Chapter 6

Infrastructure Needs in CLMV Countries for Private and State Companies: The Case of Cambodia

Socheth Hem
Assistant to the Cabinet of the Deputy Prime Minister, H. E. Sok An, Minister in Charge of the Council Ministers, Cambodia

March 2010

This chapter should be cited as
Hem. S. (2010), 'Infrastructure needs in CLMV Countries for Private and State Companies: The Case of Cambodia', in Banomyong, R. and M. Ishida (eds.), *A Study on Upgrading Industrial Structure of CLMV Countries*. ERIA Research Project Report 2009-7-3, Jakarta: ERIA. pp.221-284.

CHAPTER 6

INFRASTRUCTURE NEEDS IN CLMV COUNTRIES FOR PRIVATE AND STATE COMPANIES: THE CASE OF CAMBODIA

Socheth Hem

Abstract

This chapter aims to look into more important infrastructure requirements that would allow Cambodia to diversify and upgrade its industries. Cambodia needs to diversify those sectors that are deemed important and has the potential for export and growth. To achieve this, good government policies alongside soft and hard infrastructure are a must because industries need roads and ports to transport goods, energy to power the manufacturing operations, efficient labor force to work, and good environment for investment. Although the needs for infrastructure in Cambodia are enormous and urgent, the actual investment in this sector is still limited and slow due to budgetary constraints. Cambodia's outstanding industry is the garments and textile industry, which takes 30 percent to 40 percent[1] of GDP, employs around 35,000 workers and constitutes around 70 percent to 80 percent of total export values[2]. However, in the face of the current global economic downturn and increasing international competition, Cambodia cannot afford to rely solely on this industry. That is, it has to identify other potential

[1] National Institute of Statistics.
[2] Ministry of Commerce.

sectors that can strengthen its economic bases by moving from the low-skilled garments industry to a more developed agricultural sector[3] and to motorcycle and automobile assembly and later, to other higher-skilled manufacturing sectors such as electronics. Based on information collected from desk research and field surveys conducted by the Management Compass Associates (MCA) on 30 manufacturing firms and stakeholders, the analysis is designed to look into the current impediments to industrial growth and to shed more lights on the policies that are meant to attract investments and thus upgrade industries in Cambodia.

1. OVERVIEW OF CAMBODIAN ECONOMY BY SECTOR AND TRADE

For almost three decades of civil war, especially during the period between 1975 and 1979, Cambodia had its national infrastructure damaged and more than two millions lives sacrificed, among whom were the intellectual and highly educated people. Right after the collapse of the Khmer Rouge regime in 1979, Cambodia was isolated from the outside world, especially those in the capitalist bloc, because it chose to stay with the communist bloc backed by the then Union of Soviet Socialist Republic (USSR) and Vietnam. Although there was humanitarian assistance from these two countries, Cambodia experienced difficulty trying to restart its economy after suffering from serious economic sanctions from the West during the Cold War. It was only in 1993 that the country began to see some semblance of peace. Cambodians turned a new page in history by going to the polls to select their leaders via a democratic process. Since then,

[3] Agricultural sector shall also include agro-industry products such as processed woods, rubber, cassava and the like.

all its political parties became one in rebuilding the war-torn nation, with support from the United Nations and other countries. The full-fledged peace was achieved only in 1998, when the Khmer Rouge organization was dismantled and its last remnants integrated into the government.

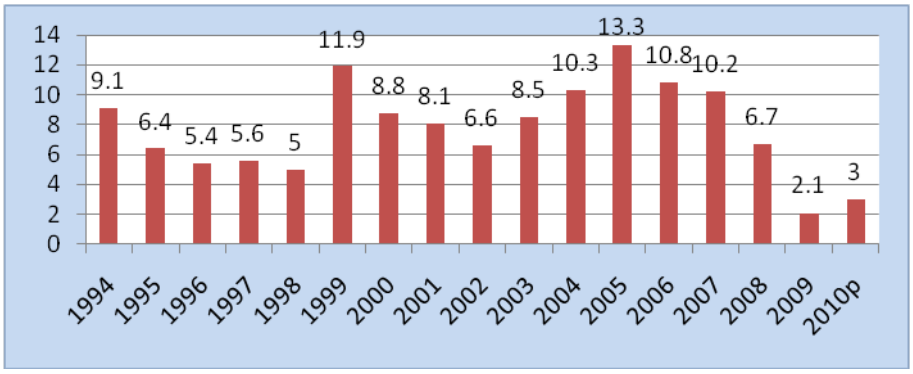
Cambodia is said to have a young population, with 55 percent of its population of over 13 million in 2008[4] being under 20 years of age and 53 percent being economically active. Around 80.5 percent live in rural areas and up to 72.5 percent work in the agricultural subsector such as farming, forestry, and fisheries. In the economic front, Cambodia showed a growth rate of 9.8 percent between 1998 and 2007, thanks to the boom in the garments industry and the emergence of the tourism and real estate and construction industry. This led the World Bank to classify Cambodia as among the fastest growing economies in Asia. Other manufacturing industries such as electronics, automotives, and agro-industries still experience very modest improvement. Cambodia has not been able to attract investments in these sectors due to the lack of key production inputs such as electricity, transportation infrastructure, and human resource. Roads, bridges, and ports are the main instruments for industrial development but Cambodia has not been able to improve all of these as quickly as it should. On the other hand, the cost of electricity and water supplies remains high compared to those in neighboring countries such Vietnam, Laos, and Thailand. In addition, the labor force in Cambodia is short of technical skills due to the lack of vocational training schools and a dearth in people interested in engineering and mechanics. All these combined have considerably deterred foreign direct investment (FDI) and led to regional and global competitive disadvantages, thus slowing the speed of economic growth.

[4] National Institute of Statistics.

In terms of the industrial structure, when Cambodia started to shift from planned to market economy in the early 1990s, the government adopted a privatization policy to allow for private ownership and to improve efficiencies of its industries[5]. The establishment of the Council for Development of Cambodia (CDC) as well as the ratification of Cambodian Investment Law in August 1994 further helped accelerate the speed of economic transformation.

Cambodia's economy has grown at an extraordinary speed with an average growth of more than 9 percent in the last decade. In the last five years, the growth rate was over 10 percent (Figure 1). In 2005, the economy grew at an astonishing 13.3 percent owing to strong growth in the garments, tourism, and construction sectors coupled with favorable weather conditions that allowed farmers to produce good crops. The economy continued to grow at 10.2 percent in 2007 even in the face of difficulties in the world economy.

Figure 1: Economic Growth 1994-2010 (in Percentage)



Note: Data in 2010 are projected.
Source: Ministry of Economy and Finance.

[5] See state-owned enterprises in Table A1 of Appendix.

However, the International Monetary Fund (IMF) forecasted that growth would be about 6.7 percent in 2008 due to inflationary pressure from high oil and commodity prices, and the figure would further decline to 2.1 percent in 2009 as a result of worldwide slowdown in demand for garment products, particularly those from the US and EU markets; and the drop in number of tourist arrival and domestic demand, all due to global financial and economic crises. The IMF expects Cambodia's economy to growth at 4.25 percent in 2010 while the Ministry of Economy and Finance projects the growth to be only 3 percent for the same period.

Table 1 shows that the share of the agriculture sector has decreased from nearly

Table 1: Gross Domestic Product (GDP) by Sector

	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007p**	**2008p**
AGRICULTURE, FISHERIES & FORESTRY	**35.92**	**34.43**	**31.47**	**32.05**	**28.79**	**29.42**	**28.02**	**26.7**	**26.45**
- Crops	16.07	14.97	13.36	15.01	13.29	14.97	14.23	13.97	13.95
- Livestock & Poultry	5.58	5.72	5.3	5.17	4.86	4.54	4.43	4.17	4.056
- Fisheries	10.76	10.55	9.95	9.32	8.31	7.75	7.26	6.64	6.628
- Forestry & Logging	3.5	3.19	2.86	2.56	2.34	2.17	2.09	1.92	1.81
INDUSTRY	**21.86**	**22.5**	**24.68**	**25.49**	**26.94**	**26.81**	**28.62**	**28.15**	**27.45**
- Mining	0.24	0.25	0.29	0.31	0.35	0.4	0.41	0.4	0.43
- Manufacturing	16.01	17.07	18.31	18.95	20.21	19.58	20.75	20.5	19.81
Food, Beverages & Tobacco	3.19	3.03	2.77	2.67	2.29	2.21	2.06	1.93	1.91
Textile, Apparel & Footwear	9.21	10.95	12.45	13.4	15.16	14.62	15.89	15.86	15.18
Wood, Paper & Publishing	0.94	0.62	0.58	0.46	0.43	0.42	0.41	0.39	0.38
Rubber Manufacturing	0.49	0.46	0.43	0.35	0.29	0.24	0.22	0.22	0.22
Other Manufacturing	2.18	2.02	2.08	2.07	2.03	2.1	2.18	2.11	2.11
- Electricity, Gas & Water	0.41	0.46	0.46	0.47	0.47	0.47	0.56	0.56	0.58
- Construction	5.2	4.72	5.62	5.76	5.91	6.37	6.9	6.68	6.62
SERVICES	**37.14**	**38.1**	**38.56**	**37.63**	**38.6**	**38.55**	**38.32**	**38.29**	**39.13**
Gross Domestic Product	100	100	100	100	100	100	100	100	100

Source: National Institute of Statistics (NIS).

36 percent in 2000 to 26.45 percent in 2008 as contributions from all subsectors such as crops, livestock, fisheries, forestry and loggings declined since 2000. The share of industry shows a slightly different trend, going up from nearly 22 percent to 27.45 percent in the same period, thanks to the increase in mining, and textile, apparel and footwear subsectors. Likewise, although the rate of change is modest, the service sector has steadily improved since 2000, reaching nearly 40 percent in 2008. As already mentioned, the drop in demand for garments, textile, and footwear can be attributed to the continued economic recession in the United States and the European nations---both destinations of more than 90 percent of Cambodia's apparel products.

Cambodia is still a predominantly agrarian country where around 70 percent of the population live in rural areas and perform agriculture-related jobs. According to the National Institute of Statistics (NIS), 70.2 percent were employed in the agriculture sector in 2002, and the number kept spiraling downward to just 56 percent in 2007 (Table 2). The steady drop in the employment in this sector was caused by the boom in the garments and footwear industry in the early 1990s. Industry sector absorbed around 10.2 percent of total workforce in 2002 and further to 15.4 percent in 2007.

During the same period, the country experienced a surge of foreign tourists coming in at an impressive 20 percent per year, culminating in more than 2 million tourists coming to visit the famous Ankor Wat temple complex, the capital city of Phnom Penh, coastal cities of Sihanoukville and Kampot province and other ecotourism areas in Ratanakiri and Mondulkiri provinces. Therefore, the employment rate of the services sector rose from a measly 19.5 percent of the total work force in 2002 to 28.7 percent in 2007 due to improved national security, macroeconomic stability, and presence of physical infrastructure.

Table 2: Employment and Share by Sector

By Sector	2002	2003	2004	2005	2006	2007
In thousand						
Total employment	6,571	6,965	7,496	7,878	8,053	8,354
Agriculture, forestry, and fisheries (AFF)	4,426	4,471	4,520	4,655	4,619	4,670
Agriculture	4,080	4,091	4,103	4,197	4,183	4,224
Forestry	56	56	57	58	60	61
Fisheries	291	323	360	400	376	385
Industry	741	835	947	1,059	1,169	1,286
Mining and quarrying	15	16	17	19	20	22
Manufacturing	601	656	720	789	870	944
Utilities	6	10	16	17	19	21
Construction	120	153	195	234	260	299
Services	1,404	1,659	2,028	2,163	2,265	2,399
In percent of total						
Agriculture, forestry, and fisheries (AFF)	70.2	67.4	64.2	60.3	59.1	55.9
Agriculture	65.2	62.1	58.7	54.7	53.3	50.6
Forestry	0.9	0.8	0.8	0.8	0.7	0.7
Fisheries	4.2	4.4	4.6	4.8	5.1	4.6
Industry	10.2	11.3	12	12.6	13.4	15.4
Mining and quarrying	0.1	0.2	0.2	0.2	0.2	0.3
Manufacturing	8.8	9.1	9.4	10	10.8	11.3
Utilities	0.1	0.1	0.1	0.2	0.2	0.2
Construction	1.3	1.8	2.2	2.6	3	3.6
Services	19.5	21.4	23.8	27.1	27.5	28.7

Source: Ministry of Planning, NIS.

Trade volume totaled US$3,665 million in 2001 and kept on rising in consecutive years, reaching US$11,242 million in 2008[6]. However, Cambodia's trade deficit also increased significantly from US$523 million to as much as US$1,826 million in the same period due to the faster increase in imports brought by the higher demand in local consumption and production.

[6] Naron, 2009.

2. INVESTMENT AND KEY SECTOR PERFORMANCE IN CAMBODIA

2.1. Aggregate FDI and Industry Investment

The inflow of FDI has played an important role in promoting trade and economic growth in Cambodia since 1994. This FDI inflow, however, has tended to be concentrated in a few sectors only, mainly the garment sector, which is dominated by Chinese firms.

Foreign direct investments brought into the country 154 projects in 1998 but declined for the next three consecutive years. In 2002, the number dropped to 26 projects before it started to rise to 103 in 2007, and then dropped to 77 in 2008 (Table 3). In terms of fixed assets, the value of FDI in 1998 was US$555 million and plunged consistently to its lowest level of US$65 million in 2003 before reaching the peak at

Table 3: Total Fixed Asset Approvals

Year	Total Projects	Total Fixed Asset (US$
1998	154	555
1999	87	196
2000	58	160
2001	27	140
2002	26	144
2003	30	65
2004	54	155
2005	85	682
2006	82	2,334
2007	103	1,345
2008	77	7,621
1998-2008	783	13,397

Source: The Council Development of Cambodia (CDC).

US$2,334 million in 2006.

In 2007, the fixed asset figure went down to US$1,345 million. Later, the number climbed again to US$7,621 million, owing to the significant contribution of the Koh Kong seacoast development project, which was approval and funded by a Chinese firm in 2008. This project was approved for US$3,805 million—the country's largest foreign investment project. However, it should be noted that approved FDI is higher than actual FDI and the total value of Cambodian inward FDI is still low compared with that of other ASEAN countries, and the quality and local linkages often remain limited. The FDI is expected to weaken further in 2009 due to the recent world economic downturn.

According to CDC, fixed assets approval for the period 1998-2008 went to tourism (US$6,161 million), services (US$1,150 million), construction (US$1,038 million), garments (US$801 million), and other sectors (US$4,247 million). Amongst the top five investors, China was ranked the first (US$6,048 million), followed by South Korea (US$2,565 million), the United States (US$1,451 million), Malaysia (US$527 million) and Russia (US$434 million).

2.2. Industrial Development

Enhancing the industrial sector is one of the government's development priorities in which investment promotion, tax incentives, and private sector promotion are the major tools. Cambodia's industry has received US$89 million worth of investment, around 34.27 percent of which went to the manufacturing sector, 15.6 percent to electricity and gas, and up to 49.55 percent to construction. Since then, the investment in manufacturing sectors kept increasing every year and reached 46.25 percent in 2008,

Table 4: Investment in Cambodian Industry 2003-2008

	2003	2004	2005	2006	2007	2008	2003	2004	2005	2006	2007	2008
	In US$Million (Actual Figure)						Percentage					
Mining	0.6	0.2	15.9	14.3	25.4	23.2	0.67	0.21	9.34	6.87	8.08	7.14
Manufacturing	30.5	36.4	84.5	97.8	156.1	150.3	34.27	37.37	49.65	46.95	49.68	46.25
-Food, beverage, tobacco	7	4.8	5.5	9.2	12.9	13.1	7.87	4.93	3.23	4.42	4.11	4.03
-Textile, Garment and Footwear	16.6	23.9	28.1	41	62.5	61.8	18.65	0.00	16.51	19.68	19.89	19.02
-Wood, paper, publishing	1.9	1.7	1.8	2.4	3.1	3.4	2.13	1.91	1.06	1.15	0.99	1.05
-Rubber manufacturing	0.8	1.9	3.3	3.6	5.7	5.4	0.90	1.95	1.94	1.73	1.81	1.66
-Other manufacturing	**4.2**	**4.1**	**45.8**	**41.7**	**71.8**	**66.7**	**4.72**	**4.21**	**26.91**	**20.02**	**22.85**	**20.52**
Electricity, gas, water	13.9	17.7	21.7	26.9	37.7	42.5	15.62	18.17	12.75	12.91	12.00	13.08
Construction	44.1	43.1	48.2	69.4	95.1	108.7	49.55	44.25	28.32	33.32	30.27	33.45
Overall Industry	**89**	**97.4**	**170.2**	**208.3**	**314.2**	**325**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Ministry of Economy and Finance.

owing to a drastic jump in the "other manufacturing" sub-sectors from 2005 although this slightly drop to 20.52 percent in 2008 from 22.85 percent in 2007 (Table 4).

2.2.1. Existing and Potential Sectors

According to the Diagnostic Trade Integration Strategy (DTIS 2007) of the United Nations Development Program (UNDP), Cambodia has 19 products with export potentials, four of which are in the services sector. Current, those exported include beer, cassava, cashew nuts, corn, fishery, footwear, garments, livestock, rice (including organic rice), rubber, silk (including silk handicraft), and soya beans. The non-exported products are fruits and vegetables, and wood products light manufacturing assembly. Below are select sectors that Cambodia currently depends on and attempts to improve to broaden its growth base.

2.2.2. Garment

The textile and clothing industry is a major contributor to industrial development in Cambodia. It is often seen as the first step in the industrialization ladder, as it helps build the groundwork for the industrial base, communication and transport infrastructure as well as the gradual accumulation of manufacturing skills by the workforce.

Since 2005, the garment and textile industry has had to rely on its competitiveness[7] to maintain exports. Cambodia faces new challenges in 2009. These include (1) the removal of safeguards from Chinese exports of textiles and clothing, as part of China's accession to the World Trade Organization (WTO); and (2) the potential effects of the global financial crisis[8]. Most commentators posit that it is not enough for Cambodia to simply rely on its reputation for compliance to labor standards to sustain growth of the industry. This was one of the important factors to attract orders from the buyers.

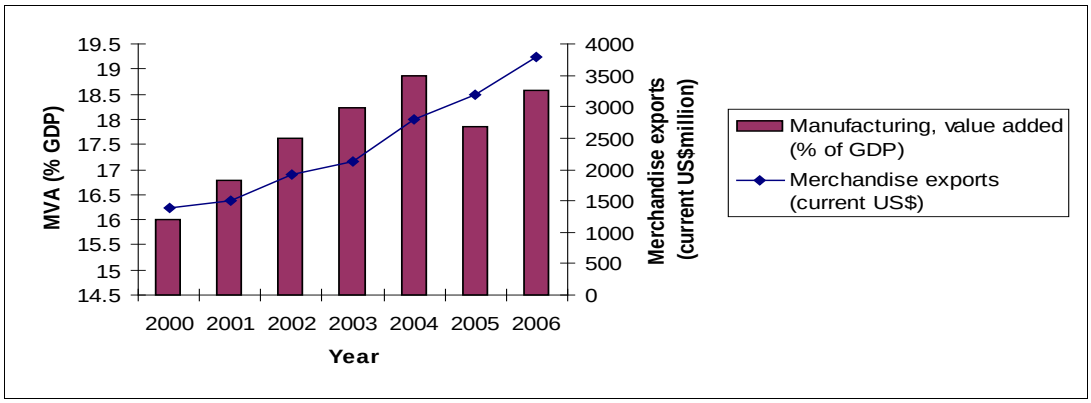
Cambodia's garment industry is heavily concentrated in the"cut-make-trim" part of the textile and clothing value chain and basic assembly of goods. For various reasons, Cambodia has not been able to diversify into textiles production although this has in the past been recommended as a means to value -add the industry.[9] The inability to do this does not necessarily place Cambodia at a competitive disadvantage within the region, as long as other factors beyond textile production make it more attractive for the cut-make-

[7] Main competitive factors in this sector include cheap labor, preferential market access, labor law compliance.

[8] The US also lifted safeguards on exports from Vietnam in 2007 after the signing of a new bilateral trade agreement.

[9] World Bank value chain and textiles and clothing studies.

Figure 2: Value-Added of Manufacturing and Merchandise Export 2000-2006



Source: World Development Indicators.

trim component of the value chain, and such activities increase Cambodia's potential to move into other types of final or intermediate goods assembly.

The Greater Mekong subregion is increasingly becoming inter-linked, thanks to improved transport and connectivity. Because of this, Cambodia is well placed to benefit from growth within the region as other countries within such region move up the value chain and increasingly look to offshore (or outsource) parts of their value chain. While in the past Cambodia had succeeded to develop a niche through adherence to labor standards so as to access other markets, the country also needs to develop a quality niche in other aspects of the assembly process so as to tap into other types of global production networks within the region.

As shown by Figure 2, garment exports accounted for 72 percent of total merchandise exports in 2007[10]. As merchandise exports have been increasing, so too

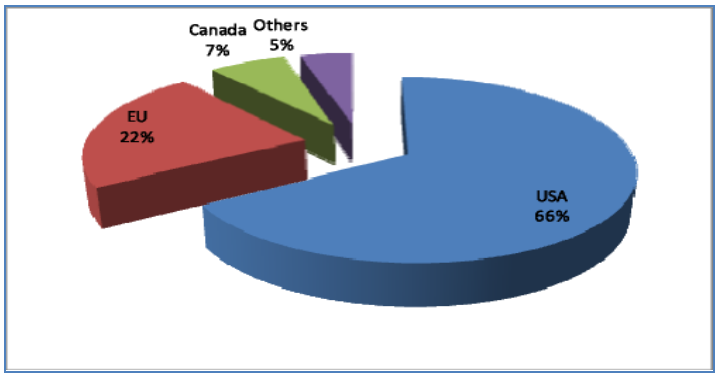
[10] World Development Indicators.

has manufacturing value added (MVA) as a share of GDP although the MVA decreased in 2005 and 2006 compared to the 2004 figure. Textiles and clothing are the dominant source of exports and foreign exchange in several developing countries, some of which are in direct competition with Cambodia. Given the relative share of the garment industry in Cambodia, the industry contributed almost US$500,000 to total customs revenue in 2007.[11]

According to the Ministry of Finance, Cambodia's growth slowed down in 2007 compared to 2006, due to a slowdown in the garments sector that resulted from Vietnam's accession to the WTO and removal of quotas on garments.[12]

In terms of market share, Cambodia exports 66 percent of its garment products to the US market, 22 percent to the European Union, 7 percent to Canada and 5 percent to the rest of the world (Figure 3). Therefore, Cambodia's garment industry is deemed a "footloose" industry---i.e., so vulnerable to the external shock it is currently facing.

Figure 3: Markets of Cambodia's Textile and Apparel Products



Source: Ministry of Commerce.

11 Assuming the industry contributed around 70 percent, given its total share in manufactured exports and total customs revenue of around $575,000 in 2007.

12 Source: Ministry of Finance (website).

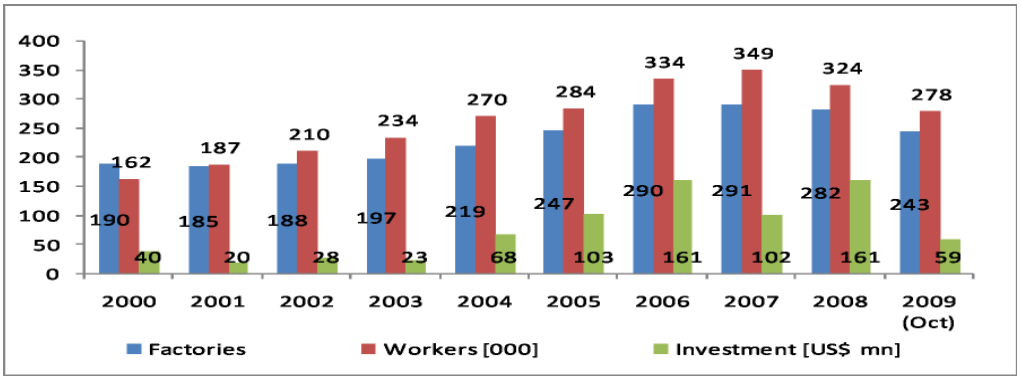
Employment in the garment industry has obvious multiplier effects. For instance, employment in textile and clothing production for less developed and low-income countries as a share of total employment in manufacturing ranges from 35 percent in selected low-income countries, 75 percent in Bangladesh and 90 percent in other selected less developed countries including Lesotho and Cambodia. In Cambodia, the garment industry directly employs around 300,000 workers but the indirect employment effects of the industry are also significant. Thousands more jobs have been created in allied areas such as food sales, other services, packaging (Economic Institute of Cambodia 2007).

The Economic Institute of Cambodia in 2007 estimated that an increase of US$100 in garment exports could result in an additional demand of US$205 in the whole economy. However, note that multiplier effects could be greater if backward linkages were improved: Cambodia has no real textile industry that intensively uses agricultural products (such as cotton) as inputs.

Although total employment in the garment industry has increased since 2000, and even after 2005[13], growth in employment seems to have remained stable in 2006 and into 2007 (Figure 4). Latest figures suggest that almost 278,000 workers are currently employed by garments factories. As of October 2009, there were 243 garment factories in operation in Cambodia, a decrease from 291 factories in 2007 and 282 factories in 2008. Between 2008 and 2009, up to 39 factories have closed down, resulting in the loss of around 46,000 job losses and more than US$2 million in wages paid per month. Moreover, the value of investment in this sector shrank sharply from US$161 million in 2008 to US$59 million in 2009.

[13] Multi Fibre Arrangement (MFA) was removed in 2005.

Figure 4: Trends of Textile and Apparel Industry



Source: Ministry of Commerce, 2009.

Based on the production line data for September 2008, the wages paid to workers within the garments industry (including those based in special economic zones) are projected to inject just over US$28 million into the local economy per month (or US$336 million per annum). Meanwhile, the National Institute of Statistics reports that the total workforce of Cambodia was around 8 million in 2006, of which around 870,000 were employed in manufacturing (10%) and just over 330,000 in the garments industry – around 4 percent of the total workforce and 39 percent of the total employment in manufacturing. Although the total employment of the garment sector is relatively low compared to other sectors of the economy, the wages paid to workers in the industry are relatively high.

2.2.3. Agro-industry

Agro-industry is one of the key industries on which the economy is based since most Cambodians are working in this sector in rural areas. However, most of Cambodia's

agricultural production is rain-fed, with annual yields significantly dependent on seasonal rains. There is a high risk of both flood and drought; for example, in the flood of 2000, over 400,000 ha. of rice crop was lost[14]. Also, the Food and Agriculture Organization (FAO) estimates that 40,000 ha. have been affected by drought in 2009.[15] The Royal Government of Cambodia's (RGC) SAW[16] 2006-2010 identifies water management as "currently the most critical element in on-farm production in Cambodia." The Ministry of Water Resources and Meteorology (MOWRAM) estimates that 730,000 ha. of land has access to irrigation in the wet season, and 280,000 ha. in the dry season. Local reports suggest that the actual area irrigated may be significantly less although no official statistics is published regarding the area irrigated.[17]

Much of the existing infrastructure is poorly designed, and operation and maintenance are often inadequate, having been largely devolved to farmer water user groups that have inadequate technical and agronomic expertise and limited government support. As a result, majority of the irrigation schemes are used only for supplementary irrigation of wet season rice production. Dry season rice accounts for only 13 percent (360,000 ha.) of the total rice area (a lot of which is partially irrigated recession rice) and a total of 66,000 ha. of subsidiary and industrial crops was cultivated in the dry season in 2008.[18] Provision of irrigation to farmers is a high priority of the government. Planning calls for irrigating an additional 20,000 ha. of land per year so as to attain 25

[14] 2008 MAFF Statistics

[15] http://english.people.com.cn/90001/90777/90851/6741683.html

[16] Strategy for Agriculture and Water Resource

[17] Information received from officials and field personnel. An inventory of irrigation infrastructure in 1993 reported by FAP found that of 841 full/partial control irrigation schemes, only 176 were fully operational (http://www.fao.org/nr/water/aquastat/countries/cambodia/index.stm). An update by MRC in 2001 reported 802 schemes, of which 125 were not operational.

[18] 2008 MAFF statistics

percent of the total crop land (around 650,000 ha.) with irrigation systems by 2010.[19] Considerable investments by the Asian Development Bank (ADB), Japan International Cooperation Agency (JICA) and Agence Française de Dévelopement (AFD) aim to rehabilitate the existing infrastructure, while Chinese, Kuwaiti and Korean private investment funds are planned to be the source for new infrastructure projects. However, unless systemic problems with farmers' understanding and uptake of dry season cropping, and operation and maintenance of communal systems are addressed, the expected gains in production from irrigation may not be realized.

Granting economic land concessions is considered among the most serious threats to forests, biodiversity, community displacements and civil unrest. Clear-felling of large swathes of forests is occurring, and there are also regular cases of illegal logging. Commercial agricultural concessions are classified under the 2001 Land Law as "land concessions for economic purposes" and are granted on up to 10,000-ha. blocks for up to 99 years in exchange for royalties. In early 2009, the Ministry of Agriculture, Fishery and Forestry (MAFF) reported that 65 economic land concessions totaling about 1.0 million ha. were granted for agro-industrial development and permanent tree mono-cropping of rubber plantations.[20]

Cambodia has two main agricultural products that can be exported to foreign markets: rice and rubber. These two products have a potential for higher value added if processing can be done locally before they are exported. Table 5 shows that out of the total volume of agriculture, fisheries and forestry exports, rubber garnered around 43.67 percent in 2000, which then rose to 72 percent in 2003 and 80.40 percent in 2008

[19] RGC Strategy for Agriculture and Water .
[20] www.twgaw.org.

(although there were a few years in between where the figure slightly dipped). Likewise,

Table 5: Exports of Key Agricultural Products

Value in US$ Million	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*
Agriculture, Fisheries and Forestry	**67.76**	**56.21**	**54.77**	**48.75**	**62.28**	**61.16**	**59.65**	**55.64**	**44.50**	**22.49**
Wood	32.56	22.31	15.96	10.15	11.08	10.26	8.60	8.71	3.38	0.86
Fish	5.35	6.00	4.31	2.84	10.57	9.96	5.06	3.20	2.29	1.33
Rubber	29.59	25.88	29.72	35.11	38.25	36.66	41.79	41.01	35.78	16.28
Rice	0.22	2.03	4.78	0.64	1.81	2.59	2.50	1.52	2.60	2.20
Other Agricultural Product	0.05	0.00	0.00	0.00	0.58	1.69	1.71	1.20	0.46	1.81
	48.05	39.69	29.13	20.83	17.78	16.77	14.42	15.65	7.59	3.84
Percentage										
Wood										
Fish	7.90	10.67	7.87	5.83	16.97	16.28	8.48	5.75	5.14	5.93
Rubber	43.67	46.03	54.27	72.02	61.42	59.95	70.05	73.72	80.40	72.41
Rice	0.32	3.60	8.72	1.32	2.90	4.24	4.18	2.73	5.84	9.77
Other Agricultural Product	0.07	0.00	0.00	0.00	0.93	2.76	2.87	2.16	1.03	8.05

Note: * Data in until May, 2009.

Source: General Department of Customs and Excise.

rice export has experienced an astonishing growth: From just 0.32 percent in 2000, it rose to nearly 10 percent in just the second quarter of 2009. The promotion of organic rice and development of irrigation systems alongside the government's agricultural policy played pivotal roles in the rapid increase. There were also more export-oriented rice milling investments in Cambodia that both the Cambodian government and international organizations had extended to rice millers.

2.2.4. Motorcycle

In 2008, Cambodia received a Japanese investment in the motorcycle business when the Yamaha Motor Co. was set up in Phnom Penh Capital. Here, Yamaha Motor Co. owns 70 percent of the share of the total investment; Toyota Tsusho Corp has 20 percent; and

a local trading company owns the remaining 10 percent. The manufacturing site covers more than 90,000 sq m of land and incurred about ¥1 billion to construct a new factory by July 2009. It is also expected to assemble 30,000 motorcycles in 2010. Yamaha projected that the size of Cambodia's motorcycles is around 130,000 units in 2007 and is expected to increase to 500,000 units by 2015[21] . The plant uses parts produced in Thailand.

In 2004, Cambodia imported around 144,000 motorcycles. Such number increased steadily to 561,600 in 2008 (Table 6) owing to a growing population and a remarkable economic development in the country. Since 1997, according to the CDC investment list, there are three Chinese-owned companies investing on the motorcycle assembly business but there has been no record of their production activities so far. Therefore, although this is considered a potential sector, the dearth of data makes it difficult to evaluate how the motorcycle business in Cambodia is performing in terms of the number of imports and domestic production.

Although the assembly process is labor intensive, it requires well trained people to perform the job. Cambodia lacks such vocational training centers that can provide skills and know-how to those who cannot attend higher education. In addition, the production operation demands stable electricity and good roads to transport raw materials and final products to and from the factory. There is therefore a need for such infrastructure if Cambodia is to promote the motorcycle industry.

Table 6: Units of Imported Motorcycles and Electronics into Cambodia

[21] September 1, 2008, Yamaha Motor Co., Ltd., Toyota Tsusho Corporation, Website: http://www.toyota-tsusho.com/data/current/detailobj-589-datafile.pdf.

Import (000 units)	2002	2003	2004	2005	2006	2007	2008
Motorcycle	144	144	192	247.92	378.72	408	561.6
Electronics	672	408	432	481.92	410.88	480	408

Source: General Department of Customs and Excise, 2009.

2.2.5. Electronics

Only few companies have so far invested in the electronics business in Cambodia. The companies KTC Cable (South Korea) and Cambodia Fiber Optic Communication Networks (China) both produce wires and cables for the Cambodian market. Table 6 shows that the nation has exported a large quantity of electronic equipment but the number has been dropping from 672,000 units in 2002 to 408,000 units in 2008, possibly because domestically produced electronics are substituting for the imports. However, no data on the local electronics assembly is published. Unlike motorcycles, it is hard to describe the electronics by units instead of by value in US dollars. Since the information on this sector is scarce, it is impossible to determine how many percent of electronics are imported and how many are produced locally.

This sector also has some potential but demands even higher-skilled workers, depending on the kind of products made. Very similar to other manufacturing sectors, the electronics sector needs to be very competitive and cost effective. Cambodia's currently high electricity and transportation costs will not make this industry successful; the products from China or Vietnam are cheaper because their efficiency is higher and other costs, including electricity, are lower than in Cambodia.

2.2.6. Industrial Corridor Development

The Royal Government of Cambodia plans to promote the development of three poles: Phnom Penh, Siem Reap, and Sihanoukville by launching "growth corridors" that are

designed to link different parts of the country to the industrial, investment, and agricultural development zones (Naron 2009). Growth-corridor plans have the development priority when it comes to receiving physical infrastructure such as

Table 7: Matrix of Economic Development Directions

Sub-Area	(2002 status) Short-term	(Up to 2008) Med to Long Term	(Up to 2015)
Greater Capital Area	-Garment and footwear (Labor intensive industries); -Supply of agriculture products to urban consumption.	-Development of agro-processing industry; -Airport based industry (high value added, labour intensive industry), electric appliance/transportation machinery assembly.	-Enlargement of agro-processing industry; -Development of import substitution industries; -Electric appliance/transportation machinery assembly and production; -Development of IT industry; -Logistics center.
Shihanouk-ville Area	-Garment and footwear (labour intensive industries); -Beverage production; -Marine products processing; -Improvement of port facility; -Beach resort for domestic visitors.	-Development of agro-fishery processing industry; -Port based industry (Garment; light manufacturing); -Enlargement of beverage; -Port-oriented industry (ship repair; boat building); -Coastal tourism for domestic visitors.	-Development of agro-fishery processing industry; - Development of import substitution industries; -Electric furnace semi-assembly/production -Enlargement of used machinery reuse and recycling; -Export of beverage Products; -Coastal tourism for local and international visitors.
Other Areas	-Cottage and handicraft industry; -Vegetable and fruit production; -Cattle farming; -Fishery.	-Enlargement of suburban agriculture for import substitution; -Modernization of cottage Industry; -Promotion of village tourism; -Agro-fishery processing.	-Further improvement of agro-fishery processing for export.

Source: JICA.

telecommunication, water supply, and electricity alongside social and legal infrastructure. As shown in Table 7, growth corridors present the present and future scenarios of economic development.

In terms of regional integration, Cambodia has joined five other countries[22] within the Greater Mekong region to create three economic corridors: the Southern, East-West and North-South Corridors. A southern corridor links Cambodia to Laos, Thailand, and Vietnam. According to Commerce Minister Cham Prasidh during forum in September 2009, Cambodia had gained little so far from the southern corridor. When compared with other nations with corridors, Cambodia is relatively slow in carrying out its plans. With financial and technical assistance from the ADB, the six Mekong countries have agreed to cooperate with each other in turning the three corridors into economic hubs as well as in improving transportation facilities, tourism, hydropower, and disease control until 2020. Arjun Goswami, former head of the ADB's regional cooperation and integration group, said that (1) the corridor development would benefit around 330 million people through job creation, commercial activities, investment and development; and (2) a more rapid improvement of the southern corridor would attract investment and increase exports from Cambodia.

Between 1992 and 2008, the ADB provided more than US$11 billion in loans to the six Mekong countries, with US$243 million going to Cambodia to improve the infrastructure in the southern corridor by connecting 21 provinces to six provinces each in Laos and Thailand, and four provinces in Vietnam. Bilateral trade has significantly increased between Cambodia and Vietnam, the ADB said, reflecting the fact that only the border area of Bavet has seen an increase in commerce and tourism. Meanwhile, the East-West and North-South Corridors have seen significant improvement in trade and investment, benefitting China, Laos, Thailand, and Vietnam more.

[22] The other five countries include Laos PDR, Thailand, Vietnam, Myanmar, and China.

Ros Silva, deputy secretary-general of the Ministry of Economy and Finance, said Cambodia faces challenges on how to reap benefits from the southern corridor, as this corridor is a newly-developed area with weak infrastructure in place. In the same vein, Paul Apthorp (TNT Express Worldwide) said that aside from weak infrastructure development, the southern corridor has the most number of disadvantages among the Mekong corridors, due in part to the unnecessary documentations required by customs and other government agencies. Nonetheless, he remained optimistic about the more efficient linkage between Cambodia and other countries in the region.

JETRO Director Mr. Masaaki Toma reports that one JETRO survey aimed to grasp the business needs and strategies of Japanese and non-Japanese companies in the Mekong subregion and to identify issues on investment and industrial development. As part of the plan to promote the subregion as a textile-and-garments industries corridor, there will be an appropriate division of labor among Thailand, Cambodia, and Vietnam. The survey found some benefits in turning to the cheaper and more convenient transport by sea rather than by roads from Thailand to Vietnam.

3. INFRASTRUCTURE DEVELOPMENT AND POLICY IN CAMBODIA

Compared to 134 countries in the world, Cambodia ranks poor in all indexes (Table 8). When compared to the ASEAN countries in the Institution index, Cambodia is ranked 103rd while Thailand and Vietnam are ranked 34th and 70th, respectively. In infrastructure, Cambodia takes the 97th spot while Thailand and Vietnam are in 29th and 93rd places, respectively. Cambodia is in the lowest rank (105) among the ASEAN

countries in terms of macroeconomic stability. However, labor market efficiency is better than Vietnam, Indonesia, and the Philippines. In terms of financial market sophistication and technological readiness, Cambodia is ranked 130th and 123rd, respectively.

Table 8: WEF Competitiveness Indicators, Country Rankings in ASEAN

	Brunei	Cambodia	Indonesia	Malaysia	Phil	Sing	Thailand	Vietnam
GCI 2008-2009	39	109	55	21	71	5	34	70
Institutions	41	103	68	30	105	1	57	71
Infrastructure	**39**	**97**	**86**	**23**	**92**	**4**	**29**	**93**
Macroeconomic stability	2	105	72	38	53	21	41	70
Health and primary education	47	111	87	23	90	16	58	84
Higher education and training	69	127	7 1	3 5	60	8	51	98
Goods market efficiency	91	88	37	23	81	1	46	70
Labor market efficiency	16	33	43	19	101	2	13	47
Financial market sophistication	75	130	57	16	78	2	49	80
Technological readiness	54	123	88	34	70	7	66	79
Market size	116	95	17	28	34	41	21	40
Business sophistication	89	110	39	22	57	14	46	84
Innovation	91	112	47	22	76	11	54	57

Note: Data for Lao PDR and Myanmar are not available and a total number of 134 were included.
Source: WEF Global Competitiveness Report 2008-2009.

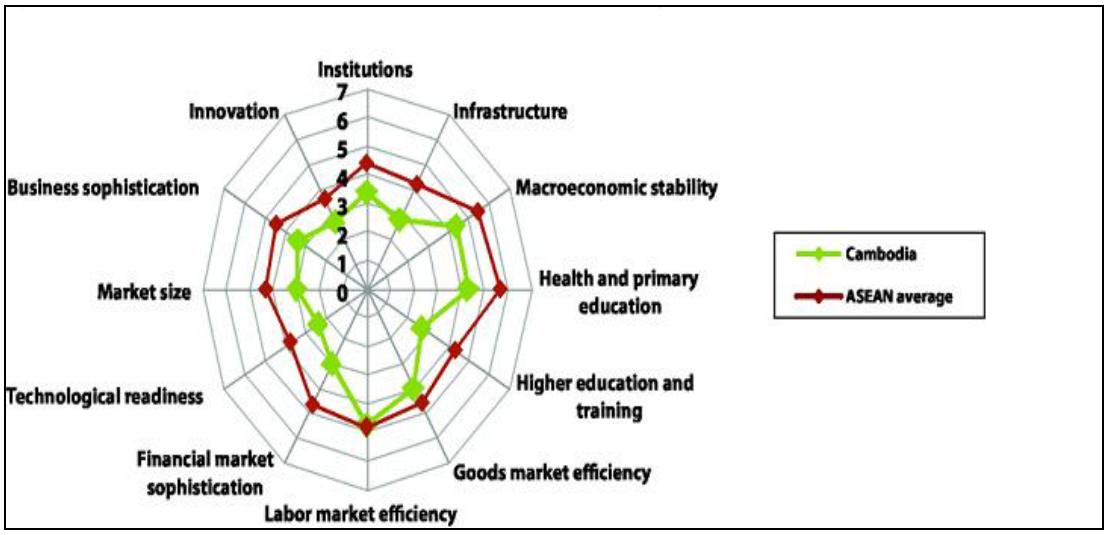
Compared with the ASEAN average (Figure 5), Cambodia has the lowest score *inter alia* in infrastructure, which means that it is still facing a great deal of infrastructure problems that may be deterring foreign investments and increasing cost of

products. Cambodia remains below the ASEAN average, making the country less attractive in the region.

3.1. Road Networks

Cambodia's one-digit and two-digit national roads (NRs) make up of just 5.3 percent and 7.9 percent, respectively, of the total lengths of roads, including a total of 1,217

Figure 5: WEF Competitiveness Scores, ASEAN Average and Cambodia



Source: WEF Global Competitiveness Report 2008-2009.

Table 9: Road and Bridge Network in Cambodia as of 2009

Road classification	Roads		Bridges		Management authority
	Length (km)	Percentage	Number	Meter	
1-digit national roads	2,117	5.30	589	17,643	
2-digit national roads	3,145.6	7.9	698	15,710	MPWT
Provincial roads	6,441	16.2	904	16,309	
Rural roads	28,000	70.5	n.a.	n.a.	MRD

Total length	39,703.60	100	2,121	51,917

Source: Ministry of Public Works and Transportation (MPWT) and Ministry of Rural Development (MRD).

bridges, 589 of which belong to one-digit NRs and 698 belong to two-digit NRs (Table 9). Rural roads comprise as much as 70.5 percent of the total length of roads, which means Cambodia needs to accelerate the improvement and construction of more roads and bridges to meet the increasing demand for transportation and safety.

Cambodia is also poised to get connected with its neighboring countries for cross-border trade and tourism. Although some construction undertakings are not completed yet, roads linking one province to another will facilitate both domestic and international transportations, thus lowering transport costs.

As briefly illustrated in Table 10, Cambodia has built road networks with its neighboring countries for the corridor development plan. There is now a call to invest in the rehabilitation of existing roads. For one, Cambodia has a low road density compared with its ASEAN counterparts (Figure 6)[23]. Cambodia is even ranked the lowest in terms of paved road density while both Vietnam and Thailand are in a much better position. This puts Cambodia in a competitive disadvantage in terms of business services and investment attraction.

Table 10: International Highway in Cambodia

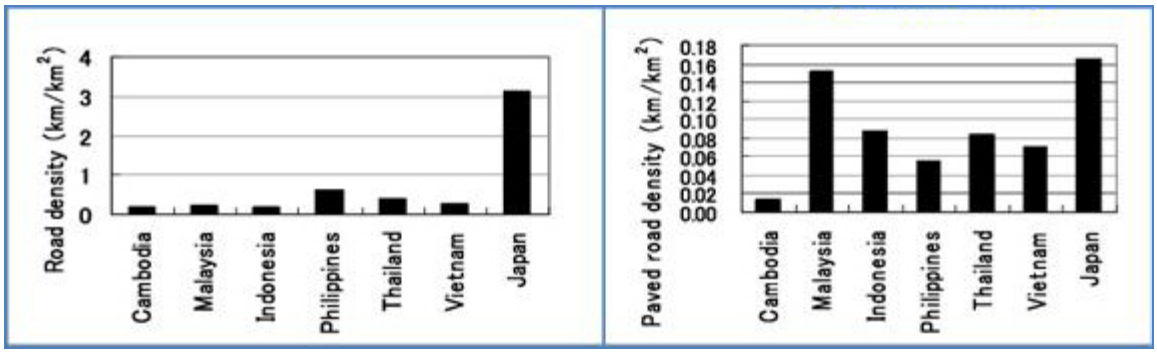
GMS Road No.	Asian Highway No.	ASEAN Highway No.	Cambodian Road No.	Route

[23] Calculation of road density index is shown in Table A3 of Appendix

R1 (Central sub-corridor)	AH1	AH1	NR1, NR5	Poipet-Sisophon-Phnom Penh - Svay Rieng-Bavet
R6 (Inter-corridor link)	AH11	AH11	NR4, NR6, NR7	Sihanoukville-Phnom Penh - Kampong Cham-Stung Treng - Trapengkreal
R10 (Southern coastal sub-corridor)	na	AH123	NR48, NR3, NR33	Cam Yeam-Koh Kong-Viel Rinh - Sre Ambel-Kampot-Lork
R9 (Northern sub-corridor)	na	na	PR2624, RB2661, NR78	Siem Reap-Preah Vihear-Stung Treng-Rattanakiri-O Yadav Border

Source: Ministry of Public Works and Transportation (MPWT).

Figure 6: International Comparison of Road Density and Paved road Density



Source: JICA.

At present, Cambodia's railway system and facilities are very obsolete and to a large extent, not utilized, making it unsafe and efficient to carry passengers and cargos by train. Table 11 shows that only a few lines and stations are being used. The Northern Line was constructed in 1929-1942 and the Southern Line in 1960-1979, but were destroyed in the civil war, making them less important and unsafe. Petroleum tanks are even transported by train but accidents happen quite often because of the railways' poor condition and the unreliable safety control system. Only seven out of the 49 stations in the Northern Line and just five out of 27 stations in the Southern Line are operating.

Table 11: Situation of Railway Facilities

	Northern Line (NL)	Southern Line (SL)
Length (km)	385 (including 48 km missing link)	264 km
Section	Phnom Penh – Pursat – Battambong – Mongkol Borey – Poipet	Phnom Pen h – Takeo – Kampot – Sihanoukville
Station (number)	49 (current operation 7)	27 (current operation 5)
Construction year	1929-1942	1960 – 1969

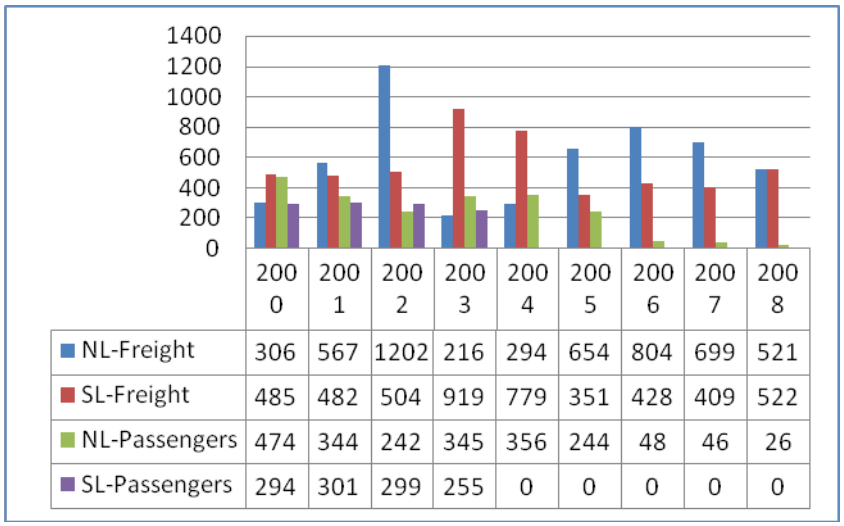
Source: Ministry of Public Works and Transportation (MPWT).

Figure 7 shows that while the number of the NL freight increased from 306 in 2000 to 1,202 in 2002, it drastically decline to 521 in 2008. The number of trains transporting passengers also dropped very significantly from 474 in 2000 to just 26 in 2008. It is therefore important for the government to consider directing investments into the railway business so as to reduce the transportation cost because cargos transported by train cost lesser than those by trucks. However, Cambodia's railway network is very old and unsafe.

3.2. Maritime and Ports

Among the ports in Cambodia, only Sihanoukville Port and Phnom Penh Port handle international containers. Although the two are administratively controlled by the central government, they are financially independent, autonomously-managed ports (Table 12). Sihanoukville Port was constructed in 1961 with French assistance and later aided by

Figure 7: Number of Trains Operated Per Year



	2000	2001	2002	2003	2004	2005	2006	2007	2008
NL-Freight	306	567	1202	216	294	654	804	699	521
SL-Freight	485	482	504	919	779	351	428	409	522
NL-Passengers	474	344	242	345	356	244	48	46	26
SL-Passengers	294	301	299	255	0	0	0	0	0

Source: Royal Railway of Cambodia.

Table 12: Status of Facilities at Sihanoukvilles Port and Phnom Penh Port

Port name	Channel	Berth					Other facilities & Remarks
	South Channel	Name	Structure	length	Depth	Year	
	Length 5.5 km	No. 1-2	Jetty	290m	9m	1960	**Warehouses**
	Length 5.5 km Depth: 8.4 m	No. 3-4	Jetty	290m	9m	1960	5 buildings, 36,600m^2
	Width: 80-100 m	No. 5-7	-	350m	9m	2007	Container yard
Sihanoukville port		No. 8-9	-	400m	10m	2007	3 yeards, 110,000m2
	North Channel		Private facilities				-
	Length 1km Depth: 10m	Sokimex	Jetty	200m	9.2m	-	
	Width: 150-200m	-	Pontoon	110m	6.5m	-	
		-	Stone Wharf	53m	4.2m	-	
	Maintenance dredging (at Chaktomok) Depth: 7m Width: 60m Length: 1,290m Volume: 159,648m3	Port No. 1					**Container yard** 2 yards for laden containers, 1 yard for empty containers
		No. 1	Jetty, apron width 20m	Total 300m		-	
		No. 2				-	
		No. 3				-	
Phnom Penh port			Port No. 2 (for passengers)				1 km downstream from Port No. 1
		No. 5b	Pontoon	-		-	
		No. 5c	Pontoon	-		-	
			Private facilities				Between 4 and 13 km upstream from Phnom Penh
		-	8 facilities for oil bergs	Ship size from 600-1,000DWT		-	

Source: JICA, 2007 and PAS.

the Japanese government to complete the development of a 400m-long and 10m-deep container terminal along the quay.

The Phnom Penh Port, which has a 300m-long pier, is also capable of handling containers. There are other small ports such as Sre Ambel Port and Kampot Port, too and the privately-owned Keo Phos Port and petroleum jetty in Sihanoukville.

In terms of the use of ports, Sihanoukville Port has handled approximately 1.6 million tons of cargos while Phnom Penh Port has handled 740,000 tons of cargos. Both have improved their capacity to handle containers: Around 700 vessels were accommodated by Sihanoukville Port in 2005 and 1,070 vessels (mostly small barges) by Phnom Penh Port. In 2008, 377,000 tons of cargos for export and 1,680,000 tons of cargos for import were handled by Sihanoukville Port, while 86,000 tons of cargos for export and 1,154,000 tons for import were accommodated by Phnom Penh Port.

3.3. Airports

Although there are 11 air terminals in Cambodia, only two--- Phnom Penh International Airport and Siem Reap International Airport---regularly operate. The Societe Concessionaire de l' Aeroport (SCA) began to carry out the operational management of Phnom Penh, Siem Reap and Sihanoukvile Airports in 1995, 2001, and 2006, respectively, on a build-operate-transfer (BOT) scheme between the company and the Royal Government of Cambodia (Table 13). In addition, other domestic airports, except the Kampong Chhnang Airport, are managed by the State Secretariat of Civil Aviation (SSCA). At the Phnom Penh International Airport, the number of both national and international airplane passengers increased as the number of tourists reached 1.7

million, of which 1.53 million are international flight passengers. At the Siem Reap International Airport, on the other hand, the number totaled around 1.5 million in 2008 (a drop from 1.7 million in 2007).

3.4. Telephone and Internet

The Cambodian Communications Authority (CCA), which will act as a national regulator, is to be formed to regulate the communications services, and construction and operation of communication networks (Naron, 2009). Cambodia's telecommunication

Table 13: Present Status of Airports in Cambodia

Airport	Runway (m) Surface/Ref. Code	ILS	Area (ha.)	Owner/Operator	Status
		International Airport			
Phnom Penh	3,000x45/Asphalt/4D	*	387	RGC/SCA	Open
Siem Reap	2,550x45/Asphalt/4C	*	197	RGC/SCA	Open
		Domestic Airport			
Sihanoukville	2,500x34/Asphalt/4C		123.84	RGC/SCA	Open
Kampong Chhnang	2,400x45/Concrete/4C		2011	RGC/Air Forces	Close
Battambong	1,600x34/Bitumen/3C		128.68	RGC/SSCA	Open
Stung Treng	1,300x20/Bitumen/3C		112.5	RGC/SSCA	Open
Rattanakiri	1,300x30/Laterite/3C		48.09	RGC/SSCA	Open
Koh Kong	1,300x30/Laterite/3C		125.66	RGC/SSCA	Open
Mondulkiri	1,500x30/Laterite/3C		36	RGC/SSCA	Close
Preah Vihear	1,400x30/Laterite/3C		150.98	RGC	Close
Kratie	1,180x30/Laterite/3C		112.5	RGC	Close

Note: RGC = Royal Government of Cambodia, SCA: Societe Concessionaire de l'Aeroport, SSCA: State Secretariat of Civil Aviation.

Source: State Secretariat of Civil Aviation.

sector is composed of three main operators (fixed phone, mobile phone and internet), all of which have seen remarkable development so far. Table 14 indicates that among the three fixed line operators, Telecom Cambodia is 100 percent owned by the government.

The number of landline telephone is still on the rise but at the slow rate. Figure 8 shows the increasing competition from the mobile telephony has pushed the landline telephone service to a competitive disadvantage, slowing to 15 percent in 2000. Between 2000 and 2007, the growth averaged at only 7.6 percent because in 2007 it plummeted to just 1 percent---a dramatic decline due to the development of VOIP telephony. In 2008, landline telephony in Cambodia accounted for 35,415 landline telephones or 2.4 landline phones per 100 inhabitants. In contrast, the number in

Table 14: Cambodian Telecom Service Operators as of May 2008

Category	Operators	Name of Operators	officially Started	Ownership
		Telecom Cambodia	2006*	100% state-owned
Fixed lines	3	Camintel	1993	MPTC (51%) & 49% A-Z company (Cambodia)
		Camshin	1993	100% Shin Corporation (Thailand)
		CamGSM (Mobitel)[24]	April 1996	38.5% Cambodia & 61.5% Sweden
		Casacom (Hello)	1992	100% Telekom Malaysia
Mobile service	8	Camshin (M-Fone)	1998	100% Shin Corporation (Thailand)
		Applifone (Starcell)	October 2007	Teamed up with Ericsson for solar powered-base station in Cambodia
		CADCOMMS (qb)	2007	
		GT-Tell-Cambodia (Excell)		
		Letelz (Smart Mobile)		100% owned by Timeturns Holdings (Russian Parent Company)
		Viettel (Metfone)	2009	
		Camnet (TC)	May 1997	100% state-owned
		Camintel	1999	MPTC (51%) & 49% A-Z company (Cambodia)

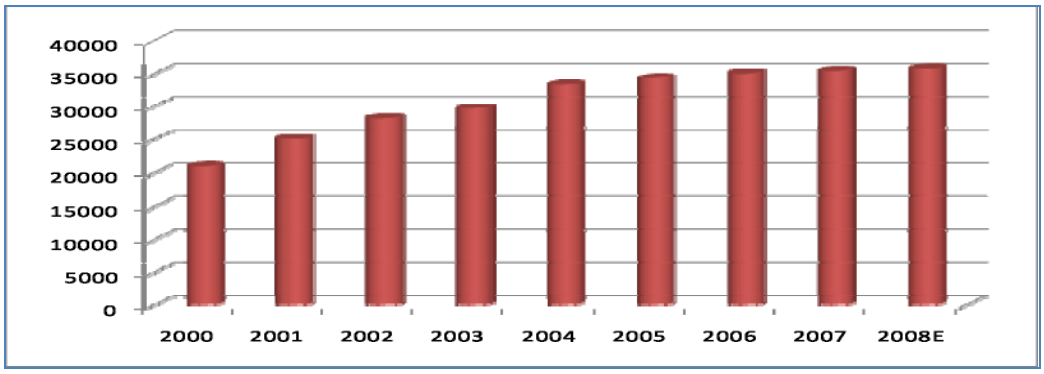
[24] CamGSM was licensed in April 1996 as a joint venture between MPTC (25 percent) and Royal Milicom (75 percent). In July 1999, MPTC shares were transferred to Royal Milicom. The current owners are Royal Group of Cambodia (38.5 percent) and Milicom Group (61.5 percent).

		Cambodia Broadband Technology		
Internet		Camshin	2002	100% Shin Corporation (Thailand)
	12	City link		
		Angkor Net	2005	MediaRing (Singapore) & Anana Computer (Cambodia)
		Online (Cogetel)	June 1997	
		Telesurf (CamGSM)	2001	38.5% Cambodia & 61.5% Sweden
		Wicam	2005	
		Wireless IP	2006	
		Genusys Cambodia		
		PPCTV	2005	

Note: *Under MPTC supervision during 1993–2005, became a public enterprise as Telecom Cambodia in 2006.

Source: MPTC 2008.

Figure 8: Number of Subscriptions in Fixed Telephony Service



Source: Telecom Cambodia, 2009.

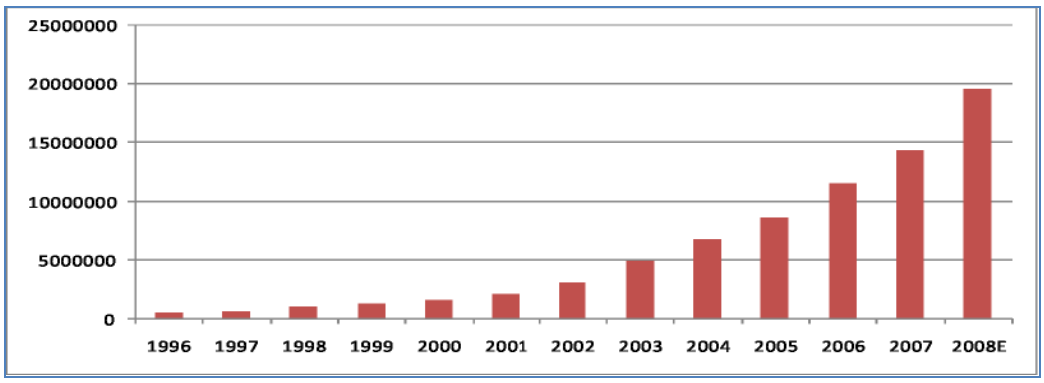
Thailand reached up to nearly 13 landlines per 100 inhabitants.

According to the Ministry of Post and Telecommunication, there are eight mobile phone operators, of which CamGSM (Mobitel) dominates with 59 percent of the market share, followed by Camshin (24%) and Telekom Malaysia (15%). Viettel[25] (Metphone)

[25] Viettel is owned by the Vietnamese Ministry of Defense.

started its presence in Cambodia in 2008 and attracted a significant number of subscribers (around 500,000 in 2009) due to its broad service coverage and competitive call rate.

Figure 9: Mobile Phone Uses in Cambodia



Source: MPTC, 2009.

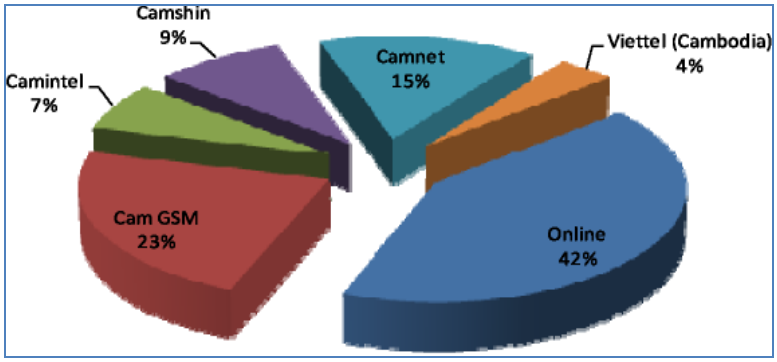
The rapid surge in mobile telephone consumption in Cambodia has been significant (Figure 9), surpassing 1 million users or 80 portable telephones per 100 persons compared to only 30.6 mobile phones per 100 persons in Thailand. The inconvenience and high call rate between different mobile phone companies prompted many Cambodian consumers to carry more than one mobile phone or using different numbers under different companies.

Internet service started in 1997 in Cambodia, with three internet pioneers: Bigpond (Online), Camnet and Telesurf at the outset. Internet charges were very high at around US$8.50 per hour in 1997, which might have been the result of insufficient and poor network infrastructure. In 1998, with grant aid from the German government, an optical fiber network was installed connecting Poipet (Thai border) in the north-west

and Bavet (Vietnamese border) in the south-east, passing through Phnom Penh and six provinces.

The MPTC funded another network connecting Siem Reap and Banteay Meanchey. At present, there are other projects under way: (1) installation of an "information superhighway" in the Greater Mekong Subregion through the support of the Japan Bank for International Cooperation (JBIC; (2) an optical fiber installation

Figure 10: Market Share of Internet Services in Cambodia



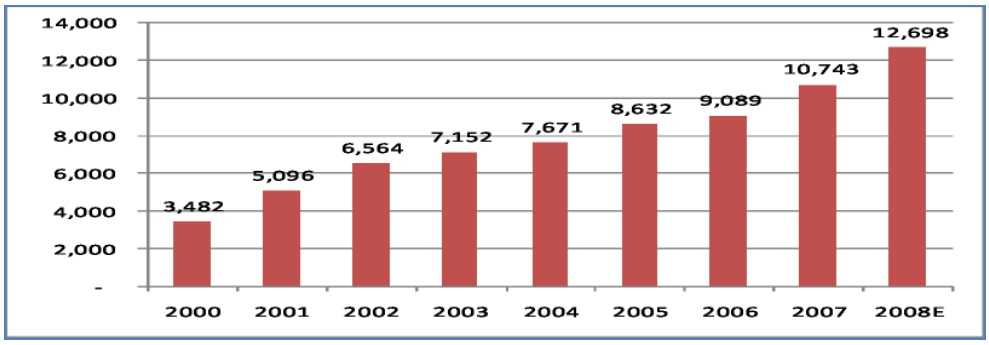
Source: Telecom Cambodia.

connecting Siem Reap to the south by Viettel; and (3) another optical fiber installation in Phnom Penh by the Chinese company CFOC (*Phnom Penh Post*, 2–16 May 2008, p. 5).

As shown in Figure 10, ONLINE maintains 42 percent of the internet service market, followed by CambGSM (23 percent), Camnet (15 percent), Camshin (9 percent), Camintel (7 percent) and Viettel (4 percent). Despite the current improvement in the network infrastructure and substantial increase in the number (12 in all) of internet service providers, internet service charges, although declining gradually during

the last decade, remain high.[26] In 2008, the total number of internet subscribers was 12,698 but increased to 15,950 in 2009, 7,500 of which were dial-up service subscribers and 8,450 were broadband subscribers. Figure 11 shows an upward trend in the number of subscribers from 2000 to 2008. Such can be attributed to the increasing number of

Figure 11: Internet Users in Cambodia



Source: Telecom Cambodia.

players that drive down the price and the changed attitude of Cambodian consumers due to globalization. Table 15 describes the features of Cambodia's telecommunication industry from 1999 to 2007.

4. COMPARATIVE ANALYSIS OF OVERALL INFRASTRUCTURE BETWEEN CAMBODIA AND ITS NEIGHBOURING COUNTRIES

[26] Currently, AT&T, a giant US telecom, offers unlimited downloads at a speed of 3 MBPS for US$30 per month, yet Wicam's plan for providing 2 MBPS in Cambodia costs US$7,000 per month. However, since 2005, 1 MBPS from Camnet has declined from US$6,000 per month to US$2,000 (*Cambodia Daily*, 21 February 2008, p. 21).

The Asian Productivity Organization (APO) collects basic labor productivity statistics for a number of Asian countries. Table 16 presents productivity indicators for Cambodia and other ASEAN countries where data are available. Unfortunately, data for Laos PDR, Myanmar, and Brunei could not be obtained. From 2001 to 2005, Cambodia experienced the slowest increase rate in labor productivity compared to all other ASEAN countries. This finding suggests that value-added per worker in Cambodia is

Table 15: Performance Indicators of Telecoms Industry during Last Decade

Service	1999	2001	2003	2004	2005	2006	2007
Wireline connections	19,918	25,784	28,310	33,095	34,754	29,146	32,104
WLL connections	7786	7710	8884	6344	6350	5618	5421
Total fixed line	27,704	33,494	37,194	39,439	41,104	34,764	37,525
Population* (million)	12.40	12.80	13.03	13.05	13.08	14.10	14.40
Fixed line penetration per 100	0.22	0.26	0.29	0.30	0.31	0.25	0.26
Public payphones	308	312	463	443	439	445	456
Cellular mobile subscribers	89,117	223,458	489,504	659,084	840,916	1,151,617	1,400,314
Total telephones	116,821	256,952	526,698	698,523	882,020	1,186,381	1,437,839
Total teledensity per 100	0.94	2.01	4.04	5.35	6.74	8.41	9.98
Internet subscribers	2258	5096	7152	7671	8632	9089	11,779
Internet penetration per 100	0.018	0.040	0.055	0.059	0.066	0.064	0.082
Investment approvals (US$million)	19.3	0	9.9	0	0	0	471.2
Total employment	731	662	593	553	541	-	-
Telephone lines per employee	27	39	48	60	64	-	-

Source: MPTC 2008, NIS 2006 and CDC 2008.

Table 16: Labor Productivity by Manufacturing Industry, Index 2000 = 1.0

Country	2001	2002	2003	2004	2005
Indonesia	0.995	1.046	1.160	1.282	1.274
Malaysia	0.927	1.009	1.063	1.229	1.316
Philippines	0.993	1.041	1.017	1.078	1.130
Singapore	0.959	1.062	1.101	1.260	1.059
Thailand	0.957	1.000	1.055	1.124	1.139
Vietnam	1.018	1.053	1.085	1.120	1.189
Cambodia	0.901	0.949	0.974	1.045	1.045

Source: Asian Productivity Organization (2008).

relatively low. Low productivity leads to low efficiency and high cost per unit that will, in turn, make Cambodia's products less competitive in the world market.

In terms of the ease of doing business, the World Bank reports that Cambodia has improved its rank by 15 places in just one year---between the 2007-2008 and 2008-2009 rankings---as a result of credit reforms that allowed it to outperform the Philippines and Lao PDR.

4.1. Electricity

Cambodia established an electricity regulator and passed the Electricity Law in 2001. However, there is still no national grid, and most towns are supplied through isolated systems. A mere 10 percent of the population, mostly in Phnom Penh, consumes 90 percent of the electricity.

Although the average tariff is around US$0.16 cents/kWh, the tariffs of rural electricity enterprises (REE) range from US$0.30/kWh and US$0.90/kWh, making electricity consumption unaffordable to a large number of the population. Only 6 percent of rural households have access to electricity, and half of those use individual power generating units. However, the Cambodian government has announced plans to increase rural electricity coverage from the current 10 percent to 70 percent by 2030 as shown in

Table A3 of Appendix. Table 17 summarizes the ranking of Cambodia's soft and hard infrastructure by comparing it with the ASEAN. Cambodia's infrastructure is ranked the lowest due to the poor railroads, electricity, and phone line infrastructure.

Table 17: Comparison of Cambodia's Infrastructure with ASEAN

	Brunei	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Infrastructure	39	97	86	23	92	4	29	93
Quality of overall infrastructure	39	82	96	19	94	2	35	97
Quality of roads	28	80	105	17	94	3	32	102
Quality of railroad infrastructure	na	97	58	17	85	10	48	66
Quality of port infrastructure	35	91	104	16	100	1	48	112
Quality of air transport infrastructure	38	87	75	20	89	1	28	92
Quality of electricity supply	45	117	92	31	82	13	43	104
Phone lines	61	132	100	71	105	30	86	37

Source: EDE and ODI.

4.2. Special Economic Zone (SEZ) in Cambodia and its Activities to Date

Until presently, the SEZ Committee has approved 21 investment projects for the development of SEZ, 14 projects of which are created by a sub-decree (Table 18). Some of the SEZ companies that are still under construction have already accommodated a few manufacturing firms. Others are still filling the land surface and building roads, electricity, and water systems. Although the government has encouraged investors to operate in these zones, only a small number of manufacturing companies have invested,

possibly because the rest cannot gain any advantages in doing so. However, when good infrastructure and further government support are available, there is hope that there will be more firms setting up in these investment zones.

Table 18: Approved investment projects of SEP development

No.	Name of company	Date of approval	Investors	Status
1	Stung Hav SEZ	12-Feb-05	Lim Chiv Hour	Not active
2	Phnom Penh SEZ	20-Feb-06	Lim Chiv Hour	Active
3	Doung Chiv Phnom Den SEZ	20-Feb-06	Doung Chiv	Under construction
4	Kam Pot SEZ	23-May-06	Vinh Ho	Under construction
5	Poi Pet "Oroneang" SEZ	1-Jun-06	Van Ny	Under construction
6	Manhattan SEZ (Svay Rieng Province)	29-Nov-06	Clement Yang	Active
7	Sihanoukville I SEZ	25-Oct-06	Lav Meng Khin	Active
8	Tay Seng Bavit SEZ	4-Apr-07	Lee Hong Sin	Active
9	Goldfame Pakson ESZ	4-Apr-07	Jiang Jikvong	Active
10	Sihanoukville II SEZ	27-Jun-07	Lav Meng Khin	Active
11	Thary Kampong Cham SEZ	16-Jul-07	Chhorn Thary	Active
12	Neang Kok Koh Kong SEZ	26-Oct-07	Ly Yong Phat	Under construction
13	Kirisakor Koh Kong SEZ	25-Dec-07	Ly Yong Phat	Under construction
14	Sihanoukville Port SEZ	8-Feb-08	Lou Kim Chhun	Under construction

Source: Council for the Development of Cambodia (CDC).

5. ANALYSIS OF RESULT FROM FIELD SURVEY

To further identify the factors that can attract FDI and determine how to upgrade and identity Cambodian industries, field interviews were conducted with 26 respondents, of which three are policymakers, and 14 are in the garment factories, three in footwear

factories, one in motor vehicle industry, one in plastics manufacturing, two in metal processing, one in electronics, and one in agro-industry. Majority of the ownership is from Hong Kong (10), followed by Taiwan (6), Korea (2), the United States (2) and rest of the world (1). None of the firm is located in industrial estates, special economic zones or export processing zones. Most foreign-owned firms have either headquarters, branches, parent companies, or subsidiaries in one to five countries, mainly in Asia.

Table 19 shows that majority of the firms surveyed belonged to the garments sector, a core industry for Cambodia's manufacturing and export sector. Cambodia has a very narrow base for economic growth as investment in the manufacturing sector is still unable to attract foreign investors due to poor physical infrastructure coupled with insufficient yet costly energy as compared to that of Cambodia's neighbors. Interestingly, the maximum number of workers in the garments factory in this survey reached 6,000, which means that the garments sector absorbs a large pool of the workforce. Sales revenues of garments firms range from US$500,000 up to US$100 million, implying that the garment industry has become the backbone of Cambodia's export sector. Since there is only one firm interviewed in some sectors, the mean calculated in the above table is just equal to the corresponding indicators. As shown in Table 20, firms in garments, footwear, and automotive sectors have all products for export while firms in other sectors supply more for the domestic market. Only 20 firms

Table 19: Firm's Annual Sales, Assets and Number of Worker

No.	Sector	Sample	Annual Sales (Means)	Assets (Means)	Main Business Activities	Worker (Means)
1	Electronics	1	10,000,000	17,000,000	Assembler/Manufacturer	200.00
2	Automotive	1	n.a.	n.a.	Assembler/Manufacturer	80.00

3	Plastic processing	1	4,000,000	2,500,000	Part/Component supplier	120.00
4	Metal-processing	1	n.a.	n.a.	Assembler/Manufacturer	150.00
5	Footwear	3	4,450,000	n.a.	Assembler/Manufacturer	2,705.33
6	Agro-industry	1	500,000	n.a.	Assembler/Manufacturer	400.00
7	Garment/knitting	14	16,045,455	3,000,000	Assembler/Manufacturer	2,296.43
8	Cements	1	9,500,000	100,000,000	Assembler/Manufacturer	1,000.00
	Total	**23**	**12317647**	**18785714**		**1835.48**

Note: Mean annual sales is calculated for each sector by dividing the total number of sales of all firms in the same sector by the total number of firms in that sector.

Source: Field survey by MCA, 2009.

Table 20: Mean of Export Ratio by Sector

No.	Sector	Observation (20)	Export ratio
1	Electronics	na	na
2	Automotive	1	100
3	Plastic processing	na	na
4	Metal-processing	1	25
5	Footwear	3	100
6	Agro-industry	na	na
7	Garment and knitting	14	100
8	Cements	1	0

Source: Field survey by MCA, 2009.

reported their export ratio. For the agro-industry sector, it is estimated that many agro-business-related firms engage in exports, particularly of primary products such as timber, rubber, and cassava.

Unfortunately, many of the sampled firms could not complete the cost structure part of the survey because some were unaware of the cost breakdown while others found it difficult to calculate such. This leads to a discrepancy among observations in all indicators as shown in Table 21. It is important to note that companies in different industries have different cost structures: Some may be more labor-intensive while others may be more capital-intensive. Nonetheless, since the total sample size of 23 firms is

very small as compared to the total population in the manufacturing sector, which is mostly labor-intensive, the average cost of inputs of all firms that have responded to the survey should be used to explain the percentage share of cost accrued by each input. That is, on average, 11 firms responded that 22 percent of input cost goes to labor, nearly 48 percent goes to imported parts and raw materials (for 10 firms), 10.5 percent

Table 21: Cost Structure Mean by Number of Observation

Variable	Observation	Mean	SD*	Min	Max
Labor force	11	21.82	14.01	5	50
Imported parts, components & raw materials	10	47.95	13.39	30	70
Parts, components & raw materials procured from domestic market	6	10.5	10.46	3	30
Transportation	10	8.3	5.48	3	20
Electricity	11	9.23	5.85	1	20
Other energies	5	1.9	0.89	0.5	3
Depreciation on machinery	8	4.87	0.35	4	5
Other elements	10	8.75	6.10	2	23

Note: *SD = Standard Deviation is the squared distance (gap) of all observations from the means.
Source: Field survey by MCA, 2009.

to domestic parts and raw materials (6 firms), and 12 percent to electricity and other energy. This indicates that the high cost of electricity can push the price up, thus making products less competitive. The cost of transportation, which takes as much as 10 percent of the total costs, is also high. It actually makes sense to put the cost of customs clearance into the cost structure because many companies complain about the large amount of money shelled out to import and export goods.

Cambodia can improve the state of its energy sector by encouraging investment in energy-related industries such as hydro dam and imported power from Vietnam,

Thailand, and Laos. As mentioned in the government's Rectangular Strategy Phase I and II, the Royal Government of Cambodia has been granting licenses to foreign firms, especially Chinese state-owned firms, to invest in the hydro-energy sector in Kam Chay, Atai and in other parts of the country so that energy will be available at a cheaper rate.

Firms surveyed also talked about the distance of their factories to major ports in Cambodia, including Sihanoukville Port and Phnom Penh Port (Table 22). Since firms are locating in Phnom, Kandal, and Sihanoukville, the average distance to Sihanoukville and Phnom Penh ports are between 10 km to 260 km (an average of 193 km) and 15 km to 240 km (an average of 84 km), respectively. The average time needed to reach Sihanoukville and Phnom Penh ports are 4.26 hours and 2.38 hours, respectively. However, due to limited infrastructure such as roads, bridges, water, and electricity networks, most companies in Cambodia have to locate in Phnom Penh, where they find it more convenient to operate their business. Additionally, the average lead time for firms to deliver their goods to customers is around 48 days, while it takes around 32 days for firms to receive deliveries for imported materials. In terms of the frequency of delivery, 84.21 percent of the firms said that they deliver goods once a week via Sihanoukville Port. For firms that use Phnom Penh Port, around 75 percent said that goods are delivered once every two or three weeks. This further confirms that Sihanoukville Port is being used to import raw materials and ship final goods, especially

Table 22: Distance and Time to Major Ports and Lead Time for Delivery

	To Sihanoukville Port		To Phnom Penh Port		Lead time for delivering goods	Lead time for receiving goods
Observation	18	18	8	8	20	20

	Distance (km)	hours	Distance (km)	hours	days	days
Mean	193.33	4.26	84.38	2.38	48.15	31.975
SD	85.75	1.80	97.56	1.98	32.09	9.95
Min	10.00	0.50	15.00	1.00	1	7
Max	260.00	6.00	240.00	6.00	117.5	60

Source: Field survey by MCA, 2009.

garments and footwear products to foreign markets such as the United States, the European nations, and Japan.

Table 23 reveals that firms need to take around five days and a half to pass one container through export customs clearance and shell out an average of nearly US$440 per container. Similarly, with regard to the import customs clearance process, it takes nearly seven days and costs around nearly US$500 on average per container. The time and cost combined put Cambodia into a competitive disadvantage, which might send negative signals to potential investors. On top of that, the bureaucratic red tape plays a key role in delaying import and export processes because Cambodia is still allowing various government institutions' functions to overlap. For example, to import a container of merchandise, inspections must be jointly done by the customs office (MEF), CAMCONTROL (MOC), and other government agencies, thus adding more costs to transactions and making the process time longer than necessary. It is reported that inspections are done frequently and firms are required to pay quite a sum of money to inspecting officials. Therefore, a single-window policy is very much needed if Cambodia is to facilitate business and trade transactions.

In the energy sector, 14 out of 17 firms interviewed said that power failure

Table 23: Time and Cost for Import and Export Customs Clearance

	Observation	**Mean**	**SD**	**Min**	**Max**

Export	Time (hours)	17	5.47	2.48	1	8
	Payment (US$)	15	437.33	205.44	180	700
Import	Time (hours)	18	6.89	4.00	1	16
	Payment (US$)	17	487.94	251.96	180	900

Source: Field survey by MCA, 2009.

Table 24: Black-Out Frequency and Length of Power Cut

Black-out Frequency	Frequency	Percent
Several times in a day	1	5.88
Once or a few times in a week	na	na
Once or a few times in a month	14	82.35
Once or a few times in six months	1	5.88
Have not experienced in a year	na	na
Own generator	1	5.88
Total observation	17	100

Length of period in case of the longest	Frequency	Percent
Less than a few seconds	na	na
A few seconds – one minute	na	na
One minute – five minutes	3	17.65
Five minutes – thirty minutes	3	17.65
Longer than thirty minutes	11	64.71
Total observation	17	100

Source: Field survey by MCA, 2009.

happens once or a few times in a month, while 11 firms stated that the power cuts take longer than thirty minutes (Table 24). Indeed, most of manufacturing firms had to install their own power generators so as to avoid delays in production and delivery.

A worker receives an average salary of around US$73 per month while middle-managers and engineers can get on average around US$265 and US$762 per month,

respectively. Ergo, the least educated workers performing unskilled jobs get a very low pay as compared to those performing skilled and managerial jobs.

The average turnover rate in 2008 was 13.67 percent with one firm reporting up to 50 percent of job leavers. This was a common phenomenon in late 2008, when the global financial crisis led to a lower demand for garment products. This spiral effect has

Table 25: Average Wage of Employees by Group

Wage	Observation	Mean	SD	Min	Max
Worker	23	73.37	29.94	45	180
Middle manager	22	265.23	155.19	70	700
Engineer	15	762.00	562.54	100	2000
Turnover rate	17	13.67	13.47	2	50

Source: Field survey by MCA, 2009.

so far resulted in 30,000 to 40,000 job losses in Cambodia's garments industry and increased the burden on rural households that were dependent on remittances from members working in the garments industry. Table 26 shows that only 2 percent of workers have a college or university education while up to 56.58 percent finished only

Table 26: Education of Employees by Group

Worker	Observation	Mean	SD	Min	Max
a	13	14.62	17.38	5	70
b	19	56.58	23.46	10	80
c	21	29.24	21.10	5	84
d	15	11.73	16.17	1	60
e	3	53.33	32.15	30	90
f	2	30.00	28.28	10	50

Middle manager					
c	7	25	29.86	5	90
d	19	36.31	27.73	10	90
f	18	66.83	30.15	10	100
Engineer					
e	17	96.47	14.55	40	100
f	2	80	28.28	60	100

Note: a. No formal schooling, b. Elementary school, c. Middle high school, d. High school, e. Vocational school, f. College/university, g. Graduate school

Source: Field survey by MCA, 2009

their elementary education. In some cases, as much as 70 percent of workers have no formal schooling and 80 percent only have elementary schooling. Children in rural villages generally cannot pursue their schooling because their families are too poor to afford the tuition fees. Such children even have to drop out of school to help their parents work in the agricultural sector.

In contrast, around 67 percent of middle managers have a college or university education while 96.5 percent of engineers have completed their degree and 80 percent have proceeded to graduate school. The level of education therefore correlates with the level of salary earned by each group of employees.

5.1. Needs and Demand for Improvements of Soft and Hard Infrastructure in Cambodia

Companies in the sample were asked to enumerate their understanding of what are needed so as to improve the country's soft and hard infrastructure by ranking these requirements in order of importance (ranking of 1 to 5). Table 27 shows that among the 23 firms, more than 69 percent listed investment climate (B) as the factor of primary importance (column 1), while 26 percent chose labor improvement as their top answer.

For the second need (column 2), more than 56 percent would want labor issues

improved, followed by investment climate (21.74 percent). In column 3, which indicates the third most important need, 50 percent of the respondents demanded that transport and logistics be improved, followed by electricity (nearly 32%). This demand reappears in column 4, where up to 45 percent of interviewees suggested that the transport and logistics be developed, followed by demand for improving electricity (35 percent). For the last important demand (column 5), around 73 percent of firms feel that

Table 27: List of Demand to Improve Soft and Hard Infrastructure in Cambodia

	1		**2**		**3**		**4**		**5**	
Needs	Fr	%	Fr	%	Fr	%	Fr	%	Fr	**%**
A	6	26.09	13	56.52	2	9.09	1	5	na	na
B	16	69.57	5	21.74	na	na	1	5	na	na
C	na	na	na	na	11	50	9	45	1	6.67
D	na	na	1	4.35	2	9.09	2	10	11	73.33
E	1	4.35	4	17.39	7	31.82	7	35	3	20
Total	**23**	**100**	**23**	**100**	**22**	**100**	**20**	**100**	**15**	**100**

Note: A: Labor Issue; B: Investment Climate; C: Transport and logistics; D: Telecommunication; E: Electricity; Fr: Frequency and order of importance ranges from 1 to 5.

Source: Field survey by MCA, 2009,

Table 28: Needs and Demands to Improve Soft and Hard Infrastructures

Labor issue
1. Although employee-employer relation is good, law enforcement against illegal strikes is needed
2. Create more vocational training schools due to lack of skilled workers
Investment climate
1.More attractive business climate
2. Facilitate more in terms of documentation process
3. More favorable law and continued public-private forum initiative
4. Provide incentive such as tax holiday and other government support
5. Improve SEZ to promote export
6. Reduce corruption by customs officers at port and harbor for import-export process
8. Keep current social stability and improve macro-economic stability
Transport and logistics

1. Decrease cost of logistics
2. Improve infrastructure condition
3.Take shorter time for document process
4. Improve road infrastructure
Telecommunication
1. Further improve speed of internet connection
2. Cheaper and more reliable
Electricity
1. More available (less frequent black-out) and stable
2. Cheaper and more accessible

Source: Field survey by MCA, 2009.

telecommunication improvement is important, followed by electricity (20 percent).

To further elaborate on each of these requirements, Table 28 summarizes some key suggestions from the companies. Although there are some limitations in this research, the results are very indicative and consistent with the current situation in Cambodia: These shed more light on the existing factors that impede the flow of investment.

5.2. Consultation with the Government Ministries as Policy Makers

This study's research team met with the senior and technical government officials from the Ministry of Commerce, Ministry of Economy and Finance, and the Council for the Development of Cambodia, the interview results of which are reported in Table 29 below.

Government officials did raise very compelling points concerning the strategies to attract investment and the factors that hinder more diversified industries in CLMV countries.

The research team conducted a routing survey in terms of cost, time, mode, and distance required from Phnom Penh, Cambodia, to destinations in other parts of the ASEAN region. Table 30 summarizes the results of the interviews with seven freight

forwarders, including Hecny Transportation (Cambodia) Limited, RCL (Regional Container Lines), Unique Logistics Int'l (Cambodia) Co., Ltd., Macoline-ITI (Cambodia) Ltd, Expeditors Cambodia Ltd., TNT Express Worldwide (Cambodia) Ltd, and DHL Express Cambodia Ltd.

Table 29: Views of Three Policy Makers Concerning the Improvement of Business Atmosphere and Infrastructure in Cambodia

	To attract more FDI into the country	The reason why CLMV countries, especially Cambodia have not been able to diversify its existing industrial structure is because:	Conclusion
Ministry of Commerce **Interviewee:** **Mr. Noun Sophal**	1.The government should improve existing Investment Law, favorable taxation law compared with neighboring countries. 2.Law implementation bodies should act free from corruption 3. Infrastructure such as phone, electricity, and water should be improved.	1. Cambodia still has limited skilled labor, thus need to improve HR. 2. Lack of international awareness toward Cambodia's business environment and policies.	He ranks: 1. Investment Climate, saying that it is still difficult for investors to gather information, which is the major factor based on which the decision is made. 2. Labor issue is another important criterion. 3. Frequent black-out and high prices sometimes have scared investors away. He however is optimistic about investment trend in Cambodia, saying that by 2011-2012, the world economic turmoil should be over and Cambodia should be able to attract more investors.
Ministry of Economy and Finance **Interviewee: Mr. Sophal**	1.Cambodia should raise awareness to investors about favorable business climate including ASEAN and WTO membership and LDC status for preferential access to US and EU market. 2. Cambodia should conduct resource mapping study. 3.Cambodia should strengthen its investment law	1. Limited size and potential of market 2. Awareness of favorable investment climate to the whole world 3. Limited skills of human resources 4. Lack of infrastructure	However, Cambodia does have its strengths, Government and Private Sector Forum. Mr. Sophal optimistically said that in the next few years FDI in Cambodia could worth up to US$20 Billion.

The Council for the Development of Cambodia **Interviewee: H.E. Dr Hang Chhun Naron**	1.Tax incentives alone are not enough, the government should take steps to improve the overall environment in terms of political stability, physical security, social order, legal and institutional framework, infrastructure, HR and external markets. 2. The government should take revenue enhancing measures by tightening and rationalizing incentives in order to generate additional resources to strengthen the government institutions, increase investment in infrastructure, human resources, security, social order and marketing research.	1. No any attraction to investors apart from tax incentives. 2. The general environment, such as political stability, physical security, social order, legal and institutional framework, infrastructure (water, electricity, and road), human resources and external markets is less favorable compared to neighboring countries.	Mr. Naron concludes with the positive trend of FDI inflows into Cambodia, thanks to the arrival of Law on Investment. He reveals that the Royal Government of Cambodia has reviewed the incentive system (Sub-decree No 53 dated 11 June 1999). The next step is to amend the Law on Investment of the Kingdom of Cambodia. The Council for the Development of Cambodia (CDC) is working closely with the Foreign Investment Advisory Services (FIAS)/International Finance Corporation (IFC) of the World Bank Group to draft the amendment to the Law on Investment.

Source: Field survey by MCA, 2009.

Table 30: Routing Research on Mode, Distance, Time and Cost of Transportation (Continues)

	Origin - Destination	**Leg**	**Mode** (Road/ Sea/ Air)	**Distance** (Km)	**Cum. Dis** (Km)	**Cost** (US$/Ton)	**Cumu. Cost** (US$/Ton)	**Transit Time** (hours)	**Cumu. Time** (Hours)
Cambodia & Lao PDR	**Phnom Penh - Vientiane**	**Phnom Penh** - PP Airport	Road	7	7	80	80	0.5	0.5
		PP Airport	-	-	7	110	190	3.5	4
		PP Airport - **Vientian**	Air	n.a.	7	700	890	18	22
	Total Phnom Penh - Vientiane			7		890		22	
	Vientiane - Phnom Penh	**Vientian** - PP Airport	Air	n.a.	n.a.	1000	1000	18	18
		PP Airport	-	-	n.a.	110	1110	3.5	21.5
		PP Airport - **Phnom Penh**	Road	7	7	80	1190	0.5	22
	Total Vientiane - Phnom Penh			7		1190		22	
Cambodia &Myanmar	**Phnom Penh - Yangon**	**Phnom Penh** - PP Airport	Road	7	7	80	80	0.5	0.5
		PP Airport	-	-	7	110	190	3.5	4
		PP Airport - **Bangkok**	Air	n.a.	7	1000	1190	1.5	5.5
		Bangkok - **Yangon**	Air	n.a.	7	1000	2190	24	29.5
	Total Phnom Penh – Yangon			7		2190		29.5	
	Yangon - Phnom Penh	**Yangon - Bangkok**	Air	n.a.	n.a.	1500	1500	24	24
		Bangkok - PP Airport	Air	n.a.	n.a.	1500	3000	1.5	25.5
		PP Airport	-	-	n.a.	110	3110	3.5	29
		PP Airport - **Phnom Penh**	Road	7	7	80	3190	0.5	29.5
	Total Yangon - Phnom Penh			7		3190		29.5	
Cambodia & Vietnam	**Phnom Penh-Ho Chi Minh**	**Phnom Penh** - Bavet	Road	170	170	100	100	5	5
		Crossing Border	-	-	170	250	350	4	9
		Bavet - **Ho Chi Minh**	Road	60	230	350	700	3	12
	Total Phnom Penh - Ho Chi Minh			230		700		12	
	Ho Chi Minh - Phnom Penh	**Ho Chi Minh** - Bavet	Road	60	60	450	450	3	3
		Crossing Border	-	-	60	250	700	3.5	6.5
		Bavet - **Phnom Penh**	Road	170	230	100	800	5	11.5

Total Ho Chi Minh - Phnom Penh		230		800		11.5	
Phnom Penh - Danang	**Phnom Penh** - Bavet	Road	170	170	100	100	5	5
	Crossing Border	-	-	170	250	350	4	9
	Bavet - **Ho Chi Minh**	Road	60	230	350	700	3	12
	Ho Chi Minh - **Danang**	Road	n.a.	230	200	900	24	36
Total Phnom Penh – Danang		230		900		36	
Danang - Phnom Penh	**Danang - Ho Chi Minh**	Road	n.a.	n.a.	200	200	24	24
	Ho Chi Minh - PP Port	River	n.a.	n.a.	330	530	12	36
	PP Port	-	-	n.a.	270	800	4	40
	PP Port - **Phnom Penh**	Road	8	8	120	920	0.5	40.5
Total Danang - Phnom Penh		8		920		40.5	
Phnom Penh – Hanoi	**Phnom Penh** - Bavet	Road	170	170	100	100	5	5
	Crossing Border	-	-	170	250	350	4	9
	Bavet - **Ho Chi Minh**	Road	60	230	350	700	3	12
	Ho Chi Minh - **Danang**	Road	n.a.	230	200	900	24	36
	Danang – **Hanoi**	Road	n.a.	230	750	1650	48	84
Total Phnom Penh – Hanoi		230		1650		84	

Table 30: Routing Research on Mode, Distance, Time and Cost of Transportation (Continued)

Origin - Destination	Leg	Mode (Road/ Sea/ Air)	Distance (Km)	Cum. Dis (Km)	Cost (US$/Ton)	Cumu. Cost (US$/Ton)	Transit Time (hours)	Cumu. Time (Hours)
Hanoi - Phnom Penh	**Hanoi – Danang**	Road	n.a.	n.a.	750	750	48	48
	Danang - **Ho Chi Minh**	Road	n.a.	n.a.	200	950	24	72
	Ho Chi Minh - PP Port	River	n.a.	n.a.	330	1280	12	84
	PP Port	-	-	n.a.	270	1550	4	88
	PP Port - **Phnom Penh**	Road	8	8	120	1670	0.5	88.5
Total Hanoi - Phnom Penh		8		1670		88.5	

Source: Field survey by MCA, 2009.

CONCLUDING REMARKS AND POLICY IMPLICATION AND RECOMMENDATION

As a small and less developed nation, Cambodia still faces challenges ranging from maintaining macro-economy, preserving environment, diversifying key sectors to promote growth, and building soft and hard infrastructure to attract investment. The cost and quality as well as the availability of electricity, roads, bridges, and ports are ranked poorly as compared to those of other ASEAN nations. It is difficult to promote

investment as the cost and time of doing business are so high and protracted. The Rectangular Strategies Phase I and II clearly articulate persistent and dynamic actions in all aspects, including agriculture, private sector, energy, and administrative reforms as well as anti-corruption mechanism. However, the implementation of these strategies requires consultations between government and private sectors, takes time and implies cost. Although there are a number of ongoing infrastructure and energy-related projects such as the construction of national highways and hydropower dams, importation of electricity from neighboring countries and use of generators to supply the growing demand for power, Cambodia is still slow in developing this sector due to lack of resources. In addition, labor issues seem to bring problems to Cambodia's business environment (example, lack of education or skills, and capacity as well as commitments of workers). Illegal strikes staged by a few union members result in a big loss to any company because of the production delays incurred and bribe money given to union leaders to mitigate the frequency of strikes. All these have, in turn, deterred potential investments and in some way retarded the business development. Therefore, reducing bureaucratic red tape and unofficial payment to government officials are two of the prioritized action points intended to ease business and investment procedures.

Firms interviewed have common concerns over labor-related issues such as education, illegal strikes, and interpersonal relations between employees and employers as well as vocational trainings for workers. After all, the improvement of the investment climate depends on the facilitation of investment and business transactions, tax incentives, promotion of public and private fora, special economic zones, reduction of corruption, and maintenance of social and macro-economic stability.

In terms of the logistics system, there is a need to lower the logistics cost, improve

infrastructure conditions, reduce the time for document processing and upgrade road infrastructure. The costs of telephone, internet, and electricity should be lowered and access should be reliable to keep the business operations working smoothly. The promotion of special economic zones is crucial for export-oriented industries. The government should facilitate the flow of investments in special economic zones by attracting more investors into Cambodia. If all of these are improved, Cambodia will for sure attract more multinational companies in agro-industry, and light manufacturing such as motorcycle assembly and electronics and make Cambodia-made products more competitive in the world market.

It is therefore an urgent call to step up efforts and improve both soft and hard infrastructure if Cambodia wants to bring in foreign direct investment and create jobs that will allow skill and technology transfers. It can join other ASEAN members in the production of some parts and components of products that require lower skills. Cambodia needs to break all barriers that harm the investment and business climate. Otherwise, it could lose investors to other countries, especially Vietnam and Thailand. In other words, to catch up with other ASEAN members, the Royal Government of Cambodia should create an investment environment that is attractive and safe for investors by reducing the cost of doing business.

If Cambodia can achieve all these, it will be able to improve all sectors of the economy and diversify its growth base. As the economy grows, Cambodia will certainly be able to eradicate poverty as set forth in its National Poverty Reduction Strategy and Millennium Development Goals (CMDGs).

APPENDIX

Table A1: State-Owned Enterprises in 2008 (in US$ Million)

No.	Name of enterprise	Assets	Own capital	Total staff	Financial year 2006		
					Total revenue	Total expenditure	Profit
1	Agricultural Input Company	5.226	5.066	0.012	0.673	0.660	0.013
2	Sihanoukville Autonomous Port	112.664	111.213	0.246	23.099	20.757	2.341
3	Phnom Penh Autonomous Port	25.827	25.004	0.111	4.397	3.041	1.356
4	Kampuchea Shipping Agency & Brokers	5.806	5.375	0.035	2.164	1.102	1.062
5	Green Trade Company	10.779	9.964	0.046	1.703	1.710	-0.008
6	Cambodian National Insurance Company	7.603	7.017	0.014	1.083	0.963	0.120
7	Printery	6.992	6.941	0.035	2.630	2.412	0.218
8	Telecom Cambodia	54.436	44.271	0.147	19.520	13.321	6.199
9	Royal Cambodian Railways Company	940.793	940.038	0.383	1.864	2.213	-0.349
10	Engineering and Public Works Lab	0.409	0.305	0.006	0.100	0.120	-0.019
11	Phnom Penh Water Supply Authority	132.195	103.478	0.135	18.693	13.964	4.729
12	Electricity of Cambodia	140.334	82.928	0.519	146.095	143.157	2.938
13	Rural Development Bank	15.490	7.242	0.012	0.963	0.645	0.318
	Grand Total	1579.897	1463.100	4.559	269.031	240.182	28.849

Source: Ministry of Economy and Finance.

Table A2: Summary of Proposed Roads to be improved

Target of Road Network Development	Proposed Roads to be improved						
Support for Strategy 1: Enhancement of Multi Growth Pole Development							
(1) Widening and Upgrading of 1-Digit National Roads	NR1	NR2	NR3	NR4	NR5	NR6	NR7
	NR8	2nd Mekong Br					
(2) Construction of Bypasses around Main Cities	Siem Reap, Battambang and Kampong Chhnang Bypass						
(3) Reinforcement of the Road Network around PP by Ring Road	PP Ring Rd. including Takhmau Br crossing Bassac River and Ouster Ring Road						
Support for strategy4: National Integration							
(1) Improvement of Accessibility to Provincial Capitals	NR11	NR31	NR33	NR48	NR56	NR57	NR62
	NR68	NR76	NR78	NR55			
(2) Reinforcement of Main Routes	NR11	NR13	NR22	NR33	NR51	NR61	NR71
	PR147	PR126	PR1578	OR159E	PR159D	PR159	PR266B
	NR66	NR64	NR2714	PR371	PR263B		
(3) For Access Road to Provincial Capitals	NR56	NR64	NR2714	NR76	PR1488	NR11	NR31
	NR57	NR55	NR78				
Support for Strategy 5: Development of International Corridor							
(1) International Highway (GMS	NR1	NR3	NR4	NR5	NR7	NR33	NR48
	NR66	NR78	NR73	NR8	NR6		
(2) Access to the Border	NR2	NR21	NR33	NR48	NR57	NR62	NR64
	NR68	R72	NR74	NR78	No7	NR8	PR3762
(3) Improvement of Access to the Railway and Inland Waterways							
- Linkage to Railway Facilities	NR31	NR33	NR42	NR51	NR53	NR55	NR53a
- Linkage to Inland Waterway Facilities	NR52	NR54	NR63	NR70			
- Linkage to Seaport Facilities	NR4	NR45	NR33	PR1481			
Support formStrategy3 : Promotion of Tourism Development							
(1) Tourism Development							
- Eco-Tourism Area (Northeast Region)	NR7	NR76	NR78	PR3785	PR3RT1	PR378	
- Siem Reap and Wider Tourism Area (North Region)	NR6	NR62	NR63	NR64	NR65	PR266	PR2626
	PR2663	PR2624	PR2686	Siem Reap Bypass			PR2625
- PP Gate Town and Sihajoik ville and Coastal Area	PP Ring Rd.		NR4	NR43	NR41	NR51	
Support for Strategy 2 : Strengthening of Economic Growth Corridor Development							
(1) Economic Development							
- Special Economic Zone near Vietnamese	NR1	2nd Mekong Br					
- Sihanouk ville- PP Growth corridor	NR4	NR48	NR51	NR43	NR41		
Support for Strategy 6: Enhancement of Rural Economic Development							
(1) Agriculture Development							
- Northeast Region	NR78	PR3RT1	PR378				
- North Region	NR64	NR68	NR66	PR2686	PR2648		
- Middle East Region	NR70	NR73	PR2714	PR371	NR7	NR8	
- West Region	NR57	NR59	NR5				
- South Region	NR44	NR48					
(2) Regional Development of Poverty reduction							
- Rural area	NR76	NR78	PR3785	PR378	PR3RT1	NR7	
- Rural area	3- Digit roads and rural roads						

Note: New Road number system is used.
Source: Ministry of Public Works and Transportation.

Table A3: Population by Road Density in Cambodia

Road					
1-digit NR		2,097.28	km		
2-digit NR		2,704.37	km		
Prov. Road		6,692.44	km		
	Rural Road (L1)	28,000.00	km		
	NR and PR (L2)	11,494.09	km		
	Total length (L3)	39,494.09	km		
Land areas (A)		181,035	sqkm		
Population, P (x1000)		(in 2005)		PxA	(PxA)^0.5
Total population		13,800.00	mill.	2498283000	49982.83
Rural		11,592.00	mill.		
Urban		2,208.00	mill.		
Road density and Road density index					
Road density, RD=L/A (km/sqkm)		0.218		(all roads)	
		0.063		(National & Provincial roads)	
		0.155		(Rural roads)	
Road density Index, RDI		0.790		(all roads)	
RDI=L/(PxA)^0.5		0.230		(National & Provincial roads)	
		0.560		(Rural roads)	
Total population/Total road length		350.00	Person/km		
Rural population/Rural road length		414.00	Person/km		

Source: World Bank.

Table A4: Finalized and Under Construction Energy Project (Continues)

Project 1: Upgrading capacity of 115 kV system in Phnom Penh
Scheduled Year of operation: 2009 Scope: 1) Add 2 circuit of 115 kV line from WPP substation to existing 115 kV system of Phnom Penh, 2) Add second circuit to the existing 115 kV line connecting sub-stations in Phnom Penh, 3) Deviate 115 kV line from Kirirom Hydro Power Plant to WPP substation, 4) Modification of substation GS1 and connection of 10 MVAr reactive compensation on 22 kV side 5) Add one transformer 115/22kV 30/50 MVA at GS2 substation and connection of 15 MVAr reactive compensation on 22 kV side 6) Add one transformer 115/22 kV 30/50 MVA at GS3 substation and connection of 15 MVAr reactive compensation on 22 kV side. All these works are being done to upgrade transmission and distribution capacity of Phnom Penh power supply system and to receive electricity from Vietnam and new power plants. Implementer: EDC under WB loan, Work in progress
Project 2: Construction of 230 kV transmission line connecting Phnom Penh, Takeo and Vietnam including substations at WPP and Takeo
Scheduled Year of operation: 2009 Scope: Build substations at West Phnom Penh (WPP) and Takeo and 230 kV transmission line connecting Phnom Penh to Takeo and to Vietnam in order to purchase electricity from Vietnam. Implementer: EDC under ADB loan. Work in progress
Project 3: Construction of 22 kV sub-transmission lines in the provinces of Takeo, Phnom Penh, Kampong Speu, Kampot, Sihanouk ville and Battambang
Scheduled Year of operation: 2009, 2010, 2011 Scope: Construction of 22 kV sub-transmission lines in the provinces of Takeo, Phnom Penh, Kampong Speu, Kampot, Sihanouk ville and Battambang to take the grid supply to areas around the grid substations Implementer: EDC under WB, ADB and other loans. Work in progress.
Project 4: Build National Dispatching Center
Scheduled Operation year: 2011 Scope: Build National Dispatching Center in Phnom Penh in order to manage all connected power supply systems in the country. Implementer: EDC under WB loan. Bidding in progress
Project 5: Build 230 kV line connecting Takeo to Kampot and substation in Kampot provincial town
Scheduled Operation year: 2011 Scope: Build 230 kV transmission line connecting Takeo and Kampot, and build 230 kV substation at Kampot provincial town in order to purchase electricity from Kamchay Hydro Power Plant. Implementer: EDC, KFW give grant to RGC and RGC give this grant to EDC as loan to implement the project. Bidding in progress
Project 6: Build 230 kV line connecting Kampot to Sihanoukville and substation in Sihanoukville
Scheduled Operation year: 2011 Scope: Build 230 kV transmission line connecting Kampot and Sihanoukville, and build 230 kV substation at Sihanoukville in order to purchase electricity from Coal Fired Power Plant. Implementer: This project is under joint loan of ADB and JBIC and EDC is implementer of the project. Bidding in progress.
Project 7: Build 193 MW Kamchay Hydro Power Plant and transmission line connecting KHPP to Kampot substation
Scheduled Operation year: 2011 Scope: Build 193 MW Kamchay Hydro Power Plant and transmission line connecting this power plant to substation in Kampot provincial town in order to sell electricity to EDC. Implementer: The investment for this project is by SINOHYDRO from People's Republic of China, who received special investment concession from RGC. Work in progress

Table A4: Finalized and Under Construction Energy Project (Continued)

Project 8: Build 18 MW Kirirom III Hydro Power Plant and transmission line connecting Kirirom III plant to Kirirom I substation
Scheduled Operation year: 2012 Scope: Build 18 MW Kirirom III Hydro Power Plant and transmission line connecting Kirirom III plant to Kirirom I substation in order to sell electricity to EDC. Implementer: This project is the second phase of investment of Chinese company CETIC from People's Republic of China, who built Kirirom I Hydro Power Plant in the first phase. This project is in the same concession package with Kirirom I Hydro Power Plant. Work in progress
Project 9: Development of Stung Atay Hydro Power Plant, Common switching substation at Ou Saom and 230 kV transmission line connecting switching substation and Pursat substation.
Scheduled Operation year: 2012 Scope: Build 120 MW Stung Atay Hydro Power Plant, common switching substation, transmission line connecting this plant to common switching substation and 230 kV line connecting common switching substation to substation at Pursat provincial town. Implementer: This project is under private investment and RGC gave concession to Yunnan Southeastasia Economy and Technology Investment Industrial Co Ltd from PRC in the project package Stung Atay Hydro Power Plant. Work in progress
Project 10: Build 230 kV transmission line connecting Phnom Penh, Kampong Chhnang, Pursat and Battambang with substations at Kampong Chhnang, Pursat and Battambang
Scheduled Operation year: 2012 Scope: Build 230 kV transmission line connecting Phnom Penh, Kampong Chhnang, Pursat and Battambang and build substations near Kampong Chhanang, Pursat and Battambang in order to connect southern zone system with western zone system to become one system. Implementer: This project is under private investment and RGC gave concession to Yunnan Southeastasia Economy and Technology Investment Industrial Co Ltd from PRC in the project package Stung Atay Hydro Power Plant. Present Position: The Transmission agreement and IA have been signed. Preparation to start the work in progress
Project 11: Build 200 MW Coal Fired Power Plant in Sihanoukville and transmission line connecting this plant to Sihanoukville substation
Scheduled Operation year: 2012 Scope: Build 200 MW Coal Fired Power Plant (operated on imported coal) and transmission line connecting this plant to Sihanoukville substation. Implementer: The investment for this project will be by a private company on the BOO basis. Present Position: The PPA and IA have been signed.
Project 12: Build Stung Tatay Hydro Power Plant and transmission line to common switching substation.
Scheduled Operation year: 2013 Scope: Build 246 MW Stung Tatay Hydro Power Plant and transmission line connecting this plant to common switching substation. Implementer: The Company China National Heavy Machinery Corporation from PRC will implement the project. Present Position: The PPA and IA have been signed. Preparation to start the work in progress
Project 13: Build Lower Stung Russey Chrum Hydro Power Plant and transmission line to common switching substation.
Scheduled Operation year: 2014 Scope: Build 338 MW Lower Stung Russey Chrum Hydro Power Plant and transmission line connecting this plant to common switching substation. Implementer: The Company Michelle Corporation from PRC will implement the project. Present Position: The PPA and IA have been signed. Preparation to start the work in progress

Table A4: Finalized and Under Construction Energy Project (Continued)

Projects planned and under different stages of implementation
The following power supply development projects are planned and, at the end of 2008, are at different stages of planning:
Project 14: Build 115 kV line connecting Kampong Cham to Suong and Kraek towns and to Vietnam power system
Scheduled Operation year: 2011 Scope: Build 115 kV line connecting Kampong Cham, Suong, Kraek and Taininh in Vietnam and build 115 kV substations at 3 places, 1) in Kampong Cham provincial town, 2) in Suong town and 3) in Kraek town in order to import electricity from Vietnam to supply all above areas. Implementer: This project is being undertaken in private sector.
Project 15: Build 115 kV line connecting Steung Treng to Laos's power system
Scheduled Operation year: 2011 Scope: Build 115 kV line connecting Steung Treng, Suong, to Lao power system and build 115 kV substation at Steung Treng provincial town in order to import electricity from Laos to supply Steung Treng province. Implementer: This project is under grant of WB to RGC, and RGC is providing a loan to EDC to implement the project.
Project 16: Build 230 kV transmission line connecting Phnom Penh to Kampong Cham and new grid substation in Kampong Cham provincial town
Scheduled Operation year: 2012 Scope: Build NPP substation in Phnom Penh, and 230 kV transmission line connecting NPP to Kampong Cham provincial town and build substation in Kampong Cham provincial town in order to connect southern zone system with power supply system in Kampong Cham area together into one system. Implementer: This project is being undertaken in private sector.
Project 17: Strengthen Phnom Penh System.
Scheduled Operation year: 2012 Scope: Build 115 kV substations in eastern area of Phnom Penh (EPP). Build 115 kV transmission line connecting GS1 to NPP and NPP to EPP to meet the load of new growing areas of Phnom Penh. Study: This project is included in 2006 Master Plan but neither detail technical study nor the feasibility study has yet been done. Implementer: EDC shall seek fund to implement this project.
Project 18: Upgrade capacity of Phnom Penh power supply system.
Scheduled Operation year: 2015 Scope: Build 230 kV part of EPP substation in Phnom Penh, upgrade transformer capacity in WPP substation, build new substation GS4 and 230 kV transmission line connecting WPP to GS4 and 230 kV transmission line connecting GS4 to EPP. Study: This project is included in 2006 Master Plan but neither detail technical study nor the feasibility study has yet been done. Implementer: EDC shall seek fund to implement this project.
Project 19: Build 230 kV transmission line connecting Phnom Penh to Sihanoukville substation
Scheduled Operation year: 2015 Scope: Build 230 kV transmission line connecting EPP substation in Phnom Penh to Sihanoukville in order to transport electricity from 400 MW Coal Fire Power Plant, which should be built in Sihanoukville. Study: This project is included in 2006 Master Plan but neither detail technical study nor the feasibility study has yet been done. Implementer: EDC shall seek fund to implement this project.

REFERENCES

Cambodia Daily. 21 February 2008, p. 21.

Electricite Du Cambodge (EDC).

IFC. *The Provincial Business Environment Scorecard in Cambodia.* April 2009.

Laws and Regulations on Investment in the Kingdom of Cambodia.

Ministry of Commerce (MOC).

Ministry of Economy and Finance (MEF).

Ministry of Industry, Mines and Energy (MIME).

Ministry of Post and Telecommunication (MPTC).

Ministry of Agriculture, Fishery and Forestry (MAFF).

Ministry of Rural Development (MRD).

National Institute of Statistics (NIS).

Ministry of Public Works and Transportation (MPWT).

MCA Survey 2009.

National Statistics of Cambodia.

Naron, H C. *Cambodian Economy.* 2009.

Overseas Development Institute (ODI).

Phnom Penh Post. 2009.
Royal Government of Cambodia (RGC). *Rectangular Strategy Phase I and II.*

Royal Railway of Cambodia (RRC).

The Council for the Development of Cambodia (CDC).

UNDP. *Diagnostic Trade Integration Strategy (DTIS)*. 2007.

World Development Indicators (WDI).