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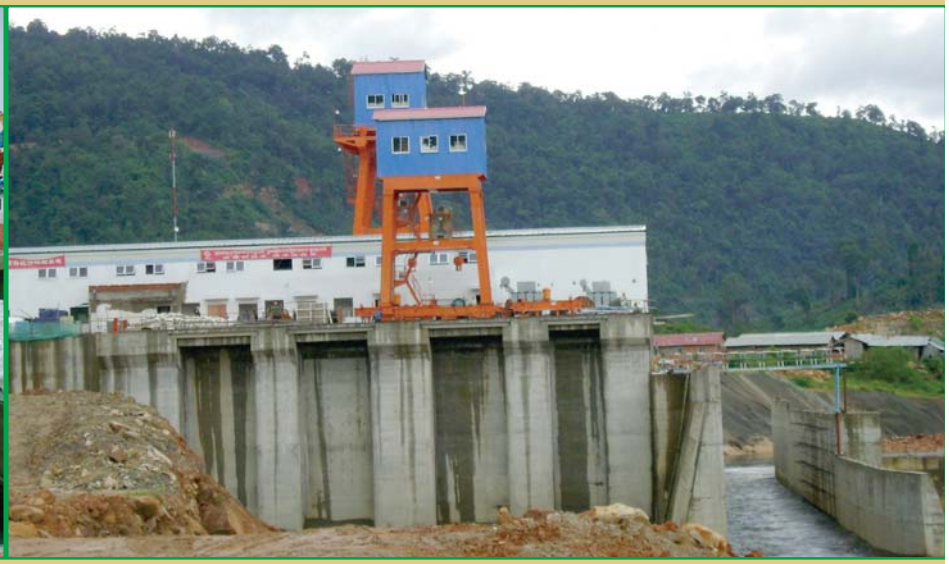
Assessing China's Impact on Poverty Reduction in the Greater Mekong Sub-region: The Case of Cambodia



OUCH Chandarany, SAING Chanhang and PHANN Dalis

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Acronyms and Abbreviations

ACFTA	ASEAN-China Free Trade Area
ACLEDA	Association of Cambodian Local Economic Development Agencies
ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AMK	Angkor Mikroheranhvatho Kampuchea
ARTNeT	Asia-Pacific Research and Training Network on Trade
ASEAN	Association of South East Asian Nations
ASYCUDA	Automated System of Customs Data
PRASAC	PRASAC Microfinance Institution
CDC	Council for the Development of Cambodia
CDRI	Cambodia Development Resource Institute
CLMV	Cambodia Laos Mayanmar Vietnam
CMDG	Cambodia Millennium Development Goals
CNOOC	China National Offshore Oil Corporation
CNRS	Centre National de la Recherche Scientifique
CPI	Consumer Price Index
CRDB	Cambodian Rehabilitation and Development Board
CSES	Cambodia Socio-Economic Survey
DAN	Development Analysis Network
DTIS	Diagnostic Trade Integration Study
EBA	Everything But Arms
EHP	Early Harvest Programme
EIC	Economic Institute of Cambodia
ELC	Economic Land Concession
EU	European Union
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
FTA	Free Trade Area
GDP	Gross Domestic Product
GDRP	General Directorate of Rubber Plantations
GMAC	Garment Manufacturers Association in Cambodia
GMS	Greater Mekong Sub-region
GSP	Generalised System of Preference
KHR	Cambodian Riel

MAFF	Ministry of Agriculture, Forestry and Fisheries
MFN	Most Favoured Nation
MoC	Ministry of Commerce
NIS	National Institute of Statistics
NPRS	National Poverty Reduction Strategy
NSDP	National Strategic Development Plan
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OGB	Oxfam GB
PRC	People's Republic of China
RMB	Renminbi – currency of China
SEDP	Socio-Economic Development Plan
SESC	Socio-Economic Survey of Cambodia
SITC	Standard International Trade Classification
SWAp	Sector-wide Approach
USAID	United States of America International Aid
USD	United States Dollar
USITC	United States International Trade Commission
WTO	World Trade Organisation

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Phnom Penh, June 2011

Executive Summary

The deepening trade relation between Cambodia and China has brought about significant expansion of bilateral trade between the two nations; however, Cambodia's negative trade balance continues to widen at an average annual growth rate of 34 percent. The study uses the framework developed by Jenkins and Edwards (2004) to examine China-Cambodia trade and its implications for poverty reduction in Cambodia through three specific dimensions, namely export to China, import from China and export to the third market.

The pattern of export shares between 1992 and 2008 has changed noticeably. The share of labour-intensive agriculture dropped substantially from 51.4 percent in 1992 to 9.1 percent in 2000 and then rebounded to 29.6 percent in 2008. There was also evidence of a spike in export shares of live animals and fish between 2000 and 2008. Labour-intensive textiles and garments' share of export to China also showed a marked upward trend from 3.2 percent in 1992 to 28.2 percent in 2008. The rising shares of the two product groups would certainly have contributed to poverty reduction in Cambodia provided that they also generated significant employment.

Data on import from China show a small and declining share of labour-intensive agriculture products between 1992 and 2008. It appears that competition between the two countries in domestic agriculture markets is unlikely. Some of the imported products, which are not of Cambodian specialisation, are complementary. However, the regular and constant rise in the import share of certain products in this category, albeit small, could pose potential competitive threat to Cambodian producers in the future. More importantly, the substantial jump in the import share of labour-intensive textiles and garments between 1992 and 2008 does not compete with the domestic market provided that the products are assembled for re-export to third markets. The rising import share of said products appears to contribute to employment creation in Cambodia, thereby having a positive poverty effect, but it hinders the development of domestic backward linkage industries in the domestic economy.

In terms of consumer gain, data show that the import share of pro-poor consumer goods increased between 1992 and 2000, but then declined between 2000 and 2008. This indicates that poor consumers' gain from the import of cheap Chinese consumer products abated slightly during the second half of this period, making it less likely that the import of pro-poor products from China contributes to poverty reduction in Cambodia. Pro-poor products that have been imported regularly include fish, cereal, vegetables, fruit, beverages, apparel and worn clothing.

Analysis of export to the third market reveals that Cambodia and China could be competitors in manufactured goods, but not agricultural products. Further examination of the top 12 garment exports to the US and the EU shows that there is potential competition with China in the US market, but not in the EU market given Cambodia's tiny 0.01 to 10 percent market share. Among the 12 products in the US market, China's declining share and Cambodia's rising share of knit/crochet apparel (SITC 8459) creates opportunity for domestic suppliers, while the steep rise in China's market share of the remaining products could pose potential threat to producers in Cambodia. This could have negative implications for poverty alleviation in Cambodia.

In line with the analysis of China's trade, the poverty effects of Chinese investment in Cambodia are also investigated by applying Jenkins and Edwards's (2004) framework. Labour-

intensive foreign direct investment (FDI), which is important for poverty reduction in its role as a major generator of employment in Cambodia, is examined. A case study on the garment sector, which is greatly attractive to investment from China, looks at the impact of China's investment in Cambodia through: i) increased earnings of the rural poor through employment creation and higher wages; ii) remittance; and iii) skill development of the rural poor.

The case study shows to some extent that Chinese investment in the Cambodian garment sector has contributed to poverty reduction by creating employment for rural people. A survey of 300 garment workers was conducted in Phnom Penh (150 from Chinese and 150 from non-Chinese owned factories). The survey indicates that 70 percent of the total interviewed workers were previously self-employed, 45 percent of whom are presently employed in the selected Chinese owned factories. Garment workers in both Chinese and non-Chinese factories earn on average around USD80 per month or USD2.67 per day (USD2.03 per day at 2006 prices), which is higher than the overall poverty line in Phnom Penh of USD0.76 per day (USD0.71 per day at 2006 prices). Workers' remittance is used for household daily food consumption (64 percent), as well as for investing in agriculture, paying debt and saving for children. In terms of skill development, neither the Chinese nor the non-Chinese factories appear to have clear training programmes. Only two of the interviewed workers (employed in a Chinese factory) had been offered training – in new design and labour law.

In sum, Chinese investment in the garment sector has considerably contributed to poverty reduction in Cambodia by providing employment opportunities and income generation for the rural poor.

The impacts of China's official development assistance on poverty reduction are assessed through two case studies on China funded projects in the transport sector: the Rehabilitation of National Road No 7 from Kratie to Trapeang Kriel (a border-crossing to Laos) and the Construction of the Prek Tamak Bridge in Kandal province. The main focus of the case studies is to assess the likely impact of each project on local people's livelihoods and local communities' social development, primarily based on local people's perspectives. The new road and bridge built under the China disbursement projects have provided the villagers with more positive than negative benefits. The opportunity of growing more crops and better access to market has improved their quality of life. They have easier access to more education as well as better healthcare services, can travel further to find work and learn about the outside world from going to the provinces or Phnom Penh city. Conversely, the villages can be reached more readily by development agencies which could bring social services to the areas as well as help in managing forest resources. In short, both projects have brought more livelihood options for local people.

CHAPTER 1
INTRODUCTION

1.1 BACKGROUND

Over the last three decades, China has witnessed dramatic economic transformation, rapid development and greater involvement in regional and global economic and political affairs. Such significant achievements have become the subject of intense debate, seeing China as both economic threat and opportunity.

Countries in the GMS are geographically close to China and constitute a highly dynamic region with great potential for development that could become a strategic market space and provide institutional arrangement prospects for strengthening China's regional integration. Likewise, China could become the gateway and main market destination for GMS countries, reducing their export dependency on the international market. Through connecting with countries in the GMS, China has built considerable trade and investment relations and provided support in the form of official development assistance (ODA), particularly infrastructure development.

Cambodia views China as a promising development partner that can expedite the country's development and reduce the gap with other Asian countries.[1] Clearly, the weight of China's presence is being increasingly felt in the country, drawing attention to its contributions and impacts. In discussing these issues, therefore, China's increasing role and its impacts within Cambodia should be studied.

1.2 RESEARCH OBJECTIVES

This study is one of a series of country studies conducted by GMS-DAN with support from the Rockefeller Foundation that seek to assess the potential impacts of China on the poor in the GMS countries, namely Cambodia, Vietnam, Laos and Thailand. This working paper focuses on Cambodia and analyses the poverty effects of China's rise through three critical components: *i) trade, ii) investment,* and *iii) official development assistance*. It examines the trade relation between Cambodia and China and its poverty implication by mainly looking at the role of China's trade in labour-intensive products. The contribution that China's investment makes to the poor is reviewed through a case study on the garment sector. In recognition of China's support in developing Cambodia's infrastructure, two case studies on Chinese ODA funded projects in the transport sector explore the contributions of China's assistance to livelihood and social development of local people.

The paper aims to raise policymakers' awareness of the impacts of China's investment, trade and ODA in order to consider ways to mitigate the negative and promote the positive impacts for poverty reduction and the country's development. Part 1 describes the background and objective of the study. Part 2 reviews existing literature and the poverty situation in

1 H.E Keat Chhon, Cambodia's deputy prime minister and minister of Economy and Finance, in an exclusive interview with China Daily on 18 September 2010 http://www.cdeclips.com/en/business/fullstory.html?id=51941 (accessed 25 September 2010)

Cambodia, and presents a brief overview of policy on Cambodia-China trade and investment relations and Cambodia-China development assistance relations. Part 3 describes and analyses the trends in trade between Cambodia and China, explains the analytical framework on trade impact, and investigates the impact of China's trade and its contribution to poverty reduction in Cambodia. Part 4 looks at the trends of China's investment in Cambodia over the past decade, describes the methodologies and analytical framework of a case study on the garment sector and discusses the findings and poverty implications in terms of employment generation, remittance and skill development. Part 5 illustrates the findings and analyses from two case studies on China's ODA-funded transport projects in Cambodia and their potential impacts on the local people. Finally, Part 6 discusses the main issues and policy implications from the study's findings.

CHAPTER 2

REVIEW OF EXISTING STUDIES AND POVERTY SITUATION

2.1 REVIEW OF STUDIES ON CHINA'S IMPACTS ON THE CAMBODIAN ECONOMY

China's rapid growth during the last couple of decades has clearly stimulated curiosity among academics, researchers and policymakers in both developed and developing countries about the magnitude of the effects, either complementary or competitive, that China could have on least developed countries. As the fourth largest world economy in terms of GDP at official exchange rate (Jenkins *et al*. 2007:235), China has found its way into extracting productive resources in least developed countries in order to enhance its production capacity and to keep pace with accelerating world and domestic demand. This begs the question whether China contributes to the host least developed countries' development or hinders it.[2] Some of the major literatures on the impacts of China on poverty reduction in Cambodia are reviewed below.

The study by Jenkins and Edwards (2004) is one of the major researches on the impact of China on poverty reduction, including in Cambodia. By combining a disaggregated approach to examine the impacts of China on trade of the third countries at 3-digit SITC level with Winters' (2004) framework for the analysis of trade-poverty linkages using data from 1990 to 2002, they find that in terms of export to China, Cambodia (among a few other Asian countries such as Bangladesh and Pakistan) predominantly exported labour-intensive manufactured products and some labour-intensive agricultural products3 that have notable implications for poverty. Using an export similarity index—the closer the index is to 1, the greater the likelihood that China and Cambodia will be competitors—the study also found that Cambodia and China have strong export similarity for both overall export and manufactures export.

As the major proportion of manufactured exports comprises labour-intensive textiles and garments, the study projects that rising competition from China in the third market could have negative effect on the poor. Although the import of manufactured products from China is substantial, it does not displace domestic industries, which employ unskilled workers, as those imports are mainly yarns and fabrics for garment export-oriented production. And thus, imports from China pose no significant threat to domestic manufacturing industries and therefore have minimal negative effects on the poor.

Hing and Nou (2006), using in-depth consultation with various stakeholders to explore the poverty implications of the Early Harvest Programme (EHP) under the framework of ASEAN-China Free Trade Agreement, conclude that EHP provides Cambodia an opportunity

2 For the analysis and findings on impacts of China's growth on least developed countries see papers by Jenkins & Edwards (2004); Jenkins *et al*. (2007); Kaplinsky & Messner (2007); and Humphrey & Schmitz (2007).

3 Based on Jenkins & Edwards'(2004), labour-intensive agricultural products are SITC-Rev2 product codes 037, 042, 05, 06, 07 and 232; labour-intensive manufactures are SITC-Rev2 product codes 269, 61, 63, 665, 666, 821, 831, 851 and 89; labour-intensive textiles and garment products include SITC-Rev2 product codes 65 and 84.

to develop its agriculture as a source of growth and poverty alleviation through expanding export of products such as fresh fruit, livestock, fish, shrimps and prawns to China. Applying the industrial pollution projection approach developed by Hettige *et al*. (1995) in their investigation of China's impact on the environment in the region, Hing and Jalilian (2008) report that in the case of Cambodia, rising imports in the most polluting sectors from China between 2001 and 2007 led to a substantial gain from trade for the Cambodian environment, which comes at the cost of environmental degradation in China.

Chinese investors have been significantly involved in several sectors of Cambodia's economy, namely garment manufacturing, extractive industry, agro-industry and infrastructure development. Contribution from Chinese investors through their direct investment in the garment industry has been especially noteworthy. Data from the Garment Manufacturers Association in Cambodia (GMAC 2006) indicates that of the total number of factories, approximately 20.7 percent are owned by Hong Kong investors, followed by Taiwanese with 24.5 percent and Chinese with 13.1 percent, while only 8.6 percent are owned by Cambodian investors (cited in USAID 2007:8). Yamagata (2006), using firm-level data from 164 companies employing 147,000 females and 21,000 males in 2003, confirms that Cambodia's garment industry has substantially contributed to poverty reduction in the country through the employment of the poor as entry-level workers at wages far above the poverty line. Using overall food poverty lines of USD0.63 per capita per day for Phnom Penh and USD0.46 per capita per day for rural areas and data from Cambodia's Social Economic Survey 1999, the author estimated that the overall poverty line per capita per month for Phnom Penh in 1999 was USD18.9, which is far below garment workers' average monthly earnings of USD45.

The role of Chinese state-owned and private firms in the mining and extractive industry sector is also emerging. Although impact from these activities on Cambodia has yet to be quantified, several studies have shed light on the direction Chinese firms are taking. A map compiled by Oxfam America in 2007 indicates that two Chinese companies are engaged in Cambodia's offshore oil and gas sector (map cited in Ngo 2007:10): China National Offshore Oil Corporation (CNOOC) in block F, and China Petrotech in block D. Rutherford *et al*. (2008) state that six Chinese mining companies –one of which is China Petrotech – are known to be operating in Cambodia's mining sector, particularly metallic minerals, gold deposits, oil and gas (see Rutherford *et al*. 2008:52 for a detailed list of firms).

With respect to Chinese engagement in the agricultural sector, Tong *et al*. (2009) report that as of March 2009, 11 Chinese companies had acquired investment licences in the form of economic land concessions (ELC) in the north and north-eastern parts of the country, three of which had started crop cultivation (for details of other companies see Rutherford *et al*. 2008:48). Hem *et al*. (2009), through consultation with various stakeholders, namely commune and village chiefs, villagers and NGOs at various ELC sites, identify several problems caused by the arrival of Chinese investors: excessive felling of forest; no right of way on company-built roads for villagers; and denied access to forest products.

Tong *et al*. (2009) confirm that several hydropower development projects have been awarded to Chinese firms—both private and state-owned. Those projects, both pre-feasibility and feasibility studies, include Lower Se San 2, Lower Srepok 2 and 4. Four major projects have been finalised for construction, including Kamchay, Stung Atai, Stung Tatay and Stung Russey Chrum (for detailed list of priority hydropower projects in Cambodia see Hem *et al*. 2009:24). From their consultation with villagers, Hem *et al*. (ibid) note that roads constructed

by Chinese companies in some project areas are closed to villagers as the companies fear that they might destroy construction facilities (specific location).

Matthew (2007) notes China's involvement in the construction of roads and bridges in the central, north and north-eastern parts of the country. Although his study reports both complaints from a number of villagers who had to relocate and the approval and consent from others given the benefits they have acquired from the projects, no hard evidence on the impact of those projects on the communities in the surrounding areas was brought to light.

Overall, the above studies provide some insights into the effects of China's growth on Cambodia's economy. China has played a vital role in reducing poverty in Cambodia through its substantial direct investment in the garment industry. The export expansion of labour-intensive products to the Chinese market also has implications for poverty reduction in Cambodia. Meanwhile, concerns over Chinese involvement in agri-business development and infrastructure development, namely hydropower, onshore mining and off-shore oil and gas sectors, persist.

2.2 POVERTY SITUATION IN CAMBODIA

Fighting poverty in developing countries has always been a mounting and resource-consuming challenge, and the outcome of such effort has been characteristically slowed by various factors such as civil war and conflict, natural disaster, resource constraints and weak public institution among others. And these factors have impeded poverty eradication in Cambodia for the last decade and a half. This section is not intended to provide critical detail of causality between poverty incidence and the above mentioned shocks or phenomena; rather it presents the changing trends of poverty status during the last 15 years and the likely factors influencing the poverty situation in Cambodia. It briefly reviews policy framework aiming at eliminating poverty and gives a general and practical definition of poverty and poverty measurement in Cambodia prior to unveiling the poverty trends.

It is widely acknowledged that poverty eradication has ranked high on the government's development agenda since the completion of the first Socio-Economic Development Plan I (SEDP I 1996-2000) which focused on macroeconomic stability and growth, social development and poverty alleviation, and the second government mandate 1998-2003, during which the Triangle Strategy – aiming at building peace, stability, security, integrating Cambodia into the region and the world, and promoting economic and social development through various programmes – was launched. The outcome of SEDP I laid the foundation and built confidence for the government, along with various stakeholders such as the government's development partners, NGOs, and the private sector, to formulate the National Poverty Reduction Strategy (NPRS) in late 2002, which was in line with SEDP II 2001-2005 and Cambodia Millennium Development Goals (CMDG)[4] adopted in September 2000.

Since then, the government has pursued its commitment to reducing the number of Cambodians living in poverty by keeping poverty alleviation at the top of the agenda for government priority actions set out in the National Strategic Development Plan 2006-2010 and the Government Rectangular Strategy, both of which were formulated in the third government

4 Cambodia's MDG covers nine broad indicators/goals, in which eradicating extreme poverty and hunger was set as MDG1. The overall target of MDG1 is to halve, between 1993 and 2015, the proportion of people whose income is less than the national poverty line.

mandate 2003-2007. It appears that considerable resources and efforts have been geared towards poverty alleviation through policy formulation; thus it is worth examining the changing trends of poverty incidence in Cambodia during the last decade and a half.

In order to grasp the nature of poverty, it is important to understand the concept and measurement of poverty from various dimensions. Poverty is commonly defined as "pronounced deprivation in well-being". In this sense, well-being is measured as the command of an individual or household over resources, and therefore, people are better off if they possess greater command over resources (World Bank 2008:11). There are two well-known dimensions for measuring well-being (and hence poverty): monetary and non-monetary. Monetary measurements employ two key indicators, namely income and consumption; poverty is measured by comparing individuals' income or consumption with some threshold (poverty line) below which they are considered to be poor. Non-monetary measures focus on literacy (education poverty) and nutrition (health and nutrition poverty). Education covers the level of individuals' literacy in comparison with the threshold of illiteracy as the poverty line and the number of years of education completed relative to the expected number of years that should be completed. Nutrition focuses on the nutritional status of children, the incidence of specific diseases (diarrhoea, malaria, respiratory diseases) or the life expectancy of different groups within the population (Coudouel *et al*. 2002:30-33).

The indicator of well-being in Cambodia is per capita per day consumption of a basket of food and non-food items, which has been used since the early 1990s. National daily per capita consumption and several other socio-economic indicators have been obtained through large household sample surveys since the early 1990s, i.e. the Socio-Economic Survey of Cambodia (SESC) 1993/94 and 1996, the Cambodia Socio-Economic Survey (CSES) in 1997, 1999, 2004 and 2007 (World Bank 2006:19). Traditionally, poverty incidence, gap and severity, as well as poverty lines for food, non-food and total consumption, have been estimated by the World Bank. The analysis below owes most parts to a report produced by the World Bank (2006, 2007, 2008, 2009b).

Table 2.1: Updated Food Poverty Line, Non-food Allowances, and Total Poverty Line

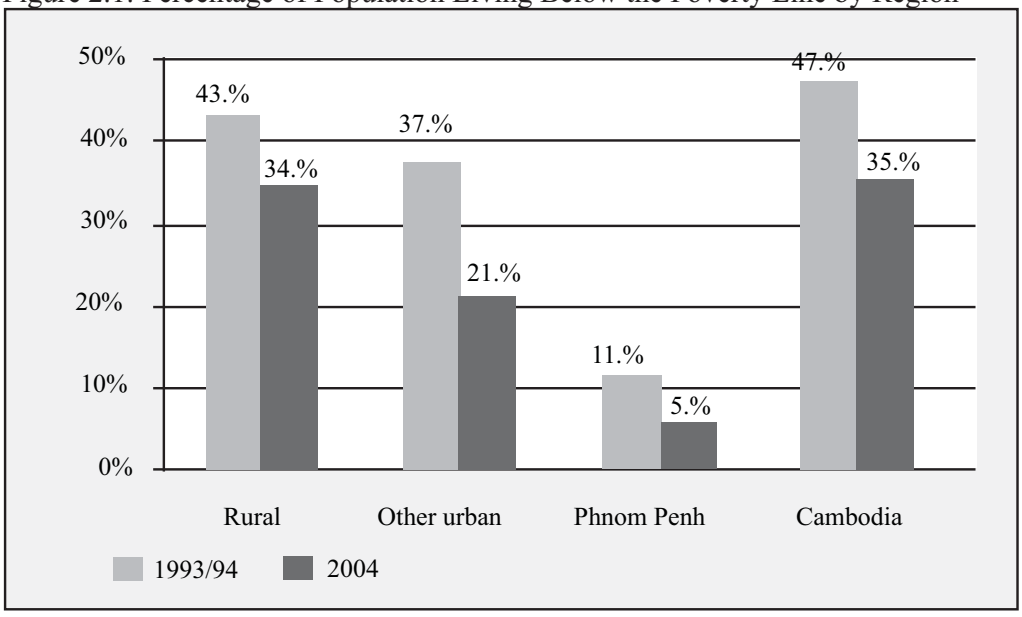
Region	1993/94	2004	2007
Food poverty lines (current riels per capita per day)			
Phnom Penh	1185	1782	2445
Other Urban	996	1568	2274
Rural	882	1389	1965
Non-food allowances (current riels per capita per day)			
Phnom Penh	393	569	647
Other Urban	269	384	430
Rural	236	364	302
Total poverty lines (current riels per capita per day)			
Phnom Penh	1578	2351	3092
Other Urban	1265	1952	2704
Rural	1118	1753	2367

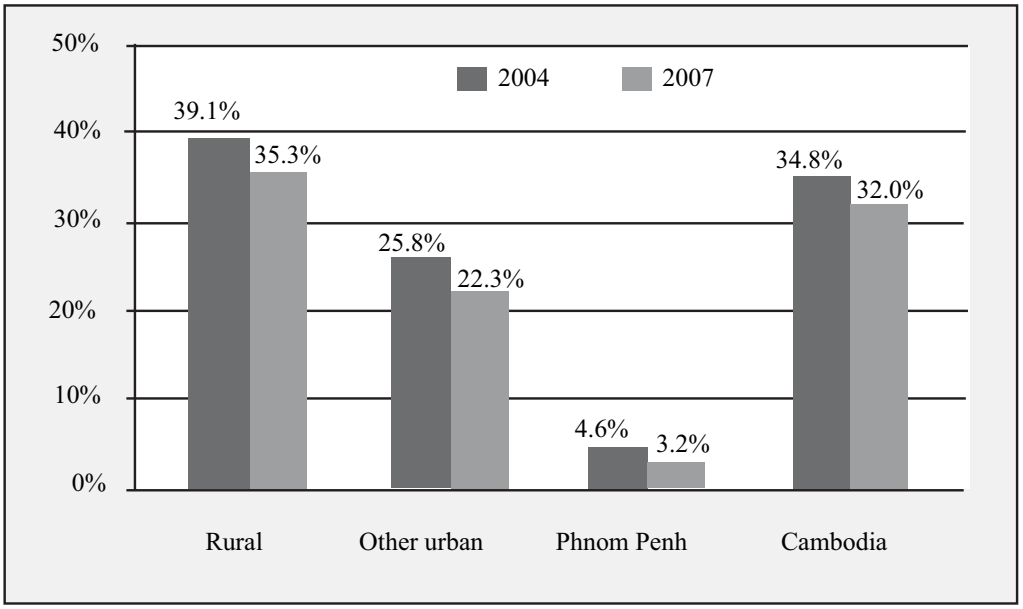
Sources: SESC 93/94, CSES 04, CSES 07, World Bank staff projections

Note: - The table is reproduced from World Bank 2006:21 for 1993/4 and 2004; World Bank 2009:7 and 12 for 2007
- Exchange rates (NBC): 2,445.2 riels/USD (1994), 4,019 riels/USD (2004), 4,062.7 riels/USD (2007)

Before investigating poverty trends and to get a clear picture of poverty status in Cambodia, it is useful to outline how the poverty line is set. The food poverty line is based on the estimated cost of a basket of goods that would provide a subsistence-level dietary intake of 2,100 calories per day, and non-food allowances—minimum consumption of non-food goods and services—are derived from the non-food consumption of Cambodians whose total per capita household consumption is just equal to the food poverty line (World Bank 2006:20). Table 2.1 summarises food, non-food and total poverty lines over time in three geographical zones. The figures indicate that the cost of living (to maintain a decent standard of life) across the regions rose markedly between 1994 and 2007.

Figure 2.1: Percentage of Population Living Below the Poverty Line by Region[5]





Source: SESC 93/94, CSES 04, CSES 07, World Bank staff projections, 2006-2009

5 Figures are shown in two separate graphs because different sample frames, i.e. 1994-2004 and 2004-2007, were used for the estimations.

Overall, the poverty rate in Cambodia has declined markedly over the last fifteen years, from 47 percent in 1994 to 32 percent in 2007. During this period, poverty dropped by an annual average rate of around 1.15 percent, indicating a moderate outcome from the government's poverty eradication efforts. Although poverty fell across geographical zones, i.e. Phnom Penh, other urban and rural areas, improvement in poverty status was uneven. Poverty incidence in rural areas remained high followed by other urban areas, while Phnom Penh marked the lowest rate of poverty (Figure 2.1). As approximately 40 percent of the nation's total poor live in the Plains region and 50 percent live in the Tonle Sap and Mountain/Plateau regions, it can be concluded that poverty in Cambodia is a rural phenomena (World Bank 2006:35).

It should be noted that the slow reduction in poverty between 1994 and 2004 was due to one critical factor, the protracted civil war between the government and rebel Khmer Rouge fighters, who were finally demobilised and integrated into government troops in 1998. The conflict limited the outreach of public service delivery, namely health and education, to areas under rebel control and areas frequently plagued by the Khmer Rouge fighters' looting and destruction of community infrastructure between 1979, which marked the fall of Khmer Rouge's absolute control of the country, and 1998. Several other factors that could possibly be behind the sluggish decline in poverty include uncertain weather conditions and stagnant investment in rural infrastructure, particularly irrigation systems. The downward trend of poverty continued across all three regions from 2004 to 2007, but poverty incidence remained pronounced in the rural areas.

As of 2007, it appeared that government policy had been on track as it had brought about significant change in poverty outcome. However, inequality worsened as the Gini coefficient (a commonly used measure of inequality, ranging from a value of zero –signifying perfect equality – to one – signifying perfect inequality), rose from 0.35 in 1993/94 to 0.40 in 2004 and 0.43 in 2007 (World Bank 2007: iii : World Bank 2009:26). Since the last quarter of 2007, poverty outcomes have been eroded to a certain extent due to the twin typhoons that struck Cambodia, i.e. sudden hike in food and energy prices from mid-2007 to mid-2008 and the global financial crisis that struck the Cambodian economy in the last quarter of 2008.

The first wave of the storm brought about substantial changes in household consumption patterns. During the period July 2008 to July 2009, prices of all varieties of rice went up by 100 percent, followed by 50-70 percent rise in meat prices and 20-30 percent increase in fish and vegetable prices. This had adverse impacts on the poorest 40 percent as they spend approximately 70 percent of their income on food consumption (CDRI 2008:9). On the second wave, the decline of the economies of countries such as the US, the EU and middle-income Asian countries such as Japan and South Korea had a severe effect on the Cambodian economy, particularly the garment industry—a pro-poor manufacturing industry[6] —which was hit the hardest as approximately 70 percent of total garment export is destined for the US and 22 percent to the EU. Between September 2008 and May 2009, 62,000 workers, most of whom are women, were laid off bringing the sector's total workforce to 290,000 in May 2009 (Ministry of Commerce 2009). The two blows to a certain extent caused several groups of Cambodians, particularly low-income and vulnerable groups, to fall into poverty, eroding the poverty eradication outcome of the government during the last decade and a half (1994-2007).

6 The sector is considered pro-poor as the majority of the workers are from the provinces and their relatives depend on their remittance.

2.3 POLICY FRAMEWORK

Many policy and legal reforms towards trade and investment promotion have been put in place to boost economic growth and contribute to poverty reduction in the country. The government's Rectangular Strategy particularly emphasises the need to attract foreign investment and mainstream trade development in the country's poverty reduction efforts. Initiatives such as the Trade Integration Strategy known as the Diagnostic Trade Integration Study (DTIS) and the Sector-Wide Approach (Trade SWAp) have been pinpointed as key instruments for the implementation of Cambodia's trade sector development strategy. In addition, because of Cambodia's participation in ASEAN and the WTO, as well as several bilateral deals, the government has overhauled the legal framework, procedures and institutional structures to be in line with international standards, including the implementation of harmonised customs nomenclature, computerised customs system, and a Single Window for customs.

Cambodia-China Trade and Investment Relations

Economic and trade relations between Cambodia and China have expanded in recent years. In 1996 Cambodia and China signed the agreement on trade, investment promotion and protection, and in 2000 they set up an economic and trade cooperation committee.[7] On 27-29 June 2008, the Embassy of China in Cambodia, the Ministry of Commerce (MoC) of Cambodia and the Council for the Development of Cambodia (CDC) jointly celebrated the fiftieth anniversary of Sino-Cambodian trade and economic cooperation achievement. They organised a large-scale exhibition, involving China's state-owned and private enterprises, local businesses and Chinese community groups in Cambodia, to build a high-level communication opportunity and expand investment, trade and encourage joint ventures.

The establishment of the ASEAN-China Free Trade Area (ACFTA) marks an important milestone in the development of ASEAN-China economic and trade relations. ASEAN and China signed a framework agreement in Phnom Penh in November 2002 that committed to establish the ACFTA within 10 years, and for it to be fully operational by 2010 for the six original ASEAN members (Singapore, Thailand, Malaysia, Indonesia, Brunei and Philippines) and by 2015 for the four newer ASEAN members (Laos, Cambodia, Myanmar and Vietnam). This framework enhances trade and investment cooperation and reduces trade barriers between ASEAN and China as it covers trade in goods and services, investment and expansion of cooperation in various areas such as trade facilitation, technology transfer, human resources development and sub-regional development projects (including the ASEAN Mekong River Basin Development Cooperation[8]).

One of the most important arrangements in the framework agreement is the "Early Harvest" Programme (EHP), which took effect between 2004 and 2006 for the ASEAN-5, and is to come into effect in 2010 for the new members and the Philippines. Cambodia is expected to gain economic benefits and opportunities as well as challenges from ACFTA along with the EHP. A number of studies have examined the prospects for ACFTA as a whole. However, little information or research is available for the case of Cambodia. Hing and Nou (2006) explored the potential impacts of the EHP on the Cambodian agricultural sector and conclude that it could provide opportunity for Cambodia to develop its agriculture as a source of growth and poverty reduction through expanding the export of products such as fresh fruits, livestock, fish,

7 http://www.mfa.gov.cn/eng/wjb/zzjg/yzs/gjlb/2696/ (accessed 26 May 2010)

8 The Development of the Singapore-Kunming Rail Link and the Bangkok-Kunming Highway

shrimps and prawns to China. However, they caution that these benefits have yet to materialise because Cambodia faces some challenges, including unsound business climate, inadequate legal framework, insufficient infrastructure and ineffective public institutions, in increasing the competitiveness of its agriculture and enterprises to take advantage of the opportunity associated with the EHP.

The Greater Mekong Sub-region (GMS) cooperation programme among six countries located along the Mekong River (Cambodia, Laos, Myanmar, Thailand, Vietnam and Yunnan province of China), which was established by the Asian Development Bank (ADB) in 1992, is another important economic and trade relation between Cambodia and China. The GMS agenda has concentrated on "hardware" in the form of physical infrastructure, especially cross-border infrastructure, to improve connections and communication across the region. In addition, the GMS programme has made the effort to address complementary "software" issues, including the facilitation of cross-border trade and investment, to support economic integration in the GMS. These complement many of the liberalisation measures pursued as part of ASEAN Free Trade Area (AFTA) membership.

Menon (2005) found that "*the GMS program is assisting its members to integrate more closely with the ASEAN region and, through this, with the rest of the world. As a program based on market rather than institutional integration, the GMS is promoting both regionalism and multilateralism. The sub-regional public goods provided through the program are spilling over to become not only regional but also global.*"

China plays an active role as both a beneficiary and a contributor to the GMS programme. China provides financial and human resource development support to the GMS programme and its members because it aims to create more economic opportunities and growth in the southern parts of China (Yunnan and Guangxi) and encourage increasing Chinese investment in GMS countries.

Cambodia also benefits in terms of involvement in the GMS project development in various sectors, including environment, tourism, energy and human resource development.

Cambodia-China Foreign Aid Relations

China has been providing foreign aid to Cambodia since the mid-1950s. Over recent years China and Cambodia have seen continuous expansion of cooperation in culture, tourism and agriculture. There have also been exchange visits between the parliaments, armies, press, and health officials of the two countries.[9]

China's foreign aid to Cambodia is considered an essential channel for the promotion of trade and investment between the two countries.

China has gained popularity in Cambodia for development assistance due to its lesser burden of certain political pressure and economic conditions compared with other countries (Phou Sambath ND). As a result of its own experience with foreign assistance and not wanting to replicate what it perceives to be the ill behaviour of international donors, the Chinese government put in place a formal foreign aid or development assistance policy for recipient countries, including Cambodia, and set eight principles to guide the allocation of its

9 http://www.mfa.gov.cn/eng/wjb/zzjg/yzs/gjlb/2696/ (accessed 26 May 2010)

disbursements that seem to release pressure off recipient countries; the principles are (Chin & Frolic 2007):

- Both donor and recipient countries have to ensure equality and mutual benefits
- Respect sovereignty and never impose conditions
- Give interest-free or low-interest loans in the name of the poor helping the poor
- Encourage recipient countries to develop independently and be less-reliant on foreign countries
- Support and endorse projects that require little investment and can be accomplished in the short term
- Allocate quality equipment and materials corresponding to market prices
- Deliver effective technical assistance
- Pay experts affordable fees according to local market prices.

In turn, Cambodia's government is also highly committed to ensuring the effective use of all the international aid provided, such as using it with transparency and accountability, strengthening the role of key persons and relevance in programme planning and implementation, and undertaking assessment of the impact of NSDP (Chan Sophal *et al*. 2008).

CHAPTER 3

CHINA'S TRADE AND ITS IMPACTS

3.1 MAGNITUDE AND CHANGES

Significant progress in Cambodian-Chinese economic relations was evident in the mid-1990s when a number of Chinese investors flocked to the Cambodian garment industry to tap the benefits from Cambodia's special preferential treatment, namely Most Favoured Nation (MFN) status provided by the EU and the Generalised System of Preference (GSP) by the US government. This could to a certain extent be a result of the Cambodia-China agreement on investment promotion and protection in July 1996 and the bilateral trade agreement in July 1997 coming into effect (Hing 2006:17). Relations deepened further through the Framework Agreement of ASEAN-China FTA (ACFTA), particularly the Early Harvest Programme (EHP), which aims at accelerating agricultural trade liberalisation. Official Development Assistance (ODA) and capital inflow from China also played a vital role in boosting Cambodia's development during the last decade. Before examining Cambodia-China bilateral trade in greater detail, it would be useful to overview Cambodia's relation with its key trading partners in the region and the world during the last decade.

Cambodia's Trade with the World

In terms of import, the rate of import growth from the world, ASEAN and GMS-5 was considerably high between 2000 and 2008. By nominal trade values, Cambodia tends to import mostly from its traditional trading partners, namely its neighbours Thailand and Vietnam, followed by China, Singapore, Korea, Japan and Malaysia, and imports the least from India. What is noticeable is that the trends of import from these countries are all upwards, which begs the question whether said imports compete or complement the domestic market.

The pace of export growth lagged behind that of import during 2000-2008, reflecting Cambodia's persistent negative trade balance during the period. Cambodia's negative trade balance with the world was almost USD2 billion in 2008, while its massive negative trade balance with ASEAN from 2000 to 2008 is striking, indicating the country's high dependence on commodity imports from the world and the region. By trading partner, severe negative balances with Thailand, Vietnam, China, Singapore and South Korea are evident. It is imperative that potential effects from such trade balances, i.e. crowding-out effect on domestic producers, are investigated so that the domestic industrial or economic base is safeguarded by either horizontal or vertical interventions.

Cambodia-China Bilateral Trade

Deepening trade relation between Cambodia and China, i.e. ACFTA-EHP, has brought about significant changes in bilateral trade patterns between the two countries during the last decade. In general, total trade (import plus export) between the two countries expanded considerably at an average annual growth rate of 23.1 percent between 2001 and 2008. However, as shown in Figure 3.1, the value of Cambodia's export to China between 2000 and 2008 remained small, averaging around USD36.34 million, and its average share to Cambodia's total export to the world during the period was around 1 percent.

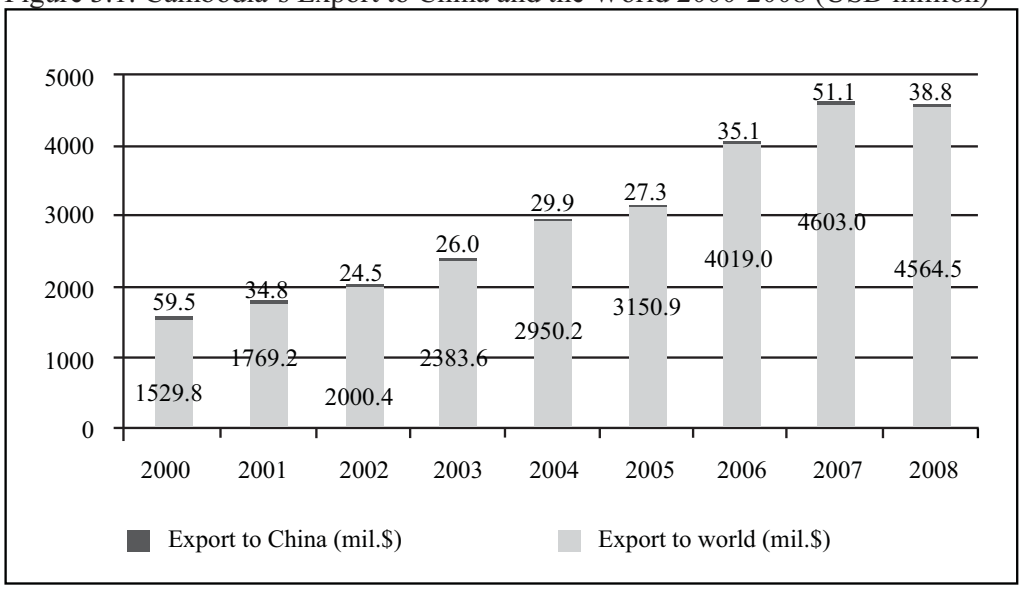
Table 3.1: Cambodia Bilateral Trade with World 2000-2008 (USD million at nominal value)

Countries	2000	2001	2002	2003	2004	2005	2006	2007	2008
Import									
World	1762.71	1862.3	2045.59	2347.71	2840.69	3420.35	4558.02	5324.97	6934.63
ASEAN-9	1038.63	1119.39	1177.93	1418.6	1616.11	1984.58	2712.49	3101.09	4412.61
EU-15	106.57	93.6	111.39	103.57	125.76	145.82	155.19	199.14	211.99
GMS-5	651.58	819.1	945.66	1254.54	1558.35	2006.66	2730.07	3281.52	4641.17
CHN	164.06	205.65	251.56	294.65	451.77	536.03	697.76	883.59	1095.54
IND	7.89	10.54	16.97	20.27	16.75	21.35	48.09	44.83	53.85
JPN	51.98	50.43	69.95	54.55	79.87	78.11	81.82	111.04	184.04
KOR	95.91	101.54	115.23	105.56	126.32	144.28	205.09	281.43	294.38
MYS	71.33	60.26	55.01	64.74	83.54	109.28	108.33	134.12	165.13
SGP	425.75	370.02	352.25	307.61	348.76	303.04	459.63	438.66	520.45
THA	345.9	467.44	515.69	692.61	722.6	914.99	1251.69	1356.85	2014.03
USA	23.06	28.05	28.47	56.3	57.24	67.19	70.87	137.53	150.27
VNM	141.62	146	178.41	267.29	383.97	555.64	780.61	1041.07	1531.6
Export									
World	1529.75	1778.26	2013.67	2384.22	2950.36	3150.85	4019.03	4605.79	4955.64
SEAN-9	138.35	112.24	182.84	192.95	218.07	302.47	338.88	362.24	438.86
EU-15	342.43	479.41	522.1	621.39	824.17	724.89	928.18	1045.7	1249.58
GMS-5	104.65	69.91	101.15	132.98	188.15	219.08	239.2	305.33	343.24
CHN	59.49	34.8	24.55	26	29.93	27.3	35.09	51.07	38.83
IND	1.27	1.11	0.68	0.31	0.23	0.42	1.48	1.24	4.27
JPN	52.18	66.01	74.92	89.43	99.76	105.46	120.23	138.99	121.01
KOR	2.31	7.1	3.03	4.2	6.95	5.96	5.46	8.87	14.38
MYS	16.84	19.01	19.36	8.32	9.03	8	20.27	21.31	14.38
SGP	74.84	54.64	84.03	74.48	48.35	100.42	112.35	84.87	116.58
THA	7.86	12.27	11.22	12.26	27.64	31.56	34.65	48.77	90.12
USA	879.95	1016.77	1145.81	1335.84	1591.48	1766.6	2328.27	2599.41	2545.83
VNM	37.3	22.83	65.39	94.71	130.58	160.22	169.45	205.5	214.28

Source: UNComTrade 2009

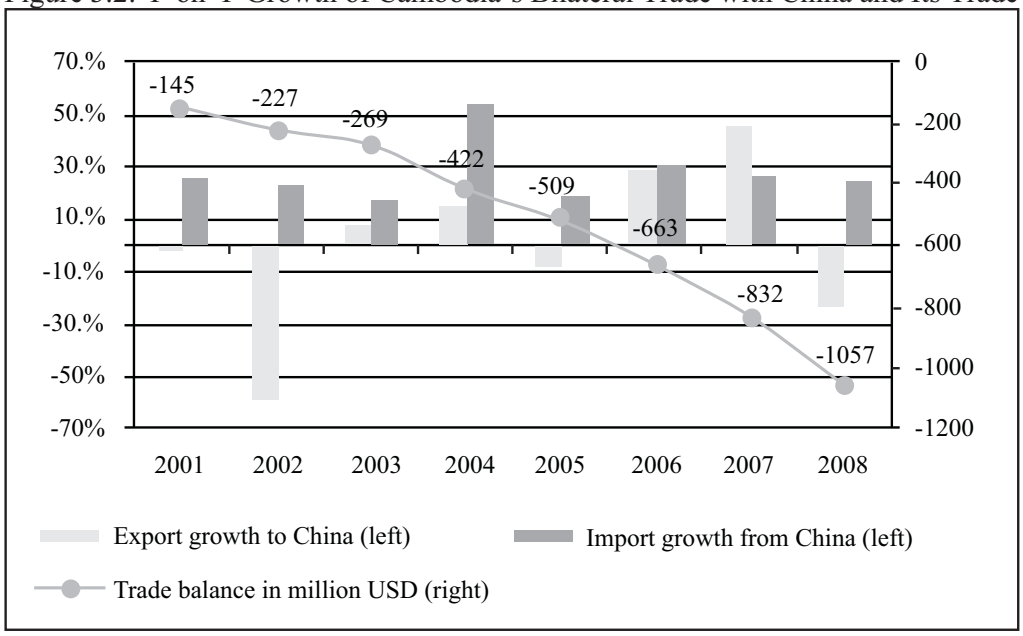
With low export value and highly fluctuating year-on-year export growth to China (averaging 0.3 percent between 2001 and 2008) and substantial rise in year-on-year import growth from China (averaging 27.2 percent between 2001 and 2008), Cambodia's trade balance (export minus import) with China worsened (Figure 3.2). There were two severe drops: year-on-year export growth dropped considerably and turned negative by 58.7 percent in 2002 and by 24.5 percent in 2008. Given the two slumps and the continued rise in China's imports, Cambodia's trade balance has been widening substantially since the early 2000s, jumping from -USD146 million in 2001 to -USD1,057 million in 2008. It is therefore worth examining the pattern and nature of trade between the two countries in order to evaluate the potential benefits or losses from the ASEAN-China FTA, and the Early Harvest Programme in particular. This paper does not attempt to perform any impact evaluation of the agreement; rather, it examines likely effects of China's growth on poverty reduction in Cambodia through trade channels, which could shed light on potential gains or losses that might result from the framework agreement.

Figure 3.1: Cambodia's Export to China and the World 2000-2008 (USD million)



Source: UNComTrade 2009

Figure 3.2: Y-on-Y Growth of Cambodia's Bilateral Trade with China and Its Trade Balance



Source: UNComTrade 2009

Prior to examining trade patterns in detail, it is important to look at Cambodia's top ten exports to China during the last decade. In 2008, the three major products – crude and synthetic rubber, cork and wood[10] (SITC 24), and textiles and clothing accessories –exported to China, contributed almost 89 percent of total exports to China (Table 3.2). Other exports included agricultural products such as fish fresh/frozen, crustaceans/molluscs, and furniture/furnishings. Backtracking over the last ten years, we can see a tremendous decline in export (59.2 percent)

10 Using SITC Rev. 3, cork and wood includes cork natural/raw/waste, fuel wood/wood charcoal, wood chips/particles, wood in rough/squared and wood simply worked, i.e. wood railway sleepers, soft wood shaped/grooved and hardwood sawn.

between 2000 and 2002, which marks a significant transition in the pattern of bilateral trade between China and Cambodia.

Table 3.2: Cambodia's Top 10 Products Exported to China 2000-2008

SITC Rev.3	Production description	Value in million US dollars					Share (%)				
		2000	2002	2004	2006	2008	2000	2002	2004	2006	2008
23	Crude/synthetic rubber	5.4	7.5	2.5	8.7	11.5	9.1	30.9	8.5	25.8	31.6
24	Cork and wood	1.6	1.1	10.1	12.1	10.6	2.7	4.4	33.6	35.8	29.2
84	Apparel/clothing/accessories	2.5	0.1	0.8	3	10.3	4.2	0.2	2.5	9	28.4
00	Textile fibres	-	-	0.1	0.7	1.2	-	-	0.3	2.2	3.3
26	Textile yarn/fabric/art.	0	0.2	9.1	7	0.6	0	0.6	30.6	20.9	1.7
03	Fish, live/fresh/chilled/frozen	0.5	1.1	0.5	0.6	0.5	0.8	4.4	1.7	1.8	1.3
65	Crustaceans molluscs	0.6	0.2	0.8	0.4	0.4	1	0.9	2.6	1.1	1
85	Footwear	-	0.1	0	0.1	0.4	-	0.2	0.1	0.4	1
82	Furniture/furnishings	-	0	0	0	0.3	-	0.1	0.1	0	0.9
89	Misc manufactures	0	0	0	0.2	0.2	0	0	0.1	0.5	0.4
	Others	48.7	14.1	5.9	0.9	0.4	82.1	58.3	19.9	2.7	1.2
	Total	**59.3**	**24.2**	**29.9**	**33.7**	**36.4**	**100**	**100**	**100**	**100**	**100**

Source: UN ComTrade 2009

Note: Author's ranking based on commodity export values in 2008

The massive drop in total export in the early 2000s resulted primarily from a 71 percent fall in cork and wood manufactures[11] (SITC 63) export from USD48.64 million in 2000 to USD14.05 million in 2002. This stemmed mainly from the government's cancellation of 40 percent of all forest concessions, almost half the original area under concession, as well as the government's moratorium on logging in concession areas and log transports in January 2002. These anti-logging measures came after the government's realisation of the extremely negative consequences of logging and investors' inability to fulfil their contractual obligations (World Bank 2004:19, 76). That said, it is important to note that despite the fall of cork and wood manufactures (SITC 63), natural cork and wood (SITC 24) increased markedly during the same period.

Despite the nosedive of total exports to China in the early 2000s a reverse trend became evident as export started to gradually rebound in 2008, though the figure remained lower than that of the year 2000. Additionally, several other traditional exports, namely crude and synthetic rubber, apparel and clothing accessories, fish products, footwear and furniture grew moderately during the same period. It appears that more opportunities have been opened up for Cambodian products to enter the Chinese market. And, the reduction of wood export reflects the changing pattern of trade and the government's stance towards environmental conservation and natural resource preservation.

The pace of growth of import from China has been far more rapid than the growth of export. The average year-on-year growth of import between 2001 and 2008 was around 27.2 percent. Among the top ten products, textile yarn/fabric/articles ranked top and contributed about 50.3 percent to total import from China in 2008 (Table 3.3). It should be noted that the

11 Using SITC Rev. 3, cork and wood manufactures (SITC 63) include corks and stoppers, veneer sheets, particle board (wood), plywood, fireboard and wood simply shaped.

first ranked product was imported mainly for domestic production and re-export to the third markets such as Japan, Canada, the EU and the US as around 20.7 percent of the total number of factories in the industry are from Hong Kong and 13.1 percent from mainland China that source inputs mainly from parental factories in their hometown (GMAC 2006 cited in USAID 2007:8).

Table 3.3: Cambodia's Top 10 Products Imported from China in 2008

SITC Rev.3	Product description	Value in million US Dollars					Share (%)				
		2000	2002	2004	2006	2008	2000	2002	2004	2006	2008
65	Textile yarn/fabric/ art.	76	146.4	286	434.1	550.1	46.3	58.2	63.3	62.2	50.2
76	Telecomm equip-ment	11.4	5.9	11	23.1	59.7	6.9	2.3	2.4	3.3	5.4
66	Non-metal mineral manuf.	4.3	9.2	16.1	28.4	50.2	2.6	3.7	3.6	4.1	4.6
84	Apparel/clothing/ac-cessories	8.2	8.2	11.9	30	48.4	5	3.2	2.6	4.3	4.4
71	Power generating equipment	4.3	8.1	11.6	17	47.4	2.6	3.2	2.6	2.4	4.3
77	Electrical equipment	1.3	2.5	2.7	11.2	37	0.8	1	0.6	1.6	3.4
67	Iron and steel	12.9	6.8	15.2	13.7	36.8	7.9	2.7	3.4	2	3.4
69	Metal manufactures	4.9	14.8	10.7	9.5	29.6	3	5.9	2.4	1.4	2.7
72	Industry special machine	6.5	11.4	7.7	21.6	29.1	3.9	4.6	1.7	3.1	2.7
74	Industrial equipment	1.5	2.5	4.7	17.1	28	0.9	1	1	2.5	2.6
	Others	32.8	35.3	73.9	91.8	176.4	20	14	16.4	13.2	16.1
	Total	**164.1**	**251.1**	**451.7**	**697.5**	**1092.9**	**100**	**100**	**100**	**100**	**100**

Source: UN ComTrade 2009

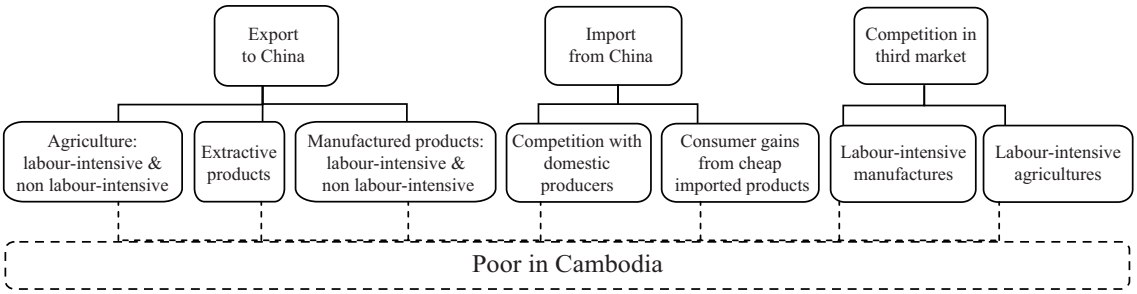
Besides textile yarns and fabrics, import of telecommunications equipment ranked second, followed by non-metal mineral manufactures, apparel and clothing accessories, power-generating equipment, electrical equipment, iron and steel, metal manufactures and industrial machinery. Competition from China in the domestic market appears unlikely as import of the top ranked product is mainly for export-oriented production and backward linkages in the domestic economy are absent. In addition, six of the remaining top nine imported products are not manufactured in Cambodia, and the activities and scale of the other three – apparel and clothing accessories and metal and non-metal manufactures – are insignificant.

On the whole, stronger trade relations between Cambodia and China, particularly through ACFTA-EHP, have provided wider opportunities for increasing bilateral trade in traditional commodities such as wood, fish, telecommunications equipment, textile yarns and fabrics, electrical machinery, iron and steel, metal and non-metal manufactures and several other new varieties of agricultural and manufactured products. However, as Cambodia's trade balance has been negative and immense during the last decade, it is worth questioning whether Cambodia gains, and if so, to what extent, from trade with China. Section 3.3 attempts to address the above questions.

3.2 METHODOLOGIES AND ANALYTICAL FRAMEWORK

The study adopts Jenkins and Edwards's (2004) framework for the analysis of the likely effects of China on poverty reduction in Cambodia by applying trade data at 3-digit level. The likely effects can be examined at three levels. Level 1 includes export to China, import from China and export to the third market. Level 2 covers the scale of labour-intensive exports to China, the scale of competing import from China and pro-poor consumer goods and the scale of labour-intensive export to the third market. The last level focuses on likely poverty effects of increased or decreased employment in labour-intensive export to China, rising import competition from China, and the level of competition in labour-intensive products in the third markets. The framework below outlines the mechanisms of the analysis:

Figure 3.3: Analytical Framework of Impact of China's Trade on Poverty Reduction in Cambodia



Source: Adapted from Jenkins and Edwards (2004)

3.3 FINDINGS[12]

Export to China

Table 3.4 indicates significant changes in the structure of Cambodian export to China during the last two decades. Between the early 1990s and 2000, all product groups, except for other labour-intensive manufactures and forestry (data for which is not available for 1992) and other labour-intensive textiles and garments, show a marked significant decline in export shares. The tremendous drop in export share of labour-intensive agriculture in the early 2000s implies significant losses in export earnings and possibly employment in the sector. During the same period, export shares of other agricultural products and other manufactured products shrank substantially, marking the slump in export earnings, but any employment effects appear to be unlikely as those sectors are not labour-intensive. Interestingly, the share of export of labour-intensive textiles and garments shows a meagre rise during the period.

From 2000 to 2008, the trends of these product groups started to show a plausible turnaround (Table 3.4). Export shares of labour-intensive agriculture and textiles and garments increased considerably, but the immense drop in export shares of other labour-intensive manufactures gives a mixed picture as to whether this could imply reduction in export earnings and employment in the sectors. Additionally, export shares of non-labour-intensive agriculture, forestry, minerals and other manufactured products also increased which helped offset the decline in export of other labour-intensive manufactures.

12 The section is adapted from Jenkins and Edwards (2004) where products are classified into groups in terms of their level of labour-intensiveness for export to China and pro-poor consumption categories for import from China in order to capture likely effect of bilateral trade on poverty reduction in Cambodia.

Table 3.4: Share of Export to Total Export to China 1992-2008 at 3-digit Level

P. Groups	RECODE of products	1992 (%)	2000 (%)	2007 (%)	2008 (%)
1	Labour-intensive agriculture	51.38	9.11	21.8	29.63
2	Other agriculture products	14.46	2.16	4.43	8.43
3	Forestry		2.73	47.06	27.42
4	Minerals & petroleum			0.02	0.32
5	Labour-intensive textiles & garments	3.26	4.21	19.34	28.19
6	Other labour-intensive manufactures		81.77	3.69	5.57
7	Other manufactured products	30.9	0.02	3.67	0.43
	Total	**100**	**100**	**100**	**100**

Source: UN ComTrade 2009
Note: Classification of products is indicated in Appendix 1

Investigation of the detailed 3-degit level breakdown of products in each of the above product groups reveals more interesting findings (Table 3.5). The tremendous drop in labour-intensive agriculture export stemmed primarily from declining export shares of fresh and dried fruits and nuts (SITC 057) from 16.8 percent in 1992 to nil in 2000 and of natural rubber/latex (SITC 231) from 34.5 percent in 1992 to 9.1 percent in 2000. It should be noted that there was no rice export of any type at the time. During this period, among fresh/dried fruits and nuts, only dried fruits (SITC 05799) were exported to China in 1992 and cashew nuts (SITC 05773) in 1995. The significant drop in natural rubber export resulted mainly from substantial reduction in the cultivated tapping area from 50,891 ha in 1992 to 29,119 ha in 2002 as large numbers of old (25-30 years of age) unproductive rubber trees were felled resulting in the reduction of total natural rubber/latex production, and thereby export (MAFF 2010).[13]

Between 2000 and 2008, the increase in the export share of natural rubber was the sole factor behind the surge in the export share of labour-intensive agriculture. It is also worth noting that two rice categories—glazed or polished (SITC 0422) and milled unbroken (SITC 04231)—were exported in 2005 and 2008, but on a negligible scale of around USD200 to USD300. Export of natural rubber has picked up noticeably during the last decade due to the government's rubber tree replanting programme started in 1993 and the harvesting expansion of both private and smallholder rubber plantations. As a result, the total area of rubber plantation—state, private and smallholder—in 2008 had reached 108,656 ha, around 31.58 percent of which had matured for tapping (GDRP 2009). It should be noted that rubber trees are ready for tapping five years after planting.

The effect of natural rubber export on employment and poverty reduction in particular could be significant. A study by SOFRACO in 2005 estimated that the total workforce in the sector numbered around 26,300 in 2002, and a later UNDP (2007) estimate put the sector's workforce at 40,000 in 2007. In his study on the export competitiveness of the Cambodian rubber sector, Saing (2009a) indicates that the nominal daily wage of rubber labourers in 2008 was KHR15,000 equivalent to KHR9814.8 at 2006 prices, which is far above the 2007 national rural poverty line—daily food and non-food consumption estimated by the World Bank—of KHR2367 equivalent to KHR2203.9 at 2006 prices.[14]

13 Link to MAFF statistics webpage: http://www.maff.gov.kh/eng/statistics/rubber.html#a2
14 Author's calculation using consumer price index (CPI 2006=100) data compiled by the National Institute of Statistics of Cambodia

It is worth noting that the employment effect in the sector could be even more significant as a large proportion of Cambodian natural rubber is either formally or informally exported to Vietnam where it is processed and a certain proportion of the readily reprocessed rubber latex is re-exported to China. Despite the low rubber price in Vietnam compared to Singapore's and Malaysia's markets, Cambodian rubber producers prefer the Vietnamese market because of its acceptance of low-grade natural rubber and low transport costs to the Vietnamese border (Saing 2009a:13).

Table 3.5: Detailed Breakdown of Share of Export to Total Export to China 1992-2008

SITC 3	Product categories	1992 (%)	2000 (%)	2007 (%)	2008 (%)
001	Live animals except fish		0.352	2.012	6.223
034	Fish live/fresh/chilled/frozen		0.78	1.623	1.25
036	Crustaceans molluscs etc		1.025	0.672	0.945
231	Natural rubber/latex/etc	34.551	9.099	21.569	29.606
247	Wood in rough/squared		0.568	31.605	13.027
248	Wood simply worked		2.167	15.452	13.669
292	Crude vegetable materials	14.455		0.08	0.016
634	Veneer/plywood/etc		79.439	0.051	
635	Wood manufactures nes		2.329	0.043	0.226
657	Special yarns/fabrics		0	0.02	0.046
661	Leather manufactures		0	0.001	0.005
841	Men/boys wear, woven		4.185	1.154	5.074
845	Articles of apparel nes		0	4.623	17.022
846	Clothing accessories		0.021	0.003	0.004
848	Headgear/non-textile clothing		0	0.001	0.001
893	Articles nes of plastics		0.001	0.036	0.058
899	Misc manufacture articles nes		0.001	0.135	0.33

Source: UN ComTrade 2009
Note: A detailed table is presented in Appendix 2.

Other agriculture products followed a similar trend to labour-intensive agriculture between 1992 and 2000. The drop in the late 1990s-early 2000s resulted from a large decline in export of crude vegetable materials (SITC 292). And the rebound in the mid-2000s was due mainly to the increase in export of live animals (SITC 001) and fish live/fresh/chilled (SITC 034). Over the period 2000 to 2008, there was a remarkable jump in the export of forestry products owing to the rise in exports of wood rough/squared and wood simply worked. Export of mineral products emerged in 2007-08– namely, ferrous waste/scrap (SITC 282) and base metal ore (SITC 287) – but the scale was insignificant.

Export shares of labour-intensive textiles and garments showed a constant upward trend between 1992 and 2008 due to the rise in exports of textile yarn, cotton fabrics/woven, man-made woven fabrics, woven textile fabrics, knit/crochet fabric, tulle/lace/embroidery, special yarn/fabrics (SITC 651-657) and men/boy wears, women/girl clothing woven, men/boy wear knit/crochet, women/girl wear knit/crochet, article of apparel, clothing accessories and headgear/non-textile clothing (SITC 841-848).

Unavailability of data and study on the number of garment factories that produce to export to the Chinese market makes it difficult to capture the employment and poverty effects

of the rise in the export of garments and textiles. However, it could have implications for poverty reduction as the current monthly minimum wage in the sector is USD50 (approximately USD2.27 per working day at 2008 prices), which is higher than the 2007 Phnom Penh national poverty line of USD0.76 per day.[15]

In contrast, there was a significant fall in export of other labour-intensive manufactures between 2000 and 2008. Substantial decreases in veneer/plywood (SITC 634) and other wood manufactures were the underlying reason behind the export slump. This was due to the government's moratorium on logging in concessions and log transports in January 2002. The significant slash in plywood production implies reduction in employment in the industry. Lack of data on job cuts and workers' daily earnings in the sector during this period prevents us from drawing any concrete conclusion on the poverty effect. However, it marked a significant change in the government's stance to a more environmental conservation oriented trading position.

Import from China (producer side)

Table 3.6 indicates that agricultural products contributed only a small proportion of total import from China between 1992 and 2008. Thus, it appears that agriculture import from China posed no significant threat to and created no fierce competition against domestic agricultural producers. Overall, various agricultural are imported from China, but most of them are imported on an irregular basis, meaning that a product appears in one year but not in another. These products include several kinds of fish, fresh/chilled/preserved (SITC 034 & 035), rice in husk and milled unbroken (SITC 0421 & 04231), tapioca/sago (SITC 05645), dried vegetables (SITC 05619), melons/papaws (SITC 05791), pineapples prepared (SITC 05893) and apricots/ cherries (SITC 05895).

Table 3.6: Share of Import to Total Import from China 1992-2008 at 3-digit Level

P. Groups	RECODE of product	1992 (%)	2000 (%)	2007 (%)	2008 (%)
1	Labour-intensive agriculture	1.95	0.3	0.29	0.25
2	Other agriculture products	0.08	4.8	1.03	0.82
3	Forestry		0	0.01	0.01
4	Minerals & petroleum		0.44	0.73	1.66
5	Labour-intensive textiles & garments	0.06	51.33	60.22	54.63
6	Other labour-intensive manufactures	6.42	7.6	3.19	3.66
7	Other manufactured products	91.48	35.54	34.49	38.74
	Total	**100**	**100**	**100**	**100**

Source: UN ComTrade 2009
Note: Detailed table is presented in Appendix 2

It should be noted that other products are regularly imported, but are not of Cambodian specialisation, including frozen vegetables (SITC 05459), fresh apples (SITC 0574), dried grapes (SITC 05752), fresh pears/quinces (SITC 05792) and cooked pasta (SITC 09891). These imports are complementary to domestic production.

Although small in magnitude, given their constant rise in import value to Cambodian market and China's leading role among low-cost producers in the region, some products could compete with domestic producers. Such products include pork prepared/preserved (SITC

15 Adjusting for inflation using CPI constructed by the national institute of statistics: real daily wage=2.27/1.51= 1.50USD at 2006 prices (CPI2008=151); daily per capita consumption=0.76/1.07=0.71 USD at 2006 prices (CPI_{2007}=107)

0175), onions/shallots (SITC 05451), garlic/leeks (SITC 05452), mushrooms/truffles dried or preserved (SITC 05613 & 05674), tomato puree (SITC 05673), other vegetables preserved (SITC 05679), fruit jams (SITC 0581), nuts/seeds (SITC 0581), fruit/nuts preserved (SITC 05896), natural honey (SITC 0616), sugar confectionery (SITC 06229), green tea (SITC 07411), black tea (SITC 07413), animal feed (SITC 08199), soy sauce (SITC 09841) and sauces/mixed seasonings (SITC 09849).

Before the mid-1990s labour-intensive textiles and garments accounted for a minimal share of total imports, while other manufactured products took the substantial share. Since then, textiles and garments import has grown rapidly—approximately half of the total import from China—because of the sector's dramatic expansion in the domestic economy between the mid 1990s and 2008. It should be noted that of the total number of factories in the industry, around 20.7 percent of investors are from Hong Kong and 13.1 percent from China (GMAC 2006 cited in USAID 2007:8). These Chinese factories, almost all of which are export-oriented, tend to source their inputs for production in Cambodia from their parental firms in China and Hong Kong[16]. Therefore, the rising import share of such products poses no threat to domestic producers, but it does limit the development of domestic backward linkages.

The import share of other labour-intensive manufactures to total import from China was insignificant and declined from 7.6 in 2000 to 3.6 percent in 2008. It seems that no severe effects are likely to emanate from this import as several products, i.e. animal hides, i.e. pig, sheep, goat, bovine (SITC 6112-6118), veneer sheets, plywood and fireboard (SITC 6341-6345), wooden tools/boxes (SITC 6351-6359), mattress support and bedding items (SITC 8212), metal and plastic furniture (SITC 82139 & 82171), handbags, leather trunks, plastic cases (SITC 8311-8312), and toy products (SITC 89421-89429) and vacuum flasks (SITC 89997), do not compete in the domestic market given the absence or meagre scale of such production activities in Cambodia.

However, other imported labour-intensive manufactures could pose potential competition for domestic producers given their regular and constant rise in share of import. Those products include glass bottles/jars, drinking glasses & kitchen/table glasses and other glassware and glass ornaments/beads (SITC 66511, 66522, 66523, 66529, 66593), kitchen/table porcelain (SITC 66611), wooden office, kitchen and bedroom furniture (SITC 82151-82159), bamboo furniture (SITC 82179), label paper and paperboards (SITC 89281), plastic bags/packaging and containers, plastic office equipment & other plastic articles (SITC 89311, 89319, 89394, 89399), pens of all kinds (SITC 89521), and brushes/brooms/mops (SITC 89972).

The import shares of other manufactured products constituted around one third of total imports from China between 1992 and 2008. Although the magnitude of this import may not have any serious employment effect in the domestic economy given that the product group is not labour-intensive, it could hinder growth or expansion of similar domestic industries.

Some products could compete with local producers, such as beverages – alcoholic & non-alcoholic (SITC 111-112), pharmaceutical products (SITC 541-542), manufactured

16 A survey of 70 factories of the total 238 export-oriented members of the Garment Manufacturers Association in Cambodia (GMAC) by the Economic Institute of Cambodia (EIC) in February 2005 indicates that 79 percent of the total number of factories in the sample import fabric from China and 14 percent from Hong Kong, while 71 percent import textile accessories from China and 24 percent from Hong Kong (USAID 2005:13).

fertilisers (SITC 56211), paper/paperboard/cut paper products (SITC 641-642) and cement (SITC 66122). Other products, such as organic and inorganic chemicals (SITC 511-516, 522-524), plastics of non-primary form and chemical materials/products (SITC 581-583, 591-598), iron and steel and metal manufactures (SITC 673-679, 682-686, 691-699), and several other types of industrial and agricultural machinery (SITC 75-79, 81-83, 87-89) pose no threat to domestic producers due to the absence of the industries in the country.

Import from China (consumer side)

Besides examining the possible employment effect and competition arising from China's imports, it is also worth investigating whether Cambodian consumers could gain benefits from cheap products from China. Table 3.7 shows a mild rise in pro-poor consumer goods import share between 1992 and 2000, which dropped slightly to around 5.5 percent in 2008. It appears that consumer gain is somehow insignificant.

Table 3.7: Share of Poor Consumers' Goods Imported from China 1992-2008 (%)

RECODE of product	1992	2000	2007	2008
Pro-poor consumer goods	2.27	9.55	4.82	5.49
Other product group	97.73	90.45	95.18	94.51

Source: UN ComTrade, 2009
Note: Classification of products is indicated in Appendix 1

Table 3.8: Pro-poor Products Share of Total Imports from China 1992-2008 (%)

SITC 3	Product categories	1992	2002	2007	2008
001	Live animals except fish				0.0095
037	Fish/shellfish, prep/pres		0.002	0.021	0.049
042	Rice		0.008		
048	Cereal etc flour/starch		0.013	0.094	0.337
054	Vegetables, fresh/chilled/frozen		0.001	0.013	0.001
056	Vegetable root/tuber prep/pres	0.013	0.144	0.095	0.032
057	Fruit/nuts, fresh/dried		0.077	0.016	0.054
061	Sugar/molasses/honey	1.84	0.005	0.012	0
062	Sugar confectionery	0.095	0.023	0.102	0.096
081	Animal feed		0.026	0.001	0.006
098	Edible products n.e.s.		0.318	0.091	0.042
111	Beverage non-alcohol n.e.s.	0.663	0.107	0.037	0.067
269	Worn clothing etc			0.004	0.009
841	Men/boys wear, woven		0.009	0.008	0.05
842	Women/girls clothing woven		0.097	0.001	0
843	Men/boy wear knit/crochet		0.27	0.07	0.652
844	Women/girl wear knit/crochet		0.129	0.165	0.733
845	Articles of apparel n.e.s.		3.188	2.448	2.034
846	Clothing accessories		0.78	0.959	0.845
848	Headgear/non-text clothing	0.065	0.506	0.19	0.116
851	Footwear	0.171	3.902	0.488	

Source: UN ComTrade 2009

Table 3.8 lists those pro-poor consumption categories in terms of their shares of total import from China. Agriculture contributed a minor share to the total sum of the product group, live animals and fish/shellfish had tiny shares, while rice was imported occasionally. In addition, the share of vegetables declined between 2000 and 2008. These are essential products commonly consumed by Cambodian middle and low-income households, the poor in particular. Import shares of sugar and sugar confectionary also declined during the same period.

In contrast, shares of animal feed, edible products and non-alcoholic beverages increased slightly, and worn clothing emerged as a new import in 2007 and 2008. Import shares of clothing categories such as men/boys wear, women/girls wear, articles of apparel and clothing accessories, which were the main products in the group, marked a mild rise between 2000 and 2008. Consumer gain appears to be insignificant given that the major imports from China are inputs for the garments and textile sector for domestic export-oriented production and in other chemicals and agriculture and industrial machinery.

Export to the third market

Prior to examining competition between Cambodia and China in the third market, it is important to investigate similarities in the export structures of the two countries. To do so, the study adopted the method used in the studies by Jenkins and Edwards (2004) and Okamoto (2005). Spearman correlation ranking was applied to check the correlation between the share of Cambodia's and China's SITC 3-digit export to their total export to the world. The closer the value is to 1, which would indicate identical export structures, the greater the likelihood that China and Cambodia will be competitors in the third market.

Table 3.9 indicates that for all exports, Cambodia had low export similarity with China between 2001 and 2008, which is statistically significant at 1 percent for 2001-07 and at 5 percent for 2008. By product group classification, the structure of Cambodia's agriculture export had no similarity with that of China, but there was a rising level of similarity in the structure of its manufactures export, which is statistically significant at 5 percent in 1995 and at 1 percent in the period 1998-2008. This indicates rising competition from China in manufactured products in the third market.

Table 3.9: Export Similarity between China and Cambodia 1992 and 2008

Year	Agriculture†	p-value	Manufactures†	p-value	All Exports†	p-value
1992	-0.1125	0.66	0.1293	0.24	-0.0618	0.54
1995	-0.0455	0.84	0.2287	0.02**	0.0756	0.4
1998	0.0614	0.8	0.326	0.00***	0.1079	0.24
2001	-0.0818	0.69	0.3593	0.00***	0.2642	0.00***
2004	-0.0557	0.77	0.4731	0.00***	0.2388	0.00***
2007	-0.1921	0.32	0.4646	0.00***	0.2501	0.00***
2008	-0.1504	0.48	0.4685	0.00***	0.1771	0.03**

Source: Author's calculation based on data from UNComTrade 2009
Note: Level of significance: *: at 10 percent; **: at 5 percent; ***: at 1 percent
†: Spearman correlation ranking between export shares of Cambodia and China

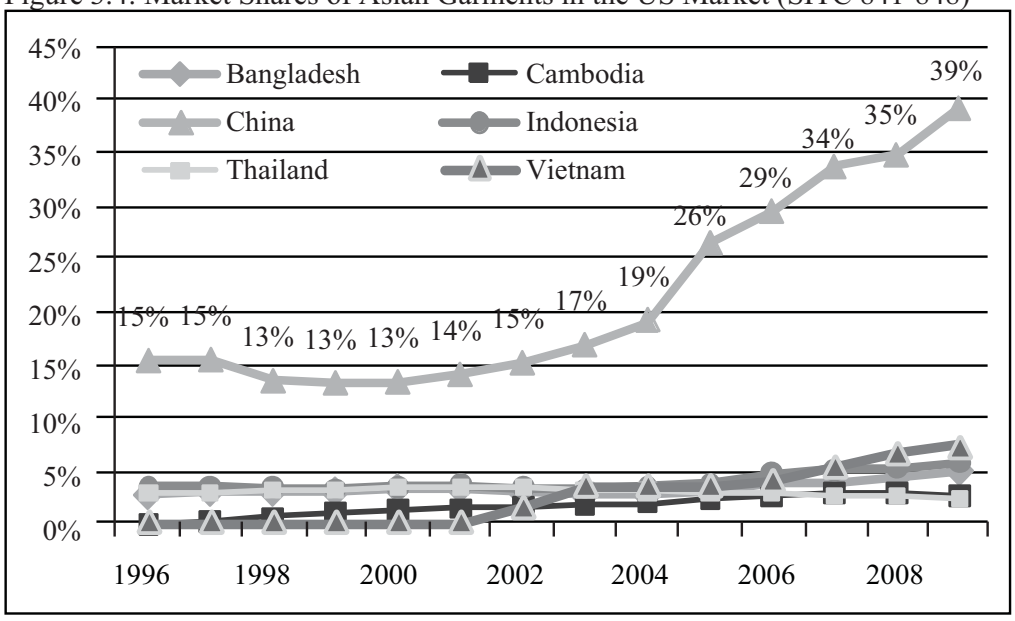
As Cambodia's manufactures export is concentrated mainly in textiles and garments (particularly SITC Rev.3 84), the two countries are likely competitors in those products in the third markets. It should be noted that the marked correlation coefficients of the export structure

of the two countries in manufactured products could be attributed to their strong similarities in the export structure of garments and textiles as Cambodia still has a narrow manufacturing base. Since the industry's establishment in the mid-1990s, Cambodia's garment products have traditionally been destined for three major markets, namely the US (around 70 percent), the EU (23 percent) and Canada (5 percent) (MoC 2009 cited in Saing 2009b:2). Therefore, it is worthwhile examining the competition status between the two countries in both the US and EU markets.

Competition in the US market

Figure 3.4 indicates substantial growth in China's market share of the US garment market during the last decade, which was considerably high between the early 2000s and 2008, marking potential threat to countries specialising in these products, i.e. Bangladesh, Cambodia, Indonesia, Thailand and Vietnam. Despite the two shocks—hike in energy prices and the global economic recession—between late 2007 and 2009, the Chinese market share expanded markedly, while Cambodia's share slowed. During the same period, the rising shares of Vietnam and Bangladesh to a certain extent put further downward pressure on Cambodia's garment producers.

Figure 3.4: Market Shares of Asian Garments in the US Market (SITC 841-848)



Source: USITC 2010

Table 3.10 lists Cambodia's top 12 garment exports to the US market since the establishment of the industry in the early 1990s and highlights the products that Cambodia specialises in i.e. jerseys/pullovers, men/women trousers, men/women outwear/underwear/nightwear, T-shirts, women/girl blouses and baby garments. Over the period 1990 to 2008, most products showed increasing export at current market value, while some marked a significant rise, for instance, jerseys and pullovers, women/girls trousers, men/boys trousers and women girls outerwear.

Table 3.10: Cambodia's Top 12 Garment Exports to US Market 1990-2008 (USD million)

No.	SITC	Product name	1990	1994	1997	2000	2003	2006	2008
1	8453	Jerseys/pullovers/etc	-	0.001	25.92	200.65	182.64	456.08	591.75
2	8426	Women/girl trousers woven	-	-	11.4	139.66	273.21	350.95	373.5
3	8414	Men/boy trouser/etc woven	-	-	34.73	163.42	140.79	195.9	236.69
4	8442	Women/girl outerwear knit/ crochet	-	0.001	4.06	18.64	29.56	142.7	230.57
5	8448	Women/girl under/night-wear k/c	-	-	1.32	27.23	123.86	185.63	160.00
6	8454	T-shirts/singlet knitted/ crochet	-	-	0.70	12.74	13.33	107.62	136.82
7	8437	Men/boy knitted/crochet shirt	0.073	-	2.64	20.97	31.23	90.98	93.69
8	8447	Women/girl blouses knit/ crochet	-	0.012	4.99	16.67	34.75	117.56	91.46
9	8438	Men/boy underwear etc knit/crochet	-	-	2.39	11.45	74.54	76.13	73.18
10	8459	Apparel nes knit/crochet	-	-	0.42	3.26	6.23	60.98	72.62
11	8451	Babies garments etc	-	-	0.08	21.03	16.91	35.24	66.47
12	8432	Men/boy suits knitted/cro-chet	-	-	1.21	3.59	4.78	35.75	50.32

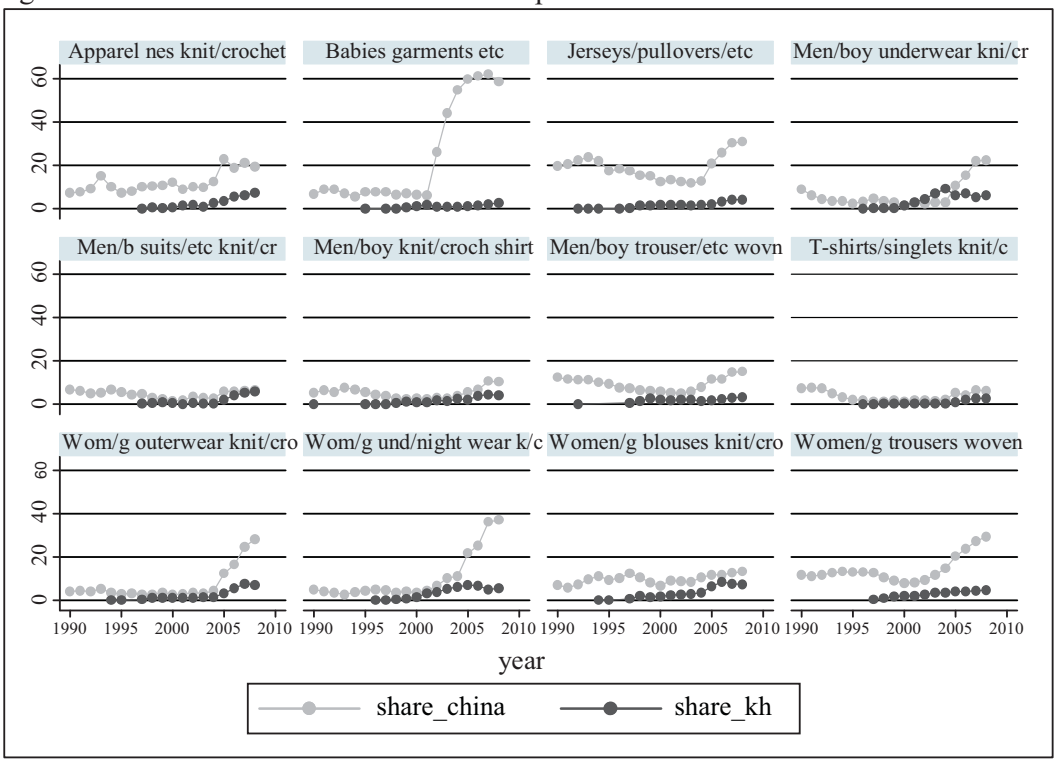
Source: UN ComTrade 2009

Given the increasing export value of Cambodia's top 12 products, it appears that the rising share of Chinese overall garment export to the US does not seem to pose any serious concern to Cambodian products. However, a closer look at the relationship between market shares of the two countries at 4-digit product level gives a clearer picture of the likely competition between the two countries. Figure 3.5 shows that Cambodia could face potential threat from Chinese producers in some garment products, such as baby garments, jerseys/ pullovers, men/boy underwear knit/crochet, men/boy trousers, women/girl outerwear, women/ girl under/nightwear, women/girl blouses knit/crochet and women/girl trousers, but due to the declining share of other Chinese products, specifically apparel knit/crochet, could also grasp new opportunities.

Competition in the EU market

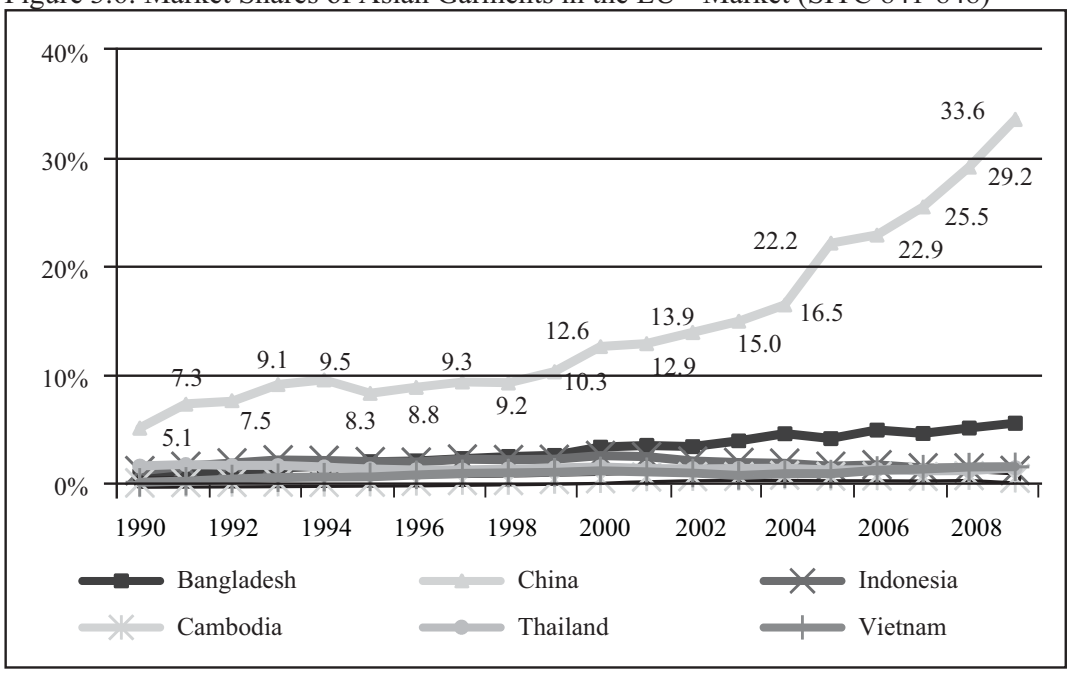
Figure 3.6 shows substantial growth in China's EU garment market share during the last decade which gathered pace between 2000 and 2008, indicating potential threat to countries specialising in the same products, i.e. Bangladesh, Cambodia, Indonesia, Thailand and Vietnam. Despite the two shocks—steep rise in energy prices and the global economic recession—between late 2007 and 2009, the Chinese market share continued to gain momentum, while Cambodia's share slumped. However, given Cambodian products' minimal EU market share of, 0.01 to 1.0 percent between 1990 and 2008, China's and Bangladesh's surging market shares appear unlikely to have any effect on Cambodia.

Figure 3.5: Market Shares of Cambodia's Top 12 Garment Products in the US 1990-2008[17]



Source: UN ComTrade 2009

Figure 3.6: Market Shares of Asian Garments in the EU[18] Market (SITC 841-848)



Source: UN ComTrade 2010

17 All products are Cambodia's top 12 ranking among all garment exports to US (SITC 84) based on export value in 2008

18 EU12 includes Austria, Belgium, Denmark, Spain, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands and Portugal.

Table 3.11 highlights Cambodia's top 12 garment exports to the EU market between 1990 and 2008, the structure of which is similar to that to the US market. Main exports are men/boy trousers, women/girl trousers, men/boy shirts, jerseys/pullover, men/boy knit/crochet shirts and men/boy suits, while others include women/girl outerwear and coats, apparel knit/crochet, T-shirts and women/girl blouses. The top six marked significant rise in export value, except for jerseys/pullovers and men/boy shirts; similar trends were also evident in the remaining top product groups.

Table 3.11: Cambodia's Top 12 Garment Export to the EU Market 1990-2008 (USD million)

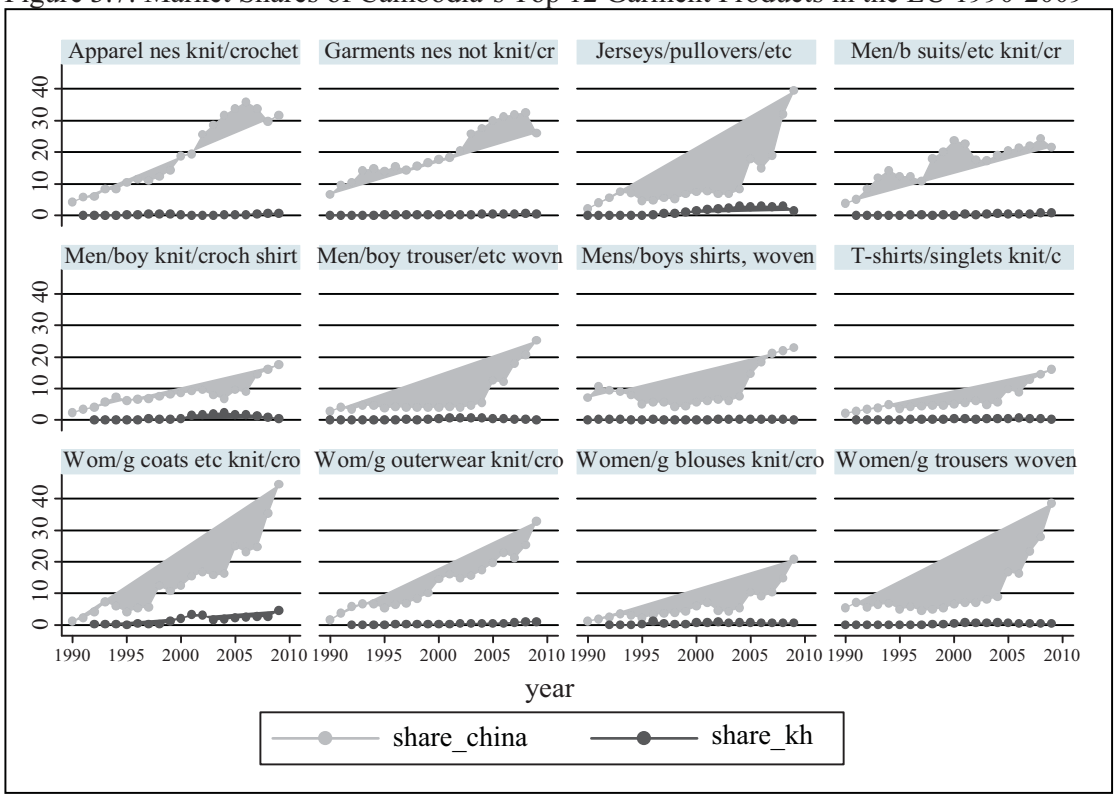
No.	SITC	Product name	1990	1994	1997	2000	2003	2006	2008
1	8414	Men/boy trouser/etc woven	0.01	3.36	53.37	139.69	282.83	433.89	548.86
2	8426	Women/girl trousers woven	0.00	3.58	14.6	25.65	37.42	86.05	92.11
3	8415	Men/boys shirts, woven	0.00	0.16	3.36	5.04	11.01	15.53	54.23
4	8453	Jerseys/pullovers/etc	0.21	0.87	13.8	31.12	54.67	49.42	43.31
5	8437	Men/boy knit/crochet shirt	-	0.51	2.88	19.43	57.49	43.27	42.28
6	8432	Men/boy suits/etc knit/crochet	-	0.13	0.51	5.33	9.11	18.97	30.85
7	8442	Women/girl outerwear knit/ crochet	-	0.57	6.06	5.84	21.85	31.9	24.89
8	8441	Women/girl coats etc knit/ crochet	-	1.78	3.41	2.57	6.51	8.25	17.52
9	8459	Apparel nes knit/crochet	-	5.64	4.19	0.91	8.79	11.5	16.66
10	8454	T-shirts/singlet knit/crochet	-	0.71	4.56	2.86	0.65	3.31	15.72
11	8447	Women/girl blouses knit/ crochet	-	0.35	4.95	5.11	6.76	11.1	13.15
12	8458	Garments nes not knit/ crochet	-	0.21	1.39	0.37	3.13	3.65	9.69

Source: UN ComTrade 2009

Given the increasing export value of Cambodia's top 12 garment products, it appears that the rising share of Chinese overall garment export to the EU poses no threat to Cambodian products. Classified at 4-digit level, the picture of China's rising market shares is even more revealing. The Chinese market share of each of the top 12 grew rapidly, which could pose potential harm to Cambodian products. Nevertheless, as the Cambodian market share of each of the 12 products is minimal, negative effect appears unlikely.

Overall, by examining market shares of Cambodia's key garment products in the third markets, namely the US and EU, the study could postulate that China could become a competitor in a number of Cambodian garment products, but not in the EU given Cambodia's negligible EU market share. However, the question whether Cambodia could compete against China in the US and EU markets should be given serious consideration as a substantial 13.1 percent of the industry belongs to China and 20.7 percent to Hong Kong, while only a minor share of 8.6 percent belongs to Cambodia (GMAC 2006 cited in USAID 2007:8).

Figure 3.7: Market Shares of Cambodia's Top 12 Garment Products in the EU 1990-2009



Source: UN ComTrade 2009

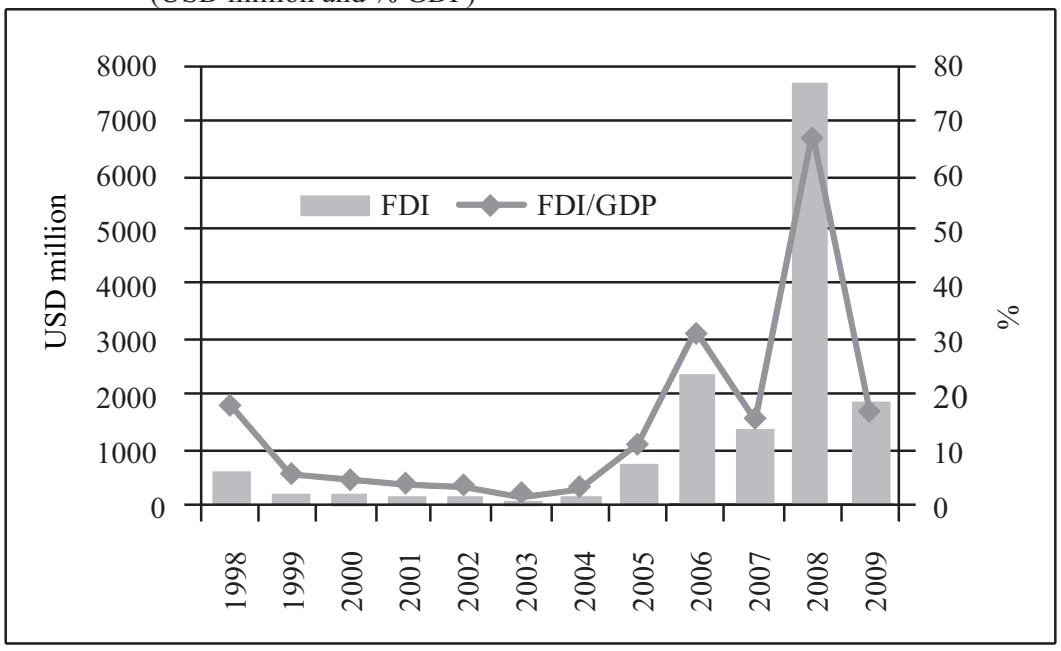
CHAPTER 4

CHINA'S INVESTMENT AND ITS IMPACTS

4.1 MAGNITUDE AND CHANGES

Given its low domestic savings, FDI is a significant element in Cambodia's economy. From 1998-2008 the level of FDI in terms of fixed assets approval contributed on average about 15 percent of GDP and 56 percent of total investment approvals (Figure 4.1). FDI was mainly concentrated in the tourism, construction and garment sectors. However, data from the National Institute of Statistics (NIS) Statistical Yearbook 2008 indicates that on average 60 percent of total fixed asset approvals were implemented during 1994-2007.

Figure 4.1: Foreign Direct Investment (Total Fixed Asset Approvals) in Cambodia (USD million and % GDP)



Source: The Council for the Development of Cambodia and IMF World Economic Outlook Database (April 2010)

China is a major investor in Cambodia. Table 4.1 shows the top twelve investors in Cambodia from 1998 to 2009. China is the top investor, accounting for about 45.6 percent of total foreign investments, followed by South Korea (17.6 percent) and the United States (9.5 percent). The average scale of China's investment is about USD25 million, lower than Russia's USD62 million, the United States' USD37.2 million and South Korea's USD30.9 million.

Table 4.1: Top 12 Investors in Cambodia 1998-2009

Country	No. of Project	Fixed Assets Approval (US$ million)	Average Investment Value (US$ million)	% of Total FDI
China	278	6940.9	25.0	45.6
S. Korea	87	2686.1	30.9	17.6
United States	39	1452.5	37.2	9.5
Thailand	43	596.1	13.9	3.9
Malaysia	51	534.6	10.5	3.5
Vietnam	33	447.0	13.5	2.9
Taiwan	117	436.2	3.7	2.9
Russia	7	434.0	62.0	2.8
Singapore	46	403.8	8.8	2.7
Hong Kong	47	171.6	3.7	1.1
Japan	15	135.4	9.0	0.9
France	15	114.8	7.7	0.8

Source: The Council for the Development of Cambodia

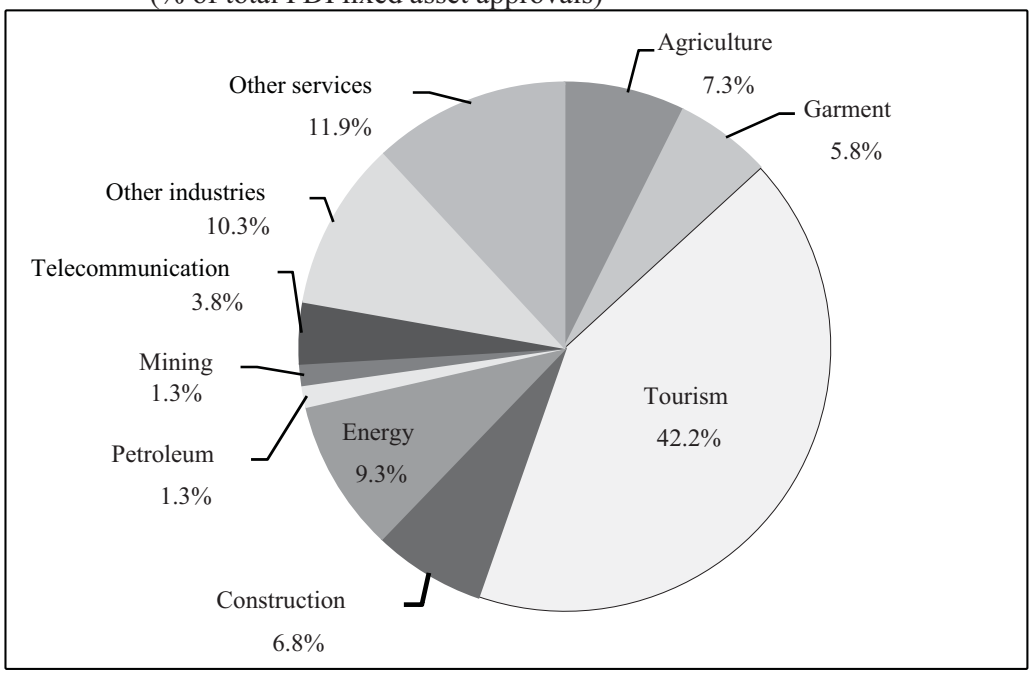
Table 4.2 illustrates the development of Chinese direct investment in Cambodia since 1998, and the substantial investment in Cambodia by Chinese enterprises from 2004 to 2009.

Table 4.2: China's Investment in Cambodia 1998-2009

Year	Number of projects			Fixed Assets Approval (USD million)		
	Total	China	% China	Total	China	% China
1998	212	40	18.9	555.5	104.7	18.9
1999	135	27	20.0	196.2	46.0	23.5
2000	83	7	8.4	160.2	28.4	17.7
2001	47	5	10.6	139.5	5.0	3.6
2002	44	8	18.2	143.6	24.1	16.8
2003	58	10	17.2	64.7	32.9	50.9
2004	75	21	28.0	154.7	83.1	53.7
2005	123	41	33.3	682.4	452.0	66.2
2006	119	31	26.1	2300.6	717.1	31.2
2007	166	32	19.3	1344.6	180.3	13.4
2008	125	28	22.4	7620.8	4374.6	57.4
2009	122	28	23.0	1871.3	892.7	47.7
1998-2009	1309	278	21.2	15,234.0	6940.9	45.6

Source: The Council for the Development of Cambodia

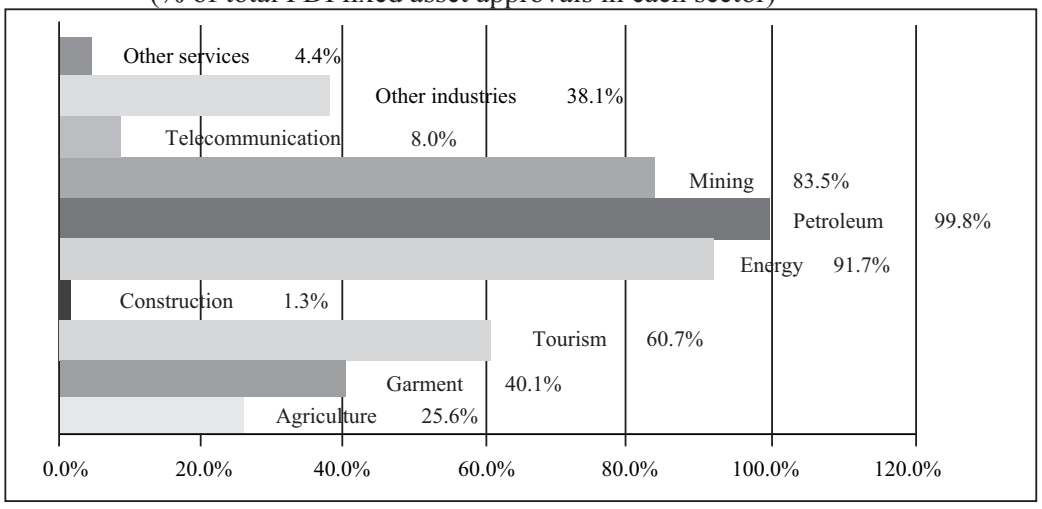
Figure 4.2: Fixed Asset Approvals in Selected Sectors 1998-2008
(% of total FDI fixed asset approvals)



Source: The Council for the Development of Cambodia

Sectoral distribution of China's investment in Cambodia shows that China is mostly attracted to the natural resource development sector, such as petroleum, mining and energy (including hydropower plants), and the tourism and garment sectors.

Figure 4.3: China's Fixed Asset Approvals in Selected Sectors 1998-2008
(% of total FDI fixed asset approvals in each sector)



Source: The Council for the Development of Cambodia

From 1998-2009, 99.8 percent of the total FDI in the petroleum sector, 91.7 percent of that in mining and 83.5 percent in the energy sector was China's investment (Figure 4.3). China's investment in tourism (60.7 percent), garments (40.1 percent), other industries (38.1 percent) and agriculture (25.6 percent) was also significant compared to the total FDI flows to each sector.

The scale of China's investment in the country has gradually expanded from small-scale manufacturing companies, particularly in the garment sector, to medium and large size resource development companies that have invested critically in natural resources, agriculture, construction, and hydropower plants. Notably, China invested heavily in Cambodia's tourism sector in 2008, in particular the development of Koh Kong coastal resorts (Kirisakor and Botomsakor), amounting to USD3,805 million and accounting for about 98 percent of China's total investment in this sector from 1998-2009.

Wu and Chen (2001) point out that the emergence of China's overseas investment is prompted by political motivation, market seeking, the desire to take advantage of lower labour costs, and the availability and price of natural resources. The physical and human infrastructure, together with the macroeconomic situation and institutional structure of the host country, also play decisive roles in China's investment, as is evident in Cambodia.

The extensive Chinese investment in the export-oriented garment sector in the 1990s was largely attributed to Cambodia's Most Favoured Nation (MFN) status as well as the benefits that Cambodian exports were eligible for under the Generalised System of Preference (GSP) of the US, the EU and other developed countries. China's investors took both advantages of market accession and lower labour costs. More recently, China has been investing in natural resource development such as energy (hydro-power plants), mining, agro-industry and construction.

Wu and Chen (2001) add that poor labour quality and low technical standards in developing nations have greatly encouraged the development of the contract market, and China has been able to move into this market on the basis of its experience, undertaking basic infrastructure construction through the provision of foreign aid. Moreover, it has helped to promote export sales of China's products. For example, China's construction companies have helped boost exports of China's construction equipment, facilities, materials, technology and labour. This will be discussed in the next section on China's official development aid to Cambodia.

4.2 METHODOLOGIES AND ANALYTICAL FRAMEWORK

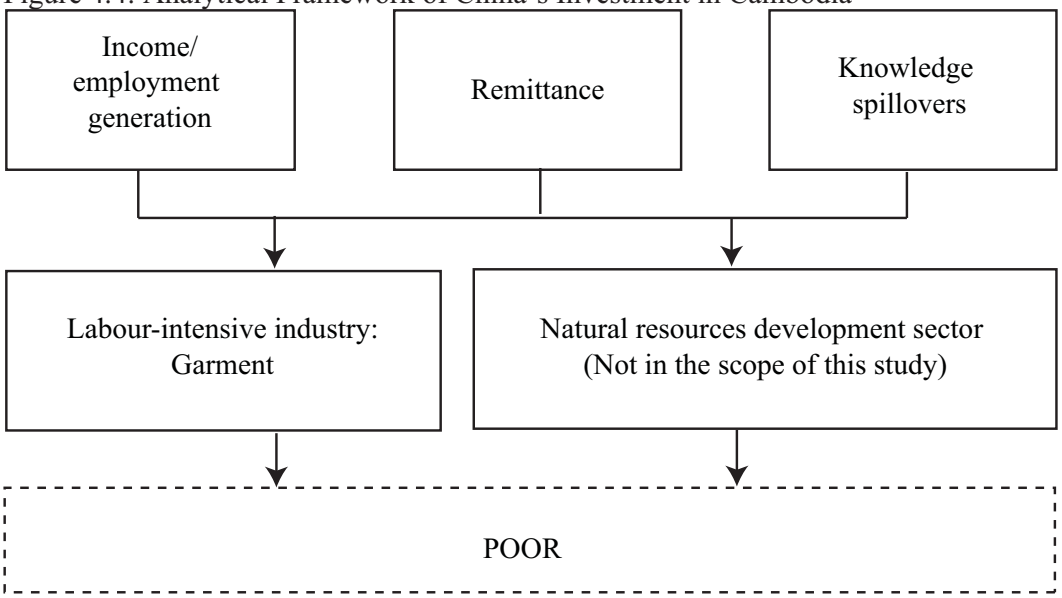
In assessing the effects of FDI on poverty reduction, it is important to distinguish between its direct and indirect impacts. FDI can provide direct contribution mainly through employment and income generation. The indirect benefits of FDI can be transmitted through backward and forward linkages, spill over and demonstration effects. However, it is difficult to measure many of these effects.

On the other hand, the poverty effects of different types of FDI, i.e. labour-intensive or capital-intensive, can be identified. This is crucial for the country to design policies and strategies to attract FDI in those sectors that contribute to poverty reduction. Labour-intensive FDI, as a major generator of employment in a country like Cambodia, is important for poverty reduction.

The labour-intensive investment of China is perceived as creating vast employment for unskilled-workers which positively affects the rural poor. Therefore, the research team undertook a case study on the garment sector which is a labour-intensive industry and greatly attractive to investment from China. The case study attempts to assess the potential effects of China's FDI inflow on poverty reduction through exploring: i) opportunities for the rural poor to increase earnings through employment creation and higher wages; ii) remittance; and

iii) spill over effect on the rural poor's skill development and technology transfer to local enterprises. The effect of China's investment in the garment sector on the economy is also briefly discussed.

Figure 4.4: Analytical Framework of China's Investment in Cambodia



China has also invested heavily in natural resources (agriculture, agro-industry, mining, oil and gas, and hydropower), especially through economic land concessions. Such investment has significant positive and negative impacts on poverty reduction, local livelihoods and the environment. However, this aspect is not within the scope of this study. There are several studies that criticise and explore the ground issues of Chinese companies' involvement in natural resources in Cambodia.

Method and Limitations of the Case Study on Cambodia's Garment Sector

A survey was designed to gain insight into the specific impacts of Chinese investment in the garment sector, principally through the three channels outlined above. The survey was conducted in Phnom Penh and covered a sample of 300 garment workers: 150 employed in Chinese owned and 150 in non-Chinese owned factories. The sample was selected from both Chinese and non-Chinese owned companies to understand whether and how the poverty effects of China's FDI differ from other sources of FDI. The sample was purposely selected at the location while the size of factory (the total number of workers employed) is not taken into account.

Since the sample size is small, the results of this survey cannot be used to generalise the effects. Furthermore, it is mainly based on workers' perspectives without balancing these against other stakeholders' views. This is due to difficulty accessing China's investors and other relevant agencies. Most importantly, the survey was not intended to be an in-depth analysis on the extent of the net benefit of China's investment in the garment sector to poverty reduction.

4.3 CASE STUDY

4.3.1 Overview of the Garment Sector

The garment sector, accounting for around 10.5 percent of GDP, has contributed tremendously to economic growth in the past decade. Data recorded by the Economic Institute of Cambodia indicates that the garment sector has added an estimated 2 percent annually to GDP since 1995, though this trend seems to have been declining recently. The garment sector emerged in response to US trade preferences. The US-Cambodian Trade Agreement on Textiles and Apparel (1999-2004), which linked market access (increasing quota) to labour standards, was signed in 1998-99. A three-and-a-half year EU-Cambodian textile agreement, which provided duty and quota free access for Cambodian garment products subject to rules of origin requirements being met, was set up in 1999. In addition, the EU introduced its "Everything but Arms (EBA)" scheme in 2001, which allows quota and duty-free access on all Cambodian exports to the EU market.

To date, Cambodia's share of its garment sector's value chain and value-added is relatively limited. Cambodia is only involved at the "cut, make and trim" phase of the value chain (World Bank 2009). Cambodia does not have a textiles industry and most of the inputs for the sector are imported. Otherwise, the producing firm is supplied with materials by its customers and is paid a processing fee. More than 90 percent of garment factories are foreign-owned, resulting in a significant repatriation of the profits. Direct contributions to the government budget have been limited since the sector enjoys import tax exemptions as well as tax holidays.

Table 4.3: Garment Factories Registered as Members of GMAC (January 2010)

Country	No. of Factory	Total No. of Worker*	Country	No. of Factory	Total No. of Worker*
Taiwan	61	77,245	Taiwan + USA	3	3657
China	41	40,394	China + Hong Kong	4	3632
Hong Kong	37	45,838	China + Taiwan	2	2635
Korea	31	26,014	China + Cambodia	3	2529
Malaysia	13	26,733	Korea + Cambodia	1	1213
Cambodia	12	6701	Malaysia + Taiwan	1	1093
Singapore	10	20,575	Hong Kong + Canada	1	565
USA	8	4916	Hong Kong + Macau	1	478
Macau	3	7747	China + British	1	399
Bangladesh	1	2126	Taiwan + Cambodia	1	356
British	1	1400			
Canada	1	1113			
Australia	1	713			
Indonesia	1	546			
Philippines	1	425			
Spain	1	350			
Thailand	1	306			
Total	**224**	**263,142**		**18**	**16,557**

Source: GMAC 2010

Even so, the benefits of the garment sector to Cambodia have been substantial in terms of boosting overall GDP, income generation and poverty reduction. Garments account for up to 80 percent of recorded total exports. The garment industry not only contributes in terms of employment creation, but also through remittance to workers' families in rural areas. Many workers are young women who migrated from poor rural areas to Phnom Penh, where most garment factories are located. Thus, the majority of people who benefit from the industry are unskilled and poorly educated young women from rural areas, who typically would be among the most vulnerable within the labour market. The challenge is to what extent Cambodians are employed as technical workers and managers. It is estimated that Chinese recruitment agencies have sent approximately 5,000 Chinese garment technicians and supervisors to work in garment factories in Cambodia. Building domestic human resources capacity is crucial, and the circumstances in which local entrepreneurs gain experience from foreign firms should be established. Meanwhile, indirect job creation such as in transport, trade, restaurants, and other small businesses and services is also evident.

Table 4.4: Factories Selected and Number of Workers Interviewed

No	Name of Factories	Owner of the factory	No. of garment workers interviewed
1	(Cambodia) Hongmei Imp & Exp Co., Ltd	Chinese (mainland China)	15
2	GDM Enterprise Co., Ltd	Chinese (mainland China)	15
3	GHG (Cambodia) Ltd	Chinese (mainland China)	15
4	Kimsheng Garment Co., Ltd	Chinese (mainland China)	15
5	Legend Garment (Cambodia) Co., Ltd	Chinese (mainland China)	15
6	New Orient (Cambodia) Garment Co., Ltd	Chinese (mainland China)	15
7	Pine Great (Cambodia) Garment Co., Ltd	Chinese (mainland China)	15
8	Shen Zhou (Cambodia) Co., Ltd	Chinese (mainland China)	15
9	Star Knitting & Garment Factory Ltd	Chinese (mainland China)	15
10	Su Tong Fang Group Ying Kan (Cam) Garment	Chinese (mainland China)	15
11	Gennon (Cambodia) Garment Manufacturing Ltd	Hong Kong	15
12	Supertex .,Ltd	Hong Kong	15
13	Evergreen Garment Co.,Ltd	Korea	15
14	Gawon Apparel Co., Ltd	Korea	15
15	June Textile Co., Ltd	Malaysia	15
16	PCCS Garment Limited	Malaysia	15
17	8 Star Sportswear Ltd	Singapore	15
18	Chean Ping Garment Co., Ltd	Taiwan	15
19	Phong Wan Enterprise Co., Ltd	Taiwan	10
20	Kin Tai Garment Co., Ltd	Taiwan	5
21	Sky High (Cambodia) Co., Ltd	USA	15
Total			**300**

Source: Survey conducted by CDRI in April 2010

4.3.2 Findings

The case study presents basic information on garment workers' perceptions of the industry's contribution to poverty reduction through employment and income generation, remittance and opportunity for capacity and skill building.

Factories Selected

Table 4.3 shows the number of garment factories registered as member of the Garment Manufacturers Association in Cambodia (GMAC) by nationality of the owners, together with the total number of workers employed in those factories as of January 2010.

The sample firms and number of garment workers interviewed are listed in Table 4.4; 10 firms are from mainland China, two from Hong Kong, two from Korea, two from Malaysia, one from Singapore, three from Taiwan and one from the US.

Employment Creation

Table 4.5 details the number of workers studied by sex, job category and work experience. Eighty-eight percent of the interviewed garment workers are women, and 82 percent have been working in their current factories for three years or less. Characteristically, the industry is highly reliant on female labour; hence, its development empowers women economically by providing them with large-scale employment opportunities. Sewing machinists represent 58 percent of the total sample while only 1.6 percent are office staff.

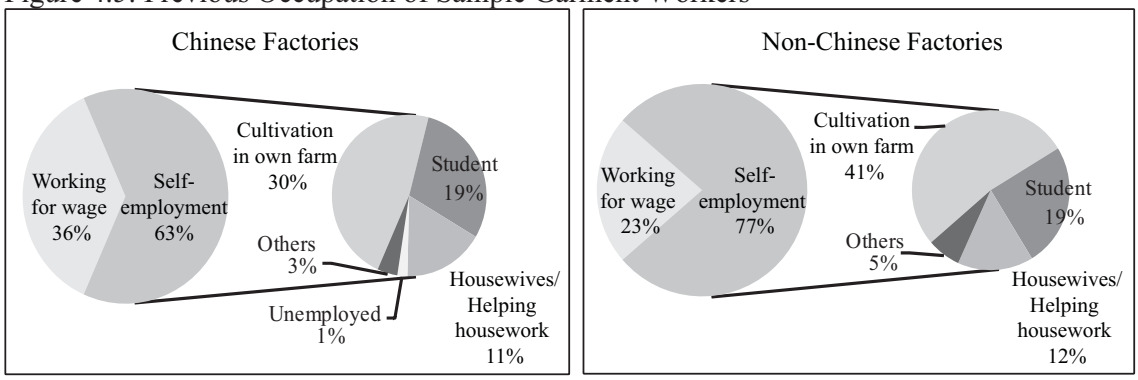
Table 4.5: Total Number of Sample Workers by Sex, Job Category and Work Experience

Experience / Job Category	< 1 year		1-3 years		> 3-5 years		> 5-15 years		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Sample worker	0	2						1	3
Cutting operator	1	5	2	3	0	2		2	15
Sewing operator	9	42	4	68	0	27		25	175
Quality control worker	0	13	0	13				1	27
Worker (washing, ironing, packing...)	11	8	2	19	0	4		3	47
Warehouse worker	0	3	0	5	0	2			10
Cleaner/Guard/Cooker/ Driver	0	1	2	5	1	0		1	10
Quality control inspector	0	1			0	2			3
Final inspector								2	2
Mechanic	1	0	1	0					2
Quality assurance assistant	0	1							1
Office staff			0	2	1	1		1	5
Total	**22**	**76**	**11**	**115**	**2**	**38**		**36**	**300**

Source: Survey conducted by CDRI in April 2010

Based on the sample garment workers' recall of the last job they had when they were employed for at least three months, it was found that 63 percent of workers from the Chinese factories and 77 percent from non-Chinese factories were previously self-employed as: i) farmer on their own farm, ii) student, iii) housewife or helping with housework, iv) unemployed, and v) other self-employment at home (Figure 4.5).

Figure 4.5: Previous Occupation of Sample Garment Workers



Source: Survey conducted by CDRI in April 2010

During 1998-2008, Chinese investment in the garment sector accounted for 40 percent of the total amount of investment in this industry and 34 percent to total FDI in this industry. Not taking the size of factory (in terms of the number of workers employed) in the sample selection into account to some extent confirms that Chinese investment in Cambodia's garment sector has contributed in creating employment for rural people. It must be noted however, that the net benefits between previous (self-employment) and current employment are not examined.

At the time of survey in April 2010, the legal minimum wage for garment workers had been USD50 per month since 2006. Table 4.6 shows the monthly wage profile obtained from the interviews. Most of the workers interviewed earned around USD80 per month, about USD2.67 per day on average. They work eight to 10 hours per day six days per week. However, about 76 percent of garment workers from non-Chinese factories work 10 hours per day compared to only 36.7 percent of workers in Chinese factories.

Table 4.6: Earnings of Sample Workers

	All Sample	**Chinese factories (1)**	**Non-Chinese factories (2)**	**Differences (1) & (2)**
Mean	81.9	83.8	80.1	3.7
Median	80.0	82.0	77.5	4.5
Mode	80.0	80.0	80.0	0.0
Std. Deviation	21.5	21.0	22.0	-1.0
Minimum	14.0	14.0*	40.0	-26.0
Maximum	200.0	150.0	200.0	-50.0

Note: Earnings (in January 2010) include overtime and other allowances
*One garment worker only did a few days work in January 2010 as she was sick
Source: Survey conducted by CDRI in April 2010

To recap, the total poverty line in Phnom Penh in 2007 estimated by the World Bank is USD0.76 per day. That garment workers earn an average of USD2.03 per day (at 2006 prices) i.e. higher than the income needed to live above the overall poverty line in Phnom Penh of USD0.71 implies that to some extent employment in the garment industry reduces poverty.

Work Environment

Compared to the Chinese factories, a larger proportion of workers in the non-Chinese factories rated their work environment as good.

Table 4.7: Work Environment Rating by Sample Workers

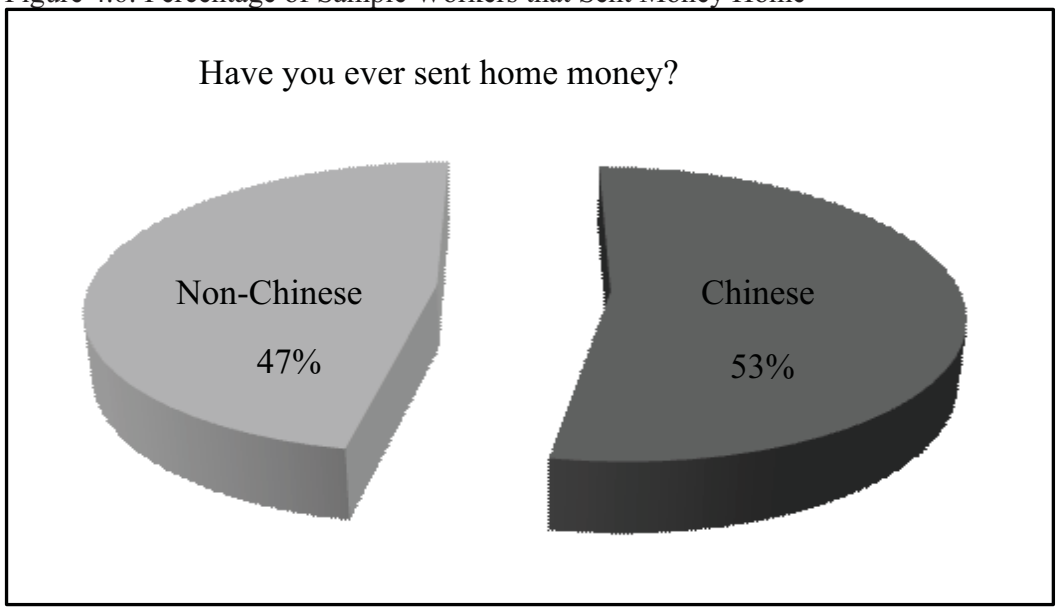
		Health care	Working space	Sanitation	Asking for annual leave	Asking for sick leave
Chinese Fatories	Good	31%	31%	35%	29%	34%
	Medium	53%	64%	31%	42%	38%
	Bad	14%	4%	28%	21%	17%
Non-Chinese Factories	Good	45%	45%	36%	63%	66%
	Medium	51%	51%	49%	23%	21%
	Bad	4%	4%	13%	13%	13%

Source: Survey conducted by CDRI in April 2010

Remittance

When asked if they had ever sent money home, 47 percent of workers from non-Chinese factories and 53 percent from Chinese factories said they had. The sample workers' households mainly use remittance for: i) daily food consumption, ii) investing in agriculture, iii) supporting education of family members, iv) paying debt, v) saving for children, and vi) buying farm land (Figure 4.7).

Figure 4.6: Percentage of Sample Workers that Sent Money Home



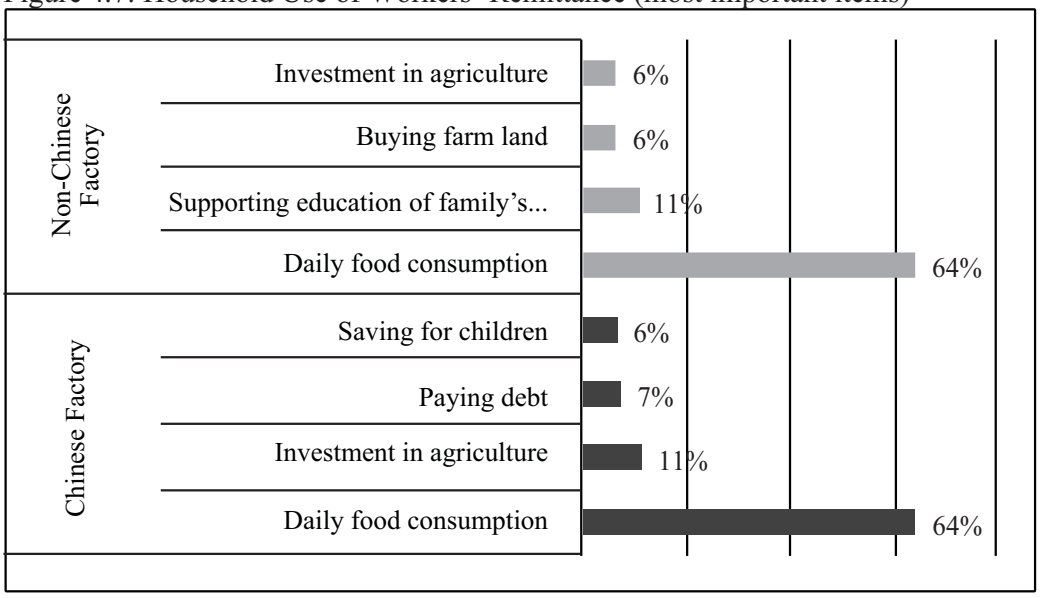
Source: Survey conducted by CDRI in April 2010

Skill Development

As shown in Figure 4.8, neither the Chinese nor the non-Chinese factories offer systematic skill or technical training. Of the total sample of 300, only four respondents (two from Chinese factories) had received training – in new design and labour law.

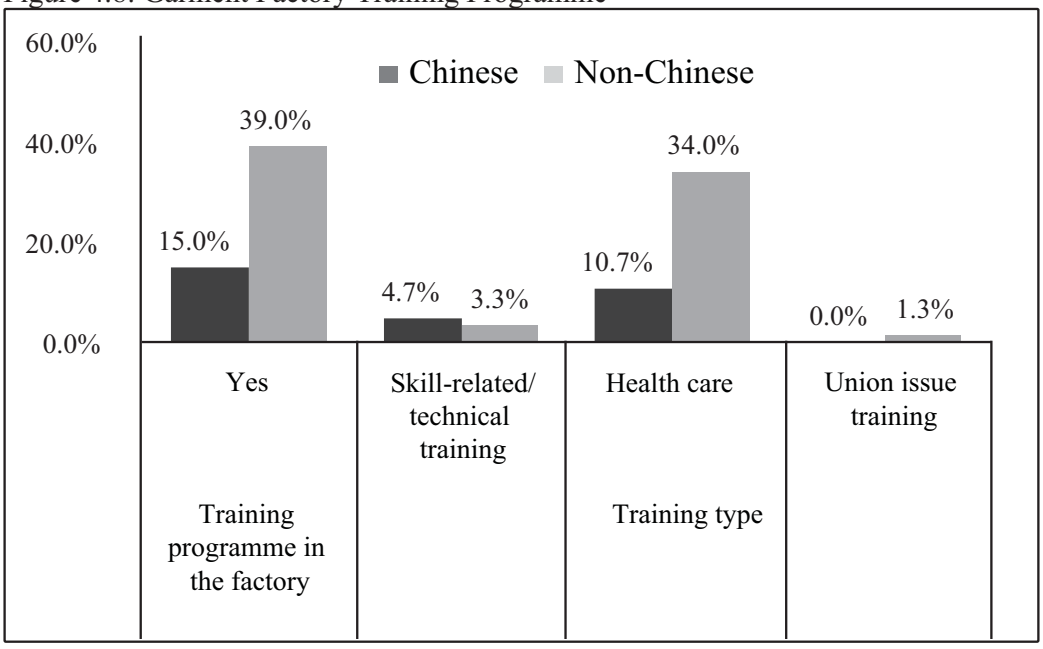
Similarly, most of the workers interviewed responded "don't know and no" when asked whether they would factory support opportunities to attend externally organised vocational training (Figure 4.9).

Figure 4.7: Household Use of Workers' Remittance (most important items)



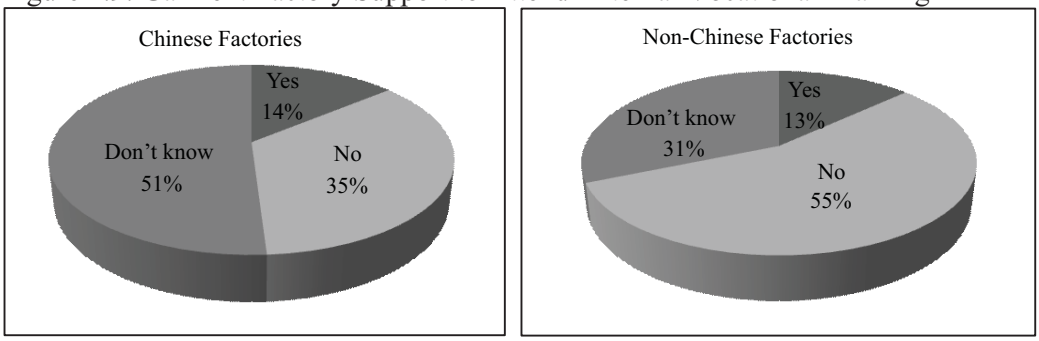
Source: Survey conducted by CDRI in April 2010

Figure 4.8: Garment Factory Training Programme



Source: Survey conducted by CDRI in April 2010

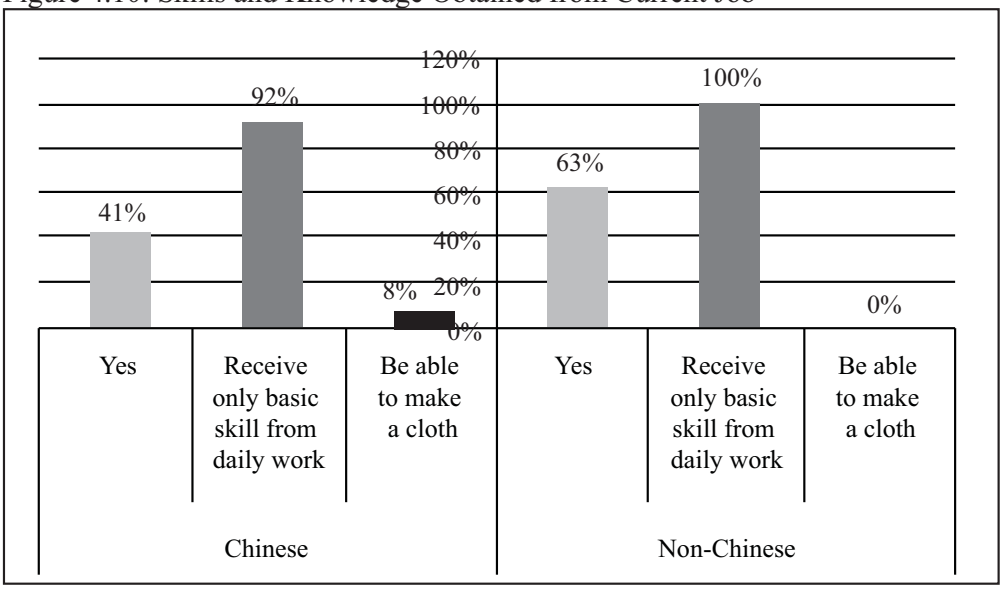
Figure 4.9: Garment Factory Support to Attend External Vocational Training



Source: Survey conducted by CDRI in April 2010

Figure 4.10 illustrates that 41 percent of Chinese factory workers and 63 percent of non-Chinese workers feel they have gained specific skills or knowledge from their current job, though most of them have only attained basic skills through their daily work. They anticipate being able to use these skills and knowledge to i) find a job in other similar factory in the country, ii) find a job in a similar factory abroad (Korea, Malaysia, Thailand), and iii) run their own business e.g. a tailor shop (Figure 4.11). Only about 10 percent of the workers interviewed had sought and paid for personal skill development such as sewing and designing and wedding designing.

Figure 4.10: Skills and Knowledge Obtained from Current Job

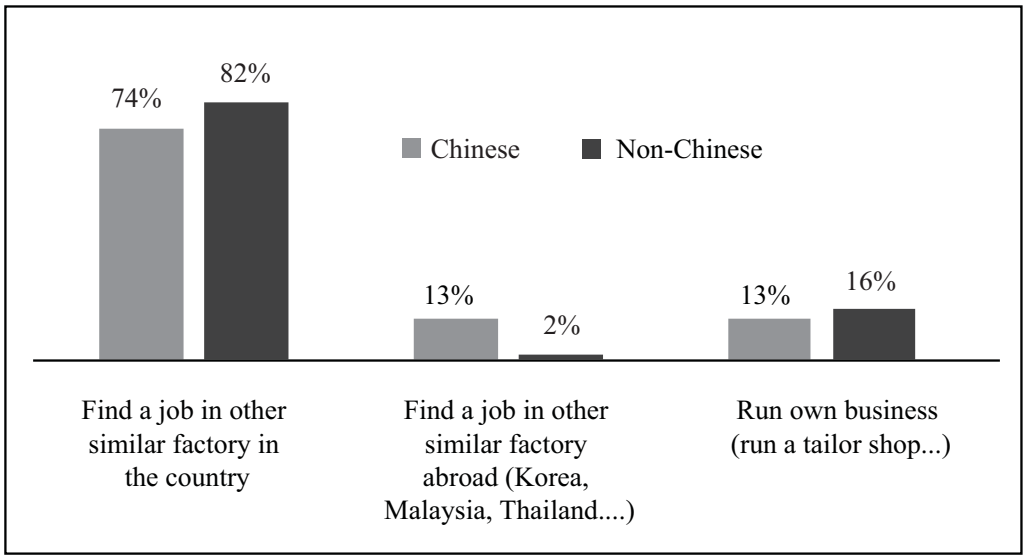


Source: Survey conducted by CDRI in April 2010

Changes in Livelihood

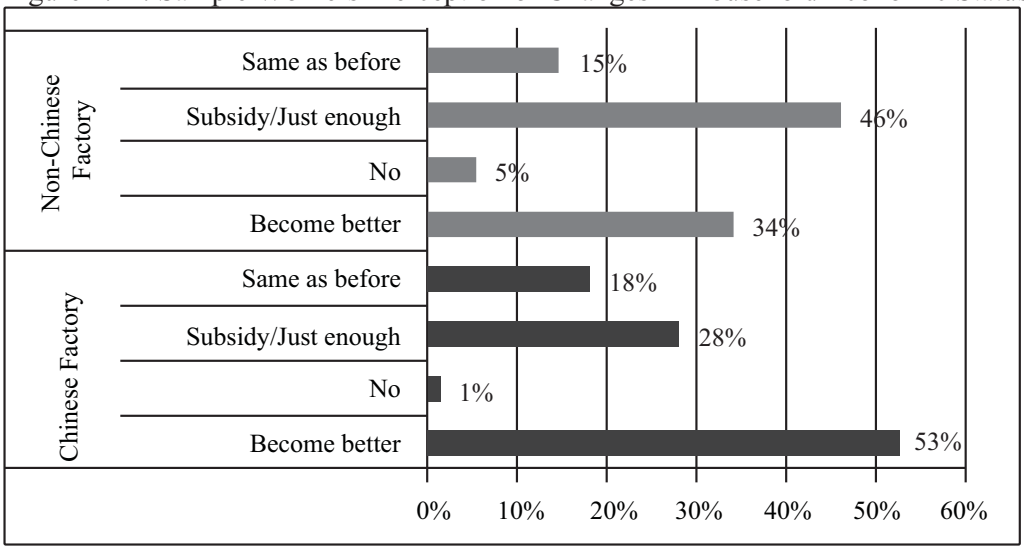
Around half of the respondents from both Chinese and non-Chinese factories believed that their household's economic status had improved. The main reasons given for the changes include: i) investment (purchase of land, motor boat, livestock), ii) regular income (factory wages), iii) more sources of household income, iv) better rice yield, and v) better living conditions in the village.

Figure 4.11: Use of Skills and Knowledge Obtained from Current Job



Source: Survey conducted by CDRI in April 2010

Figure 4.12: Sample Workers' Perception of Changes in Household Economic Status



Source: Survey conducted by CDRI in April 2010

CHAPTER 5

China's Official Development Assistance and Its Impacts

5.1 MAGNITUDE AND CHANGES

Official development assistance (ODA) plays significant roles in financing Cambodia's development as an additional public resource through supporting public service delivery, and as a form of attracting private sector investment through infrastructure improvement and economic services.[19]

The ODA database of the Cambodian Rehabilitation and Development Board of the Council for the Development of Cambodia (CRDB-CDC), the national aid coordination focal point, has recorded continuously increasing financial disbursements since 2000. The average disbursement funds allocated by official bilateral and multilateral development partners and NGOs in the form of grant and loan between 2000 and 2009 totals USD662.3 million. In 2000, ODA per capita was USD37, rising to USD70.7 per capita in 2009. The main sectors targeted include health, education, agriculture, rural development, culture and arts, energy and electricity, governance and administration, transport, and community and social welfare, which is consistent with Cambodia's development priorities in the context of the Rectangular Strategy and the National Strategic Development Plan (NSDP). Each year during the period 2000 to 2009, around 35 percent of the total disbursement fund was allocated to technical cooperation, around 60 percent to investment projects and programmes, and just 2.5 percent went to food aid and emergency.

Given the fund disbursement, mutual trust and accountability are prerequisite for an effective development partnership. This perspective appeared following the recommendations of the Aid Effectiveness Reports in 2006 and 2007. The reports emphasise that acceleration of trust and understanding between Cambodia and its development partners is essential in order to ensure the improvement of development effectiveness.[20]

Historically, several sources of assistance from different partners have financed Cambodia's development needs. Of those, China is emerging as a major donor for the country's improvement. Since the 1990s, once Cambodia was able to ensure security and political stability, the two countries have maintained frequent contact and exchanged visits, building on the strong diplomatic relations already forged over the previous 50 years. The two governments nominated the year of 2008 as Sino-Cambodia Friendship celebration year to strengthen their relationship and enhance bilateral cooperation.

China has been a key source of foreign aid to Cambodia. During the period 2000 to 2009, China's ODA to Cambodia totalled USD465 million, which represents 7.0 percent of the overall endorsement from all Cambodia's partners. China's disbursement kept on increasing each year as is clearly illustrated in the rise from a mere USD2.6 million in 2000 to USD32.5

19 The Cambodia Aid Effectiveness Report 2008 of the Council for the Development of Cambodia, p. 1 & 3
20 The Cambodia Aid Effectiveness Report 2008 of the Council for the Development of Cambodia, p. 1 & 3

million in 2004 and then to USD114.7 million in 2009 (Table 5.1). As of 2009, its significant 11.6 percent share of Cambodia's total disbursement, an increase of 20 percent on 2008, saw China ranked in second place after Japan.

Table 5.1: China's Disbursements in Terms of Assistance 2000-2009 (USD million)

	Term	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 est.
Total disbursement by all the development partners	Grant	-	347	347.7	373.4	367.2	438.8	458.6	567.3	681.7	699.1
	Loan	-	124.9	183.2	166.1	188.2	171.2	136.1	223.1	273.9	290.3
	Total	466.8	471.9	530.9	539.5	555.4	610	594.7	790.4	955.6	989.4
China	Grant	-	-	-	-	-	13.1	6.7	0.4	0.2	3
	Loan	-	-	-	-	-	33.5	46.5	92	95.2	111.7
	Total	2.6	16.3	5.7	5.6	32.5	46.6	53.2	92.4	95.4	114.7
Percentage of total											
China	Grant	-	-	-	-	-	3	1.5	0.1	0	0.4
	Loan	-	-	-	-	-	19.6	34.2	41.2	34.8	38.5
	Total	0.6	3.5	1.1	1	5.8	7.6	9	11.7	10	11.6

Source: The Cambodia Aid Effectiveness Report 2007, 2008, 2009

The disbursement from China consists of three types of bilateral aid in the forms of grants, interest free loans and concessional loans. Grants and interest-free loans are mostly channelled in-kind through various projects, especially those directed to social welfare, material and technical assistance and personal training, according to the request of the country. Concessional loans are primarily captured in the profitability of the projects, namely infrastructure development, through contracting supplies of materials, technologies and services from China's state-owned companies (Martyn 2008).

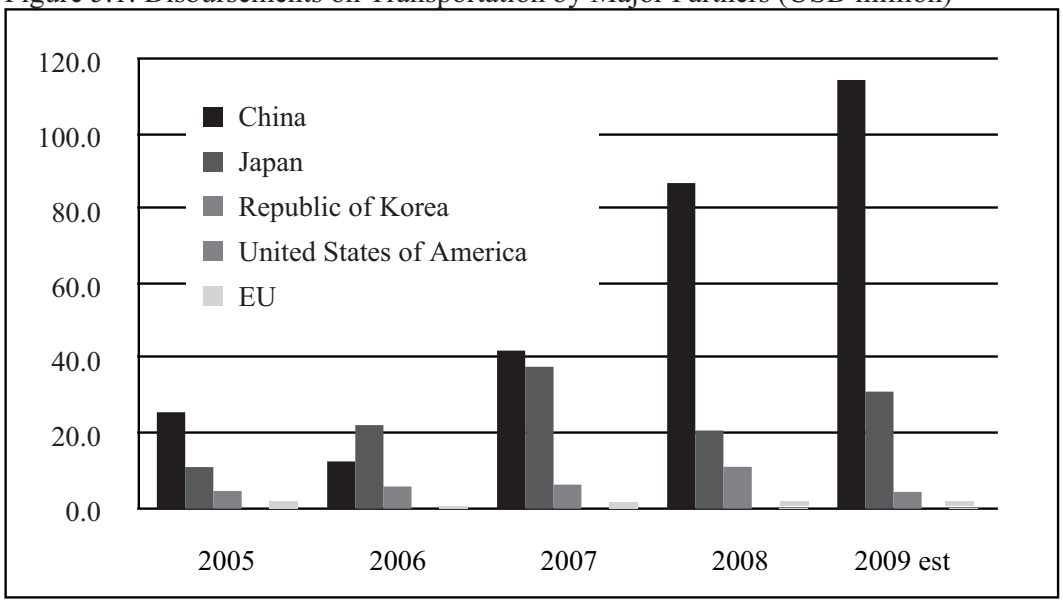
In terms of sectoral disbursement, China's disbursement was primarily allocated to the transport sector from 2005-2009 a robust trend that increased annually from 2006 to 2009 (Table 5.2), Compared to other major development partners, China was the largest contributor to this sector during 2007-2009, followed by Japan and South Korea (Figure 5.1).

Table 5.2: China's Disbursement by Sector 2005-2009 (USD million)

Sector	2005	2006	2007	2008	2009	Total
Health		0.13				0.13
Education		0.38			0.08	0.46
Agriculture	1.71	0.07				1.78
Manufacturing, Mining and Trade	0.05					0.05
Information & Communication			8.85			8.85
Post & Telecommunications		8.46				8.46
Transportation	25.83	12.68	42.31	87.12	114.62	282.56
Community & Social Welfare Services	18.53	19.04	26.22			63.79
Culture & Arts		0.28	0.3			0.58
Environment & Conservation		0.02	0.02			0.04
Governance & Administration	0.52	12.18	14.75	8.29		35.75
Total	46.64	53.24	92.45	95.41	114.7	402.43

Source: The Cambodia Aid Effectiveness Report 2007, 2008, 2009

Figure 5.1: Disbursements on Transportation by Major Partners (USD million)



Source: The Cambodia Aid Effectiveness Report 2007, 2008, 2009

China has never hesitated in supporting Cambodia in areas that other lenders and donors have given up on due to related issues such as human rights, the lack of the Cambodian government's response on administrative procedures, the level of corruption, military and administrative reform, and the risky nature of the projects. Moreover, China actively encourages business between its home investors and associates in Cambodia. This is indicated by approximately 90 percent cooperation between Cambodian and Chinese private and semi-private firms (Phou Sambath ND cited in Marks 2000). Additionally, the aid from China is primarily based on the actual needs of Cambodia, and it is not linked to any condition or any repayment ('without strings attached'). Therefore, Chinese development assistance has become increasingly attractive and demanded by the country.

Both Cambodia and China continue to strengthen their relationship through frequent mutual exchange visits. China is willing to expand commercial ties and allocate more disbursements to Cambodia for physical infrastructure and agriculture sector improvements (Deum Ampil 2010). During the visit of Chinese Vice Premier Hui Liangy in March 2010, China signed three Memorandums of Understanding (MOU) with Cambodia, declaring its intention to boost crop production and upgrade the telecommunication systems in the country (Ek Madra 2010).

Box 1: China's ODA to Improve Cambodia's Basic Physical Infrastructure 2004-09

The notable rise of China's ODA can be chiefly chronicled through improvements in Cambodia's basic physical infrastructure, as evidenced in several main aid programmes:

- In 2004 China endorsed USD200 million as buyer's credit to build the Mekong and Tonle Sap bridges and two highways – Road Nos. 76 and 78. The company responsible for these constructions was Shanghai Construction Group of China.
- In 2006, RMB300 million was provided as non-refundable aid to build Cambodia's government office. Yunnan Construction Engineering Group undertook construction. Soon afterwards, under the GMS programme, China disbursed further concessional loans to build the Information Super Expressway. Another endorsement was the pledge of RMB100 million of interest-free loans for Cambodia's development activities.
- In 2007 China provided USD207 million under preferential buyer's credit loan for the construction of National Road No. 8 and a section of road No. 76, and Prek Tameak and Prek Kdam bridges. China further donated 200 small-size diesel-powered water pumps for agricultural use to Cambodia and joined with multilateral donors in providing funds for the improvement of education and healthcare, improving infrastructure, rural development and agriculture. China's disbursement accounted for 13 percent of the total USD690 million, which was a remarkable amount to Cambodia for its development process. As a bilateral donor, China kept allocating funds to Cambodia which was evident in the USD62,500 provided to Parliament and Inspection ministries for organising their offices and transport equipment; the scholarships awarded to 60 Cambodian soldiers to undertake army training in China; and the nine naval patrol boats granted to safeguard oil installations in the Gulf of Thailand (Xinhua adapted from Rasmei Kampuchea 2007).
- In 2008 China promised to endorse low-interest loans of USD55 million, at the same time allowing Cambodia to export extra volume of goods to China tax-free. China later pledged USD280 million in loans for infrastructure projects, the construction of irrigation systems in Battambang province, power transmission lines to Phnom Penh, the repair of a road linking Kampong Thom and Preah Vihear provinces, and the road from Stung Treng province to Ban-lung (Xinhua adapted from Rasmei Kampuchea, 2008).
- In May 2009, about USD73 million was provided as a concessional loan to build part of the main road in north-eastern Cambodia to support the development of that area into a new economic zone. The road will be used for border trade, transport, and tourism with neighbouring countries in the GMS Triangle Development Framework. In July, approximately USD66.8 million was endorsed for road restoration in Kampong Thom, Kampong Cham, and Mondolkiri provinces (Xinhua, Rasmei Kampuchea 2009).

5.2 METHODOLOGIES AND ANALYTICAL FRAMEWORK

It appears that ODA plays an essential complementary role to other sources of development financing, especially in low-income countries like Cambodia. Also, ODA is a major vehicle for transferring both capital and technical knowledge from developed to developing countries. The challenge however is how to utilise ODA more efficiently and effectively in assisting the development and poverty reduction efforts of the recipient country.

It should be noted that evaluating the impact of ODA in general or in a specific sector is a complex task as developmental outcomes and poverty dynamics are influenced by many

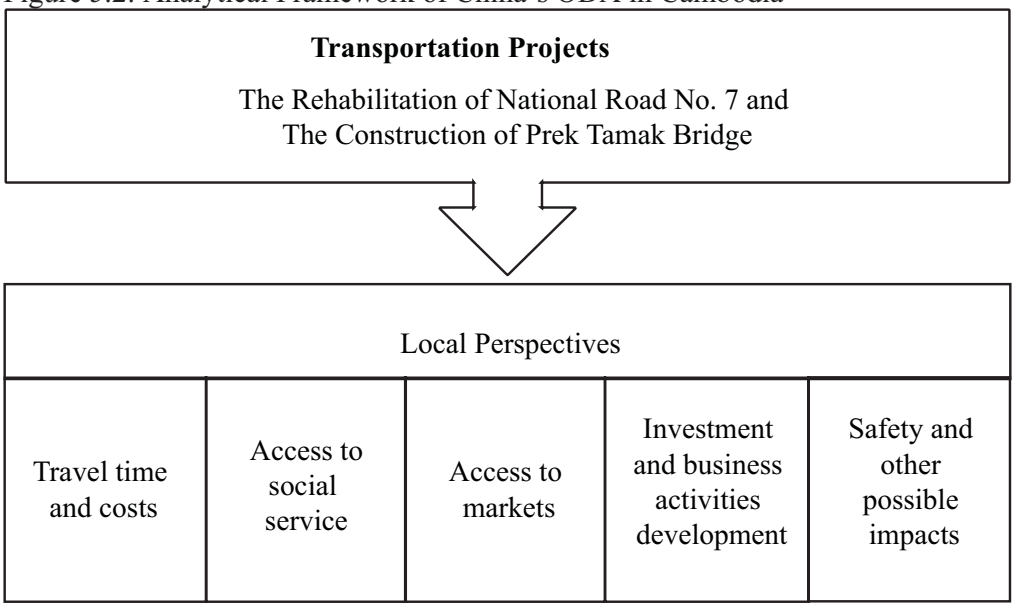
factors outside the sphere of ODA operation. Importantly, the effects are even more difficult to quantify.

As stressed in the previous section on the magnitude of China's ODA, there has been a notable rise in China's funding which has mainly been allocated to the improvement of transport infrastructure in Cambodia. Hence, the impacts of China's ODA on poverty reduction are assessed through selected case studies on Chinese-funded transport infrastructure projects.

Transport infrastructure has long been assumed to contribute indirectly to poverty reduction. A number of studies, using different methodologies and with differing temporal and spatial coverage, provide considerable empirical evidence to validate the poverty impact of transport development. Setboonsarng (2006), reviews existing empirical findings and summarises the 2005 ADBI Workshop on transport infrastructure and poverty reduction[21], and presents the macro- and micro-level impacts of transport infrastructure. *At macro-level*, the transport infrastructure and poverty reduction linkage channels through economic growth. *At micro-level*, transport infrastructure contributes to poverty reduction in terms of the impact on income and non-income dimensions of poverty. In terms of *income poverty*, transport infrastructure opens up opportunities for the poor to raise the productivity of their limited resources (e.g. lowering the costs of inputs and facilitating access to credit, extension services, markets with better prices and agricultural diversification). Likewise, with *non-income poverty*, transport infrastructure can generate impacts by lowering the cost of services needed by the poor, and by complementing interventions that seek to improve access to health, education and other social services.

On this basis, the micro-level impacts of two transport development projects in Cambodia are investigated to assess the poverty impacts of China's ODA. The analytical framework is shown in Figure 5.2.

Figure 5.2: Analytical Framework of China's ODA in Cambodia



21 This workshop was held in Manila from 18 July – 22 July 2005. For more details: http://www.adbi.org/event/851.transport.infrastructure.poverty.reduction/

Method and Limitations

Two case studies on China ODA funded projects in the transport sector were conducted to gain insights on specific issues and relevant impacts: the rehabilitation of National Road No 7 from Kratie to Trapeang Kriel (a border to Laos) which has been completed, and the construction of the Prek Tamak Bridge in Kandal province which was in progress at the time of study.

Focus group discussions (FGDs) with direct and indirect beneficiaries and target group representatives, and researchers' observations were used to gather mainly qualitative information, primarily based on local people's perspectives. The key components discussed in the FGDs are illustrated in Figure 5.2. The main limitations of this assessment are the lack of quantitative data (conducting a survey would have been too costly given the budget for this study) and the unevenness of time-series data on village social indicators (e.g. school drop-out rate, mortality rate before and after having the road and bridge).

5.3 CASE STUDIES

5.3.1 Background of Case Studies

Case Study 1: Rehabilitation of National Road No 7 from Kratie to Trapeang Kriel (a border to Laos)

National Road No.7 is a 509 km long national highway that runs through Kratie and Stung Treng provinces. It connects Skuon in Kompong Cham province with Veun Sai on the Laos border, then joins Laos' Route 13 and runs northwards along the Mekong River to Luang Prabang.

The reconstruction of the road (Figure 5.3), was funded by concessional loan of USD60.98 million and grant of USD2.43 million from the Chinese government, and was undertaken by the Shanghai Construction Group of China. Reconstruction started in November 2004 and finished in December 2007. National road No. 7 is part of the road linkage for ASEAN countries and also completes Asian Highway No. 11; local people in Kratie and Stung Treng provinces generally refer to it as the ASEAN highway.

Case Study 2: Construction of Prek Tamak Bridge in Kandal Province (1060m)

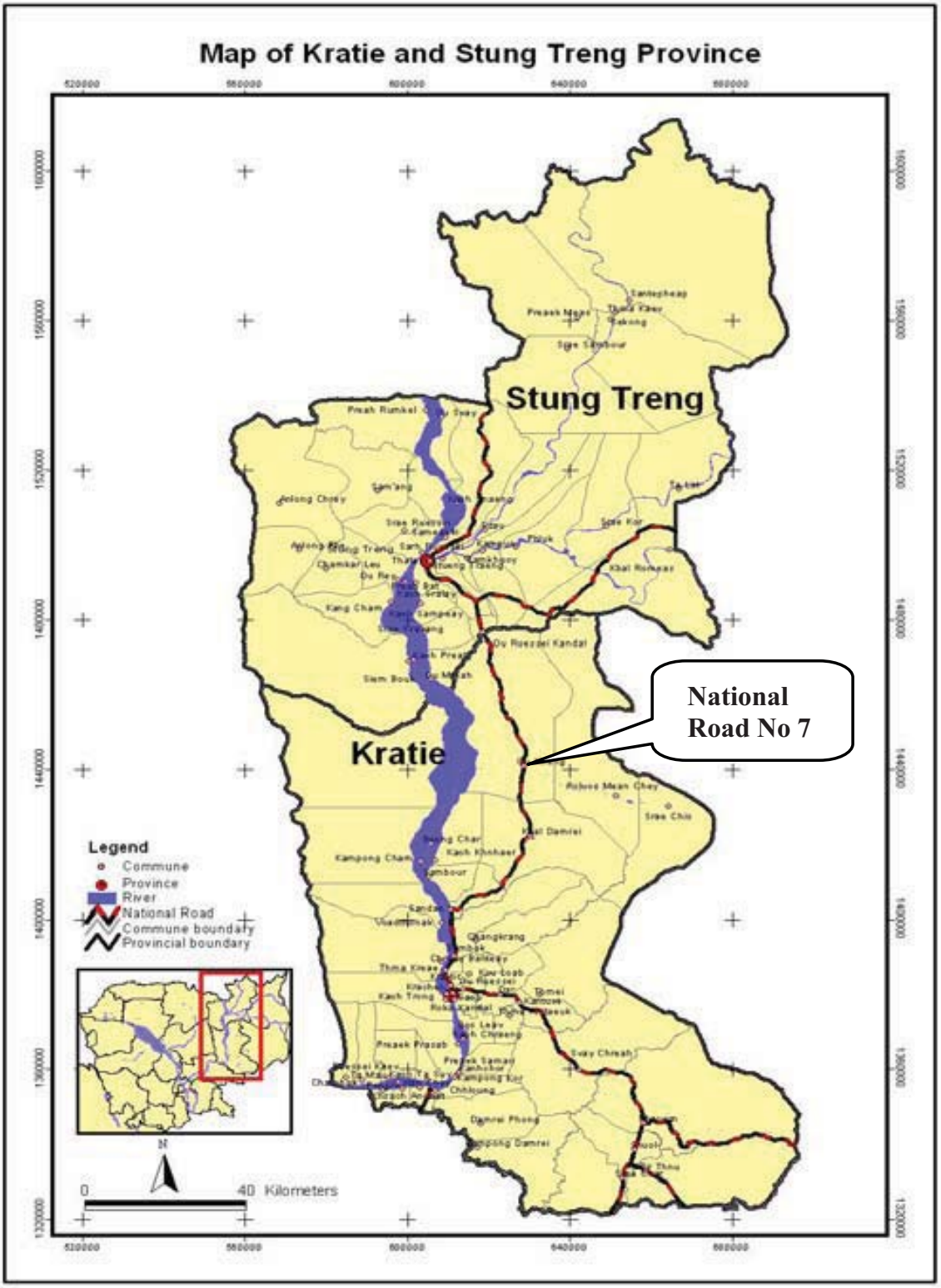
The Prek Tamak Bridge, 1060 m long and 13.5 m wide, is located about 40 km north of Phnom Penh city. The project was started in June 2007 and scheduled for completion in September 2010. By providing a crossing over the Mekong River, the project creates another east-west link for the country. Construction is supported by a concessional loan of USD43.5 million from the government of China under contract with China's Shanghai Construction Group.

5.3.2 Findings

Case Study 1: Rehabilitation of National Road No 7 from Kratie to Trapeang Kriel (a border crossing to Laos)

The FGDs were conducted from 23 to 25 March 2010 in the north-eastern provinces of Stung Treng and Kratie as National Road No. 7 cuts across these provinces and links Cambodia's and Laos' economic corridor.

Figure 5.3: Map of Kratie and Stung Treng Provinces



In each province, three villages located along the road and near the border were selected for focus group discussions to discover how the road construction had affected villagers' livelihoods. The villages of O' Svay, O' Reussey Kandal and Reachea Nokol in Stung Treng province and O' Tanueng, Korsang and Sre Ror Neam in Kratie province were chosen.

The six to eleven participants in each FGD were selected with the help of the village chief, trying to achieve gender equality, diverse sources of income and a broad age range of 20-60 years old. The key points raised included the village situation before and after the road was repaired, likely impact on the villagers, and the relationship between villagers and outsiders throughout the road development. The main sub-items covered travel time and costs, changes in livelihood patterns, access to market, access to social services, land values and investment development, safety, resettlement and rehabilitation, and possible impacts on other activities.

The findings are largely dependent on the information recounted by the participants in the FGDs and researchers' observations. They cannot be used to generalise the impact of China's ODA on the whole of Cambodia.

Community Background

The six chosen villages are located 12 km to 60 km from the centre of Stung Treng and Kratie provinces (FGD reports from each village are attached in the appendices). After the new roads were built, the villages became crowded as new-comers moved in. The new people came to acquire bigger cultivation land or those who were landless came to find refuge.

Changes in villagers' occupations were identified by contrasting the situation in the villages before and after the road were improved. More earning opportunities had been created as the villagers had much easier transport and access to market and greater bargaining power when selling their produce. Their children could travel outside the village to find work or continue their education. Most villagers grew several crops, such as cane and maize; however, the most popular crop was cassava (introduced by newcomers). Villagers had several income sources such as growing crops, raising livestock, waged farm work and lumbering, fishing, running a grocery shop, and collecting resin. Nonetheless, their main income came from cultivating rice except for those in Reachea Nokol village, Stung Treng province, whose main occupation was employment in the armed forces. Villagers in Reachea Nokol did little farming due to the poor soil, lack of irrigation and landlessness.

Outcomes and Impacts

The newly reconstructed road has brought positive and negative benefits to people living along the road and nearby.

Positive side

Similar benefits from road construction were reported during the FGDs as the geographical area and the location of the selected villages were similar. The road has helped villagers by reducing the duration and cost of travelling to the provincial towns and markets. It has expanded accessibility to education, healthcare services and credit, and increased the value of farm products and land. The road has further brought villages within the reach of development organisations and to new ideas on both cultivation techniques and agricultural business. However, for the villagers in Reachea Mongol, the road has only brought the opportunity of working for other people either outside or within the village as their land holdings are too small to grow much.

i) Travel time and costs: The six villages revealed changes in the duration and cost of travel. Villagers in Ou Svay village previously depended on travelling by boat to the capital of Stung Treng province, which would cost them up to KHR100,000 and they would have to spend a night in Stung Treng province. Now, they drive their own motorbike or travel by taxi and the journey takes just one to two hours. The cost of the 55 km journey from O' Taneng village to Kratie province fell from KHR7000 to KHR4000 and now takes one hour by mini-bus or taxi compared to the three hours it used to take.

> *"Before, there was no point in buying a motorbike because there was no road. When we wanted to go somewhere, we had to wait until the taxi came to us or hitch a ride from a military truck. Now that there is a good road, we have been able to buy a motorbike with the money we have saved from selling our land and farm products, making it easier and faster for us to travel……Some grocers go to the provincial market almost every day."*

ii) Access to education and healthcare: The school that serves the villages was in existence even when there was no road, but only grades 1 to 6 were taught. Children's education would stop once they had finished those grades or some even dropped out after just a few years of schooling. This was due to the shortage of teachers, lack of school facilities and poor security when travelling to and from school. Since construction of the new road, more children attend school because there are teachers and better school facilities i.e., tables, chairs and text books. Also, the school now teaches up to grade 9. Children can continue their education at secondary schools in the nearby districts or provinces (8 to 55 km away); a return fare costs KHR3000 by motor-taxi or others whose families can afford the expense, rent a house close to the school.

The difficulties of accessing healthcare services before the new road was built were expressed in all the FGDs. Villagers would use traditional medicines and treatment when ill; for childbirth, women just used herbs and relied on a traditional mid-wife which put them in imminent danger. The seriously ill would simply die at home or on the way to the healthcare centre, especially where health centres are located far from the village. Since the road was constructed, private healthcare providers have shown interest around the villages and villagers have ready access to the public health centre. Also, the traditional mid-wife has been trained in safer delivery methods at the health centre. However, healthcare services in the villages are very slow to improve and can only deal with minor health problems. As a result, villagers still have to travel to other nearby districts which have better services or to the province or Phnom Penh city, but they have better access to faster more readily available transport regardless of the circumstances.

iii) Land value: The price of land varied depending on the location. In O' Reussey Kandal village, the land price along the road increased dramatically from virtually nil previously to USD100 for a plot 3m*400m, while farm land was valued at USD2000 - 3000 per hectare. Whereas in Reachea Nokol village, the price of land was USD600 for a piece 1m*300m and farm land was USD1000 per hectare. Land prices have been escalating since the initial phase of the road construction which coincided with the land market boom in Cambodia. The buyers are from other provinces, namely Kampong Cham, Takeo, Prey Veng and Kampong Thom, and also Phnom Penh. They have bought land for farming and for investment, speculating on the future land price.

iv) Access to markets: The prices of farm products have risen as a result of the road bringing more buyers from further afield to the villages. The road also enables villagers to

transport fresh produce to the market themselves, thereby increasing their bargaining power in setting their selling price. From the discussions, crop prices have risen from KHR200 per kg to KHR800-1000 per kg, encouraging farmers to expand their farm production. It was further reported that villagers used to let their produce rot because no one came to buy it or transporting it to market was too difficult and costly.

> *"Brokers come to our house almost every day unlike before when they came only once a month……Even if they don't come to us, we can take our products to the provincial market ourselves."*

v) Other benefits:

- *Overall benefits:* The villagers are enjoying their quality of life with new motorcycles and house renovation paid for by selling their land and crops. Their children can now go to find work and learn new vocational skills such as crafts or motorcycle maintenance outside the villages.
- *Connection to development agencies:* The road links the villages with development agencies, micro-finance institutes and tourists. This was reflected in the activities of Oxfam and Danida, such as digging wells, providing animal loans for livelihood earning, and helping to build paths in the villages. Micro-finance institutes such as Acleda, AMK and Thaneakea Phum provide opportunities for people to increase their use of agricultural inputs. CIVO has taught villagers handicraft skills. The road is attracting more tourists to visit potential eco-tourism sites near the villages (O' Reussey Kandal village).

Negative side

Besides its good points, some major concerns about the road construction were also expressed.

i) Employment opportunities during the construction period: The construction project came complete in terms of labour, techniques and materials; only a few local villagers were employed in the construction work and just for a few weeks.

ii) Resettlement and rehabilitation: During the initial phase, some villagers' houses were damaged or demolished to make way for the road. Although compensation was paid, USD1000-2500 for a house in good condition and USD300-600 for a poor one, it was not much given the villagers had to move their new settlement deeper into the forest.

iii) Road safety and community security: The road has caused more traffic accidents due to the shortage of proper traffic signs, and because the road surface is easily damaged. Moreover, now that the villages are more accessible, incidences of theft have increased.

iv) Conflict and the environment: The road has attracted several investment companies, mostly Chinese plantation and mining businesses. These companies have been granted concessional land from the government, affecting villagers' cultivated fields and leading to conflict between villagers and the companies. Another detrimental effect is the loss of precious wood where those companies have cleared the forest to grow agro-industrial crops.

To sum up, the new road built under the Chinese disbursement project has provided villagers with more positive than negative benefits. The opportunity of growing more crops and learning from the experience of newcomers as well as passers-by has improved villagers quality of life. The road has been a complementary input, increasing the opportunity of getting more education as well as better healthcare services. The villagers could learn about the outside world from going to either the provinces or Phnom Penh city. They can travel further and more easily to find work. Additionally, the villages can be reached by development agencies which could allocate social services to the villagers as well as help in taking care of forest resources. In short, the roads have brought more livelihood choices.

The FGD respondents suggested that good roads should have enough warning signs to reduce traffic accidents and further, the roads should be of long lasting quality.

Case Study 2: Construction of Prek Tamak Bridge in Kandal Province (1060m)

Community Background

Two FGDs were conducted, one in Kampong Domrey village, Prek Tamaik commune, Kasach Kandal district, Kandal province, and the other in Svay Ath Leu village, Prek Tamaik commune, Kasach Kandal district, Kandal province. The FGDs were carried out in December 2009 while construction of the bridge was in progress and villagers were still using the ferry to cross the river. Thus, the FGD participants were asked what benefits they expected the new bridge to bring.

Kampong Domrey village comprises 274 households. Eight participants (one male, seven females) were selected for the FGD by the village chief based on their standard of living which was defined as poor. One of the participants was a member of the commune council and a village chief.

Svay Ath Leu village has a total of 207 households. Seven people were purposely selected for the FGD according to their occupation as vendors around the ferry site. However, more people than expected joined the FGD which finally comprised 17 participants whose occupations or family members' occupations were vendors (cane juice, shell-fish, food, fruit and beverages) at the ferry dock.

Expected Outcomes and Impacts

Positive side

i) Travel time and costs: For the participants, having the bridge is better than not. Once the bridge is built they will be able to go to the other side whenever they wish, whereas now they have to wait for the ferry and there is no ferry service at night-time. They will also spend less money on travelling. For example, the return trip from their village to Phnom Penh now costs KHR40,000. Moreover, when they use the ferry, they have to pay KHR500 for a motor bike and KHR300 per person. If they travel by taxi, the return trip costs around KHR20,000. It takes from around one to one and a half hours to cross the river. When the bridge is open, they will not have those extra costs. Importantly, the ferries operate from 5am to 5pm, thus their travelling is limited. In an emergency, they would have to spend more money on the ferry.

ii) Changes in livelihood: People expected to have easier access to market because they will be able to travel at any time. In addition, the prices of products produced in the village are going to increase because they will be able to sell direct to retailers rather than to middlemen. For instance, at the time of study the price of bricks in their village was KHR150 per piece, and without having to pay for the ferry crossing they would be able to get KHR200 per piece. In addition, villagers could get work in Phnom Penh because they will be able commute from home easily without having to spend money on renting houses in the city. Besides, they expected that new restaurants would open in their village, so there should be more local jobs available. Also, they were expecting their village to be connected to the national grid soon. Villagers presently use a private electricity supply that costs KHR2800 per kilowatt. Electricity became available in the beginning of 2009 and nearly 70 percent of households are connected to a supply.

However, the participants reported hardship from the loss of family income, especially those whose sole income source is from selling around the ferry terminal. Still, they would prefer to have a bridge than not. This is because the income made from selling around the ferry site is minor or is intermittent at times; it is only supplementary income.

iii) Access to social services: They hope that students who study in Phnom Penh might be able to return home on the same day rather than renting accommodation and that more students will be able to access school. Moreover, when they are seriously ill, they will be able to get to hospital in good time.

iv) Land value and investment: The price of land is expected to rise once the bridge is operational because of the easier accessibility. Land value around the site shot up during the initial stages of construction. Although the land price keeps increasing, villagers will not sell their residential land as they do not know where they would move to afterwards. The FGDs further revealed that the villagers did not foresee any immediate investment; however, they expected to in the future.

v) Resettlement and rehabilitation: The bridge has affected nearly 100 households. It is being constructed on people's land or houses and the government has paid compensation of USD18.0 per square metre for land or houses near the bridge, USD15.0 per square metre for other residential land, USD8.0 per square metre for farm land, USD5.3 per square metre for other land. Most of the people affected by the construction and who had to move have resettled in the same village.

Negative side

The bridge has positive and negative repercussions on the people who live nearby. Although some local people who have small businesses near the ferry terminal may lose their supplementary income once the bridge is built, they were optimistic about the prospect of the bridge. All in all, they felt they stood to gain, for instance, the time and money that will be saved on travelling, the opportunity of finding jobs further afield, better access to markets outside the village and getting higher prices for their products.

Although the bridge is being built in their commune, no local people have been employed in the construction. Most of the construction workers are Chinese.

Chapter 6
Conclusions and Policy Implications

6.1 CONCLUSIONS

The following section outlines the evidence from each component of our impact analysis – trade, investment and ODA – linking them to poverty implications. It should be kept in mind that the findings are mainly drawn from the case studies.

Trade Dimension

The last decade and a half has seen a significant expansion of bilateral trade between Cambodia and China; however, Cambodia's negative trade balance continues to widen at an average annual growth rate of 34 percent. Using framework developed by Jenkins and Edwards (2004), the study examined Cambodia's poverty effect from China through three specific dimensions, namely export to China, import from China and export to the third market. The results are summarised below.

There were noticeable changes in the pattern of export shares to China between 1992 and 2008. The share of labour-intensive agriculture dropped substantially from 51.4 percent in 1992 to 9.1 percent in 2000 and then rebounded to 29.6 percent in 2008. The decline was mainly due to the reduction in natural rubber export when many old unproductive rubber trees were felled, while the rebound stemmed primarily from the rising export of natural rubber as several thousand recently replanted rubber trees matured for tapping and the increased export of live animals and fish between 2000 and 2008. Export of labour-intensive textiles and garments to China also showed a marked upward trend, rising from 3.2 percent in 1992 to 28.2 percent in 2008. The rising shares of these two product groups would have contributed to poverty reduction in Cambodia provided that they also generated significant employment. However, there was considerable drop in the export of other labour-intensive manufactures between 2000 and 2008, which was offset by the significant rise in the export of forestry products during the same period.

Data on Cambodia's imports from China show a small and declining share of labour-intensive agricultural products between 1992 and 2008. It appears that competition between the two countries in domestic agriculture markets is unlikely. Additionally, some of the products that are not of Cambodian specialisation, such as fresh apples, dried grapes, fresh pears and quinces, are complementary. Despite labour-intensive agriculture's tiny import share, the regular and constant rise in the import share of certain products in this category, albeit small, could pose competitive threat in the future. More importantly, the substantial jump in labour-intensive textiles and garments' import share between 1992 and 2008 creates no competition in the domestic market provided that the products are assembled for re-export to the third market. The rising import share of said products appears to create employment in Cambodia, thereby having a positive poverty effect, but hinders opportunity for the development of domestic backward linkage industries in the domestic economy.

In terms of consumer gain, data show that the import share of pro-poor consumer goods increased between 1992 and 2000, but then declined from 2000 to 2008. This indicates that poor consumers' gain from the import of cheap Chinese consumer products abated slightly during the second half of the period, making China's contributing role to poverty reduction in Cambodia less likely. Pro-poor products that have been imported regularly include fish, cereal, vegetables, fruit, beverages, articles of apparel and worn clothing.

Analysis of export to the third market reveals that Cambodia and China could compete in the third market in manufactured goods, but not agricultural products. Further examination of the top 12 garment exports to the US and the EU reveals potential competition with China in the US market, but not in the EU given Cambodia's tiny EU garment market share of between 0.01 and 1.0 percent. Among the 12 products in the US market, China's declining share and Cambodia's rising share of knit/crochet apparel (SITC 8459) creates opportunity for Cambodian producers, while the steep rise in China's market share of the remaining top 12 products could pose potential threat. This could have negative implications for poverty alleviation in Cambodia.

Investment Dimension

A major investor in Cambodia, China's investment in the country has grown substantially since 2004 and is concentrated in natural resource development (petroleum, mining, energy and hydropower plants), tourism and garment sectors. China's investors in Cambodia have explored low labour cost, political stability, investment incentives and newly emerging markets for Cambodia's MFN status.

The contribution of China's investment in Cambodia's garment sector is examined through the case study in terms of employment and income generation, remittance, and opportunity for skills transfer and capacity building. China's investment in this sector has shown a positive contribution to employment creation (63 percent of the interviewed workers were self-employed before joining the Chinese factories). Their average earning is more than double the overall poverty line in Phnom Penh at 2006 prices. However, the net benefits between previous (self-employment) and current employment are not captured in the objectives of this study.

The case study also reveals that garment workers' remittance is chiefly used for household daily food consumption, followed by supporting the education of family members, paying debt and buying farm land, all of which would help their households move out of deficiency in the short and long-run. This reflects workers' perceptions on the improvements in their household's economic status since they have been working in the garment factories, i.e. they are able to invest in buying land, motor boat and livestock in order to have regular income or more sources of income. On the other hand, most workers stated their dissatisfaction with the factory working environment including healthcare, work space, sanitation, and annual and sick leave entitlements. Opportunity and support for capacity and skill development were rated low, while the only skills and knowledge they have gained from their current job are basic skills learned from doing their daily work. Importantly, knowledge and skills transfer is a major gap in China's investment in Cambodia, especially in the garment sector. Although this sector does not require much skill, opportunity and support for skill development should be a complying component for foreign investment in Cambodia.

ODA Dimension

China has been a great development partner for either funds channelling or investment gathering for Cambodia. China's ODA also plays significant roles in financing Cambodia's development agenda as an additional public resource through supporting public service delivery. Cambodia has been granted aid with little quibbling over transparency and modality (Chan Sophal *et al*. 2008). China's assistance to Cambodia ranges from diplomatic ties to economic and investment interventions. But mostly China provides concessional loans to develop physical infrastructure, especially road construction and restoration. This study explored the contribution of two China ODA-funded transport projects to local people's livelihoods and local communities' social development.

Transport is crucial for the development of local communities as well as the nation as a whole. Without physical access to resources and markets, health, education and other social services, the quality of life suffers, growth stagnates and poverty reduction cannot be sustained. Also, poor roads limit the facilitating role of transport in both production and consumption activities.

The contribution of the China-funded projects to improve National Road No. 7 and construct Prek Tamak Bridge to livelihood changes and social development in the project areas are viewed from the perspectives of local people in terms of travel time and costs, access to market and social services, investment and business development, safety and other possible impacts. The findings of the two case studies suggest that villagers perceive they have gained more positive than negative benefits. In short, the better road and new bridge seem to be complementary inputs for developing or attracting both income earning and non-income opportunities that contribute to their livelihoods and social progress and to scaling down the poverty trap.

Case study respondents stressed that the road and bridge have significantly reduced travelling time and transport costs. This leads to the greater availability of inputs and consumption goods. Local farm produce can be sold at higher prices due to easier access to more markets and because more middlemen come to the villages. Crop diversification is another notable factor as newcomers and extension services bring in new information and techniques. The case studies also show villagers' increased use of education and health services resulting from road improvements as well as other interventions such as the greater willingness of professional staff to work in areas with guaranteed access and more reliable delivery of supplies. In addition, a new road encourages commercially operated services. Other positive impacts significantly raised by local people are the links to development agencies, micro-finance institutes, and tourists, which create business and employment opportunities for local people.

On the other hand, the idea that transport infrastructure can reduce poverty by creating employment is not confirmed by the local people in the two case studies. The construction and maintenance of a road is labour-intensive and could provide job opportunities to local people, though these activities are only occasional and therefore cannot represent a long term strategy for reducing poverty. Construction activities were contracted with China's state-owned companies in the form of materials, technologies as well as labour – even unskilled workers. Only a few local people were employed during the construction period and just for a few weeks. Another concern raised by participants and local authorities is that since the road improvements, some Chinese plantation and mining investment companies have been granted concession land in the

areas, leading to conflicts between villagers and companies, deforestation, and villagers' loss of access to land and forest resources. Issues of poor road safety due to inadequate traffic signs and increased theft in the villages were also raised.

Vendors who had a small business near the ferry terminal at the time of our survey stood to lose their supplementary income once the bridge is open, though they still felt optimistic about having the bridge.

6.2 POLICY IMPLICATIONS

The discussion in the previous section highlights the main findings from each dimension of our analysis on China's trade, investment and ODA along with the poverty implications. In order to have more desired effect, some further steps should be taken into account.

Trade Dimension

From the empirical findings it is clear that deepening trade and investment relations with China could potentially contribute to poverty reduction in Cambodia through employment creation in labour-intensive sectors and the import of pro-poor consumer goods from China, which are complementary products for the domestic market. In order to better contribute to poverty reduction, it is imperative that the following steps be taken:

- Exploit opportunities to export labour-intensive agricultural products of Cambodian specialisation, such as fish, live animals, rice, rubber and other light-manufactured products with preferential treatment from China under ACFTA framework, which would to a certain extent ease the burden of negative trade balance and enhance poverty reduction
- Promote access to and increase availability of trade finance for small and medium enterprises as they indirectly engage in export activities
- Promote Cambodian agricultural products through trade fairs or trade mission in China
- Lobby Chinese garment producers to source their inputs from local producers or to establish backward linkage industries in Cambodia
- Encourage and support local producers to engage in backward linkage sectors in the garment industry
- Adopt a computerised customs system to reduce the number of documents and signatures and informal fees, i.e. ASYCUDA World system at Sihanuokville Port, which will reduce unpredictability and improve investors' confidence.

Investment Dimension

The country's rich endowment of natural resources, extensive timber, mineral and hydropower potential, and petroleum reserves as well as its intensive low cost labour force makes Cambodia attractive to China's investment and development assistance and assures the country of a positive attitude from China. As seen in the case study on the garment sector, China's investment impacted positively on employment and income generation, but not on skill development. The key issue is the extent to which benefits from China's investment spill over into the domestic sector in a synergistic relationship. Hence, policy interventions are needed to create necessary conditions for positive spill over and attract Chinese or other foreign investment to those sectors that have the potential to transfer skills and technologies, thus

leading to innovation and increased productivity, improved domestic production and quality, and domestic backward and forward linkages.

ODA Dimension

Besides the positive impacts from the better road and new bridge, some courses of action at both local and national level should be considered:

- Diversification or expansion of livelihood opportunities for vendors and businesses that stand to lose income from trading at the ferry site and those who have lost access to land and forest resources
- Dissemination of traffic information and road safety awareness guidelines to villagers through the commune councils
- Negotiation with the Chinese government to employ Cambodian labour in China's ODA projects to promote the transfer of technologies and skills to Cambodia
- Promotion of capacity building programmes at local level should be a complying condition for China's ODA.

Future Research

Based on the limitations of this study, more in-depth empirical analyses of the linkage between foreign investment and poverty reduction and the notion of infrastructure development and poverty reduction for Cambodia, at both macro and micro levels, should be undertaken.

References

Carl, Middleton & Sam, Chanthy (2008), "Cambodia's Hydropower Development and China's Involvement" (Phnom Penh: RCC)

CDC (2007, 2008 & 2009), "The Cambodia Aid Effectiveness Report" (Phnom Penh: CDC)

CDRI (2008), Impact of High Food Prices in Cambodia, Survey Report (Phnom Penh: CDRI)

Chan, Sophal, Mangahas, Joel, Pham Thi, Thanh An & Wood, Bernard (2008), Cambodia Evaluation of Aid Effectiveness, Final Report

Chin, T, Gregory & B. Michael, Frolic (2007), "Emerging Donors in International Development Assistance: The China Case", (PBDD: Partnership & Business Development Division, York University)

Coudouel, Aline, Hentschel, Jesko S., Wodon, Quentin T. (2002), Poverty Measurement and Analysis (Washington: World Bank)

Cuyvers, Ludo, Soeng, Reth & Bulcke, Daniel Van Den (2006), Foreign Direct Investment of Least Developed Countries: The Case of Cambodia's Textile, Garment, Furniture, Transportation and Tourism Industries, CAS Discussion Paper No. 09

Ek Madra (2010), China Signs Agreements with Cambodia to Boost Investment, March 18 (http://www.dap-news.com/en/news/582-china-signs-agreements-with-cambodia-to-boost-investment.html)

Hem, Socheth, Tong, Kimsun & Ker, Bopha (2009), Maximising Opportunities of Chinese Investment in Natural Resources in Cambodia (Phnom Penh: CDRI, forthcoming)

Hettige, Hemamala, Martin, Paul, Singh, Manjula & Wheeler, David (1995), The Industrial Pollution Projection System, World Bank Policy Research Working Paper No. 1431

Hing, Vutha & Hossein, Jalilian (2008), Environmental Impacts of the ASEAN-China Free Trade Agreement on the Greater Mekong Sub-Region (Canada: IISD)

Hing, Vutha & Nou, Keosothea (2006), The Early Harvest Programme: Implications for Cambodian Agriculture, Special Report No. 4 (Phnom Penh: CDRI)

Humphrey, John & Hubert Schmitz (2007), China: Its Impact on the Developing Asian Economies, Working Paper 295 (Brighton, UK: Institute of Development Studies)

Jenkins, Rhys & Chris Edwards (2004), How Does China's Growth Affect Poverty Reduction in Asia, Africa and Latin America? Expanded Report to DFID (Norwich: University of East Anglia)

Jenkins, Rhys, Enrique Dussel Peters & Mauricio Mesquita Moreira (2007), The Impact of China on Latin America and the Caribbean, *World Development,* Vol. 36, No.2, pp. 235-253

Kaplinsky, Raphael & Dirk Messner (2007), Introduction: The Impact of Asian Drivers on the Developing World, *World Development,* Vol. 36, No. 2, pp.197-209

Kheang, Un (ND), China's Foreign Investment and Assistance: Implications for Cambodia's Development and Democratization

L. Alan, Neil & Andrew (2004), Trade Liberalisation and Poverty: The Evidence So Far, Journal of Economic Literature Vol. XLII, pp. 72-115

Ludo, Joseph, Reth & Daniel (2008), Determinants of Foreign Direct Investment in Cambodia: Country-Specific Factor Differentials, University of Antwerp

Ludo, Reth & Daniel (2006), Foreign Direct Investment and Development of Least Developed Countries: The Case of Cambodia's Textile, Garment, Furniture, Transportation and Tourism Industries, CAS Discussion Paper No.49, CAS & CIMDA

Ludo, Reth, Joseph & Daniel (2008), Productivity Spillovers from Foreign Direct Investment in the Cambodian Manufacturing Sector: Evidence from Establishment-Level Data, University of Antwerp

Martyn, Davies (2008), "How China Delivers Development Assistance to Africa", Centre for Chinese Studies, University of Stellenbosch

Matthew, Coghlan (2007), China's Poverty Footprint in Cambodia (Phnom Penh: OGB)

Menon, Jayant (2005), "Building Blocks or Stumbling Blocks? Regional Cooperation Arrangements in Southeast Asia", *ADB Institute Discussion Paper No.41* (Tokyo: Asian Development Bank Institute)

Neak, Samsen & Yem, Sokha (2006), Trade and Poverty Link: The Case of the Cambodian Garment Industry, (Phnom Penh: EIC)

Ngaire, Woods (2008), "Whose aid? Whose influence? China, Emerging Donors and the Silent Revolution in Development Assistance", The Royal Institute of International Affairs

Ngo, Ngoun Theary (2007), *Extractive Industry Transparency Initiative in Cambodia*, Cambodia Development Watch, Vol. 3, No.2, pp.7-10 (Phnom Penh: NGO Forum on Cambodia)

Nuno, Crespo & Maria, Paula Fontoura (ND), Determinant Factors of FDI Spill-overs: What Do We Really Know? ISEG-Universidade Techica de Lisboa

OECD (2008), China's Outward Direct Investment, OECD Investment Policy Reviews: China 2008

Okamoto, Yumiko (2005), China and India: Challenges and Opportunities for ASEAN from Japanese Perspectives (Kyoto: Doshisha University)

Phou, Sambath (ND), "Cambodia-China Relation: Past, Present and Future", PhD Student, IIMBA

Raphael & Dirk (2008), Introduction: The Impact of Asian Drivers on the Developing World, World Development Vol. 36, No. 2, pp. 197-2009

Renato, Maria & Rogerio (2002), Foreign Direct Investment Spillovers: Additional Lessons from a Country Study

Rhys, Enrique & Mauricio (2008), The Impact of China on Latin America and the Caribbean, World Development Vol. 36 No. 2, pp. 235-253

Rutherford, Jeff, Lazarus, Kate & Kelley, Shawn (2008), Rethinking Investment in Natural Resources: China's Emerging Role in the Mekong Region (Phnom Penh: HBSC)

Saing, Chan Hang (2009a), Export Competitiveness of the Cambodian Rubber Sector Relative to other Greater Mekong Sub-region Suppliers: A Simple Descriptive Analysis, ARTNeT-GMS Discussion Paper No.1

Saing, Chan Hang (2009b), Impacts of the Global Financial Crisis on Garment Workers and Remittances: Lesson from Cambodia, ARTNeT-GMS Notes No.3

Sandra, Poncet (2007), Inward and Outward FDI in China, (University Paris 1 CNRS and CEPII)

Saw, Sheng & Chin (2005), ASEAN-China Relations: Realities and Prospects, Institute of Southeast Asian Studies, Singapore

Sida (2007), Understanding Rural Poverty in Cambodia, Country Economic Report 2007:1 (Phnom Penh: Sida)

Setboonsarng, Sununtar (2006), Transport Infrastructure and Poverty Reduction, ADBI Research Policy Brief No.21 (ADBI: Tokyo)

SOFRECO & CEDAC (2005), Study on the Evolution of the Cambodian Rubber Sector, Draft report (Clichy-Cedex France and Phnom Penh)

Tong, Kimsun & Hem, Socheth (2009), China' Investment in Cambodia (Phnom Penh: CDRI)

UNDP & MOC (2007), Cambodia's 2007 Trade Integration Strategy: Executive Summary and Action Matrix (Phnom Penh: UNDP)

USAID (2007), Factory-Level Value Chain Analysis of Cambodia's Apparel Industry (Phnom Penh: USAID)

USAID (2006), Cambodia Garment Industry Workforce Assessment: Identifying Skill Needs and Sources of Supply (Phnom Penh: USAID)

USAID (2005), Measuring Competitiveness and Labor Productivity in Cambodia's Garment Industry (Phnom Penh: USAID)

World Bank (2009a), Sustaining Rapid Growth in a Challenging Environment, Cambodia Country Economic Memorandum (Phnom Penh: World Bank)

_____ (2009b), Poverty Profile and Trend in Cambodia: Findings from the 2007 Cambodia Socio-Economic Survey (Washington: World Bank)

_____ (2008), Handbook of Poverty Analysis (Washington: World Bank)

_____ (2007), Cambodia: Sharing Growth, Equity and Development Report 2007 (Phnom Penh: World Bank)

_____ (2006), Cambodia: Halving Poverty by 2015? (Phnom Penh: World Bank)

_____ (2004), Cambodia at the Crossroads: Strengthening Accountability to Reduce Poverty (Phnom Penh: World Bank)

Wu, Hsiu-Ling & Chien-Hsun Chen (2001), "An Assessment of Outward Foreign Direct Investment from China's Transitional Economy", *Europe-Asia Studies,* Vol. 53, No. 8 (Glasgow: Central and East European Studies) pp. 1235-1254

Yamagata, Tatsufumi (2006), The Garment Industry in Cambodia: Its Role in Poverty Reduction Through Export-Oriented Development, IDE Discussion Paper No. 62 (Chiba: JETRO)

Yamagata, Tatsufumi (2007), Prospects for Development of the Garment Industry in Developing Countries: What Has Happened Since the MFA Phase-Out? IDE Discussion Paper No. 101 (Chiba: JETRO)

Yu, Ching Wong & Charles, Adams (2002), Trends in Global and Regional Foreign Direct Investment Flows, Regional Office for Asia and the Pacific International Monetary Fund

Zhu, Zhenming (ND), "China's Economic Aid to CLMV and Its Economic Cooperation with Them"

Appendices

Appendix 1: Classification of SITC 3-digit Products according to Production and Consumption Categories* (Jenkins and Edwards 2004:38)

Production Categories

1: Labour-intensive agricultural products – 037; 042; 05; 06; 07; 231; 232
2: Other agricultural products – 00; 01; 02; 034; 035; 036; 04 (-042); 08; 09; 12; 21; 22; 26 (-266 and 269); 29; 411; 42; 43
3: Forestry – 24; 25
4: Minerals and petroleum – 233; 266; 27; 28; 32; 33; 34; 35; 68
5: Labour-intensive textiles and garment products – 65; 84
6: Other labour-intensive manufactures – 269; 61; 63; 665; 666; 821; 831; 851; 89 (-896 and 897)
7: Other manufactured products – 11; 51; 52; 53; 54; 55; 56; 58; 59; 62; 64; 66 (-665 and 666); 67; 69; 71; 72; 73; 74; 75; 76; 77; 78; 79; 812; 87; 88; 896; 897; 9

Consumption Categories

The following SITC products were identified as products likely to be consumed by low income consumers. These consist of food, beverages, tobacco, garments and footwear.
00; 01; 02; 03; 04; 05; 06; 07; 09; 11; 12; 269; 84; 851

** Where a 2-digit SITC classification is indicated, this means that all 3-digit classes within it are included in the product group.*

Appendix 2: Share of All Products Exported to and Imported from China 1992-2008 at 3-digit Level

Table: A2.1: Share of All Products Exported to China 1992-2008 at 3-digit Level (%)

SITC 3	Product names	1992	2000	2007	2008
001	Live animals except fish		0.3522	2.0122	6.2231
012	Meat neces. fresh/chilled/frozen		0.001		
034	Fish, live/fresh/chilled/frozen		0.7799	1.6226	1.2503
036	Crustaceans molluscs etc		1.0249	0.672	0.9446
037	Fish/shell-fish, prepared/preserved			0.1935	
042	Rice				0.0005
054	Vegetables, fresh/chilled/frozen		0.0047		
057	Fruit/nuts, fresh/dried	16.833			
058	Fruit preserved/fruit preps		0.0057		
059	Fruit/vegetable juices			0.0358	0.0248
112	Alcoholic beverages				0.0101
222	Oil seeds etc - soft oil			0.0381	
231	Natural rubber/latex/etc	34.551	9.0992	21.569	29.606
246	Wood chips/waste				0.7213
247	Wood in rough/squared		0.5677	31.605	13.027
248	Wood simply worked		2.1666	15.452	13.669
269	Worn clothing etc			2.6466	3.1204
273	Stone/sand/gravel			0.0141	0.066
282	Ferrous waste/scrap				0.2571
287	Base metal ore			0.0074	
292	Crude veg materials nes	14.455		0.0803	0.0159
335	Residual petrol. prods			0.0001	
524	Other inorganic chemical				0.0001
541	Pharmaceutical & medicament			0.0001	
542	Medicaments include vet			0.0125	
551	Essentialoil/perfume/flavouring			3.6379	0.3337
581	Plastic tube/pipe/hose				0.001
598	Misc chemical prods nes		0.0010		
611	Leather			0.0042	0.0336
634	Veneer/plywood/etc		79.439	0.0506	
635	Wood manufactures nes		2.3286	0.043	0.2263
641	Paper/paperboard		0.0001		
642	Cut paper/board/articles			0.0003	
651	Textile yarn			8.5324	1.2187
652	Cotton fabrics, woven			0.843	0.0374
653	Man-made woven fabrics		0.003	0.2308	0.0458
654	Woven textile fabric nes		0.0001	0.1738	
655	Knit/crochet fabrics			0.7581	0.2251
656	Tulle/lace/embroidery/trim			0.0332	0.0076
657	Special yarns/fabrics		0.0001	0.0196	0.0462
658	Ready-made textile articles	3.2624		0.0016	

661	Leather manufactures		0.0002	0.0014	0.0045
664	Glass				0.0003
665	Glassware				0.0005
666	Pottery			0.0053	0.0277
667	Pearls/precious stones			0.0016	
679	Iron/steel pipe/tube/etc				0.0004
694	Nails/screws/nuts/bolts		0.0007		0.0008
697	Hold equipment				0.0003
699	Base metal manufacture		0.0003		0.006
716	Rotating electric plant			0.001	
718	Power generating equipment	6.3992			
723	Civil engineering plant				0.0144
724	Textile/leather machinery		0.0036		
728	Special industrial machinery				0.0009
742	Pumps for liquids				0.0022
744	Mechanical handling equipment	6.009			
747	Taps/cocks/valves				0.0007
752	Computer equipment				0.0045
763	Sound/television recorders etc				0.0002
764	Telecomm equipment nes			0.0102	0.0059
771	Elect power transmission equip				0.0017
772	Electric circuit equipment			0.0004	0.0405
776	Valves/transistors/etc			0.0024	0.001
778	Electrical equipment nes	18.491			0.0015
784	Motor vehicle parts/access			0.0001	
785	Motorcycles/cycles/etc			0.0016	
813	Lighting fixtures etc				0.0002
821	Furniture/stuff furnishing			0.1683	0.8679
831	Trunks and cases			0.001	
841	Men/boys wear, woven		4.1851	1.1544	5.0744
842	Women/girl clothing women			0.3848	0.6723
843	Men/boy wear knit/crochet			1.4856	1.793
844	Women/girl wear knit/crochet			1.0931	2.0472
845	Articles of apparel nes		0.0000	4.6233	17.022
846	Clothing accessories		0.0206	0.0031	0.004
848	Headgear/non-text clothing		0.0003	0.0009	0.0007
851	Footwear			0.5635	0.9043
874	Measure/control app nes			0.0014	0.0016
885	Watches and clocks		0.0126		
892	Printed matter		0.0013	0.0328	
893	Articles nes of plastics		0.001	0.0363	0.0575
894	Baby carriage/toy/game/sport				0.0007
897	Jewellery			0.0011	
898	Musical instrument/records			0.0026	
899	Misc manufacture articles nes		0.0007	0.135	0.3296

Source: UN ComTrade, 2009
Note: Share of export to China to total export to China

Table: A2.2: Share of All Products Imported from China 1992-2008 at 3-digit Level (%)

SITC 3	Product names	1992	2000	2007	2008
001	Live animals except fish				0.00952
016	Meat/offal preserved		0.00055		
017	Meat/offal preserved nes	0.08425		0.00095	
022	Milk prep. excluding butter/cheese		0.04319	0.00007	
025	Eggs, albumin		0.00018		
034	Fish, live/fresh/chilled/frozen		0.00007		
036	Crustaceans molluscs etc		0.00005		
037	Fish/shellfish, prep/pres		0.00236	0.02132	0.04885
042	Rice		0.00827		
048	Cereal etc flour/starch		0.0134	0.09388	0.337
054	Vegetables, fresh/chilled/frozen		0.00068	0.01321	0.00087
056	Vegetable root/tuber prep/pres	0.01262	0.14422	0.09495	0.03198
057	Fruit/nuts, fresh/dried		0.07736	0.0162	0.0539
058	Fruit preserved/fruit preps		0.02109	0.03298	
061	Sugar/molasses/honey	1.84029	0.00543	0.01187	0.00014
062	Sugar confectionery	0.09468	0.023	0.10214	0.09587
071	Coffee/coffee substitute		0.00829		
074	Tea and mate				0.00323
075	Spices		0.00299		
081	Animal feed		0.02587	0.00085	0.00591
091	Margarine/shortening			0.00718	0.00416
098	Edible products n.e.s.		0.31752	0.09061	0.04174
111	Beverage non-alcohol n.e.s.	0.66259	0.10683	0.03698	0.06718
112	Alcoholic beverages	0.30194	0.09179	0.89364	1.03233
121	Tobacco, raw and wastes		0.55311	0.34514	0.133
122	Tobacco, manufactured		3.83837	0.46196	0.28224
222	Oil seeds etc - soft oil			0.0023	
223	Oil seeds-not soft oil			0.001	
231	Natural rubber/latex/etc		0.00197		
232	Rubber synthetic/waste/etc		0.0003	0.00013	0.01169
248	Wood simply worked		0.00011	0.00664	0.00406
251	Pulp and waste paper			0.00281	0.00947
266	Synthetic spinning fibre			0.00168	0.00855
269	Worn clothing etc			0.00372	0.009
272	Fertilizers crude			0.0013	0.00021
273	Stone/sand/gravel		0.02655	0.07052	0.0179
277	Natural abrasives n.e.s.		0.00367	0.00094	0.00311
278	Other crude minerals		0.13092	0.00236	0.02637
281	Iron ore/concentrates				0.00015
283	Copper ores/concentrates		0.00152		
285	Aluminium ores/concentrates/etc			0.00016	
291	Crude animal material n.e.s.				0.00373
292	Crude vegetable materials n.e.s.		0.01051	0.02274	0.00099

322	Briquettes/lignite/peat			0.00068	
334	Heavy petrol/bitum oils		0.26001	0.36809	0.91359
335	Residual petrol. prods			0.00002	0.00314
342	Liquid propane/butane				0.51737
511	Hydrocarbons/derivatives		0.00392	0.0159	0.03792
512	Alcohols/phenols/derivatives		0.0073	0.00753	0.00075
513	Carboxylic acid compound		0.02104	0.01336	0.02302
514	Nitrogen function compound		1.05954	0.16193	0.06416
515	Organic-inorganic compounds		0.05858	0.03344	0.02539
516	Other organic compounds		0.04296	0.01211	0.0137
522	Elements/oxides/hal salt		0.11811	0.0385	0.01659
523	Metal salts of inorganic acid		0.10523	0.09365	0.09607
524	Other inorganic chemical		0.03267	0.00003	0.00077
531	Synthetic org colour agents		0.02146	0.00237	0.0014
532	Dyeing/tanning extracts		0.00005		
533	Pigments/paints/varnish		0.09016	0.06972	0.06407
541	Pharmaceuticals excluding medicaments		0.28184	0.21826	0.17008
542	Medicaments including vetinary supplies	0.03652	0.47826	0.86327	0.80181
551	Essential oil/perfume/flavouring		0.04672	0.10437	0.13017
553	Perfume/toiletries/cosmetics		0.00241	0.17828	0.10624
554	Soaps/cleansers/polishes	0.16069	0.20416	0.08388	0.04197
562	Manufactured fertilisers		0.0068	0.02985	0.03688
571	Primary ethylene polymer		0.00922	0.04005	0.02612
572	Styrene primary polymers			0.01741	0.00086
573	Vinyl chloride etc polymers			0.00145	0.01862
574	Polyacetals/polyesters		0.00107	0.00014	0.02518
575	Plastic nes-primary form		0.01034	0.01913	0.02286
581	Plastic tube/pipe/hose		0.00844	0.19971	0.14751
582	Plastic sheets/film/etc		0.07706	0.15332	0.17389
583	Monofilament rods/sticks		0.00455	0.00587	0.00562
591	Household/garden chemicals		0.04153	0.03352	0.03713
592	Starches/glues/etc.		0.02345	0.05477	0.07511
593	Explosives/pyrotechnics			0.03766	0.05766
597	Oil etc additives/fluids		0.00008	0.00168	0.00084
598	Misc chemical prods nes		0.01998	0.07384	0.16101
611	Leather		0.10046	0.22987	0.06989
612	Leather manufactures		0.00216	0.00165	0.00283
613	Fur skins tanned/dressed				0.01637
621	Rubber materials		0.04022	0.07521	0.05973
625	Rubber tyres/treads		0.76485	0.33168	0.30054
629	Articles of rubber nes		0.10853	0.06459	0.14593
633	Cork manufactures			0.00005	
634	Veneer/plywood/etc		0.00356	0.02489	0.07754

635	Wood manufactures n.e.s.		0.00328	0.04424	0.0194
641	Paper/paperboard		0.60196	0.31687	0.25305
642	Cut paper/board/articles		0.62733	0.43079	0.42958
651	Textile yarn		1.42078	2.48547	2.58503
652	Cotton fabrics, woven		21.2794	15.6682	13.4696
653	Man-made woven fabrics		6.55946	7.0439	5.38476
654	Woven textile fabric nes		2.94135	0.51125	0.69596
655	Knit/crochet fabrics		13.2108	28.5606	26.3276
656	Tulle/lace/embroidery/trim etc		0.28478	1.19186	0.94483
657	Special yarns/fabrics		0.60757	0.68895	0.69375
658	Made-up textile articles		0.02915	0.21196	0.20152
659	Floor coverings etc.		0.01237	0.03993	0.03245
661	Lime/cement/construction materials	40.3933	0.10128	0.2819	0.37723
662	Clay/refractory material	1.786	0.49292	2.69139	3.08905
663	Mineral manufactures nes		0.06801	0.12127	0.07552
664	Glass	1.23345	0.47847	0.32501	0.48312
665	Glassware	3.08465	0.03021	0.14412	0.21236
666	Pottery	0.63646	1.45092	0.537	0.35556
673	Flat rolled iron/st prod	0.25065	0.09859	0.13819	0.01279
674	Rolled plated m-steel		0.00542	0.62191	0.54692
675	Flat rolled alloy steel		0.00064	0.00462	0.0722
676	Iron/steel bars/rods/etc	25.5067	6.9837	0.87978	2.25324
677	Iron/steel railway material			0.00452	
678	Iron/steel wire	0.07518	0.2353	0.04464	0.11492
679	Iron/steel pipe/tube/etc		0.54115	0.49922	0.36789
682	Copper		0.00333	0.05492	0.02731
684	Aluminium		0.01236	0.22761	0.14167
685	Lead		0.00003		
686	Zinc		0.00004	0.00004	
691	Iron/steel/aluminium structures		1.72209	0.80198	1.14679
692	Metal store/transport container		0.00918	0.37736	0.08989
693	Wire products excluding ins electricity		0.04572	0.10745	0.6551
694	Nails/screws/nuts/bolts		0.02194	0.10694	0.09939
695	Hand/machine tools	1.9072	0.34065	0.24378	0.23708
696	Cutlery		0.20313	0.0196	0.01493
697	Base metal household equipment		0.10399	0.04736	0.03666
699	Base metal manufacture nes	0.17153	0.51193	0.48182	0.43256
711	Steam generating boilers		0.08127	0.06753	0.87924
712	Steam/vapour turbines				0.17038
713	Internal combust engines	1.09634	1.89992	1.76467	2.16358
714	Engines non-electric nes			0.00001	
716	Rotating electrical plant	0.44833	0.65085	0.65028	1.07005
718	Power generating equipment nes	0.08661		0.00042	0.05799

721	Agriculture machine excluding tractor	0.47872	0.00939	0.02756	0.11745
722	Tractors	0.55781	0.06027	0.04352	0.10807
723	Civil engineering plant	0.08035	0.02686	0.64169	0.54447
724	Textile/leather machinery		2.43813	1.58974	0.93542
725	Paper industry machinery		0.20473	0.06741	0.05693
726	Printing industry machinery		0.02999	0.01022	0.02077
727	Food processing machines	0.49281	0.13988	0.08192	0.35903
728	Special industrial machines nes	7.8745	1.04036	0.58708	0.52136
731	Mach-tools remove material		0.01896	0.01326	0.02226
733	Mtl m-tools w/o mtl-rmvl		0.0161	0.00276	0.03128
735	Metal machine tool parts		0.00087		0.00042
737	Metalworking machine nes		0.00273	0.02966	0.05484
741	Industrial heat/cool equipment	1.31248	0.31729	0.70361	0.57535
742	Pumps for liquids	0.13706	0.15695	0.377	0.4076
743	Fans/filters/gas pumps	0.45103	0.13327	0.40265	0.29792
744	Mechanical handling equipment	1.34276	0.07906	0.61571	0.78082
745	Non-electrical machines nes	1.21536	0.09557	0.13078	0.22769
746	Ball/roller bearings		0.01415	0.02877	0.03141
747	Taps/cocks/valves	0.00641	0.03689	0.07573	0.06458
748	Mechanical transmission equipment		0.06318	0.03619	0.14016
749	Non-electrical parts/acc machine		0.0149	0.03835	0.03679
751	Office machines		0.01061	0.10893	0.06364
752	Computer equipment		0.0192	0.08929	0.06227
759	Office equipment parts/accessories		0.00326	0.04715	0.03563
761	Television receivers		5.0272	0.13524	0.08937
762	Radio broadcast receiver		0.03094	0.00146	0.0023
763	Sound/television recorders etc		0.00028	0.00067	0.05767
764	Telecomm equipment nes	0.21517	1.87375	5.71636	5.31392
771	Electric power transmission equipment	0.02912	0.03766	0.18374	0.75807
772	Electric circuit equipment	0.40462	0.12704	0.22214	0.62065
773	Electrical distribution equipment	0.28229	0.01354	0.82665	1.2714
774	Medical etc electro diagnose equipment		0.01581	0.02645	0.04526
775	Domestic equipment	0.05246	0.02691	0.0283	0.04356
776	Valves/transistors/etc	0.02527	0.00137	0.07706	0.0641
778	Electrical equipment nes	0.91781	0.57849	0.35895	0.58521
781	Passenger cars etc		0.01048	0.04338	0.02239
782	Goods/service vehicles	0.7972		0.65014	0.65833
783	Road motor vehicles nes			0.05197	0.00321
784	Motor vehicle parts/accessories	0.03052	0.02185	0.1907	0.25128
785	Motorcycles/cycles/etc	0.37667	2.10005	1.44051	1.48437
786	Trailers/caravans/etc	0.00424	0.00517	0.03102	0.01017
791	Railway vehicles/equipment			0.0045	

793	Ships/boats/etc		0.01069	3.10741	2.01862
811	Prefabricated buildings		0.00436	0.08251	0.11951
812	Sanitary/plumb/heat fixture		0.04137	0.06964	0.09925
813	Lighting fixtures etc	0.11955	0.20663	0.25854	0.33261
821	Furniture/stuff furnishing		0.07494	0.18578	0.30184
831	Trunks and cases		0.1649	0.04484	0.49168
841	Men/boys wear, woven		0.00949	0.00789	0.04977
842	Women/girl clothing woven		0.09733	0.0005	0.00046
843	Men/boy wear knit/crochet		0.26984	0.06986	0.65166
844	Women/girls wear knit/crochet		0.12894	0.16501	0.73263
845	Articles of apparel nes		3.1879	2.44795	2.03402
846	Clothing accessories		0.7803	0.95889	0.84454
848	Headgear/non-text clothing	0.06452	0.50618	0.19031	0.11617
851	Footwear	0.1705	3.90183	0.48847	0.42219
871	Optical instruments nes		0.0001	0.00234	0.00175
872	Medical/etc instruments	0.00507	0.04669	0.1053	0.19009
873	Meters and counters nes	0.11508	0.02697	0.01176	0.01818
874	Measure/control app nes	0.02464	0.04451	0.05894	0.06315
881	Photographic equipment		0.00001	0.00081	0.00298
882	Photographic supplies		0.02741	0.03857	0.02604
884	Optical fibres		0.04329	0.01215	0.03329
885	Watches and clocks	0.0141	0.57079	0.00259	0.00186
891	Arms and ammunition	0.28472	0.00031	0.01246	0.02617
892	Printed matter		0.0725	0.22723	0.18773
893	Articles nes of plastics	2.2192	0.78243	0.47005	0.43092
894	Baby carriage/toy/game/sport	0.0183	0.08321	0.0448	0.07383
895	Office/stationery supply		0.23431	0.06915	0.06686
896	Art/collections/antiques		0.00078	0.00013	
897	Jewellery		0.00035	0.02157	0.03019
898	Musical instruments/records		0.00759	0.10048	0.35234
899	Miscellaneous manufacture articles nes	0.00966	0.68267	0.56453	0.54788

Source: UN ComTrade, 2009

Note: Share of import from China to total import to China

Appendix 3: Focus Group Discussions: China's ODA on the Rehabilitation of National Road No 7 of Cambodia from Kratie to Trapeang Kriel (a border crossing to Laos)

FGD 1: Sre Ror Neam Village, Kshem Commune, Snhoil District, Kratie Province

Date: 25 March 2010
Time: 10:10-11:10
Location: Sre Ror Neam village, Kshem commune, Snhoil district, Kratie province
Facilitator: PON Dorina
Note taker: PHANN Dalis

The table below lists the seven participants selected for the focus group discussion.

No	Name	Sex	Age	Education	Occupation	Number of HH members
1	PA Malis	F	44	0	Farmer and drinks vendor	7
2	HEANG Orn	F	43	0	Selling labour	6
3	PUT Phean	F	23	0	Selling labour	3
4	CHAN Heng	M	46	7	Farmer and drinks vendor	7
5	MEUN Srey Orn	F	44	3	Porridge vendor	3
6	YEIM Sokha	M	56	0	Farmer	2
7	PROM Ny	F	52	3	Farmer	6

1. Background of the Community

Sre Ror Neam village is 60 km from Kratie province. It consisted of 297 households before the road was built; the number has recently increased to 367 households. The new villagers are mostly from Prey Veng, Svay Rieng and Kampong Cham provinces. The villagers cultivate rice, grow crops, saw logs, keep grocery stores, raise livestock, collect triang (a kind of thorny palm tree) and sell labour. They have sawn logs since 1995 and this activity has been boosted by having a good road. They also transport logs for others, charging KHR100,000 per ox-cart for about 20 km. However, people do not expect to earn more income from sawing logs because it contravenes the law. The law is now strictly enforced and it is not worth the risk of being caught. Following the newcomers' experiences, about 70 percent of the villagers have been growing cassava over the last three years because it fetches a high price. Unfortunately, they do not have enough land for growing cassava; they have an average 0.5 to 2 hectares of farm land. There are many grocery shops and small restaurants run by the villagers along the roadside, while deep in the forest, there is farm land.

2. Impact

Positive Effects

Many advantages of the new road that have improved people's standard of living were reported during the discussion. These include saving time and money, rising prices of land and farm products, being within reach of more buyers, and accessing better healthcare services (public and private) and higher education for the villagers' children.

Travel time and costs: The road shortens journeys and brings once distant destinations within easy reach. Previously, villagers would spend the whole day and up to KHR10,000 travelling to the province. Now it takes just a 30-60 minute bus or taxi ride to get to the same place and costs KHR5000.

> *"Now we don't need to stay overnight in the province and waste money on paying rent for a place to sleep. We can drive our own motorbike and come back whenever we like. Before, we only went to the provincial market twice a year whereas now, some might go almost every day. Now, if we want some ice, it can be delivered to us immediately by just making a call."*

Access to education and healthcare: The village has only a primary school. As a result, education for many children in the village would come to an end once they finished that education level. With the new road, children can continue to secondary school in Svay Chrois or Toul Prolie districts, an 8 km or 13 km journey, which costs them KHR3000 for the return taxi fare.

A village healthcare service is available, but it is used only for minor health problems. Villagers who are seriously ill have to go to Kshem or Snoil healthcare centre otherwise they have to travel to the province.

"Before, we used traditional medicine or herbs to cure our sickness, and our only option was to wait to die if we could not be cured. Now everything is good for us, we can get to a good health centre; even though it is a bit far, we can access it easily."

Land value and prices of farm products: Roadside land values have increased as a result of better accessibility and new business opportunities in the areas taking advantage of Cambodian's land market boom. The land price has risen from USD7 to USD400 for a plot 1m*150m. It has dropped back a little since the global downturn.

The village is not quiet like it was before the new road. Trucks and brokers come to collect farm products almost every day. The crop price has increased from KHR300 per kg to KHR700-800 per kg, encouraging farmers to grow more and expand their farm land.

Other benefits:

- **Overall benefits:** The road has improved villagers' living standards through the higher prices they can now negotiate for their farm produce. It has enabled villagers to renovate or build a bigger house, buy a motorbike, generator and even a car.
- **Connection to the development agencies:** It has brought agencies such as CIVO (teaching crafts) and micro-finance institutes-MFIs (Acleda and AMK) to the village. This in turn has given people the opportunity to take out loans to invest in farm inputs. About 98 households have borrowed money from MFIs, loans from KHR4 million to KHR18 million at an interest rate 2.5 percent per month to buy cows, carts and other inputs. They will repay the money after a year.

<u>Concerns</u>

Road safety: Few bad effects from the road were reported. Participants just emphasised that a good road should have enough warning signs for drivers to drive with care or some safeguards for drivers to avoid accidents.

3. Conclusion

The road helps people to improve their livelihoods by getting them to more markets which in turn give them the chance to expand their farm production. Villagers can learn about new cultivation techniques from the experiences of newcomers as well as people passing through. They are pleased with the new road even though there are some disadvantages.

FGD 2: O' Taneung Village, Kbal Domrei Commune, Sambo District, Kratie Province

Date: 24 March 2010
Time: 09:50-11:00
Location: O'Taneung village, Kbal Domrei commune, Sambo district, Kratie province.
Facilitator: PON Dorina
Note taker: PHANN Dalis

With help from the village chief, eight people were selected to participate in the discussion on the impact of Chinese investment in National Road 7 on the living standards of those people who live along the road and nearby (see table below).

No	Name	Sex	Age	Education	Occupation	Number of HH members
1	REACH Sarat	M	51	DK	Village chief	6
2	PAL Arth	M	37	8	Farmer	7
3	GNEAV Yat	M	60	11 (old)	Farmer	4
4	SOR Eng	M	70	3 (old)	Farmer	7
5	KORN Tim	M	41	2	Farmer and grocery store	5
6	MEN Near	F	58	0	Farmer	5
7	PHUN Phany	F	23	4	Farmer	4
8	TUY Sophea	F	31	4	Farmer	3

1. Background of the Community/Participants

The village is 55 km from the provincial town. Five years ago O' Taneung village had only 79 households; the number has recently increased to 143 households because of the new road. The old and new villagers earn income from farming such as cultivating rice, growing crops, logging, selling labour, raising livestock, and running grocery stores. They mostly grow corn, beans and cassava in their market garden. They also raise chickens, ducks, oxen and buffaloes for eating, selling and helping them in rice production. Only one household had sent their children out of the village to work in Malaysia. Some villagers who do not have cultivation land sell labour logging and doing other villagers' farm work. In total, only 27 households are landless and the others have 1 to 3 hectares of land on average. Rice fields are the most important income source for farmers; market gardening and other occupations are just supplementary income sources. Only 10 households in the village grow crops. Some families are paid a fee for transporting sawn logs but they have to use their own means of transport; in this case, only 96 households did so. Logging has been going on since 1983, but it was boosted in 2003 and the period after a road was built.

2. Impacts

Positive Effects

The FGD revealed a great optimism about the new road. People can save money and time on travelling. Some can earn money from transporting villagers to the province. Many buyers now flock to the village during the cultivation season. They compete with each other for available farm products thereby increasing the prices. The road has attracted a private nurse, a company and another institution to the village and it has increased the price of land.

Travel time and costs: The road has reduced the cost of travelling to the province from KHR7000 to KHR4000. The villagers need not worry about not having transportation as before because now there are trucks in the village that serve them whenever they want, and also many taxis drive along the road. It now takes only one hour to reach the province's centre whereas before, it took three to four hours to make the same journey.

> *"Some villagers even get to the province by bicycle……People who own a grocery store go to the provincial market almost every day to buy goods. Some just wait for the broker to bring them stuff for their store."*

Access to education and healthcare: The primary and junior high schools have been in the village since 2007 before the road was built. Most children –about 80 percent – attend school, but the lack of teachers is the reason why children tend not to go. Those who finished the school grade in the village could attend further education in Sandan district (25 km from the village) and either commute to school daily or (like a few villagers) rent a house there.

Villagers usually go to one of the many private healthcare practitioners in the village who have come to the village since the road was constructed. There is also a public health centre in the village, but not many people use it because their services are slow and there is no nurse on site. People sometimes go to the clinic in Sandan district or the public health centre in O' Kreang district (35 km away) if their sickness cannot be cured by a private healthcare practitioner. The improved access to health services means that women give birth more safely. Most women give birth at home attended by the mid-wife from the health centre or a traditional mid-wife who has been trained at the health centre. Before the new road was built, there were only traditional mid-wives who had no professional training; they just delivered babies using traditional methods.

Land value and price of farm products: Land value has increased from nil to USD100 for a piece of land 1m*300m following the road construction. Mostly, the land has been bought by people from Phnom Penh, Takeo, Prey Veng, Kampong Cham either for farming or as an investment, speculating on future land value.

It's a similar story for prices of farm products, especially rice, which has increased from KHR500 per kg to KHR8000-1000 per kg now that there are more brokers demanding produce.

> *"Brokers come to our house almost every day unlike before when they came only once a month……Even if they don't come to us, we can get our products to the provincial market ourselves."*

Other benefits:

- **Employment opportunity:** During the road construction, four to 10 villagers were hired to work on the construction site. They got paid KHR10,000 per day, but the job only lasted a few days. Additionally, since the road has been built, girls can get to O' Reussey district to get training on handicrafts or go to other places to find a job.
- **Connection to development agencies:** Having a good road brings many benefits to the village. It attracts many institutions or organisations to help in developing the village. The villagers have formed a group of 25 to get funding from the organisations for raising livestock, growing crops and creating small businesses. Each group received USD70, but they had to repay the money once their business was up and running. Oxfam and Danida are also present in the village helping people to dig ponds and wells, constructing roads, and lending animals. The services of micro-finance institutions, namely Acleda, Theaneakea Pum and AMK, have been available in the village for a long time, but they have recently boosted their activities. However, only 16 households have taken out a loan from those institutions, none of which are for more than USD500.

<u>*Concerns*</u>

Besides the benefits, there were also negative impacts from the road construction.

Resettlement and rehabilitation: The construction damaged some villagers' houses; even though there was compensation, it was such a small amount. Houses in good condition (tiled roof) got paid USD1000-2500, those in an average condition got USD800-900, and in poor condition USD700-800. Villagers had to move deeper into the forest for their new settlement.

Road safety and community security: The good road causes more accidents, especially where there are no proper signs. Likewise, a good road leads to more theft as it makes it easy for thieves to transport villagers' livestock to the market at night time.

> *"Sometimes, thieves stole almost all of our animals and we were left with none to help work the fields."*

Effect on the environment: The road has also attracted companies which have destroyed the forest by pretending to invest in something, and paying little compensation to villagers for the damage done to their farm land. Those companies are discussed below.

Companies in the village: Four companies, namely Kamadyno, Asiavel (China), NK Akree (China) and Tong Men (China), set up in Kbal Dam Rei commune when the new road was built. Another company, namely Global (China), has been there for the last five years. Most of them grow teak by clearing the forest. None of the villagers have worked for those companies because they offer such low salaries (KHR170,000 - 180,000 per month). That is why they hire people from different provinces such as Kampong Thom, Kampong Speu, Kandal and Kampong Cham. These companies have demanded vast areas of land for their plantations which has affected villagers' farm land.

3. Conclusion

The investment in the new road has brought more benefits than disadvantages to the villagers. People can increase their income because their farm produce commands higher prices. They can take their produce to market themselves. Their children have the chance to get higher education and find work outside the village. The village can be reached by development and micro-finance institutions which help them to improve their livelihood and address emerging needs.

FGD 3: Kor Sang Village, Chongkrong Commune, Chetborey District, Kratie Province

Date: 24 March 2010
Time: 15:10-16:10
Location: Kor Sang village, Chongkrong commune, Chetborey district, Kratie province
Facilitator: PON Dorina
Note taker: SRY Bopharath

The table below lists below the seven participants in the focus group discussion conducted to find out what the impact of Chinese investment along national road No. 7 (known locally as the ASEAN road). Most of them came to live in this village after the national road was constructed.

No	Name	Sex	Age	Education	Occupation	No. of HH members
1	SEM Phally	F	46	3	Farmer	5
2	PEOU Mo	M	39	8	Farmer	4
3	VONG Prom	M	59	7 (old system)	Farmer	10
4	NGOV Sy Keang	F	52	3 (old system)	Farmer	11
5	BEN Soean	F	60	Kindergarten	Farmer	7
6	CHOUN Phath	M	40	4	Farmer	8
7	CHAN Sothea	F	49	7 (old system)	Farmer	6

1. Background of the Community/Participants

The distance from Kor Sang village to Kratie province is approximately 22 km. Villagers' main occupations are growing rice, cassava, soybeans, peanuts, cutting bamboo, and working as paid labourers clearing grass in the village and nearby villages. The senior villagers have more opportunity because they have their own land to grow rice and cassava. Three households have opened grocery shops. Some villagers migrate to other provinces such as Ratanakiri, Kampong Cham and Phnom Penh to work in the garment sector, Malaysia to work as a housekeeper because there is no land for farming and no available jobs. As one man said *"The main reason I moved is that I don't have land."* At the same time, many people have also moved into this village. After the road was constructed, the newcomers got information through the village chief who allocated some land concessions according to government policy. The senior villagers who live in this village are from minority groups, and there were not many families living in this village before. That is why the government gives concession land to soldiers. After land concessions were given to people who had moved to this village, more and more people came to live there. More than 400 households applied for only 100 land concessions.

2. Impacts

Positive effects

Connection to employment opportunities: Having a good road makes it easier for people to travel and seek work outside the village and transport their farm produce to market. Most villagers who sell labour in the village cannot support their livelihoods, thus they have to go to other villages. One man mentioned that "Selling labour in another place would earn 200,000 riels which could buy only a sack of rice." Thus, the road helps them to sustain their livelihoods.

Reduced travel time and costs: The distance from this village to the national road is 4.0 km. People spend less than before on travelling and it takes only one hour to reach Kratie province. Villagers usually go to Kor Sang market because it is nearby. Villagers go to Kratie province by motorbike, a journey that now takes half an hour.

Access to education and healthcare: Children can only study grades 1 to 6 locally. However, they are able to continue to grade 7 to 9 in Kor Sang village because of the available road.

There is a health centre in the village near commune office (Salar Khom); however, only basic medicines are available there. Since construction of the road, villagers usually go to Kratie province when they are seriously ill.

Prices of farm produce: Before having the national road it was difficult for middlemen to access the village and if they came to buy produce, they would only buy at lower prices in order to earn more profit. Soon after the road construction, many brokers, mostly from Kratie and Kampong Cham, come to the village which motivated villagers to grow more crops, especially cassava introduced to the area by the new comers. The increase in market demand means they can earn more from growing cassava. At the time of the FGD they were selling dried cassava at KHR600 to 650 per kg, compared to KHR200 per kg before the road and or when there was little demand. Furthermore, they can sell crops such as eggplants and pumpkins in Kor Sang market located 4 km from the village, and they go to market every two or three days.

Other benefits:

- **Connection to development agencies:** a Chinese company came to teach villagers how to plant cassava because cassava can be ground into flour with little wastage, nearly 100 percent per kg. In addition, microfinance institutes came to the village after the road had been constructed, namely ACLEDA, AMK, PRASAC, and Theaneakea Phum. Most villagers borrow money from Theaneakea Phum. If they borrow as individuals, they need to have their land certificate as collateral; borrowing as a group is easier. Villagers could borrow from KHR500,000 to KHR1,000,000. Usually they can pay back both interest and the capital sum that they had borrowed after 10 months; the interest payable on KHR1,000,000 is KHR30,000.

3. Conclusion

We could not get more information about their standard of living before the road was constructed because the FGD participants are newcomers to this village; however, we did get more information about their standard of living after the road was finished. People had easier

access to markets, hospitals, and schools. Although villagers do not live along the road, they have gained a lot of benefits such as many more middlemen to buy their produce and they do not need to go to market to sell their produce. Thus, the costs of travelling and transport are reduced and when they need healthcare services such as maternity services, they can get to the hospital in the province in time. The villagers plan to live in this village forever because they have their own land and can earn a living by cultivating crops.

FGD 4: O' Reussey Kandal Village, O'Reussey Kandal Commune, Siem Bok District Stung Treng Province

Date: March 23, 2010
Time: 15:30-16:25
Location: O'Reussey Kandal village, O'Reussey Kandal commune, Siem Bok district, Stung Treng province.
Facilitator: PON Dorina
Note taker: PHANN Dalis

The table below lists the six people who participated in the focus group discussion conducted to find out the impact of Chinese investment in national road no. 7 on people who live along the road and nearby. Most participants were female because male villagers were working on their fields or in the forest at the time of discussion.

No	Name	Sex	Age	Education	Occupation	Number of HH members
1	SUO Kam Eang	M	35	DK	Village chief	7
2	OUING Kosal	M	27	5	Farmer	5
3	PUT Yorn	F	60	DK	Primary school principal	7
4	HOUT Sophy	F	48	5	Farmer	7
5	OUING Navy	F	32	4	Farmer	7
6	SEM Chan Torn	F	52	8	Farmer	7

1. Background of the community/participants

O' Reussey Kandal village is located approximately 28 km from the centre of the province. It originally comprised 100 households; however, since the construction of road no. 7, newcomers have moved to the village and at the time of study, there was a total of 1,000 households, most of whom came from Kampong Cham. About 20 households including six new households have a grocery store. However, most of the villagers cultivate rice, sell labour for farm work, collect resin, go fishing and hunting, saw logs, and grow cane, cassava, sesame, maize, beans, mangos, cashew nuts and other crops. About 90 percent of the villagers have been growing rice and cashews for a long time, but approximately 70 percent have been cultivating cassava for the last few years, following the new comers. Only 3 percent of the villagers grow other crops. Furthermore, ten households started to grow rubber in late 2009. Most of the villagers have a maximum of just 2 to 3 hectares of farm land and it is hard for them to grab a lot of benefit. Although each household has several occupations, rice and crop growing remain the main sources of household income; they practice shifting cultivation on the same plot of land. Villagers moreover sell labour to those who have logging equipment. As a result, they get little benefit from the forest.

2. Impacts

Positive Effects

National road no. 7 was built during 2006-2007. Since the start of construction, many people have enjoyed multiple benefits provided by the road. FGD participants revealed that the road has helped them by reducing the cost and duration of travelling, improving accessibility of the village to many people especially businessmen, making it easier to access health centre and education services and transport produce to market, increasing land value, increasing the prices of their farm produce, and connecting them with the city.

Reducing cost and time of travelling: Travelling to centre of the province used to take the participants a whole day and the journey used to cost up to KHR20,000, but now the same journey takes only 1 hour by bus, taxi or motorbike. They said that about 70 percent of the households now own a motorbike, allowing them to travel to the province whenever they wish.

> *"Before, there was no point is us buying a motorbike if we didn't have a road. When we wanted to go somewhere, we had to wait until the motor-taxi came to us or hitch a ride with a military truck. Since we've had a good road, we have been able to save money from selling our land and farm produce to buy a motorbike which makes it easier and faster to travel……Some grocery sellers go to the market at the province almost every day."*

Access to education and healthcare: Primary and secondary school had been available in the village for the three years before our study. However, not many children used to go to school because of the lack of teachers and concern about their security on the way to school. Now, more children attend school, some even make the return trip to attend high school (not available in the village) in the province.

There is a health centre in Srer Krasaing village which is 15 km from the village. Villagers usually go to that health centre otherwise they go to the province when they need healthcare –maternity services for instance. Women used to give birth in the village attended only by a traditional midwife which could easily have endangered their well-being.

Increasing land value and price of farm produce: The price of land began to rise almost as soon as the road construction started because new people came to grab big and cheap land for crop growing. Land value rose from nil to USD100 for a 3m*400m plot along the road, and USD2000 to 3000 per hectare for distant land. Similarly, crops that previously sold at KHR200 per kg or were left to rot due to lack of market access rose in price to KHR700-900 per kg.

> *"Buyers come to the village and they compete with each other for our products. We are very happy because this increases the prices of our products and they also transport the products themselves. If they don't come to us, we can transport our produce to the market directly."*

People's standard of living is better because of the good road. The village can be reached by businessmen who create a market for farm production. The road brings tourists to see the beautiful waterfall, the environmental conservation programme in the village creates employment for villagers.

"We have an eco-tourism committee in the village for our beautiful waterfall. Our young people are employed to take care of the area. Foreigners are charged KHR4000 to get into the area but the fee is KHR500 for Khmer visitors. Ten percent of the fees go to the commune, 20 percent to the provincial tourism department, 35 percent to the committee, and the rest will be kept in the bank for other development in the area. People can earn money by selling food in the area."

<u>Concerns</u>

The road brought some disadvantages, mostly during construction as a few houses in the path of the road were damaged or demolished. However, there was compensation: small house owners received USD300 for having to move. In addition, participants reported that more accidents were caused by the good road because motorists drive too fast and there are no clear signs at night or proper warning signs.

3. Conclusion

The improved road helps people to better their livelihood and to be reached by many institutions that can help develop the village. However, a good road should have enough road safety signs to warn motorists to drive carefully and be of good enough quality so that the road surface is hard wearing and long lasting.

FGD 5: Ou Svay Village, Ou Svay Commune, Taraborivath District, Stung Treng Province

Date: 23 March 2010
Time: 10:00-1:.00
Location: Ou Svay village, Ou Svay commune, Taraborivath district, Stung Treng province
Facilitator: PON Dorina
Note taker: SRY Bopharath

No	Name	Sex	Age	Education	Occupation	Number of HH members
1	SANORNG Noean	F	64	Informal education	Farmer	5
2	NORNG Pi	F	34	3	Farmer	5
3	NORNG Leng	F	29	3	Housewife	5
4	CHROEK Konthear	F	33	5	Butcher	7
5	KEOV SoKeam	F	27	3	Grocer	6
6	SEN Bornlen	F	23	8	Seller (Chinese noodle)	6
7	KEM SokKheang	M	48	3	Farmer	7
8	CHEA Chanthoean	F	53	10	Seller (dessert)	6
9	VAN Sena	M	28	0	Farmer	6
10	NORNG Teang	M	64	N/A	Farmer	4

1. Background of the community/participants

Ou Svay village is located 12km from national road No.7, also known as the ASEAN road. The majority of villagers work as farmers and mainly grow rice, corn, soybeans and sesame. Their substitute occupation is sawing logs. However, not many villagers have sawn logs recently because they cannot earn much and it is a risky job. There are 211 families and

most of them cultivate rainy season rice, which they can do only once a year, and around 10 families run a grocery shop. Besides growing rice, villagers work as labourers collecting corn, drying fish, and as construction workers in the village. They also go to the forest to collect resin, and hunt wild animals.

2. Impacts

Travel time and costs: Before the national road was built, villagers had to travel by motorboat along the river to Stung Treng. Travelling to Stung Treng would cost them at least KHR100,000: they paid KHR50,000 for a fast motorboat and least KHR20,000 for a slow motorboat. The journey was not only costly, but also time consuming because they had to stay overnight on the way to Stung Treng. Since the road construction, villagers spend less time and money on travelling.

> *"Before, going to Stung Treng, I would reconsider whether to travel many times because I don't have much money and I would have to spend so much on travelling and also staying over one or two nights along the way".*

Access to education and healthcare: Before the road most students could only study up to grade three. Now, they can continue their education to higher grades in Stung Treng because the journey takes just one to one and a half hours by road.

Villagers who are seriously ill or women in need of maternity services can get to the hospital in Stung Treng on time.

> *"My wife died of a haemorrhage after giving birth because they didn't have enough equipment."*

Land value and prices of farm produce: The price of land is very expensive now. A 50m*50m plot of land costs USD5000 to USD6000. Since 2003 many newcomers have moved in from Kompong Cham, Takeo, Kompong Thom provinces and bought land to grow crops.

> *"Villagers used to need 0.1 to 0.2 damlung to buy a piece of land (20*30m) but now they need 1 to 2 damlung. After the ASEAN road was constructed, many newcomers moved to this village; that's why the price of land is very high. Residential and farm land have increased in price."*

There are many sellers along the national road. Middlemen can buy villagers' produce easily because they can get to the village everyday or whenever produce becomes available. Thus, villagers' produce fetches higher prices than before. For example, soybeans now fetch KHR4000 to KHR5000 per kg; as a result people are growing more soybeans. After having the national road, the prices of food as well as other daily items also became very expensive. Before the road villagers would spend a lot of time and money on transport fees to get their produces to the market that is so far away that produce did not arrive in fresh condition. Thus, they did not have enough power to negotiate high prices. No middlemen came to buy the produce which was often left to rot.

Other benefits:

- **Overall benefits:** Previously, there was no taxi service in the village but now there are seven taxis which usually run from the village to Stung Treng. The cost of transporting produce from the village to Stung Treng is KHR30,000 per tonne compared to KHR50,000 per tonne by motorboat.
- **Connection to development agencies:** ACLEDA came to this village in 2005, and AMK arrived in 2009. Most of the villagers borrow money from AMK. At the time of study, villagers could borrow up to USD2000 at an interest rate of 2.8 percent per month. They have to repay the loan after 18 months. AMK collects the interest payments every month. If villagers borrow as group, they do not need collateral. This group borrowing helps villagers expand their crop growing and respond to emergency needs.

Concerns

Road safety: Many traffic accidents have occurred since the new road was built because motorists drive faster on a smooth road.

Other effects: Motor boat owners lost their work because villagers stopped travelling by boat. Only one boat owner still keeps his boat for his own transport and for tourism. Additionally, villagers who used to hunt wild animals and collect resin have done so less often since the road was constructed. The road has attracted a private company that has felled trees, reducing villagers' benefit from the forest.

3. Conclusion

Overall, people have a better standard of living than before because they spend less time and money travelling to Stung Treng as well as to Phnom Penh. They can sell their produce for higher prices. On the other hand, they cannot take as much benefit from forestry resources like they used to before the new road.

FGD 6: Reachea Nokol Village, Stung Treng Commune, Stung Treng City, Stung Treng Province

Date: 23 March 2010
Time: 17:00-1:.00
Location: Reachea Nokol village, Stung Treng commune, Stung Treng city, Stung Treng province
Facilitator: PON Dorina
Note taker: SRY Bopharath

The FGD was held in the late afternoon. Around half of these villagers are soldiers, thus soldiers and their wives were available to join the group discussion; a total of eleven people participated.

No	Name	Sex	Age	Education	Occupation	No. of HH members
1	OUB Som Oean	F	50	0	Housewife	5
2	CHHOY Houy	F	47	0	Housewife	9
3	SOK Mom	F	45	0	Farmer	9
4	KHEIV Channa	F	23	6	Housewife	5
5	VAN Navy	F	45	3	Housewife	6
6	CHOV Sey Sengvean	F	31	2	Housewife	4
7	BEN Sopheak	M	33	7	Farmer	N/A
8	HONG Saron	M	66	9	Assistant to village chief	3
9	ENG Savy	M	40	9	Farmer	8
10	LAV Chon	M	53	9	Soldier & farmer	7
11	THON Sopheap	F	46	2	Farmer	6

1. Background of the Community/Participants

Reachea Nokol village is 20 km from Stung Treng (riverside) and 140 kilometres from Ou Pong Maen, Kratie province. Until two to three years ago when many soldiers were given a piece of land (10m*30m), few households lived in this village. Around half of the villagers are soldiers and farming is their secondary occupation. Villagers grow cassava and cashew apples. Villagers who do not have their own land work as labourers clearing grass and vegetation, picking cashew apples, and looking after other people's farms. People cannot grow rice in this village because the land is unsuitable and there is no irrigation system.

2. Impacts

Travel time and costs: Travelling from the village to Phnom Penh used to take two days and two nights and from the village to Stung Treng took two hours. The cost of travelling was KHR50,000 to Phnom Penh and KHR30,000 to Stung Treng. Due to the high cost of travelling villagers only went to Stung Treng for business purposes. The cost and duration of travelling has been reduced since the road construction. It now takes around 20 minutes to get to Stung Treng and only one day to reach Phnom Penh. The road makes it possible for young villagers to find work outside the village.

Access to education and healthcare: There is a primary school in this village and the secondary school was established around two years ago. Most of the children in this village could access education. However for further education, students have to travel to Stung Treng; there tended to be fewer female than male students because many parents thought their sons should get higher education rather than their daughters.

Because of the new road villagers can readily go to Stung Treng health centre and doctors usually come to the village to give vaccinations once a month. Women go to the hospital in Stung Treng for childbirth, which reduces the risks of complications compared to traditional mid-wifery practices, because the cost of travelling is affordable now. There are traditional midwives in the village who have been trained by a health organisation; however, villagers prefer to go to Stung Treng hospital rather than stay in the village.

Land value and farm produce prices: After the road was built, the price of a 1m*300m plot of land near the national road was USD600 and the price of one hectare of farmland was USD1000. The buyers were mostly from Kompong Cham, Phnom Penh, and Prey Veng.

The prices of farm produce increased. The price of cassava rose from KHR300 per kg to KHR700 per kg. Many middlemen come to the village and readily buy villagers' produce.

Other benefits:

- **Overall benefits:** The condition of villagers' houses is better than before. Many more households now live in this village. Around 70 percent of the villagers own motorbikes. In addition, all the daily requirements are available in the village, for example, beef, pork, gasoline, ice and vegetables, some of which cannot be grown or produced in the village and have to be brought in from other villages or provinces.
- **Connection to development agencies:** Many microfinance institutes arrived in the village after the road was completed e.g. AMK and ACLEDA. Sixteen families in this village have formed groups to borrow money while 10 to 20 families have taken individual loans. They can borrow around KHR300,000 to KHR2,000,000 and the interest rate is KHR30,000 per KHR1,000,000 loan. Better accessibility has brought many new activities to the village. Participants pinpointed the presence of a company named AN MARADY growing rubber trees on concession land granted by the government. Additionally, brokers come to the village to inform villagers about overseas employment opportunities such as being a housekeeper in Malaysia.

Concerns

Road safety and availability to earn for living: The new road has led to more accidents due to careless driving, and lack of road signs. Although some villagers got work with the Chinese construction company, they were only employed for two to three months for which they were paid KHR10,000 to KHR15,000 per day. Deforestation by the newly arrived investment companies has reduced villagers' forest income.

3. Conclusion

Comparing the standard of living before and after the national road was constructed, villagers are better off in terms of jobs, education and income.

Appendix 4: Focus Group Discussion: China's ODA-funded Construction of the Prek Tamak Bridge

FGD 1: Kompong Domrey Village, Prek Tamaik Commune, Kasach Kandal District, Kandal Province

Date: 30 December 2009
Location: Kompong Domrey village, Prek Tamaik commune, Kasach Kandal district, Kandal province
Facilitator: PON Dorina
Note taker: SRY Bopharath

List of Participants

Name	Sex	Age	Years of schooling	No. of HH members	Roles
1. MOM Hoean	F	60	0	1	Participant
2. NA Vannsy	F	45	2	9	Participant
3. PICH Pok	F	34	0	9	Participant
4. MAUY Sokchea	F	38	4	9	Participant
5. MAU Mom	F	30	4	6	Participant
6. CHEA Sin	F	50	Informal education	7	Participant
7. MOM Chanthou	F	36	2	6	Participant
8. HAOR Chea	M	55	N/A	N/A	Participant
9. YEN Orl	M	50	N/A	N/A	Member of commune council
10. HEY Dararith	M	55	N/A	N/A	Village chief

1. Background

Kompong Domrey village is not directly affected by the new bridge; however, repercussions from the bridge construction are causing many changes in their standard of living. There were 274 households in this village and eight participants (one male, seven females) were selected by the village chief based on their standard of living which was defined as poor. One of the participants was a member of the commune council and a village chief.

A. Main occupation of participants

Seven participants were mat weavers and only one participant was a crop grower. Other sub-occupations that villagers do to earn a living were selling labour in the rice field or other crops, fishing, motor-taxi driver, carpentry, selling around the ferry site, and sending children to work in the garment sector. They could earn KHR3000 to 3500 a day for mat weaving, KHR15,000 for transplanting, KHR5000 for plantation work, KHR15,000 to 20,000 for fishing and KHR3000 for cutting wood. Mat weaving is a year-round occupation, but working in the rice field and fishing is seasonal employment.

B. Major livelihoods in the community

Participants' main occupation was selling labour as most of them did not have their own land. They worked on the rice field in the cultivation season and did fishing in the hatching season. They also sold labour weaving mats and worked on other crop plantations.

C. Access to social services

Children have a 1km bicycle ride from the village to study at Preah Sihanouk Reach secondary school and Hun Sen Bunrany primary school. Most of the children could attend primary school but usually could not afford to study higher than grade eight, while the primary school was in Phum Preah Prosorb. Twenty percent of children had dropped out of primary school, while enrolment of students in secondary and high school was stable. Last year 14 students finished high school but only four of them could continue to university. The health centre in Prek Tamaik commune was 1.2 km from the village. People went to the health centre or bought medicine from market if they had a minor ailment, but went to Preah Kettomelea hospital in Phnom Penh if they had a more serious illness.

2. Expected impacts

A. Travel time and costs

Travelling will be easier because villagers will no longer have to wait for the ferry, will be able to travel when they wish and they will spend less money. For example, the return trip from their village to Phnom Penh and back costs KHR40,000. The ferry fares are KHR500 per motor bike and KHR300 per person. A taxi costs around KHR20,000 for the return trip. There is usually around a one hour or one hour and a half wait to cross the river by ferry. When the bridge is open they will not have these costs. Importantly, ferries operate from 5am to 5pm, thus travelling is limited. In case of emergency they would have to spend even more money on the ferry.

B. Livelihood

People will have easier access to market because they will be able to travel at any time. In addition, they will be able to get higher prices for the products produced in the village because they will be able to sell direct to retailers rather than to middlemen. They will be able to get jobs in Phnom Penh because they will be able to commute from home without having to spend on renting houses in Phnom Penh. They expect new restaurants to be opened in their village, which will provide more jobs. One example that illustrates some of the livelihood changes is the price of bricks: presently the price is KHR150 per piece, and without spending on the ferry crossing they will be able to get KHR200 per piece.

C. Access to social service

Students will be able to commute daily from their home in the village to study in Phnom Penh rather than having to pay room rent in the city. More students will be able to access school. When villagers are seriously ill they will be able to get to hospital quickly.

D. Land values and investment

Easier access will likely result in higher land prices. At the time of study nearly 70 percent of the households were connected to a private electricity supply and paying a tariff of KHR2800 per kilowatt. Most of the FGD participants could not afford the high price of electricity. Once the bridge is open households will be able to connect to the national electricity grid at a lower tariff.

E. Safety

The bridge could cause traffic accidents because of the lack of understanding about traffic signs.

F. Resettlement and rehabilitation

The bridge construction has directly affected about 100 households. It is being built on people's land or houses. The government paid compensation of USD18 per $1m^2$ for land or houses near the bridge, USD15 per $1m^2$ for residential land, USD8 per $1m^2$ for farm land, and USD5 per $1m^2$ for other lands. Most of the people that moved from the affected land settled elsewhere in the same village.

3. Conclusion

The bridge has positive and negative repercussions on the people who live nearby. However, people feel optimistic about the bridge because they will gain more benefits than disadvantages, for instance, time and money saved on travelling, better access to market and more employment opportunities.

FGD 2: Svay Ath Leu Village, Prek Tamaik Commune, Kasach Kandal District, Kandal Province

Date: 30 December 2009
Location: Svay Ath Leu village, Prek Tamaik commune, Kasach Kandal district, Kandal province
By: PHANN Dalis and OUCH Chandarany

There were a total of 207 households in Svay Ath Leu village. Of those, seven people were purposely selected for the FGD depending on their occupation selling around the ferry site. However, more villagers than expected joined the FGD making a total of 17 participants whose occupations or family members' occupations were as sellers (cane juice, shell-fish, food, fruit and beverages) around the ferry site.. There were only two male participants. The discussion has lasted one hour.

1. Background

Main occupation of participants

The villagers' main occupations are growing rice and other crops, such as water melons, vegetables and beans, weaving mats, fishing, moto-taxi driver, furnace worker, seller around ferry site and sending children to work in the garment sector. The poorest largely depend on selling labour to other villagers. Only three to four households go fishing. About 10 households send their children to work as garment workers in Phnom Penh, a marked decrease from the 50 percent of total village households that used to. Almost 40 percent of the total households in the village are ferry site vendors. The villagers, including the participants, rely heavily on working on the rice field and braiding mats for their everyday living, while other occupations were mostly viewed as supplementary income sources.

Access to social services

There is a district health centre 1 km from the village. All the villagers used that health centre for simple health problems such as high temperature, minor coughs and colds as well as birth delivery. They go to Phnom Penh if they have a serious health problem. Private treatment is also available, but only for simple ailments, and there is a traditional mid-wife in the village.

Children have a 1.5 km bicycle ride to reach the primary and secondary schools located in another village within the same commune. The high school is in Prek Pror Sop commune, it is 3 km from the village.

2. Expected impacts

Travel time and costs

The participants said having the bridge was better than not. Once the bridge is open they will be able to go to the other side whenever they wish, whereas presently they have to wait for the ferry; there is no ferry service after 5pm.

Livelihood

FGD participants stressed the difficulties they will face from losing family income, especially those whose sole source of income is selling around the ferry site, due to the new bridge. However, they still prefer to have a bridge. This is because the income earned from selling at the ferry site is minor; it is only a supplementary source of income. The bridge will attract more brokers to buy their products at better prices. The participants talked about the thin connection with the city. They rarely travelled outside the village even to sell their yield. Nonetheless, a few villagers transported their products to Phnom Penh's market themselves. Therefore, having a bridge will make it easier for traders to seek better prices for their products. Furthermore, they expect more people, especially investors, to come to the area which will create more jobs for their children. Also, they expect their village to be connected to mains electricity soon.

Land value and investment

At the beginning of the bridge construction, the land value around the site rose steeply. Later on, it fell dramatically to the same price before the sudden hike. Although the land price keeps on increasing, villagers will not sell their residential land as they have nowhere else to move to. The FGD revealed that they did not foresee any immediate investment, however, they expect to in the future.

Although the bridge is being built in their commune, no local people have been employed in its construction. Most of the construction workers were Chinese.

3. Conclusion

In short, the villagers are looking forward to the new bridge. It will give them the chance to find jobs or access better markets outside the village. They will be able to cross the river whenever they need to.

Appendix 5: Survey Questionnaire for Case Study of the Garment Sector

Cambodia Development Resource Institute

Development Analysis Network

Questionnaire on
Assessing China's Impact on Poverty Reduction in the Gms: The Case of Cambodia

Survey for Case Study of Garment Sector

Interview Date: ____/____/2010 (dd/mm/yy) **Questionnaire ID: .....**

Interviewer's Name: .....

Time of Interview: Start__ __ __ __End__ __ __ __

Quality Control Record		
Checked by: ……	Signature: ……	Checking Date: ……..…
Supervisor's remarks: …… …… ……		

Please inform the interviewee that the information supplied will be treated as confidential and used for academic purposes only

I. General Information

1.1 Interviewee's Name: …… 1.2 Age: …….. years

1.3 Gender: 1= Male 2= Female

1.4 Marital status: 1= Single 2= Married 3= Divorced
4= Widow/Widower 5= Deserted

1.5 Educational Level: 1 = Can't read or write 2 = Primary (Grade 1-5)
3 = Lower Secondary (Grade 6-8)
4 = Upper Secondary (Grade 9-12)
5 = University
6 = Others (specify)……

1.6 Permanent resident (province): .....

1.7 Telephone number: .....

II. Household Information

2.1 How many hectares of agricultural land does your household have? ……..ha
(1 kong = 10 ar; 1 ha = 100 ar; 1 ar = 100 m2; 1 rai = 16 ar)

2.2 How many people in your household? ……..….person(s)

2.3 Sources of household income

What are the main sources of income of your household? **For each item, please provide a rank (1, 2, 3, 4, etc.) in terms of its importance and how many people in your household are involved in it.**

Itemise main sources of income	**Rank**	**No. of family members involved**
Rice production	_____	
Vegetable/Fruits	_____	
Livestock	_____	
Fishery	_____	
Collecting other resources from water or fields	_____	
Collecting resources from forests	_____	
Selling labour within the village (of family member)	_____	
HH business	_____	
Motor taxi driver	_____	
Construction worker	_____	
Working in factory	_____	
Income from assets (interest, rent.)	_____	
Remittance (including you and other family members if it applies)	_____	
Other (specify)_____	_____	

III. Interviewee's Employment

Current Employment

3.1 Name of Factory:……

3.2 Owner of the factory: 1= Chinese (mainland China) 2= Other (specify)…….

3.3 Your current position: 1= Sample worker 2= Cutting operator
3= Sewing operator 4= Quality control worker
5= Worker (washing, ironing, packing)
6= Maintenance worker 7= Quality assurance worker
8= Warehouse worker 9= Cleaner/guard/cook/driver
10= Quality control inspector 11= Final inspector
12= Mechanic 13= Quality assurance assistant
14= Office staff 15= Others (specify)……..…

3.4 Are you recruited as:

1= Permanent worker 2= Temporary worker 3= Don't know

3.5 How long have you been working in this job? ..... months

3.6 Have you been promoted since working in this factory? 1= Yes 2= No

3.6.1 If yes, please describe …….

3.6.2 If yes, why were you promoted?…….

3.7 What was your incentive to work in this current factory? (Can tick more than one answer)

1= Earn more money 2= Improve family living

3= Support family member's education 4= Avoid attending school

5= Change job 6= Others (specify)……

3.8 Did you know whether your factory has recruitment criteria/standards for your position?

1= Yes 2= No (please go to Q. 3.9)

3.8.1 If yes, please describe what they are:

1=…….

2=…….

3=…….

4=…….

5=…….

3.9 How many days do you work per week? .....days

3.10 On average, how many hours do you work per day (including overtime)?

.....hours

3.11 How much do you earn per month (including overtime and food allowance)? In last month (**January 2010**):…….....riels per month (*exchange rate in January 2010 = 4169 riels per US$*)

3.12 How much of your earnings do you allocate to the following items per month (**in last month _January 2010**): (*exchange rate in January 2010 = 4169 riels per US$*)

Note: individual expense only

Items	Riel/month
1= Food	
2= Renting house	
3= Medical expenses	
4= Transportation	
5= Personal saving	
6= Remittance	
7= Other (specify).....	
Total	

3.13 Do you want to change your job?

1= Yes 2= No (please go to Q. 3.13.3)

3= Don't know (please go to Q. 3.14)

3.13.1 If yes, why?……

3.13.2 If yes, what do you want to do?.....

3.13.3 If no, do you want to work long-tem in your factory?

1= Yes 2= No 3= Don't know

3.14 If you didn't have your current job what would you do? (Can tick more than one answer)

1= Work in other factory in Phnom Penh

2= Work in manufacturing enterprises in the village or other provinces

3= Work in restaurant or hotel in the province or Phnom Penh

4= Cultivate own farm 5= Fishing

6= Collect other resources from water or fields

7= Collecting resources from forests

8= Work on other's farm for wages 9= Construction worker

10= Unemployed 11= Continue studying

12= Housewives (Help with housework)

13= Others (specify)……

Work Environment

3.15 How do you rate the following work environment in your factory?

	1= Excellent	2= Good	3= Medium	4= Bad	5= Very bad
3.15.1 Healthcare service					
3.15.2 Work space					
3.15.3 Sanitation (toilet)					
3.15.4 Asking for annual leave					
3.15.5 Asking for sick leave					
3.15.6 Others (specify).....					

Historical Employment of Interviewee *(Please recall the last job that she/he did for at least three months before working at the factory)*

3.16 What did you do before working in the current factory?

1= Working for wage (by monthly, weekly…..)

2= Self-employed (please go to Q. 3.26)

3.17 What was your occupation?

1= Working in another factory in Phnom Penh (if 1, please go to Q. 3.18)
2= Working in manufacturing enterprises in the village or other provinces (please go to Q. 3.19)
3= Working in restaurant or hotel in province or Phnom Penh (please go to Q. 3.19)
4= Construction worker (please go to Q. 3.19)
5= Others (specify)……..

3.18 What is the name of the factory?.....

3.18.1 Owner of the factory:
1= Chinese (mainland China) 2= Others (specify)…….....

3.19 How much benefit (including salary, overtime pay, bonus etc.) did you receive from that occupation per month?.....(riels per month)

3.20 How many days did you work per week? .....days

3.21 On average, how many hours did you work per day (including overtime…)?
….....hours

3.22 When did you work for that job?.....

3.23 How long did you work in that job? ..... month(s)

3.24 How much of your earnings did you allocate to the following items per month?

Exchange rate (riels per US dollar)									
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
3840.8	3916.3	3912.1	3973.3	4016.3	4119.7	4119.0	4062.7	4058.2	4141.9

Note: individual expense only

Items	Riels per month
1= Food	
2= Renting house	
3= Medical expenses	
4= Transportation	
5= Personal saving	
6= Remittance	
7= Others (specify).....	
Total	

3.25 Why did you change job?

1= Factory closed
2= Laid off, because I was a temporary worker
3= Problem with supervisor 4= Sickness
5= Better salary with new job 6= Better work conditions in the new factory
7= Others (specify)……

3.26 For self-employment, what were you doing?

1= Cultivating own farm 2= Fishing
3= Collecting other resources from water or fields
4= Collecting resources from forests 5= Student
6= Housewives /helping housework 7= Unemployed
8= Others (specify)…….....

3.27 Compared to your current job, which one do you prefer?

1= Current job 2= Previous job 3= Both of them
4= Neither of them 5= Don't know

3.27.1 Why? Please give three main reasons:

1=.....
2=.....
3=.....

IV. Training/Skill

Vocational Training before working in the current factory

4.1 Did you attend any vocational training before working in the current factory?

1= Yes 2= No (please go to Q. 4.3)

4.1.1 If yes, how many times did you attend the vocational training?.....Time(s)
4.1.2 What are they? (Can tick more than one answer)

1= Sewing 2= Handicraft/Weaving 3= Hairdressing
4= Wedding designer 5= Repairing 6= Carpentry
7= Animal raising 8= Agritraining 9= Construction
10= Others (specify).....

4.2 For your last training, what was your training?

1= Sewing 2= Handicraft/Weaving 3= Hairdressing
4= Wedding designer 5= Repairing 6= Carpentry
7= Animal raising 8= Agri training 9= Construction
10= Others (specify).....

4.2.1 Where did you receive that training?

1= Family 2= Relative 3= Friend
4= Government 5= Int'l and/or local NGOs
6= Private organisation/training class
7= Others (specify).....

4.2.2 How long was that training?.....day (s)
4.2.3 Did you pay for that training?
1= Yes, totally 2= Yes, some of total fees 3= No
4.2.4 If yes, how much did you pay?.....riels

Work experience and pre-training before starting your current job

4.3 Did you have work experience/skill related to your current work before joining the factory?
1= Yes 2= No (please go to Q. 4.3.2)

4.3.1 If yes, where did you get?
1= Worked in the similar factory before 2= Attended the vocational training
3= Both of above 4= Others (specify).....

4.3.2 If no, did you have a short-term pre-training before starting your current job?
1= Attended private training class
2= Learned by myself at home/from friend/relative
3= Was trained by the current factory
4= No training at all (Please go to Q. 4.4)
5= Others (specify).....

4.3.2.1 How many days were you trained/taught?.....Days

4.3.2.2 Did you pay?
1= Yes by myself 2= Deducted from my salary 3= No, didn't pay

4.3.2.3 If 1 & 2, how much did you pay?.....riels

Factory Training Programme

	Current Employment	**Previous Employment***
4.4 Does your workplace have a training programme for staff/workers? 1= Yes 2= No (please go to Q. 4.7) 3= Don't know (please go to Q. 4.7)		
4.4.1 If yes, what are they? (Can tick more than one) 1= Skill-related/technical training 2= Healthcare 3= Union issue training 4= Others (specify)..... *(If answer is 2 or 3 or 4, please skip all questions in this table and go to Q. 4.7)*		
For Skill-related/technical training only		
4.5 How often is the training offered? 1= One month 2= Three months 3= Six months 4= One year 5= Others (specify)…….....		
4.5.1 Who can join? Or what are the criteria for selection?		
4.5.2 What are the purposes of the training? (Can tick more than one answer) 1= Staff/workers capacity building programme 2= Orientation of new technology installed in the factory 3= Orientation to staff/workers to meet quality/standard requirement of buyers 4= Others (specify)……		
4.5.3 Is there any condition/commitment after receiving the training from the factory? 1= Yes 2= No 3= Don't know		
4.5.4 If yes, what are they?.....		
4.6 Have you ever received training? 1= Yes 2= No (please go to Q. 4.7)		
4.6.1 If yes, how many times have you received training?.....Time(s)		
4.6.2 If yes, what was the training?.....		
4.6.3 If yes, please describe what benefit you got from the training?.....		

** Please recall the last job that she/he did for at least three months before joining the factory*

Training Programme Provided by other Organisations (ILO, USAID, Association) or paid for by Interviewee

	Current Employment	**Previous Employment***
4.7 If staff/workers in your factory have an opportunity to attend vocational training organized by other organization (beside factory's arrangement), does your factory allow them to attend? 1= Yes 2= No (please go to Q.4.9) 3= Don't know (please go to Q.4.9)		
4.7.1 If yes in Q.4.7, why? 1= It is compulsory from the government 2= It is compulsory from the relevant organization (ILO, USAID, Association…etc) 3= It is buyer's requirement 4= Others (specify)……		
4.7.2 If yes in Q.4.7, is there any condition/commitment after receiving the training from the factory? 1= Yes 2= No 3= Don't know		
4.7.2.1 **If 1 in Q 4.7.2,** what are they?.....		
4.8 Have you ever received such training? 1= Yes 2= No (please go to Q. 4.9)		
4.8.1 **If yes**, how many times have you received?.....Time(s)		
4.8.2 **If yes**, what are they?.....		
4.8.3 **If yes,** please describe what do you benefit from the training?.....		
4.9 Have you ever received any training from other places (besides your current workplace) after working in this factory **(paid for yourself)**? 1= Yes 2= No (please go to Q.4.10)		
4.9.1 If yes, what are they?.....		
4.10 Do you think that you have obtained any specific skill/knowledge from your current job? 1= Yes 2= No (please go to Q. 4.11)		
4.10.1 If yes in Q. 4.10, what kind of skill/knowledge (please list three)?	1= ..... 2= ..... 3=.....	1= ..... 2= ..... 3=.....

4.10.2 If yes in Q.4.10, what can you use skill/knowledge for if you stop working from your current work? 1= Find a job in other similar factory in the country 2= Find a job in other similar factor abroad (Korea, Malaysia, Thailand…..) 3= Run own business (specify what kind of business)…… 3= Others (specify)……..		

** Please recall the last job that she/he did for at least three months before joining the factory*

4.11 Do you know whether your current factory has installed any new technology or machinery during your employment?
1= Yes 2= No 3= Don't know

V. Remittance

	Current Employment	**Previous Employment***
5.1 Have you ever sent money home? 1= Yes 2= No (Please go to Q. 5.3 but skip Q.5.4)		
5.2 If yes, do you send more money home from your current job than your previous one? ***(in case self-employment is the previous job, please skip this question)*** 1= Slightly more than 2= Much higher 3= Same 4= Slightly less than 5= Much lower		
5.3 **If no**, why? (Can tick more than one answer) 1= Because you did not have enough money 2= Because you did not have to support any one in hometown (in case family moves to live Phnom Penh) 3= Because you got married and have your own family living in Phnom Penh 4= Others (specify)…….……		

** Please recall the last job that she/he did for at least three months before joining the factory*

5.4 Please rank three most important items (1, 2, 3, 4, etc.) which your household used remittance (money which you sent home) for:

Items	Rank	
	Current Employment	Previous Employment*
1= Daily food consumption		
2= Supporting education of family members		
3= Health treatment of family members		
4= Buying consumer durable goods		
5= Building/buying/repairing house		
6= Buying farm land		
7= Investment in agriculture		
8= Investment in handicraft production		
9= Running small business at home		
10= Paying debt		
11= Lending		
12= Saving for children		
13= Other investment		
14= Others (specify)		

** Please recall the last job that she/he did for at least three months before joining thefactory*

5.5 Do you think your income could improve your household's economic status (Please compare your current household's economic status to your household's status before working in the current factory?

1= Yes, become better 2= No 3= Subsidy/Just enough 4= Same as before

Household's General Status Assessment

5.6 Before working in the current factory, in comparison with other households in your community, did you consider your household as:

1= Very rich 2= Rich 3= Medium 4= Poor 5= Very poor/destitute

5.7 Currently, in comparison with other household in your community, do you rate your household as:

1= Very rich 2= Rich 3= Medium 4= Poor 5= Very poor/destitute

5.8 Compare answer in Q. 5.6 and Q. 5.7; if there is a change, please list 5 main factors that contribute to the change:

1=……..
2=……..
3=……..
4=……..
5=……..

Thank you for your kind cooperation.

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