

# Evaluating the Competitiveness of Least-Developed Countries—The Example of Cambodia

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## Abstract

Globalization, which has become a critical activity for many contemporary enterprises, is achieved primarily through collaboration and alliance with firms in different countries. In this respect, the government can play a vital role by providing an adequate infrastructure and competitive investment environment that attracts foreign firms to invest. The composite measure of a nation's economy, technology, human resources and management, among other things, reflects the national competitiveness. Through a series of discussions with researchers in Southeast Asian countries, extensive literature review, and expert interviews, this study developed a comprehensive framework of national competitiveness for the least-developed countries, which is then used for measuring the national competitiveness of Cambodia. The results of this study indicate that Cambodia's economic performance, technology development, human resources, and management capability are relatively poor, but its growth of industrial production and its favorable weekly working hours are laudable. A detailed description of implications for each category of competitiveness can be found in the study. Issues related to "black economy" are also mentioned in this study, which is useful for obtaining a full picture of the national competitiveness of Cambodia.

*Keywords:* Cambodia; National competitiveness

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## 1. Introduction

In the past two decades, globalization has become a critical activity for enterprises. To help enterprises compete in the world, governments should provide adequate infrastructure and a competitive investment environment. Due to its geographic proximity, Taiwan has close relation with the Southeast Asian countries in trade, politics, and culture, and many firms in Taiwan are moving to Southeast Asian countries to find their "fortune".

In the 1980s, the Asian economies grew rapidly and played an impor-

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tant role in the growth of the global economy. Because of foreign direct investment (FDI) from East Asian countries, Southeast Asian countries have demonstrated an “Asian miracle” and emerged as a fast-growing region of the world [17]. Among the Southeast Asian countries, Cambodia is fast-developing because of its open policy. Recently, many Taiwanese firms have invested in Cambodia, and Taiwan has become the second largest investment country in Cambodia [6]. As the first least-developed country to become the 147th member of the World Trade Organization (WTO) and as a full member of the Association of South-East Asian Nations (ASEAN), Cambodia has drawn much attention from the international community [2,27]. Thus, it is worthwhile analyzing the national competitiveness of Cambodia to provide a reference for the government and international firms, especially for Taiwanese firms.

The purpose of the study is to explore the national competitiveness of Cambodia. The remaining parts of the paper are organized as follows: Section 2 describes the background of Cambodia; Section 3 presents a literature review of national competitiveness; Sections 4, 5, and 6 discuss Cambodia’s national competitiveness; the final section provides conclusions and suggestions.

## **2. Background Information on Cambodia**

### *2.1. General Descriptions*

Cambodia's main strengths are those related to the tourism industry, low labor costs, and favorable conditions for certain agricultural commodities, such as rice. The country also benefits from favorable tariff and quota arrangements with the European Union (EU), under its “Everything But Arms” program, and the US under the Normal Trade Relations (NTR) and the Textile and Garment Agreement (TGA). Additionally, Cambodia also benefits from liberal investment regulations and a tax system that is both simple and low (typically 9%) [19].

The 1994 Law on Investment encourages investment in export-oriented industries, tourism, energy, mining, and industrial agriculture; guarantees remittance of foreign exchange; and offers investment incentives [6]. Sectors in which restrictions on foreign investment still apply include the law and accounting professions, transportation, construction, publishing, printing, radio and television broadcasting, gemstone exploitation, brick making, rice mills, wood and stone carving, and silk weaving. Other factors such as lack of infrastructure and disrespect for the law are also impediments to foreign investment.

More discussions about the background of Cambodia regarding resources, industry distribution, as well as economic status and relevant policies will be presented below.

## *2.2. Resources*

Cambodia provides plentiful supplies of labor and natural resources. Its population is estimated at approximately 12 million, of which 51% are in the “working age” group. Its labor costs are low compared with other Asian countries, and more natural resources, especially oil and minerals, have been discovered recently [26].

## *2.3. Industry Distribution*

Cambodia, one of the poorest nations in the region, still depends mainly on agriculture. The agriculture sector contributes about 37% of GDP and directly employs nearly 80% of the workforce. The industrial sector’s share of GDP rose from 12.7% in 1993 to approximately 22% in 2002. The industrial sector consists mainly of manufacturing (73.5%) and construction industries (18.8%). Garment making and food processing dominate value-added manufacturing and have shown strong growth in recent years [4]. Its primary exports are: rubber, timber, rice, sesame, soybeans, clothing, and foodstuffs, and the major importing countries of these goods are Singapore, Thailand, Germany, the United Kingdom, India and the U.S [4].

An in-depth look at Cambodia’s economic performance in 2002 shows that the tourism and garment sectors grew rapidly, with garments accounting for more than 90% of exports, worth approximately US\$900 million and employing over 190,000 workers. Tourists numbered approximately 700,000 during 2002 [4].

## *2.4. Economic Status and Relevant Policies*

Cambodian per capita GDP is around US\$ 275. The inflation rate remains at 3%. In 2002, total budget revenue declined by 1% relative to that of 2001. The main reasons were the decline in customs revenue and the heavy flooding. The government has significantly reduced the expenditures on defense and security (a 20% reduction), and allocated bigger budgets to education and health (an 18% increase). The Monetary performance in 2002 was stable. Despite a slight decline in foreign assets, net domestic credit increased by 3% during the last quarter of 2002, compared with that of the same period in 2001. This growth shows confidence in the banking sector [14].

Although Cambodia has gone through civil war and turmoil, it has made remarkable progress over the past decade and now stands poised to take advantage of its enormous economic potential. The economy has responded well to liberalization and stabilization measures, and recent growth has been robust. About 90% of the international financing is in light industries, services, and infrastructure construction. Foreign assistance also plays an important role in the Cambodian economy, with approximately 58% of the national budget depending on foreign aid [14].

Nevertheless, Cambodia has had trouble attracting FDI, due in part to the unreliable legal environment. Compared with neighboring countries, per capita income and education levels in Cambodia are still low [7,8,9,14,22]. The infrastructure remains insufficient. Cambodia does its best to quicken its integration with the regional and world economy. Recently, by the promulgation of a new investment law, the establishment of the Council for the Development of Cambodia (CDC), and the development of special promotion zones [6], the Royal Government of Cambodia (RGC) hopes to attract more FDI, to create more jobs and to boost exports, and thus to improve its national economy. Even with these drastic measures, remaining challenges include access to finance, market information, and skilled labor, relatively high costs of energy and telecommunications, land issues for agriculture investment projects, red tape in administrative procedures, as well as infrastructure that has deteriorated through years of unrest.

### *3. Literature Review*

National competitiveness is widely mentioned in several sources. For example, the Organization for Economic Cooperation and Development (OECD) regards competitiveness to be “the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously expanding the real incomes of its people over the longer term” [12]. Scott and Lodge [23] also provide the following definition: “national competitiveness refers to a nation’s ability to produce, distribute, and service goods in the international economy in competition with goods and services produced in other countries and to do so in a way that earns a rising standard of living.”

Several organizations compile annual surveys of the competitiveness of countries, notably the Institute for Management Development (IMD), which publishes the World Competitiveness Yearbook (WCY) annually [12], and the World Economic Forum (WEF), which also publishes the Global Competitiveness Report (GCR) annually [31]. The WCY and GCR consider a

large number of criteria to arrive at competitiveness ratings. For example, IMD [11] analyzes 47 industrialized and emerging economies, and constructs an index based on 290 criteria to capture a country's ability to help firms compete. These criteria are grouped into eight main factors: domestic economy, internationalization, government, finance, infrastructure, management, science and technology, and people. In the case of the GCR, the eight principal factors that contribute to the overall competitiveness index are openness, government, finance, infrastructure, technology, management, labor, and institutions.

Noting that the ratings produced by WCY and GCR are quoted in policy statements and in the media, one may wonder whether the rankings accurately reflect each country's true position. In addition to the two published and well-known rankings, there are numerous unpublished ones prepared by governments, consulting firms, and research institutions, all feeding an insatiable appetite for benchmarking competitive performance.

Economists are also skeptical of the attempts to quantify competitiveness. From a developing or least-developed economy perspective, an examination of the WEF index shows that it suffers from some analytical, methodological, and quantitative weaknesses. In particular, its presentation conceals these weaknesses, giving a misleading impression of precision, robustness, and sophistication [18]. Furthermore, negative arguments for the above definitions or measurements of national competitiveness are discussed [15,16].

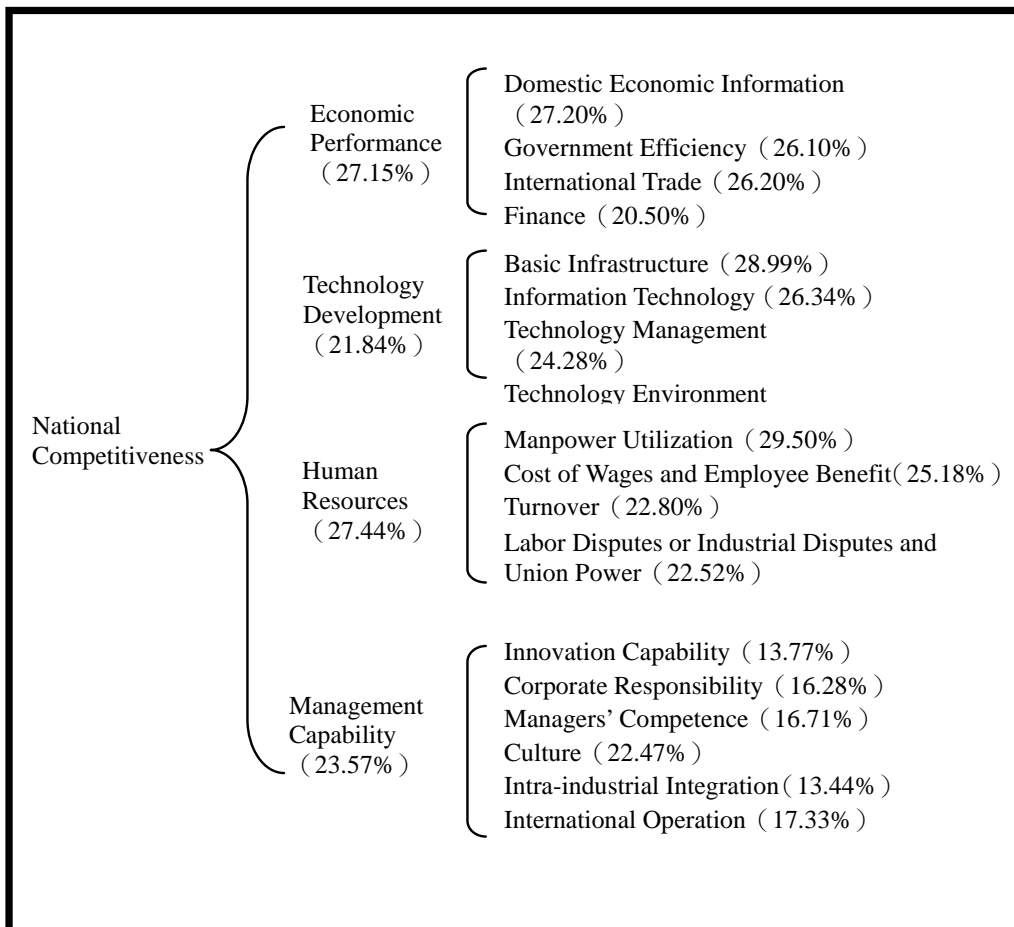
There is considerable room for other benchmarking exercises, but it is difficult to beat the brand advantage established by the two institutions and other studies. It should be noted that the available measurements of national competitiveness are not appropriate for the least-developed countries such as Cambodia because they are constructed based on the point of the developed or developing countries' views. Therefore, it is worth having another measurement of the national competitiveness for Cambodia, and, consequently, this study proposes a modified measurement for assessing the national competitiveness of Cambodia, which will be described in the following section.

#### **4. Research Design and Methodology**

We first describe the framework of measurement of the national competitiveness, then the data collection approach.

#### 4.1 Framework of Measurement

The research framework of this study mainly stems from the benchmark models discussed in the previous literature review and experts' opinions. The scholars are from prestigious universities of Southeast Asian countries such as Nanyang University of Technology in Singapore, the University of Malaya in Malaysia, and the Royal University of Law and Economics in Cambodia. Issues regarding trade, finance and banking, technology, human resources, and management are discussed in the questionnaires, and a consensus on four categories of national competitiveness for Cambodia, namely, economic performance, technology development, human resources, and management capability is achieved. The framework for measuring the national competitiveness of Cambodia is shown in Figure 1.



Note: number inside parentheses is weight.

Figure 1 A Framework of National Competitiveness for Cambodia

As shown in Figure 1, there are four categories and 18 sub-categories employed for measuring the overall national competitiveness of Cambodia. To measure these sub-categories, 84 indicators are employed, including 31 indicators for economic performance (see Table 1), 14 indicators for technology development (see Table 2), 18 indicators for human resources (see Table 3), and 21 indicators for management capability (see Table 4). Note that the indicators marked with "●" and "○" are measured (hard) data and survey (soft) data, respectively; and the indicators marked by an asterisk (\*) indicate that their direction of measurement is adverse.

#### *4.2 Data Collection*

Data collection has been conducted since late 2001. The data can be classified into two categories: hard (measured) data including 41 indicators (e.g., amount of GDP, exports), and soft data including 43 indicators (e.g., motivation, work skills, attitudes).

Hard data were collected from governmental publications and reports that were verified by the researchers from Cambodia, while soft data were solicited from 50 invited experts of Cambodia, including 25 experts from the industry sector, 15 from government, and 10 from academe. Each indicator of the questionnaire reveals the extent of experts' agreement on a ten-point Likert scale (0= strongly disagree and 10= strongly agree). Some indicators have an adverse score (e.g., unemployment rate, the levels of recruitment cost), as shown in Table 1 to Table 4. For these indicators, the higher the indicator, the worse the performance. To make these adverse items comparable with others, we use the number "10" to subtract their survey values. Additionally, the 50 experts were asked to perceive the relative importance of each sub-category and category.

### **5. Results and Analysis**

The results are presented in five sections. The first four sections relate to the categories of economic performance, technology development, human resources, and management capability, respectively. The last section describes the relative importance of these categories and sub-categories.

#### *5.1 Economic Performance*

Table 1 shows the results of Cambodia's economic performance. Cambodia's economy has been improving, with foreign reserves of US\$248 million in 1999, US\$307 million in 2000, and US\$344 million in 2001. Cambodia does well in the growth of industrial production, with a mean rate of

21.1%. It is probably due to the low labor costs, which attracted a significant number of direct foreign investments, especially in the garment industry. Beside the low labor costs, RGC strives to promote a friendly environment for the foreign investors so as to boost the export volumes and create more jobs, at 71.6%, 84.8%, and 86.9% in 1999, 2000, and 2001, respectively, and gross domestic savings as a percentage of GDP at a mean rate of 9.32%.

Cambodia does well in the unemployment rate, at a mean rate of 1.63%. But its foreign direct investment is relatively low with a mean of US\$122.8 million from 1999 to 2001. The economy also has a poor track record in creating jobs in the formal sector, and the challenge will only become more daunting in the future since 40% of the population is under 15 years of age and a majority of them will enter the work force over the next 10 years [14].

Cambodia's GDP grew at a mean rate of 5.53%, with almost all of the growth coming from the garment sector. This sector started to expand rapidly in the mid-1990s and now employs more than 200,000 workers [17]. In spite of recent progress, the Cambodian economy continues to suffer from the aftereffects of decades of war and internal strife. Per capita income (US\$261) is still behind most neighboring countries.

Cambodia remains heavily reliant on foreign assistance, with government budget balance as a percentage of GDP at a mean rate of -5.82%. Though balance of trade (a mean of US\$-226.07 million) and current account balance (a mean of US\$-245.83 million) are poor, they are improving steadily.

Most scholars perceived political and social instability as the main causes for Cambodia's lagging economy: adequacy of the legal framework in promoting the country's competitiveness (4.14), degree of political stability (4.38), effectiveness of government policy implementation (4.44), adaptability of government policies to changes in the economic environment (4.44), feasibility of accessing the local financial market (4.49), degree of compliance with respect to the legal requirements for conducting business (4.56), soundness of the central bank's policy for the country's economic development (4.66), and adequacy of facilities provided by the government to access foreign markets (4.81). All the values of indicators are below 5 points, which implies that experts tend to have a negative attitude regarding these sub-categories. Nevertheless, the 1997 Asian financial crash did not have a huge impact on Cambodia's economy since Cambodia was not heavily engaged in capital flow. This indicates that Cambodia's financial sector is not sufficient and attractive to foreign investments. For example, the legal system in Cambodia makes it difficult for the banking industry to operate.

Table 1 Results on Economic Performance

Sub-category	Indicator	1999	2000	2001	Mean
Domestic Economic Information	●Gross Domestic Product (GDP) (US\$ billions) # 1	3.30	3.35	3.40	3.35
	●Growth of GDP (%)# 1	5.70	6.40	4.50	5.53
	●Unemployment Rate (%)* # 1	0.60	2.50	1.80	1.63
	●GDP per capita (US\$)# 1	264	261	259	261
	●Growth of GDP per capita (%)# 1	3.10	3.70	2.00	2.93
	●Gross capital formation as a percentage of GDP (%) # 1	14.41	15.13	15.90	15.15
	●Gross domestic savings as a percentage of GDP (%)# 1	6.70	9.81	11.44	9.32
	●Growth of agricultural production (%) # 1	0.00	-0.30	3.90	1.20
	●Growth of industrial production (%) # 1	13.20	34.60	15.50	21.10
	●Growth of service production (%) # 1	7.10	5.80	2.90	5.27
Government Efficiency	●Government revenue as a percentage of GDP (%) # 1	11.55	11.64	12.36	11.85
	●Government expenditure as a percentage of GDP (%) # 1	16.70	18.06	18.35	17.70
	●Government budget balance as a percentage of GDP (%) # 1	-5.15	-6.42	-5.90	-5.82
	○Degree of political stability				4.38
	○Effectiveness of government policy implementation				4.44
	○Adequacy of the legal framework in promoting the country's competitiveness				4.14
	○Degree of compliance with respect to the legal requirements for conducting business				4.56
International Trade	●Exports of goods and services (US\$ billions) # 1	1.25	1.65	1.73	1.54
	●Imports of goods and services (US\$ billions) # 1	1.52	1.72	1.82	1.69
	●Growth of exports of goods and services (%) # 1	13.14	33.22	6.21	17.52
	●Growth of Imports of goods and services (%) # 1	14.30	14.71	7.50	12.17
	●Balance of trade (US\$ millions) # 1	-275.30	-262.80	-140.10	-226.07
	●Current account balance (US\$ millions) # 1	-258.50	-257.30	-221.70	-245.83
	●Balance of trade/GDP (%) # 1	8.34	7.84	6.50	7.56
	●Degree of openness (%) # 1	71.60	84.80	86.90	81.10
Finance	○Adequacy of facilities provided by the government to access foreign markets				4.81
	●Foreign reserves, including gold (US\$ millions) # 2	248.00	307.00	344.00	299.67
	●Foreign direct investment, net inflows in reporting country (US\$ millions) # 3	143.60	111.70	113.10	122.80
	○Feasibility of accessing the local financial market				4.49
	○Soundness of the central bank's policy for the country's economic development				4.66

Note: "●" and "○" indicate the measured (hard) data and the surveyed (soft) data, respectively.

"\*" indicates the adverse indicators.

Data resource: # 1. NIS: National Institute of Statistic.

#2. Conversion rate: NBC: National Bank of Commerce.

#3. World Bank, "World Development Indicators (WDI) database". Website:

<http://www.worldbank.org/data/dataquery.html>

## 5.2 Technology Development

Table 2 shows the results of technology development. In recent years, Cambodia has developed and improved its local infrastructure in order to attract businesses as well as tourists. Despite recent improvement, the Cam-

bodian infrastructure is still limited compared with its neighboring countries, such as the paved road network density (193 km), and railroad network density (3.3 km). The World Bank also indicates that, of total roads, the paved roads are merely 16% [32].

Information technology in Cambodia lags behind neighboring countries, with the number of computers per 1,000 people at a mean of 1.4 units; host connections to the Internet per 1,000 people at a mean of 0.03 units; people's access to the Internet per 1000 people at a mean of 0.5 units; main telephone lines per 1,000 people at a mean of 2.4 units; and cellular/mobile phone subscribers per 1,000 inhabitants at 11.2 units in 2001.

Most scholars perceived that Cambodia performed poorly (below 5 points) in technology management, such as technological cooperation between companies (3.77), technology transfer between universities and companies (4.04), development and application of technology supported by the legal environment (4.36).

As for the technology environment, like the rest of the world, the younger generation of Cambodia has been exposed to technology development and its benefits that would enrich their education and life. However, the copyright policy in Cambodia is loose; stores sell pirated CDs around the street corners and educational institutions use unauthorized print materials and computer applications [13].

Despite technical and financial assistance from foreign counterparts such as Taiwan, Japan, and Korea, Cambodian technology development is still limited in research, development, human resources, and investment. It is partly due to the shortage of engineers and technical workers [20].

Technology development, although it is weak at the moment, is rapidly taking its ground in Cambodia. The government has no restrictions on the transferring of data across the Internet, and people have wider access to information technology. With foreign assistance, technology management know-how is being gradually transferred to Cambodian [28].

Internet awareness is increasing in Cambodia and the Internet has been used by several local companies and highly educated people. The RGC has committed to launching its e-government by the end of 2003. The RGC has been promoting the upgrade of its workforce so that they can easily receive the new technology through foreign direct investment, joint projects, joint ventures/licensing, franchising, training, and through other means to meet international standards [28].

Table 2 Results on Technology Development

Sub-category	Indicator	1999	2000	2001	Mean
Basic Infrastructure	●The paved road density of the network (km) #1	190	193	196	193
	●Railroad density of the network (km) #1	3.3	3.3	3.3	3.3
Information Technology	●No. of computers per 1,000 people (unit) #2	1.10	1.1	2	1.4
	●No. of host connections to internet per 1,000 people #2	0.02	0.04	0.05	0.03
	●No. of people with access to internet per 1,000 people #2	0.3	0.5	0.7	0.50
	●No. of main telephone lines per 1,000 inhabitants (lines) #2	2.3	2.4	2.50	2.4
	●No. of cellular/mobile phone subscribers per 1,000 inhabitants #2	7	10	16.6	11.2
Technology Management	○Technological cooperation between companies				3.77
	○Technology transfer between universities and companies				4.04
	○Development and application of technology is supported by the legal environment				4.36
	○Lack of sufficient financial resources does not constrain technological development				4.11
Technology Environment	○Basic research enhances long-term economic and technological development				5.4
	○Science and technology arouses the interest of youth				5.06
	○Patent and copyright protection is enforced in your country				5.9

Note: “●” and “○” indicate the measured (hard) data and the surveyed (soft) data, respectively.

Data resource: #1 [http://www.unctad.org/en/docs/ldc01stat\\_cam.en.pdf](http://www.unctad.org/en/docs/ldc01stat_cam.en.pdf)

#2 CIA, <http://www.cia.gov/cia/publications/factbook/geos/cb.html>

### 5.3 Human Resources

The results of Cambodian human resources are shown in Table 3. Compared with the developed countries, Cambodia performs well in weekly working hours (48 hours), partly due to its low labor costs.

On the other hand, Cambodia performs poor in both the pupil teacher ratios of primary (a mean of 53.57), and secondary education (a mean of 36.63). Furthermore, education levels in Cambodia are lower compared with most neighboring countries, with literacy ratio at a mean rate of 63.9%, due to low quality of training and scarce financial resources [20]. Chronic civil wars in the past decades have wiped out most of the educated people and essential infrastructure. According to interviews with Taiwanese business-men

Table 3 Results on Human Resources

Sub-category	Indicator	1999	2000	2001	Mean
Manpower Utilization	● Labor force participation rate, LFPR#1	45.00	78.40	64.00	62.50
	● Weekly working hours#1	48.00	48.00	48.00	48.00
	● literacy ratio#3	63.70	62.00	66.00	63.90
	● Number of students per teacher (primary school) * #5	50.60	53.30	56.80	53.57
	● Number of students per teacher (secondary school) * #4	47.80	45.70	16.40	36.63
	● Number of students per teacher (tertiary education) * #5	4.71	10.64	12.70	9.35
Cost of Wages and Employee Benefit	● Average Hourly Wages#2	0.11	0.12	0.12	0.12
	● Wage Inflation minus CPI inflation * #2	-0.14	4.48	-0.20	1.38
	○ The benefit level of employees				4.20
Turnover	○ The level of recruitment cost *				4.46
	○ The level of training cost *				4.80
	○ The level of severance payment *				4.86
Labor Disputes or Industrial Disputes and Union Power	● Strikes * #2	78.00	76.00	95.00	83.00
	● Working days lost * #6	15	24	24	21
	○ The enforcement degree of labor legislation				5.71
	○ The coverage degree of labor legislation				5.20
	○ The union effect on wage rates				5.31
	○ The labor power existing on foreign companies				5.49

Note: “●” and “○” indicate the measured (hard) data and the surveyed (soft) data, respectively.

“\*” indicates the adverse indicators.

Data resource: #1. SEDP ( SOA’O Economic Development Plan )

#2. Moeys <http://www.moeys.gov.kh/>

#3. Report the Assessment of the Functional Levels of the Adult Population in Cambodia

#4. Education Management Information System, Ministry of Education, Youth and Sport 1999-2000

#5. Education Statistics Indicators 1999-2000, Ministry of Education, Youth and Sport

#6. Department of Finance, Ministry of Education, Youth and Sport

in Cambodia, teachers in general educational programs are demotivated due to low compensation. In addition, poor families find it very difficult to support their childrens' education, and early school dropouts are quite common [1]. Fortunately, foreign assistance has helped to rehabilitate and improve the educational system in recent years. Scholarships are offered to outstanding students to pursue higher education abroad – for example, approximately 30 students are recruited annually to study in Japan. Nevertheless, education in Cambodia does not meet international standards yet [26].

Most scholars perceived that Cambodia performs poorly in labor turnover, such as the level of recruitment cost (4.46), the level of training cost (4.80), and the level of severance payment (4.86). In order to have adequate capability of employees, companies operating in Cambodia have spent a lot of money on recruiting, and the top management is usually comprised of foreign employees and expatriates.

As for labor and industrial disputes, Cambodia appears to perform poorly on strikes with a mean of 83, and working days lost with a mean of 21 days, partly because black economy and under-the-table deals run rampant and labor legislation is complicated in Cambodia.

#### *5.4 Management Capability*

Table 4 presents the results of management capability. Most scholars perceived that Cambodia performed better in integration in supplier-manufacturer (6.92), ethical practices (5.20), and customer orientation (5.02), but performs poorly on the remaining indicators (below 5 points), especially shareholder value (3.62), corporate boards (3.92), and competence level (3.96).

Given that the legal system in Cambodia is incomplete, many companies simply lobby the key top government officials to remove any restrictive regulations, and are willing to pay for the service. In this respect, corporate responsibility is low in Cambodia. As to management competence, Cambodia lags behind most of the countries in the region due to the lack of a qualified workforce, essential training and development, and other crucial resources. In Cambodia, the corporate culture is quite conservative. Based on the interviews with the Taiwanese investors, we learned that entrepreneurship among Cambodians is quite limited, for people are not willing to invest in risky projects or businesses. Cambodian businessmen tend to prefer reaping the benefits now and do not care if they lose their customers in the future. International operation is not likely to be very efficient and effective from

the Cambodian perspective, because experience in international trading, exchanging, and global operation, in general, is insufficient. In conclusion, Cambodia seems not to perform very well in management capability. Cambodia still lacks experience in management.

### 5.5 The Weights of National Competitiveness Index

The surveyed results of relative weights for each sub-category and category are shown in Figure 1. The categories of national competitiveness, in order of importance, are human resources (27.44%), economic performance (27.15%), management capability (23.57%), and technology development (21.84%).

In summary, from the local experts' perspective, human resources are considered to play a more important role in national competitiveness. However, technology development is considered as having the least impact on national competitiveness. For economic performance, the domestic economy

Table 4 Results on Management Capability

Sub-category	Indicator	1999	2000	2001	Mean
Innovation Capability	○Price/Quality Ratio of Products *				4.50
Corporate Responsibility	○Prestige to Company Managers				4.41
	○Corporate Boards				3.92
	○Shareholder Value				3.62
	○Social Responsibility				4.60
Management Competence	○Availability of Senior Managers				4.47
	○Competence Level				3.96
	○Labor Relations				4.61
	○Recognition to enterprise identity				4.80
	○Employee Training				4.42
Culture	○Customer Orientation				5.02
	○Entrepreneurship				4.78
	○Orientation for Risk Taking				4.94
	○Tax Evasion *				4.94
	○Ethical Practices				5.20
Intra-industrial Integration	○Integration in Supplier-Manufacturer				6.92
	○Integration in Manufacturer-Channel				4.29
	○Vertical Integration				4.35
International Operation	○International Experience				4.19
	○Competence for Global Operations				4.23
	●Export Value (US\$ billions) #1	1.25	1.65	1.73	1.54

Note: “●” and “○” indicate the measured (hard) data and the surveyed (soft) data, respectively.

“\*” indicates the adverse indicators.

Data resource: #1 World Bank, “World Development Indicators (WDI) database”. Website:

<http://www.worldbank.org/data/dataquery.html>

played a very important role, but finance played a less important role. The scholars perceived that basic infrastructure is vitally important in technology development, but technology environment has less impact. As for human resources, manpower utilization plays a key role, but labor disputes or industrial disputes and union power are perceived to have less impact. From the experts' viewpoint, culture is very important in management capability, but intra-industrial integration is considered as having less impact on management capability.

## **6. Issues Undermine Competitiveness**

Comparing Cambodia with Taiwan, the political condition of Cambodia is similar to that of Taiwan in the 1950's. The strongman strived to recover the nation from the political and social instability resulting from civil war. At that time, under martial law, many economic activities were not permitted in Taiwan. This led to a black economy, which may undermine the national competitiveness, but yet, sometimes facilitates economic activities. Therefore, it would be helpful to explore the black economy in Cambodia when evaluating its national competitiveness. The main problems that undermine the national competitiveness of Cambodia are described below.

### *6.1 Corruption*

Corruption incurs unnecessary costs for businesses. Cambodian society seems to accept financial practices that would be unacceptable to the majority of other societies. In Cambodia, the practice of paying and accepting bribes is so common and obvious that people discuss it openly.

In 1998, the Center for Social Development (CSD) conducted the first ever National Survey on Public Attitudes Towards Corruption in Cambodia, and asked adults from 22 different occupations, ranging from members of Parliament and the Council of Ministers to farmers and fishermen, how they perceived corruption and how it might be stopped. According to the Corruption Survey, although 84% of the 1,513 respondents agreed that corruption is the norm in Cambodia, 91% believed that it harmed the nation, and 98% wished it to be stopped as soon as possible [30].

Generally speaking, the younger generation showed a significant lack of comprehension of and concern about corruption. Teenagers tend to give a lower priority to fighting high-profile corruption and have less conviction that corruption hurts the national economy or reduces people's confidence in government. This is not a good trend since teenagers constitute 43 percent of the population in Cambodia. In contrast, civil servants have a better under-

standing of the consequences of corruption; however, they are much more tolerant of everyday corruption. For instance, government employees are much more likely to think that corruption “greases the wheel” and that most businesses pay bribes [30].

### *6.2 Drug Smuggling*

Illegal drugs have been a major obstacle to social development and harm the well-being of Cambodian society. Teenagers become the victims in this respect. Hundreds of kilograms of heroin pass through Cambodia every year from Burma via Laos, and the quantity has been increasing. According to an internal Cambodian police report, local production of methamphetamines is now also taking place in western Cambodia, near the Thai border, and in the capital Phnom Penh itself. Stockpiles are stored in a string of newly opened casinos in the border towns of Poipet and Koh Kong, the report says, and, according to the United Nations International Drug Control Programme (UNDCP), the casinos are also used to launder drug money. This charge has also been supported by reports from the U.S. [29].

Methamphetamines are increasingly used by young people and those working in labor-intensive industries. The steady fall in the street price of methamphetamines in Cambodia to around US\$1.00 per tablet is a further indication that substantial quantities of the drug are penetrating a market that is unaware of its dangerous consequences. Linked to the increasing occurrence of drug abuse in Cambodia is the danger of an increase in transmission of HIV/AIDS through intravenous drug use (IDU) and in particular through unsafe sexual practices whilst under the influence of illicit drugs [29].

### *6.3 Intellectual Properties and Copyrights*

The 1992 Land Law provides a framework for real property security and a system for recording titles and ownership, but its effectiveness is limited because the majority of property owners have no documentation to prove their ownership. As for intellectual property rights, protection is based on articles contained in the 1992 United Nation Transitional Authority of Cambodia (UNTAC) Criminal Code. Cambodia acceded to the Paris Convention in 1998 and has since been making progress in legislation of trademark, copyright, and patent laws.

With no trademark laws enforced in Cambodia, owners of trademarks are unable to seek relief in court. Until the law is passed, complaints go to the Ministry of Commerce, which has responsibility for registering trademarks, but does not have clear legal authority to conduct enforcement activi-

ties [33]. Responsibility for copyrights is split between the Ministry of Culture (phonograms, CDs, and other recordings) and the Ministry of Information (printed materials). The Ministry of Culture prepared a draft copyright law in 1998, which is under review.

Since Cambodia has a very small industrial base, and infringement on patents and industrial designs is not yet commercially significant, the Ministry of Industry has prepared a draft of a comprehensive law on the protection of patents and industrial designs [33].

Cambodia's legal system does not protect private property effectively, and Cambodia's court system is weak. Judges, who have been trained either for a short period in Cambodia or under other systems of law, have little access to the published Cambodian law. They are inexperienced and courts are understaffed. The local and foreign business communities have reported frequent problems with inconsistent judicial rulings as well as outright corruption [33].

#### *6.4 Underground Businesses*

The one-kilometer long gambling strip in Poipet with its well-watered and immaculately manicured lawns, luxury hotels, air-conditioned shopping centers, massage parlors and brothels, has seven casinos, with an eighth under construction. This is in sharp contrast to the squalor outside the casino gates, with heaps of uncollected garbage along the dirt road and the numerous shanties all over.

The opening of the country, since 1992, to international observers, UN soldiers, managers and consultants, brought new problems to the country. Consumer desires were aroused which few were able to satisfy given their persistent poverty. Prostitution has increased and with it the rate of HIV-infection. According to realistic assessments, Phnom Penh alone has 15,000 prostitutes, one-third of whom have been brought in from China and Vietnam. A third are below the age of 18 and half are HIV-positive [24]. Together with prostitution there has also been an increase of trafficking in humans, although the abduction of children for prostitution in Cambodia can be punished with prison sentences of up to 20 years.

#### *6.5 Illegal Imports of Expired Products*

Some foreign companies have dumped their expired products in Cambodian markets. Due to the consumers' unawareness of expired products and to the extent that they can pay bribes to shut up the officials, local importers

are motivated to import expired products with the offer of attractive prices from those foreign companies. The products usually include pesticides, cigarettes, soft drink, and medicines.

### *6.6 Illegal Fishing and Logging*

Cambodia is also an exporter of both fresh and salty water fish. The Great Lake, locally known as Ton Le Sab, provides a rich source of fish. However, illegal fishing has a huge impact on fishing productivity.

Although much of Cambodia's black market activity occurs in labor and pirated intellectual property, illegal logging is widespread despite attempts to crack down on the problem; according to the Economist Intelligence Unit [33], “officially, the contribution of forestry to GDP was 2.7% in 1998, but this is almost certainly an underestimate because of widespread illegal logging.” Smuggling continues to be extensive, particularly over the Thai border [33].

### *6.7 Sweatshops*

Factory conditions in Cambodia are being scrutinized. Press reports tell of managers beating workers. For instance, employees at a garment factory in the Takhmau district north of Phnom Penh complained of receiving electric shocks from their sewing machines but were ordered to keep working. These garment factory workers work long hours yet earn very little. Child labor also takes place in some factories [3, 25].

### *6.8 The Black Economy on National Competitiveness*

Poverty, together with an implicit culture of corruption, have forced a significant number of Cambodians to do virtually anything just to survive in this dark reality.

There are debates on the accession of Cambodia into the WTO whether foreign companies will take this opportunity to penetrate Cambodian markets, given that they do not have to pay for import tariffs and other incentives offered by RGC. However, the implicit culture of corruption and government red tape may cost foreign companies tremendously; as a result, foreign firms may feel reluctant to enter Cambodian markets.

Intellectual property and copyrights are also the key issues for the black economy, and these are the weaknesses of Cambodia's national competitiveness. Foreign companies would incur a great amount of loss due to the violation of intellectual property and copyrights in the country.

Drugs, as well as women and children trafficking, are the obvious factor that undermines Cambodia's competitiveness in terms of manpower utilization and social welfare in the long run. Children are the future stars of a society; however, children in Cambodia, overwhelmed by poverty, do not have proper access to education, let alone quality education.

Cambodian young women are happy to work in the garment factories in sweatshop conditions, rather than in the brothels. In this respect, sweatshops are better off for Cambodian young women whose families live under the poverty line, and it creates thousands of jobs for them.

Deforestation, resulting from illegal logging in recent decades, often causes flooding, which in turn costs Cambodian agriculture a lot of money. 80% of Cambodians are farmers, and most of them, living in flood areas, have suffered a great deal from floods since they cannot plant. In some provincial areas throughout Cambodia, it is very difficult to cultivate in the dry season because of the hot weather. To sum up, deforestation makes farmers suffer and decreases agricultural productivity. Furthermore, provided that Cambodia farmers use imported pesticides, the agricultural productivity is not much different. The kind of productivity generated from applying imported and/or expired pesticides is offset by the extent that pesticides erode the soil and damage farmers' health, and it may gradually destroy the essential ecosystem.

One of the black economic activities, transnational gambling, is perceived by the RGC as an engine and a temporary alternative for economic growth since it creates more jobs and generates capital inflow.

In short, although the black economy is not a desired alternative for economic growth, many countries, not only Cambodia, have been engaged in it. Because of poverty and an implicit culture of corruption, Cambodians and their government, to some extent, are not willing to hold back the black economy.

## **7. Conclusions and Suggestions**

In Cambodia, the term "national security" has traditionally been associated with military and political issues. Economic decline, poverty, and associated social problems are national threats. From this viewpoint, economic security will become an increasingly important part of national security. Therefore, Cambodia needs to work harder to enhance its national competitiveness by ensuring social stability, upgrading the workforce, and offering a free-, fair- and friendly-investment environment to both foreign and domes-

tic entrepreneurs.

Cambodia has the competitive advantage of lower labor costs. It motivates investors to make good use of its labor and produce low-cost, labor-intensive goods. Consequently, human resources are one of the key factors to national development, and Cambodia is still lacking a great deal of essential human resources in its workforce. It is necessary to enhance the skill level of the Cambodian labor force for improving economic competitiveness and long-term development prospects. Fortunately, there is an increasing number of private institutions for higher education, and technical and vocational training centers [28]. In this respect, the human resources sector is expected to be stronger eventually.

However, the overall national competitiveness of Cambodia is relatively poor. Porter has stated that upgrading an economy demands a steadily rising level of technology [21]. Hence, poor technology development is another cause of Cambodia's weak economic performance. Due to the shortage of engineers and technical workers as well as capital investment, all technologies used in Cambodia are imported.

In conclusion, the main suggestions of the study are that the RGC should place technology policies and educational strategies as a top priority, invest in the educational sector to enhance the quality of human resources training and development, and create a national environment with regard to tax and fiscal policy, foreign and trade relations, and procurement [5].

The results of this study may provide a useful reference for academics and practitioners to learn about the status of the national competitiveness of Cambodia, and offer suggestions to the RGC for determining priorities in policy planning. It would also be helpful for foreign firms or governments to formulate strategies regarding trade, investment, and related issues with Cambodia. Furthermore, according to Felker [10], for Cambodia to move forward, the resource-based economic model should be gradually replaced by an investment-based model.

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