

F.No.7/1/2012-FT(ASEAN)  
Government of India  
Ministry of Commerce and Industry  
Department of Commerce

Udyog Bhawan, New Delhi  
Dated 10 May, 2019

OFFICE MEMORANDUM

Subject: Study on the Pharmaceutical Market and Healthcare infrastructure in Cambodia.

The undersigned is directed to refer to this Division's earlier OM of even number dated 19th March 2019 requesting to take appropriate action to enhance India's trade prospects in pharmaceutical sector with Cambodia in the background of interaction of Indian Ambassador to Cambodia with Khmer Times highlighting the rapidly expanding healthcare sector in Cambodia and calling on Indian pharmaceutical industry to grasp this opportunity to flourish in this sector.

2. The Embassy of India in Cambodia had commissioned a study on the Pharmaceutical Market and Healthcare Infrastructure in Cambodia and has now sent the Report of the study together with an executive summary prepared by the Mission. A copy of the Report and the executive summary is enclosed herewith for information and action as appropriate.

Encl: As above

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Copy to: Shri Udaya Bhaskar, Director General, Pharmexcil, 101, Aditya Trade Centre, Ameerpet, Hyderabad -500038, Andhra Pradesh., E-mail- dg@pharmexcil.com - for disseminating the report among its members.

*13/5/19*  
*on file pls Div (EP-Pharma)*  
*CCBS*  
*13/5/19*

## Summary of Survey Report on Pharmaceutical Market and Healthcare Infrastructure in Cambodia

Cambodia is rapidly growing economy with average 7-8% GDP growth during last two decades enabled by a low-cost, low-value economic growth model with high inflow of FDI. Cambodian economy is vulnerable to outside economic factors such as possible slowdowns in FDI and changes in schemes such as Everything But Arms. Country is committed to economic development with investment in human capital which is more than 1% of GDP in education and rapid development of infrastructure. Cambodia's industry based economy is divided in four sectors; Agriculture, tourism, construction and manufacturing, all heavily funded by FDI. FDI in first six months of 2018 increased by 14.3%, majority of which originated from China and targeted real estate sector. Lack of processing, evolution and value addition and creation of human capital is the major challenge for Cambodian economy, which is crucial for facilitating economic diversification and job creation. Agriculture is largest sector with over 80% of population relying on it. Manufacturing sector accounts for approx. 30% of Cambodian economy and is dominated by garment and footwear. Tourism continues to be a rapidly growing sector with 28.3% of Cambodia's GDP and 25.9% employment in 2017.

### **Healthcare Sector in Cambodia**

Since the reform initiatives by Government in 1990s, the health of Cambodian population has improved with country achieving most of its MDGs by 2014 and life expectancy increasing to 66.7 and 70.8 years in men and women, respectively in 2015. National budget in healthcare doubled between 2010 to 2015 but remained 20% of total health expenditure accounting for 5-7% of GDP despite Government's goal to raise upto 30% in public health expenditure. High poverty rate directly affects health of Cambodian population. Cambodia lacks universal health coverage or established health insurance services so the poor are reliant on healthcare provided by NGOs or at no cost at public facilities. Because of this, Cambodians spend a disproportionate amount of their household income on health care usually in the form of medicines directly purchased from pharmacies. These payments mostly go to private health services totalling 61% of total healthcare expenditure. As per 2010 Cambodian Demographic and Health Survey, only 29% sick or injured patients sought care first at public sector facilities, while 57% sought care from private health providers. This shows the lack of trust of treatment capabilities of public health facilities and professionals.

Current health system in Cambodia has two major inherent problems: health system in place was not specifically designed for Cambodia and is based on Vietnamese and French systems; regulatory systems are overly bureaucratic and overly complex with high duplication and overlap between governing bodies and regulation. Cambodian healthcare system includes both public and private sectors (later include for-profit and not-for-profit organizations) with Ministry of Health as the supreme health authority. Qualified private professionals and pharmacies are mostly available in urban areas. In 2015, there were approx. 2000 registered pharmacies, 300 drug import/export companies and 13 medical manufacturing institutions in Cambodia. There are also informal health providers which include vendors selling drugs from shops or markets, traditional birth attendants and healers and upto 2/3 of public health staff also work separately in some private capacity.

### **Pharmaceutical & Medical Device Marketing**

With a population of over 16 million and Cambodians spending on average \$ 60 out of pocket healthcare annually, largely in the form of pharmaceuticals purchased directly from pharmacies, Pharmaceutical market in Cambodia has experienced consistent growth for the past 10 years. In 2016 there were 13 pharma companies which grew to 2248 registered pharmacies and 381 drug import/export companies in 2017. France is Cambodia's top supplier followed by India who is the Cambodia's largest Asian supplier, accounting for about

one quarter of the entire market. Cambodian Government is combatting with the problem of high rate of counterfeit drugs and many pharmacies have been closed. Currently, there is no Govt. controls on pharma prices in both public and private sector. Pharmaceuticals are regulated by the Law on the Management of Pharmaceuticals, 2007 and National Medicines Policy, 2010. Cambodia's medical device market is expected to grow as there is currently low domestic production of medical devices in Cambodia with most medical devices being imported. Most companies act as distributors of medical supplies or offer certification for medical devices. Cambodia does not have specific barriers barring foreign firms from importing medical products to the country. Drug and device registration in Cambodia follows ASEAN requirements. Registration of pharma products are inexpensive but keeping in view the formalities and limited validity, it is advisable to engage local partners. Cambodians restrict certain type of pharma products like narcotic, psychotropic and drug precursors. Mostly pharma products are being imported. Two of the four Indian companies interviewed reported that they have plans to establish manufacturing plants in near future. In 2017, pharma products were among top ten exports to Cambodia with drug formulations and biologicals totalling at over \$ 39 million. Indian pharma companies differentiate themselves as being cheaper than their European counterparts. However, the low prices of Indian products could be driven up in future to India's plan to instate 30% tax on raw materials used in pharma manufacturing. As per estimates, there are around 80 Indian pharma companies in Cambodian market. MoH is largest purchaser of medical products with doctors, private pharmacies and clinics as potential buyers.

#### **Health Education/Pharma Manufacturing/Health Tourism etc.**

Health education in Cambodia is only skeletal and approx. 10 medical schools in Cambodia lack adequate resources to properly train their students. Due to religious belief in Cambodia, students do not get to learn from human cadavers thereby restricting the quality of medical education at a very low level. Health profession in Cambodia is split into five regulated health professions, with five independent councils for each like Medical Council of Cambodia, Dental Council of Cambodia, Cambodia Council of Midwives, Cambodia Council of Nurses and Pharmacy Council of Cambodia. Each Council administers their own regulations together with MoH. This is excellent time for new entrants into Cambodian health education market by focussing on new markets and transfer knowledge and skills and develop human capital, especially when 70% of population is below 30 years of age who is looking for opportunities and can be trained properly. Cambodia also lacks infrastructure especially outside Phnom Penh. Foreign funded hospitals are mostly in Phnom Penh therefore there is a lot of scope in establishing hospital in every part of Cambodia through foreign investment. At present, Indian pharma companies import their products from India. Cambodia's SEZ offers many perks to foreign companies to attract FDI inflows. Pharma manufacturing plants have to comply with WHO's GMP. This way companies can reduce cost of production and provide employment opportunities to Cambodian youths. Cambodia also has good scope for niche health tourism market through for-profit drug rehab centres by development of non-compulsory in-patient rehab treatment centres in different parts of country, which would attract foreigners and indigenous population as in-patient treatment centres are private and secure, a 28 day in-patient treatment programme will work with a 30-day tourist visa etc. This would also import mental health professionals from other countries which would help in educational and skill development opportunities for new generation of Cambodian professionals. Indian companies could also import /manufacture medical devices by setting up a company in PPSEZ and applying for Qualified Investment Project status to receive benefits. Field of Local production of medical devices in Cambodia is untapped. Indian companies could establish a dental hospital, which due to lower prices attracts medical tourism from neighboring countries. This could also provide opportunity to train Cambodian dental professionals.

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**The Pharmaceutical Market and Health Care  
Infrastructure in Cambodia:**

**A report prepared for the Embassy of India**



**Embassy of India**

**Phnom Penh, Cambodia**

**Prepared by: Real-time Data Solutions**

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## B. Abbreviations

ASEAN	Non-Governmental Organization
BDF	Phnom Penh Special Economic Zone
DDF	Pharmaceutical Sector Strategic Plan 2013-2018
Detox	Quality Investment Project
EU	Royal Government of Cambodia
EBA	Rehabilitation
FDI	Special Economic Zone
GDP	University of Health Sciences
GMP	United Nations
HSP-3	United Nations Transitional Authority
(the) Kingdom	American dollar(s)
KHR	World Bank Group
LTGM	World Health Organization
MDG	World Trade Organization
MoH	
NGO	
PPSEZ	
PSSP-2	
QIP	
RGC	
Rehab	
SEZ	
UHS	
UN	
UNTAC	
USD	
WBG	
WHO	
WTO	

The Association of Southeast Asian Nations  
Bureau of Drugs and Food at the provincial level  
Department of Drugs and Food  
Detoxification  
European Union  
Everything but Arms agreement  
Foreign Direct Investment  
Gross Domestic Product  
Good Manufacturing Practices  
Health Strategic Plan 2016-2020  
the Kingdom of Cambodia  
Cambodian riel  
Long-Term Growth Model  
Millennium Development Goal(s)  
Ministry of Health

## III. Executive Summary

The Kingdom of Cambodia's traumatic history from the latter-half of the 20<sup>th</sup> century still shapes and informs the country's current healthcare sector, as well as country-specific challenges present in the healthcare market, among others. Between 1975 and 1979, the Khmer Rouge effectively destroyed all healthcare and educational infrastructure in the country, as well as eradicated most of the country's Western-trained professionals, including doctors and physicians. Afterwards, when the country was being rebuilt during the

1980s and 1990s, many legislation systems including healthcare legislation and regulation, were inherited directly from French systems, and not developed with the country's specific needs in mind.

Currently, the country's healthcare delivery systems are met by both public and private sectors, with ample market entry opportunities on the private side due to widespread Cambodian distrust of national (public) medical services, which in turn is at least partially inherited from Khmer Rouge-era policies. In four years, the Khmer Rouge effectively dismantled the health education institutions in the country, as well as eradicated many of Cambodia's doctors, physicians and other health professionals either directly through elimination, or through famine and over-work. What few medical professionals remained after the regime fell, many fled the country. When the country began rebuilding its healthcare infrastructure in 1980, it was essentially rebuilt from nothing, and the doctors and health professionals that remained became administrators and professors in newly reopened medical education institutions. Because there was a need to have health professionals in any capacity, to address the near total lack of having any, when these educational institutions were reopened they focused more on the quantity of health professionals graduating, rather than the quality of their training.

Cambodia has experienced consistent high economic growth for the past twenty years, with annual economic growth averaging at more than 7%, and because of this, the country was able to graduate from being a low-income country to being classified as a lower-middle income country in 2017. However, if the Royal Government of

Cambodia (RGC) wants to maintain its impressive economic growth and achieve its development goals of being an upper-middle income economy by 2030, and a high-income country by 2050, the country will have to evolve away from its current low-skill low-value industry-based economy, in favor of achieving more sustainable growth in the long-term. Fortunately, Cambodia's current population is experiencing a "demographic dividend," with over 70% of the current population being under the age of 30, most of whom who are already part of the country's available workforce (ages 18-64), or who will soon enter the working population. Additionally, this demographic will take at least another 30 years to age out of the workforce, providing the country with a unique opportunity to properly educate and train the upcoming generation in order to transform the current industry-based economy to a Long-Term Growth Model (LTGM). To do this, Cambodia will need to heavily invest in education including healthcare education, in order to best-equip the upcoming generation to work in a globalized economy as well as effectively delivering medical care to this generation as it ages, as well as reverse the government's current downward trend in spending on infrastructure, including transportation infrastructure.

While a large portion of the Cambodian economy is bolstered by high rates of foreign direct investment (FDI), which is unsustainable in the long-term, high FDI rates at present can be transformed to provide delivery of much needed infrastructure and education by connecting FDI to domestic development of education, human resources development and capacity

building of infrastructure including the healthcare sector.

#### IV. Introduction

Cambodia is a small, low-land wetland plain nation in Southeast Asia on the Indochina Peninsula, that shares its border with Thailand to the west, Laos to the north, Vietnam to the east and the Gulf of Thailand in the south. It has an estimated population of 16.48 million people in 2019, with about 70% of its population being under the age of 30, and 50% being under the age of 25, contributing to a demographic dividend with the country's working-age population (15- 64) growing faster than its total population. According to the World Bank, the country's current population demographics contribute to Cambodia having "...a window of opportunity for rapid economic growth during the next 30 years, until its working-age population starts to decline."<sup>113</sup> Cambodia's modern-day population make-up is directly affected by the genocide, wars and famine the country experience during the second-half of the 20<sup>th</sup> century. The country's population of over 7 million in the early 1970s was decimated by genocide, war and famine, with 1-2 million deaths estimated between 1975 and 1979 alone, when the communist Democratic Kampuchea party (colloquially known as the Khmer Rouge) was in control of the country. After the regime fell, the country experienced a baby boom, swelling the country's population to its modern

numbers, and accounting for the demographic disparity.

The present state of healthcare and medical education in Cambodia, as well as Cambodian attitudes towards health care, were also deeply altered by the Khmer Rouge. Their primary aim was to transform the country's economy through developing industry by increasing Cambodia's economic wealth through a complete overhaul of rice production, which they aimed to do by forcing the country's entire population to take part. They began when they captured and emptied the capital of Phnom Penh in April 1975, effectively closing hospitals and medical institutions at this time. Foreigners were expelled, and all Western-educated or influenced persons, including medical health professionals, were deemed politically suspect "urban exploiters" and were banned from their former fields. Programs for health and education were suspended until agricultural production goals were met, and imported medicines were banned, with medicines left on the shelves in the abandoned hospitals and pharmacies in the city.<sup>38</sup> The Khmer Rouge's ideals of self-sufficiency and ideological purity extended to its medicine production and health-care system which meant two things: 1) the medical system of the regime was based on class loyalty and revolutionary consciousness and thus excluded both Western- trained physicians and traditional medicine practitioners and 2) the regime would have to produce their own supply. The isolated economy of the Khmer Rouge resulted in a shortage of chemical medicine, which was to be met by domestic production under the new regime,



Pharmaceutical market and health care in Cambodia and the regime's new revolutionary doctors were to be modeled upon the barefoot doctors of Communist China.<sup>36</sup>

However, internal strife within the regime resulted in purges that resulted in less and less qualified persons in the place of medical professionals, placed according to their revolutionary purity, which undercut the efficacy of any chemical medicine production as well as training for health personnel.<sup>38</sup> While there were hospitals functioning in Phnom Penh after the city was emptied, with some even having Chinese specialists and receiving Chinese medicine, their staffs were not allowed to travel and mostly catered to officials of the Khmer Rouge. The quality of hospitals and medical professionals worsened outside of the capital, with country infirmaries being primitive and staffed with untrained revolutionary doctors who produced artisanal herbal "rabbit dung" medicines, which were dispensed as a medicinal cure-all.<sup>38</sup> The people were not allowed to medicate themselves and the sick had the lowest level in Khmer Rouge society as they could not work. Those who could not work were forced to go the regime's hospitals, which were increasingly staffed by "younger and purer recruits" because of the purges, and "[a]fter 1977, it was not unusual to see 10- or 12-year-old children with dirty syringes, imitating nurses and injecting dubious substances into terrified patients."<sup>38</sup> By 1979, any remnant of the pre-Khmer Rouge health care system was completely destroyed, with ten or fewer physicians surviving from the 500 or so who had practiced before the revolution, and

many of them leaving the country as refugees.<sup>4,38</sup>

The effects of Khmer Rouge- era policies which dismantled the health care and education sectors from before, are still evident today. Despite it being a closed-economy, the regime was closely supported by China, who to this day remains Cambodia's closest trade partner and strongest ally, and remains Cambodia's largest source of foreign direct investment and largest debtor. Both the health care and educational systems had been decimated, and their reconstruction was challenged by the on-going civil war which persisted until the 1991 Paris Peace Accords, which formed the peace-keeping United Nations Transitional Authority (UNTAC) from 1992-1993, which restored the monarchy. Furthermore, Cambodian distrust of their country's health care system in country dates back to the Khmer Rouge, with the effects of regime's policies still permeating Khmer sociocultural consciousness today. This distrust is not unfounded. Cambodia's health sector is one of the worst in the region as it is highly unintegrated and largely unregulated, and medical school training is poor and the country lacks an exam for medical professionals to pass in order to be practicing doctors, although Cambodian doctors do need a medical degree to register as a business.<sup>25</sup>

Cambodian distrust of their country's healthcare and the system itself lacking proper regulation is important in the following ways. Firstly, poor quality health care in Cambodia translates high rates of

medical tourism to other countries in the region for any major medical malady, namely to Thailand, Vietnam and Singapore, which is a huge loss for the Cambodian economy.<sup>15</sup> Sources estimate that Cambodians spend over \$600 million annually seeking medical care abroad.<sup>23, 44</sup> Moreover, time in transit to seek healthcare which could be time spent working, with not only the person afflicted being out of work, but also at least one able-bodied family member out of work in order to take care of the sick individual and to aid their transport. However, as a low-to-middle income country, many in the country do not possess the means to travel to address more serious medical concerns. Secondly, because the population is poor and health care is expensive and untrustworthy (it is estimated that Cambodians spend \$60 per capita annually, one of the highest rates in the region), many Cambodians don't seek medical attention until it's too late, or beyond stages where the affliction can be easily treated.<sup>113</sup> Thirdly, as most Cambodians do not seek doctors when they are ill but instead self-prescribe with various over-the-counter antibiotics and other pharmaceuticals. This translates to the medicines being taken improperly as Cambodians as many do not take the full course required, and antibiotics being used too frequently, which can result in antibiotic resistance and the creation of "super-bugs," leading to more health problems and increasing the country's disease burden.

#### IV- A. Cambodian Economic Status

According to the World Bank's Poverty Assessment Study in 2013, Cambodia was performing extremely well exceeding its millennium goal on poverty reduction.<sup>113, 114</sup> Domestic demand is also growing as wages have been increasing, with decreasing taxes serving as the main driver. In 2017, Cambodia graduated to being a lower-to-middle income status country, with the country's gross domestic product (GDP) growth averaging at 8% between 2000 and 2010, and at 7% since 2011.<sup>21, 113</sup> However, the country's high rates of growth were enabled by a low-cost, low-value economic growth model, fueled by high rates of FDI that "mostly uses Cambodia as an export platform for low-cost, low-productivity activities that have limited potential for transferring capital and knowledge."<sup>113</sup> The desire for the Kingdom to become an upper middle- income economy by 2030, and high- income country by 2050 is challenged by its current industry-based geared towards low-skill, low-cost jobs, which remains vulnerable to outside economic factors, including possible slowdowns FDI and the early 2019 changes to the Everything but Arms agreement (EBA) with the European Union (EU).<sup>88, 113</sup> Further economic development to move from the status of a low-income to a middle-income country is evident, namely the country's need to invest in human capital through education (current education spending amounts to a little over 1% of its GDP), and further development of its infrastructure, including roads and transportation, as well as healthcare.<sup>113</sup> Although economic growth remains strong in 2019, Cambodia shows few signs of evolving from its

industry-based economy, with increasing export is the main driver of this continuing growth.<sup>113</sup>

Cambodia's industry-based economy is divided into four major economic pillars- agriculture, tourism, construction and manufacturing- with all of them heavily funded by FDI. In 2018, FDI estimates for Cambodia "... increased by 14.3 percent (y/y) during the first six months of 2018."<sup>113</sup> However, the majority of this originates from China and targets construction and real estate, which is where the majority of Cambodia's bank credit goes.<sup>53</sup> In light of a possible "real estate bubble" this represents significant risk for the country's economy. And while some of the FDI goes to agriculture and the garment sectors (approximately 20%)<sup>113</sup>, there is not much evidence to show that processing and added value is taking place in the Kingdom. As Cambodia strives to position itself downstream in the value chain, lack of human capital remains one of its most serious constraints, with the World Bank stating that "[t]he accumulation of human capital is crucial for facilitating economic diversification and job creation."<sup>113</sup> For the Kingdom to truly capitalize on its substantial growth it will need to invest in growing its pools of skilled labor.

Agriculture is the largest sector, with over 80% of the population relying on agriculture for livelihood in 2012.<sup>118</sup> According to a 2015 report by International Finance Corporation, "Rice is the principal crop of farmers in Cambodia. Rice production accounts for 15 percent of agricultural value added and paddy occupies 75 percent of the cultivated land. Rice production, processing, and marketing are estimated to employ 3 million people, or more than 20

percent of the country's working-age population."<sup>48</sup> The sector is challenged by a traditional-supply system which relies on producer-pushed production, unskilled informal employment, and little diversification.<sup>7</sup> Moreover, the sector is further challenged by land management problems, climate change, as well as vulnerability to outside economic factors. In January 2019, the European Commission ruled for new tariffs imposed on Cambodian rice imports to the EU, Cambodia's most profitable export market. According to the Phnom Penh Post, "[t]he sector will be forced to pay about \$53 million in the first year based on the amount the Kingdom exported to the EU last year."<sup>54</sup> Cambodia enjoyed duty-free export of rice to the EU as a benefit of the Everything but Arms (EBA) agreement since 2010, with rice export to the EU increasing steadily since 2012, with the EU accounting for 43% of total Cambodian rice exports, or 269,127 tons of total 626,225 tons of rice exported in 2018 according to Cambodian government data.<sup>54, 100</sup> The new tariffs will charge a duty of \$200 per ton in the first year before decreasing to \$171 the following year and finally \$142.50 per ton the third year.<sup>100</sup> The responsibility of offsetting the duty costs will fall to local Cambodian rice farmers, who will have to find ways to cut production costs.<sup>100</sup>

The manufacturing sector accounted for 31% of Cambodia's economy in 2016, and is dominated by the garment and footwear industry which employed about 700,000 people in 2017.<sup>21</sup> The garment/footwear industry is also the country's largest export sector with more than a third going to the EU market: "[e]xports of garment and footwear products increased 16.1% (y/y) during the first half of 2018 - a two year

high- from 8.3 percent at the end of 2017.”<sup>113</sup> However, like the other pillars of the Cambodian economy, while there is high FDI in this sector, there is little spillover to knowledge development and investment in human capital.

Tourism continues to be a growing sector, accounting for 28.3% of Cambodia’s GDP and 25.9% of its employment in 2017.<sup>114</sup> Tourism to Cambodia has been consistently growing from just over 1 million visitors in 2004 to 5.6 million in 2017. Visitors increased by 12% in 2018 with the Chinese segment representing 70% of total arrivals.<sup>111</sup> However, although steadily growing, Cambodia tourism remains well behind its geographic neighbors Thailand and Vietnam, who captured 35.4 million and 12.9 million visitors respectively in 2017, with 5% of tourists from Vietnam and 13.5% from Thailand visiting Cambodia.<sup>113</sup> Furthermore, “more than 80 percent of foreign tourists to Cambodia are first-time visitors” with only 16.5% of tourists coming to Cambodia are returning compared to more than 50% in Thailand, suggesting that Cambodia is a less attractive tourist destination to affluent foreigners.<sup>113</sup> Factors affecting the profitability of this sector include a need to develop a more comprehensible transportation infrastructure inside the country, as well as development of the health care sector, as affluent foreigners are less likely to travel to destinations lacking hospitals.

The fourth pillar of the Cambodian economy is construction, which has been experiencing a decade-long boom alongside real estate since the end of 2008-09. The growth of this sector is best exemplified in the nearly 2 billion dollar Chinese investment developing Sihanoukville and

other seaside locations over the past two years. According to the National Bank of Cambodia, the construction sector contributed 11.5% to the country’s economy in 2018, despite experiencing a 20% fall in FDI from 2017.<sup>42</sup> However, the RGC stated that they expect a rebound of FDI in this sector in 2019.<sup>13,14</sup>

Cambodia is a developing market economy with an open business environment due to its liberal trade and investment policies, and has a high ranking of 22 out of 190 global economies for getting credit. Despite the country’s overall challenging business climate, such policies continue to attract high FDI inflows, by having few restrictions on which sectors can receive FDI and providing large incentives for private enterprises.<sup>63,115</sup> According to the ASEAN Business Guide, Cambodia approved 21 Special Economic Zones (SEZ) to stimulate FDI inflows, “providing benefits including tax holidays, zero rate VAT, and import duty exemption for raw materials, machinery and equipment.”<sup>6</sup> In 2017, FDI reached 2.8 billion in American dollars (USD), an increase from 2.4 billion USD the previous year. This continued growth is due to the ability of companies to be 100% foreign-owned, corporate tax holidays of up to eight years with a 20% tax after the holiday period, regional economic growth and an open investment market.<sup>89</sup> According to ASEAN 2018, the country’s main FDI investors and corresponding investments in millions of USD are: 1) China with \$501.5; 2) Hong Kong with \$248.9; 3) Japan with \$198.7; 4) Vietnam with \$184.5 and 5) Singapore with \$168.9 as of 30 June 2017.<sup>6</sup>

In 2019, Cambodia ranks below the regional average score in the East Asia and Pacific (63.4 out of 100 in 2019), ranking 130 out of

190 economies worldwide with a score of 54.80.<sup>115</sup> Despite scoring slightly better than its regional neighbor Laos overall in doing business, Cambodia scores last in the region for starting a business, with a rank of 185 out of 190 global economies.<sup>115</sup>

Furthermore, Cambodia ranks 179 in dealing with construction permits, 141 in getting electricity, 124 in registering property, 110 in protecting minority investors, 137 in paying taxes, 115 in trading across borders, 182 in enforcing contracts and 79 in resolving insolvency.<sup>115</sup> As a consequence, many businesses go unregistered and avoid paying taxes—another loss for the Cambodian economy.

In summary, Cambodia's economy has experienced unprecedented, continual economic growth since finally achieving peace in 1999. Because of this, the country was able to become a lower-middle income country a few years ago. Since then, the RGC has set development goals for itself to become an upper-middle income country by 2030 and a high-income economy by 2050. The Swedish Trade and Investment Council has listed Cambodia as one of the "Southeast Asian frontier markets" alongside Myanmar and Laos.<sup>113</sup> The World Bank explains that these markets are "also known as pre-emerging markets [and] are developing countries with high potential for investment, presenting significant opportunities—high growth, low labor costs, and growing consumer markets— but requiring long-term work and enormous infrastructure and construction development, and posing challenges [for] doing business."<sup>113</sup> This type of economic opportunity is further bolstered by the country's predominantly young population. However, to take advantage of this potential, Cambodia needs to transform its

current economic landscape from one of low-cost low-value industries that are largely supported by FDI, but lack knowledge and skills transfer by FDI, something the RGC has stated it wants to overcome. So far, Cambodia's economic development has been short-term and not oriented towards long-term sustainable growth. Long-term planning normally requires investment in human capital—namely in knowledge building and skills training that could be captured by FDI. A transformation of the economy is needed, as well as an overhaul in investment in Cambodia's road infrastructure, educational institutions and healthcare sector.

#### IV-B. Healthcare Sector in Cambodia Overview

Due to Cambodia's continuing economic growth and government health sector reform initiatives since the 1990s, the overall health of the country's population has significantly improved.<sup>118</sup> While the country achieved most of its Millennium Development Goals (MDG) by 2014, and life expectancy rose in both men and women in 2015 to 66.7 years and 70.8 years respectively. Between 2010 and 2015, the national budget for healthcare doubled<sup>118</sup>, but remained around 20% of the total health expenditure, only accounting for 5-7% of GDP, falling far short of the government's goal to achieve the 30% in public health expenditure.<sup>61</sup> While the increase in government spending can account for health care infrastructure and human resources increasing overall in both public and private sectors, the ratio of hospital beds per capita as well as the

number of physicians and nurses per capita lags far behind regional averages for ASEAN countries.<sup>51</sup>

Despite achieving many of its MDGs, a high poverty rate remains (17.7% in 2012 with 3 million poor people, and 8.1 million near poor)<sup>113</sup> and directly affects the overall health of Cambodia's population. Currently, Cambodia lacks universal health coverage or established health insurance services, so "the poor are reliant on healthcare provided by nongovernmental organizations or at no cost at public facilities."<sup>57, 58</sup> Because of this, and juxtaposed against high rates of poverty, Cambodian people spend a disproportionate amount of their household income (about \$60 per annum)<sup>113</sup> on health care, usually in the form of medicines purchased directly from pharmacies, without significantly improving their health overall. It is further noted that these out-of-pocket payments mostly go to private health care services, totaling 61% of the total health expenditures. According to the 2010 Cambodian Demographic and Health Survey, only 29% of sick or injured patients sought care first at public sector facilities, while 57% sought care from private health providers.<sup>57</sup> There is also a trend of sick and/or injured people in Cambodia seeking out care from private health providers reflects the overall lack of trust of treatment capabilities of public health facilities and professionals.<sup>61</sup> Reflective of this lack of trust is the fact that an estimated 220,000 Cambodians go abroad every year to receive medical treatment<sup>23, 31</sup> and the country has only 1.7 doctors and seven beds per 10,000 residents.<sup>23, 31</sup>

The current health care system in Cambodia is plagued by at least two inherent disadvantages: 1) the current healthcare system in place was not specifically designed for Cambodia, and therefore only partly meeting the country's needs, as it is largely based on Vietnamese and French systems and 2) regulatory systems at present are overly-bureaucratic and overly-complex, with high duplication and overlap between governing bodies and regulation.<sup>25</sup> Accordingly, despite publishing multiple detailed Health Strategic Plans and Pharmaceutical Sector Strategic Plans, achieving stated goals depends on the effectiveness of implementation and would require the cooperation of the health sector as a whole in Cambodia, including FDI inflows, NGOs, individual workers in the public and private sectors as well as other government ministries.

Currently, the Cambodian healthcare system includes both the public and private sectors (the latter including for-profit and not-for-profit health organizations), with the MoH acting as the RGC-mandated health authority with a responsibility manage and lead the health sector as a whole, covering a wide spectrum of healthcare providers and services. Qualified private providers and pharmacies are mostly available in urban areas. In 2015, there were approximately 2,000 registered pharmacies, 300 drug import/export companies, and 13 medical manufacturing institutions in Cambodia.<sup>58, 59, 60</sup> There are also informal health providers which include vendors selling drugs from shops or markets, traditional birth attendants, and traditional healers, and up to two-thirds of public health staff also work separately in some private capacity. In the country's Health Strategic Plan 2016-2020 (HSP-3),

the RGC states that “the public sector is the prominent providers of preventative services and inpatient admissions, whereas the private sector tends to dominate provision of outpatient curative consultations,” with the private sector experiencing rapid growth and receiving the biggest share of total health care spending.<sup>59</sup> In December 2015, the RGC reported that there were 1,141 health centers and 107 health posts for 1,633 cities/sangkats, and 68 district-based referral hospitals at the Operational District level; 25 municipal/provincial referral hospitals and 9 national hospitals.<sup>58</sup> The private non-profit sector is comprised of 180 local and international non-governmental organizations (NGOs) working in the health sector in 2015.

Overall, the private-for-profit sector is an important provider but is mostly concentrated in more urban and wealthier areas of the country. As of December 2015, the RGC reported that there were 8,488 formal private providers/facilities.<sup>58</sup> This figure excludes pharmacies and depots, but covers a range of health care providers, from nursing and maternal care, specialized practices such as physiotherapy, dental care and cosmetic beauty centers, as well as private clinics, polyclinics and hospitals. Because Cambodia is a member of the World Trade Organization (WTO), the country allows for 100% foreign-owned hospitals, as long as at least one of the medical directors is a Cambodian national.<sup>61</sup> Accordingly, Cambodia has several large foreign-owned private hospitals, most of which are in Phnom Penh. There is the Thai-operated and managed hospitals Royal Angkor International Hospital and Royal Phnom Penh Hospital under the Bangkok Dusit Medical Services Public (BDMS).<sup>61</sup>

From Japan, there is the Sunrise Japan Hospital in Phnom Penh, the Kithara Neurosurgical Institute and the Kithara Japan Clinic in Phnom Penh. From Singapore, there is the Raffles Medical Phnom Penh and the Singapore Medical Centre. Even so, most high-income and some middle-income people continue to seek medical treatment abroad for emergency cases, primarily in Vietnam, Thailand, and Singapore.<sup>51, 61</sup>

## V. Pharmaceutical & Medical Device Market

With a population of over 16 million, and the fact that Cambodians spend on average \$60 USD out-of-pocket on healthcare annually, largely in the form of pharmaceuticals purchased directly from pharmacies, it is unsurprising that the pharmaceutical market in Cambodia has experienced consistent growth for the past ten years. According to the RGC, pharmaceutical spending in Cambodia grew from \$265 million in 2016 to \$296 million in 2017, with projected spending to be near \$437 million by 2021, and the country’s budget for the sector increased to \$487 million in 2017.<sup>97</sup> Furthermore, almost 80% of pharmaceutical spending occurs in and around Phnom Penh, with about 55% of the total market being imported drugs, signifying a local preference for foreign-made medicines.<sup>75</sup>

In June 2016, there were 13 pharmaceutical companies in Cambodia supplying local and overseas markets, and in 2017 the RGC

counted 2,248 registered pharmacies and 381 drug import/export companies and branches in the country.<sup>57, 58</sup> France is Cambodia's top supplier of pharmaceuticals followed by India, who is the Kingdom's largest Asian supplier, accounting for about one quarter of the entire market. In 2015, Indian pharmaceuticals in Cambodia were valued at almost \$30 million USD<sup>97</sup>. Notable pharmaceutical companies that are already established in Cambodia include Sanofi from France (boasting having a presence in all Khmer provinces in 2015)<sup>103</sup>, DKSH from Switzerland, Bayer from Germany, GlaxoSmithKline from the United Kingdom, Zuelling Pharma from the Hong Kong and the Cambodian company Pharma Product Manufacturing.<sup>61, 103</sup> Curewell International Co. Ltd. was the first Indian pharmaceutical company to enter the Cambodian market in 2001.<sup>97</sup>

One challenge that the Cambodian pharmaceutical market faces is high rates of counterfeit products. The RGC is committed to combatting illegal and parallel imports and counterfeit products, evident in the establishment of the Cambodian Counter Counterfeit Committee in 2014, deeming counterfeit products harmful to overall health and safety of Cambodian society.<sup>61</sup> In 2016, the Interior Ministry reported closing down 64 illegal pharmacies and sending over 135 cases to court. Additionally, the provincial health department in Svay Rieng, the province which directly links Phnom Penh to Vietnam through National Road 1, reported shutting down 248 illegal clinics in 2017.<sup>61</sup> Currently, there are no government controls on pharmaceutical prices in both the public and private sector, and there is no reimbursement system for drugs.<sup>75</sup> Pharmaceuticals are regulated by the Law

on the Management of Pharmaceuticals, established in 2007, and the National Medicines Policy, established in 2010.<sup>61</sup>

While small in comparison to the more developed medical device markets of its regional neighbors, Cambodia's medical device market is expected to grow in the future.<sup>61</sup> Currently there is low domestic production of medical devices in Cambodia, with most medical devices being imported. Accordingly, Cambodia registered 1,616 medical devices between 1994 and 2016, with only 335 new registrations and 130 renewals in 2016.<sup>61</sup> Most companies occupying this sector act as distributors of medical supplies or offer certification for medical devices, such as TÜV Rheinland from Germany and Medicom from France. Meanwhile, the American company Abbott Laboratories uses local partners like Dynamic Pharma to distribute medical devices it produces.<sup>61</sup>

Cambodia does not have specific barriers barring foreign firms from importing medical products to the country. Drug and medical device registration in Cambodia follows ASEAN requirements. Registration for pharmaceutical products and medical equipment and devices is relatively inexpensive and usually takes three to six months, but could take up to 10 months to one year depending on the MoH's product registration work load. Registration certificates are valid for three years from the issuing date, and companies must re-apply for a new registration certificate six months before the expiration of the previous certificate. However, as the process can prove complicated and confusing, foreign embassies recommend that new market entrants work with local (Cambodian) partners, either in the form of



agents or distributors, possessing ample experience with and knowledge of the local market, rules, and regulations. All imported pharmaceutical products are required to have at least 18 months' validity before the expiry date. Currently, Cambodia restricts three types of pharmaceutical products: 1) narcotic drugs, 2) psychotropic substances, and 3) drug precursors, so all medical importers need to send their products to the MoH for testing to determine if they fall under any of the restricted categories. Medical devices are classified by risk in the four following classes: Class A for low-risk, Class B for fairly low risk, Class C for fairly high-risk and Class D for high-risk. All medical devices require registration from the MoH for testing. After being licensed by the MoH for importing medical products, companies "can conduct all business activities pertaining to production, storage, distribution and wholesale, and importation and exportation of pharmaceutical product[s] and medical equipment, which in turn may include material, equipment, instrument, implement, appliance, apparatus, implant, machine, disinfectant, in vitro reagent and calibrator, and software that are used for health sector in Cambodia."<sup>61</sup>

At present it does not appear that many pharmaceutical companies are manufacturing products locally. However, two of the four Indian pharmaceutical companies interviewed<sup>83-86</sup> reported having plans of establishing manufacturing plants in the future, and recently, the Indian VTSIX Group was approved to set up a factory inside the Phnom Penh Special Economic Zone (PPSEZ) in late 2017.<sup>64</sup> Jaimix Co., Ltd. also reported hearing about a Chinese pharmaceutical manufacturing plant opening in Sihanoukville soon.<sup>84</sup> All four of

the companies reported importing pharmaceuticals from factories based primarily in India, but also receiving a small share of their supply coming from Pakistan, Vietnam, China and Russia.<sup>82-86</sup> Furthermore, all of the companies interviewed deal strictly with pharmaceutical products at present, with only two intending on expanding into importing medical devices and equipment. All of the companies interviewed reported employing over 50% Khmer workers by choice, many working in sales, because of the usefulness of using the local language in dealing with customers such as pharmacies, as Cambodian customers are more comfortable in dealing with native Khmer speakers.<sup>82-86</sup> Moreover, the companies reported both teaching and transfer knowledge and skills to their Khmer counterparts.<sup>82-86</sup>

In 2017, pharmaceuticals were among India's top ten exports to Cambodia, with drug formulations and biologicals totaling at just over \$39 million USD.<sup>32</sup> Globally, India is the largest producer of generic pharmaceuticals. Indian pharmaceutical companies generally differentiate themselves as being cheaper than their European counterparts, but claim to maintain the same high quality. However, JaiMix Co., Ltd. reported that the low prices of Indian pharmaceuticals could be driven up in the future, due to India instating a 30% tax on raw materials used in pharmaceutical manufacturing.<sup>84</sup> In the global pharmaceutical market, India's biggest challenger is China and its ability to produce even cheaper products, though Indian companies claim the quality is much lower. According to the Khmer Times, "China is believed to be the largest single source of fake pharmaceuticals flooding

Cambodia's market" with many Cambodians distrusting Chinese products in general because of the lower quality of Chinese products.<sup>83</sup> On the other side, Cambodians perceive French products as having the best quality, which is evident in French pharmaceutical companies being the number one supplier. French companies have also been in Cambodia the longest, so brands are already well-established in the pharmaceutical market, known to have high quality. However, cheap prices are the main driver of the Cambodian demand side of the pharmaceutical market, which is how India has come to account for the second large share of the market. It is also important to note that none of the Indian companies interviewed acknowledged China as a viable competitor in the Cambodian market, with all of the companies reporting that other Indian pharmaceutical companies and French companies as their main competition locally. JaiMix Co., Ltd. estimated that there are around 80 Indian pharmaceutical companies in Cambodia at present.<sup>84</sup>

Indian pharmaceutical companies' main competitive edge in Cambodia is offering the demand side the same high-quality guaranteed by French products, for a fraction of the cost. Furthermore, Indian companies have been in Cambodia for over 15 years, so many of the companies enjoy having long-established reputations in the Cambodian markets regarding high quality and low prices. As previously stated, this could be challenged by new taxation in India. Other ways Indian companies have been making headway in the Cambodian market is by offering promotions to buyers, such as buy 10 get one free, paying Cambodian customers who consistently buy their products a small salary for doing so,

focusing where they supply the market in Cambodia by either focusing on market in Phnom Penh primarily or markets in provinces primarily, and/or by distributing mostly generics or alternatively, distributing mostly name-brand pharmaceuticals. Because the demand side is driven by cheap prices, there is a large generic market in Cambodia. One company noted that one of the best markets in Cambodia is for stomach pharmaceuticals, because there are a lot of stomach problems in Cambodia, which is reflective of how the country scores on hygiene standards.<sup>84</sup>

Players who have been in the market for over ten years noted that while the demand side has remained relatively unchanged, but the supply side of the market has expanded considerably. One company estimated that 10 years ago, there were maybe 100 pharmaceutical companies in Cambodia but now there are over 350, which is good for value but makes the market a little tougher now.<sup>86</sup> The MoH, who represents the public sector, is the largest purchaser of medical products in Cambodia, but many pharmaceutical companies distribute directly to doctors, private pharmacies and clinics among others in the private sector. It also should be noted that many health professionals working in the public sector also have secondary private practices, due to national wages being insufficient.

## VI. Health Education in Cambodia

After the near total dismantling of the health sector including health education under the Khmer Rouge regime between 1975 and 1979, Cambodia had to completely rebuild its medical

infrastructure during the 1990s, when the country achieved a level of peace. Under the Khmer Rouge, medical school and hospitals were abandoned and many of the doctors and other “Western-trained” health professionals who did not leave prior to April 1975 were killed. Before the Khmer Rouge came to power, there were approximately 500 health professionals in Cambodia. By 1979, “only 45 medical doctors had survived the brutal Khmer Rouge regime, which wiped out an estimated 25 percent of the population. Reports from the time state that of those, 20 soon left the country. Additionally, only 26 pharmacists, 28 dentists, and 128 medical students remained in Cambodia.”<sup>4</sup> Cambodia’s leading public medical institution, the University of Health Sciences (UHS) resumed operation in 1980, and is one of only 11 registered medical schools in the country as of 2016. According to HSP-3, “there were 11 licensed private universities (including one institute) that offer a wide range of degree programs, compare to only one large public university (University of Health Sciences), the Institute of Public Health, five Secondary School for Technical Medical Care (including four regional training centers), and Health Science Institute of Royal Cambodian Arm Force.”<sup>4</sup> <sup>59</sup> The HSP-3 goes on to note that “there is an urgent need to institute a system for accreditation of health educational institutions, especially in the wake of the recent surge in the number of private educational institutions in health” and also that there is a need to “improve the quality of education and training to meet the skill and development needs of the workforce in a changing demographic and epidemiological environment.”<sup>59</sup> Furthermore, the HSP-3 notes that, “strengthening health education and

training systems by focusing on competency-based education and training, in tandem with developing accreditation system for health education and training institutions” is necessary for continuing country economic and social development.<sup>59</sup> In 2014, Cambodia only had two physicians per 10,000 people- far below the world average of 14 per every 10,000, and a fraction of the 30 physicians per 10,000 people in most developed countries worldwide.<sup>4</sup> In 2014, Cambodia’s medical schools graduated over 700 medical students, but the country’s limit of only 200 official post-graduate training slots, severely limits the number of doctors in country. While Cambodia is slightly more successful in training other health professional careers, such as nurses, limited resources and a general lack of development of such professions, results in poorer quality health professionals.<sup>4</sup>

In 2016, the Phnom Penh Post reported that all 11 of the country’s medical schools were lacking adequate resources to properly train their students, including access to human cadavers as learning tools.<sup>2</sup> Teaching medical students about the human body from cadavers has long been an international gold standard in medical education, and while technology can aid medical students learning, digital representations of the human body fail to teach students how different aspects of human anatomy feel, and typically use color-coded learning aids that clearly designate bone from blood from tissue etc.- something that a real human body lacks, as most everything is red in color.<sup>8</sup> The lack of this important learning tool can be attributed to Cambodian superstitions and country-specific beliefs attached to Khmer reincarnation conceptions prevent the

availability of human cadavers donated to science for medical professionals in training to learn from. This attachment of the physical body associated with Khmer reincarnation is distinctly different from other religious conceptions of reincarnation which generally attach reincarnation ideas to the non-physical soul, rather than the physical body. Cambodians believe that if a dead body loses a limb or organ, that the person will enter the next life lacking those things, which is distinctly different from other religious conceptions of reincarnation, which view organ donation and donation of a body as a merit-accruing acts of karma, which would be beneficial in the individual's next life.<sup>11</sup> The lack of an organ donation system in Cambodia is also affected by this belief.<sup>1</sup> Due to this, Cambodian medical students do not have human cadavers to learn from, and instead the country's advanced medical students are limited to performing surgery on live pigs under anesthesia just twice a year, and their success is determined by if the pig wakes up or not, although long-term effects are unknown.<sup>2</sup>

This needs to be addressed in two ways- 1) from a cultural standpoint, especially in regards to traditional Khmer conceptions of reincarnation and physical body. If doctors in Cambodia were able to train properly on human cadavers, there would be less of a need for Cambodians to travel out of the country for medical help, and perhaps this would lessen the rate of misdiagnosis in the country. Also, a comprehensive organ donation system would also benefit the country. 2) a general transformation of medical health professional training in Cambodia, including long-term training, availability of human cadavers to be studied and practiced upon, as well as a

government mandated test for medical professionals to pass before entering practice. Currently, health professions regulation under the MoH is split into five regulated health professions, with five independent councils for each health profession: 1) the Medical Council of Cambodia; 2) the Dental Council of Cambodia; 3) the Cambodia Council of Midwives; 4) the Cambodia Council of Nurses and 5) the Pharmacy Council of Cambodia. Each council administers their own regulations together with the MoH, again leading to high rates of overlap and duplication.<sup>25</sup>

## VII. Market Entry Opportunities in Cambodian Health Care Sector

### *Connecting FDI Inflows in Health Sector to Development of Human Capital, Knowledge and Skills*

2019 appears to be an excellent time for new entrants into Cambodia's market, especially if such entrants focus on emerging markets and transference of knowledge and skills training through FDI and development of human capital, especially when 70% of the Kingdom's population is under 30 years of age, meaning that there are many young people, without skills or careers, who could be trained properly. While Indian pharmaceutical companies are already well-established in the pharmaceutical sector in Cambodia, there is high potential for Indian companies to expand into other areas of the healthcare sector. The best way to do this, would be for Indian companies to align themselves with the government of

Cambodia's economic and social development goals, namely to become an upper-middle income economy by 2030, and a high-income country by 2050. As previously established, for Cambodia to keep on track towards these development goals among others, the country will need to start heavily investing in both its transportation and healthcare infrastructure, as well as developing human capital to best capitalize on the demographic dividend in its present. Although Cambodia's overall economic growth made it the sixth-fastest growing economy in the world in 2015, "analysts argue that poor infrastructure, unforgiving working conditions and an investment approach that prioritises profit over people threaten to knock the Kingdom's development off course."<sup>9</sup>

The problem of building human capital through investment in human resources to upgrade the skills of the country's poorly educated population, like many other problems in Cambodia, is challenged by Khmer Rouge-era policies which eliminated the country's intellectual classes the century before.<sup>9</sup> In general, long-term economic projections require a country to meet the evolving demands of an economy outgrowing the scale of low-skill low-budget labor.<sup>10</sup> Furthermore, "...improving education levels could prove to be the most important factor in unlocking the country's future economic prosperity." Investments need to be made in human capital, otherwise Cambodia risks failing to meet its long-term economic and social development goals, but also the risk of falling into a "low-income trap" due to the country's rising wages undercutting its overall competitive edge, especially in the manufacturing sector.<sup>9</sup> Aside from large investment in

education, the RGC needs to reverse its downward spending trend for infrastructure, with the World Bank reporting that public capital investment expenditure fell from 10.8% of GDP in 2011 to 7.1% in 2016.<sup>113</sup> The effects of such policies affect Cambodia's economy, and are evident in the country's frequent power cuts and significantly potholed national roads. These factors all lead to increasing production costs in Cambodia when compared to its regional ASEAN neighbors.<sup>9</sup>

For the most part, these growth opportunities have not yet been effectively addressed by the large amounts of FDI pouring into the country, including the healthcare sector, and the RGC has expressed its desire for higher transfer of skills and development of human capital from FDI inflows. If Indian companies are able to provide FDI to the health sector to develop projects that are both profitable for the Indian economy and also help develop human capital and healthcare infrastructure for Cambodia by transferring knowledge and investing in Cambodia's upcoming generation through education opportunities, India would stand apart from other foreign investors in Cambodia, thus making their investment projects more attractive to both the Cambodian government and also its people. By positioning themselves as not only providing FDI into health/medical/pharma sector, but also translating their investment into human capital, which is in line with RGC's strategies/desires. This would help transform the Cambodian economy beyond being low-skill low-budget industry-based model, and instead start to implement the Long-Term Growth Model (LTGM) based upon the renowned Solow-Swan growth model.<sup>113</sup> While the transition from the

current low-skill economic industries in Cambodia to longer-term sustainable ones would take more time to build, such a transition is necessary if Cambodia wants to continue experiencing its high economic growth rates during the past two decades, and also if the country wants to reach its economic goals of becoming a high-income country in the next thirty years. Cambodia needs invest in education and start promoting local development and manufacturing to develop domestic industries for long-term competitive growth.<sup>5</sup>

## VII-A. Building a Teaching Hospital Outside of Phnom Penh

As with other areas of the healthcare sector in Cambodia, Khmer Rouge-era policies greatly affected the country's healthcare infrastructure. From the pool of 500 estimated medical graduated between 1953, when Cambodia gained independence from France, and 1975, when the Khmer Rouge took power, fewer than 50 doctors survived, with many leaving the country after the genocidal regime fell. Reconstruction of the medical school and healthcare system began in 1979 with the help of foreign doctors and NGOs with minimal resources as the Khmer Rouge destroyed everything in the medical schools- from blackboards to desks to books and laboratory equipment.<sup>69</sup> Education has been one of the countries priorities for the past two decades, so while the number of health professionals has increased significantly since the 1980s and 1990s, training has focused on quantity over quality, with education based on a curative

model occurring in hospitals.<sup>69</sup>

Furthermore, like with many areas of Cambodia's healthcare system, health training was derived from French systems dating from the 1960s, which only partially address the country's specific needs in this sector. Due to a lack of faith in local healthcare systems, many Cambodians become health tourists, spending millions each year in traveling to Thailand, Vietnam or Singapore for treatment.<sup>6</sup> The RGC's recent opening of the healthcare sector to private investment has helped curb this outflow of money in medical tourism, and provides a market entry opportunity for the development of private hospitals by Indian companies.

In a country where over 60% of health expenses are out-of-pocket, and where there is widespread distrust of national health delivery systems and professionals, private hospitals and clinics offer promising business opportunities for Indian companies. The ratio of hospital beds is low in Cambodia, as well as the ratio of physicians to every 10,000 persons. In 2016, Cambodia has 33 national and/or provincial hospitals and 54 private hospitals. The number of hospital beds per capita was 0.72 in 2014, with the number of physicians reported to be .17 per 10,000 persons in 2013.<sup>35</sup> Overall in Cambodia, there is a lack of human resources and hospitals, and hospitals and medical services that are in country fail to meet international standards and lack hands-on training by medical professionals.<sup>44</sup> There are several foreign-funded hospitals in Cambodia, however, the vast majority of them are in Phnom Penh, but most import their professional medical staffs from their country of origin. There is the Thai-operated and managed hospitals Royal

Angkor International Hospital and Royal Phnom Penh Hospital under the Bangkok Dusit Medical Services Public. From Japan, there is the Sunrise Japan Hospital in Phnom Penh, the Kithara Neurosurgical Institute and the Kithara Japan Clinic in Phnom Penh. From Singapore, there is the Raffles Medical Phnom Penh and the Singapore Medical Centre. However, many of these facilities target high-income Cambodians, who make up a small slice of the country's population, and while they aim to provide international quality medical care at lower prices, the prices are still much higher than what the country's average population can afford.<sup>44, 99</sup> Most foreign private hospitals aim to enter this market through Phnom Penh, and depending on the success of their facility, then would consider expanding to areas outside of the capital, such as Siem Reap and Sihanoukville.<sup>99</sup>

Japan signed a memorandum of understanding on Japanese provision of sophisticated medical systems, supporting their construction of an emergency hospital in Phnom Penh in 2015.<sup>31</sup> The 50-bed Sunrise Japan Hospital opened in 2017, and sends all of the hospital's non-Japanese staff to Japan for six-to-twelve-month training- a perk that benefits building human capital in the Cambodian population, as well as giving confidence to tourists traveling through the country as well as local Cambodians who may have previously traveled out of the country to receive proper medical treatment.<sup>31</sup> Although these hospitals are private enterprises, there is ample opportunity to build up Cambodia's health sector as a whole. Most recently, in early March 2019, construction of the 300-bed Cambodia-China Friendship Tboung Khmum Hospital

broke ground in Tboung Khmum province- a crucial development for the health of Cambodia's largely rural population.<sup>119</sup> The hospital will be equipped with modern medical equipment, and would become a regional hospital that could provide medical services to the neighboring provinces of Kratie, Rattanakiri, Stung Treng and Mondul Kiri.<sup>119</sup> Similar to the Sunrise Japan Hospital, China intends to help train Cambodian doctors working at this hospital, but unlike the Japanese enterprise, China would send doctors to Cambodia instead to help train their Cambodian counterparts so as to provide a more efficient treatment for patients.<sup>31, 119</sup>

Using the models of the two foreign hospitals mentioned, India could also enter this sector through establishing a privately-owned hospital in rural Cambodia and use it as a teaching platform to help develop human capital in the medical sector, by either funding training exchange programs that would send Cambodian health professionals to India for training, or by importing Indian health professionals to train Cambodians in medical treatment in-country. The establishment of an Indian private hospital in the provinces of Cambodia would also help secure Indian pharmaceutical companies' current foothold in supplying the provinces with Indian pharmaceuticals. Additionally, the development of a high quality, international standard, private hospital in Cambodia's fast-developing southern coastal region would help further develop tourism in the area. Indian companies could build resort centers that provide high-quality facilities, with good human resources including doctors and nurses, that offer both emergency healthcare in addition to regular

Pharmaceutical market and health care in Cambodia  
medical check-ups, and specialized services  
to attract health tourism to the area.<sup>44, 99</sup>

## VII-B. Pharmaceutical Manufacturing Development

In 2018, India became one of the top five emerging pharmaceutical markets and the third largest producer of drugs by volume in the world. With the country's pharmaceutical industry growing exponentially over the past 30 years, the already multi-billion-dollar industry is projected to grow to US \$55 billion by 2020. Additionally, India is the world's largest producer of generic drugs, which is evidence of India's pharmaceutical sector's consistent ability to produce high-quality drugs at cheap prices. Most of India's pharmaceuticals go to the more strictly regulated Western markets, but there is a huge demand present in Cambodia as the demand side of Cambodia's market is driven by the desire for high-quality, effective medicines at cheap prices.<sup>107</sup>

Currently, Indian pharmaceutical companies import their products from factories in India, Pakistan among other locations. However, the Indian government's 30% tax increase on imported materials used in the pharmaceutical manufacturing industry there could drive up the prices of Indian pharmaceuticals produced in India. While lacking the high-quality transportation infrastructure of its regional neighbors currently, Cambodia is addressing this problem, and even despite this, Cambodia is centrally located geographically in relation to the rest of Asia. Additionally, Cambodia's SEZ offers many perks to

foreign companies as a way to attract FDI inflows, and in 2018, Indian pharmaceutical company VTSIX signed a lease agreement to set up a factory in Phnom Penh's SEZ. The pharmaceutical manufacturing plant will comply with WHO's Good Manufacturing Practices (GMP), while also diversifying Cambodia's manufacturing sector, which currently focuses on garment and footwear production. If successful, the company would help Cambodia create more career opportunities for its young population, and help diversify the country's work-force. VTSIX Group produces a wide range of oral medicines and aims to produce up to 500 million units annually.<sup>64</sup> Other Indian pharmaceutical companies could follow suit, and capitalize on this market-entry point.

## VII-C. Production of Pharmaceutical Products through Rubber Investment

There is a limited market opportunity to add value to rubber investment for large Indian investors through agribusiness and/or agro-processing through the production of pharmaceutical products such as condoms, dental products, and surgical gloves among others.<sup>7</sup> While the country's production of rubber is increasing, prices are dependent on the international market.<sup>7</sup> Although Cambodia is a small player in the global rubber market, there is opportunity in this market if the country is able to focus on the creation of niche products, which would move it away from its current mass-manufacturing of graded dry rubber blocks for export, and differentiate it from competitors.<sup>7</sup> However,



this type of investment opportunity is limited unless a plantation is sold, but this is an untapped market that could provide a new entry point for Indian pharmaceutical companies interested in expanding and/or producing medical equipment.<sup>7</sup>

#### VII-D. Establishing Niche Health Tourism Market through For-Profit Drug Rehabilitation Centers

Medical tourism is a multi-billion-dollar industry globally and Southeast Asia remains one of the hotspots addressing this market. The United States organization, Patients Beyond Borders, tracks global medical tourism trends, estimates that the market for global health tourism is expanding up to 25% each year, and worth upwards of \$55 billion, with almost one-third of consumers- that is, 11 million people- traveling to Southeast Asia for health services.<sup>44</sup> One market entry-point into this sector in Cambodia would be the creation of a non-compulsory, private, in-patient substance abuse treatment facility in Cambodia would help further develop both the healthcare and tourism sectors of the Cambodian economy, as well as offer human capital development opportunities in health education for mental health professionals in Cambodia, along with creating high potential for further development in this sector.

Internationally, mental illness and substance abuse addiction are grouped in the same health category, and together this global problem affects at least one in four people of the current worldwide population according to WHO estimates. When

combined with current statistics for the Cambodian population of 16 million, these problems could afflict up to four million people in Cambodia. The Western-held drug and alcohol addiction disease model does not discriminate based on gender, age or wealth demographic, but is challenged by widespread misconceptions about what kinds of people substance abuse addiction afflicts. These popular beliefs are also challenged by the Western medicine DSM-V classification of substance abuse addiction as a disease- a classification that does not exist in Asian medical thinking, alongside with mental illness- and the Cambodian cultural concept of "losing face." Often in Asian cultures, perceived mental illness and substance abuse addiction is highly stigmatized and taboo, which can cause an afflicted person- and by extension, their family- to be tainted and dishonored, thus resulting in "losing face."

Due to high estimates of Cambodians living with post-traumatic stress from the war-time period in the late 20<sup>th</sup> century, the MoH has expressed interest in learning more about Western approaches to mental health, but has little to address this interest so far. However, nursing and medical schools in the country do not offer instruction in mental health,<sup>69</sup> with only about 9.3% of Cambodia's health centers offering mental health services in 2017.<sup>95</sup> Additionally, between 2017 and 2018, the number of drug addicts seeking treatment in Cambodia has more than doubled, and the MoH has begun taking more proactive measures to educate the population on the negative effects of drug addiction and the importance of treatment.<sup>92, 94</sup> Currently, there are 430 health centers in the country that provide some form of mental health care and drug rehabilitation, but the quality

of the level of care available through these centers is uncertain.<sup>85</sup> Cambodia's current action plan combatting drug addiction is a community-based treatment program that was adopted from China. While the community-based effort is a welcome alternative to previous mandatory rehab centers, which became known for their human rights abuses and high rates of relapse, they still focus on poorer subsections of society afflicted by addiction problems and are in coordination with NGOs that focus on harm-reduction strategies, such as drug replacement therapies or needle exchange programs.<sup>90</sup> In 2017, there were 10 rehab centers in Cambodia, with 7 being state-owned. The most well-known of these is the compulsory treatment center, the Orkas Knhom "My Chance" center, located at the outskirts of Phnom Penh, which has long been criticized for its questionable methods.<sup>82</sup> A drug rehab center opened in Kampot at the end of 2017, able to help up to 100 patients at one time, although there is insufficient data regarding if this center offers any in-patient treatment options.<sup>92</sup> Also in 2017, the Cambodian government made plans to establish a national drug rehab center in Sihanoukville.

The non-compulsory for-profit 28 to 30-day in-patient treatment for drug and alcohol abuse rehabilitation is an extremely profitable niche market, with the industry being valued at \$35 billion USD in 2015 in the United States alone.<sup>72</sup> While there are drug treatment centers in Cambodia already, the majority of them are funded by the government or NGOs, and typically deal with low-bottom, poorest-of-poor cases, and have a contentious history concerning human rights violations. Drug addiction is on the rise in the Kingdom, partly due to

the demographic dividend and there being a lack of careers outside of low-skill industries, and while it is good that there are treatment centers already partially addressing this growing problem, the treatment centers in country are not attractive to more affluent people also suffering from drug and alcohol addiction. There is at least one for-profit rehab center in India, the Phoenix Rehab Service Facility in Hyderabad, India, and there is also the so-called "Betty Ford of the East," the Cabin in Chiang Mai, Thailand. The average cost of a 30-day in-patient treatment program for one person starts at \$15,000.<sup>72</sup> Through a brief website-based messaging correspondence with Jordan Kennedy, a Registered Nurse working at The Cabin in Chiang Mai, their 30-day in-house treatment programs start at \$14,900 per person, but the facility also offer special gender and age-specific programs which start around \$15,900.<sup>10</sup> They receive no government funding but are licensed as a rehab with Thailand's Ministry of Health. While Thailand is world-renowned for its health tourism industry, their sector is addresses a wide variety of health tourist opportunities. Health tourism as an industry in Cambodia has yet to be developed, and there is opportunity to create a niche-health tourist market in this virtually untapped sector in Cambodia.

There is high potential to develop a specialized market opportunity through the development of non-compulsory in-patient rehab treatment centers in the country, and their development would be attractive to the Cambodian government for a variety of reasons:

- 1) In-patient treatment centers are private, secure facilities that have high levels of

security to protect both their patients as well as the communities in which they are established.

2) A 28-day in-patient treatment program would work with most single-use 30-day tourist visas, and outside of visa costs among other expenses incurred, would generate high monetary inflows for the tourism sector as whole, while also extending the average tourist stay in Cambodia from three-days in country to at least 28 days in country.

3) High levels of privacy and confidentiality agreements between treatment centers and patients would make these centers attractive to not only wealthier foreigners, but also to upper-class families in Cambodia who may have family members who suffer from addiction, but do not want to put their loved ones in the current rehabilitation facilities in country that cater to poorer addicts, and/or lack the financial means to send their family member outside of the country for treatment and/or do not want their loved one to be far away from their family unit, as the family unit is the most important social segment in Cambodian culture.

4) There would be opportunity to import mental health professionals from other countries which in turn could help develop this virtually non-existent health sector by creating educational and skills development opportunities for a new generation of Cambodian mental health professionals, which would also help further Cambodia's overall economic and social development.

5) Most substance abuse treatment centers offer in-patient chemically-aided "detox" plans, as withdrawal from alcohol dependency can cause death, so the need for adequate detox facilities inside in-patient rehab centers would create growth in pharmaceutical demand in Cambodia for

substances used in detoxification treatment regimens, thus creating further market opportunities for Indian pharmaceutical companies.

6) Once in-patient treatment facilities are established, there would opportunity for future economic investment and development through the establishment and offering out-patient treatment programs, which could be highly encouraged by rehab facilities to their patients to ensure a high chance of long-term recovery from substance abuse and to prevent future relapse, which would generate more money for this sector along with fees from additional visa extensions, which in turn would create a need to develop "sober living" houses for patients attending out-patient programs that would charge room-and-board fees.

#### VII-E. Importation of Medical Devices and Equipment with Possibility of Developing Local Production

Current production of medical devices is limited in Cambodia, with most companies limited to distribution. This is due to the fact that the current market, although consistently growing, remains much smaller than and therefore less profitable than the more highly-saturated pharmaceutical market. However, the small size of the supply side of this market creates some opportunities through the lack of many competitors, unlike the pharmaceutical sector. However, there are already some key players already existing in this space including TÜV Rheinland from Germany and

Medicom,<sup>61</sup> with medical devices produced by the American company Abbot being distributed by local partners. Despite this, some opportunities for this side of the market include devices and equipment related to respiratory, cardiovascular, cancer or diabetes issues, as well as tomography scanners or x-ray and ultrasound machines. Furthermore, there is an increasing demand for dental treatments in Cambodia, with an estimated 20 international standard dental clinics operating in Phnom Penh complete with Western-trained dentists. Because of the cheap price of dental care in Cambodia, this sub-sector is already attracting medical tourists from neighboring countries, with one of the biggest players being the Cambodian-owned Roomchang Dental Hospital.<sup>61</sup>

Accordingly, Indian companies desiring to enter this side of the market could do so in one of two ways: 1) A company could set up in the PPSEZ, also applying for a Qualified Investment Project (QIP) status to receive benefits. Local production of medical devices is currently untapped at present, and this would also provide opportunity for the RGC to diversify the country's manufacturing sector while also providing human resource development in skills training.

2) An Indian company could establish a dental hospital, capitalizing on this entry point in the medical tourism market in Cambodia while also creating opportunity to train Cambodian dental specialists. To further differentiate themselves, the company could establish the dental hospital in a Cambodian seaside resort location, thus being able to market affordable quality dental care as also being a tropical seaside vacation opportunity.

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