

## Cambodia's Diversification Potential: Implications of Trade and Industrial Policies

Cambodia's exports have been posed daunting challenges by high dependency on a few sectors and trading partners. Current exports, mainly garments, are also strongly exposed to external factors. This requires additional efforts to maintain the country's competitiveness in world markets.

With this imbalanced and narrow economy, it's crucial to explore the possibility of diversification.

It has been demonstrated that the country does have a strong possibility to diversify its export profile in a number of sectors. The development of

those sectors through a focused export strategy would support their sustainable development as well as create new employment, generate rural income and reduce poverty.

Nevertheless, these sectors will not develop per se, and preserving the status quo would mean the continued loss of value addition, employment opportunities and rural income, as well as slowing the pace of poverty reduction.

Instead, the necessary policies to address the supply and demand constraints should be designed. The supply side



*How to diversify exports in potential sectors?*

refers to policies at the domestic level, while the demand side refers to trade negotiations with trading partners. The implementation requires the commit-

ment and participation of various stakeholders in a coordinated way so that the desired results can be achieved.

[Full story on pages 2-7]

## The Potential of the Cambodian Tourism Industry

Tourism is the country's biggest exporter of services and has been the main engine of economic growth during the last decade. It has created both direct and indirect jobs with some positive effects on rural development and poverty reduction.

The number of tourist arrivals has gradually increased, which explains the expansion of the sector. It indicates the possibility of further contribution to development, and employment generation, if a number of challenges are managed in a sustainable way.

The major challenges are to strengthen backward linkages; to develop skills needed by the sector; to diversify the sector in terms of destinations, culture and arts; and to make available important legislative supports which govern the sustainable development of the sector. These call for practical policies with effective implementation.

To achieve this end, it requires various forms of partnerships among the public and private sectors, associations and donor agencies.

[Full story on pages 8-10]

## Cotton and Motor-Assembly Sectors in Cambodia

Despite its robust garment industry, cotton does not appear to be a main crop for the country. Cotton proves to be a profitable crop with estimated incomes of around US\$280 per hectare, compared with about US\$150 for paddy per hectare.

However, development of the Cambodian cotton sector faces a number of challenges which include a lack of textile industry, low conversion rate from seeds to lint cotton, and low yield due to the poor quality of cotton-seeds and equipment. Additionally, many coun-

tries have supported their cotton farmers, which make it difficult for small countries, like Cambodia, to compete on international markets.

Likewise, the current expansion of motor-assembly is limited to domestic demand for new motor cycles. The sector does not appear to have potential for export earnings in near future due to its cost competitiveness. It is already well-established in the region, which leaves little room for Cambodia to enter the export markets.

[Full story on pages 11-15]

# Cambodia's Diversification Potential: Implications of Trade and Industrial Policies

*There is a need for practical policies with effective implementation in order to diversify the country's export profile which is currently limited in terms of products and trading partners.*

Cambodia's trade is concentrated on a limited number of products, most importantly garments, which accounted for over 75 percent of the country's exported goods including informal exports. The question is whether Cambodia has potential for diversification in other sectors, and if so, how this potential can be unleashed. This study attempts to explore the opportunities for Cambodia's export diversification. The article is arranged into five parts. The first part gives a brief overview of the Cambodian economy. The second and third parts discuss the diversification potential and sectoral case studies. The fourth part provides a general picture of the Cambodian trade and industrial policy environment and suggested alternative policies that will contribute to promoting exports. The conclusion will be drawn from the main observations made during the study.

## Overview of the Cambodian Economy

### Structure of the Economy

Cambodia has made substantial progress in the transition from a planned economy to a market economy since the 1991 Paris Peace Agreement. It eventually integrated itself into the world economy, becoming a member of ASEAN in 1999 and WTO in 2003.

According to the National Institute of Statistics (NIS), Cambodia's economy peaked in 2005 with a growth

rate of 13.4 percent, up from 10 percent in 2004. The country's economy is driven by a few select sectors. The agriculture sector represented 33 percent of GDP, and about 70 percent of the Cambodian population derives their living from this sector. The agriculture sector depends very much on climate conditions.

The growth of the industry sector, which accounted for 25 percent of GDP, is driven mainly by the garment industry's continuing expansion. Besides the agriculture sector and the garment industry, the service sector (42 percent of GDP) has also played a significant role in the Cambodian economy. The tourism sector, including hotels and restaurants, constitutes the most important sub-sector of this.

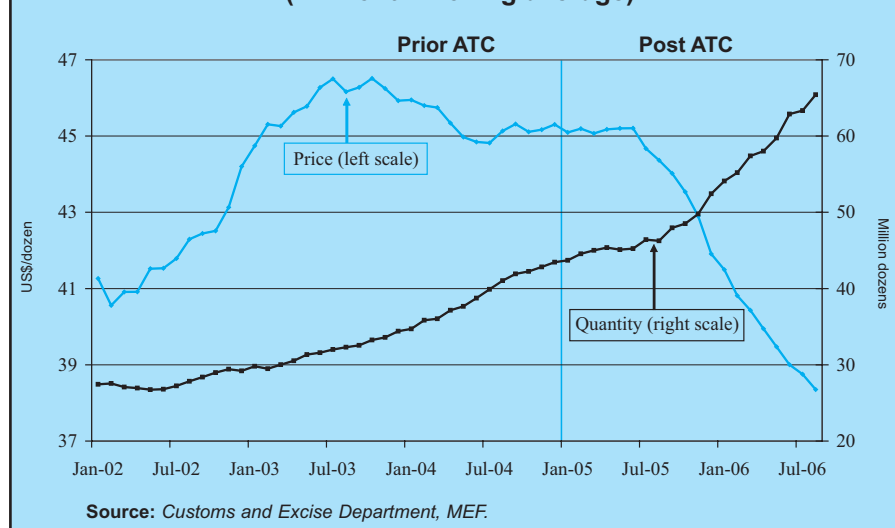
Although Cambodia has enjoyed relatively high economic growth rates in the last decade, the challenge remains to equitably redistribute the welfare gain throughout the population. Poverty remains a major concern, and reforms are a necessity for Cambodia to achieve its Millennium Development Goals (MDGs) to halve poverty by 2015.

### Contribution of Garment Industry

Since the end of the 1990s, the garment industry has played a vital role in the economy. The number of garment factories grew from almost nil in 1995 to about 250 factories in 2005 and garment exports have also risen dramatically during this period. Annual Cambodian garment exports rose by 46 percent in 1999 and 78 percent in 2000, before slowing down to around 20-25 percent in 2001-2004. The expansion of the garment sector has contributed 26 percent of GDP growth, or about two percentage points annually, since 1995. Moreover, garment exports accounted for more than 75 percent of the country's exports.

The garment industry also has a spillover effect on other auxiliary sectors. EIC estimated, based on the Input/Output model, that an increase of US\$100 in garment exports would result in an additional demand of US\$205 in the whole economy. As Cambodia does not have strong supporting industries and most inputs are imported, this additional demand only produces an increase of US\$45 in the

**Figure 1: Trend of Garment Exports  
(12-month moving average)**



*This article is compiled from research project on "Addressing the impact of agreement on textile and clothing (ATC) expiration on Cambodia" supported by UNDP Regional Centre in Colombo (UNDP RCC).*

total value added (US\$3 in agriculture, US\$1 in non-garment industry, US\$8 in services, and US\$33 in the garment industry itself).

Overall, the garment industry has a positive impact on human development in Cambodia in the sense that it contributes to generating employment, rural household incomes, improved working conditions and workers' rights. By the end of 2005, it was estimated that the garment sector directly employed 270,000 people. The number of indirect jobs created by the industry is also important: possibly as many as 242,000, the equivalent of almost one indirect job per garment worker. (Nearly half of indirect jobs are concentrated in the service sectors, such as transportation and trade.)

### *Future Prospects*

Given its high dependence on garment exports, the Cambodian economy was seen as vulnerable, especially after the expiration of the Agreement of Textiles and Clothing (ATC) on 01 January 2005. Fortunately, Cambodia has been able to maintain the growth of its garment industry. Garment exports continue to increase in terms of both volume and value following the quota elimination.

Overall, garment exports from Cambodia increased by 20.7 percent in terms of volume in 2005 due to fast growth in the US market. However, the growth level shrank to only 11.7 percent in value terms because of the fall in unit price, especially in the US market. Although a collapse in the garment industry is not a foreseeable risk post-ATC, it is not ideal for the economy to be highly dependent on just one or two particular industries.

### **Diversification Potential**

It is believed that the competitiveness of the country's exports is based primarily on low labor cost and natural resources. The following sections will examine the opportunities for export diversification of both products and services.

### *Agriculture and Manufactured Products*

Many studies have concluded that agriculture is a key sector for Cambodia because the country has a comparative advantage in terms of land and labor. The opportunity for crop diversification would depend very much on how the country exploits and develops a competitive advantage out of seasonal differences, and climatic and soil conditions, with the rest of the world. In addition, the growing importance of the garment industry seems to indicate that Cambodia is in the early stages of industrialization. At this stage of development, it is too soon for Cambodia to think about capital-intensive or technology-oriented industries.

Based on the experiences of other countries in the region, it may be beneficial for Cambodia to focus on alternative light manufacturing industries which require a low-skilled labor force. Moreover, the recent discovery of oil and gas as well as other mineral resources (bauxite and iron ore) has led to these being identified as new priority sectors.

### *Service Sectors*

With its historical heritage, culture, tradition and natural environment, Cambodia has become a new and attractive tourist destination in South-East Asia. In the context of a stable political situation, Cambodia is believed to have great potential with regard to its tourism industry. However, Cambodia is unlikely to enjoy high growth in other

service sectors. Development of modern service sectors including finance, banking and ICT (Information, Communication and Technologies) is far behind most countries.

The fact that higher skills are required to work in much of the service sector makes it difficult for a large section of the Cambodian population to participate in this particular area. Based on the Executive Opinion Survey conducted among business executives in various countries in 2006, Cambodia seems to be competitive in tourism, in the sense that Cambodians welcome foreign travelers and tourists. The same survey highlights clearly that Cambodia is not competitive enough in its ICT, finance and banking services.

### **Sectoral Case Studies**

#### *The Selection of the Sectors*

To gain a deeper understanding of export potential and constraints, five sectors have been identified for specific case studies. Their selection has been based on a number of criteria, including: (i) priority sectors of the National Export Strategy (NES) 2007-2010, (ii) Revealed Comparative Advantage (RCA), (iii) potential for export earnings, (iv) employment opportunities, (v) use of domestic inputs, (vi) sustainability of possible exports, (vii) suggestions from members of the project's National Reference Group (NRG).

The sectors identified comprise organic rice, cashew nuts, rubber, silk,

**Table 1: Assessment of the Selected Sectors**

	Organic Rice	Cashew Nuts	Rubber	Silk	Tourism
Priority Sectors of the NES 07-10	H	L	L	H	H
Revealed Comparative Advantage	M	M	H	M	H
Potential for Export Earnings	H	H	H	M	H
Employment Opportunities	M	H	M	H	H
Use of Domestic Inputs	H	M	H	M	M
Sustainability of Possible Exports	M	H	H	M	H
Suggestion from Members of NRG	H	H	H	H	H

**Source:** Opinion survey among research team members.  
**Note:** H=high/yes, M=medium, L=low/no.



and tourism. It is worth noting, however, that the selection of these sectors does not mean that they are the only potential export-generating sectors in Cambodia. Great potential for export diversification may exist in many other sectors.

At the preliminary stage of the study, two other sectors, motor-assembly and cotton, were also included on the list, but were rejected after discussions with the project's NRG. Initial assessment indicated that the two sectors might not meet at least two of the above-mentioned criteria, namely RCA and employment opportunities. A detailed analysis of tourism is included in a separate article in the review, due its significant contribution to the service sector.

### *Organic Rice*

Organic rice has gained popularity among consumers in developed countries, especially in the EU and US, where demand is noticeably high. Having spotted this opportunity, in 2003 a number of NGOs launched an organic rice farming pilot project in Cambodia, covering 11 districts in four provinces. Converting from conventional to organic farming typically takes three years. Since organic rice farming is a recent innovation, its production capacity is minimal compared with the country's conventional rice. In 2005, certified organic rice production reached only 881 tons, cultivated on 560 ha, while total rice production was approximately six million tons.

In the current context, conventional rice production in Cambodia is unlikely to be able to compete with that in neighboring countries, especially Thailand and Vietnam, which are among the world's top rice producers. However, the organic rice sector in developed countries has the potential to be a niche market for Cambodian rice exports. Besides marketing benefits and price premiums, organic rice farming may bring several other advantages to farmers. Firstly, expenditure on chemical fertilizer is reduced and yields may gradually increase, as there are no chemical pollutants in the soil. However, the preparation of organic manure and nurseries is labor intensive.

Nevertheless, strong potential for expanding the production of organic rice exists and a significant impact on farmers' incomes could be expected. Based on the analysis of production costs, farmers could increase their incomes by more than 50 percent by converting from conventional to organic farming. However, many farmers do not recognize this potential, which is mainly a result of two factors. Typically, rice farmers are unable or at least reluctant to take the entrepreneurial risks connected with long conversion periods. The second factor is that organic rice production is very labor intensive.

### *Cashew Nut*

Cashew nuts have a favorable position in the international market for agricultural commodities. The world production of raw cashew nuts has increased dramatically to about 2.3 million tons in 2004, mostly produced in developing countries. The global cashew industry can be divided into three sections: raw cashew producing countries, processing countries and consuming countries. In Cambodia, most cashew planting is done by households on small plots of land with low yields. The total cashew cultivated areas represented about 16,000 ha in 2000, increasing to more than 60,000 ha in 2005. Annual production is estimated at 30,000 to 50,000 tons, which is roughly 1.3 percent of total world production.

In terms of processing capacity, less than five percent of Cambodian cashew nuts are processed domestically; the remaining 95 percent are exported informally to Vietnam. This may have an impact on prices since they are usually fixed by Vietnamese brokers. Fortunately, during the last few years prices have increased from about US\$570 per ton in 2003 to nearly US\$1,000 per ton in 2005. However, an increase in Vietnam's production capacity will probably place negative pricing pressure on Cambodian raw cashew nuts in the future.

The Cambodian cashew industry is being handicapped by a lack of investment in processing. Invest-

ment in both cashew planting and processing is worth promoting, since the business offers reasonable returns. Developing competitive Cambodian-based processors is necessary to avoid dependency on neighboring countries and to retain added value in the economy. If the raw cashew nuts are domestically processed for export, it will contribute to the creation of thousands of new jobs in rural areas.

### *Rubber*

Rubber is an industrial crop with great potential for export-generated earnings because of growing international demand. Rubber plantations provide three main benefits in today's world. Firstly, they provide latex, which may be processed into industrial products. Secondly, they provide wood-based industries with their raw material. Thirdly, they allow for the uptake of carbon dioxide (CO<sub>2</sub>), thereby lessening the effects of global warming. At present, there are three groups of Cambodian rubber growers: seven state-owned plantations, three privately owned plantations and numerous smallholder rubber plantations.

In total, rubber plantations occupy over 60,000 ha. In terms of volume, Cambodia's export of dry natural rubber was up from about 37,000 tons in 2001 to more than 44,000 tons in 2002, but decreased dramatically to less than 30,000 tons in 2005. Nonetheless, the value of exports was on a rising trend during 2001-2005 because of the significant increase in the price of natural rubber. In 2005, the export value represented US\$36 million. In Cambodia, natural rubber is processed into dry rubber and then exported to other countries in the region, especially Vietnam. The ability of the country to transform dry, natural rubber into finished products is still limited due to a lack of investment, technology and skilled labor force in this sector. Thus, Cambodia still has a long way to go in order to gain substantial benefits from the value addition of rubber.

The Cambodian rubber indus-

try faces many challenges, including a lack of planting materials; security of land tenure; a shortage of technical supports; low productivity; uncompetitive processing costs; a lack of processing capacity; low levels of production and discounted rubber prices. In addition, rubber plantation is a long-term investment and the start-up costs are high compared to other industrial crops. This makes it difficult for average rural households to consider converting their land to rubber plantation. By successfully tackling these challenges, the Cambodian rubber planters could benefit substantially from favorable market opportunities.

### *Silk*

Silk products are popular in many countries especially among people in the higher-income bracket. Cambodia's annual raw silk production is limited to around seven to eight tons, produced mainly at Phnom Srok in Banteay Meanchey province. Local production can satisfy only two percent of domestic raw silk consumption. To meet this demand, 98 percent of raw silk is imported, usually through informal channels, from Vietnam.

In Cambodia, the production of its well-known gold-colored yarn is a cottage industry, while in neighboring countries silk is produced with advanced technology to a high standard. As a result, the country's capacity for silk production is minimal compared with that of its regional competitors. At present, Cambodian silk products are exported indirectly through tourists and Cambodian expatriates. Silk products are believed to have a high potential for export, especially through the increasing number of tourists and the identification of niche markets.

Overall, the Cambodian silk industry creates significant employment opportunities for people in rural areas. In 2005, there were approximately 20,000 active silk weavers, and about 700 people are estimated to have been employed full-time in yarn production. If Cambodia could increase its raw silk production capacity, it is expected that

the number of raw silk producers would reach an estimated 30,000.

The analysis of cost profile shows that incomes of raw silk producers are at about the same level as garment workers, but that they could be better-off since silk producers usually work at home and thus their expenses are less. Silk weavers, generally, are able to earn a better income. Nonetheless, both silk producers and weavers require an initial investment of between US\$300-500, which is a major constraint for many poor households wishing to become active in the silk sector.

### *Lessons Learned*

The studies of the identified sectors have been useful in gaining an insight into the possibilities for export diversification in Cambodia. It is clear that each of the sectors has its own potential for export earnings, which is a good sign for Cambodia's economic diversification. In addition, goods and services in these sectors could be promoted as fair trade products or examples of sustainable development.

High potential notwithstanding, the opportunities for diversification have not been fully exploited, constrained as they are by a number of structural problems. Cambodia seems to lack an effective mechanism to support domestic producers or processors. Local Small and Medium Enterprises (SMEs) are unlikely to enjoy government-provided incentives like garment factories, which receive various forms of inducements including import tax exemption and holiday tax on profit. This lack of effective mechanisms results in a number of cross-cutting issues, which create a bottleneck for Cambodia to explore diversification potentials.

Among other problems faced by export-oriented sectors are: (i) lack of domestic investment along the value chain, mainly in agro-industry, (ii) strong dependency on neighboring countries for exports, (iii) no international standards recognition, (iv) low skill and lack of know-how of Cambodian labor-force, (v) high transportation

and export cost, (vi) limited access to finance, especially in rural areas and, (vii) poor enforcement of rules and regulations to protect business.

Creating a more favorable trade and industrial policy environment could greatly help in the exploration of diversification potentials. The following part of the article looks at alternative policies to deal with the cross-cutting issues, often faced by export-oriented sectors.

### **Trade and Industrial Policy Environment: Policies to Promote Exports**

#### *Fuel Prices*

Retail prices of gasoline and diesel are much more expensive than neighboring countries, and distort private sector development. The study revealed that distributor's gross profits are much higher in Cambodia, and while government taxes are comparable with Thailand, they are higher than Vietnam.

Policy recommendations should focus on promoting competition among distributors to lower their gross profits by establishing a competition law and policies with effective implementation. The Government should consider establishing an Energy Policy and Planning Office, as in Thailand, with the responsibility of providing information on price structure, import costs, government taxes and distributors' gross profits. The information would be posted on the website, and should result in greater competition among distributors and prove attractive for investors. The reduction of government taxes would also be useful for lowering retail prices. Finally, the Government should consider exploring the possibility of alternative sources of energy such as bio-fuel and hydropower. In this early stage, the bio-fuel development program should be developed and executed by a specific committee.

#### *Access to Credit*

High interest rates and the use

of real estate as the only collateral have been a major issue for SMEs and farmers to access credit in Cambodia. One of reasons contributing to high interest rates is that most Micro-Finance Institutions (MFIs) depend on external funding. By examining current transactions in Figure 2, interest rates can be further reduced if dependency on external funding can be decreased.

The objectives can be achieved through several options. First, commercial banks would increase the amount of money they lend to SMEs and individuals, and local savings and deposits should be optimized. SME's access to loans from commercial banks can be achieved through fulfilling several necessary conditions including the establishment of an effective SME financial reporting system and development of a credit information system. Increased local savings and deposits with MFI can be done through building strong images of the institution (to win public trust), promoting marketing on saving and deposit accounts and diversifying saving and deposit options.

Second, given the current excess deposits held by commercial banks, they should be encouraged to offer loans to MFIs. A special guarantee arrangement between MFIs and commercial banks would need to be initiated, in order to minimize the risks faced by the banks. Inter-bank markets should also be established and National Bank of Cambodia (NBC) could intervene by adopting legislation that would require the commercial banks to provide a minimum loan to MFIs at a favorable interest rate.

Third, NBC should consider increasing the loans it provides to MFIs, with less strict conditions.

Finally, a commodity-based collateral system should be set up. Such schemes are widely practiced in other countries such as India, providing mainly agricultural producers with additional options in terms of accessing finance. Similar arrangements could be initiated in Cambodia, via commercial banks, MFIs, SMEs and/or warehouse owners.

### *Infrastructure*

Deficiencies in Cambodia's infrastructure impede the development of potential sectors. It is limited in terms of prices and accessibility compared to other countries in South-East Asia.

To tackle this, pro-competition policies or law could help increase the level of competition among service providers such as electric, telecommunication and internet companies, thus lower prices and improve services.

In terms of physical infrastructure such as roads, the Government and donors should focus on regions where the five potential sectors dealt with in this study are organizing their businesses. Given the important volume of trade movement with neighboring countries (mainly Thailand and Vietnam), there should be a commitment to building and maintaining roads to improve cross-border links. In addition, local government or "commune councils" could potentially contribute towards the rehabilitation of physical infrastructure through contributions from the Government and residents.

### *Investment Incentives*

In current investment law, incentive packages are applied in an identical manner to all sectors. As a

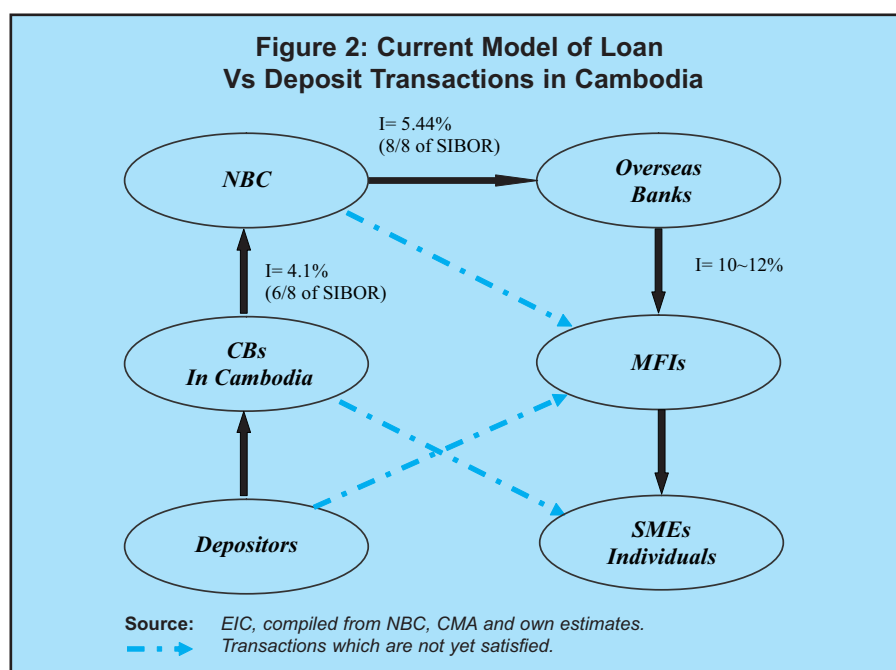
result, investors naturally seek to put their money into sectors with high margins and quick profits such as the garment and tourist industries, rather than sectors with low and slow returns as is the case with the agricultural sector.

In order to develop the potential sectors, new investment incentive schemes should be introduced. These packages should be designed to encourage investment in specific sectors, rather than the "one size fits all" policy which exists at the present time.

### *Anti-competitive Practices*

Several studies confirmed the prevalence of anti-competitive practices in Cambodia. The World Bank identified anti-competitive practices in a number of areas: conspiracy to limit access to markets and suppliers, government subsidies granted to competitors, state tolerance of some firms' tax arrears and violation of intellectual property rights. A perception survey by EIC in 2005 indicates that sectors with greater market participation, such as petroleum, telecommunications and public utilities are particularly badly affected.

In order to overcome anti-competitive practice, establishing a competition law or policies with effective enforcement is recommended as it would guarantee that markets function



effectively and efficiently in the interests of consumers.

### *Trade Facilitation and Governance*

Administrative procedures and trade document requirements for imports and exports are perceived as burdensome by many stakeholders.

To reduce overlaps and duplications, it is important to implement risk management approaches by speeding up the preparation of Service Level Agreements and Memorandums of Understanding among border agencies. It is also suggested that there should be an agreed process, laid out in published maps and guidelines associated with official fees. Another solution is to accelerate the development of Special Economic Zones (SEZs) by speeding up the ratification of SEZ law, which should also consider other fiscal benefits in addition to those in current investment law. In addition, the zones would be managed without red tape.

### *Standards and Certifications*

Standards laws and conformity assessments, which are compliant with international ones, are limited. In addition, private investment in certification services is restricted by the small market size of most sectors. As a result, product standards and certifications are not internationally recognized and are often rejected by importing countries or buyers.

Cambodia could unilaterally upgrade its standards and technical regulations to conform to international ones. Alternatively, it could consider Mutual Recognition Arrangement (MRA) within ASEAN, as another way to overcome standards barriers, with the focus on a number of sectors or products with export potential. Another effective option is to use the standards and conformity assessment systems of other countries in ASEAN: rather than setting up laboratory systems in Cambodia, the exporters could make use of internationally recognized laboratories in those countries. However, this system may need initial subsi-

dies since Cambodian exporters, who operate mainly on a small and medium scale are as yet unfamiliar with such practices, and their lack of experience may make them reluctant to risk investing in standard compliance services.

### **Concluding Remarks**

Given the economy relies heavily on the garment sector, now is the time for the country to explore the export potential in other sectors. The study recommended five sectors as suitable areas for diversification, and the promotion of these through a focused export strategy would support their sustainable development as well as create new employment, generate rural income and reduce poverty.

Nevertheless, these sectors will not develop per se, and preserving the status quo would mean the continued loss of value addition, employment opportunities and rural income, as well as slowing the pace of poverty reduction.

In order to develop the selected potential sectors, trade and indus-

trial policy urgently needs to focus on removing the constraints mentioned before. Implementation requires the participation of stakeholders at various levels. High level decision-makers need to intervene in formulating policies and legislation such as fuel price policy, competition law and investment law. Coordination among relevant government agencies is crucial, for instance in the areas of trade facilitation and standards and certification. The role of the private sector is important in the dialogue to provide feedback and express development needs. Donors can provide technical and financial assistance, and local government plays an important role by raising awareness and increasing the participation of villagers and farmers.

Lastly, the country should prepare the best negotiation strategies through various forums such as WTO, ASEAN, GSP, and bilateral agreements to deal with tariff and non-tariff barriers prevailing in the markets that are of interest to potential sectors.

**Dourng Kakada and Chan Vuthy**

### **Box 1: Experiences of Cambodia's Exports Facing Standards and Certifications Barriers**

**Fish and fish products:** Cambodia's fish products have not been exported to EU markets since 1997, while they can be exported to other countries such as the US, Hong Kong and Taiwan. In 1997, the European Commission issued new requirements for the purpose of consumer protection under Decision 97/296/EC, for countries wishing to export fish products into the EU. Those requirements include production legislation equivalent to the EU's; laboratories accredited against standard ISO17025; health conditions during production and storage in line with the EU's requirements; and health certification in line with international standards. Cambodia which has a weak standards infrastructure can not fulfill these requirements, thus is unable to access EU markets.

**Black peppers:** A local firm was prevented from exporting black pepper to Japanese markets due to its lack of a certificate of sterilization. Fortunately, French markets proved more accessible, since France requires only a certificate of analysis, which the firm was able to provide. In order to export their product to Japan, the firm would have to purchase expensive technology for sterilizing black pepper, which they are unwilling to invest in, since the Japanese market is the only one for which this process is required. The cost of sterilization is high, which raises questions of return on investment. On the other hand, there is no private investment in sterilization certification services since the market for this service is undersized.

**Source:** Economic Institute of Cambodia (EIC).



## The Cambodian Tourism Industry: A Growing Sector with the Potential for High Job Creation

*Cambodia's tourism has maintained economic growth and created both direct and indirect jobs. Yet, the sector could further contribute to the country's development and employment generation if a number of challenges are sustainably managed.*

Tourism is by far the most promising locomotive for the growth of the economy. Following its contribution of around 11 percent to the country's GDP in 2004, tourist arrivals to Cambodia have continued to increase at a high rate. However, the industry faces a number of issues, most notably, economic leakage and environmental degradation.

At present, only three main destinations attract the majority of tourists: Siem Reap (Angkor), Sihanoukville and Ratanakiri province; in spite of the existence of other suitable areas for development. This article will explore the potential for diversification in Cambodia's tourism industry and the challenges to be met.

### Global Tourism Industry

#### *Contribution to the World Economy*

Travel and tourism spending worldwide was slightly more than US\$6 trillion in 2005, and it is expected to exceed US\$6.5 trillion over a ten-year period from 2007 to 2016 with an annual growth of 4.5 percent, according to Tourism Satellite Accounting Research. The industry represented 3.6 percent of the world's GDP and generated around 2.5 million new jobs in 2006. Direct jobs created by the industry amount to a total of 76.7 million, or 2.8 percent of world employment.

In 2005, international tourism receipts for developing countries amounted to US\$203 billion. Based on World Tourism Organization (UNWTO) statistics, tourism is one of the major export sectors of developing countries, and is the primary source of foreign exchange earnings in 46 out of the 49 Least Developed Countries (LDCs).

#### *International Tourist Arrivals*

According to UNWTO, the number of international tourists in 2005 was estimated at 808 million, representing a growth rate of 5.5 percent over 2004. In 2006, the growth rate was estimated at 4.6 percent in real terms, slightly lower than in 2005. France remained the world's most visited destination for international tourists in 2004, receiving around 75 million tourists. This was followed by Spain and the United States that welcomed about 52 million and 46 million tourists, respectively, and China ranked 4th in the list.

In 2004, more than 50 percent of tourists traveled for holidays; another 26 percent visited friends and relatives; and nearly 16 percent of visitors traveled for business and professional purposes. Land and roads are still the most preferred means of transportation for tourists. According to UNWTO figures, in 2004, approximately 50 percent of the total international visits were made by

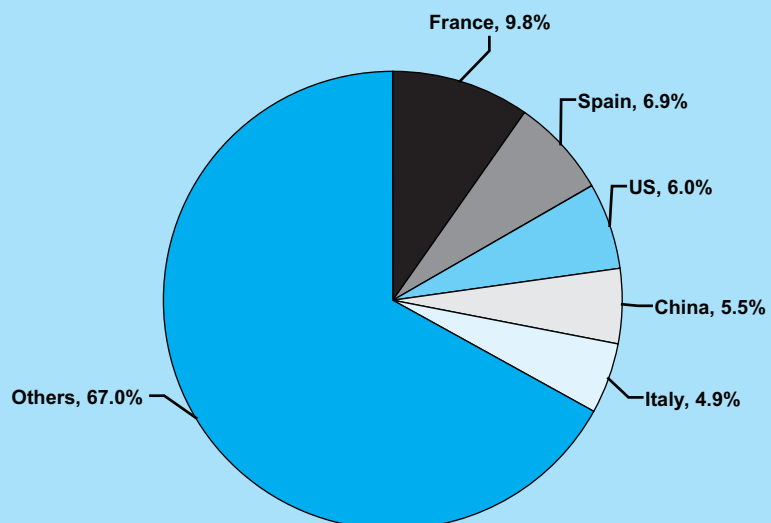
land, about 43 percent by plane and only seven percent by water.

#### **Tourist Trends and Prospects from 2007 to 2020**

Recently, there has been a demand for customized holidays among international tourists. In spite of the decreasing number of working hours, tourists tend to take shorter stays when going on holiday, but with the purpose of visiting a wider range of places. There has been a shift from active holidays to participative experiences, which provides new knowledge.

Based on a 2005 report by UNWTO, international arrivals are expected to reach over 1.56 billion by 2020, of which 1.2 billion will be intraregional arrivals and 0.4 billion will be long-haul travelers. Europe, East Asia & the Pacific and the Americas will be the top receiving regions, although Europe and the Americas are anticipated to have lower than average growth rates, estimated at 4.1 percent.

**Figure 1: World Top Tourism Destination in 2004**



Source: Tourism Organization.



### Cambodian Tourism Industry

Tourism, based almost entirely on natural and cultural heritage resources, is important for Cambodia thanks to its contribution to economic development. It is estimated that in 2003, the sector employed around 100,000 people, of which 32,500 were direct employments and 67,500 indirect employments, according to data from the Ministry of Commerce (MoC).

The number of domestic tourists increased from one million in 2002 to five million in 2005, raising more revenue for the Government and boosting local economies through the establishment of restaurants, shops, handicraft production and so on. This was due to the improvement of incomes, security, infrastructure development and more attractive tourist sites.

International visitors to Cambodia increased gradually from 0.7 million in 2003 to 1.4 million in 2005, almost double within two years. In 2005, the largest market for Cambodia's tourism was South Koreans (15.2 percent), Japanese (9.7 percent) and Americans (7.7 percent). Fifty-one percent were group tours and 49 percent were independent tourists; of these 97.15 percent were holiday tourists and 0.32 percent were business visitors. According to the Ministry of Tourism (MoT), the average length of stay was 6.3 days and daily expenditure was around US\$93.

### Potential Areas for Tourism Diversification

At present, Siem Reap, home to Angkor Wat, attracts the largest number of tourists. Sihanoukville, popular for its beautiful beaches and Ratanakiri province, well known for its natural wilderness, are the second and third most visited places. However, there is potential to develop areas that already receive some visitors, and to promote new ones.

#### *Silk Production Areas*

Silk making skills have been passed down for generations and the

whole process would be of interest to many tourists who want to have hands-on experience. Some potential areas are Koh Dech district in Kandal province, Bati in Samraong district and Prey Kabas district both in Takeo province. By promoting them as tourist destinations, revenue could be generated. Home-stays can be offered, and since silk production is a lengthy operation, visitors could stay for up to seven days to engage in the whole process.

#### *Buddhism and Religious Tourism*

Cambodia has the potential to generate more interest in its Buddhist culture and attract tourists who want to learn about the religion. With suitable development, some areas have potential for this purpose, such as Phnom Sompov Resort in Battambang, Phnom Suntuk in Kompong Thom, Kompong Trach Resort in Kompot, and Mount Udong, which is known for its Buddhist relics. Promoting such places as tourist attractions will not only preserve and promote Buddhism, but also enhance the economy of the residents living in those areas.

#### *Khmer Rouge Historical and Commemorative Sites*

Sites related to the Khmer

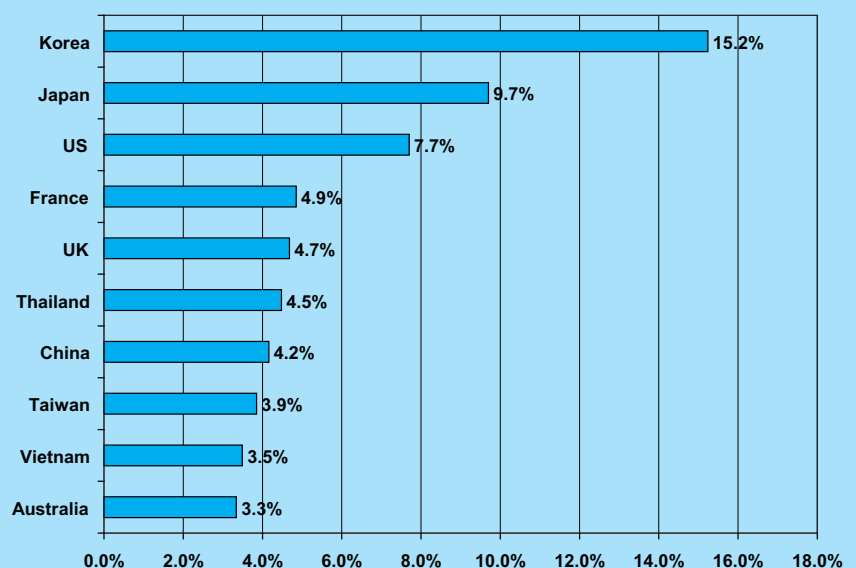
Rouge regime have received considerable attention from tourists who are interested in Cambodia's history and are eager to learn about the Pol Pot regime. Interest in this notorious regime is likely to increase through the media attention and the imminent Khmer Rouge tribunal. Toul Sleng Museum and Cheung Ek Killing Fields are examples that have already seen some transformation. Ta Mok's house, the former chief military commander under the Khmer Rouge, is another example of a site that could attract more visitors to travel to Anlong Veng.

#### *Eco-tourism Attractions*

The country has seven national parks with spectacular views and natural diversity: Bokor Resort in Kompot province, Kirirom National Park in Kompong Speu province, Virachey Park in Ratanakiri and Stung Treng provinces, Ream Park in Sihanoukville and Botum Sakor National Park in Koh Kong province.

Cambodia has many waterfalls and ethnic minorities located in the various mountain ranges. Chambok, in Kompong Speu province, has a variety of different attractions including a 40-metre-high waterfall, nature walks and ox-cart rides. Tourists can also learn

**Figure 2: Cambodia's Top Ten Tourism Markets in 2005**



Source: Ministry of Tourism, Annual Report on Tourism Statistic, 2005.

about the indigenous cultures and a variety of plants and animals.

Eco-tourism could also be promoted at Sek Sork resort in Banteay Meanchey province, Boo Sra and Sen Monoroum waterfalls in Mondolkiri province and Yeak Loam Lake in Ratanakiri province. Furthermore, Boeung Prek Lapouv in Takeo province, and Phnom Somkos in Koh Kong, have potential to attract avid bird watchers.

### *Mekong Dolphin Watching*

The Mekong River near the Lao border is home to the Mekong dolphins, mammals that are threatened with extinction. Kamyu Resort in Kratie province is the most suitable place for dolphin watching, and this activity could come under eco-tourism if developed in a sustainable way. Some of the revenue from tourists could be used to fund research to help protect the dolphins.

### **Issues and Challenges for Cambodian Tourism**

#### *Economic Leakage*

Economic leakage in tourism occurs when a country imports products from other countries to support tourist demand, which results in tourist revenue flowing out of the country to pay for imports, and only a small percentage is actually kept. This is what happens in Cambodia, due to a weak supply side.

Most of the food to support tourism is imported from Vietnam and Thailand. According to a study by the MoC, the leakage multiplier of Cambodian tourism is 0.4, which is very high compared with Thailand's figure of only 0.035. Cambodia lost around US\$370 million by importing produce from neighboring countries, based on this 2004 study of the estimated incomes generated in the tourism industry.

#### *Infrastructure*

The Government should

receive credit for its efforts of infrastructure rehabilitation. However, Cambodia still has problems related to access to tourism sites, making tourists hesitate to visit some sites, due to time constraints and lack of comfort. Insufficient road maintenance and road building is the main source of the problems.

### *Environmental Issues*

Water pollution and deforestation are of greatest concern. Some hotels and restaurants discharge polluted water into the rivers, while others run generators day and night, causing noise pollution. Illegal deforestation endangers the potential for ecotourism by destroying the landscape. The lack of rubbish bins, public toilets, and other facilities for tourists is also a problem.

### **Concluding Remarks**

Cambodia's tourism has brought about jobs and incomes for many young Cambodians and contributes significantly to economic devel-

opment. Besides the current three main tourist destinations, there are good prospects for diversifying tourism in the areas mentioned above.

A number of issues need to be tackled for Cambodia to benefit from the sector. Firstly, the limited supply capacity should be addressed to avoid economic leakage. Next, promoting the country's image on the global stage would help attract more tourists to Cambodia. However, environmental problems such as deforestation, water and air pollution, and damage to the ecosystems in tourist areas, are a major concern and should be seriously tackled.

The development of eco-tourism should be used as a strategy for preserving the country's unique natural environment and heritage. Creating jobs related to these areas will encourage the local populations to protect the sites, as they become aware of the mutual benefits. Finally, for the sustainable development of this particular sector, there is a need to pass tourism laws to regulate tourism-related businesses such as hotels and restaurants.

**Chou Huot and Chan Vuthy**

**Table 1: SWOT Analysis of the Cambodian Tourism Industry**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>Natural environment and cultural heritage to attract tourism – beaches, forests, waterfalls, temples, the Arts, traditions, ethnic minorities, etc.</li> <li>Safe and relatively peaceful environment (no threat from terrorism).</li> <li>Cambodian people are friendly to foreigners.</li> <li>Cambodia is located in a fast-growing region.</li> <li>High-quality silks and handicrafts for tourists.</li> </ul>	<ul style="list-style-type: none"> <li>Poor supply-industry (e.g. agriculture).</li> <li>Tourism laws and regulations to govern the industry have not been passed.</li> <li>Lack of regulations and standards to rank hotels and restaurants.</li> <li>Insufficient infrastructure, such as roads connected to tourist attractions.</li> <li>Low capacity of airports to host large airplanes and to connect Cambodia to important outbound tourist countries.</li> <li>Low-skilled labor force and insufficient education in tourism.</li> <li>Lack of information systems and insufficient data collection for policy development.</li> <li>Insufficient and ineffective campaigns to attract tourists.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>Attraction of more tourists resulting from Mekong Sub-Region Cooperation Program.</li> <li>Infrastructure improvement under Mekong Sub-Regional Development.</li> <li>Potential for home-stay tourism.</li> <li>Potential for diversification in tourism areas, especially eco-tourism.</li> <li>Attraction of more tourists – thanks to the improved image of Cambodia.</li> </ul>	<ul style="list-style-type: none"> <li>Possibility of environmental degradation due to lack of proper sewage systems in hotels and restaurants and littering.</li> <li>Possibility of destruction of eco-tourism due to deforestation.</li> <li>Possibility of political instability due to the forthcoming elections and instability in Thailand.</li> <li>Threat from bird flu.</li> <li>Uncertainty of the world economy, due to increasing oil prices and war against terrorism.</li> </ul>

Source: Authors, Based on interviews with staff of the Ministry of Tourism.

## The Cotton Sector in Cambodia: *Is Growing Cotton Beneficial for Cambodia?*

***Cotton could be an alternative to other crops grown in Cambodia. However, both national and international situations are unlikely to encourage cotton growing in small countries. There is still a long way to go if Cambodia wants to benefit from this particular sector.***

Garment manufacturing is one of Cambodia's main industries, and provides employment opportunities to many Cambodian people, especially women in rural areas. Despite the Agreement on Textile and Clothing (ATC) expiry on 01 January 2005, the industry continues to grow and constitutes an important part of the national economy.

However, there is a general argument that the competitiveness of this sector is reduced due mainly to an insufficient supporting textile industry, which requires cotton as an important input. Even though Cambodia grew a significant amount of cotton in the past, it remains doubtful whether cotton should be promoted at present to support the possible development of the textile industry within the country.

### International Cotton Market

Cotton growing is a main industry in some countries such as China, the US, India, Pakistan and Uzbekistan. Demand for cotton has kept increasing gradually over the years, indicating its importance to people's livelihoods. Cotton can be used for a variety of purposes, but it is mainly used as a raw material for fabric manufacturing, which is then processed into clothing for the garment industry.

#### *Production, Consumption and Trade*

Since the 1960s, the global harvested areas of cotton have varied between 30 and 35 million hectares, while global production has increased notably from less than 20 million tons in 2000 to approximately 25 million tons in 2005. This probably reflects the increase in the global yield of cotton. Data from the United States Department of Agriculture (USDA) shows

that China is the largest cotton producing country. In 2005, China's production capacity was 5.7 million tons, or 23 percent of the world's output. The US and India were in second and third positions, producing respectively 21 percent and 17 percent of global cotton. Other important cotton producers are Pakistan, Uzbekistan, Brazil and Turkey.

World cotton consumption has also increased remarkably to approximately 25 million tons in 2005. This increase is probably linked to the growth in population; it is also believed to be influenced partly by the impact of the end of the Multi-Fibre Agreement (MFA) on developing countries, especially China, India and Pakistan. The end of the quota system boosted the textile and garment industries in China and India in particular, which in turn drove the demand for cotton. As a result, China absorbed 9.3 million tons in 2005 or 38 percent of the world's consumption of cotton.

This high consumption level implied that China is not only the top cotton producer, but also the top importer. Local production could only

satisfy around 60 percent of domestic consumption and as a result, China imports more than 40 percent of its demand. India and Pakistan consumed roughly 15 percent and 10 percent of the global demand, making them the second and third cotton-consuming countries. In 2005, total exports of cotton were 9.8 million tons, representing an increase of 28 percent compared with 2004. The US is the major cotton exporter. About 75 percent of US production is for export, accounting for about 40 percent of world export.

#### *Cotton Trade under WTO*

Cotton has assumed an important role in international agricultural trade. It is an essential cash crop for the economy and social development of many African countries. Several millions of people in Africa depend on the production and export of cotton. In Benin, Burkina Faso, Mali and Chad, cotton production accounts for five to 10 percent of GDP. It also plays a central role in their trade balance, accounting for nearly 30 percent of the total export

**Table 1: Main Cotton Producers in 2005 (000's tons)**

	Harvested Area (ha)	Production	Import	Export	Consumption
China	5,060	5,704	4,199	8	9,330
United States	5,586	5,201	6	3,927	1,160
India	8,830	4,180	87	708	3,592
Pakistan	3,100	2,145	425	70	2,564
Uzbekistan	1,432	1,208	-	1,045	174
Others	10,422	6,415	4,955	3,970	7,838
<b>Total</b>	<b>34,430</b>	<b>24,854</b>	<b>9,671</b>	<b>9,728</b>	<b>24,658</b>

Source: United States Department of Agriculture (USDA).

revenue, and more than 60 percent of agricultural exports revenues.

As part of agricultural produces, cotton has become a major concern in trade negotiations under WTO. There appears to be an issue of cotton subsidies in developed countries, especially the US and the EU. Under the Agreement of Agriculture (AoA), which came into force in 1995, WTO requires its members to reduce subsidies that hinder trade. Nonetheless, due to a loophole in the agreement, some developed countries still use subsidy policies to support their farmers. China, a leading country in the cotton trade, is also known for its strong support program for cotton farming. The bilateral agreement between China and the US to pave the way for China's entry into WTO will greatly reduce China's support program for agriculture, however.

The International Cotton Advisory Committee (ICAC) estimated that direct income and price support worldwide increased from US\$3.8 billion in 1997 to US\$5.8 billion in 2001. Fourteen countries, representing three-fourths of world cotton production, offered direct income and price support programs to cotton growers. These programs have resulted in a surplus in cotton production, which has reduced world cotton prices. In turn, this has forced the burden of adjustment to low cotton prices onto growers in countries that do not provide similar measures of protection.

ICAC has also predicted that US cotton production would be reduced by about one-fourth in the absence of the US cotton program, and production in the EU would probably drop by three-fourths without a subsidy. Likewise, China's production would drop greatly without the presence of its support program. Furthermore, ICAC indicated that the withdrawal of American cotton subsidies would raise cotton prices by 26 percent.

The implications of these policies affect poor cotton producing countries, especially African countries. For the region as a whole, the loss amounts to US\$301 million, while eight cotton producing countries in the West Africa

accounted for around US\$191 million in overall losses. This issue has been raised in several WTO ministerial meetings, and representatives from African countries are strongly committed to the elimination of support programs by developed countries. The deadlocks at several meetings have been due to the demand to eliminate the support programs for agriculture, which the US and the EU in particular find hard to accept.

### Cotton Sector in Cambodia

In the early 1960s, Cambodian farmers were keen to grow cotton. According to a World Bank (WB) study on private sector development, there were approximately 20,000 hectares of land for growing cotton at that time. However, due to political instability and turmoil the growing areas dropped significantly towards the end of the decade. After 1979, only around 1,500 hectares of land was used to grow cotton, but again this area gradually decreased. More recently, the reasons behind the dearth of cotton production have been the lack of textile industry and competition from other commercial crops. According to USDA's database, during the 1990s, Cambodia became a cotton-importing country, and on average imported

1,100 tons annually. The imported volume was triple in 2002 compared with 2001 and reached almost 4,400 tons in 2005. This seems to indicate the potential market for cotton in Cambodia, given the growing importance of the garment industry.

At present, however, cotton does not appear to be an important crop in Cambodia. Official statistics do not display cotton in their figures. An interview with staff at the only textile factory in Kampong Cham province revealed that around 200 hectares of cotton is currently grown in the province, which is inadequate for all their supply needs. The Cambodian annual production of cotton represents, on average, 340 tons, which is nothing if compared with the main producers or neighboring countries. Vietnam and Thailand each produce more than 10,000 tons of cotton annually and have plans to expand their cotton growing areas in the near future. Cambodia's production can not even satisfy local demand and the country has to import cotton from China.

### Cost and Benefit of Growing Cotton in Cambodia

An analysis of the production

**Table 2: Cost Profile for Growing Cotton in Cambodia**

Items	US\$/ha	%
Seeds	50	19%
Labor	190	73%
Other Expenses	20	8%
<b>Total Cost</b>	<b>260</b>	<b>100%</b>
Yield (ton/ha)	1.5	
Selling Price (US\$/ton)	360	
<b>Gross Income</b>	<b>540</b>	
<b>Net income</b>	<b>280</b>	

Source: Authors, calculation based on interviews with the private sector.



cost shows that growing cotton requires labor-intensive work, which accounts for about 73 percent of the total cost. Cost of cottonseeds is estimated at US\$50 per hectare or 19 percent of the production cost. It is worth noting that in practice, the processing company imports and provides seeds at a low price to farmers who grow cotton for the company. According to a WB study on cotton in 2003, the cost of cottonseeds could be three times higher, if farmers are to import by themselves. Assuming that cotton yields are 1.5 tons per hectare and the cotton price is stable at US\$360 a ton, growing cotton generates a net income of about US\$280 per hectare. This level is a somewhat interesting return if compared to paddy production which provides an estimated net return of around US\$150 per hectare (EIC, 2007). Nonetheless, there exist a number of obstacles for the development of the cotton sector in Cambodia.

### Challenges for the Development of Cambodian Cotton Sector

Although Cambodia's land and weather conditions are suitable for growing cotton, many farmers are reluctant to switch from other cash crops, such as paddy, with which they are more familiar. As shown above, growing cotton provides better returns than growing paddy, but most farmers are not aware of the international and national market information on cotton, which means it is grown on a subsistence basis, providing inconsistent supply for the sector as a whole.

According to an interview with the private sector, the seed to lint cotton conversion ratio is 30 percent. This means that one hectare of land growing cotton yields an average 450 kilograms of lint cotton, which is relatively lower than the world average, estimated at 620 kilograms. Insufficient irrigation systems prove to be a difficulty for cotton cultivation in Cambodia. Moreover, the lack of technology and old equipment used in the conversion process make it even more diffi-

cult for Cambodia to be competitive in the cotton sector. In terms of quality, Cambodian cotton falls in the low-quality category. Cottonseeds imported into Cambodia are of the second rank and also of poorer quality.

Growing cotton could be beneficial for Cambodia because of the potential integration with the country's expanding garment industry. However, for this to happen it requires the development of supporting industries, particularly a textile industry. At present, textile factories are rare in Cambodia, and most of the garment factories import fabric, not lint cotton, for their production.

It is also worth highlighting that dependence on cotton for exports appears to be a challenge for Cambodian farmers. As revealed above, many countries have supported their cotton farmers through different measures, which make it difficult for small countries to compete in the international market. Cambodia does not have any clear policy to support the cotton sector.

### Conclusion

Cotton is an industrial crop with growing demand in the international market. Growing cotton is rela-

tively profitable if farmers manage to achieve high yields and obtain government subsidies. Although the issue of cotton subsidies has been addressed to WTO, many farmers in the main producing countries, such as the US and China, continue to benefit largely from the subsidy schemes.

In small countries like Cambodia, cotton could be an alternative to other crops, but both national and international situations are unlikely to encourage cotton growing and it is not a real opportunity for Cambodian farmers for the moment. There is still a long way to go if Cambodia wants to benefit from this particular sector. A clear policy framework should be established to support the sector as a whole. From the start, these policies could include substantive state subsidies to encourage farmers to become more active in the sector. Moreover, supporting the development of the textile industry could also have a positive impact on the cotton sector.

However, the evolution of cotton trade negotiations within WTO context should be the first thing to consider before Cambodia can develop such a policy framework to support the development of the cotton sector.

**Chou Huot and Chan Vuthy**

#### Box 1: From Cotton to Consumer Goods

Farmers harvest cotton balls, then dry and sort them before ginning to make lint cotton. Ginning is usually done with old equipment imported from China. This is the yarn production process.

According to an interview with the private sector, the seed to lint cotton conversion ratio is 30 percent. Thus, one ton of cottonseeds yields only 0.3 ton of lint cotton. Lint cotton needs considerable maintenance before it is transformed into fabric. With the available technology in Cambodia, there is about 10 percent wastage when lint cotton is converted into yarn. Therefore, one ton of lint cotton after processing yields only 0.9 ton of yarn cotton.

Next, yarn cotton is woven and knitted to produce fabric which is cut and sewn to make a complete product. This is called the fabric production process, and as in the yarn production process, old machines imported from China are used. The ratio of conversion from yarn cotton into fabric is 98 percent, leaving waste of only two percent. The fabric is then cut into different sizes and bleached before it can be used to make products such as bed sheets and clothing. It is estimated that the waste in the bleaching process is two percent.

**Source:** *The World Bank, Towards a Private Sector-Led Growth Strategy for Cambodia, June 2003.*

## The Motor-Assembly Sector in Cambodia:

### *A Sector Limited to Domestic Demand*

*Motor-assembly has evolved in Cambodia and there has been a sharp rise in the demand for new motorcycles. However, stiff foreign competition in the export market means opportunities to expand are restricted.*

Motorcycles are a popular means of transportation in many countries, especially in Asia. Cambodia imports all of its motorcycles, and the number of imports keeps increasing appreciably. Due to the growing local demand, motorcycle assembly started in Cambodia in 1999, and since then most companies have imported motorcycles as Complete Knock Down (CKD) units. Previously, most motorcycles were imported as Complete Build Up (CBU) units.

This article seeks to understand the potential for the development of motor assembly in Cambodia. The study is rather exploratory and further effort is required for a more comprehensive analysis of the sector.

#### Global Motorcycle Market

The motorcycle industry has grown markedly in recent years. Global production increased significantly from 12 million in 1991 to around 30 million in 2003. China is the biggest producer, while Japan is the main source of Foreign Direct Investment (FDI) in motorcycles around the globe. In 2003, China alone produced more than 14 million motorcycles of which 20 percent were for export. It should be noted that the demand for motorcycles in South-East Asia has risen considerably, and this attracts FDI, mainly from Japan and Taiwan, in the industry. South-East Asian countries, especially Vietnam, Thailand and Indonesia, have been major players in the development of the global motorcycle market. The regional demand increased from less than four million in 2000 to over six million in 2003. Regional production was also up appreciably to nearly six million in 2003, accounting for about 20 percent of global production.

It is also important to note that Japan, as the major FDI contrib-

utor, has played a crucial role in transferring the industrial technology to other countries. However, total production in Japan represented only 1.83 million units in 2003, explained by the fact that Japan now focuses more on niche markets, producing motorcycles for export to high-income countries in Europe, Asia and to the US.

#### Motor-Assembly Sector in Cambodia

All motorcycles used in Cambodia are imported as either CKD or CBU units. As the Cambodian economy continues to grow, two separate consumer markets begin to emerge. The first is the traditional segment, where the motorcycle serves as the workhorse for family and commerce, and the second is the youth segment that tends to seek out new models and designs. Official statistics from the Customs and Excise Department show that the number of imported motorcycles keeps increasing at a remarkable rate. Cambodia imported only 75,000 motorcycle units in 2002, but the number increased to 175,000 in 2006. However, the figures do not take into account motorcycles smuggled into Cambodia through different border checkpoints. The statistics also show that used motorcycles represent the largest number of

imports, with new motorcycles only accounting for around 20 percent.

As in other South-East Asian countries, Japanese motorcycles are popular in Cambodia and are recognized for their good quality. Nonetheless, by the late 1990s, Chinese motorcycles started to penetrate the Cambodian market. In general, the Chinese products are of lower quality, but come at a reasonable price suitable for middle-income families. Higher-income families generally prefer to buy Japanese models. In Cambodia, the demand for motorcycles is usually higher after the harvest season, from November to April, because farmers, who comprise the majority of the population, have money after selling their paddy.

Looking at the supply side, Cambodia is not attractive enough for establishing manufacturing factories. Producing motorcycles as well as the spare parts requires a relatively high-skilled labor force compared to traditional sectors. However, the assembly of motorcycles started in Cambodia in 1999, with both Honda and Suzuki setting up assembly plants. There are now a dozen other Chinese motor-assembly companies in Cambodia such as MCT, UMT, MGT, Hijoy, Spider, Loncin, Lifan, Jumbo, etc. In interviews conducted with staff at one Chinese company, it was confirmed

**Table 1: Number of Imported Motorcycles in Cambodia**

	2002	2003	2004	2005	2006
Motorcycle (million US\$)	29.0	34.3	46.1	55.6	93.4
Motorcycle (000's Unit)	75.4	88.6	102.5	121.7	175.3
Unit Price (US\$)	385	387	450	456	533

Source: Customs and Excise Department, MEF.

that the firm sells between 100 and 150 units per month.

The existence of the assembly plants has changed the form of motorcycle importation. Many companies now prefer importing motorcycles as CKD units for assembling in the country, and getting the spare parts from Japan, China, or other countries.

### Production Cost Profile of the Motor-Assembly Business in Cambodia

As new motorcycles are mostly imported as CKD units for assembling in Cambodia, the value of input cost represents the largest proportion of the total cost of the motorcycle. The value of a CKD unit of a Japanese motorcycle is estimated at around US\$683 per unit while that of a Chinese is US\$382 per unit. This accounts for around 70 to 80 percent of the total cost.

Regarding the labor cost, companies which assemble the Chinese motorcycles require about four to six permanent, skilled assemblers, who can earn roughly US\$70-80 per month. Besides the permanent staff, some companies may also reserve part-time workers to support the assembly activities when there are more orders. In general, labor costs make up only 1.4 percent for Japanese motorcycles and 0.6 percent for Chinese motorcycles. This clearly suggests that the motor-assembly sector has an insignificant impact on human resource development, because the nature of the industry requires only a limited number of skilled workers. It is estimated that the whole industry employs less than 1,000 permanent workers.

It is also important to understand the structure of administrative cost since it represents a significant proportion of total cost, 12 to 16 percent after the input cost. This administrative cost includes import tax and fees paid to different ministries such as the Ministry of Public Works and Transport (MPWT) and MoC. In practice, big companies are allowed to pay an annual lump-sum, around US\$10,000,

to government officials in exchange for paying less import tax. This has, to some extent, put bigger companies in a more favorable position than small companies, especially when they import in large quantity.

The average price (including VAT) of a Japanese motorcycle is about US\$1,200 per unit and that of a Chinese, around US\$500-700 per unit. An analysis of the cost profile suggests that the motorcycle business provides remarkable returns. The profit margins stand above 10 percent for both Japanese and Chinese motorcycles.

### Challenges for the Motor-Assembly Sector in Cambodia

In spite of these returns, the motor-assembly business requires substantial investment. The high administrative cost does have an impact on the motor-assembly sector in Cambodia. Red tape has been another obstacle, making the importation of motorcycles a lengthy and complicated process. The bigger companies' advantages are also likely to act as a constraint for small companies or new entrants into the motor-assembly market.

Smuggling is another hindrance to the sector, because companies may lose their markets, especially in the provinces, due to the uncontrolled, ille-

gal movement of motorcycles. With poor enforcement of laws and regulations, people tend to buy smuggled motorcycles at a cheaper price.

### Concluding Remarks

At present, Cambodia is unable to attract the investment for the manufacture of motorcycles or spare parts. Nonetheless, the assembling of new motorcycles in Cambodia has evolved from importation of CBU units to the importation of CKD units. The motor-assembly sector started to support domestic demand for new motorcycles. Dependence on export is not an opportunity for the Cambodian motor-assembly sector due to cost competitiveness. The fact that most countries in the region have already become main motorcycle producers leaves very little room for Cambodia to have a vertical integration within the motorcycle sector.

The motor-assembly sector, the expansion of which is limited to domestic demand for new motorcycles, does not appear to be an important sector for the economy or for human resource development in Cambodia. It does not have potential for export earnings in the near future.

**Thak Socheat and Chan Vuthy**

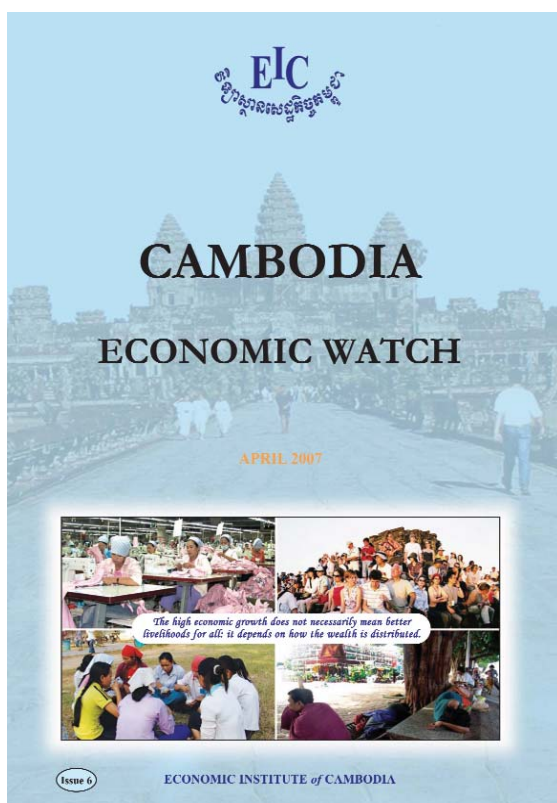
**Table 2: Cost Profile for Motor-Assembly Business in Cambodia (US\$)**

Item	Japanese Motorcycle		Chinese Motorcycle	
	Cost (\$)	% of Sale	Cost (\$)	% of Sale
Imported Inputs (CKD)	683	78.9%	382	73.6%
Labor	12	1.4%	3	0.6%
Utilities	4	0.4%	2.5	0.5%
Transportation	23	2.7%	29	5.6%
Administrative cost	105	12.1%	82	15.7%
Other expense	38	4.4%	21	4.0%
<b>Total Cost</b>	<b>865</b>	<b>100.0%</b>	<b>520</b>	<b>100.0%</b>

*Source: WB, Private Sector Development, 2003 & EIC interviews with the private sector in 2006.*

## EIC RECENT PUBLICATION

The Economic Institute of Cambodia is pleased to present the 6<sup>th</sup> issue of its bi-annual "Cambodia Economic Watch". This issue considers the country's current economic trends with an in-depth look into performances, recent progress and reforms. With the data provided, urgent measures to solve inherent and recurring problems are highlighted.

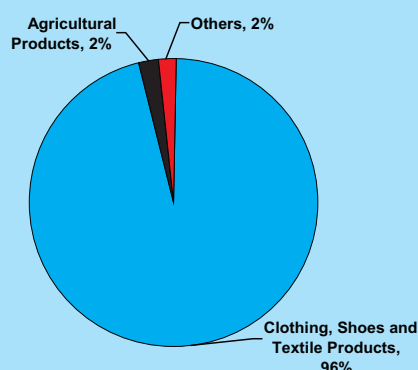


102 pages  
Price: US\$10

## CAMBODIA'S EXPORT PROFILE

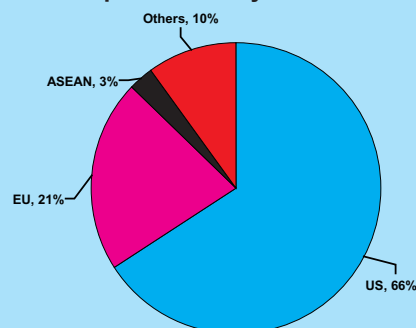
Cambodia's exports are limited in terms of products and market places, which is putting the country in a precarious situation. Practical policies with effective implementation are called for in order to diversify the country's export profile and promote development, job creation and poverty alleviation.

Formal Export Profile by Products in 2006



Source: Customs and Excise Department, MEF.

Formal Export Profile by Countries in 2006



Source: Customs and Excise Department, MEF.



## Economic Review

Suite 234, Phnom Penh Center, Corner Street 274 & 3, Phnom Penh, Cambodia  
PO Box 1008 Phone: (+855) 23 987 941 Fax: (+855) 23 224 626  
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