In 2020 with the outbreak of the COVID19 pandemic, the demand for Lao garments and thus for workers in the industry collapsed. The following year, the problem of labour shortage resurfaced. In July 2021, the industry was short of approximately 10,000-15,000 workers. As wages are rather low, the sector does not attract potential workers. Instead of working in a Lao garment factory, many young people prefer to go and work in the neighboring Thailand where minimum wages are significantly higher. In addition, in the country, the variety of alternative employment opportunities has increased over the years in sectors such as construction, services, mining, and in the special economic zones. Often a job in a Lao garment factory is not seen as a long-term occupation. Labour turnover is high by international standards and often reaches more than 30% per year, or even 40 - 60% for some factories. The issue of this permanent drain of freshly skilled labour has a negative impact on productivity for many factories and also makes them reluctant to invest in the upgrading of skills, and thus productivity, of their workers. Low productivity also means that wages remain low.

Whereas labour productivity per worker rose between 2015-2019, capital productivity growth was negative in the years 2015-2020 and total factor productivity (TFP) declined between 2015 and 2020. These figures are the continuation of a long-term trend in the Lao PDR. Between 2000 and 2018 per worker labour productivity grew by an annual average of 2.5%, capital productivity fell by an average of 8% per year and TFP fell by 1.1%. This development erodes the advantage of low wages and leads to less competitive wage cost per unit of output. While low wages are one of the few advantages of the Lao PDR, the current minimum wages are so low that they barely allow for a living. Given that the minimum wages have not been adjusted in the last few years, there is a chance that they will increase in the near future and thus there is the risk that one advantage is lost or reduced.

Some companies already focus on product upgrading or customization, others on cost cutting, investment in more sophisticated machinery, and skill upgrading of the workforce. On the issues of moving towards automation, digitalization, including process upgrading and other aspects of the Industry 4.0, some garment companies are upgrading towards more complicated and sophisticated products which can more easily absorb higher tariff rates. Others have changed their product lines and their markets, partly in response to the US-China trade war, while some undertake already or have plans to invest in skill development and machinery. Automation in the Lao garment industry is rather difficult due to lack of skilled labour. The lack of skilled labour is not only an issue of operation of more sophisticated machines but also of their maintenance. The possibilities for automation and computerization are therefore limited. On the other hand, extensive automation would lead to many fewer jobs and thus reduce the main benefit the sector provides to the country. No research has been done on the increased use of digitalization in the Lao garment companies. But evidence shows that some enterprises are undertaking respective efforts. Many companies see the production of more sophisticated and complex garments as the

most viable answer to the loss of trade privileges and the potentially increasing competition from other countries, in other words they intend to focus more on products than on processes.

In terms of other developments, since the 1990s the market trend has moved towards workwear fashion. The reason is that, on one hand, the fashion aspect itself is becoming more important, particularly SMES in the west, as more workers choose their own workwear. On the other hand, workwear is increasingly worn outside factories, including during work or leisure. As a result, the design used to produce workwear becomes more sophisticated under professional considerations with high customer demand, leading to the expansion of operations in the Lao PDR. Many companies require special skills or upgrading skills from the workforce for the ability to operate modern, sophisticated machines, or to produce more complicated products. Some encourage staff to undertake home-based sewing while some boost sales by increased advertising via Facebook.

Advantages, Challenges, and Sustainability of Lao's Garment Industry

Advantages of Lao's garment industry are as follows:

- 1. Better International Market Accesses: One of the most influential factors supporting garment exports was the special tariff granted by developed countries such as the United States and those in the European Union. In 2018, Lao received the Generalized System of Preferences (GSP) from 36 countries worldwide. LDC market access benefits (in particular EBA scheme of EU) and the opportunities consist of FTAs with ASEAN and ASEAN+ member states, tailored GSP+ arrangement with the EU, and rising wage and production costs in some competing countries.
- 2. Infrastructure development: the most important infrastructure project is currently under construction called the Lao-China Railway. It is part of the Chinese Belt and Road Initiative which in the future may be relevant for the Lao garment industry. The railway which will connect Vientiane with Kunming and the Chinese railway network from December 2021 is supposed to be extended ultimately to Bangkok and Singapore which could reduce logistic costs and open up new opportunities.
- 3. Competitive labour force: Lao has relatively low labour cost. Labour in Cambodia is cheaper than most regional competitors, except Myanmar.
- 4. Labour skill development: the Garment Skills Development Centre (GSDC), founded with the support of the TDF (Trade Development Facility), provides courses for personnel in the industry such as sewing operators, supervisors, quality control personnel, etc. Most garment companies in Lao PDR are registered under the Association of Lao Garment Industry (ALGI), an active member of the ASEAN Federation of Textile Industry (AFTEX). ALGI was founded in 1995 with a number of approximately 50 registered members. Among these, some 40 members of the association produce exclusively for export, while the rest produces for the international as well as for the domestic markets. The association regularly communicates and consults with its members, gathers their data, ideas, and concerns. Among the different Lao industry associations, ALGI is one of the strongest and best organized. It operates its own training facility.
- 5. Political stability: Lao has been ruled by a one-party Communist Government since 1975.
- 6. LM committee: a large number of the suppliers to the garment factories in Lao PDR are mainly from the Lancang-Mekong countries such as, China, Thailand, and Vietnam.

The establishment of the Lancang-Mekong committee and cooperative networks would significantly promote and support the export of Lao garment products to the world. It is also expected to strengthen the supply chain within the region with respect to the comparative advantage in garment and apparel industries so that the LM members could exclusively focus on their specializations. In addition, the LM committee would also ensure the follow-up of the movement of ready-to-wear garments and the textile market for the benefit of the trade and marketing interests of its members. As China and Thailand are two of the powerful textile industries within the region, the LM committee would be able to promote exchange and dissemination of technical and professional knowledge as well as advisory services.

7. The wake of COVID19 pandemic: according to the International Labour Organization, a multi-donor programme has been designed to assist both workers and private sector businesses to rebuild their economic activities, mitigate further interruptions in the supply chain, and provide direct support to garment sector workers, especially women.

Challenges of Lao's garment industry. With the recent economic changes and the fluctuations in the global economy, the Lao garment industry has faced with the number of challenges as follows:

- Lacks domestic upstream industries: most garment factories in Lao rely heavily on orders from third parties. The industry depends on imported fiber, yarn and fabric for assembling finished textiles or clothes that are then re-exported. These imported inputs accounted for more than half of total production costs. The dependence on imported intermediaries may lead to a severe problem after Laos' LDC graduation. Most FTAs and other preferential trade agreements require specific rules of origin (RoO) which stipulate that products contain a certain amount of local value added in order to be eligible for preferential treatment. Without cumulation provisions, many products of the Lao garment industry will face the challenge of meeting the RoO regulation and thus will not be able to benefit from preferential regulations or FTAs.
- 2. Geographical constraint: Lao is a landlocked country which offers a sufficient disadvantage for Lao exporters. The expensive transport costs are associated with a landlocked country such as Lao PDR, lack of sophisticated logistics sector, and generally not very favorable business environment. The Lao PDR ranked 154th of 190 countries in the Ease of Doing Business Ranking for 2020. In ASEAN, only Myanmar ranked lower.
- 3. Lack of skilled labour: the most important challenges for the industry include lack of skilled and unskilled labour, low skill level, low labour productivity, widespread lack of vocational skills making it challenging to upgrade its position in the value chain, increase in utility costs, high logistic costs, lack of supplying industry, high labour turnover, dependence on imported inputs, domination of low value-added operations, high transport and logistics cost, and little investment. Threats include long lead times, loss of privileged market access after LDC graduation in particular if the GSP+ agreement with EU cannot be reached, and increasing competition from other countries. Producers face immense difficulties in sustaining production due to the increased competitiveness of the world economy. The chronic problem of the shortage of skilled labour in the sector also results in the reduction of garment exports.

- 4. Too small to growth: a major problem of the Lao garment industry is its small size. It prevents the establishment of a supplying industry such as spinning mills, dye factories, or knitting mills (for which qualified personnel would most likely not be available anyhow) with the exception of some local printing and embroidery. It also results in the lack of domestic supporting industries or domestic backward linkages. There are no producers of yarn, fabric, buttons, zippers, etc. in the Lao PDR that can supply the export industry. Therefore, main inputs have to be imported. The small size of the industry not only prevents backward linkages but also increases costs. For example, quality inspectors of the clients have to travel to Laos for quality control of the products, which has been particularly difficult and costly during the COVID19 pandemic. In countries with a bigger garment industry, clients often have their own offices with resident quality inspectors.
- 5. Unproductivity: the productivity of Lao's garment industry is relatively low in comparison with its competitors due to the lack of training, skills, labour and management. In addition, the bureaucratic procedures caused difficulty for the manufacturer and export inefficiency. Many products, especially garment and textile products, benefit from special preferences. However, the comparative advantage in the garment industry has recently been reduced due to the continuous increase in minimum wage. According to the Ministry of Labour and Social Welfare, the minimum wage has increased from LAK 348,000 (US\$43.5) in 2011 to LAK 1,100,000 (US\$137.5) in 2018. Compare to the other countries in the region, the availability of labour in the manufacturing industries is relatively low which proportionally lowers the size of the garment labour force. Moreover, labour productivity is another prominent problem facing the garment industry. In recent years, this problem has led to low productivity of Lao garment workers, which is seen as not equivalent to the rising wage rates. Despite the increasing wages, the labour productivity is relatively low comparing to Malaysia, Philippines, Thailand, Pakistan, Indonesia, and India. At the same time, low skilled labour also affects the whole industry's competitiveness when compared with other countries in the region.
- 6. Lack of research and development: both government and garment companies also invest little in R&D in Laos. However, some garment companies in Laos have been upgrading their technologies. As export constitutes a crucial factor in the companies' performance and technological capabilities, the institutional support, particularly basic infrastructure, is significant for technological capability improvement. However, merger and acquisitions, as well as foreign affiliations and regional linkages are not major determinants of companies' technological capabilities. In fact, foreign companies invest little to upgrade human capital in Laos.
- 7. Competitive advantages: the Lao' garment industry is not in the right position to face the coming competition. Lao garment companies are likely to face a considerable level of competition from larger economies such as China, Vietnam, India and Pakistan, which have the comparative advantage of a large pool of cheap labour and the production of high-quality garments. Similar to other LDCs such as

Cambodia and Myanmar, the textile and garment industry in Lao PDR is expected to graduate from the least developed countries (LDCs) status in 2026. After the LDC graduation, Lao PDR will lose its LDC specific trade preferences, face more stricter RoO to qualify for trade preferences under the GSP or regional trading arrangements. As most entrepreneurs in Lao PDR operate at the CMT level, addition of higher local value-added content in meeting the stricter RoO postgraduation will be a big challenge. As Lao PDR is in the low-value manufacturing segments of the textile and garment in the global value chains, the loss of its trade preferences would put great pressure on the competitiveness and export prospects of the textile and garment industry which is a major industry.

8. COVID19 pandemics: The garment sector in Lao PDR has been one of the hardest hit industries by the COVID19 pandemic. For many companies, the current preoccupation of the industry is to deal with the ongoing COVID19 crisis and the fight for survival before making longer term strategic plans. It is estimated that the garment sector, after growing by 2.5% in 2019 suffered a negative growth rate of -21.2% in 2020. As demand plummeted in the major markets, the profits of the global fashion industry are estimated to have fallen in 2020 by 93% year-on-year. Lao garment exports fell in 2020 by 40 to 50%, and many companies had to scale down operations or temporarily suspend operations and lay off staff or reduce their working hours. Many workers saw no payment or delays in payment. Between April and June 2020, only 12 to 15 garment companies could uphold their production. In early 2021, the pandemic caused the fall in demand, increased cost of inputs, and lack of workers. However, for those that operate in a highly professional way, they pursued extension and modernization programmes. Some companies even relocated part of their production from other countries to Laos. Together with the revival, the labour shortage became a major issue. Additional effect is the rise of shipping cost since November 2020. In 2020, the average price of shipping a 40-foot container from East Asia to Northern Europe cost less than 2,200 USD. But in 2021 it was 8,880 USD. However, although the increase was huge, the cost increase per unit of shipped garment was still manageable. Lastly, customers want quality products and the manufacturers hold little power to bargain as their costs rise while the prices received remain constant.

Sustainability

In the current trend of sustainability, factory-based producers face immense difficulties in sustaining production due to the increased competitiveness of the global economy. However, investment in sustainably sourced local production and traditional design can offer Lao PDR an unparalleled advantage as one of the leading fashion exporters in ASEAN due to the increasing interest in small-scale sustainable production and unique designs. Investments in livelihood creation have the potential to substantially raise the income for producers and service providers across the country. Moreover, the existing garment industry can substitute its fibers and fabric with recycled textiles. As of 2015, the imports of new fibers cost US\$ 87.5 million for the economy, an amount which could be significantly reduced if the production focus would be on reutilizing low-value, end-of-life clothing as raw material. At present, some companies have some waste management put in place. Some are audited on a regular basis, and certified to specific standards required by their customers.

Moreover, the Traditional Arts and Ethnology Centre (TAEC) and Ock Pop Tok (East Meets West) focus on fostering economic opportunities and commercializing old traditions for rural artisans by granting soft loans and providing training on design and business practices. In 2019, Fashion Revolution Laos and Fair Fashion Lao launched the Sustainable Fashion Weekend and Design Competition. The aim was to support designers with focus on sustainable, ethical, and culturally unique garments to enhance the green fashion industry in the country. Independent designers and boutiques have also invested in this initiative. Also in 2019, due to the significant potential of Lao home textiles in the European market as a niche market for sourcing sustainable handmade home-textile products, the Lao government and CBI of the Netherlands signed an MOU to further develop the home-textile value chain in Lao PDR and to support Lao textile producers to enter the European market with their hand-spun, naturally dyed cotton products with sustainable values as there was a wide range of attractive, ethnic woven motifs and naturally dyed colors that had potential appeal for the European consumers.

Moreover, for over 30 years, Lao Textiles, a studio and gallery founded in 1990, has brought together rural silk farmers, artisans, and craftsmen to produce premium wall hangings, scarves, shawls, and custom furnishings. All these activities are paving the way towards a new future of fashion for Laos while placing importance of the potential of emerging markets in leading the global change towards a greener, and less mass-produced garment industry.

Despite the proliferation of mass-produced textiles, traditional weaving and local artisans continue. Many nonprofit organizations have sought to support the growth of fashion-focused SMEs by bringing weaving products to the wider markets.

Recommendation and Conclusion

Recommendations

A key lesson learned from the Covid19 pandemic is that it is essential to immediately support businesses in their efforts to survive as well as workers who lose their jobs and income. The government support is needed to mitigate the future challenges as follows:

1. The government should also prioritize its industrial strategy towards the promotion of education, skilled labour training, and the attitude towards accumulating professional experience in order to increase labour productivity in line with the increasing wages. Consequently, it is necessary for the country to invest in skill training and development through in-house training and the provision of vocational training institutions. Business entrepreneurs can also assume an even more important role in promoting skill development of garment and textile workers if there are the policies of the government's incentives such as tax exemptions during a certain period, or a tax holiday in order to compensate for the costs associated with training for enterprises that provide training and develop the skills of their workers on a regular basis. Moreover, the government should organize technical training programmes related to inventory management, business negotiation skills, business planning, marketing strategy, and more training activities in order to improve business practice for local handicraft textile producers.

2. The Lao government should continue the improvement of trade, investment, business environments and connectivity, import procedures, and regulations. Specific support programmes on R&D development, industrial development, and competitiveness are necessary to ensure the survival and the competitiveness of Lao garment industry at the time when the Lao economy is integrating into the regional and global economy. Incentives should also be given to encourage companies to invest more in human resource development, innovation, research and development, technology, and digitalization. Local institutions such as training and other high-tech institutions

should be further strengthened in order to attract more advanced technology and high value-added segment of the global production network. Moreover, targeted export promotion programmes should also be considered. Moreover, the measures to react to the potential loss of trade privileges include measures to enhance productivity, market diversification, product upgrading, specialization, and regional collaboration.

3. The context of the Lancang-Mekong Cooperation and Development initiative is viewed as crucial to the industrial sector in Laos, in terms of generating employment and income for unskilled labour. However, it also raises issues relating to labour shortage, low skilled labour, low productivity and transportation costs. To promote and strengthen the garment and textile industry should be an important part of the agenda of the government agencies to overcome those obstacles. For example, a pilot project can be initiated to improve the facilities and the quality of vocational schools which can greatly contribute to the promotion of skilled work force in the future.

4. The export infrastructure for the garment industry needs to be enhanced as there is a need to make export competitive and to keep the costs under control because of the insufficient infrastructure that increases transaction costs. The infrastructure will be an important step towards modernization such as connectivity to ports, testing labs, and certification centers. Infrastructural development will not only boost the domestic textile market, but will also ease the way for export by reducing logistics costs. The LMCD could establish a project for regional cooperation in transportation and logistics which would include all countries within the LMCD. The project would be a platform for promoting good cooperation on transportation and logistics among the LMCD countries. Thus, this could help to reduce the transportation costs of each country, especially a landlocked country like Lao PDR.

5. The problem of labour shortages in the garment and textile industries could be the result of poor working environment in the factories where the majority of workers are women. A pilot project can be set up to promote good working environment in garment and textile factories. The relevant government agencies can exercise monitoring, as well as providing incentives, in order to encourage companies to promote better working environment.

6. A significant part of the Lao garment industry produces for mid to high level fashion brands such as Benneton or Armani or they produce sophisticated workwear for Western markets. The issue is rather that the value-added is comparatively low because most of the companies are only engaged in the CMT process. As some locally owned garment factories are manufacturingoriented, brand name orders will be divided up according to each country's supply capacities. The suppliers in Laos are more likely to receive the smallest allocation in the light of their limited production capacities, compared with China or Viet Nam.

There are also limits to the restructuring and reorganization of these value chains due to the small domestic market of Lao PDR. The latter does not allow for significant economies of scale, and, combined with the lack of specialized skills and technological capabilities, prevents the location of upstream activities in the country. Low conducive business enabling environment adds to the obstacles. Downstream activities or postproduction activities such as marketing, advertising, sales are often undertaken by multinational companies that are based in Europe or in the region. In 2018, none of the apparel produced in the Lao PDR was sold under a manufacturer's brand. All were sold under the buyers' brands. The Lao garment companies operate in value chains led by the buyers which control production networks, design, distribution, marketing, and branding. Many of the Lao garment companies did not even know about the final clients or end consumers of their products. Nor would they have the capabilities to deal with the after-production services.

A solution therefore might be to focus more on niche markets and products with a higher value-added. However, it would most likely require more investment in capital and more capacity building. As a landlocked country, Lao PDR has to rely on harbors in neighboring states such as Laem Chabang in Thailand and Danang in Viet Nam. As Lao PDR does not have very efficient or cheap logistics sector, it leads to comparatively long lead times. Road transport to the ports is comparatively very expensive, which adds to the cost burden. Apart from improving its international connectivity, upgrading the logistics sector will become ever more important.

7. In terms of regional and international collaboration in order to enlarge the supply chain, it might be an option if Lao PDR seeks a GSP or GSP+ arrangement with the EU and if the EU would allow regional cumulation to fulfil the RoO. A deeper integration into ASEAN value chains or the ASEAN part of global value chains, combined with upgrading and a higher degree of specialization could mitigate the reliance on imports of third countries. However, some Lao garment companies have some doubts that inputs of the necessary quality will be available in the region in sufficient quantity. Among the GMS countries, only Thailand and Viet Nam have capacity to produce natural fibers and have the technology and know-how to produce artificial fibers. Another option would be an increased cooperation with larger garment factories, particularly from Cambodia, Viet Nam and Thailand, so that the Lao companies can easier participate in larger orders. This would require some division of labour based on the strengths of the individual companies.

8. In terms of the future LDC graduation, in view of the degree of competitiveness of the garment industry, the prospect of losing preferential market access makes it crucial to diversify and develop production capacities in order to adapt to the transition to the new trading conditions. As major garment brands will look more into the issues such as environmental compliance, innovation and speed to market as the major determinants of their long-term sourcing, the graduation can in fact present the opportunity for Lao PDR to develop strategies that can position the textile and garment industry higher up the global value chain.

9. The private sector can pursue several measures such as market diversification through deepening the penetration into existing markets such as US, Japan, and ASEAN. In addition, they could penetrate into new markets such as China. Another opportunity is ASEAN market. Thailand, particularly the fast-growing market, have already imported more than 6.4m USD garment products from the Lao PDR in 2019. Half of those are men's and boys' shirts. Malaysia was the second large ASEAN market, importing 0.95m USD of Lao garments. Moreover, they should strengthen its markets in East Asia, especially Japan covered with a free trade agreement.

Conclusion

As Lao PDR is looking to transform itself from a land-locked to a land-linked country through regional infrastructure development, significant investments include the Laos-China railway, the East-West economic corridor, and key road networks. The challenge is to ensure that it can fully benefit from this improved connectivity, not only as a transit country but also through increased economic activity, export volumes, value-added services, and the creation of new and better jobs for its textile and garment industry. However, the costs of these investments are very high and the country can only benefit from the improved connectivity through improvement of the transport connectivity gaps to ensure access to logistics infrastructure, create business environment to attract investment and generate jobs, promote the products that Laos has a comparative advantage, modernize business services, and importantly improve and continue the compliance with social and environmental regulations through stringent assessment and garment industry.

Chapter 4 Myanmar

Economic Outlook in Myanmar



Figure 4.1 Map of Myanmar

Source: Nations Online Project (n.d.)

Myanmar has a long coastline along the Bay of Bengal, the Gulf of Mottama and the Andaman Sea in the south. It borders China in the north and northeast, Lao and Thailand in the east, and Bangladesh and the Indian states of Nagaland, Manipur and Mizoram in the northwest (see Myanmar map in Figure 4.1). The country covers an area of 676,578 km². Myanmar has a population of 53.86 million people. Largest city, former capital, and economic center of Myanmar is Yangon (Rangoon). Since 2005 Myanmar's new (administrative) capital is Naypyidaw, a planned city in the country's central part. Spoken languages are Burmese (official); Kachin, Kayah, Karen, Chin, Mon, Rakhine, and Shan are major regional languages. Myanmar is currently under a military regime (Myanmar Garment Manufacturers Association, 2022; Nations Online Project, n.d.).

Myanmar has 54.6 million Population with 46.9% are at working age. The average income (GDP per capita) in 2021was 1,100 per person per year which made it the poorest country in Southeast Asia. The unemployment rate of Myanmar is constant at 4% (see figure 4.2). The



minimum wage in 2021 has been gradually increased from 48 baht per day in 2012 to 113 baht per day in 2021 (see Figure 4.3).

Figure 4.2 Inflation Rate and Unemployment Rate in Myanmar during 2012-2021

Source: Inflation rate from International Monetary Fund (2022) and unemployment rate from DITP (2022)



Figure 4.3 Minimum daily wage in Myanmar

Source: Adapt from ASEAN Briefing (2021)

The GDP in Myanmar in 2021 was worth 65.16 billion USD (see Figure 4.4). The most important sector of the economy is services, which has been growing steadily in the last few years, and now account for over 38 percent of GDP. The share of agriculture has been declining, and now represents 36 percent of GDP. Finally, industry contributes the remaining 26 percent of GDP. However, it was expected that the annual GDP growth rate in 2022 would be -18 percent as all sectors are hit by the pandemic as well as the Coop (Myanmar Garment Manufacturers Association, 2022). The inflation in Myanmar was increasing to 7.3 percent in 2021 and 13.82 percent in January 2022 (see the blue line in Figure 4.2).



Source: Adapt from International Monetary Fund (2022)

The Kyat is continuously declined over the decade from 27.98 kyats per 1 baht in 2012 to 53.60 kyats per 1 baht in 2021 (see Figure 4.5). This trend initiates the export value of Myanmar. Myanmar's export value kept growing until the crash in 2019 due to political instability and the pandemic of COVID19 (see Figure 4.6). Oil and natural gas dominate Myanmar's exports. Other exports include rice, beans, grains, vegetables, wood, fish, clothing, rubber and fruits. Myanmar's main exports partners are China (30%), Thailand (23%), European (18%), Japan (6%), India (5.7%), USA (2.9%), UK (2.6%), Malaysia (2.0%) and South Korea (2.0%). Myanmar mainly imports fuel, vegetable oil, vehicles, pharmaceutical products, construction equipment, polymers, tires, machinery and boilers, and electronics. Myanmar's main imports partners are China (30%), Singapore (19%), Thailand (15%), Indonesia (8.5%), Malaysia (6%), India (4%), European (4%), Vietnam (2.4%), Republic of Korea (2.1%), and Japan (2.1%) (Myanmar Garment Manufacturers Association, 2022; Trading Economics, 2022).



Source: Adapt from Bank of Thailand (2022) and baht365.com (n.d.)



Source: Adapt from DIPT (2022)

International Trade between Myanmar and Thailand

Thailand and Myanmar have been established a strong profound the border trade relationship. The intertrade value between Myanmar and Thailand gradually increased from 5,989.06 million USD in 2012 to 7,138.53 million USD in 2021 (see Figure 4.7 below).



Figure 4.7 International Trade between Myanmar and Thailand

Source: Adapted from DIPT (2022)

Thailand is the second largest trade partner with Myanmar after China. The trade balance between Thailand and Myanmar in 2021 was 7,143 million USD with the export value of 2,823.27 million USD and the import value of 4,319.73 million USD. The main export markets of Myanmar are China, Thailand, European, Japan, India, USA, UK, Malaysia and South Korea consecutively. The top 10 imported product from Thailand to Myanmar in 2021 were fuel, drinks, chemicals, iron and steel, cereal, cosmetics, plastics, car and its components, textiles, and food grade oils. The top 10 exported products from Myanmar to Thailand in 2021 were natural gas, plants, minerals, meat, edible fruits and vegetable, fishery, iron and steel, electric machines, coffee, tea and spices, and live animals as can be seen in Figure 4.8 (DIPT, 2022; Trading Economics, 2022).

Top 10 Imported Thai products			Top 10 Exported Products from Myanmar			
to Myanma	ar in 2021		to Thailand in 2021			
Products	Value	% of	Products	Value	% of	
	(M.USD)	Total		(M.USD)	Total	
		Import			Export	
1. Fuel	512.72	11.87	1. Natural Gas	1,715.67	60.77	
2. Drinks	353.33	8.18	2. Plants	473.31	16.76	
3. Chemicals	253.24	5.86	3. Minerals	145.78	5.16	
4. Iron and steel	200.48	4.64	4. Meat	114.14	4.04	
5. Cereal	185.02	4.28	5. Fruits and Vegetables	63.13	2.24	
6. Cosmetics	164.24	3.8	6. Fishery	56.89	2.02	
7. Plastics	154.48	3.58	7. Iron and steel	50.78	1.8	
8. Car and components	148.37	3.43	8. Electric Machines	38.72	1.37	
9. Textiles	98.72	2.29	9. Coffee, tea, spices	24.56	0.87	
10. food grade oils	81.66	1.89	10. Live animals	1.39	0.05	
Total Import	4,319.73	100	Total Export	2,823.27	100	

Figure 4.8 Top 10 export and import products between Thailand and Myanmar

Source: Adapted from DIPT (2022)

Garment Industry in Myanmar

The textile and garment industry plays a major role in Myanmar's economy, particularly the export sector. Myanmar highly depends on the imported textile raw materials for its garment industry. The majority of raw materials such as fabrics for garment factories in Myanmar are imported mainly from China based on the buyer/supplier specifications and the design of products. In 2018, 74% of factories imported raw materials, such as, fabrics, sewing silk, exclusively from China. In 2021, Myanmar imported 97.3% of its textile products from Asia countries including 72% from China. There are 516 companies recently registered with the Myanmar Garment Manufacturers Association (MGMA). Total employment of the MGMA member were 453,377 people including 50,530 males and 402,847 females. In Myanmar, the textile, garment, and footwear industry employed more than 1.1 million workers in 2018, rose from only 0.3 million in 2016. The Myanmar garment sector is a female-dominated industry similarly to other garment exporters in the region. Approximately 90% of workers in export-oriented garment factories are female. Most of whom are under 35 years of age. Moreover, the expansion of the industry is mainly concentrated in Yangon and Bago, which has led to a significant increase of rural to urban migration. The sector's rapid growth has significantly contributed to the economic development of Myanmar and thereby reduced poverty. Before the spread of the COVID19 pandemic, the industry employed approximately 700,000 people, representing 10% of the total female workforce of the country. It supported thousands of more jobs in sectors such as logistics, transportation, daycare, and food services. Through revenue redistribution, these jobs support families all over the country of which 86% of the workers send back approximately 50% of their salaries to their relatives. Also prior to COVID19, in 2019 the export-oriented garment factories constituted of more than 600,000 workers, representing approximately 3% of the country's labour force.

The garment manufacturing model in Myanmar is divided into four stages along the value chain namely CMP, FOB/OEM, ODM and OBM. These manufacturing models in the global value chains include the following:

1. Cut-Make-Pack (CMP): The contracted garment company only focuses on production. The supplier/buyer provides the inputs, specifications, and design of the products.

2. Free on Board (FOB/OEM): The manufacturer is responsible for production activities as well as activities to procure the necessary raw materials for production.

3. Original Design Manufacturing (ODM): The garment company is engaged in designing activities in addition to FOB.

4. Original Brand Manufacturing (OBM): This business model covers branding and marketing activities in addition to previous stages of the value chain.

The majority of garment factories in Myanmar operate under the Cut-Make-Pack (CMP) system. Under the CMP system, producers are only responsible for the production of the garment and not for the design and/or input sourcing processes and most buyers/suppliers are responsible for purchasing the raw materials and delivering them to Myanmar. Most of the export-oriented garment factories in Myanmar are categorized as CMP factories and enjoy tax exemption for importing raw materials and exporting finished goods. But according to regulations, a CMP factory in Myanmar is required to export 100% of its products. Some factories focusing mainly on the domestic market operate as ODM. The use of local materials is very limited. Other manufacturing models such as the FOB system are required to pay at least 5% tax for importing raw materials and 9% tax to export finished products.

The garment industry consists of a buyer-driven value chain and brands/suppliers dominate the market and set the prices of the products. Myanmar is lack of the upstream industry for garment

industry in terms of both quality and quantity. Most of the inputs necessary to the garment sector, such as zippers, buttons, fabrics, etc., are imported. The raw materials necessary to manufacture these inputs are either not available in Myanmar at the necessary quality level or unable to reach the international standard. Lead-time is one of the important aspects of the relationship between brands/suppliers and manufacturers in order to maintain competitive prices and business relationship.

From Figure 4.7, the export of Myanmar's garment industry has been dramatically increased. From the mid-1990s to 2004, the country's contribution of the industry was relatively small compared to that of other Asian countries as their garment sector relied heavily on exports to US more than 50% of their exports. Myanmar's global trade in textile and garment products began significantly to increase after EU reinstated Myanmar into its Generalized System of Preferences (GSP) in 2013 and US restored Myanmar's trade benefits in 2016. With the sanctions lifted, Myanmar's garment industry became the main contributor to the country's strong economic growth. The Myanmar garment industry has grown significantly over the past few years, providing job opportunities for hundreds of thousands of workers. The reinstatement of EU trade preferences, or the Everything But Arms (EBA) initiative stimulated many European investors to come to Myanmar and develop the industry.

In 2010, Myanmar exported appeal related materials such as silk, cotton, yarn, knitted or crocheted garment and clothing, and non-knitted or crocheted garment and clothing for about 345,331,000 USD to all countries. In 2011, the exported values are about 494,469,000 USD to all countries. The value growth rate compared from 2010 to 2011 is 44 %. In 2012, the exported value increased to 857,289,000 USD and the export growth rate rose to 76%. The export value reached 1,201,865,000 USD with the growth rate of 16% in 2013. However, the export value dropped by 12% in the next year with the export value of only 1,064,951,000 USD. During 2015 - 2019 was the golden era for the garment industry in Myanmar. The export value rose up sharply from 863 million USD in 2015 to 1,575, 2.704, 4,179, and 5,021 million USD in 2016, 2017, 2018, and 2019 consecutively. Nevertheless, the political instability and the pandemic consequently caused a fall on export value in garment industry to 4,584 million USD in 2020 and 3,883 million USD in 2021. The political unrest, logistical challenges and banking hurdles in Myanmar cause more damage to the garment industry in 2022. The main export markets for Myanmar's garment industry are Japan (24%), Spain (10%), Germany (9.4%), The Netherlands (9.2%), UK (9.1%), USA (6%), and Republic of Korea (5%) as shown in Figure 4.8 (Myanmar Garment Manufacturers Association, 2022).

Since 2015, the government identified the textile and garment industry as a priority industry under the National Export Strategies. From 2015 to 2019, Myanmar's garment global export enjoyed 57% annual growth. Myanmar's garment export to EU experienced 97% annual growth and US 78% annual growth. The textile and garment industry accounted for nearly 30% of Myanmar's total exports in 2019. Garment export grew from 912 million USD in 2012 to 5.7 billion USD in 2019. EU was the largest destination for Myanmar garment products, representing 75% of Myanmar's total garment export in 2019. The critical factor behind this growth was tariff free access to European and North American markets.

In 2021, Myanmar's export market shares remained stable in EU and US, and it enjoyed a substantial increase in Japan. As Myanmar's garment export enjoyed duty-free market access in the EU, Japan, and South Korea and Myanmar was also a beneficiary of the US Generalized System of Preferences (GSP) programme, Myanmar's garment exports mostly went to EU (56%), Japan and South Korea (30%), and US (5.5%).



Figure 4.7 Myanmar Garment Export Value during 2011 - 2021





Figure 4.8 Myanmar Garment Export Value by Drstination Market during 2018 - 2021

Source: Adapted from Myanmar Garment Manufacturers Association (2022)

However, Myanmar's market shares in the leading garment export markets namely US, EU, and Japan remained small. For example, in 2019, less than 0.1% of the US and the EU's garment import came from Myanmar. Meanwhile, Myanmar was diversifying its export market. For example, over 8.5% of Myanmar's garment export went to other ASEAN members in 2021, up from only 3.0% in 2020 and 2.7% in 2019.

Prior to 2010, most of the garment factories were owned by domestic investors. Since 2012, foreign and domestic investors showed increasing interest in the textile and garment industry in Myanmar due to the supply of cheap and abundant labour, liberalization of investment regime, GSP tariff benefits for Myanmar, incentives offered by the government such as investment and tax incentives for manufacturers established in special economic zones, 5-year tax holiday, custom duty exemptions on imported machinery, and inclusion of equipment and value of machinery into the capital investment requirement. In 2016, 30 investment proposals were approved, 14 of which involved in the construction of new garment factories. The share of foreign owned factories dropped by 19% during the same period. Approximately 91% of export-oriented garment factories were located mainly in industrial zones.

Advantages, Challenges and Sustainability of Myanmar's Garment Industry

Advantages of Myanmar's garment industry are as follows:

- 1. Competitive labour force: Myanmar has a large group of working age population with multi language skills including English, Chinese, Japanese, and Korean. International brands have been interested in Myanmar because despite largely untrained and unskilled labour force, its strength is sizeable low-wage workforce (garment workers earned approximately 85 USD/month in 2019). Although other countries in the region are more advanced than Myanmar in the production of garment, there are opportunities for Myanmar to gain more of the regional production share as some of these countries such as Vietnam, Cambodia, China are increasingly expensive. Due to foreign investment with nearly half of Myanmar's garment factories are foreign-owned, Myanmar specializes in relatively high quality functional/technical clothing such as outwear like jackets and coats. This is different from many other garment exporting countries such as Bangladesh, Vietnam, and Cambodia who mostly export low-cost items.
- 2. Geographic advantages: Myanmar location is proximity to major garment partners: China, Bangladesh, Vietnam, India, etc.
- 3. Upstream of the chain: Myanmar is the 13th largest cotton producer in the world. Industry diversification continued, with a further shift from many investors to vertically integrate, and build up more value-added production within Myanmar. The first GOTS (Global Organic Textile Standard) certified cotton was domestically grown, the first zipper factory was established, denim washing facilities, garment printing facilities, a circular knitting factory were among the several companies for whom production was either newly established or expanded.
- 4. Infrastructure and facilities: Myanmar government supports the foreign direct investment and provides quickly modernizing port infrastructure. Industrial zones are being setup in new cities and regions.
- 5. Low-cost advantage: Myanmar has been one of the most popular emerging garment sourcing bases among fashion companies. International retailers such as Gap, H&M, Marks and Spencer Group, and Primark Stores Ltd. signed contracts with more than a

dozen garment factories in Myanmar. C&A, New Look, and Muji were mega retailers manufacturing their products in Myanmar. During 2019 to 2020, some of the world fashion brands that carried garment items "Made in Myanmar" included United Colors of Benetton, Next, Only, Guess, Jack & Jones, and Mango. At present, brands and retailers are outsourcing garment from Myanmar include Zara, Adidas, Fast Retailing Group, and C.P. Company. Outwear is the single largest category of products that fashion companies outsource from Myanmar approximately 37%. The average price of "Made in Myanmar" outwears in the retail market in developed countries e.g., EU, US, and Japan is approximately 70 USD/piece, much lower than those from China (over 200 USD/piece) and Vietnam (over 150 USD/piece). As fashion companies struggle with the increased sourcing costs in 2022 and the pressure of reducing reliance on China, Myanmar remains a reasonable sourcing destination to fulfill certain orders from the business perspective. At the present moment, fashion brands and retailers typically treat Myanmar as a supplementary sourcing base as part of their overall sourcing diversification strategy. Some fashion brands and retailers continue to source garment from Myanmar in 2022 due to changing business environment for example inflation and need to reduce dependence on China but the practice varies country by country.

- 6. Technology development: Automation in the Myanmar garment sector is limited but growing. Some garment factories have invested in some type of automation for their factories but often for only a small part of their production process. In the past few years, some factories adopted new technologies such as digital plotter printers or computer aided design in preproduction processes. Fully-automated production lines are still in the very early stages of use and can only produce a small number of products. However, a wide range of new automatic machines used in the production process are being rapidly adopted by garment factories which include automatic sewing machines, hanger systems, and fabric spreaders and cutters. Foreign-owned factories such as from China, Korea, and other Asian countries are more likely to adopt more sophisticated technology. While automation and new technologies will make some jobs redundant, they also pave the way for more productive work, higher paying jobs, and improved working conditions and occupational safety and health. Many factories have adopted the CAD and /or plotter printers. In fact, CAD and digitalization of preproduction is a major component for a factory to move from CMP to FOB. Some factories have invested in RFID, a digital technology to help better manage production and inventory. The RFID system allows the management to track the movement of items in real time and with greater accuracy. Moreover, some factories have invested in ecofriendly washing machines which not only use less water, but also keep track of water and chemical use. The automation also reduces waste and defects, improve the efficient use of resources, and improve management and data collection capacity.
- 7. Labour development in garment industry: CBI, an organization providing quality trainings, organized programme and training activities for garment companies such as visit to international trade fair, price bargaining, inspection of input quality, increase of productivity, and improvement of sewing technique. A CBI programme focused on assisting companies to shift from a CMT (cut-make-trim) business model, whereby all inputs are provided by the buyers, to FOB (free-on-board) in which companies themselves source these materials, carrying larger risk but also potentially gaining higher margins. However, many factories expressed hesitation in implementing the FOB

production through concerns about accessing to suitable finance such as prefinancing, and overcoming logistical challenges in sourcing the required inputs from abroad. On this matter, other donor organizations in Myanmar were trying to start a dialogue with the government and other relevant institutions to facilitate companies who wanted to switch to the FOB production. Another CBI programme was to raise awareness of factories on the importance of the standards of labour conditions and CSR activities and that they would have to implement the improvements if they wanted to export to European markets.

- 8. Industrial linkage: EMC (Environment Myanmar Cooperative), a leading resource and environmental consultant group, designed potential measures for linkage between stakeholders, which were divided into three groups namely near-term, year-long, and policy interventions.
 - Near-term interventions included improving the linkages within the sector or increasing the amount of information available to all stakeholders, strengthening the sector linkages that could take place through workshops between international buyers and local manufacturers, mini trade fairs to connect local garment manufacturers with local and international input suppliers, and by including local and international banks within the sector.
 - Year-long interventions would see the improved capabilities of training providers in the country. EMC recommended the focus on management trainings that might assist the industry in moving from the current CMP production system towards the higher value-added FOB model.
 - Policy recommendations aligned with the objective that was already part of the Myanmar Ministry of Commerce's national garment and textile export strategy. The MOC was planning to create an interministerial steering committee to jointly design the future national strategic policies for the garment sector

Challenges of Myanmar's garment industry. With the recent economic changes and the fluctuations in the global economy, the Myanmar garment industry has faced with the number of challenges as follows:

1. Political and humanitarian situation in either country and region level. Fashion brands in the West tend to reevaluate their sourcing strategy from Myanmar not only about price competition, Myanmar's attractiveness as a garment sourcing base may be affected. Moreover, the international community, including US and EU, is considering new sanctions against Myanmar. If Myanmar loses its EU's EBA eligibility or no longer enjoys duty-free access to its major garment export markets, the country's garment export could be seriously affected. Therefore, it could be challenging for Myanmar to find alternative garment export markets especially during the pandemic. For example, only 1.3% of Myanmar's garment export went to China in 2019. In the course of the recent event, US has recently imposed the most significant sanctions such as suspending the 2013 Trade and Investment Framework Agreement (TIFA) and issuing the Business Advisory for Burma in January 2022. EU continues to allow garment export from Myanmar to enjoy duty-free benefits under the Everything But Arms (EBA) programme. Similarly, without facing major trade-related sanctions, Myanmar's garment to Japan remains qualified for duty-free benefits under the GSP (as of April 1, 2022). But while Myanmar earned nearly 4.8 billion USD from garment exports in the fiscal years 2019-20, the exports were down by over 63 million USD when compared to the previous year.

- 2. Inadequate physical infrastructure: in comparison with key export hubs in China or Vietnam, poor business environment such as communications and transportation networks with limited supply of electricity and limited access to telecommunication outside major urban areas among others.
- 3. Lack of skilled labour: only a small share of workers (approximately 4 per cent in a 2020 study) have directly experienced a change in the digitalization or automation in their work. Technological changes are coming but the inevitable changes necessitate Myanmar to make preparations now. Future success in the garment industry in Myanmar will basically depend on the skills of the workforce with capacity building to operate advanced machines for the production of complex, high valued garment. The garment industry will also require more highly skilled repair and maintenance workers.
- 4. Low productivity: the labour are lack of knowledge and skills to work with new technology. Due to the potential of the textile and garment sector in Myanmar's economic growth, increasing demand for preparation of entrepreneurial skills for professionals in domestic and global textile and garment markets as well as for specific education related to textile and garment is crucial. Its market challenges include underqualified workforce, weak training and skill development system
- 5. Environmental issues: due to weak regulatory, some manufacturers caused negative environmental impacts. In addition, inadequate safety standard in some factories threaten the reputation of the industry.
- 6. Incomplete value chain: the industry depends on imported fiber, yarn and fabric for assembling finished textiles or clothes that are then re-exported. These imported inputs accounted for more than half of total production costs.
- 7. Low technology: technology and automation in the textile and garment industry are crucial for Myanmar to upgrade to higher value-added products and to increase wages. Automation and digitalization play an important role in enhancing operational efficiencies, reducing time lags that hinder the production process, increasing labour productivity, increasing over all competitiveness of the industry, and reducing the industrial environmental footprint. Nevertheless, they could also pose serious challenges for the many garment factories and unskilled workers involved, including the lack of improved supervisory skills as factories become more automated.
- 8. COVID19 pandemics: the COVID19 pandemic has disrupted the garment supply chain and affected the stakeholders in Myanmar's garment sector as follow:
 - As a major contributor to jobs and livelihoods for the country, the industry suffered a decline in production due to the demand shocks in destination countries. In Myanmar, factories reduced their workforce while maintaining the demand for workers' productivity as a survival strategy to compensate for the decline in CMP prices from buyers or COVID19 related adjustment costs. In terms of employment, 142 factories in Myanmar either temporarily or permanently closed and 171 factories reduced their labour force from early January 2020 to mid-January 2021. As a consequence, a total of 96,519 workers were laid off, mostly small and medium sized factories and/or local market focused factories.

- Small and medium-sized factories and local subcontracted factories were less flexible than large factories due to resource constraints and lack of direct market access. During 2020, the garment sector faced significant challenges to respond and recover from the pandemic. Between late 2020 and in January 2021, there were supply and demand uncertainties, order decrease and/or order cancellations from international buyers, declining wages, and job losses. In 2020, during the COVID19 pandemic, the World Bank estimated that Myanmar's GDP growth for the 2018/19 financial year was 6.8% and declined to 1.7% in the 2019/20 financial year. When comparing the trade volume before COVID19 (April September 2019) and during COVID19 (April-September 2020), the total volume dropped by 2%. Manufacturing export also decreased by 13.5% compared to the same period before the pandemic.
- Factories experienced a shortage of raw materials due to transport disruptions and/or the closure of supplier factories in China. In order to reduce the transportation time, some factories shifted their transport mode from sea shipment to overland transportation, despite 10-15% higher transportation cost. Also, some export-oriented factories among Myanmar's subcontractors shifted some part of the buyers/suppliers' orders to other companies, especially locally owned factories, to meet order deadlines while some received subcontracting work from other factories.
- While the COVID19 had impact on operating hours, factories also tried to increase production levels with the remaining workforce. As women make up over 80% of the garment sector workforce, the state of their economic self-reliance was threatened by the massive job losses in 2020 because of the COVID19 pandemic.
- Both the government and the leading relevant private sector formulated the strategy to identify the role of transitioning from a CMP manufacturing model to an FOB manufacturing model. However, it seemed that factories were unlikely to adopt such a strategy under uncertain market conditions and financial constraints especially during the COVID19 pandemic and still preferred to take advantage of low labour costs in Myanmar.

Sustainability

The most negative impacts garment factories in Myanmar have on the environment include air pollution from boilers, water over-extraction, water pollution, solid & hazardous waste disposal issues, and contribution to deforestation due to wood fuel use in boilers. The implementation towards sustainable consumption and production in the Myanmar garment industry has only just begun.

As of mid-2019, at least six garment factories in Myanmar installed solar photovoltaic systems for combined peak generation capacity of approximately 500 kW. Five other garment factories set up rainwater harvesting systems. Some factories also installed biomass boilers. One of the facilities taking some of these measures was Amava Apparel which was to become the first LEED Platinum manufacturing facility in Myanmar. These best practice activities reflect positive future, but actions taken by only the most progressive 1% of manufactures are not sufficient.

The 2015 White Paper by the Myanmar Garment Manufacturers Group outlined goals to increase the number of people employed in the textile and garment sector to 1.5 million by 2024 and increase the value of the industry to 10 billion USD. However, the high rates of growth tended to have negative side effects, especially to the environment. Over-extraction of water and pollution

were major concerns in the stages of garment production and processing in Myanmar, alongside boiler fuels and emissions of factories that occasionally used coal as a cheap fuel source. Moreover, the lack of comprehensive environmental regulations contributed to the on-going environmental degradation arising from the processes of sourcing raw materials, milling, dyeing, manufacturing and packaging.

However, numerous players from governments, global retailers, brands, and local employers have responded to these concerns, and the interest regarding ethical, sustainably sourced and produced fashion increased nationwide. SMART Myanmar, a project funded by EU, intended to raise awareness among European consumers regarding the production situation in Myanmar while promoting cooperation among actors of the value chain in Europe and Myanmar to foster sustainable practices by enhancing collaboration. In 2020, the SMART project team also implemented the EU Myan Ku Fund, which was an emergency cash transfer mechanism designed to assist tens of thousands of workers employed by the garment industry, now affected by the COVID19 pandemic. Companies such as Virya Myanmar also entered the sustainable fashion industry in Myanmar by utilizing locally sourced, naturally dyed fabrics, and by providing training and support to weavers and local communities. While a lot remains to be done, ongoing initiatives have contributed to sustainable change in the emerging fashion industry in Myanmar.

Recommendation and Conclusion

Recommendations

Given the economic growth potential of the textile and garment industry, it is crucial for Myanmar to consider undertaking the following measures:

1. In terms of skill development, what increasingly essential is the need for the industry stakeholders to invest in skill development to cater to future demands. Training systems should be reformed. Industry bodies and workers should take the lead role in designing skill development structures and programmes, with training delivery focusing chiefly on in-house training. Partnership between training institutes and private sector should be developed for skill training programmes to have access to new technologies, as well as other essential fields such as design, product development, and marketing. Skill certifications should also be integrated into training programmes. The government is recommended to improve the legal system, develop the sufficient TVET (Technical and Vocational Education and Training) legislation, and improve the Employment and Skills Development Law. The appropriate incentives, programmes, and policies must be developed to encourage training and technological adoption, including technological adoption at the workplace. Moreover, the development of technical skills should be complemented with the development of other skills such as soft skills, or problem-solving skills.

2. In terms of business environment, predictable, reliable, and affordable electricity is essential for garment production including automated garment production. Efficient ports are also crucial as the industry places increasing emphasis on time to market. These changes require significant investment and policy reforms in order to ensure that Myanmar remains competitive and continues to create quality employment in the textile and garment sector.

3. Partnership and exchange should be developed and supported. Being an organization of sustainable business, BSR recognizes that there is great momentum for Myanmar's garment sector, with a number of initiatives already working in the country, including BSR's HER project to face the challenges of many of the ESG (environmental, social, and governance) issues. These activities need to be supported by increased garment sector transparency and actions in terms of human capital development, community engagement, and contributions to regulatory reform and

enforcement. Finally, these opportunities will represent long-term business value because they support and accelerate the development of an efficient and sustainable garment manufacturing sector in Myanmar. The following key opportunity areas are crucial to support the sustainable growth of Myanmar's garment sector:

- Strengthen industrial relations: Those involved in the garment sector should undertake in-house human resource capability development. The garment sector and its partners should also provide support to institutions such as the Ministry of Labour, the International Labour Organization (ILO), and local labour rights organizations, to increase awareness, knowledge, and transparency on good industrial relations practices.

- Develop modern human resource practices: Clarity and transparency around internationally accepted standards and modern HR management practices will help establish responsible sourcing environment. In-house capacity building combined with the adoption of relevant internationally accepted industry principles and best practices will boost the ability of Myanmar's garment sector to remain competitive and sustainable.

- Encourage industry-wide dialogue by exchanging best practices, lessons, and information on the rapid changes of the industry.

- Engage with key stakeholders to inform sourcing practices and identify partners for further collaboration on key issues.

- Conduct business, dialogue, and stakeholder engagement in a transparent manner to enable further accountability.

- Encourage sustainability leadership to foster the continuous improvement of ESG (environmental, social, and governance) conditions across the sector.

4. The National Export Strategies specified the need for the garment sector to shift from the CMP model to the FOB model to improve the capacity building of the workers and expand the market.

5. Myanmar's garment sector needs to diversify its market due to decreased orders as a result of the current COVID19 situation. Under a programme by the UK's DaNa Facility, local garment factories are also being encouraged to diversify their products, with five local garment factories in Yangon and Bago having started making personal protective equipment (PPE). At present, Myanmar garment markets include EU, Korea, Japan, and Germany. Only a small number goes to US and not many to Central America and the Middle East. So, the markets should be tapped or intensified.

Conclusion

The textile and garment industry in Myanmar faces a number of challenges. Production is generally concentrated in the low-value end, driven by a workforce with limited educational qualifications and with challenges to adopt new and necessary technologies. With foreign direct investment and interests from global clothing buyers, the industry is a substantial source of employment. Sustaining these prospects and enhancing competitiveness will necessitate more skilled workforce, higher value-added product development, sufficient infrastructure, as well as strengthening cooperation across the industry.

Chapter 5 Vietnam

Economic Outlook in Vietnam



Figure 5.1 Map of Vietnam

Source: Nations Online Project (n.d.)

Vietnam, officially the Socialist Republic of Vietnam, is a long-stretched country along the eastern coast of the Indochinese Peninsula with an area of 331,689 km². Vietnam borders China in north, Laos and Cambodia in west. The nation is bordering the South China Sea in east, and the

Gulf of Tonkin with the island of Hainan Dao (China) in north-east (see Figure 5.1). The country shares maritime borders with Indonesia, Malaysia, Philippines, and Thailand. Capital city of Vietnam is Hanoi (Ha Noi), former capital of the Republic of Vietnam and largest city is Ho Chi Minh City (also known as Saigon). The Socialist Republic of Vietnam is a one-party Communist state. The Communist Party of Vietnam plays the central role in politics and society. Head of state, nominal commander of the armed forces and chairman of the Council of National Defense and Security is the President. Head of government is the Prime Minister who is appointed by the president.

Vietnam has a population of 99.4 million people; it is the 13th most populous country in the world. Spoken language is Vietnamese, English is increasingly favored as a second language, and there are still people speak some French. Vietnam is a multinationality country with 54 ethnic groups. Viet (Kinh) (87%), Chinese (3%), Tay, Thai, Muong, Hoa, Khmer, Nung, other mountain people. The average income in 2021 was 4,160 USD per person (GDP per capita) lower than the average income of Southeast Asia at 5,380 USD. Vietnam's minimum wage in 2021 was 155.32 baht (see Figure 5.2). The unemployment rate in Vietnam was 2.7% in 2021, slightly increased from 2.0% in 2012 and 2.5% in 2020 (see the orange line in Figure 5.3).



Figure 5.2 Minimum daily wage in Vietnam

Source: Adapt from ASEAN Briefing (2021)



Figure 5.3 Inflation Rate and Unemployment Rate in Vietnam during 2012-2021

Source: Inflation rate from International Monetary Fund (2022) and unemployment rate from DITP (2022)

Vietnam's GDP in 2021 was 366.20 billion USD increased by 2.58% over the previous year due to the Covid19 seriously affected all areas of the economy, especially in the third quarter of 2021, many focused economic localities had to implement prolonged social distancing to prevent the COVID19 epidemic (see also in Figure 5.4). The Vietnamese economy is based mainly on service sector which accounted for 40.95% of total GDP, following by: industry and construction accounted for 37.86%; agriculture, forestry, and fishery sector account for 12.36%; product tax minus product subsidies accounted for 8.83% (General Statistics Office of Vietnam, 2021). The inflation rate in 2021 was 1.8% which is comparatively low comparing to the average inflation rate of Southeast Asia Region at 2.5% (see the blue line in Figure 5.3 above)



Source: Adapt from International Monetary Fund (2022)

In 2020, Vietnam exported a total of 300 billion USD, making it the number 16 exporter in the world. During the last five reported years the exports of Vietnam have changed by 132 billion USD from 169 billion USD in 2015 to 300 billion USD in 2020 (see export growth in Figure 5.5). The top exports of Vietnam are broadcasting equipment (\$42B), telephones (21.4 billion USD), integrated circuits (19.4 billion USD), textile footwear (8.9 billion USD), and office machine parts (7.68 billion USD). The main export markets of Vietnam in 2020 was USA (77 billion USD, 25.6%), China (49.4 billion USD, 16.5%), Japan (20.4 billion USD, 6.79%), South Korea (19.6 billion USD, 6.54%), and Hong Kong (13.8 billion USD, 4.6%). Vietnam exported its products to Thailand only 5.14 billion USD or 1.71% of total export value. Vietnam was the world's biggest exporter of coconuts, brazil nuts, and cashews (3.06 billion USD), metal-clad products (3 billion USD), fuel wood (1.92 billion USD), cement (1.48 billion USD), and nonretail mixed cotton yarn (349 million USD). The top imports of Vietnam are integrated circuits (34.2billion USD), telephones (16.5 billion USD), semiconductor devices (6.04 billion USD), light rubberized knitted fabric (4.84 billion USD), and broadcasting accessories (4.1 billion USD). The main import partners of Vietnam were China (104 billion USD), South Korea (48 billion USD), Japan (16.1 billion USD), Taiwan (11.5 billion USD), and Thailand (11.2 billion USD). Vietnam was the world's biggest importer of light rubberized knitted fabric (4.84 billion USD), synthetic filament varn woven fabric (2.12 billion USD), soybean meal (1.7 billion USD), coconuts, brazil nuts, and cashews (1.6 billion USD), and plastic-coated textile fabric (1.16 billion USD) (Observatory of Economic Complexity, 2020)



Figure 5.5 Export Growth of Vietnam during 2012 – 2011

Source: Adapt from DIPT (2022)



Figure 5.6 Exchange rate VND to 1 THB during 2012 - 2021

Source: Adapt from Bank of Thailand (2022) and baht365.com (n.d.)

International Trade between Vietnam and Thailand

Thailand and Vietnam have been both competitor and trade partner in global market. The intertrade value between Vietnam and Thailand steady increased from 9,360.84 million USD in 2012 to 19,477.76 million USD in 2021 (see Figure 5.7 below).



Figure 5.7 International Trade between Vietnam and Thailand

Source: Adapted from DIPT (2022)

Vietnam was the third largest export market of Thai textile and garment industries with 7% of total exported value after USA (20%) and Japan (12%). At the same time, Vietnam was the second largest import market for Thai textile and garment industries holding nearly 9% of total imported value after China which held 46% of import value (Thailand Textile Institute, 2021). The trade balance between Thailand and Vietnam in 2021 was 18.73 billion USD with the export value of 6.16 billion USD and the import value of 12.57 billion USD. The main export markets of

Vietnam are USA, China, Europe, Japan, Republic of Korea, Hong Kong, UK, India, and Thailand consecutively. The top 10 imported product from Thailand to Vietnam in 2021 were vehicles, electronic equipment, plastics, machinery, auto parts, electricals, mineral fuels and oils, chemicals, chemical products, and textiles. The top 10 exported products from Vietnam to Thailand in 2021 were telephones, crude oil, mechanics, electronic and computer, vehicles, iron and steel, fishery, garment, fruits and vegetables, steel product as can be seen in Figure 5.8 (DIPT, 2022; Trading Economics, 2022).

Top 10 Imported T	Thai product:	8	Top 10 Exported Products from Vietnam			
to Vietnam i	n 2021		to Thailand in 2021			
Products	Value	% of	Products Val		% of	
	(M.USD)	Total		(M.USD)	Total	
		Import			Export	
1. Vehicles	1,509.1	12.00	1. Telephones	938.9	15.24	
2. Electronic equipment	1,218.6	9.69	2. Crude oil	577.6	9.37	
3. Plastics	945.1	7.52	3. Mechanics	543.8	8.83	
4. Machinery	927.1	7.37	4. Electronic, computer	506.1	8.21	
5. Auto parts	834.7	6.64	5. Vehicles	477.0	7.74	
6. Electricals	756.3	6.01	6. Iron and steel	406.4	6.6	
7. Mineral fuels, oils	733.6	5.83	7. Fishery	266.9	4.33	
8. Chemicals	578.4	4.60	8. Garment	211.2	3.43	
9. Chemical products	320.3	2.55	9. Fruits and Vegetables	147.2	2.39	
10. Textiles	266.0	2.12	10. Steel Product	114.0	1.85	
Total Import	12,574.7	100	Total Export	6,161.2	100	

Figure 5.8 Top 10 export and import products between Thailand and Vietnam

Source: Adapted from DIPT (2022)

Garment Industry in Vietnam

Vietnam was the fourth largest exporter of textiles and garment in the world with the share of 5.2% after China (31.6%), Europe (26.9%), and Bangladesh (5.4%). Vietnam was the 7th exporter of textile products with the turnover of 4.4 billion USD whereas it was the fourth exporter of garment products with the turnover of 34.93 billion USD (see Figure 5.9 and 5.10). The textile and garment industry is the major contributor to the total export earnings and the economic development of Vietnam. Garment industry is the leading industry in Vietnam in terms of labour recruitment creating employment of about 2.5 million workforces directly in industry and nearly 1 million workers indirectly in the trading and service businesses. The labour force in the textile and garment industry accounts for 39.7% of the country's total labour force, mostly from rural areas and around 80-85% is female.

Garment enterprises accounted for approximately 63% while textile enterprises accounted for approximately 37%. The number of Vietnamese textile and garment enterprises significantly increased from 2,994 in 2007 to 13,741 enterprises in 2019. The percentage of textile enterprises in the total number of enterprises in the country's economy between 2008-2019 was between 2% and 2.5%. Vietnam's competitiveness is owed to large and young labour force with limited technical skill. The industry also benefits small-and medium-sized enterprises (SMEs), which account for 97% of all companies and employ nearly 75% of the labour force. Garment industry generate income of nearly 200,000 billion VND per year (equivalent to 8.6 billion USD/year). It

creates value in the average income of about 8.5 million VND per person per month. In 2019, the revenue that Vietnam earned from the textile industry stood at 39 billion USD. Production lines are mostly medium and small scale. Vietnam's textile and garment industry consists of three subsectors namely upstream sector (fiber pro-duction), midstream sector (fabric production and dyeing), and down-stream sector (garment manufacturing). The textile and garment industry uses main materials such as cotton, synthetic fiber, wool, filament, and silk. Initially, the subsectors that produced fibers or fabric were not of good quality and were mainly used for domestic consumption. Although Vietnam has huge potential of cotton cultivation and production, the local source supplies only less than 2% of the total cotton requirements and the textile industry imports a large amount of cotton. The local fabric industry supplies about 20% of total input demand by the garment sector, the rest 80% is imported for the export-oriented garment industry. However, the availability of domestic textile inputs is a major problem.



Figure 5.9 Top 10 textile exporting countries in 2021



Figure 5.10 Top 10 garment exporting countries in 2021

Source: Vietnam Textile and Apparel Association (2022)

Vietnamese garment producers heavily rely on imported inputs for their production, constraining them from moving up the global value chain. The industry's development was limited

by low value-added production due to weak linkages in the value chain. Fiber and fabric are mainly used for domestic consumption due to low quality. The price of local cotton or polyester fabric compared to imported fabric is 40% higher, making it too costly to fully replace import mainly from China and US. Vietnam has a relatively small spinning subsector that produces yarn or approximately 6% of the enterprises. Nevertheless, yarn production is an area where Vietnam has a comparative advantage in addition to garment production. Between 2013-2017, yarn production increased by almost threefold from 720,000 metric tons to 2,050,000 metric tons. Among the raw materials used in the textile industry in Vietnam, the most common ones are cotton, polyester, and silk. Vietnam remains a net importer of cotton. Vietnam's top five cotton suppliers are US, Brazil, India, Australia, and Cote d'Ivoire, supplying over 90% of cotton for the country's production. Vietnam also imports yarn for its weaving and knitting industry, most of which is synthetic yarn. In 2019, Vietnam imported up to 89% of fabrics, of which, 55% from China, 16% from South Korea, 12% from Taiwan, and 6% from Japan.

The downstream sector of garment manufacturing consists of Cut-Make-Trim (CMT) models as the main activities. In 2019, CMT accounted for approximately 65% of total exports, earning very low value-added while the more advanced business models such as Original Equipment Manufacturer (OEM)/FOB (Free on Board), and Original Design Manufacturer (ODM) accounted for only 35%. Moreover, in the downstream sector, marketing and distribution are underdeveloped and depend heavily on foreign companies. In the global textile and garment value chain, most Vietnamese enterprises are at the bottom of the value chain or the lowest value-added stage. In 2018, approximately 70% of Vietnamese textile and garment participated in the value chain with the simple method of CMT in which the value-added could create only 1-2% of the total value added of the textile value chain. Few businesses participate in FOB or OEM due to the following reasons: 1) the supporting industry of the textile and garment industry is underdeveloped, making businesses rely on imported raw materials, 2) technological level of the textile enterprises is low, 3) The quality of labour is low, and 4) The majority of textile enterprises are small scale.

The textile and garment industry has undergone development stages as follows:

1. The first stage was based on abundant natural resources such as cotton, silk; low-cost and low-skilled labour with mass production, and processing with low value-added products.

2. The industrialization period with strongly developed intermediate industries and manufacturing chains with high flexibility and increasing automation level. The demand for semi-skilled and highly skilled labour force, managerial labour and professional labour was increasing but labour costs were increasing as well.

3. The stage of applying knowledge economy, competitiveness thanks to the high technology capability and skilled human resource development. The demand for high-quality human resources has increased sharply, focusing on those capable of researching and developing new products, designing, labour with many skills, and knowledge of the market.

Garment export turnover in 2021 has reached 40.4 billion USD accounting for 12% of total Vietnam's export turnover. In addition, Garment industry could create a large export surplus of the country (see details in Figure 5.11). In 2021, it contributed a trade surplus of 19.74 billion USD, four time higher than the total trade surplus of Vietnam at 4 billion USD (Vietnam Textile and Apparel Association, 2022).

No	Categories	2019	2020	2021	Compared 2020 (%)	Compared 2019 (%)
	Garment export	30,723	27,867	30,201	8.38	-1.70
	Fabric export	2,127	1,943	2,553	31.39	20.03
	Fiber export	4,177	3,737	5,612	50.17	34.35
	Textile Accessories export	1,270	1,064	1,303	22.45	2.63
	Geotextile export	589	456	785	72.15	33.28
1	Total Textile & Garment export	38,886	35,067	40,454	15.36	4.03
2	Total Textile import	22,003	19,589	24,243	23.76	10.18
	Cotton import	2,570	2,282	3,232	41.62	25.77
	Fiber import	2,410	1,999	2,553	27.70	5.92
	Fabric import	13,277	11,876	14,325	20.62	7.89
	Textile accessories import	3,746	3,432	4,133	20.44	10.33
3	Import for Export	18,933	16,372	20,715	26.53	9.41
4	Export-Import (1-3)	19,953	18,696	19,740	5.58	-1.07
5	VAT rate (4/1)	51.3%	53.3%	48.8%	-4.5%	-2.5%

Figure 5.11 Export and Import Turnover of Garment Industry by Product Types

Source: Vietnam Textile and Apparel Association (2022)

Vietnam's export turnover in 2021 reached 24.24 billion USD including 3.23 billion USD of cotton, 2.55 billion USD of Fiber and yarn, 14.32 billion USD of Fabric, and 4.13 billion USD of accessories (see figure 5.12). However, the main players in the industry are FDI manufacturers who contributes around 60% of total export turnover of Vietnam's Garment industry (see Figure 5.13).



million USD

Source: Vietnam Textile and Apparel Association (2022)



Figure 5.13 The Proportion of Garment Industry exports by FDI and Local Enterprises in Vietnam

Source: Vietnam Textile and Apparel Association (2022)

Vietnam's garment exports have increased considerably from 28.1 billion USD in 2016 to 38.9 billion USD in 2019, or an average growth rate of 9.55% annually Vietnam has emerged as the fourth largest garment exporter in the world after, China, EU, and Bangladesh with an export market share of 7.05% in 2020, an increase from 5.54% in 2016., with US, EU, Japan, and South Korea as the main export destinations of Vietnam's textile and garments products. The country's textile and garment industry aimed to achieve an export revenue of approximately 39 billion USD in 2021. Recently, Vietnam exports textile and garment products to more than 200 countries and territories around the world, increased from 150 in 2016. US remained Vietnam's main export market in 2020, reaching 16.06 billion USD, or 45% of the total export turnover. Meanwhile, exports to EU accounted for 14%, reaching 4.99 billion USD, followed by Japan and South Korea with 4.82 billion USD and 3.57 billion USD respectively Moreover, Vietnam's textile and garment industry has achieved great successes in other markets such as China, Russia, Cambodia, Indonesia, and Thailand. More than 60% of garment exports consist of shirts, trousers, jackets, sporting clothes, sweaters, polo shirts, and dresses.

In the past, the sales of Vietnam-branded products in foreign markets were challenging because Vietnamese producers and designers did not have experience in promoting their own brands in international markets. Since 2016, garment producers and designers made great progress in the domestic market, incorporating Vietnamese culture and characteristics in their designs and setting fashion trends among local consumers. The brand examples are numerous. The Merriman men's fashion brand is one of the major brands in the domestic and the global markets. Its products are manufactured with ecofriendly materials and offer an elegant and luxurious design. Nha Be Garment JSC chooses high-quality materials and aims to make customers feel comfortable in most weather conditions. Phong Phu Corporation and Viettien both apply modern machinery and

equipment and offer diverse designs in clothing and household textiles. Moreover, in Vietnam, the international, renowned buyers include H&M, Levi Strauss, Sears Holdings (Sears and Kmart), GAP, ADIDAS, Target, VF Jeanswear, Matalan, Blue Star, Nike, JC Penny, PVH, C&A, Walmart, Kohl's MGT, Children's place, the William Carter, and M&S.

In terms of ownership structure, out of nearly 6,000 companies currently in the industry, 2% are SOEs (state-owned enterprises), 15% are foreign-invested companies, and 83% are private companies. Although small in number, SOEs have been the dominant producers and the gateway for foreign companies to tap into Vietnam's low-cost labour force. Currently, Vietnam National Textile and Garment Group (Vinatex), a state-owned corporation formed in 1995, is the largest public shareholding company in the sector. It supports improved technology, modern management, and diversified business, as well as investment and finance.

In the first 11 months of 2019, Vietnam attracted FDI capital to the garment and textile industry with the value up to 1.55 billion USD for 184 projects. Investments were led by Hong Kong (447 million USD), Singapore (370 million USD), China (270 million USD), and South Korea (165 million USD). FDI companies made up 70% of the total garment and textile exports in 2019. In recent years, foreign investment has shifted from mainly CMT activities to more upstream sectors such as fabric productions and dyeing. In 2019, more than 80% of FDI in the industry consisted of manufacturing fabrics and raw materials projects. Besides capital, these FDI companies have stimulated innovation and growth of domestic producers and increased the industry's capacity. However, compared to the total FDI in other sectors in Vietnam, the textile and clothing industry only gets a very small share of FDI.

Advantages, Challenges, and Sustainability of Vietnam's Garment Industry

Advantages of Vietnam's garment industry are as follows:

- 1. Political and economic stability.
- 2. Geographic advantages: Vietnam is a long-stretched country along the eastern coast of the Indochinese Peninsula. It can be reach easily by the sea. In addition, it borders to China, the largest supplier of textiles in the world.
- Access to the global markets: Vietnam's bilateral and multilateral FTAs continue to 3. provide Vietnamese manufacturers access to new markets, minimizing the effect of growing trade protectionism. With new FTAs in effect such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and Vietnam-EU FTA (EVFTA), new markets will lead to higher exports and push manufacturers to develop the industry's supply chain so that they can take full advantage of the preferential tariffs and increase the competitiveness of their products. The many free trade agreements (FTA) that Vietnam participates in are the driving force behind the industry in the long run Vietnam's bilateral and multilateral FTAs continue to provide Vietnamese manufacturers access to new markets. With new FTAs in effect, manufacturers are driven to develop the industry's supply chain so that they can take full advantage of the preferential tariffs and increase the competitiveness of their products. However, Vietnamese manufacturers will need to invest in technology, particularly Industry 4.0 technologies, to increase productivity, and improve quality to remain competitive, and to develop supporting industries. Forward linkages require the development of downstream sectors such as design, branding, marketing and distribution, as well as insurance and finance. Backward linkages mean investment in upstream capital-intensive sectors with high research and development costs.

- 4. Made in Vietnam: As for the free trade agreement between the EU and Vietnam, it strongly encourages European brands to embark on "Made in Vietnam". By enhancing the competitiveness of Vietnamese brands in domestic and international markets and promoting the awareness of local and international distributors and consumers of Vietnamese products, the Vietnam Value Programme, implemented since 2003, aims to create Vietnam's image as a country with the reputation for a diversity of highquality goods and services and drive for socioeconomic development. The recognized national brands grew from 97 in 2018 to 124 in 2020. In 2018, the enterprises with recognized national brands generated the revenue of approximately 39.4 billion USD, export turnover reached 5.6 billion USD, contributing 3.7 billion USD to the national budget, and generating 340,000 jobs. In 2020, the revenue increased to 42.4 billion USD and the export turnover increased to 5.34 billion USD, contributing to 8.5 billion USD to the national budget, and generating 350,000 new jobs, despite the pandemic. Several domestic companies are recognized as national brands within the Vietnam Value Programme. For instance, Garment 10 Corporation generated domestic revenues in 2018 of over 180 billion USD, with an average growth rate for three consecutive years (2018-2020) of over 15%.
- 5. Cheaper labour cost: labour cost in Vietnam is lower than in China. The textile industry takes advantage of the country's young population, low-cost labour, and natural resources. In addition, Vietnam is a potential domestic market of more than 97 million people, of which 65% aged 15 and over, and on the average, approximately 500,000 people join the workforce every year. The advantage and skilled workers will also help expand the textile and garment industry.
- 6. Government scheme: the Vietnamese government offered fiscal and investment incentives in order to attract local and foreign direct investment as follows: local garment and textile industries are entitled to get refund of value added tax; zero duty on importation of capital machinery and equipment for textile and garment industry; investment incentives to the enterprises that produce equipment and machinery for the textile and garment industry; investment incentives involved in production of weaving fabrics, completing textile products, producing silk and fibers of various kinds; investment incentives to the garment and textile industry regularly employing 500 to 5,000 employees; and, Investment incentives to the enterprises producing waste treatment equipment for the textile and other industries. Prior to the pandemic, the government expanded industrial parks for textile and garment industry to increase the supporting industries. The local government was also encouraged to assist companies in research and development activities, technology transfer, and innovation. During the pandemic, the government also proposed to extend the list of import tax exemptions for raw materials, supplies, and components for processing and manufacturing of export products.
- 7. Human capital development: Vinatex has been assigned by the government to open training campuses. The Vietnamese government is aware of its skilled labour shortage. To address this problem, over the past two decades, the state-owned conglomerate has been established. In 2019, Vinatex had three universities and colleges with more than five campuses that specialized in technical training for the textile sector, including associate degrees in mechanical engineering, sewing technology, and fashion design. Some enterprises, especially under Vinatex, have introduced many preferential

policies in training as well as attracting highly qualified human resources. In view of the development of high-quality human resources, the government formulated the "National Digital Transformation Programme up to 2025, with a vision to 2030" to promote digital economy, and improve economic competitiveness. It set the goal that by 2025 the digital economy will account for 20% of GDP, the share of digital economy reaches at least 10%, labour productivity increases at least 7% a year, and the Vietnam will be the top 50 leading countries in IT. The government also conducted a programme to support the development of the labour market until 2030 by expecting the rate of workers with the IT skills to reach 90% by 2030. Moreover, in this connection, many textile and garment enterprises set up digital transformation plans. Integration and technology will create many opportunities for employees to improve their qualifications to meet new job requirements.

- 8. Industrial network: two associations in the textile and garment industry include Vietnam Textile and Apparel Association (VITAS) and Association for Garment Textile Embroidery Knitting (AGTEK). VITAS has 15 branches and 683 members, accounting for 70% of the total production capacity of the industry. VITAS advises state agencies on policies and mechanisms relevant to the development of the industry. It also represents the industry when dealing with international buyers by facilitating contracts between domestic enterprises and foreign investors. As for AGTEK, it largely represents small and medium companies which constitute approximately 62% of the total businesses in the sector. It is active in promoting business and trade opportunities among members and international buyers.
- 9. Industrial capacity: capacity has been increased in the area of garment and spinning production and product quality has been improved, attracting foreign customers such as importers and retailers. 80% of equipment in the garment branch are modernized, satisfying the requirements of foreign textile and garment importers. With Vietnam ranked one of the top 10 biggest textile and garment exporters in the world, there is increased trend of relocation of textile and garment production from developed countries such as Taiwan and Korea to Vietnam, attracting capital, technology, and management.
- 10. Global value chain: the growth of the garment and footwear sector is also boosted by Viet Nam's increased integration into Global Value Chains (GVCs) through the coming into force of a number of trade agreements including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) (2019), the EU – Viet Nam Free Trade Agreement (EVFTA) (2020), and the UK -Vietnam Free Trade Agreement (UKVFTA) (2021). It is forecast that the CPTPP will increase Vietnam's GDP by 10% by 2030. Besides, Vietnam's textile and clothing industry is forecast to grow 10% per year on average from 2018 to 2025. However, FTAs' imposition of the rules of origin requires the use of domestically produced fabrics in order to enjoy preferential tariffs. A good number of backward linkage industries have been established to support the garment industries producing various raw materials and accessories (buttons, trims, threads, zippers, poly bags, interlining, etc.). Local backward linkage industries have also grown that can meet around 20-30% of requirements. Currently, more than 21 accessories industries are in operation in Vietnam. Vietnamese garment producers use high quality accessories such as international brands as YKK zippers, COATS (sewing thread), Kufner, Freudenberg
and Vilene (interlining). However, Vietnam still relies on imports of fibers, yarns, fabrics, and garment accessories mostly from China, Hong Kong, Taiwan, and South Korea.

- 11. International cooperation: the German Development Co-operation Organization (GIZ) and the French sporting goods retailer Decathlon signed an MOU to improve environmental performance of Vietnamese garment and textile suppliers through the projects "Climate protection through sustainable bioenergy markets in Vietnam (BEM)" and "Fostering and advancing sustainable business and responsible industrial practices in the clothing industry in Asia (FAB-RIC)" in order to help Decathlon's Vietnamese suppliers improve their ability in climate change adaptation, efficient use of waste and energy, and chemical management in factories in 2022, through basic knowledge on climate change, reduction of greenhouse emissions, and energy efficiency and renewable energy.
- 12. COVID19 pandemics: some producers showed resilience despite the economic shock of COVID19. For example, TNG, an OEM company, stockpiled enough fabric for production and arranged for alternate sourcing from Pakistan etc. According to highly efficient management, TNG started to produce antibacterial masks, leading to 65% increase in revenue compared to 2019, despite cancelled orders overseas. TAL, a Hong Kong-based company, constructed a 350 million USD worth fabric plant in early 2019. In 2020, Texhong, another Hong Kong-based company, committed to 500 million USD, apart from the existing 500 million USD investment, to expand yarn and fabric production. These FDI companies are expected to stimulate innovation and growth of domestic and state-owned fabric producers. During the pandemic, many garment producers in the country shifted to the production of face masks and personal protective equipment (PPE) as a solution to deal with suspended orders and take the opportunities from mounting demand in both domestic and international markets. Vietnam exported over 415 million face masks. Local manufacturers had a total production capacity of 40 million face masks a day or approximately 1.2 billion face masks a month. With full capacity, the entire garment and textile sector could produce 100 million face masks a day or approximately 3 billion face masks a month.

Challenges of Vietnam's garment industry are as follows:

- 1. Limited to CMT: The only black spot in the Vietnamese factories is that, up to now, they have been doing mainly "CMT" (cutting, sewing and finishing), that is to say, no technical textiles or fabrics or accessories. Modernize little by little and incorporate processes allowing the making of more complex and technical garments. Textile backward linkage industry is still not very developed as 70% of raw materials are imported.
- 2. Lack of adequate infrastructures such as roads, ports, and electricity which makes it costly to develop backward and forward linkages and thus hampers industrial upgrading. Moreover, seaport is limited in terms of limited warehousing facility which cannot accommodate a large quantity of export items to be shipped.
- 3. Dominant by FDI: the export turnover of Vietnam's garment industry is dominant by FDI enterprises. Thus, there is a small room left for local players to grow. marketing and trade promotion are limited. There are trade barriers such as the regulations of chemical safety, etc.

- 4. Scarcity of human resources: despite being in the golden population period, each year the labour market receives 400 thousand new workers, the textile and garment industry still faces a shortage of human resources, including technical and labour workers.
- 5. Higher cost: domestic textile enterprises still face internal challenges such as the higher prices of input materials such as cotton, fiber, yarn, and fabric. Logistics costs such as container prices and transportation costs are 3 times higher than the average in the past 5 years. Labour costs of Vietnam and the textile industry are rising rapidly; and Legal enforcement becomes more stringent.
- Lack of skilled labour: the lack of professional and technical labour, especially in 6. textile sector, is a constraint to expand the industry. Vietnam textile and garment sector has plenty of workers with good basic education and a big number of rural young women due to the labour-intensive industry. However, only few universities have departments for training engineers in the industry: Hanoi Poly-Technic University with a textile and garment department; Industrial Art University with a fashion department for training of fashion designers; Hanoi Open University with a specific subdepartment for training of fashion designers; and HCM City Poly-Technic University with a textile and garment department for training of textile and garment engineers. There are also some technical schools for training of technical workers in the garment sector. Most of the skilled workforce is located in the garment sector where skills are basic and easy to learn on the job. But the textile sector still faces a substantial short-age of technicians and engineers, especially in the fields of spinning, weaving, and dyeing. The industry also lacks quality workforce especially technical and managerial fields, design, and marketing. Development of high-quality human resources requires a lot of time and costs. Graduates fail to meet the needs of factories. Digital transformation also leads to high risk of unemployment for unskilled workforce. Engineering students also tend to study subjects conducive to careers in high-tech industries, such as computer science, mechanical engineering, and telecommunications. Moreover, labour productivity is low.
- 7. Supporting industries in the garment industry have not yet developed: The supporting industry of the industry has not yet attracted the attention of domestic and foreign enterprises, leading to a scarcity of domestic raw materials, a great dependence on imports, and difficulties in meeting the requirements of the industry requirements for rules of origin. The textile dyeing industry is underdeveloped and difficult to attract investment, partly because infrastructure investment is still slow, site clearance in industrial parks and industrial clusters faces many difficulties.
- 8. Digital transformation: Vietnamese enterprises face many challenges. Based on a survey, there are the investment costs and digital technology application (60.10%), changes in business practices (52.3%), lack of personnel to apply digital technology (52.3%), lack of information on digital technology (40.40%), lack of integration of digital technology solutions (38.50%), lack of commitment from the management (32.1%), and lack of commitment from employees (26.6%). In recent years, the supply chain of the textile and garment industry has changed to meet the requirements of digital transformation. The changes begin with the application of modern machines and technologies to use less labour and to improve productivity in spinning, weaving, dyeing, and sewing factories, application of IT and AI to transfer data from the place

of production in Vietnam to customers around the world., and management in real time of the production process.

- 9. Outdated machinery, equipment, and technical upgrading: starting in the mid-2000s, SOEs in joint ventures with foreign partners benefited from foreign technology, management, and marketing skills. However, companies in joint ventures with foreign investors tended to outperform domestic firms in technological adoption and capability. During the 2000s, additional investments were made to improve equipment and machinery but it was deemed too little and could not satisfy the demand for expansion and upgrading needed to increase production and quality.
- 10. Environmental issues: the industry consumes a lot of energy and water throughout the value chain including different fibers whether made from renewable materials such as cotton, bamboo or non-renewable sources such as petroleum, as well as in the logistics, sales and marketing of the products. The textile industry generates air pollution, wastewater, and solid waste. Waste from the production process such as bleaching, dyeing, finishing faces low treatment efficiency and is often discharged directly into public waterways. While Vietnam's industry is more famous for low-cost pro-duction, it has limited environmental standards. If the practice is not changed, Vietnam can lose its competitiveness. The industry is responsible for energy consumption which raises the national greenhouse gas (GHG) levels, overconsumption of water and release of untreated wastewater, generation of solid waste such as fabric waste, use of pesticides in the process of cultivating textile fibers contributing to environmental pollution, and most end-of-life garments end up in landfills. Approximately 20% of the water pollution in the country is caused by chemical processing including dyeing and printing textiles, worsened by the lack of standards and regulation enforcement. However, many operators in the textile manufacturing industry are aware of environmental sustainability, as shown by regulations, certifications, and the increasing use of sustainable raw materials, which, when combined with sustainable sourcing from retailers, contributes to overall improvements in supply chains. The government has also emphasized sustainable change, as outlined in the Green Growth Strategy for 2021-2030 which aimed to accomplish green growth, carbon neutral economy, sustainable consumption, and green lifestyles by enhancing the practice of eco-labelling and industry transparency etc. Vietnam's textile and garment industry is making efforts to realize its green production target and reduce emissions in a bid to help implement the Government's commitment to net-zero emissions by 2050 at the 26th United Nations Climate Change Conference of the Parties (COP26). Due to CO2 emissions in the production process, the global fashion industry is one of the causes behind climate change. Therefore, many well-known fashion brands and textile manufacturers worldwide have set goals related to the climate change and the environmental degradation.
- 11. Shortage of capital: most entrepreneurs are SMEs with low investment capital mobilization and limited access to innovative technology and modern equipment. Lack of capital and access to credit are particular obstacles for Vietnamese producers to acquire new technologies, expand productive capability, and achieve higher value-added production. Although in the early 2010s, the government made changes to allow more private enterprises access to domestic capital through bank loans, however in 2011 the interest rate was still too high and remain inaccessible for SMEs

- 12. Weak communication and coordination channels between the state and private companies or between associations for information or facilitation of business opportunities.
- 13. COVID19 pandemics: with a supply chain that heavily relies on a few key partners, Vietnam's garment and textile industry was among the country's hardest hit by the COVID19 pandemic due to the disrupted GVCs. Approximately 70% of garment manufacturers reportedly started reducing shifts and rotating workers. Imports and exports of all textile and garment products fell sharply in 2020. The suspension of the industry's input production in China resulted in interruption of material imports and shortage of raw materials in Vietnam. At the same time, the suspension in demand from the US and European markets led to order cancellations as well as revenue and job losses for domestic manufacturers. By June 2020, the estimated loss to the industry was approximately 508 million USD.

Sustainability

Between 2018-2020, the Vietnam Textile and Apparel Association (VITAS) and World Wild-life Fund (WWF) Vietnam collaborated to engage the entrepreneurs to better manage their water and energy use The project also targeted sustainable awareness of the industry by introducing better river basin governance to improve water quality. It was expected to bring about social, economic, and conservation benefits to the country. It followed a similar project funded by HSBC Bank to reduce the impact of the textile industry along the country's value chain. The project reinforced the need for better management for higher environmental and social standards, in parallel with the increasing awareness of customers worldwide who demand global brands to become more ethical in their business practices.

The use of pesticides in the cultivation process of textile fibers contributes to environmental pollution and most end-of-life garments end up in landfills. Approximately 20% of the water pollution in the country is caused by chemical processing, including dyeing and printing textiles, worsened by the lack of standards and impacted from the enforcement of regulations. However, many operators in the textile manufacturing industry are aware of environmental sustainability concerns, as reflected by regulations and certifications and the increasing use of sustainable raw materials, which, when combined with sustainable sourcing from retailers, contributes to overall improvements seen in the supply chains. The government has also emphasized sustainable change, as outlined in the Green Growth Strategy. It seeks to promote sustainable consumption and green lifestyles by enhancing the practice of eco-labelling and industry transparency, among other methods that also apply to the textile industry.

Moreover, International Finance Corporation, a member to the World Bank Group, has also contributed to the ongoing momentum by establishing the Vietnamese Sustainability Reporting Handbook in the efforts to promote transparency in manufacturing.

Recommendation and Conclusion

Recommendations

The COVID19 provides precious lessons for the industry on recovery and shows them ways to move forward. It is necessary to establish the following measures:

1. The government must develop a scheme to support SMEs in obtaining finance, facilitating joint ventures with foreign multinationals, and utilizing free trade agreements.

2. The government's environmental policy should encourage investment in environmental-friendly activities such as in Co2 dyeing without waste.

3. To benefit from technological advancement and achieve higher productivity, Vietnam should improve infrastructures such as roads, ports and electricity which would otherwise be costly to develop backward and forward linkages and obstructs industrial upgrading.

4. The government should provide incentives for efficient business operations and investment in advanced production technology, and equipment and machinery, which are required increase its competitive edge in the international export market.

5. Vietnamese garment manufacturers should make the necessary investments to shift from the labour-intensive CMT model towards more capital-intensive models that allow for higher value-added and more control and resilience to external shocks. OEM and ODM capable companies have proven to be more resilient and better equipped to quickly respond to the pandemic.

6. The needs to develop the human resource development programme based on both quantity and quality and the demand for qualified human resources. The human resource development programmes must take into account the programmes that are relevant to the reality of business operation.

7. The shortage of human resources, especially skilled human resources and limited technological capacity to meet the requirements of Industry 4.0 pose major challenges. Therefore, it is necessary for the industry to formulate the policies to support, attract, and train managerial and technical employees as well as workers; strengthen the link between schools/ institutions/universities and businesses/industry to improve the training programmes such as fashion design, planning, domestic and international marketing, attract investment and promote international cooperation in training high-quality human resources such as in the field of managerial management; production management, and product innovation, investment in the construction and modernization of job-training schools/technical colleges/technical universities. Training institutions should also regularly develop strategic and sustainable vocational training programmes to meet the demand of skilled workforce. Moreover, the human resource development policies should be in line with the requirements of digital transformation.

8. A comprehensive approach would involve upgrading equipment, relevant technologies and skilled labour, and improving output quality while maintaining competitive prices. This approach requires the government to play an active role in easing constraints in the credit market, increasing transfer of new advanced technologies, boosting technical training for the labour force, and encouraging private investment in technical training and technology transfer.

9. The textile sector would benefit from rigorous market research to find market insights of niche markets for domestic textile production in view of the domestic and global markets, analyze and recommend the type of technology required to perform competitive production, and develop production processes for these niche products.

10. VITAS and AGTEK should serve as communication channels between the government and domestic companies on new government policies, market constraints, new market access, and opportunities abroad.

11. COVID19 has reiterated the importance of rethinking global supply chains. Adopting Responsible Business Conduct (RBC) standards can help businesses become more resilient when exposed to GVC disruptions. RBC means integrating the environmental and social issues into the core business activities throughout supply chain. RBC standards provide companies with the method to understand and mitigate adverse impacts such as adapting health & safety protocols to respond to the emerging risks. Domestic and international demand for antibacterial masks and protective gear has also proven an effective and important relief measure during the pandemic.

12. It is also important for Vietnam to diversify the demand base and leverage FTAs, especially the newly-signed Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), to explore new export markets.

Conclusion

Intensive international economic integration is becoming increasingly evident. The Vietnamese textile and garment industry needs to move from competition based on the low labor price advantage to competition with value-added and innovation. It also needs to strengthen cooperation with foreign companies in order to learn management experiences, transfer modern technologies, international marketing experience, and organize production management.

The strategic policies need to be adopted to raise the sector's competitiveness with higher value-added products in the global supply chain, in which incentives are created for domestic textile producers to manufacture and participate in niche markets. In this connection, the comprehensive approach would involve upgrading equipment, relevant technologies and skilled labor, and improving output quality while maintaining competitive prices.

Most importantly, the cooperation between all the players in the entire supply chain both domestically and internationally must be forged to work and move together to achieve the common and sustainable development and growth of the textile and garment industry.

Chapter 6 Conclusion

CLMV refers to least developed countries in ASEAN including Cambodia, Lao, Myanmar, and Vietnam. The garment industry is one of the most important industries in CLMV economy due to high GDP contribution, jobs creation, and export orientation.

Cambodia

Cambodia, a lower middle-income country, has the average income (GDP per capita) of 1,770 USD per person per year. The country is popular for providing a low-cost manufacturing base for several industries. Among the many advantages that the country offers to investors are duty-free access to some large and developed markets, a stable economy, and several government incentives. Cambodia has experienced rapid economic growth over the last decade and place it as the 6th fastest economy in the world. The economic growth has been driven by 4 key sectors: tourism, garments, construction and real estate, and agriculture. The intertrade value between Cambodia and Thailand gradually increased from 6,453.75 million USD in 2012 to 7,973.7 million USD in 2021. Thailand was the second largest importer to Cambodia responsible for 18% of total import value of Cambodia following China whose took part on more than one-third of the total import. On the other hand, Cambodia could export its products to Thailand only 2.5% of total export value.

The garment industry continues to drive the Cambodian economy through human capital development, employment generation and foreign direct investment (FDI). Cambodia has a large pool of low-cost, and low-skilled workers. Cambodia's garment industry already employs over 750,000 people, making the sector the biggest employer in the country. As of June, 2022, the total number of garment factories in the country stood more than 800 factories. There are 760 garments with 520,000 workers registered in the Cambodian Ministry of Labor's National Social Security Fund. 494 factories are export-oriented factories registered with the Garment Manufacturer Association in Cambodia. Over 60 percent of Cambodia's garment factories are located within or in close proximity to the capital city – Phnom Penh. Cambodia's garment factories are generally based on the principle of cut-make-trim model. Under this method of production, the raw material, machinery and the design of the garments are imported from abroad, while the assembly of the product is outsourced to the labor-intensive factories in Cambodia.

Cambodia's garment industry contributes more than a third of the country's gross domestic product and 70 percent of Cambodia's export earnings. Cambodia's garment manufacturing industry is largely export-oriented and highly integrated into global supply chains. The United State of America (USA) represents the largest market for Cambodian garment exports, accounting for approximately 30% of the total manufacturing, followed by the European (25%), Japan (10%), UK (10%) and Canada (10%). Cambodia also faces the vulnerability of being entirely reliant on imported fabric, more than 60% of it from China. (Garment Manufacturer Association in Cambodia, 2022; Rastogi, 2018; Turton, 2022)

Lao

Lao has a population of 7.48 million inhabitants. The average income (GDP per capita) was 2,170 USD per person, the least developed Asian country. The Gross Domestic Product (GDP) in Lao was worth 18.55 billion USD in 2021 (see Figure 3.4). Most Laotians are subsistence

farmers, and rice is the principal crop. The most important agriculture products include rubber, coffee, rice, sweet potatoes, vegetables, corn, sugarcane, tobacco, cotton, and tea. The main but limited industries in the country are electricity power, tin and gypsum mining, gold mining, timber, agricultural processing, construction, garments, and tourism. The total export value in Lao in 2021 was 7,525.83 million USD, decreasing 12.12% from 2020. Agricultural products and natural resources account for the bulk of Lao's exports. Lao's main exports are wood, clothing, coffee, electricity, tin, copper, gold, corn and rubber. Its main export partners are Thailand (32%), China (31%), and Vietnam (17%).

The intertrade value between Cambodia and Thailand gradually increased from 5,039.08 million USD in 2012 to 7,261.41 million USD in 2021. Thailand was the main importer to Lao responsible for 66% of total import value of Lao following China and Vietnam. On the other hand, La0 could export its products to Thailand only 33% of total export value.

Garment Industry is an important economic sector in Lao PDR. It is a significant sector that attracts foreign direct investment (FDI) as the majority of garment factories are FDI both in the form of foreign owned and joint venture. In 2021, the garment industry contributes to export value around 198.78 million USD or 2.65% of total export value. Most of garment manufacturers in Lao PDR are basically subcontractors who could only offer cut-make-trim (CMT) with no backward linkages to fabrics and accessories. About 25,000 people are employed by the factories in garment industry, 90% of them women. According to the Association of Lao Garment Industry, the association now has 77 factories under its wing, 50 of which make goods for export and the other 27 produce garments for local consumption. There are 72 factories in Vientiane capital, two in Champasak, two in Savannakhet province and one in Vientiane. Lao's garment export industry registered a trade surplus of about \$85 million, which grew to a record \$120 million in 2017. One of the most influential factors supporting garment exports was the special tariff granted by developed countries such as the United States and those in the European Union.

Myanmar

Myanmar has 54.6 million Population with 46.9% are at working age. The average income (GDP per capita) in 2021was 1,100 per person per year which made it the poorest country in Southeast Asia. The GDP in Myanmar in 2021 was worth 65.16 billion USD. The most important sector of the economy is services account for over 38 percent of GDP. Oil and natural gas dominate Myanmar's exports. Other exports include rice, beans, grains, vegetables, wood, fish, clothing, rubber and fruits. Myanmar's main exports partners are China (30%), Thailand (23%), European (18%), Japan (6%), India (5.7%), USA (2.9%), UK (2.6%), Malaysia (2.0%) and South Korea (2.0%).

The intertrade value between Myanmar and Thailand gradually increased from 5,989.06 million USD in 2012 to 7,138.53 million USD in 2021. Thailand is the second largest trade partner with Myanmar after China. The trade balance between Thailand and Myanmar in 2021 was 7,143 million USD with the export value of 2,823.27 million USD and the import value of 4,319.73 million USD. The top 10 imported product from Thailand to Myanmar in 2021 were fuel, drinks, chemicals, iron and steel, cereal, cosmetics, plastics, car and its components, textiles, and food grade oils. The top 10 exported products from Myanmar to Thailand in 2021 were natural gas, plants, minerals, meat, edible fruits and vegetable, fishery, iron and steel, electric machines, coffee, tea and spices, and live animals

There are 516 companies recently registered with the Myanmar Garment Manufacturers Association (MGMA). Total employment of the MGMA member were 453,377 people including

50,530 males and 402,847 females. Most of the Myanmar's garment factories are generally based on the principle of cut-make-trim model. The main export markets for Myanmar's garment industry are Japan (24%), Spain (10%), Germany (9.4%), The Netherlands (9.2%), UK (9.1%), USA (6%), and Republic of Korea (5%).

Vietnam

Vietnam has a population of 99.4 million people; it is the 13th most populous country in the world. The average income in 2021 was 4,160 USD per person (GDP per capita) lower than the average income of Southeast Asia at 5,380 USD. Vietnam's GDP in 2021 was 366.20 billion USD increased by 2.58% over the previous year. The Vietnamese economy is based mainly on service sector which accounted for 40.95% of total GDP, following by: industry and construction accounted for 37.86%; agriculture, forestry, and fishery sector account for 12.36%; product tax minus product subsidies accounted for 8.83%. In 2020, Vietnam exported a total of 300 billion USD, making it the number 16 exporter in the world. The top exports of Vietnam are broadcasting equipment (\$42B), telephones (21.4 billion USD), integrated circuits (19.4 billion USD), textile footwear (8.9 billion USD), and office machine parts (7.68 billion USD). The main export markets of Vietnam in 2020 was USA (77 billion USD, 25.6%), China (49.4 billion USD, 16.5%), Japan (20.4 billion USD, 6.79%), South Korea (19.6 billion USD, 6.54%), and Hong Kong (13.8 billion USD, 4.6%). Vietnam exported its products to Thailand only 5.14 billion USD or 1.71% of total export value.

The intertrade value between Vietnam and Thailand steady increased from 9,360.84 million USD in 2012 to 19,477.76 million USD in 2021. Vietnam was the third largest export market of Thai textile and garment industries with 7% of total exported value after USA (20%) and Japan (12%). At the same time, Vietnam was the second largest import market for Thai textile and garment industries holding nearly 9% of total imported value after China which held 46% of import value. The trade balance between Thailand and Vietnam in 2021 was 18.73 billion USD with the export value of 6.16 billion USD and the import value of 12.57 billion USD. The main export markets of Vietnam are USA, China, Europe, Japan, Republic of Korea, Hong Kong, UK, India, and Thailand consecutively. The top 10 imported product from Thailand to Vietnam in 2021 were vehicles, electronic equipment, plastics, machinery, auto parts, electricals, mineral fuels and oils, chemicals, chemical products, and textiles. The top 10 exported products from Vietnam to Thailand in 2021 were telephones, crude oil, mechanics, electronic and computer, vehicles, iron and steel, fishery, garment, fruits and vegetables, steel product

Vietnam was the fourth largest exporter of textiles and garment in the world with the share of 5.2% after China (31.6%), Europe (26.9%), and Bangladesh (5.4%). Vietnam was the 7th exporter of textile products with the turnover of 4.4 billion USD whereas it was the fourth exporter of garment products with the turnover of 34.93 billion USD. Garment industry creates employment of about 2 million workforces directly in industry and nearly 1 million workers indirectly in the trading and service businesses. Garment industry generate income of nearly 200,000 billion VND per year (equivalent to 8.6 billion USD/year). It creates value in the average income of about 8.5 million VND per person per month. Garment export turnover in 2021 has reached 40.4 billion USD accounting for 12% of total Vietnam's export turnover. In addition, Garment industry could create a large export surplus of the country. In 2021, it contributed a trade surplus of 19.74 billion USD, four time higher than the total trade surplus of Vietnam at 4 billion USD.

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