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Assessing the Effects of U.S. Trade Policies on the Garment Industry in Cambodia

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Abstract

International trade and foreign direct investment (FDI) in the garment sector contributed to the rapid growth of the Cambodian economy during the post-conflict period. The major export partners are mainly developed countries such as the U.S., whereas the major import partners are mainly East Asian countries such as China. Fabrics and manmade staple fibers are the major import commodities, while apparel, clothing and footwear constitute the major exports. Garment exports increased substantially after Cambodia obtained MFN status in 1996 and was designated as a LDC under the U.S. GSP in 1997. Empirical analysis shows that U.S. trade policies since the mid-1990s correlate significantly and positively with exports in knitted and woven apparel from Cambodia to the U.S. market. This result suggests that preferential trade access to large export markets is critical to export industry development in developing economies. Additionally, preferential market access and low labor cost in Cambodia help promote direct investment by foreign investors from neighboring economies such as Thailand. As rising labor costs reduce international competitiveness in labor-intensive industries in the Thai economy, the Cambodia economy is a key investment market for Thai firms to maintain the competitiveness.

Keywords: Cambodia, Trade, Investment, Garments, Global Value Chain
JEL classification: F14, F21, F63

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1. Introduction

The Cambodian economy has experienced remarkable economic growth in recent decades. During the colonial period as a French protectorate, agricultural production in commodities such as rice, corn and rubber accounted for the majority of economic activity (Chandler, 2008). While the Cambodian government had attempted to promote industrialization since its independence, its industrial base was severely devastated under the Pol Pot regime during the period 1975-79, which abolished formal institutions including schools, private property and money. The Paris Conference on Cambodia in 1991 led to agreements on a comprehensive political settlement of the Cambodia conflict following a decade of civil war. A massive influx of foreign aid supported the reconstruction of the Cambodian economy during the post-conflict period, which set the stage for the recent economic growth.

A major driving force behind such economic growth is the rapid expansion in international trade and foreign direct investment (FDI), which contributed to industrial development in Cambodia (Chhair and Ung, 2013). Specifically, the garment industry accounted for a substantial share of merchandise exports from Cambodia and attracted a large number of foreign investors. As the garment industry has produced considerable employment opportunities in manufacturing, there is a growing number of related studies such as Bargawi (2005), Staritz (2011, ch. 4), Asuyama et al. (2013), Asuyama and Neou (2014) and ILO (2015). Specifically, Asuyama and Neou (2014) highlight international trade agreements as a crucial factor influencing garment industry development. For example, the U.S. is the largest foreign market for garments produced in Cambodia and it granted most-favored-nation (MFN) status to Cambodia in 1996. Furthermore, the nation was designated a Least Developed Country (LDC) under the U.S. generalized-system-of-preferences (GSP) in 1997. This GSP granted duty-free and quota-free access to the U.S. market for products from Cambodia.

The prior literature emphasizes that trade agreements between the U.S. and Cambodia encouraged foreign investors to manufacture garments in Cambodia for export to the U.S. market, thereby contributing to export earnings and industrialization in the Cambodian economy during the post-conflict period. However, there has been little assessment as to what extent trade policies in export markets encouraged garment exports from Cambodia. From a policy perspective, it is a crucial empirical question as to whether U.S. trade policies regarding Cambodia have an impact on garment exports. While a wide range of internal and external factors are discussed in prior works, such as Asuyama and Neou (2014), my empirical assessment improves understanding of the role of trade policies in promoting export industries in developing economies.

Empirical assessment of U.S. trade policies regarding Cambodia shows that such policies since the mid-1990s correlate significantly and positively with exports in knitted and woven apparel from Cambodia to the U.S. market. The growth of garment exports has been remarkable since Cambodia obtained MFN status in 1996 and became designated as a LDC under the U.S. GSP in 1997. These results suggest that preferential trade access to a large market is critical to export industry development in developing economies.

The analysis provides an implication for neighboring economies such as Thailand. The Thai economy has grown steadily over several decades and achieved a high standard of living. While industrial development contributed to the upgrading of industrial bases in Thailand, the economic growth also increased labor costs. Consequently, the Thai economy experienced the gradual loss of international competitiveness in labor-intensive industries such as garments. To maintain the international competitiveness, Thai firms can relocate the labor-intensive production processes to the labor-abundant economy. In this respect, low labor cost in Cambodia is a major advantage to attract Thai firms for making direct investment in Cambodia. Since the market size in Cambodia is small, major export markets for their products are advanced economies such as the U.S. This implies that market access for exports from Cambodia is crucial to improve investment attractiveness in Cambodia for Thai investors. Thus, the labor cost advantages in Cambodia and the U.S. trade policies in favor of low income countries can combine to promote direct investment by Thai investors in Cambodia, which in turn could help maintain the international competitiveness in labor-intensive industries in the Thai economy.

The rest of this chapter is organized as follows. Section 2 provides an overview of the Cambodian economy over the past few decades to describe the industrial structure, recent trends in exports and imports and trends in inward FDI. As the trends in trade and inward FDI indicate the large role of garment production in the Cambodian economy, Section 3 provides a background of the garment and footwear industry. Section 4 presents an empirical assessment to estimate the impact of U.S. trade policies regarding Cambodia on garment exports. Section 5 summarizes the main findings on trade and investment in Cambodia and discusses current policy issues in the Cambodian economy.

2. Overview of the Cambodian Economy

The Cambodian economy has grown rapidly over the past few decades. According to the World Bank, the GDP growth rate in 2015 was 7 percent, whereas the gross national income per capita reached 1,070 US dollars. As of 2015, Cambodia had attained a lower-middle-income status. As a result, the poverty level in Cambodia declined to a rate of 17.7 percent in 2012. However, there remains profound poverty in rural regions, and the inequality between urban and rural regions has substantially increased during recent decades.

2.1. The Industrial Structure

The agricultural sector has long been a pillar of the Cambodian economy. According to the agricultural census of Cambodia in 2013, 8.5 million households were estimated to maintain agricultural holdings.[1] In the northern areas characterized by hilly uplands and plateaus, 50 percent of villages collect forest products. In the southern areas along the Gulf of Thailand, 66 percent of villages engage in fishing. In the middle area along the Mekong River and Tonle Sap Lake, 40 percent of villages are involved in aquaculture.[2] In the surrounding areas of Phnom Penh, 40 percent of village inhabitants earn their income from more than one job. Additionally, the agriculture in these regions is susceptible to severe weather conditions, such as heavy rains and floods during the wet season and droughts during the dry season. Villages hit by floods and droughts tend to experience food insecurity.

Manufacturing and service sectors played a crucial role in the recent growth of the Cambodian economy. In 1990, the share of agriculture in Cambodia's GDP was 55.6 percent, which decreased to 33.6 percent in 2012. Industrial sectors, including mining, manufacturing, utilities and construction, accounted for 11.2 percent in 1990 and 22.9 percent in 2012. Service sectors, such as wholesale and retail trade, transport,

[1] Agricultural holdings are defined based on a minimum cropping area of 0.03 hectares, having at least two large livestock, three heads of small livestock and a minimum of 25 poultry.

[2] These include provinces such as Kratie, Siem Reap, and Koh Kong and Kampong Thom.

communications, finance and public administration, accounted for 31.7 percent in 1990, and 37.8 percent in 2012 (Hill and Menon, 2014). The major driver of Cambodia's industrial development is the export-oriented production of garments such as wearing apparel and footwear. The garment sector has grown more rapidly than other sectors and contributed significantly to the expansion of manufacturing bases in the economy. Additionally, service sectors have expanded rapidly, including transportation, telecommunications and hotels and restaurants (Guimbert, 2010).[3]

To shed further light on the garment industry, I use the 2011 Economic Census of Cambodia (EC2011). The purpose of the EC2011 is on survey the economic activities of all non-farm establishments and enterprises over the entire territory of Cambodia. Table 1 presents the economic indicators of garment industries in Cambodia for February 2011. Garment industries are further disaggregated into textiles, wearing apparel, and leather and footwear sectors. By way of comparison, I also present details of the food and beverage sector and aggregate manufacturing. The number of establishments comprised 71,416 in manufacturing and 25,155 in the garment industry. The total sales amounted to 53.4 million US dollars in manufacturing and 17.8 million US dollars in garments. Additionally, the total expenses reached 41.1 million US dollars in manufacturing and 13.9 million in garments. These figures suggest that the garment industry accounted for one third of manufacturing activity in Cambodia.

Table 1: The Garment Industry in February 2011

	Garment Industry					
	Textiles	Wearing Apparel	Leather and Footwear	Total	Food and Beverages	Manufacturing
Number of establishment	8,919	15,958	278	25,155	32,075	71,416
	(12.5)	(22.3)	(0.4)	(35.2)	(44.9)	
Sales (mil. USD)	2.53	14.35	0.96	17.84	15.82	53.40
	(4.7)	(26.9)	(1.8)	(33.4)	(29.6)	
Expenses (mil. USD)	1.93	11.11	0.86	13.90	12.04	41.18
	(4.7)	(27.0)	(2.1)	(33.8)	(29.2)	
Wages (mil. USD)	0.47	3.41	0.28	4.16	0.53	6.51
	(7.2)	(52.3)	(4.3)	(63.8)	(8.1)	
Employment	39,041	294,433	40,864	374,338	81,245	530,341
	(7.4)	(55.5)	(7.7)	(70.6)	(15.3)	
Self-employed proprietors	8,814	15,673	240	24,727	31,970	70,653
	(12.5)	(22.2)	(0.3)	(35.0)	(45.2)	
Unpaid family workers	5,848	10,164	203	16,215	33,958	61,723
	(9.5)	(16.5)	(0.3)	(26.3)	(55.0)	
Regular employees	24,379	268,596	40,421	333,396	15,317	397,965
	(6.1)	(67.5)	(10.2)	(83.8)	(3.8)	
Female employment	31,822	260,783	37,942	330,547	33,619	388,586
	(8.2)	(67.1)	(9.8)	(85.1)	(8.7)	

Notes: Parenthesis shows the percentage share of each sector in the aggregate manufacturing sector; expenses include purchases of products, costs for providing services, rents and employees' wages.
Source: The Economic Census 2011

The garment industry accounted for a large share of wage payments and employment. Total wage payments were 6.5 million US dollars in manufacturing and 4.1 million US dollars in garments, with 63.8 percent of wages in manufacturing being generated in the garment industry. On the other hand, there were 530,341 workers

[3] Inbound tourists to Cambodia increased rapidly over time from one hundred thousand in 1993 to 4.5 million in 2014. The estimated amount of tourism receipts in Cambodia increased from 0.1 billion US dollars in 1995 to 2.7 billion in 2014 (Cambodian Ministry of Tourism, 2014).

employed in manufacturing and 374,338 in garments.[4] Thus, 70.6 percent of manufacturing employment belongs to the garment industry. Moreover, the garment industry played a larger role in terms of regular employees and female employment. The garment industry accounted for 83.8 percent of regular employees and 85.1 percent of female employment in manufacturing. Taken together, these figures indicate the substantial role of the garment industry in Cambodia's industrialization.

Within the garment industry, the largest sector is wearing apparel, followed by textiles and leather/footwear. The number of establishments was 15,958 in wearing apparel, 8,919 in textiles and 278 in leather/footwear. Furthermore, the number of workers was 294,433 in wearing apparel, 39,041 in textiles and 40,864 in leather/footwear. These figures suggest that the average employment size per establishment was 147 workers in leather/footwear, 18 in wearing apparel, and 4 in textiles. These figures suggest that factories for wearing apparel and footwear employed a greater number of workers and operated on a larger scale than those for textiles.

Table 1 also shows that the food and beverage industry generated substantial sales. The total sales reached15.8 million US dollars and amounted to 29.6 percent of aggregate manufacturing sales. Despite this substantial volume of sales, wage payments and employment in this industry were substantially smaller than those in the garment industry. For instance, the food and beverage industry accounted for only 8.1 percent of wage payments in manufacturing, whereas it accounted for 15.3 percent of employment. This industry accounted for only 3.8 percent of regular employees in manufacturing, suggesting that the garment industry contributed to generating formal employment opportunities more substantially than other comparable industries.

2.2.International Trade in Goods

I now turn to describing international trade in goods in Cambodia by using the UN Comtrade Database – a repository of official trade statistics to extract trade statistics reported by Cambodia for the period 2000-2015. While such official trade statistics are used in my descriptive analysis, the results should be interpreted with care. As emphasized in Hill and Menon (2014), the official trade statistics in Cambodia tend to suffer from measurement errors for several reasons, including the inadequate capacity of statistical collection, commodity misclassification, unrecorded trade flows and the prevalence of smuggling to evade import tariffs.[5]

Figure 1 shows the aggregate volume of Cambodian exports and imports for 2000-2015. The total volume of exports increased from 1.38 billion US dollars in 2000 to 8.54 billion in 2015. The total volume of imports also increased from 1.43 billion US dollars in 2000 to 10.6 billion in 2015. Both exports and imports increased rapidly over time, whereas the volume of imports increased more rapidly than that of exports. Investigating discrepancies in trade statistics between Cambodia and partner countries, Hamanaka (2011) finds a relatively small discrepancy in the data on total exports from Cambodia. However, data on total imports to Cambodia tends to be largely underestimated. His findings suggest that the volume of imports in Cambodia may have grown much more substantially than that of exports.

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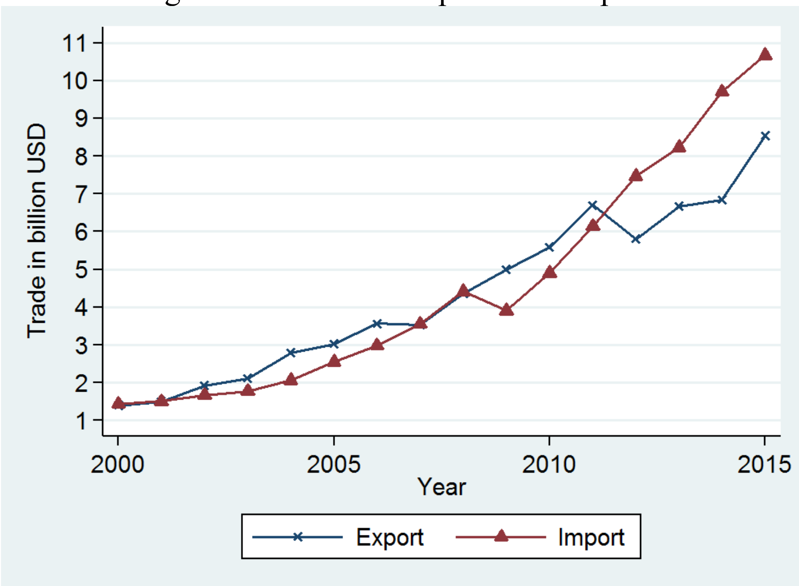
[4] ILO (2015) reports that over 600,000 workers were employed in the garment sector in the middle of 2015.

[5] Hamanaka (2011) discusses measurement issues in trade statistics. For instance, it is widely held that a large amount of rice, timber and sand are unofficially exported from Cambodia and not reported as formal exports. As a result, export statistics reported by Cambodia tend to fall short of import statistics reported by, for instance, Vietnam for rice and timber and Singapore for sand.

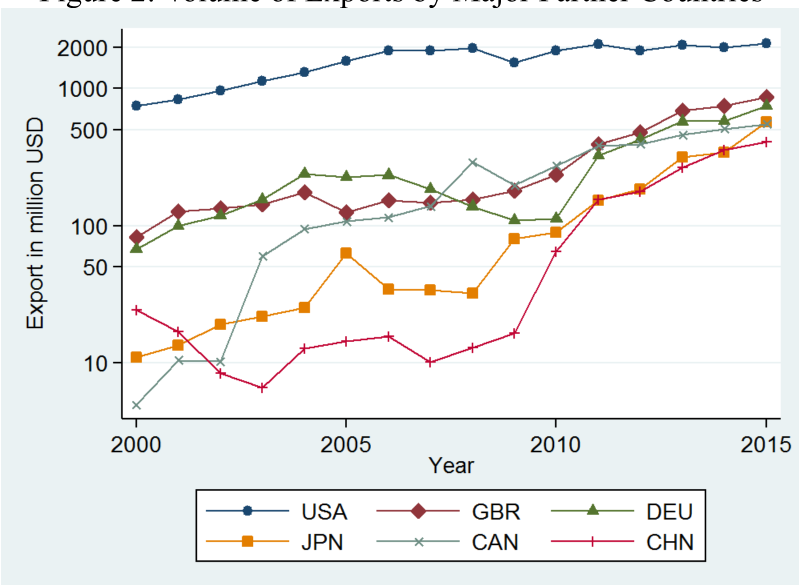
Figure 1: Volume of Exports and Imports



Source: UN Comtrade Database (accessed as of October 25th, 2016)

To understand the structure of Cambodia's international trade, I disaggregate trade statistics by major partner countries. Figure 2 shows the volume of exports of six partner countries for 2015: the U.S. (USA), the U.K. (GBR), Germany (DEU), Japan (JPN), Canada (CAN) and China (CHN). These countries accounted for around 62 percent of the total export from Cambodia in 2015. Note that the vertical axis is shown in log scale. The U.S. has been the largest destination market for Cambodia's exports, and saw an increase from 750 million US dollars in 2000 to 2,136 million in 2015. Around a quarter of the total exports from Cambodia were accounted for by the U.S. market, followed by the European countries, such as the U.K. and Germany. The other major markets include Canada, Japan and China. Exports to these markets increased substantially between 2000 and 2015.

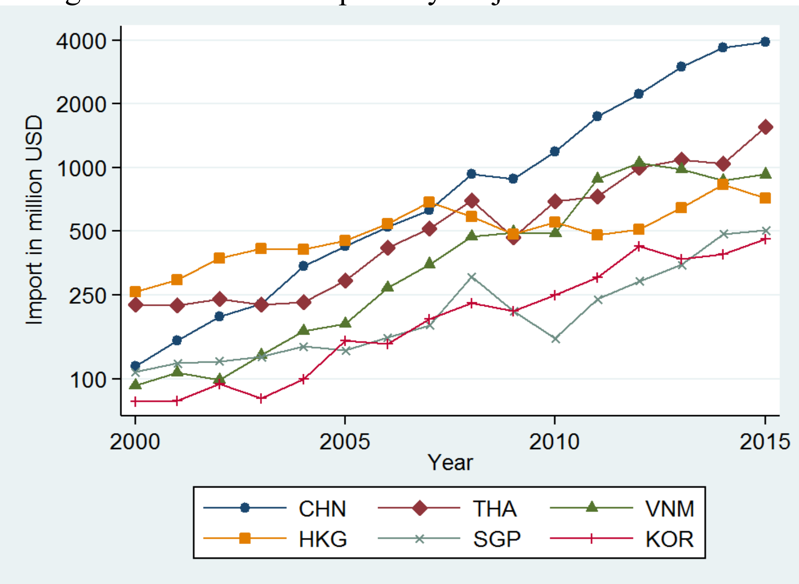
Figure 2: Volume of Exports by Major Partner Countries



Note: The vertical axis is shown in log scale.
Source: UN Comtrade Database (accessed as of October 25th, 2016)

Figure 3 presents the volume of imports disaggregated by major partner countries: China (CHN), Thailand (THA), Vietnam (VNM), Hong Kong, China (HKG), Singapore (SGP) and South Korea (KOR). These countries account for around 76 percent of the total imports to Cambodia in 2015, with China being the largest partner country. Imports from China increased from 115 million US dollars in 2000 to 3,926 million in 2015, and accounted for over a quarter of total imports to Cambodia. Imports from neighboring countries, such as Thailand and Vietnam, were also substantial. Hong Kong represented a major import partner for Cambodia, followed by Singapore and South Korea. However, these results should be interpreted carefully. Hamanaka (2011) shows large discrepancies between Cambodia's imports and the exports of its trade partners in the cases of Thailand and Vietnam, implying that imports from neighboring countries might have been much larger than the volume of imports reported in official trade statistics.

Figure 3: Volume of Imports by Major Partner Countries



Note: The vertical axis is shown in log scale.
Source: UN Comtrade Database (accessed as of October 25th, 2016)

Turning to examine the major commodities in trade, I show the major export goods for 2000 and 2015 in Table 2. In both years, the largest commodity was apparel and accessories (knitted or crocheted). The export volume of these commodities increased from 849 million US dollars in 2000 to 5,550 million in 2015. Together with other commodities in footwear, gaiters, apparel and clothing accessories (not knitted or crocheted), the volume of exports in garments and footwear amounted to 6.5 billion US dollars in 2015. These commodities accounted for around 61 percent of total exports that year. Among these commodities, the volume of exports in footwear and gaiters increased substantially from 28.8 million US dollars in 2000 to 637 in 2015. Additionally, the volume of exports in electrical machinery and vehicles and parts increased substantially in 2015, although these were not major export commodities in 2000.

Table 2: The Major Commodities of Exports from Cambodia

Rank	Year 2000 Commodity	Export	Year 2015 Commodity	Export
1	Apparel, accessories, knitted or crocheted	840.72	Apparel, accessories, knitted or crocheted	5550.19
2	Printed books, newspapers, pictures	272.41	Footwear, gaiters	637.00
3	Apparel and clothing accessories (not knitted or crocheted)	121.85	Apparel and clothing accessories (not knitted or crocheted)	366.28
4	Wood, wood charcoal	34.60	Electrical machinery and equipment and parts	321.29
5	Rubber	32.49	Cereals	285.64
6	Footwear, gaiters	28.83	Vehicles and parts and accessories	281.29
7	Headgear	7.42	Fur skins and artificial fur	166.12
8	Fish, crustaceans, molluscs, aquatic invertebrates	5.99	Rubber	163.34
9	Pearls, precious stones, metals, coins	5.96	Leather, saddlery, and harnesses	95.84
10	Other made textile articles, sets, worn clothing	5.47	Other made textile articles, sets, worn clothing	86.06

Note: Exports are in millions of USD.
Source: UN Comtrade Database (accessed as of October 25th, 2016)

Table 3 shows the major imported goods in Cambodia for 2000 and 2015. Knitted or crocheted fabrics represented the largest commodities imported to Cambodia, increasing from 131 million US dollars in 2000 to 1,984 million in 2015. The import of manmade staple fibers also increased from 228 million US dollars in 2000 to 962 million in 2015. These commodities are imported mainly as raw materials to manufacture and export garments and footwear products. Additionally, vehicles and vehicle parts experienced a marked increase in imports from 73.8 million US dollars in 2000 to 1,148 million in 2015.

Table 3: The Major Commodities of Imports to Cambodia

Rank	Year 2000 Commodity	Import	Year 2015 Commodity	Import
1	Manmade staple fibers	228.61	Knitted or crocheted fabrics	1984.80
2	Mineral fuels, oils, distillation products	182.78	Vehicles and parts and accessories	1147.97
3	Knitted or crocheted fabrics	131.48	Man-made staple fibers	962.59
4	Nuclear reactors, boilers, machinery	104.54	Nuclear reactors, boilers, machinery	670.41
5	Tobacco	77.03	Pearls, precious stones, metals, coins	599.11
6	Vehicles and parts and accessories	73.85	Electrical machinery and equipment and parts	512.19
7	Electrical, electronic equipment	54.80	Cotton	380.96
8	Other made textile articles, sets, worn clothing	47.71	Plastics	317.80
9	Pharmaceutical products	40.70	Paper, paperboard, pulp	242.48
10	Paper, paperboard, pulp	36.86	Tobacco	235.70

Note: Imports are in millions of USD.
Source: UN Comtrade Database (accessed as of October 25th, 2016)

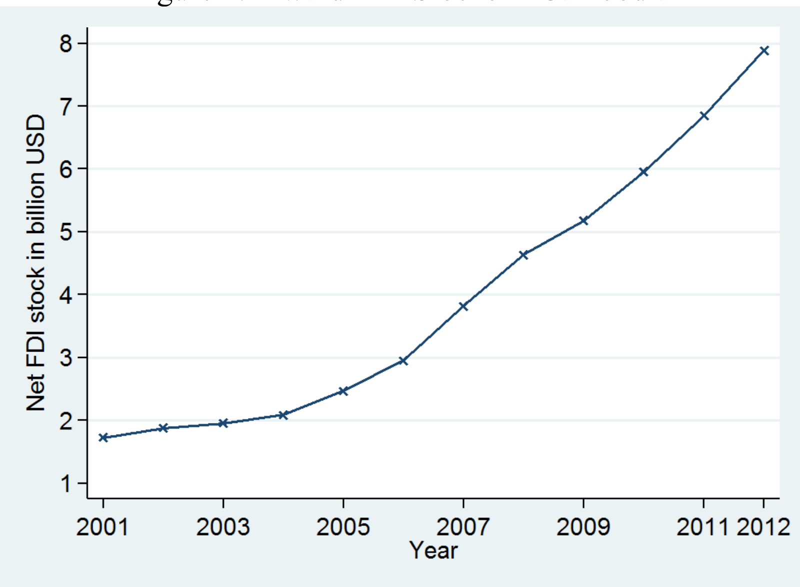
In sum, Cambodia's major export partners are mainly developed economies including the U.S., the U.K., Germany and Japan. Major import partners are mostly East Asian countries including China, Thailand, Vietnam and Hong Kong. The trade patterns outlined suggest that Cambodia imports mainly from proximate Asian countries and exports to high-income markets. In addition, fabrics and manmade staple fibers are Cambodia's major import commodities, whereas apparel and footwear are its major export commodities. These patterns indicate the considerable presence of the garment sector in Cambodia, in which fabrics and manmade staple fibers are processed to export apparel and footwear.

2.3. Inward Foreign Direct Investment

This section describes recent trends in inward FDI activity in Cambodia. In general, FDI represents an investment made by a resident in one country for the long-term management of a business enterprise in another country. When engaging in FDI, a parent firm in one country holds more than 10 percent of the voting shares of an enterprise in another country and seeks to significantly manage and control this enterprise.[6] Thus, data on inward FDI sheds light on the role of foreign-owned firms in the Cambodian economy. However, FDI statistics should be interpreted carefully as an indicator of multinational activity for measurement issues such as the definition of foreign investors, valuation of capital investment, and firms' incentives to minimize tax burdens.

For this task, the UNCTAD FDI/TNC database, which originally derives from the National Bank of Cambodia, is used. Figure 4 presents trends in the total volume of inward FDI stocks for the period 2001-2012. FDI stocks increased substantially from 1.7 billion US dollars in 2001 to 7.8 billion in 2012. During this period, FDI stocks in Cambodia increased by almost 350 percent, suggesting a substantial growth of foreign-owned firms. Together with the rapid growth of international trade, the growth of inward FDI activity represents a crucial feature of the Cambodian economy in recent decades.

Figure 4: Inward FDI Stocks in Cambodia



Source: UNCTAD FDI/TNC database, the National Bank of Cambodia.

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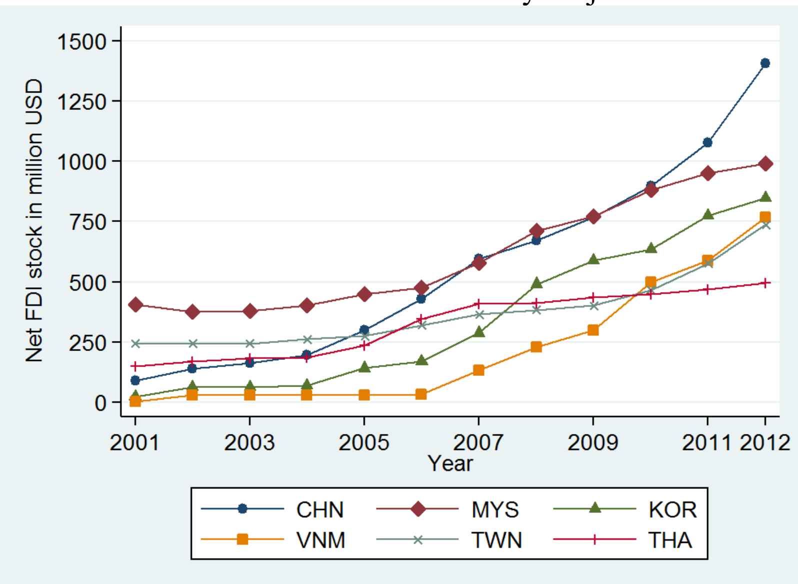
[6] See UNCTAD (2009) for a comprehensive review of FDI statistics.

Figure 5 presents inward FDI stocks in Cambodia disaggregated by the home countries of major foreign investors. In 2012, China was the largest home country of inward FDI stocks in Cambodia. Between 2001 and 2012, the FDI stocks held by Chinese investors increased from 89 million to 1,408 million US dollars, suggesting an over 1,400 percent growth. Malaysia was the second major home country and its FDI stocks increased from 406 million US dollars in 2001 to 990 million in 2012. While Malaysian FDI stocks exceeded those of China in the early 2000s, the subsequent growth has been moderate. Additionally, the other major home countries of foreign investors in Cambodia are South Korea, Vietnam, Taiwan and Thailand.[7] Thus, the home countries of FDI in Cambodia are mainly East Asian, and neighboring countries such as Thailand and Vietnam have also significantly increased FDI stocks.

Figure 5: Inward FDI Stocks in Cambodia by Major Home Countries

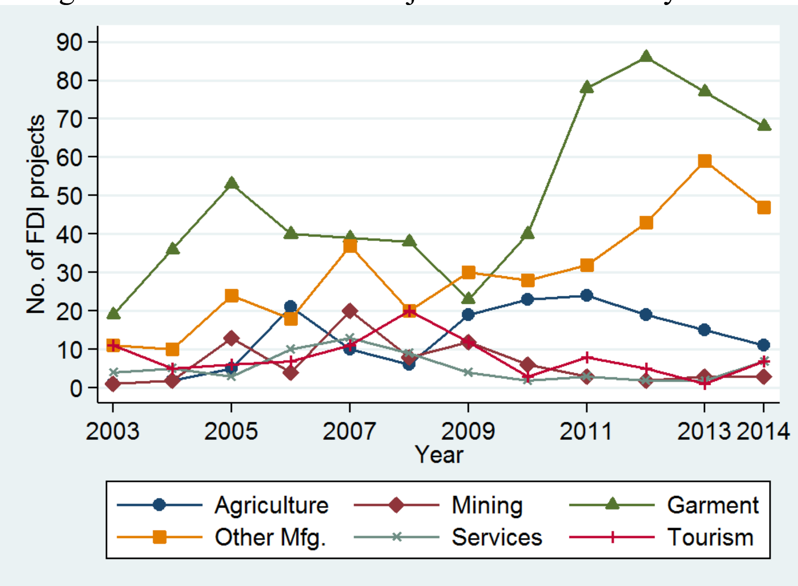


Source: UNCTAD FDI/TNC database, the National Bank of Cambodia.

In describing the major sectors of inward FDI in Cambodia, I use data on investment projects by foreign investors collected by the Council for the Development of Cambodia (CDC), because sectoral composition is not provided in the UNCTAD FDI/TNC database. The data includes investment projects approved by the CDC to be granted investment incentives, such as corporate tax exemption. If investment projects by foreign investors do not apply to the CDC for investment incentives, such projects are not included in the CDC's statistics on FDI. Thus, the data on FDI projects from the CDC should be viewed as only an approximation representing major FDI projects in Cambodia. Figure 6 shows the number of FDI projects aggregated over major sectors during 2003-2014: agriculture, mining, garments, other manufacturing, services and tourism. Since there were 597 FDI projects in garments, it represented the largest block among these sectors. There were a relatively large number of FDI projects in other manufacturing and agricultural sectors. Note that agriculture includes agro-industry, plantation, animal farming and rubber.

[7] Kristy Hsu suggests that some Taiwanese firms making direct investment in Vietnam started to invest in Cambodia as foreign investors originating from Vietnam, implying that Taiwanese investment in Cambodia may be underestimated in official FDI statistics. Consequently, Vietnamese investment in Cambodia may be overestimated.

Figure 6: Number of FDI Projects in Cambodia by Sector



Source: The Council for the Development of Cambodia

Taken together, the descriptive analysis shows that inward FDI in Cambodia has increased substantially over the past few decades. Major foreign investors come from East Asian countries, including China, Malaysia, Korea, and Taiwan. There has been a growing volume of FDI inflows from neighboring countries such as Thailand and Vietnam. Across all sectors, the garment sector is the largest in terms of the number of FDI projects, followed by other manufacturing and agriculture.

3. FDI and Global Value Chains in the Garment Industry

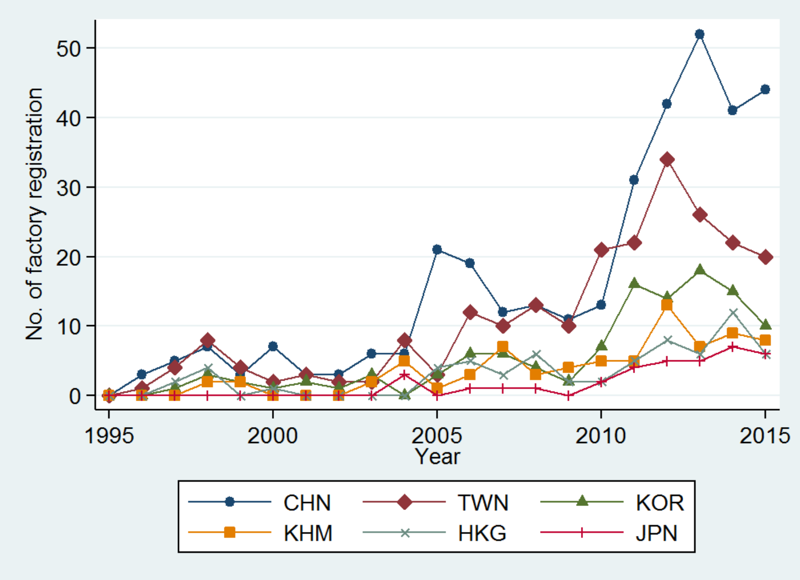
In providing an industry background for my empirical analysis, two key features of the garment industry are described: the considerable role played by foreign-owned manufacturers and the prevalence of labor-intensive tasks as part of global value chains. First, foreign-owned garment manufacturers are major producers in Cambodia. Describing the origins of the garment industry, Bargawi (2005) explains that silk and cotton were produced to manufacture garments in Cambodia during the French colonial rule. The industrial production of textiles started after the country gained independence. Such an industrial base was devastated during the period of the Khmer Rouge and subsequent civil war. After the Paris Peace Accord in 1991 set the stage for the reconstruction of the Cambodian economy, foreign investors started to build and operate export-oriented garment factories after the mid-1990s.

To document such an observation, I examine data on factory registrations provided by the Cambodian Ministry of Industry and Handicrafts. In Figure 7, a sample of garment factories after the year 1995 shows the number of registered garment factories disaggregated by major home countries. Note that Cambodian-owned garment factories (KHM) are also included in the figures.[8] Since the mid-1990s, there has been an increase in garment factory registrations from home countries such as China (CHN), Taiwan (TWN), South Korea (KOR) and Hong Kong (HKG). Specifically, garment factory registrations from China, Taiwan and South Korea have increased substantially over the past few decades. Moreover, factory registrations from Japan have started to

[8] These may include factories jointly owned by Cambodian and foreign partners.

increase in recent years. As compared with Cambodian-owned garment factories, foreign-owned garment manufacturers have played a dominant role in the recent expansion of garments production.

Figure 7: The Number of Registered Garment Factories by Major Home Countries



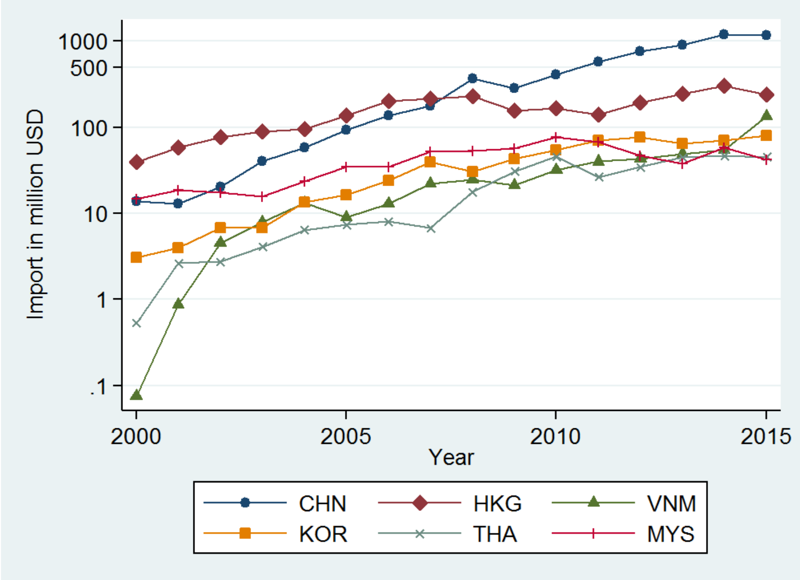
Source: The Cambodian Ministry of Industry and Handicraft

As discussed in Asuyama and Neou (2014), the rapid growth of inward FDI in the garment sector has been made possible by investment policies in Cambodia. In general, foreign investors are allowed to maintain a 100 percent of stocks in a local subsidiary. Generous incentives are provided for investors in the garment sector under the 1994 Law on Investment and its sub-degree in 1997. Specifically, these incentives include 9 percent concessionary corporate income tax, tax holidays of up to 8 years, tax exemption for reinvestment and the repatriation of profits, import duty exemptions on materials and equipment and export tax exemption. While some of these incentives were removed under the 2003 Law on Investment and its sub-degree in 2005, investment incentives remained relatively generous.

A second notable feature in this section is that garment manufactures in Cambodia engage mainly in labor-intensive tasks, such as cutting, trimming and making yarns and fabrics, in order to manufacture apparel products. While garment products are increasingly exported to high-income markets such as the U.S., Europe and Japan these manufacturers mainly import materials such as textiles and fabrics. As a result, wage payments to local unskilled workers constitute a main component of local value added. Garment factories also purchase locally produced materials, such as cardboard boxes, but their backward linkage to local industries is still limited (Hatsukano and Tanaka, 2014). Thus, garment production in Cambodia generates relatively low value added in terms of global value chains in textiles and garment production.

To illustrate the dependence of garment production on imported materials in Cambodia, the volume of imports in fabrics from major partner countries is illustrated in Figure 8. Using the UN Comtrade Database, trends in the import volume of knitted or crocheted fabrics can be observed. In the early 2000s, China (CHN), Malaysia (MYS) and Hong Kong (HKG) represented the major exporters of fabrics to Cambodia. Specifically, imports from China increased substantially over time. In recent years, the volume of imports in fabrics rapidly increased from countries such as Vietnam (VNM), South Korea (KOR) and Thailand (THA). The substantial growth of imported fabrics from East Asian markets is consistent with the growing number of garment factories in Cambodia originating from similar East Asian countries.

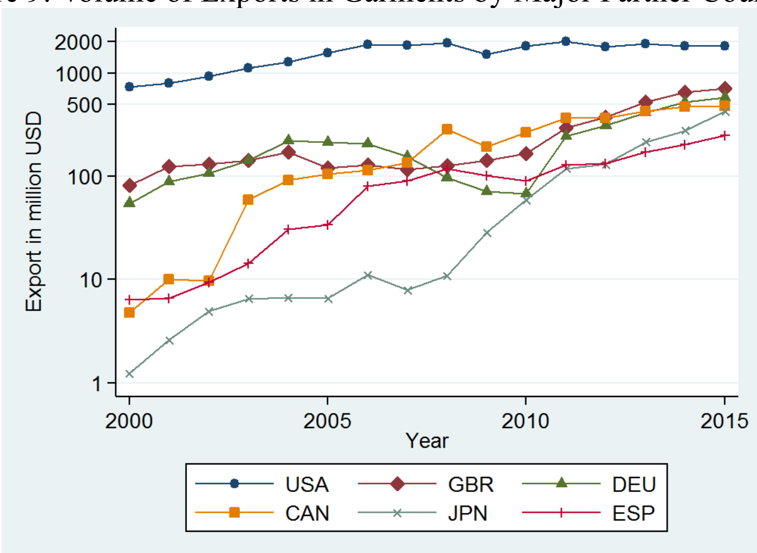
Figure 8: Volume of Imports in Fabrics by Major Partner Countries



Note: The vertical axis is shown in log scale.
Source: UN Comtrade Database (accessed as of October 25th, 2016)

Finally, Figure 9 presents export trends in apparel and clothing products by major partner countries using the UN Comtrade Database. Consistent with the trend in aggregate exports, North American markets such as the U.S. (USA) and Canada (CAN) are the largest export market for garment products in Cambodia, followed by the major European markets of the U.K. (GBR), Germany (DEU) and Spain (ESP). Additionally, the volume of garment exports to Japan (JPN) increased substantially from 2000 to 2015. Thus, these patterns are consistent with the idea that garment production in Cambodia is involved mainly in labor-intensive tasks in the global value chains of textiles and garments.

Figure 9: Volume of Exports in Garments by Major Partner Countries



Note: The vertical axis is shown in log scale.
Source: UN Comtrade Database (accessed as of October 25th, 2016)

4. Assessing the Impact of the U.S. Trade Policies on Garment Exports

Discussions up to this point have illustrated that garment exports are a major driver of industrialization in Cambodia and the U.S. represents their largest export market for garment products. In this section, I assess whether U.S. trade policies regarding Cambodia have had an impact on the garment exports from Cambodia.

4.1. Empirical Framework

As discussed in Asuyama and Neou (2014, ch. 2.2), U.S. trade policies since the mid-1990s have had a potentially considerable impact on garment exports from Cambodia. First, Cambodia obtained MFN status from the U.S. in 1996 and LDC status under the U.S. GSP in 1997. The GSP granted duty-free and quota-free access to the U.S. market for Cambodian products. Second, the U.S. concluded the U.S.-Cambodia Textile and Apparel Trade Agreement (TATA) to address the rapid growth of garment imports to the U.S. market from Cambodia. While the U.S. imposed quotas on garment products from Cambodia, such quotas were annually expanded based on improvements in working conditions at Cambodian garment factories, and the agreement was extended until 2004. Finally, the U.S. imposed quotas on garment imports from China by concluding a bilateral trade agreement between the U.S. and China during the period 2005-2008. Since Chinese exports to the U.S. market intensify competition for exports from Cambodia, the quota on Chinese products should reduce competition on exports from Cambodia.

To estimate the impact of the U.S. trade policies on garment exports from Cambodia, I specify the following model for export market *i* and year *t*:

$$\ln exp_{it} = \beta_0 + \beta_1 MFN_{it} + \beta_2 TATA_{it} + \beta_3 QUO_{it} + \delta X_{it} + f_i + f_t + \varepsilon_{it} \qquad (1)$$

where exp_{it} is the volume of garment exports from Cambodia to export market i. MFN_{it} is a dummy variable that takes on unity for the U.S. market after the year 1996, and zero otherwise. This variable captures the impact of the U.S. MFN and partly the U.S. GSP. $TATA_{it}$ is a dummy variable that takes on unity for the U.S. market during the period 1999-2004, and zero otherwise. This variable represents the effect of the TATA between the U.S. and Cambodia. Finally, QUO_{it} is a dummy variable that takes on unity for the U.S. market during the period 2005-2008, and zero otherwise. This variable captures the impact of U.S. quotas on Chinese products. Additionally, X is a vector of variables on export-market characteristics, such as GDP, GDP per capita, and regional trade agreements (RTAs).[9] f_i is a country-level fixed effect to control for unobserved time-invariant country characteristics. f_t is a year fixed effect to control for the aggregate shocks of global and domestic economies on exports in each year. Finally, ε_{it} is an error term.

Data on garment exports from Cambodia come from the UN Comtrade Database. Import statistics for 1990-2015 are used in terms of partner countries which import garments from Cambodia. Specifically, knitted apparel in HS chapter 61 and woven apparel in HS chapter 62 are analyzed separately. Data on GDP and GDP per capita is taken from the World Development Indicators by the World Bank. Information on RTAs is based on the RTA Database of the World Trade Organization.

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[9] A dummy variable for RTAs is defined for export markets involved in the ASEAN free trade area from 1993, ASEAN-China from 2005, ASEAN-Australia-New Zealand from 2010, ASEAN-India from 2010, ASEAN-Japan from 2008 and ASEAN-Korea RTAs from 2010.

4.2.Estimation Results

Table 4 presents the summary statistics of the sample used in estimation. A list of sample countries is provided in Table 5. The estimation results are shown in Table 6. Equation (1) is estimated by the Ordinary Least Squares (OLS) method separately for exports in knitted and woven apparel. Standard errors corrected for clustering in export markets are reported.

Table 4: Summary Statistics

Variable	No. of Obs.	Mean	Std. Dev.	Min	Max
Panel A: Knitted Apparel					
Log Exports	1,667	5.78	3.64	-5.81	14.49
U.S. MFN	1,667	0.01	0.11	0	1
U.S. TATA	1,667	0.004	0.06	0	1
U.S. QUOTA	1,667	0.002	0.05	0	1
Log Real GDP	1,667	4.90	1.95	-1.00	9.72
Log GDP per capita	1,667	9.44	1.23	5.44	11.60
Regional trade agreements	1,667	0.09	0.28	0	1
Panel B: Woven Apparel					
Log Exports	1,681	5.32	3.37	-6.21	13.69
U.S. MFN	1,681	0.01	0.11	0	1
U.S. TATA	1,681	0.004	0.06	0	1
U.S. QUOTA	1,681	0.002	0.05	0	1
Log Real GDP	1,681	4.92	1.94	-1.00	9.72
Log GDP per capita	1,681	9.42	1.29	5.33	11.63
Regional trade agreements	1,681	0.09	0.28	0	1

Source: Author's estimations

Table 5: List of Export Markets

Albania	Cyprus	Kyrgyz Republic	Russian Federation
Algeria	Czech Republic	Latvia	Rwanda
Andorra	Denmark	Lebanon	Samoa
Angola	Dominican Republic	Lithuania	Saudi Arabia
Antigua and Barbuda	Ecuador	Luxembourg	Senegal
Argentina	Egypt, Arab Rep.	Macao	Seychelles
Armenia	El Salvador	Madagascar	Singapore
Australia	Estonia	Malawi	Slovak Republic
Austria	Ethiopia (excludes Eritrea)	Malaysia	Slovenia
Azerbaijan	Fiji	Malta	South Africa
Bahrain	Finland	Mauritius	Spain
Bangladesh	France	Mexico	Sri Lanka
Barbados	Gabon	Moldova	St. Kitts and Nevis
Belarus	Georgia	Mongolia	St. Vincent and the Grenadines
Belgium	Germany	Morocco	Suriname
Belize	Greece	Mozambique	Sweden
Bermuda	Greenland	Namibia	Switzerland
Bolivia	Guatemala	Nepal	Tanzania
Bosnia and Herzegovina	Hong Kong, China	Netherlands	Thailand
Brazil	Hungary	New Zealand	Tonga
Brunei	Iceland	Nicaragua	Trinidad and Tobago
Bulgaria	India	Norway	Tunisia

Burkina Faso	Indonesia	Oman	Turkey
Burundi	Ireland	Pakistan	Uganda
Cameroon	Israel	Panama	Ukraine
Canada	Italy	Papua New Guinea	United Arab Emirates
Chile	Jamaica	Paraguay	United Kingdom
China	Japan	Peru	United States
Colombia	Jordan	Philippines	Uruguay
Costa Rica	Kazakhstan	Poland	Venezuela
Cote d'Ivoire	Kenya	Portugal	Vietnam
Croatia	Korea, Rep.	Qatar	Zambia
Cuba	Kuwait	Romania	

Table 6: Estimation Results of Garment Exports

Dependent variable: log of exports from Cambodia

	(1)	(2)
Sample	Knitted Apparel	Woven Apparel
HS Chapter	61	62
U.S. MFN	6.54**	5.32**
	(0.43)	(0.37)
U.S. TATA	1.86**	2.23**
	(0.19)	(0.19)
U.S. QUOTA	1.24**	1.66**
	(0.13)	(0.14)
Log Real GDP	2.80*	2.53*
	(1.24)	(1.15)
Log GDP per capita	0.71	-0.30
	(1.41)	(1.22)
Regional trade agreements	1.10+	0.86+
	(0.58)	(0.50)
Country dummy	Yes	Yes
Year dummy	Yes	Yes
No. of observations	1,667	1,681
R-squared	0.86	0.85

Notes: Parentheses report standard errors corrected for clustering in export markets; constant is not reported; **, *, and + denote significance at the 1%, 5%, and 10% level, respectively.
Source: Author's estimations

Column (1) shows the result for knitted apparel. The coefficient of the *MFN* variable is positive and significant. The estimated coefficient implies that exports in knitted apparel from Cambodia to the U.S. market have increased by 69,128 percent since 1996.[10] The marginal effect of obtaining MFN status from the U.S. is remarkably large in magnitude. Since Cambodia was designated as a LDC under the U.S. GSP in 1997, the marginal effect of the *MFN* variable should partly capture the impact of the U.S. GSP. The coefficient of the *TATA* variable is positive and significant. This result is consistent with the discussion in Bargawi (2005, p. 15) in that annual quota growth rates were generous for actual garment exports from Cambodia. The estimated coefficient suggests that exports in knitted apparel to the U.S. market increased by 542.4 percent during 1999-2004. Additionally, the coefficient of the *QUO* variable is positive and significant. The result is consistent with the argument that U.S. quotas on Chinese products should have reduced a competition effect on exports from non-Chinese markets, thereby contributing to an increase in exports from Cambodia. The marginal effect of *QUO* is 245.6 percent.

[10] The marginal effect is computed by $100 \times (exp(6.54) - 1)$.

Column (2) shows the results for woven apparel. The coefficient of the *MFN* variable is positive and significant. The estimated coefficient shows that exports in woven apparel from Cambodia to the U.S. increased by 20,338 percent. As is found with knitted apparel, the marginal effect of obtaining U.S. MFN status is substantial in magnitude. The coefficients of the *TATA* and *QUO* variables are also positive and significant. The marginal effects for *TATA* and *QUO* are 830 percent and 426 percent, respectively.

Taken together, the results suggest that U.S. trade policies potentially contribute to substantially increasing exports in knitted and woven apparel from Cambodia to U.S. markets. Specifically, the growth of garment exports was remarkable after Cambodia obtained MFN status and was designated as a LDC in the U.S. GSP, suggesting that preferential trade access to a large market is critical to export industry development in developing economies.

5. Conclusion

The Cambodian economy has experienced a remarkable growth in recent decades after a prolonged and turbulent period of domestic conflicts. The rapid growth of international trade and inward FDI contributed to export industry development. This paper shows that major export partners mainly constitute developed countries including the U.S., the U.K., Germany and Japan, whilst major import partners are largely drawn from East Asian countries, including China, Thailand, Vietnam and Hong Kong. Fabrics and manmade staple fibers represent the major import commodities, whereas apparel, clothing and footwear constitute the major export commodities. Additionally, inward FDI in Cambodia has increased substantially in recent decades. Major foreign investors come from East Asian countries including China, Malaysia, Korea and Taiwan. Across industrial sectors, the garment sector is the largest in terms of the number of FDI projects, followed by other manufacturing and agriculture.

Garment exports are a major driver of industrialization in Cambodia and the U.S. market is the largest export market for garment products. The empirical assessment of U.S. trade policies regarding Cambodia shows that such initiatives since the mid-1990s have had a substantial and positive impact on exports in knitted and woven apparel from Cambodia to the U.S. market. In particular, the garment exports increased sharply after Cambodian obtained MFN status in 1996 and was designated as a LDC under the U.S. GSP in 1997. These results suggest that preferential trade access to a large market is critical to export industry development in developing economies.

By opening up to international trade and foreign investors, Cambodia made remarkable progress along its industrialization path. While the industrial development has certainly contributed to the rapid growth of the Cambodia economy, there remain many issues in terms of sound economic development. First, the informal sector, as measured by unregistered non-farm business establishments, remains substantial and has possibly grown more rapidly than the formal sector. Tanaka and Keola (2017) show that 96.6 percent of establishments do not formally register with the government, and their sales accounted for 76.6 percent of total sales in 2011. Estimating past sales in the formal and informal sectors from changes in nighttime light for 1993-2010, they find that the share of estimated sales in informal sales increased from 68.8 percent in 1993 to 76.6 percent in 2011. As informal businesses tend to avoid formal tax burdens and distort fair competition in local markets, the formalization of business establishments is a crucial policy issue.

Second, the potentially growing share of informal businesses suggests that the formal sector has not grown rapidly enough to provide formal employment opportunities for the expanding labor force in Cambodia. According to the World Bank, the annual growth rate of the population was over 2.3 percent during 1990-2011. While the supply of workers has increased substantially, many new workers are unable to find employment in the formal sector, thereby seeking jobs in the informal sector. Additionally, a shortage of educated entrepreneurs partly explains the insufficient expansion of formal-sector employment necessary to absorb the growing number of new workers.

Third, there appears to be no substantial improvements in governance and institutional management in Cambodia, which are required to support the sound growth of formal businesses in the industrialization process (Hill and Menon, 2013). According to the Worldwide Governance Indicators of the World Bank, the control of corruption indicator shows the extent to which public power is exercised for private gain, and ranges from -2.5 (weak) to 2.5 (strong). This indicator for Cambodia deteriorated from -0.96 in 1996 to -1.22 in 2011. The regulatory quality indicator shows the ability of the government to provide sound policies and regulations for private sector development. This indicator also deteriorated from -0.05 in 1996 to -0.57 in 2011. While the political stability in recent decades helped to promote economic growth and industrialization, low institutional quality deters the sound transformation of industrial activities.

Finally, it should be emphasized that the economic liberalization and global integration experienced by Cambodia have contributed not only to reduce poverty, but also to increase inequality. From a political-economy point of view, Hughes and Un (2011) discuss a wide range of examples in which economic and political elites benefited disproportionately during the post-conflict period. The deep relationship between politics and business in Cambodia blurs the distinction between private business and public regulation, which might severely distort resource allocation. Patronage-client connections can deteriorate a market mechanism in which more productive firms gain a larger market share. For instance, a government minister may receive a consultation fee from a firm over which he/she is supposed to supervise (Ear, 2011). A person connected to the ruling elite in the government acquires land held by villagers in a rural area and influences the court in addressing land disputes in favor of the ruling elite (Cock, 2011). The rushed passage of a Land Law in 1992 contributed to exacerbate land grabbing by civilian government officials and members of the armed forces, which negatively impacted impoverished rural farmers (So, 2011). As these examples represent merely the tip of the iceberg in terms of the profound social problems faced by Cambodians, social barriers must be removed in order to enable sound, principled economic development to ultimately prevail.

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