INTERNATIONAL RELATIONS INSTITUTE OF CAMBODIA (IRIC)

តំបន់ត្រីកោណអភិវឌ្ឍន៍កម្ពុជា

សក្តានុពល បញ្ហាប្រឈម និង ការរំពឹងទុក

CAMBODIA DEVELOPMENT TRIANGLE AREA

POTENTIALS, CHALLENGES AND PROSPECTS

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SUPPORTED BY:
KONRAD ADENAUER FOUNDATION (KAF)

PHNOM PENH, JULY 2014

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ACKNOWLEDGEMENT

This report would not have been possible without the financial support of the Konrad Adenauer Foundation (KAS) and technical assistance of Cambodia Development Resource Institute (CDRI). We would like to acknowledge especially Mr. Denis Schrey, KAS Country Director, Mr. Mom Saroeun, KAS Senior Program Manager, Mr. Em Sorany, CDRI Development Knowledge Management Program Manager, and Dr KIM Sean Somatra, CDRI Research Fellow, all of whom helped the smooth implementation of the project activities as well as the preparation of this report.

Appreciation is also expressed to the many officials of the provincial governments and institutions in Ratanakiri, Mondulkiri, and Stung Treng, and who in one way or another, facilitated the fieldwork activities, data gathering and stakeholder consultations. Special thanks are due to H.E. Mr. Pao Hamphan, Governor of Ratanak Kiri Province, Mr. Yim Lux, Deputy Governor of Mondul Kiri Province, and Mr. Chheang Lak, Deputy Governor of Stung Treng Province, for their fruitful arrangements of our meetings with the managements and officials of a number of provincial departments, and provincial chambers of commerce in the three provinces. The preparation of this report benefited greatly from their contributions.

PREFACE

Development Triangle Area (DTA) of Cambodia, Laos, and Vietnam (CLV) was created to maximize the gains from international integration, especially in economic welfare. This specific paragraph indicates the government's non-deviated political will toward realization of the development along border provinces. The political agenda of the Royal Government of the third legislature stated that the development of borders and rural areas in order to encourage people not to leave their home for the city by means of putting things in place and construction of the down-town areas which are linked to proper infrastructure, especially roads and developed villages along the borders in order to facilitate their livelihood and participation in economic activities.

The development triangle project, particularly, acceded by three Cambodia's border provinces, namely Stueng Treng, Rattanakiri, and Mondulkiri, together with four Vietnam's border provinces and three Lao PDR's provinces. This Development area was first initiated by premier Hun Sen in his effort to develop the Cambodia's northeastern part to become the country's fourth development pole by year 2015. Therefore, the situation analytical study of the area is needed to carry out.

In this regard, the study on Cambodia Development Triangle Area: Potentials, Challenges, and Prospects" was carried out by IRIC team under the supervision of Dr. Sok Touch, Deputy Director General of IRIC with financial support from KAS and some technical support from CDRI.

We focused on Stung Treng, Rattanak Kiri, and Mundol Kiri as our target area. The three provinces of Cambodia, had joint economic integration since 2004 with the other two countries, Vietnam and Laos. However, the international trade in the area has not remarkably improved as the expected outcome of the initiative of DTA itself.

This report aims at providing the points where the resource endowment is rich for development of the provinces in CDTA. The natural resources especially land and its productivity, are in focal point for analysis while the productivity of labor is less and insufficient labor supply in the area fit the production. There are some challenges for developing the CDTA due to high cost of transportation, legal and political framework that lead inefficiencies and ineffectiveness in resource allocation.

Last but not least, the study also provides some recommendation in order to increase the benefit from CDTA economic integration. On behalf of the research we wish the findings and recommendation can be used to improve economic situation and condition, and living standard of the people in the target area from maximization benefit from effective and efficient resource allocation.

ABSTRACT

This paper seeks to understand the potentials, challenges and prospects for trade and development in Cambodian Development Triangle Area (CDTA). It is divided in two folds, the first is to analyze the situation and opportunities of development in the DTA with a keen focus on the pools of natural and human resources available nationally and locally. The second objective is to understand, how under the current socio-political environment, those resources could be used to speed up the growth of CDTA. This paper finds that CDTA is rich with natural resources that can potentially serve as the basis for trade development when Cambodia is fully integrated with all member countries. However, many challenges, especially those related to lack of infrastructure, unclear legal framework and ineffective resource allocation are main restrictions for maximizing benefit from trade. In short-run, due to the limited condition of infrastructure trade cannot be a fast-grown driver for CDTA, even richness in natural resources. Therefore, the study suggests that eco-tourism is the first significant sector for socio-economic benefit of CDTA due to its natural resource endowment. The research also suggests that trade policy is most likely to be associated with positive outcomes when it is conducted with effective institutions and strong commitment from the leadership.

Keywords: Resource endowment, efficiency, maximize benefit, trade, economic growth

JEL: E23, F15, F16, F41, and O13

CHAPTER ONE
INTRODUCTION

Cambodia - Laos - Vietnam Development Triangle Area is a border junction area of Vietnam, Laos and Cambodia. It covers 13 provinces from the three countries, and they are Ratanak Kiri, Stung Treng, Mondul Kiri and Kratie in Eastern Cambodia; Attapeu, Salavan, Sekong and Champasak in southern Laos; Kon Tum, Gia Lai, DakLak, DakNong and BinhPhuoc provinces in the Central Highlands of Vietnam.

The initiative to establish the Development Triangle Area was raised by Royal Cambodian Prime Minister Hun Sen in 1999 at the first historic meeting of the three Prime Ministers of Cambodia, Laos and Vietnam in Vientiane. The three Prime Ministers have pledged to prioritize the implementation of cooperation in the Development Triangle Area regarding the fields of transportation, trade, electricity, tourism, human resource training and health.

The Cambodia - Laos - Vietnam Development Triangle Area is greatly important and the three countries should work together to develop, especially the transport infrastructure which is importantly needed for mountainous area. To do this, Japan pledged to support the three countries in investing for Development Triangle Area and initially providing a large amount of financial assistance both in terms of grant and loans, making it the biggest donor in Cambodia (Ky, Lee, and Stauverman 2012). The aid is provided in small projects on people's livelihood in the region especially in the fields of transport, education, health care.

In addition, the purpose of DTA is to expand and enhance the cooperation among the three countries, in general purpose and also in specific field[1] such as traffic, energy, trade and investment. The cooperation benefits to the member counties in order to eliminate poverty, narrow social and economic gap. As an example, roads linking the provinces of the three countries are prioritized to develop as Highway 40 linking the Ho Chi Minh road and border gate Bo Y, KonTum Province. For Cambodia, Vietnam gave Cambodia a concessional loan to construct road 78 from Banlung (Ratanak Kiri) to OuYaDav, (Ratanak KiriProvince) with 70km of length. Moreover, Laos licensed to Vietnamese enterprises to invest in building hydroelectric power plant Sekaman 3 (250 MW) being integrated into Lao National electric grid at the end of 2012, hydropower project Sekaman 1 has been kicked off, project Sekaman 4 was granted with investment license, projects Sekong 4, Sekong 5, Sepien-Senamnoi are in the stage of feasibility study. For trade and investment, Vietnam has been basically

[1] http://clv-triangle.vn/portal/page/portal/clv_en/817327

accomplished commercial, service infrastructure system of Bo Y border gate economic zones (Kon Tum) and is supporting Laos to set up joint checkpoint at Phu Cua border gate (in opposite of Bo Y border gate). The joint checkpoint at Le Thanh border gate economic zone (Gia Lai) is being deployed. Vietnam gave a grant to Cambodia for the construction of a border market in Ou Ya Dav, Ratanak Kiri. Vietnamese business persons are actively investing in the provinces of Laos and Cambodia in the Development Triangle Area, building processing plants with the motto as capital, technology and markets of Vietnam, labor and land potential of Laos and Cambodia.

In DTA, the focuses of the three countries shows the potential for socio-economic integration which all member can get many benefits. There are economic as well as political reasons why nations pursue economic integration. The economic rationale for the increase of trade between member-states of economic unions that it is meant to lead to higher productivity. This is one of the reasons for the global scale development of economic integration; a phenomenon now widely referred to as Regional economic blocks, DTA. Objective of the DTA integration is comparative advantage and economies of scale. Comparative advantage refers to the ability of a person or a country to produce a particular good or service at a lower marginal and opportunity cost over another. Comparative advantage was first described by David Ricardo (Krugman, Obstfeld, and Melitz, 2012). Economies of scale refer to the cost advantages that an enterprise obtains due to expansion. There are factors that cause a producer's average cost per unit to fall as the scale of output is increased. Economy of scale is a long run concept and refers to reductions in unit cost as the size of a facility and the usage levels of other inputs increase.[2]Economy of scale is also a justification for economic integration, since some economies of scale may require a larger market than is possible within a particular country.

Even though potentials are rich, there are many challenges restricting the development of the area. Slow growth is the main point to be focused for the study, which try to seek the challenges. Economists distinguish between two primary forms of economics integration among countries. The first is trade (the exchange of goods and services). The second is the flow of factors of production across borders. Although trade and factor flows are often loosely tossed together into the category of openness, they differ in important ways. A country can be quite open to trade without allowing foreigners to own capital. Thus our analysis of

[2] Sullivan, arthur; Steven M. Sheffrin (2003). *Economics: Principles in action*. Upper Saddle River, New Jersey07458: Pearson Prentice Hall. p. 157.ISBN 0-13-063085-3.

international aspects of openness and integration in DTA must be carefully distinguished between these two forms.

This study looks at ***Cambodia DTA: Potentials Challenges and Prospects*.** The paper has two main objectives: the first is to analyze the situation and opportunities of development in the DTA; and the second objective is to rationalize the prospects for improving the growth speed of Cambodia DTA. The data on resource endowment are a main focal point such land utilization, natural resources available in the area, human capital, physical infrastructure, and so on. The second focal data is legal framework and institution that govern the conduct of trade. It allows the research to concentrate on comparison of regulation and its implementation.

This paper depends on both secondary data obtained through the analysis of government document and primary data collected by means of interviews and field observations. For interviews, this paper employs Key Informant Interview (KII) technique. A large number of key government officials ranging from the provincial governance to custom officers at the borders were contacted for interviews, which resulted in a rich pool of information of the potential and challenges for trade development in the area. These data were then compared with data collected from interviews with other non-state actors to minimize the possibility of in complete information and/or the official truth. Business persons in Mondul Kiri, Ratanak Kiri, and Stung Treng were also interviewed. The interview data were then triangulated with data from direct field observations that took place only in Cambodia but also in Vietnam and Laos to ensure a complete and reliable pool of data for analysis.

The paper is structured as follows: Chapter 1: Introduction, Chapter 2: Review of Related Literatures, Chapter 3: Potentials and Challenges for Trade in DTA, Chapter 4: Discussion, and Chapter 5: Conclusion, Recommendation and Future Study Suggestion.

CHAPTER TWO
REVIEW OF RELATED LITERATURES

Over the last half century, globalization has emerged as an unstoppable economic development trend. As part of this, world's economies became increasingly interconnected as protectionism is replaced by policy of openness and free trade. The idea of open economies and free trade is to improve resource allocation, attract more investment, facilitate acquisition of foreign technology for improving productivity and efficiency, and enhance competitive advantage (Hing, 2013).

The understanding of the significance of these factors for trade development is reflected in the Cambodia development policy. According to the Rectangular Strategy (RGC 2006) of the Royal Government of Cambodia (RGC), the development in international economic governance provides justification for Cambodia to further develop its trade sector to promote economic growth (reference). Reformation in trade policy and improvement of business and investment climate with better infrastructure and legal framework are an attraction of FDI.

While free trade offers a list of economic advantages, trade itself is dependent on a range of factors. Two important theories explain this. First, the Ricardian theory conceptualizes trade as highly dependent on the absence of interventions or restrictions, arguing for the removal of trade barriers. In "The Wealth of the Nation" of Adam Smith in 1776, it states "with competition and absence of market distortions, such gains are positive in moving toward free trade and away from autarky or prohibitively high import tariffs" (Samuelson and Nordhaus. 2004). The second one is Heckscher-Ohlin (H.O) Model. With a focus on factor of endowments, H.O Model sees countries' potential of developing trade in the resources they have, as it states " relative endowments of the factors of production (land, labor, and capital) determine a country's comparative advantage" (Lal, 2006: 24) (reference with page number). According to H.O Model, relative abundant of resources leads a county to changes pattern of trade from less efficient to more efficient production with better resource allocation. Comparative advantage is assumed to be derived from either exogenous technological differences or different factor endowment. This reallocation of resources generates efficiency gains that increase aggregate national income (Krugman, Obstfeld, and Melitz, 2012).

According to the World Trade Report (2013), natural resources, demography, investment, technology, investment, transportation costs and the institutional framework are

important factors affecting the development of trade between nations. This understanding is important for this paper which tries to assess the potentials, challenges and prospect for trade development in the CDTA. It uses natural resources, demography, technology, investment, transportation costs and the institution to form a framework of analysis.

Natural resources

Natural resources make up important factors of endowment essential for production and trade. Natural resources which include energy source, land and water are known as important factor affecting a country's development in trade. Romalis (2004) argues that countries would increase production and trade in commodities that intensively use resources abundant in the countries.

Cambodia is known to be rich in natural resources. It is endowed with rich volcano soil which is classified as fertile land suitable for the production of rice and many other important industrial crops (Bues, 2011). It is also rich in forest resources which is covered 58.39% of the total land area in 2011 (Ministry of Planning, 2014) with tropical and high value timber forest to be known that 2,500 ha to 3,000 ha are converted to agricultural land every year (Bues, 2011). At the same time, Cambodia has plentiful water resources with many natural rivers, lakes and ponds.

Despite the richness in these resources, it is not clear what it means for CDTA. The availability and quality of these resources particularly land and forest vary according to different geographical location. Thus it is important to investigate if CDTA really has these endowments in place to form the basis of production and trade. Meanwhile, while Cambodia is said to be rich in water resources, it is actually classified as a country with water economic scarcity, a term used to refer to a situation of abundant physical water but lack of investment to develop infrastructure to extract water to meet the demand (UNDP, 2006). The fact that it lacks water infrastructure suggest that it might stand as a challenge to the development of industries in the area, thus potentially holding back trade development.

Demography

Demographic factor which includes the maturing or aging population, migration, education improvement and women's participation in the workforce can affect pattern of import and trade. Cambodia has a young population. In year2013, more than 52 per cent of the population is under 24 year old and 38.2 per cent age between 25 and 54 (CIA, 2013). This represents a large percent of working population and with the young segment of the population is maturing, they can be significant addition to the nation workforce and at the

same time source of demand for goods and services that provides the basis for trade expansion.

Despite this characteristic of the population, the Cambodian workforce faces a few noticeable problems concerning levels of education, skills and labor productivities. According to the Cambodian national statistics, only 73.9 percent[3] of the population is literate which in itself is defined loosely as being able to read and write basis texts. Despite general achievements in educational access and quality over the past 15 years (particularly at the primary level), universities and technical training providers remain largely under-resourced and not attuned to the labor market needs. Partly as a result of this, Cambodia today grapples with a profound and growing mismatch between the skills of the labor force and those required by employers –a situation exacerbated by both the fast-growing labor force and the slow pace of economic diversification.[4]

Labor market inefficiencies also arise out of the structural imbalance between the numbers completing higher (tertiary) education and those obtaining technical and vocational qualifications. Cambodia, at its current level of development, desperately requires skilled labor from the latter category, in professions such as mechanics, electrical technicians and the hospitality and construction trades because this is where the bulk of new employment is being created. Currently, however, the country actually generates far more university graduates – mostly in a small handful of subjects (typically, social sciences and business-related studies) – are unsuited to vocational occupations. In large part, this can be attributed to young people's perceptions that a university education is both more prestigious and more "marketable" than a technical or vocational qualification. While the reality often belies this, it will take some time and considerable efforts in expanding labor market information and in promoting the employment value of technical and vocational training to reverse those perceptions and bring the labor force aspirations into closer harmony with the expectations of the labor market.[5]
Cambodia's literacy challenge also lies in reducing disparities in literacy rates by gender (85.1% among males to 70.9% among females) and age group, between urban and rural populations (90.4% to 74% respectively), and among ethnic minorities, and those who are most marginalized.[6] This means that human resources in the DTA area might stand as a challenge to trade and development.

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3 http://www.theodora.com/wfbcurrent/cambodia/cambodia_people.html (visited 11-08-2014)

4 NIS, MOP & ILO, *Labour and Social Trends in Cambodia 2010*, op. cit., p. 50.

5 NIS, MOP & ILO, *Labour and Social Trends in Cambodia 2010*, op. cit., p. 51.

6 http://www.unesco.org/new/en/phnompenh/education/learning-throughout-life/literacy/ (26 January 2014)

Technology

Technology, defined as information or knowledge of production, is important determinant of countries' trade for they only produce and trade goods that they can produce more efficiently then their trading partners. The relation between trade and technology is two way. On the one hand, trade depends on the country's level of technology. Countries trade goods of which they can produce efficiently. This depends on the technology. According to H.O model[7], a country may not have natural endowments needed to produce particular products, but it may have technology and efficiency, that make country become specialization in some products. The specialization may be developed expertise and come from research and development (Krugman, Obstfeld, and Melitz, 2012). On the other hand, trade foster technological advancement either through R &D or through technological transfer. On this matter of technological transfer, open economies tend to absorb greater knowledge and adopt new techniques, machinery and production processes more than less open economies (Weil, 2012). Weil (2012) goes on to argue that there are two ways in which economic openness contributes to a higher level of technology. On the one hand, trade depends on the level of technology of the host countries. On the other, trade leads to the improvement of production technology. The theories of openness suggested that an open economy tend to absorb knowledge and flow of new technology such as machinery, process of production and techniques which is called technology transfer. Coe and Helpman (1995) and Grossman and Helpman (1991) mentioned that technology spillovers from developed to developing countries through trade channel such as imported capital goods and intermediate products. Also trade is an incentive to adopt and improve technologies for export, and for reverse engineering of products developed abroad. Harrison and Rodriguez-Clare (2010) argue that firms especially in technologically backward countries can learn to improve their production technology through export. FDI is a second channel for technology transfer, not only across national boundaries but also between firms. The diffused knowledge and technology can include technologically advanced equipment and technical information, know-how, management style and production processes. Another mode of technology spillover from FDI can occur between firms that are vertically integrated (Hitt, Ireland, and Hoskission: 2007) with the multi-national corporations (MNCs) which is called inter-industry spillovers. Finally, technology diffusion may arise from labor turnover. Workers employed by MNCs acquire knowledge of its superior technology and transfer important information to local firms by switching employers or starting their own firms (Findlay:1978and Caves : 1974).

[7] H.O model: Hecksher Olin model

It was also argued that the world market seems to accelerate greatly a country's acquisition of foreign knowledge and technology which can be concluded that foreign technology—embodied in imported inputs and capital goods—is the dominant source of domestic productivity growth. Countries that are open to trade are more able to import existing technologies from abroad. This technology transfer takes place through many channels. One of them is foreign FDI which a firm building a factory in another country will transfer technology along with capital. Another channel is backward country buys capital goods that embody a new technology from abroad. The last one is the transfer of soft technologies such as innovative organizational techniques. The understanding of this nature of relationship between trade and technology, particularly the second aspect of the relation, leads to the realization that the small volume of trade in the countries might mean low level of production technology.

Investment

Investment patterns particularly in public infrastructure can reduce trade cost and at the same time increase trade volume. Nordas and Piermartini (2004) argue that there is a positive relation between paved roads and increase in volume of trade in a country. Equally important for trade development in developing countries is financial investment which has normatively been equated with FDI. The movement of financial capital in terms of portfolio investment and FDI, allows for industrial development and drives country to raise their national income. Weil (2012) argues that increase in capital stock through the flows of FDI and portfolio investment is a motive of raising income per capita, by enlarging production scale in a region and world. Tariff exemption and trade condition reduction are provided to those countries to attract FDI. Even there is no empirical proof on relationship between investment and openness, many developed countries tend to divert their capital investment from high wage to low wage countries for competition, especially to developing countries. However, FDI does not depend solely on openness of the trade policy, but also on the local economic context. Economic conditions include market size, growth prospects, labor cost, human capital, physical infrastructure and macroeconomic fundamentals like inflation, tax regime and external debt, which lead FDI flow, are indicators for trade (Edwards :1990, and Tadesse and Ryan:2004). It is concluded that openness is positively associated with FDI flows and is a shift from investment projects to serve local markets to those serving export markets. So, with the flows of FDI and financial investment, countries import technology and knowledge.

The understanding that FDI flow depends not just on the level of openness in the economy, but also on a range of other factors including market size, growth prospects, labor cost etc. raises an important question of how much Cambodia can attract FDI to finance investment. Data obtained from the government CDC's website show that FDI flow in Cambodia has been rather inadequate, and mostly, it is directed to tourism, service and garment sector. This raises an important question of how in the context of insufficient FDI to finance local investment local businesses and agro-businesses are funded.

Transportation costs

Transportation can act as barriers to trade for the higher the cost the more expensive the products become and thus losing their comparative advantages. This includes, among other things infrastructure, trade facilitations, and fuel cost. Transportation networks and facilities that connect all corners of the country are the arteries that can transform the country into an integrated economy and are critical for distributed economic growth. While economic growth is a necessary condition for poverty reduction, it is not sufficient. Here, infrastructure plays a dual role: It supports higher economic growth and strengthens the sharing of the benefits of growth. For this reason, it is important to assess the condition of the road network in the country to understand the potential it offers for trade and development. What is more important, the specific country's transportation arrangement can place more emphasis on the role of the road network and its condition. In Cambodia, for example, road transport accounts for an overwhelming share of the total transported volume of passengers (65%) and freight (70%).

Institutional framework

Costinot (2009) argues that the quality of institution significantly affect the country comparative advantage in trade. Institution consists of political institution, economic institution and regulatory system. Political institution refers to the form of government and the political regime, and it can affect trade indirectly through economic development and directly through trade policies (WTO 2013). WTO (2013) goes on to show that economic institution and regulatory system matter for trade as they provide the crucial rules for economic interaction. The understanding of the importance of institution in trade here raise a very important question the prospect of trade development in Cambodia for it is considered as a state with weak institutional capacity. Cambodia is categorized as a weak state with poor legal and regulatory function (Un 2005, Un 2009, and Un and So 2009). Thus, this paper explores how institution facilitate or constraint trade development in CDTA.

CHAPTER THREE
CONTEXT OF TRADE DEVELOPMENT IN CAMBODIA

1- HISTORY OF CAMBODIAN TRADE

Cambodia has undergone several civil wars. After the collapse of Pol Pot regime in 1979, Cambodian economy system was a closed economy centrally planned and managed by the central state under socialist ideology. All firms were state-owned firms. The state economy covered large-scale agricultural production, all industrial production, the communications and transportation networks, finance, and domestic and foreign trade. To facilitate economic transactions nationwide, the state restored the banking system in November 1979, and it reintroduced currency in March 1980 (Wikipedia). Up until the mid 1980s, the economic goal was to achieve rice self-sufficiency (Gottesman, 2004).

When the goal of self sufficiency was beginning to be realized, the state then made the first effort at planning the economy as reflected in the 1986's plan. The First Five-Year Program of Socioeconomic Restoration and Development (1986-90) was intended to open a new phase of the Cambodian revolution; it gave highest priority to agricultural production, calling it "the first front line," and focused on the four sectors of food, rubber, fishing, and timber. It set production targets for each sector. During the plan period, food production was to increase 7 percent a year to keep up with a targeted 2.8 percent annual population growth rate, which did not seem to have been reached by 1987. The plan projected that by 1990, rubber farming would expand to 50,000 hectares in order to produce 50,000 tons of latex; timber production would reach 200,000 cubic meters; jute production would increase to 15,000 tons; and fish production would amount to 130,000 tons. As in the past, the plan labeled agriculture and forestry as the real force of the national economy.

The plan was less specific for the industrial sector. It did not set industrial production targets, except that for electrical output, which was projected to reach 300 million kilowatt hours per year in 1990. The plan called attention to the need for selective restoration of existing industrial production capabilities and for proposed progressive construction of a small to medium industrial base, which would be more appropriate to the country's situation. The plan placed increased emphasis on the distribution of goods. Trade organizations were to be perfected at all levels, and socialist trading networks were to be expanded in all localities. In particular, the trade relationship between the state and the peasantry was to be improved and consolidated in accordance with the motto, "For the peasantry, selling rice and agricultural products to the state is patriotism; for the state, selling goods and delivering them

directly to the people is being responsible to the people." The plan also required that investment be directed toward the improvement of the infrastructure, particularly toward the reconstruction of communication lines and waterworks. Road, inland waterways, and railroad networks had to be restored to serve the national economy and defense.

In addition, the plan cited "export and thrift" (without elaboration), as the two primary policies to be followed in order to solve the national budget deficit. The plan implied that, into the 1990s, exports would have to consist principally of agricultural and forestry products, to which some value might be added by low-technology processing. "Thrift," although undefined, could, in the future, include some kind of government savings plan, with incentives for small depositors, to absorb surplus riels generated by Cambodia's considerable free-market and black-market sectors (Slocomb, 2010). This is because, starting from 1986 there was an undercurrent of economic change where the principle and practices of a market-based economy began to emerge. Private enterprises began to come into force and made modest progress through the rest of the 1980s decade. Citizens were allowed to buy and to sell agricultural produce and handicrafts. The law guaranteed workers the right to keep their wages, their other income and their property. Encouraged and protected by the state, hundreds of small shops and factories, each employing a few workers, opened for business in Phnom Penh and in other urban areas.

However, industry accounted for only 5 percent of Cambodia's GDP in 1985, down from 19 percent in 1969. Industrial activity continued to be concentrated in the processing of agricultural commodities, mostly rice, fish, wood, and rubber. Manufacturing plants were small, and they employed an average of fewer than 200 workers. These plants aimed to produce enough consumer goods (soft drinks, cigarettes, and food items) and household products (soap, paper, and utensils) to satisfy local demand (Cosslett, 1987).

In 1985, about half of Phnom Penh's prewar plants had reopened which most industries were producing at far below capacity because of frequent power cuts, shortages of spare parts and of raw materials, and the lack of both skilled workers and experienced managers. Industrial revival continued to be difficult and extremely slow because it was based mainly on the use of limited local resources. It leads to increase the economy. According to Hing (1995) the GDP per capita in 1991 is 186$ where the real growth rate per capita in between 1987 and 1991 is 3.2%. The main share of GDP is agricultural sector which accounted for 50% of the total GDP, and industrial sector shares 17%. From 1989, international trade was allowed especially with neighboring countries which according to Hing (1995) the total import in 1991, 1992, 1993 are $219.1 million, $345.7 million, and $222.1 million respectively. Cambodia's total export in 1989, 1990, 1991, 1992 and 1993 are

$49.8 million, $32.9 million, $67.3 million, $51.3 million, and $21.1 million respectively, and trade partners are Singapore, Thailand, and Vietnam. After election in 1993, Cambodia improved its economy and human development indicators. Rapid expansion in construction and services, largely tailored to servicing international personnel, and concentrated narrowly on the capital city of Phnom Penh produced high growth rates in the early 1990s. It is also shown that the trade with western countries was stated. In 1994, the import is industrial products such as vehicles, textile, and cigarette.

Following the 1998 elections, growth rates soared again, bolstered by high growth in the garment industry, in response to Cambodia's excess export quotas to the US. Some service growth was also seen, focused narrowly upon Phnom Penh and the town of Siem Reap, near the Angkor Wat temples, as better security encouraged tourists to return. Agriculture – the largest sector of the economy – declined, apart from a single record harvest, brought about by good weather conditions, in 1999. The only flourishing industry – garment manufacturing – is heavily dependent upon regional foreign direct investment, particularly from Cambodia's largest investors, Taiwan and Malaysia. This investment is to a great extent attracted by Cambodia's export quotas to the US that are due to be phased out in 2005. The garment industry has been the main contributor to Cambodia's growth and poverty reduction performance.

Foreign direct investment in other sectors remain low throughout the 1990s, and figures for the total number of FDI dollars spent, rather than merely pledged, in all sectors, have fallen consistently since 1998, from more than US$230 million in 1998 to US$113 million in 2001 and below US$100 million in 2002 and 2003 (World Bank, 2004). Surveys of investors found that Cambodia was seen as a high-cost and unstable business environment, suggesting that the sustainability of the rates of growth posted during the 1990s is questionable. Cambodia's major investors are its regional neighbors, with Malaysia accounting for up to 40 per cent of FDI to Cambodia in 2002 (Freeman, 2002).

Table 1: Top Ten Investors in Cambodia, Cumulative Investments, 1994-2002 (in USD).

Number	Country	Investment Capital	Percentage
1	Malaysia	1,862,432,052	31.21
2	Taiwan	493,630,670	8.27
3	USA	434,201,401	7.28
4	China	267,064,156	4.48
5	Hong Kong	253,576,213	3.95
6	Singapore	224,592,946	3.76
7	Korea	208,708,623	3.5
8	Thailand	198,674,735	3.33
9	France	192,764,327	3.23
10	United Kingdom	94,083,532.34	1.58

Source: Freeman, 2002

With respect to human development, the growth of the population at 2.5 per cent per year to an extent offsets the impact of economic growth on incomes. In particular, the expansion of the population group aged between ten and nineteen years, during the late 1990s, entailed increased underemployment as lack of growth in both agriculture and off-farm employment failed to soak up the new labor coming onto the market. The narrow concentration of the economic growth that has occurred in urban areas has prompted the emergence of wide disparities in income. In 1999, per capita income in Phnom Penh was US$691, compared to a rural per capita income of only US$197 (ADB, 1999). Although there has been some improvement in Cambodia's Human Development Index - from 0.543 in 1995 to 0.556 in 2001, representing an average of 0.00217 per year – this is a very limited pace of progress given the end of the war and influx of aid worth more than US$5 billion over this period. In the Human Poverty Index, Cambodia fares even worse – 70th out of 95 developing countries in 2004, and the lowest-ranked country in Asia (UNDP, 2004).

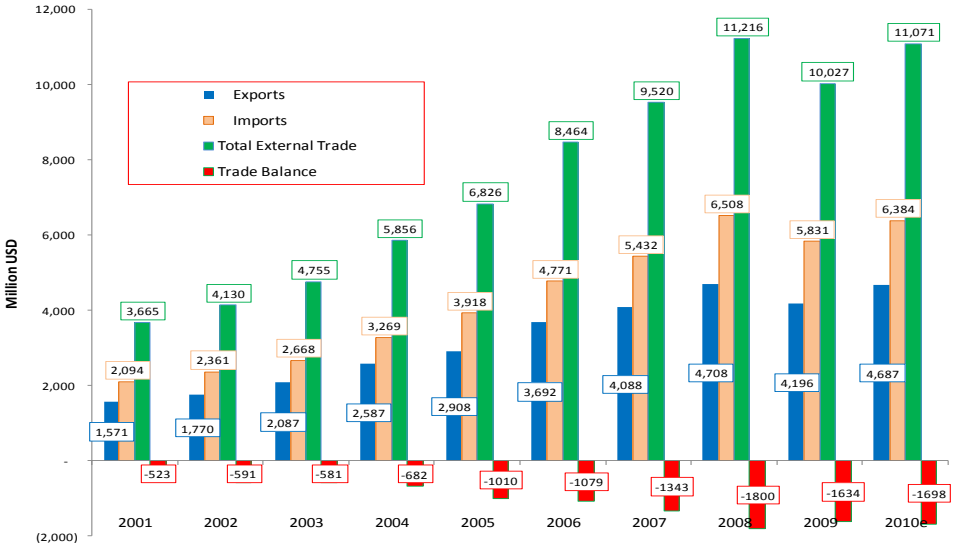
2- GLOBALIZATION AND LIBERALIZATION

After second election in 1998, Cambodian economies have been increasingly integrated with countries in region which has the same objective of trade liberalization in order to build free trade area (FTA). Cambodia became a member of Association of South East Asia Nation (ASEAN) on 30 April 1999. This integration aims to eliminate tariff and non-tariff barriers through the Agreement on the Common Effective Preferential Tariff

(CEPT) scheme which requires 0-5 percent tariff levied on a wide range of products traded within the region. Tariffs on more than 99 percent of the products in the CEPT Inclusion List of ASEAN-6, comprising Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, have already been reduced to no more than 5 percent, and 60 percent of these products have zero tariffs. For new members, Cambodia, Laos, Myanmar, and Vietnam, tariffs on about 81 percent of their Inclusion List have been brought down to less than 5 percent (Hang, 2009).

Cambodia is the youngest ASEAN member, and is one of the least developed countries in the region which is considered to have had a large positive impact on its trade. In addition, on 13 October 2004 Cambodia also became the 148th member of the WTO which reveals positive effects on trade with WTO member countries and with non-member countries.

Figure 1: External Trade of Cambodia (2001-2010)



Source: Hang 2011

Foreign trade of Cambodia has increased by 14 times for 15 years. The total trade volume has increased from $769 million (21% of GDP in 1993) to $11,000 million (107% of GDP in 2008). From 1993 to 2008, imports increased from $486 million to 6,600 million, and exports increased from $283 million to $4,400 million, respectively. According to Hang (2009) Cambodia imported goods from Hong Kong (19%), China (16%), Thailand (14%), Taiwan (11%), Singapore (10%), Vietnam (9%), South Korea (5%), Japan (4%), Indonesia (3%), France (2%), United States (1%) and others (6%), and exported to United States (52%),

Hong Kong (17%), Germany (8%), United Kingdom (5%), Canada (3%), Singapore (3%), France (2%), Vietnam (2%), Japan (1%) and others (8%).

Foreign trade has helps Cambodia avail opportunities which are beyond what could be accessed solely on domestic market conditions. In particular exporting enables the productive use of land and labor resources hitherto left unused due to the weakness of the domestic demand. Imports have allowed the Cambodian consumer to purchase high quality products at lower prices thereby adding to economic welfare. It is also helped the private sector to expand job opportunities, and improve modern technologies and market information in order to diversify market for exports and imports. These are motives for Cambodia to initiate the Development Triangle Area (DTA).

3- CONTEXT OF DEVELOPMENT TRIANGLE AREA

In the thirteen years since the first unofficial summit in 1999 at which Cambodian, Laotian and Vietnamese leaders reached an agreement on building a development triangle among the three countries, the Cambodia-Laos-Vietnam Development Triangle area has been established and has made important progress, though faced with many challenges. After the Fourth Joint Coordination Committee (JCC) in 2009, Cambodia has 4 member provinces, Vietnam has 5 member provinces, and Laos has 5 member provinces. These provinces all have similar terrain, climate, and socio-economic background providing great potential for agriculture, forestry, mining, tourism, trade and related industries. The fourth summit meeting of the CLV Development Triangle was held in Vietnam in December 2006. The prime ministers of CLV countries reaffirmed initiatives and decisions approved at the previous meetings on building the Development Triangle in order to hasten economic growth, reduce poverty and promote cultural and social progress in the region on the basis of bringing into play the potential and advantages of each country, simultaneously contributing actively to peace, consolidation, stability, integration and development.

In DTA, provinces, which are located in the border areas of the three countries and share many similarities in terms of nature, geography, economy and social conditions. The development level of these provinces is generally lower than the national level. The Royal Government of Cambodia (RGC), like other regional governments, believes that a development triangle may form as a result of full scale economic integration, which is a means to attract foreign direct investment and promote economic growth for specific periods of time.

4- GEOGRAPHY

Development Triangle Area (DTA) is located in the Cambodia-Laos-Vietnam border area which covers 13 border provinces having common border or having a connection with the common border between the three countries namely Mondul Kiri, Ratanak Kiri, Stung Treng and Kratie (Cambodia); Attapeu, Salavan, Sekong and Champasak (Laos); Kon Tum, Gia Lai, DakLak, DakNong, BinhPhuoc (Vietnam). DTA covers an areaof 143,948km^2, with a total population about 6.663 million people in 2011 (population density of 46 people/km^2). In this study, we focus on Cambodian DTA only and cover three Mondul Kiri, Ratanak Kiri and Stung Treng.

As located in North-east, Mondul Kiri, Ratanak Kiri, and Stung Treng, Cambodian DTA, are rich in land relative population with specific in climate and weather. It has a monsoonal climate with a rainy season from June to October, a cool season from November to January, and a hot season from March to May. Annual average rainfall data for the Cambodian DTA is about 1,200mm which is enough for agriculture and agro-industry. These figures show the strong seasonality of rainfall with over 84% of annual rainfall typically occurring between May and October. It is not unusual for any of the months from November to February to have zero rainfall.[8] The total population is 323,244 inhabitants who are living in the total area of 36,502 km^2 and density of 9 people per km^2.

Mondul Kiri is Cambodia's largest and also most sparsely populated province, containing an area of 14,628km^2 with a total population of 61,107 inhabitants, of which 80% are ethnic indigenous minorities, ranging from 190 to 1,000 meters. The provincial capital is Sen Monorom which is located in the southeastern part of the province about 390 km from Phnom Penh, the national capital. The northern boundary is shared with Binh Phuoc, Dak Nong and Dak Lak provinces of Vietnam (286 km in length). The western boundary is with Kratie province.

There are five districts in Mondul Kiri: Koh Nhek, Keo Seyma, Sen Monorom, O'Raing and Pich Chrada with 10 major indigenous minority group: Phnong, Khroal, Ro Oung, Stieng, Chaaraay, Kouy, Leave, Cham, Tom Pounn and Phnoon. Mondul Kiri province, at an average elevation of 800m above sea level, has different climates compared to the other parts of Cambodia. It may get warm during the day, but turn chilly at night. Mondul Kiri province is enormously rich in various natural resources, such as majestic mountains, rainforest, indigenous wildlife, pine tree plantation, impressive waterfalls, small rivers, waterfront parks, etc.

[8] MAFF, Annual Report 2010-2011 and Future direction 2011-2012

Ratanak Kiri province is located in the northeast of Cambodia, 588 km from Phnom Penh and can be reached via National Road (NR) No. 6A, No. 7 and No. 78. Ranatak Kiri is adjacent to Kon Tum and Gia Lai provinces of Vietnam and Attapeu province of Laos, covering an area of around 10,782 km^2 with a population of 111,671[9].The geography of Ratanak Kiri Province is diverse, encompassing rolling hills, mountains, plateaus, lowland watersheds, and crater lakes. Two major rivers, Tonle San and TonleSre Pok, flow from east to west across the province. The province is known for its lush forests; as of 1997, 70–80% of the province was forested, either with old-growth forest or with secondary forest region after shifting cultivation. In the far north of the province are mountains of the Animate Range; the area is characterized by dense broad leaf evergreen forests, relatively poor soil, and abundant wildlife. In the highlands between Tonle San and Tonle Sre Pok, the home of the vast majority of Ratanak Kiri's population, a hilly basalt plateau provides fertile red soils. Secondary forests dominate this region. South of the Sre Pok River is a flat area of tropical deciduous forests. The province is subdivides into one city and eight districts: Andoung Meas, Bar Kaev, Koun Mom, Krong Ban Lung, Lumphat, Ou Chum, OuYaDav, Ta Veaeng and Veun Sai. Indigenous minorities (Tompoon, Krueng, Chaaraay, Phnon, Kavet, Praov, KaChak, and Lun) form about 75% of the total provincial population. Most of the indigenous residents of Ratanak Kiri are subsistence farmers practicing slash-and-burn cultivation. Many families are beginning to shift production to cash crops such as cashews, mangoes, and tobacco, a trend that has accelerated in recent years. Ratanak Kiri villagers have traditionally had little to do with the cash economy. Barter exchange remained widespread and indigenous villagers tended to visit markets only once per year until quite recently.

It has a monsoonal climate with a rainy season from June to October, a cool season from November to January, and a hot season from March to May. Annual precipitation is approximately 2,200 mm. Flooding often occurs during the rainy season and has been exacerbated by the recently built Yali Falls Dam.

Stung Treng is located in northeastern Cambodia, about 481km from Phnom Penh and 40 km southern Lao border. Its total area is 11,092 square kilometers is sparsely populated province. It borders Laos to the North, Ratanak Kiri to the east, Preah Vihear to the West, and Kratie and Kampong Thom to the South. The province is divided into 5 districts, 34 communes, and 128 villages. It is a unique province quite distinct from other provinces in the Mekong basin, characterized by extensive forests, intersecting rivers and streams, and low-

[9] NIS, National Census 2008.

population density.[10]According to Thuon and Marcus (2006) Stung Treng is an important trade hub with a few hints of Lao due its location, joined by Asian Highway 11 (AH11). About 90% of the province's population lives along these four main rivers and depend significantly on these river systems for their livelihoods.[11]Stung Treng has districts namely Krong Stueng Traeng, Sesan, Siem Bouk, Siem Pang and Thala Barivat.

5- INFRASTRUCTURE

As a part of DTA infrastructure, currently, the Cambodian road network system has total length of about 44,119 km, and is divided into three types, national roads (NR), provincial roads (PR) and rural roads (RR). Some of NRs make up parts of Asian and ASEAN Highways (AH). NR is labeled as single-digit and two-digit roads, while PR is labeled as three-and four-digit roads (Table 2).

Table 2: Length of Road Network in Cambodia (as of 2009)

Road Classification	Length (Percentage)	No. of Bridge (Length)	Management Authority
1- digit national roads	2,117 km (4.7%)	589 (17,643m)	MPWT
2- digit national roads	3,146 km (7.1%)	698 (15,710m)	
Provincial roads	6,441 km (14.4%)	904 (16,309m)	
Rural roads	33,005km (73.8%)	1,869 (26,559m)	MRD
Total Length	44.709km (100%)	4,060 (76,221m)	-

Source: Infrastructure and Regional Integration Technical Working Group (2010)

Note: The figures of MRD are as of September 2010. The figures of MPWT are as of 2009 for road and as of 2006 for bridge.

According to National Strategic Development Plan Update 2009– 2013, the rehabilitation and construction of single-digit National Roads Network is now nearing completion. The main National Roads (asphalted) now connect Phnom Penh with almost all provincial capitals, and link to major cross-border check points with the neighboring countries. Significant progress has been made to put in place regional and sub-regional roads (such as the Asia-Pacific Region, ASEAN, and the Greater Mekong Sub-Region), that will serve as the economic corridor routes, and international transit routes facilitating

[10] http://www.cambodiancommunityday.org/index.php/en/provinces/north-east-region/stung-treng (2014-01-22)

[11] Try, T. & Chambers, M. (2005) *Situation Review and Analysis of the SteungTreng Demonstration Site of the Mekong Wetlands Biodiversity programme (MWBP), Cambodia*. IUCN, The World Conservation Union.

transportation, provision of logistics, trading, international trans-boundary tourism, and national defense. However, the actual condition of these road network might be different, and assessment from an international standard perspective may leads to a different story. Thus it is important to assess the conditions on the ground.

A portion of national roads No. 1 and No. 5 makes up a part of Asian Highway 1; national Highway No. 4, 6 and 7 make up a part of Asian Highway 11; national highway No. 48, 3 and 33 make up a part of Asian Highway 123; and national highway No. 66 and 78 make up a part of the arterial highway of the Greater Mekong Sub-region (GMS)[12] (Table 3).

Table 3: International Roads in Cambodia

GMS Road No.	Asian Highway No.	ASEAN Highway No.	Cambodian Road No.	Route
R1 (Central Sub-corridor)	AH1	AH1	NR1, NR5	- Poipet - Sisophon - Phnom Penh - SvayRieng - Bavet
R6 (Inter-Corridor Link)	AH11	AH 11	NR4, NR6, NR7	Sihanoukville - Phnom Penh - Kampong Cham - Stung Treng - Trapeang Kreal
R10 (Southern Coastal Sub-corridor)	-	AH23	NR 48, NR3, NR33	Cham Yeam - Koh Kong - Veal Rinh - SreAmbel - Kampot - Lork
R9 (Northern Sub-corridor)	-	-	PR2624, PR2661, NR78	Siem Reap - PreahVihear - Stung Treng - Ratanak Kiri - O Yadav Border

Source: MPWT

Cambodia has two major international ports (at Phnom Penh and Sihanoukville), two coastal ports (at Kampot and Koh Kong), and other river ports at Kampong Cham, Kratie,

[12] Infrastructure and Regional Integration Technical Working Group (IRITWG),*Overview on Transport Infrastructure Sectors in the Kingdom of Cambodia,* January 2009.

Stung Treng, Kampong Chhnang as well as Siem Reap in the Tonle Sap. Cambodia has also long navigable inland waterways[13]. Cambodia's navigable inland waterways measure a total length of 1,750km. The Mekong mainstream accounts for 30% of the total, the Tonle Sap River 15%, the Bassac River 5%, and other tributaries 50%. Year-round navigation is possible through 580km[14].

To date, Cambodia has 11 airports, including three international airports[15]. The Phnom Penh International Airport is near Phnom Penh and the largest one, and Siem Reap Airport, the gateway to Angkor Wat. These two major airports serve international flights. Moreover, Cambodia has two rail lines, both originating in Phnom Penh and totaling about 650 kilometers of single railway tracks (i.e., one-meter-gauge track). Between 1929 and 1942, the French built the first line (Northern line), which runs from Phnom Penh to Poipet on the Thailand/Cambodia border via Battambang. Assistance from France, West Germany, and China in the late 1960s, supported the construction of the second line (Southern line), which runs from Phnom Penh to Sihanoukville port.[16] At present, transportation of passengers and goods on the railways is quite limited. Plans are now being prepared to rehabilitate and expand this important mode of transportation and its integration with the regional railways.[17]

However, a feasibility study for the remaining link from Bat Doeung, Kampong Speu to Trapeang Srae, Kratie (255 km) or Loc Ninh (the railway connecting points between Cambodia and Vietnam), has already been completed. The Royal Government of Cambodia is seeking investment funds from development partners and private sector to construct this remaining link section.

To date, the triangle area – intersection between three countries (Cambodia, Laos and Vietnam), cannot be accessed from the Cambodian side. If the road from Banlung in Ratanak Kiri to the area is constructed, it may allow transport of goods and people across the border and beyond, and improve tourism.

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13 Sum, M. (2008), 'Infrastructure Development in Cambodia', in Kumar, N. (ed.), *International Infrastructure Development in East Asia – Towards Balanced Regional Development and Integration*, ERIA Research Project Report 2007-2, Chiba: IDE-JETRO, pp.32-84.

14 Infrastructure and Regional Integration Technical Working Group (IRITWG), *Overview on Transport Infrastructure Sectors in the Kingdom of Cambodia,* January 2009.

15 *Master Plan of Infrastructure Development in Cambodian DTA,* MPWT, 2011.

16 Sum, M. (2008), 'Infrastructure Development in Cambodia', in Kumar, N. (ed.), *International Infrastructure Development in East Asia – Towards Balanced Regional Development and Integration*, ERIA Research Project Report 2007-2, Chiba: IDE-JETRO, pp.32-84.

17 RGC, National Strategic Development Plan Update 2009 – 2013.

CHAPTER FOUR
POTENTIALS AND CHALLENGES FOR TRADE IN CDTA

1- NATURAL RESOURCES

1.1- LAND

The CDTA is rich in land resources that form a good basis for agricultural and industrial development for trade. The three provinces of CDTA have a total land area of about 36,502 km^2. DTA is a high land area in Cambodia where the land resource is rich in size and fertility. According the demographic data, land per capita on average is about 0.10 km^2 in Stung Treng, 0.07 km^2 in Ratanak Kiri, and 0.24 km^2 in Mondul Kiri, which are the biggest size and also the total land size (Table4).

Table 4: Land Size of CDTA

Items	Area (km^2)	Population	Land per capita (km^2)
Mondul Kiri	14,628	61,107	0.24
Ratanak Kiri	10,782	150,466	0.07
Stung Treng	11,092	111,671	0.10
Total	36,502	323,244	0.11

Source: Prepared by authors based on General Population Census of Cambodia 2008, MOP, 2009.

From a comparative perspective, the field data suggests that the size of land per capita in Cambodia's DTA is greater than that of other provinces, which is a potential for agricultural production, especially for agro-industry. The total area of Stung Treng province is 12,016km^2 in which the land for rice field is 22,643 hectares, the forest land is 928,000 hectares, plantation is 9,750 hectares and water area is 97,004 hectares.[18] Most of the total land is delta and broken section of river bank along Mekong River, Sesan River, Sre Pok River, and plateau that is the type of potential land for crops.

The total area of Mondul Kiri is 14,288 km^2 which equal to 7.89% of the whole land of Cambodia. The land size of this province is the biggest one among other provinces in Cambodia. The total area of this province is divided into the forest area 1,249,672 hectares, the animal shelter 992,437 hectares, rice field 124,310 hectares, and plantation 75,954

[18] Report of Stung Treng Agricultural provincial department 2007

hectares. The area of rice field is 13,454 hectares located in KohNhek district can be used to produce the rice for supporting the whole people in the province.

Existing statistic and field data suggest that CDTA provinces have great potentials in building trade foundation with big size of fertile land suitable for agro-industrial crops, and rich of other natural resources that can be raw materials and processing products that can support trade. The land is rich in fertility which appropriates for agro-industrial crops like rubber, cassava, coffee, pepper, cashew and other kind of crops. In the whole country, until the end of 2013 the total agro-industrial crops reach to 180,926 hectares and its result is 1,759,559 tons.[19] In the far north of the province is mountainous area that is characterized by dense broadleaf evergreen forests, relatively poor soil, and abundant wildlife. In the highlands between Tonle San and TonleSre Pok, the home of the vast majority of Ratanak Kiri's population, a hilly basalt plateau provides fertile red soils.

Ratanak Kiri province is 10,782km^2 in which the land for rice is 10,875 hectares, and the rest of the area is for the plantation of cashew, rubber, and other crops and so on. Even though, Ratanak Kiri is an area full of red clay and fertilized soil suit industrial agricultural crops, some local people still conserve the habit of shifting cultivation, and raise animals in the form of family level. However, the planting of industrial agricultural crops have gradually started families and private companies.[20] Ratanak Kiri is an area with geographical condition of plateau, mountain pass, streams, which has precious mineral like diamond, gold, and others. The most part of the total area covered by useful forest. This forest is also provides the shelters for animal and births like bison, gaur, rhino, orangutan, bears, snakes, and so on. In addition, the larger-scale agriculture occurs on rubber, coffee, and cashew plantations. Other economic activities in the province include gem mining and commercial logging. The most abundant gem in Ratanak Kiri is blue zircon. Gems are generally mined using traditional methods, with individuals digging holes and tunnels and manually removing the gems; recently, however, commercial mining operations have been moving into the province.

There are two categories of important crops, cash, and industrial crops. Nationally rice accounts for 84 % of the total cultivation land. But for CDTA industrial crops play a more important role. In Mondul Kiri province, for example, agro-industrial crop shares some 71% of the total cultivation land. The same is more or less true for Ratanak Kiri and Stung Treng. (see figure 2, 3 and 4)

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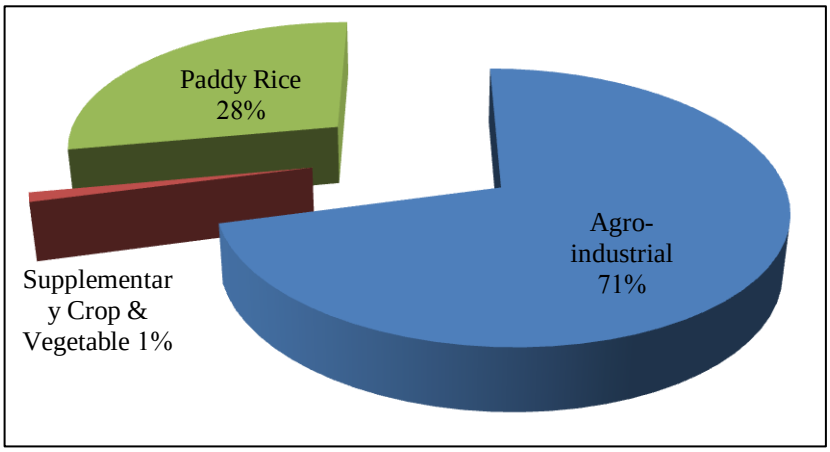
19 MAFF Op. Cit

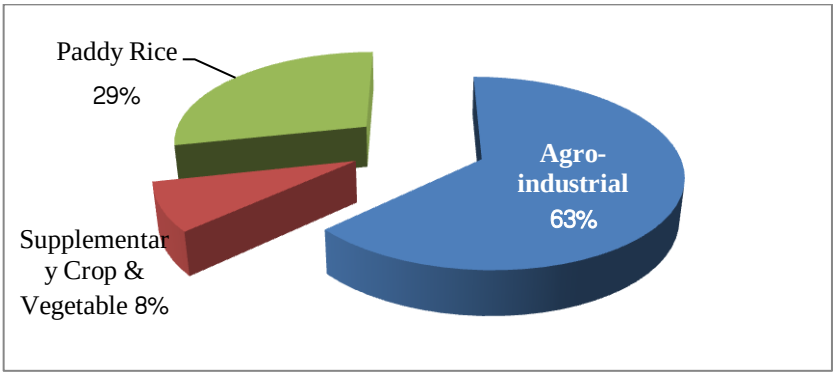
20 Report of Ratanak Kiri provincial department of Agriculture 2007 and plan for 2008

Figure 2: Cultivating Land Area in Mondul Kiri



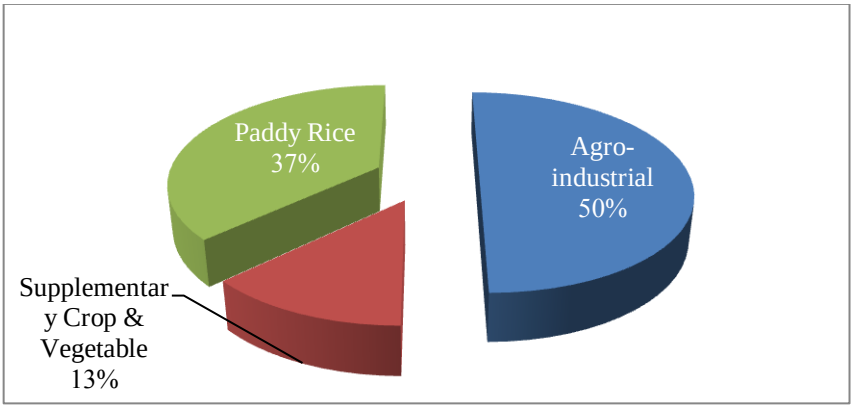
Source: Prepared by authors based on Annual Report 2012-2013, Provincial Department Of Agriculture, Forestry and Fisheries

Figure 3: The Cultivated Land Area of Ratanak Kiri 2012



Source: Prepared by authors based on Annual Report of DAFF Of Ratanak Kiri 2012, and Future Direction 2013

Figure 4: Cultivated Land Area in Stung Treng 2012



Source: Prepared by authors based on Annual Report of DAFF Of Stung Treng 2012, and Future Direction 2013

For the specific province of Mondul Kiri, the total cultivated area in the province is 324,184 ha in which the area for paddy rice accounts for 24,184 ha in lowland of Kohnhek, Pichreada and Keosema districts. The other 300,000 ha of land in Oreang, Koevsema, Senmonorom and Pichreada districts, are a type of red soil that is suitable for crops such as cassava, rubber, coffee, pepper, paulownia and cashew. According to the provincial annual report of Ratanak Kiri, the province has population of 162,891 in which 72.15 % are farmers, farming and growing agro-industrial crops.

Owing to geography, topography and climate of the province, Ratanak Kiri provides favorable conditions for strategic crops for supporting industrial sector. In Ratanak Kiri, agro-industrial crops are cultivated more than Mondul Kiri and Stung Treng. Among strategic crops for exporting and processing, rubber (both company and family rubber farms) is top one, followed by cashew and cassava is top five (See Table 6). This makes CDTA account for some 31% of the total national area of rubber cultivation.

Recently, rubber plantation areas increased remarkably particularly in the year of 2012 by 1,850 ha by small rubber plantation companies and families which leads the total production to rise to 29,235 ha, 2,436 ha of which are mature enough for latex collecting, increasing the importance of rubber crop in CDTA. (See Table 4).

Table 5: Agro-industrial Cultivation Area in CDTA Provinces

Crops	Mondul Kiri		Ratanak Kiri		Stung Treng		Total	
	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%
Rubber	47,630	82.84	47,571	56.43	14,432	34.38	109,633	59.66
Cashew	395	0.69	18,029	21.39	3,050	7.27	21,474	11.69
Pepper	39	0.07	39	0.05	-	-	78	0.04
Coffee	39	0.07	72	0.09	-	-	111	0.06
Cassava	9,391	16.33	18,591	22.05	19,202	45.74	47,184	25.67
Acacia	-	-	-	-	295	0.70	295	0.16
Teak	-	-	-	-	4,285	10.21	4,285	2.33
Paulownia	-	-	-	-	715	1.70	715	0.39
Total	57,494	100	84,302	100	41,979	100	183,775	100

Source: Prepared by authors based on Annual Report 2012-2013 of MAFF and DAFF of the three provinces

The challenges to crop development for trade have been the lack of organized market system to provide for demand and supply information. The small size of growers and the lack of integration mean that Cambodian farmers could not contribute or benefit from trade as they could insure the supply of agricultural products due to small size of cultivated land for the strategic crops (pepper and coffee), the lack of farming techniques, asymmetric market information, insecure land ownership, as well as the lack of access to credit. This, together with the lack of organized market structure, means international network of traders could not reach those individual farmers to place orders. (See Table 4).

Together with the geographical conditions of the CDTA that allow for the big size and good quality of soil, the government makes land reform policies aiming to further facilitate industrial development. The Royal government of Cambodia had granted economic land concessions to many private companies for growing agro-industrial crops. As of late December 2012, the government had reserved or granted at least 2,657,470 hectares of land to private companies under the Economic Land Concession scheme. This represents a 16.7 % increase from 2011. In 2012 alone, the government issued 66 sub-decrees reserving 381,121 hectares of land for ELCs, including 33 after the announcement of a moratorium on the granting of Economic Land Concessions (7 May 2012).

Official data published in March 2012 indicated that at the time only 90 companies had received ELCs covering 1,096,036 hectares. Some figure suggests even higher. According to Open Development Cambodia website (updated February 2014) at least 1,023,073.51 hectares of ELCs in Mondul Kiri, Ratanak Kiri and Stung Treng provinces, have been granted to 83 companies. How this policy action actually contribute to the development of trade is the subject of detailed analysis in the section on challenges to trade development.

Table 6: ELCs Companies in CDTA

No.	Number of Companies	**Land Area (Hectares)**
1	Mondul Kiri	
	37	233,902
2	Ratanak Kiri	
	32	244,698.51
3	Stung Treng	
	14	544,473
Total	***83***	***1,023,073.51***

Source: Prepared by authors based on data extracted from

Open Development Cambodia website (updated February 2014)

1.2- FOREST

Due to its geographical location and weather conditions, CDTA is endowed with rich forest resources, with 20.6% of the total land area covered by forest in 2006[21] (which is divided into two broad categories, general state forest and protected forest. The general forest area covers some 3,747,011 hectares, while the area of protected forest accounts for 1,145,190 hectares. Some of the important protected areas in CDTA are of significance to trade either in timber or non-timber product, they are Lomphat Wildlife Sanctuary covering an area of 250,000 hectares straddling along three provinces, Ratanak Kiri, Mondul Kiri, and Kratie provinces. It is a hug settlement of numerous wild animals such as buffalo, tiger, wild pig and bear. Virachey National Park covers 332,500 hectares and is located in Ratanak Kiri and Stung Treng provinces, and is part of an international park system as its borders adjoin national parks in Laos and Vietnam. Namlyr, located in Mondul Kiri, covers 47,500 hectares, Phnom Prich covers 222,500 hectares, and Seima covers 292,690 hectares (include part of Kratie).

The forest ranges from rain forest, tropical forest, and evergreen forest which consist of a wide number of important trees species. In Ratanak Kiri, most of forest is lowland tropical rainforest and montane forest where trees such as pine, bamboos, Dalbergia oliveri (Neangnuon), Dalbergia Cambodiana Pierre (Kra-nhourng), Pahudia cochinchinensis Pierre (Beng) and so on can be found. Some of these trees are of high commercial values and they are in high demand for furniture sector both inside Cambodia and internationally. This means that, if managed well, these forest resources could be extracted, processed and exported to increase the volume of trade and contribute to the rising national income. The forest of CDTA also holds important livelihood values. Interviews data reveal that local people depend on the forest for non-timber forest products such as resin, rattan, vine, agar wood (*Chan Crassna*) and cardamom… etc.

These forest resources are also of great potential for trade not only in forest products but also services beyond forest itself. Those could include eco-tourism services. The rich forest of Vireakchey National Park, for example, is known to house 30 ant species, 19 katydid species, 37 fish species, 35 reptile species, 26 amphibian species, and 15 mammal species, including several species never before observed. These can be important source of attraction for eco-tourism.

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[21] The Forestry Administration (2010). ***Cambodia Forestry Outlook Study***, Working Paper No. APFSOSII/WP/2010/32.

However, despite the richness of the naturally endowed forest resources and the wide range of associated potentials, some of the main challenges that prevent it from realizing its full potential contribution to trade development lie in the management issues that are rooted in the current political and economic arrangements on forest governance. One issue is the granting of ELCs, the decisions on which have been mainly made by the central government in manner detached and indifferent to the local social and ecological realities. Whereas the law states that "the prioritized method for granting ELCs is through competitive solicited proposals,"[22] in practice a substantial number of ELCs are granted through unsolicited proposals. Most of the latter do not fulfill the criterion set out in the Sub-decree for granting ELCs through unsolicited proposals, that is, where the proposer "promises to provide exceptional advantages to achieving the purposes of ELCs in situations such as the introduction of new technology, exceptional linkages between social land concessions and economic land concessions, and exceptional access to processing or export markets."[23]

Field data reveal cases where ELCs enclose on villager's land or protected forest area. Protected areas continue to be encroached upon on a daily basis. As there is no clear demarcation between the internal zones of protected areas, in practice the government may very well grant an ELC to a private company in a protected area's "core" or "conservation" zones (or in zones which should have been classified as such) and re-classify them as "sustainable use" zones at the same time.

Most of the new ELCs affect protected areas, whose size is fast shrinking. This pattern is similar to the lack of transparency around the status of public land, that is, the absence of clear demarcation between state public land and state private land. One strategy that is frequently used by private companies is to clear forested land inside a protected area and then to get deforestation noted by the government, who re-classifies the land or cuts it off from the relevant protected area. Thus, instead of taking action to prevent further deterioration, the government endorses the acts of grabbers and rewards them with the management right over the , resulting in forest destruction and the disappearance of wildlife, thus eliminating the potential of sustainable contribution forest has for trade development.

1.3- MINERALS

Due to its specific geographical location, CDTA is rich in mineral deposits that are off significant potential contributions to trade development. In Mondul Kiri, especially at the

[22] Sub-Decree on Economic Land Concessions, article 18.

[23] Sub-Decree on Economic Land Concessions, article 18.

southern part of the province, there are important mineral deposits such as gold, silver, aluminum, bauxite, gem stones, copper-lead-zinc, and clay for brick and tile manufacturing. Ratanak Kiri province, as its name suggests, is rich in gem stones, gold, coal, Copper Copper-Lead-Zinc, Zircon, Basalt and Clay for brick and Tile Manufacturing and construction materials (stones). Meanwhile, Stung Treng province is famous for clay, iron, gold, coal, marble, granite, gem stones copper, dolomite, limestone, amethyst, and gravel.

Despite the richness in the mineral resources, the mineral sector in Cambodia is still largely undeveloped, and most mining companies active in Cambodia are small-scale quarries producing materials for construction. The challenge in the mining sector has been the management of it. According to the Constitution of the Kingdom of Cambodia, all natural resources are the property of the State, and that the "control, use and management of State properties shall be determined by law."[24]The management of concession of mining in Cambodia is governed by Law on Mineral Resource Management and Exploitation (hereafter, the mining law) confirms that all mineral resources are the property of the State.[25] In practice, the central government is solely in charge of all of the management decisions especially the granting of the concession rights.

Between 1994 and 2006, the MIME granted a total of 19 mineral exploration licenses to local and foreign companies, of which eleven projects were to explore for metallic minerals; three for iron ore; two for gold; two for bauxite; and another one for coal. This represents territorial resource control and centralism, and it results in provincial departments being unable to monitor mining activities in their locality. It also results in unequal access to those resources and prevents a full development of the sector. Most of companies which get the licenses from the ministries do not want to cooperate with local authorities, and do not allow the provincial department staff to control their activities of exploring minerals, or/and contact with other work.

The problem also lies in the capacity of sub-national government. There is a severe lack of human resources, particularly personnel with proper training on mineral resources management, resulting in the sector being largely poorly regulated. At the same time, there are challenges arising out of the division of responsibilities between the central and local government in ways that limit the power of the provincial departments to regulate and manage those resources. Local interviews indicated that all of the decisions to grant concession rights are made at the central ministries. At the same time, the monitoring and evaluations power

[24] The Constitution of the Kingdom of Cambodia (as amended 1999), Article 58.

[25] Law on Mineral Resource Management and Exploitation 2001, Article 2

rest in the hand of not the provincial departments but the ministries. This results in a situation where companies are not accountable to nor are they willing to cooperate with local authorities. Field data show that provincial department and sub national government do not have knowledge of the activities of those mining companies, making it possibly private access to common resources.

2- HUMAN RESOURCES

Mondul Kiri, Ratanak Kiri and Stung Treng, are low-density-population provinces with a multi-ethnic groups and below-national-level literacy rate. The three provinces have a combined population of 322,542, in which Mondul Kiri has 61,107, Ratanak Kiri has 150,466 and Stung Treng has 111,671. The population density is 4 people per km^2 for Mondul Kiri, 14 people per km^2 for Ratanak Kiri and 10 people per km^2 for Stung Treng, while average density of the country is 75. The majority of the population lives in the rural areas, averaging 88.27%, while the national average is 80.50% (Table 6).[26]

Table 7: Population, Area, Density, and Literacy Rate by Province

Items	Area (km^2)	Population	Population Density Per km^2	Percent to Total Population	Rank* in 2008	Percent of Rural Population	Literacy Rate
Mondul Kiri	14,628	61,107	4	0.46	22	92.05	60.91
Ratanak Kiri	10,782	150,466	14	0.82	19	87.00	45.9
Stung Treng	11,092	111,671	10	0.83	20	85.75	61.45
Total/Average	36,502	323,244	9.34	2.11	-	88.27	56.42
National Average	-	-	75.00	-	-	80.50	77.59

Source: Prepared by authors based on General Population Census of Cambodia 2008, MOP, 2009.

** Rank of number of population in the country*

The issue of low population density represents itself as a challenge to the prospect for trade development in the DTA. On one level, the small number of population means that there is not a big enough local demand to encourage import of good to increase trade. Any prospect for trade would be seen in the increase in export of commodities with is agricultural commodity. At other level, the small local population means a lack of labor force. Interviewed with the authors, representatives of business people in Mondul Kiri province as well as Stung Treng said that it was hard to find adequate labor force in the province for their demand. In

[26] General Population Census of Cambodia 2008, MOP, 2009.

cultivating season as well as harvest season, they have to look for workers from other provinces by themselves. The most laborers are from lowland provinces of Cambodia such as Prey Veng, SvayRieng, Kampong Cham, and Takeo.

On top of these, CDTA faces human resources-related issues of low education and low skill among the labor forces. At national level, literacy rate stands at 92.5% in 2013 with literacy being defined simply as being able to read and write basic text. According to CMDGs Development Report 2013, 87.4% of the population finishes the 6 year basic education requirement and 40.6% of finished 9 years (Ministry of Planning, 2014). There are also report of the mismatched between the formal education and job requirement. The field data suggests a shortage of skilled labor. Interviewing with plantation owners indicates that there is not enough labor with expertise in planting, fertilizer use, tapping, and machinery operation and maintenance. The lacks of labor supply due to low population, role of department in training, or motivating labor to work in the area, poses challenges for the trade development. Most, if not all of the local business persons interviewed, complained about their difficulties in finding skilled and efficient laborers for their production lines. The Provincial Department of Labor and Vocational Training has not played any important role in dealing with both labor demands and supplies. The employment need information has not been widely disseminated.

This results in businesses and big plantations resorting to employing foreign workers. According to an interview with a high-ranking provincial official, due to shortage of labor supply, some companies (Vietnamese companies) have brought labor force from Vietnam, accounted for 10% of the total labor force, to work in their rubber plantation farms. But interviews with other concerning authorities and business people reveal that the Vietnamese labors working there might be more than 10%.

These suggest that the three provinces have shortage of human resources in terms of amount of labor available that we just simply count the number of people potentially available for work regardless of their labor productivity[27]. Thus this may pose a big challenge for trade development in the area.

The other problem is the structure of the traditional labor market. Most Cambodians are self-employed or work in family businesses in the informal sector, which dominates the labor market since a majority of Cambodians are highly dependent upon agriculture for their

[27] Theoretically, ***labor productivity*** is affected by (1) population's values and attitudes acquired by experiences in the home, in school, and on the job, (2) population's level of literacy and education (skills), and (3) health and nutrition of working population. *See:* Malcolm Gill et al., *Economics of Development (Fourth Edition)*, New York, W. W. Norton & Company, 1996, p. 221. In this report we focus on population's level of literacy and education only.

livelihoods. The formal employment sector is much smaller, with paid work positions available only in some sectors--garment, tourism, construction and so on--and mostly in urban areas. Given this traditional labor arrangement, the plan to shift the focus to trade and large-scale industrial arrangement might present itself as a challenge, for it involves changing labor working attitude from the freedom of being self-employed to having to comply with strict working regulations.

Field data suggest that ethnic labor forces are often perceived as having low skill and poor working attitude. An interview with a provincial governor reveals that indigenous people in the province are not accustomed to work in well-disciplined companies, and feel pressure in working in working in the private or state run enterprises. The three provinces in CDTA are home to a large number of indigenous people, almost 50% of the total population (in Mondul Kiri, the biggest size of ethnic is *Phnong* accounting for 44.61%; in Ratanak Kiri the total ethnic groups accounting for 60.59%, and in Stung Treng ethnic group represents around 5.2%).

On top of these problems, uncontrolled labor migration (both internal and international migration) presents further challenges to employers/entrepreneurs wishing to operate their business in the areas. Interviews with local authorities and representatives of business communities of the provinces reveal that local residents of those DTA, as well as everywhere else in Cambodia, are migrating to other parts of the countries or even across bother in search of better working conditions and pays. This shortage of labor force might not be an issue in the long run, as trade improves the terms of employment, but for the time being it is seen as one of the challenge to investment decision that bear big impacts on trade and development.

3- TECHNOLOGY

The current level of production technology in CDTA is observed to be generally low. Processing of agricultural products involved low technology and traditional methods. Based on data from field observations and local interviews, most of exports are raw materials, such as fresh cassava roots, fresh condensed rubber and so on, all of which indicate the lack of the technological ability to process. Interviews with local private sector also suggest a big lack of technology and technique in the production chain in agricultural production and processing. Only in Stung Treng, there is a factory that is able to convert rubber latex into steamed rubber for export. Most of rubber productions are domestic firms. For wood processing sector, the lack of production technology is partly evidenced by the fact that there is only one company that is formally recognized as licensed timber exporter in Ratanak Kiri and Stung Treng, Sopheak Nika Investment Agro-Industrial Plants Co., Ltd. is only one steamed rubber factory

in Stung Treng, and even then it has a limited capacity. It can produce steamed rubber only for 4,000 hectares over 10,000 ha totally.[28]

In the conventional agricultural sector of rice, production and processing technology is based on both traditional and semi-modern technology. Although in most cases, tractors are used in land preparation and crop transportation, the bulk of the cultivation activities still depend on the human and animal labor, making the prospect of commercial rice production for export and trade rather limited. Based on interviews with department of agriculture of the three provinces, there are a few medium-scale of rice mill factory in these areas.

The production of other crops such as cassava, coffee, pepper is not efficient due to the use of low technology instruments. For instance, in cassava production tractors are only used in the land preparation and harvest, while the rest of the activities are done by hand. That is, after extracting, some farmers chop and dries cassava root in the field if they have enough space to dry them, and some others sell the fresh root. For coffee, it is observed that family-tradition production method is still used in the CDTA; especially in Mondul Kiri, an owner of coffee business states that the modern technology is used in only roasting, grinding and packaging process. In addition, watering method for pepper production is improved only in medium-scale business in Mondul Kiri, but for family-small business, it is still traditional one.

In short, based on the field data interviews and observation, the shortage of technology drives production in the area far from specialization such as high cost, and inefficiency. Then it leads to low competitive advantage that may be due to the shortage of financial capital on the one hand. On the other hand, due small scale of production, Cambodia is less able to enter the world rubber market. Small production is a market follower which needs to be transformed from a competitor to be a supplier. That is a reason why condensed rubber is sold to Vietnam.

4- INVESTMENT/CAPITAL

Investment capital in CDTA comes from three main sources, foreign direct investment, personal sources and micro finance institutions. Information on FDI is off limit to the researchers, thus this section only discusses the personal source and micro finance institutions.

For small and informal business, personal source of capital is very important. It includes personal saving, loans from friends and relatives and informal network of lenders. Medium-size businesses depend on their own source and micro- finance institutions. FDI, at

[28] Interview with Mr. Lun Saylin , Director of Department of commerce in Stung Treng, on 2013-11-26.

the same time, provides capital investment for large-scale plantations and factories. Interviews suggest that the personal source of capital essential for most businesses but it is limited in volume. Nationally, the GDP per capita is 1,000 USD in 2013 (Ministry of Planning, 2014), and the national saving is 14.9%[29] According to CMDGs report 2013, 19.8% of the population lives under the national poverty line set at 1 USD day in 2011, suggesting that the overall level capital available to finance industrial and trade projects is limited. Most of the local business operators interviewed mention the lack of capital as a constraint to their business development.

Increasingly, commercial banks are becoming more available in CDTA as elsewhere in Cambodia. But borrowing is constricted by stringent conditions, high collateral requirement, high interest rates and short loan periods. In addition, the loan applications entail high processing cost, especially the cost of collateral evaluation. Local business persons interviewed complaint of the difficulty in accessing those credits.

Some of the current constraints to capital mobilization are observed to lie in poor legal framework such as absence of anti-trust law and commercial tribunal. Commercial laws, although good in principle, are not enforced effectively causing a sense of unfairness in competition among investors and potential joint venture. The absence of a public-private partnership arrangement means private sectors are not able to tap the capital strength of the state to financial big investment projects that are otherwise beyond their capital capability. Lacks of credible credit report system and the associated high risk of loan default have meant high bank interest rates which stands as a challenges to capital mobilization for small and medium enterprises.

Base on the field data, Cambodia's capital stock is limited especially in DTA. Openness to enlarge capital stock via investment is not effective enough due to the lack of physical capital (infrastructure) and human capital (human resource). However, the capital stock of domestic family is too small which is unable for growth. The capital of domestic firms also is limited. Totally, and the number of foreign firms is small, and most the firm are in the studying process of mineral sector.

The field data shows that the number of foreign firms in Mundol Kiri, Ratanak Kiri, and SteungTreng is small, and more importantly most of the firms focus on rubber plantation and mineral extraction on concession land. These activities require small amount of capital which is suitable in the context of scare FDI Cambodia receives.

[29] http://www.quandl.com/ODA/KHM_NGSD_NGDP-Cambodia-Gross-National-Savings-of-GDP

5- TRANSPORTATION COST AND ECONOMIC INFRASTRUCTURES

CDTA is, in principle, well-connected in a sophisticated system of international and national roads, which means big potential for trade development from the point of view of transportation. Important logistic routes include NH N. 7, NH No. 8A, NH No. 66, NH No. NH No. 75, NH No. 76, NH No. 77, NH No. 78, NH No. 79, and other important PRs in each province (Table 7).

Table 8: Logistic Routes in CDTA

Mondul Kiri	Ratanak Kiri	Stung Treng
NH No. 7, PR No. 376, NH No. 75, NH No. 79,	NH No. 78, NH No. 7, NH No. 8A, NH No. 76	NH No. 7, NR No. 66, NH No. 78

Source: MPWT

NH No.7 is 467km long and starts from Skun (Kampong Cham province) connecting with Kratie, Stung Treng provincial town and Laos border and NR No. 13 of Laos. At present, NH No. 7 is in good condition with a width of 11m (paved with DBST (double bituminous surface treatment). The section from Kratie provincial town via Stung Treng to Lao border is about 196.8 km, while the part from Stung Treng is 82 km. Construction of a large bridge crossing Sekong River in Stung Treng town has been completed. Though the construction has been recently finished, some sections of route require frequent rehabilitation due to flooding and/or overweight transportation vehicles.

NH No. 78 starts from NR No. 7 at O Pong Moan junction in Stung Treng province (15km from Stung Treng provincial town), connecting with Ban Lung (Ratanak Kiri province) to the Cambodia-Vietnam border with a total length of 194 km. The 70 km section from Ban Lung to OYaDav (Cambodia-Vietnam border) was completed in 2009. The other 124 km section from O Pong Moan to Ban Lung has been constructed and upgraded into grade III by using DBST and recently inaugurated by Prime Minister. Section 2, from Ban Lung to Cambodian-Vietnamese border (about 70 km in length), was finished with AC pavement funded by a Vietnamese loan. This route is very important as it connects the northern sub-corridor of the southern economic corridor to the international port of Quay Nhon and Danang.

PR No. 3785 is the main route connecting Ratanak Kiri to the Lao border. This road starts from its intersection with NH No. 78 at Ban Lung and continues through VoeunSai, following the direction of former NH No. 301. It approaches the Sekong River at Siem Pang,

running alongside it to the Lao border and connecting with NH No. 1J of Laos. With a total length of 150 km, an 80km section is constructed by soil and gravel and the remaining section of 70 km is under planning program.

NH No. 9 is also a principal route connecting Stung Treng province with PreahVihear provincial town and with provinces further on. A route going from Stung Treng provincial town crosses the Mekong River at the Mekong River Bridge in Stung Treng. The bridge was constructed by a Chinese company and will be complete by year 2014. The total length of NH No. 9 is 143.41 km. The civil engineering work was done by a Chinese company and will be completed by 2014. NH No. 64 is a major route connecting PreahVihear provincial town to Siem Reap (length 236.68 km, using the PPP project BOT scheme).

NH No.73 is a short-cut to Kratie provincial town. The route starts from its intersection with NH No.7 from Pratheat via Chhlong district with total length of about 93 km. It is undergoing rehabilitation using DBST. At the same time, NH No. 74 is a major route for transportation. It starts from its intersection with NH No. 7 at Snuol and goes 18.95 km to the TrapeangSrae/Hoa Lu Cambodia-Vietnam border crossing. It has finished with DBST pavement.

NH No. 76 starts from NH No. 7 at Snuol district of Kratie province to Ta Ang in Ratanak Kiri province, connecting to NH 78 at about 8 km from Ban Lung, Ratanak Kiri provincial town. This road runs through Lumphat district (Ratanak Kiri province), KohNhek (Mondul Kiri province) and SenMonorom, Mondul Kiri provincial town. The total length is about 306km long. The project for rehabilitation of NH 76 linking Snuol and SenMonorom undertaken by China Road and Bridge Construction Company with a total length of 127 km (DBST, width 11m) has been at the the final stage. The 179 km of road from SenMonorom (Mondul Kiri provincial town) to Ta Ang (Ratanak Kiri province) is still an earth road, and under construction by a Chinese company. It will be completed in 2015.

The connection from SenMonorom, Mondul Kiri provincial town to Vietnamese border (Bu Po Rang) is PR No. 3762, which has about 26.45 km of DBST surface treatment. PR No. 3766 is another main logistic route in Kratie and Mondul Kiri provinces. It starts at an intersection with NH No. 7 and goes through Kratie province to a length of 47 km. It then passes through Mondul Kiri (111 km) and, still a graveled and earthen road, leads to the Chimeat (Cambodia)/Dak Rue bilateral Cambodia-Vietnam border crossing.

PR No. 3764 is another main route from Mondul Kiri provincial town through BouSra to Nam Lea (Cambodia)/Dak Po (Vietnam) border bilateral crossing with 40 km in length.

PR No. 3760 is a 10 km route in Mondul Kiri which connects SreKtum (KeoSeyma district) to the Labakhe (Mondul Kiri)-Hoang Dieu (BinhPhuoc) bilateral border crossing. It has a lateritic surface pavement.

Despite this interconnectedness, the prospect of trade development in the CDTA is challenged by the high cost of transportation due to among other thing the general lack of a developed network of road network within the areas. Field observations reveal that the provincial and rural roads are in disrepair due to many years of limited investment and neglected maintenance.[30] Only about 20 percent of the roads and highways are covered with asphalt and in passable condition; about 50 percent of the roads are made of crushed stone, gravel, or leveled pave; and the remaining 30 percent are unleveled pave or little more than tracks.[31] Interviews with local people and field observation show that there are very few roads with poor quality from farms to towns and from farms to the borders. Some feeder roads from farms can't be accessible in rainy season.

In addition, geographical situation of the provinces with many mountains and valleys create poor condition of road networks. The current status of road network and political and legal issues in the CDTA provinces suggest the difficulties in transportation, taking much time and increase of transportation cost. This poses a big challenge for trade development of CDTA.

Other local economic infrastructures, such as electricity and water supply were also found to have significant impacts on trade development in the CDTA. The current electricity supply is sufficient only for the provincial towns and central districts of the three CDTA provinces. Currently, electricity generation facilities in these provinces are being supplied by diesel power plants, mini-hydropower dams and electricity imported from Vietnam and from Lao PDR (Table 8). Since early 2010, Stung Treng has imported from Vietnam and Lao PDR with a capacity of 3 MW through the sub-transission line of 22KV.

In Ratanak Kiri, there is a small scale hydropower dam in O'Chum with a capacity of 1 MW, which is not compatable with the current level of demand for electricity. In Mondul Kiri, two sources of electricity supply (supported by JICA), are a power generator with a capacity of 370 KW and two micro-hydropower power plants in O'Romis and O'Mleng with a combined capacity of 360KW. The limited supply abiltiy means that access to electricity for the

[30] Interview with Director of provincial department of public works and transportation of RatanakKiri.

[31] Sum, M. (2008), 'Infrastructure Development in Cambodia', in Kumar, N. (ed.), *International Infrastructure Development in East Asia – Towards Balanced Regional Development and Integration*, ERIA Research Project Report 2007-2, Chiba: IDE-JETRO, pp.32-84.

residents of those province is also limited with 8% of households in Ratanak Kiri, 13 % in Mondol Kiri and 21 % Stung Treng having access to it.

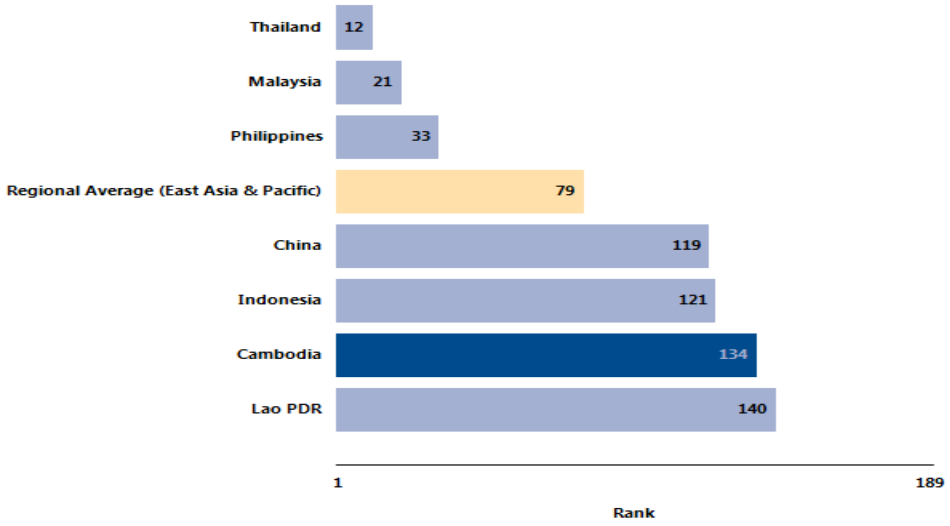
Table 9: Summary of Power Supply in CDTA's Provinces

Type of Generation Facilities	Mondul Kiri	Ratanak Kiri	Stung Treng
Hydropower Plants	2 micro-hydropower	Mini hydro dam (O'Chum); 4 sites of hydropower: - Lower Sesan1 - Lower Sesan 3 - Sre Pok 3 - PrekLaang	3 sites of hydropower: - Sesan 2 - Stung Treng Project - Sekong project.
Diesel Power Plants	EDC	SHC Cambodia International Pte Ltd;	EDC
Energy Imported	Imported from VN	Imported from VN	Imported from Lao PDR

Source: Sau Sisovanna, 2012."The Cambodia Development Triangle Area". In Five Triangle Areas in The Greater Mekong Sub-region, edited by Masami Ishada, BRC Research Report No. 11, Bangkok Research Center, IDE-JETRO, Bangkok, Thailand.

The situation is even worse for busisness and trade-related interprises. According to Doing Business, the procedures required for a local business to obtain a permanent electricity connection and supply for a standardized warehouse, as well as the time and cost to complete them, include applications and contracts with electricity utilities, clearances from other agencies and the external and final connection works. The ranking on the ease of getting electricity is the simple average of the percentile rankings on its component indicators: procedures, time and cost. Globally, Cambodia stands at 134 in the ranking of 189 economies on the ease of getting electricity (figure3). The rankings for comparator economies and the regional average ranking provide another perspective in assessing how easy it is for an entrepreneur in Cambodia to connect a warehouse to electricity.

Figure 5: Rank on the ease of getting electricity



Source: Doing Business 2014: Cambodia, p.37

Interviews with local business owners reveal that getting their business connected to the national grids is difficult. Applications are often subject to stringent examination and assessment processes designed for the purpose of red-tape and rents. Once connected, they face the problem of unsecured supply with power cut/blackout happening fregently during the periods of high electricity demand. Local businesses are also subject to electricity ration which is a disruption to their production and operation processes.

To fill this supply gap, plans are now in place to import electricity from Vietnam through sub-transmission of 35KW. But this could mean traders and investors are faced with the problems of relatively high prices compared to neiboring countries. According to statistics revealed by the Council for the Development of Cambodia (CDC), the price of electricity of the three provinces of CDTA varies from 670 riel/KWh to 1,300 riel/KWh based on the category of customers (Table 9).

Table 10: Price of Electricity in CDTA Provinces

Province	Category of Customers	Electricity Tariff
Stung Treng	For all customers	980 Rile/KWh
Ratanak Kiri	For all customers	670 Riel/KWh
Mondul Kiri (Senmorum)*	Residence	1,300 Riel/KWh
	Industrial and commercial sectors	1,200 Riel/kWh

Source: http://www.cambodiainvestment.gov.kh/investment-enviroment/cost-of-doing-business/utility-cost.html, Accessed on 26 March 2014.

** Provincial Department of Industry, Mines and Energy of Mondul Kiri, Annual Report 2013*

Interviews with local business operators lead to a realization that the electricity prices make their production and general business operation lose their competitiveness and thus lose out in trade with producers in neighboring countries where access electricity and its prices are much better.

In the mean time, water supply is also a challenge for business enterprises in the CDTA. Although, geographically, the CDTA is rich with natural water sources such as rivers, ponds and lakes and mountain valleys, there is not enough developed network for the supply of clean water. Mondul Kiri, for example, has no clean water supply system, leaving the local residents as well as businesses to depend on natural water sources such as lakes, ponds and dug wells. For Ratanak Kiri province, the majority of the population depends on water coming from mountains, plateaus, lowland watersheds, crater lakes and rivers including Se San and Sre Pok. Only a small number of residents living in the provincial town can assess clean water supply from the network. Stung Treng province, although having many water sources including Mekong, Se San, Se Kong, and Sre Pok rivers, is observed to have limited ability to supply clean running water to its population. The majority of them depend on water from lakes, ponds, and dug wells on their own, and only a limited number of the population particularly those living in the provincial town have access to domestic water supply from water plant in the province.

These conditions of lack of a reliable source of water supply presents itself as a challenge to trade development particularly the prospect for trade development through the establishment of industry. The field data and the existing documents suggest that CDTA provinces still challenge with water supply. Interviews with provincial departments and local businesspersons reveal that the shortage, the unreliability and the high price of extracting water on their own, pose a challenge to trade development and operation in the locality. Based on the condition of usage the clean water in theses provinces, it can be said that the hotels, guesthouses, restaurants, firms, other places and people are challenged by the lack of clean water supply needed in their services, their production, and their daily lives. Apart from the clean water supply, the irrigational system is still shortage that makes the farmers and plantation owners face problems of watering their crops.

7- INSTITUTIONAL FRAMEWORK

Institutional framework, especially, legal and political impacts pose a big challenge for trade development in CDTA. The challenge can be seen in business registration, ELCs procedures and governance, forest management, mining concession, issuing of certificate of origin (CO), and infrastructural development and management, and so on.

For the issue of business registration, field data reveal the businesses with the capital investment of over USD 50,000 have to be registered in Phnom Penh and it is controlled by central (ministry). This process involved sign off by many state agencies at the national levels and it involves high informal cost. This is confirmed by IFC which ranks Cambodia 184 of 188 in terms of the time and cost of business registration.

For economic land concession governance, there is a lack of monitoring mechanism to rectify the practice of concession companies, the decision is based on the map but no local community and authority consultation (free, prior and informed consent), and exploitation of the natural resources, especially timbers. Whereas article 4 of the ELC Sub-Decree mentions five cumulative criteria—regarding land classification, land use planning, impact assessment, resettlement, and compensation—which must all be fulfilled before an ELC is granted, in practice these criteria are seldom disregarded. Few land use plans have been adopted by the land management committees; very few Social and Environmental Impact Assessment studies have been completed prior to the granting of the concessions; and meaningful consultations have seldom taken place with the affected people and communities. In some instances, people learned that a concession had been granted on the day the company bulldozed their fields. According to the Sub-decree on Economic Land Concessions, the Contracting Authority and the Technical Secretariat are the main agencies monitoring and evaluating concessionaires' contract performance. These agencies report to the Council of Ministers on a six-monthly basis, requesting contract cancellation in the case of poor performance.

Due to a widely acknowledged lack of transparency in the way ELCs are granted, it is very difficult to assess exactly how many ELCs have been approved, which concessions are active, and how much state revenue has been raised in the process. According field data suggests that ELCs grant decision has been made at central level. The concerning provincial departments could not participate meaningfully in ELCs decision process. Power delegation is so limited due to the lack of education, knowledge, and experiences of provincial officials. The provincial officials have no privilege to monitor and evaluate the process of concessional land, standard quality, and also labor usage condition. The lack of controlling procedure, firms tried to exploit the workers and natural resources as much as they can as mentioned in common resource of economic theory. It leads short run economic growth by extracting resource rivalry. According to the field data, it distorts the growth rate reversely.

At the present time, the lack of rigor and real will in the land concession management causes impoverishment of the local communities and thus meets by no means the promises made by the Cambodian government. *"... the economic concessions are not meeting the*

promise that formed their rationale, namely to stimulate private enterprise, contribute to state revenue, reduce rural poverty, and generate jobs for local people"[32]

Over recent years there have been many concerns raised by communities, local and international organizations, UN agencies and development partners about the widespread granting of ELCs and the impact they are having on communities and the environment. Both local and international media frequently report on cases of land being taken from villagers, and as such should be entitled to legal protections as legal possessors under the Land Law. Indigenous communities have also been affected, losing access to spirit forests and areas they have traditionally used for agriculture, and losing resin trees that they have harvested for many years.

A trend has emerged of companies circumventing the legal size limits on ELCs by setting up separate companies and applying for ELCs that lie adjacent to each other. In actuality these concessions are developed as a single project. In addition, many ELCs are being granted within forests, even though it is illegal to grant ELCs in forested areas because forests are state public land. This prohibition of granting ELCs within forests can be bypassed if the land is first reclassified as state private land. It is legal for forest to be reclassified as state private land, but according to the Land Law, state public land can only be reclassified if it first loses its public interest. However, it can be seen that areas of protected forest are being reclassified as "sustainable use zones" with great frequency in order to allow it to be granted as an ELC before it is cleared and turned into plantation.

There is no publicly available land classification registry, i.e., information about demarcation between state public land and state private land, and actual zones. This has been the case despite repeated requests from development partners providing financial and technical assistance to Cambodia's land sector. As a result, the government may very well grant an ELC to a private company on state public land and re-classify it as state private land at the same time, in violation of re-classification criteria and procedures.

Regulations pertaining to ELCs have not been implemented. Many concessions have been approved despite substantial breaches of legal and sub-decree requirements. In terms of size and ownership, several ELCs are known to exceed the 10,000-hectare per person limit. Powerful businessmen and officials have been able to benefit from multiple concessions through companies in which they (or their relatives) have shares or hold management positions, in breach of article 59 of the Land Law. In addition, it is hard to believe that the

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[32] Peter Leuprecht, *Land concessions for economic purposes in Cambodia : A human rights perspective*. United Nations, Bureau du Haut Commissaire aux droits de l'homme au Cambodge, November 2004, p 5.

exception regarding size limit set out in the law justifies the existence of concessions as large as hundreds of thousands of hectares. If the government routinely grants exemptions, exceptions become the rule and the spirit of the law is lost. The above problem lead to misallocation of land resources such as land is not used to grow crops and enclosure on local farm land.

For forest management, the conservation has been encroached by concession companies. Against the principle, the valuation and classification of forest areas for concessions is viewed to be done mainly by government officials but not with the local community participation in real practices. So, the consequence is that the land and forest cover further shrunk. According to the field data, all local government officers are not able to check, control, and follow the project in the land concession area. They are not allowed to go through and visit the site. It leads to be uncontrollable and mismanagement resource allocation situation that may results in unreachable potential output. As consequence, the economic land concession will be concession for trading resources, especially timbers.

However, it will be vast if trees are cutting with growing any plants. Its long-term effects will be appeared such as soil erosion and becoming harder, global warming, and climate change. The field data suggested that concessional land in CDTA, especially Stung Treng became arable land without any plant which is called inefficient in resource allocation mentioned in economic theory. Firms getting land concession get short-run economic benefit from cutting off trees and luxury-timber's business. This issue leads economic situation worse due to less production and high environmental impacts.

Field data also shows that it is the same status for resource allocation in mining sector. There is lack of delegation of power for local authority to monitor, lack of awareness raising of mining law for the public, the licensing decision is made at the central level, mainly for economic gain at the expense of social and environmental losses, and lack of local consultation. According to interviews with the department of mining in the three provinces, the results are not different from data of forest land governance. Everything had done at the central level so that the management and controlling for the resource extraction is still limited. The field data suggest that provincial departments that should be in charge of mines management are not allowed to visit and check the mining sites by the exploration companies. This is, so to say, mismanagement due to less of delegation power to local governance. Some source suggests that power delegation will be done based on benefit from work. Field data also suggests that the works without privately individual benefit will be delegated, and vice versa.

In addition, trade application that is called certificate of origin (CO) has been issued in Phnom Penh but companies propose to be done at province level, due to transport and implicit costs, according the interviews with department of commerce of the three provinces. In the second quarter of 2014, it's been approved for issuing it at the border gates which make it easier for trade flows. Moreover, for export process, it is a big challenge for applying CO where exporters have to request directly to the ministry of commerce. Data from local interviews suggest that it takes at least one week, and also high cost to obtain the CO. The difficulty of obtaining CO and the cost associated with it force exporters to seek facilitation, even by means of collusion, with border officials and border polices. This imposes heavily on trade both in terms of time and money, making the prospect for trade development in CDTA rather bleak.

Furthermore, the field data also suggests that infrastructural development and governance – inappropriate bidding. High cost of construction but with poor quality (lack of quality assurance) which result in high cost of transportation and unnecessary delays in good and service delivery. Road networks recently constructed required rehabilitation sooner than planned due to natural disasters, unmet construction standards, or overweight transportation vehicles. In addition, for the rural roads, the construction financing policy has been made based on number of population of the provinces and the CDTA provinces have small size of population, so road construction and reparation financing is relatively small. Moreover, construction/bidding arrangement has been made in non-transparent way, and line provincial departments have not been given role in bidding processes and road quality control. It is revealed that the enforcement of weight regulation has not been evenly implemented as transportation firm connecting to politics spends lower than firm that doesn't connect to political power (unfair treatment to some firms).

CHATER FIVE
DISCUSSION

This research focuses on challenges and potential of CDTA. Regarding to potentials of the area, it is found that Cambodia is rich in resources especially natural resources, poor in human capital, and inefficient and complicated legal framework. Natural resources discussed above, repeatedly, are land, forest, minerals, water resources, and physical infrastructure. According to the findings, land per capita is larger than that in other provinces. It is not only the size, but also the fertility of the soil is also abundant which supports to many types of crops especially agro-industrial crops, so to say, land-intensive production.

Regarding to natural resources, Cambodia is rich in, especially, forest, water resources, and minerals. Forest and its benefits could be said are rich according to the field data. Transforming from forest to be arable land is a good idea for development. As well as forest, there are many water channels in CDTA, which is main source for fishery, agricultural water, and for hydropower development. Another component of natural resource is minerals. Minerals sector in Cambodia, politically sensitive issues. Economically, it is rich in North East of Cambodia, says CDTA, based on field data. This is a potential for economic boom due to the rich of gold, gemstone, iron, marble, granite, sand, limestone, coal, metal, bauxite, and so on. Cambodia has currently become the focus of exploration, and the number of applications for license by foreign companies has been increasing. In studying for many year all companies are still in exploration of basic metal mining in CDTA. With the soil fertility and the relatively big size of available land in CDTA, field data suggests that Cambodia has potential in agro-industrial crops for export especially rubber.

Despite the natural endowments in terms of land and forest, CDTA's comparativeness in trade is constrained due to a range of issues such as those related to lack of human resources, low labor productivity, low technology, lack of investment capital, high transportation cost and institutional framework.

The case study material suggests that CDTA only faces the problem of low population density, which mean lack of labor supply, but also problems of low labor skill due to mis-match between what the formal education offer and the need in the labor market exacerbated by the absence of skills training for the particular job. What makes the matter worse is the trend in international migration, where Cambodians leave for neighboring countries, i.e. Thailand in search of what they believe to be higher paid job. This distorts the production

change in Cambodia with higher cost of labor. Low productivity and high labor cost is an enemy of comparative advantage.

The low levels of technology in the production process can also have serious impact on CDTA's comparative advantage in trade. Theoretically, it makes production cost high and thus reducing the country's level of comparative advantage. As a result, the case study material suggests, Cambodian main exports are unprocessed agricultural commodities such as paddy rice, latex, cassava root and timber. This means that Cambodia lose the opportunity to obtain the added-value in processing.

The case study material also suggests that the problem for trade development in CDTA is rooted in the lack of investment capital that the Cambodian farmers and entrepreneurs generally face. Access to credit is limited by lack of state credit program, immature private credit institutions and high interest rate. The problem of high interest rate is found to be the limiting factor in CDTA particularly for small and medium size businesses. Analysis suggests that high interest rate is due to high credit risk and poor regulatory system that would allow for a secured and efficient credit market.

Also found to be the limiting factor for trade development in CDTA is the problem of high transportation cost. Despite the government effort at physical infrastructure development over the past decades, the case study material reveals that physical infrastructure in CDTA remains poor. Some of the strategic roads for transporting trade commodities have not be properly built. Road is a blood vena economic life. It is an ability to transport merchandise over long distances at a reasonable cost which is indispensable for export competitiveness. As a type of public investment, it is significant positive externality with high social return. In CDTA, the road is not so poor in quantity where we can see many road connected from a province to others according to the field data. However, the quality of road is limited, where we can see road reparation every year, especially, NH 78. It is a government expenditure which is leakage every year due to unattainable standard condition of road. Bad condition of road is a negative externality to export competitiveness due to the cost of transportation rise. It does not only affect the trade but also whole society. Transportation cost for households is also high which drive the connection CDTA people from Capital city. Technology, educational system, and health care system cannot be developed due to less connection between capital city and that area. It seems CDTA is a remote area of Cambodia in the case of bad condition of road and national highway.

Meanwhile, the designated DTA areas cover highland and mountain ranges, a terrain that inherently presents difficulty in travel and transportation particularly of traded

commodities. All together, the prospect for trade development in CDTA is faced with the problem of high transportation cost.

Finally, institutional framework for trade development in CDTA presents itself as a challenge. The example of how CO is given serves as a case in point. CO is issued by central government rather than provincial department, which mean that it is away for the production site. On top of this, the process and the cost of obtaining it is high, making it a point of restriction not facilitation for trade.

The current political and legal challenges together with challenges rising out of the area unique geographical landscape lead to a realization or a need to question if development priority should be shifted from trade in commodity to other area such as eco-tourism. The findings above suggest that the richness of natural resources in CDTA leads Cambodia absorbing high economic benefit from using the natural resources with high management for eco-tourism. However, this is not to suggest that commodity trade be replaced by trade in services, but to perhaps say that for the time being service trade such as eco-tourism development is arranged of competitiveness and an area that can be development with more ease. In addition, this may suggest a need to consider the government legal and political arrangement concerning natural governance, especially conservation.

CHATER SIX
CONCLUSION RECOMMENDATION AND FUTURE STUDY SUGGESTIONS

CONCLUSION

This paper concludes CDTA has much potential for trade development. The potential is offered by the rich natural endowment particularly land, mineral deposits and forest which can form an important base for agriculture- based trading regime. The large size of cultivation land and the quality of the soil mean that agro-industrial crops could be planted. The mineral deposits and forest can potentially be important sources of raw materials needed in processing industries.

However, CDTA faces many challenges in realizing these potential. The lack of both skilled and un-skilled labor forces mean that an important factor in planting and production is missing. The low level of technology means that production cost is high, and, at the same time, it means limited processing capacity to extract extra value. The problem of high production cost is coupled with the problem of high cost of transportation due to the poor state of road infrastructure and high fuel cost. Above all, the institutional framework, consisting of the political, economic and regulatory systems are seen to stand in the way of trade development.

To achieve CDTA trade potential, there is a need for stable policies including macroeconomic stability and financial sector development, improvements in the investment and business climate, investment in general infrastructure, education and health and technology and knowledge transfer should be considered. There will also be a need to strengthen CDTA economic integration as a complement to the global trading system and to exploit the benefits of economic cooperation. The research also suggests that trade policy is most likely to be associated with positive outcomes when it is conducted with effective institutions and strong commitment from the leadership. So that, for CDTA, trade policy liberalization and reforms need to gain political support from the leadership, receive momentum and impetus from stakeholders and be supported by effective and responsive institutions, according to a challenge found in the research.

RECOMMENDATION

The research found that challenges seem to out-weigh potential. Therefore, recommendation should be as below:

- Strengthening the law enforcement and transparency is the first task for sustainable economic development in CDTA.
- Reducing overlap of duties of authorities is the second task in order to improve the work efficiency of the authorities.
- Sub-national authority especially provincial departments should play more important role in resource governance such as assessing and monitoring resource extraction activities, licensing of mining, concession, and granting.
- To fast response to trade climate, the issuance of CO should be close to production area, especially in provincial level at best.
- Due to the small scale of production which leads less competitive advantage, state should focus on building and strengthening farmer Cooperative.
- The region should focus on improving infrastructure, developing agriculture in combination with poverty reduction, and improving infrastructure for border-gate economic zones and border markets, whilst creating favorable conditions for the transport of goods, trade and tourism.
- Government should focus more on agro-industrial crops development, human resource development through vocational training, and employment opportunity information
- Capital investment should be a point to be considered. Government should attract more FDI which focus on production rather than extract minerals and cutting off the trees.
- Both quality and quantity of physical infrastructure such as water, electricity and road should be improved in order to maximize production for export.
- Regulations of road use should be enforced evenly: transportation companies need to comply with weight regulation regardless of political connection or no connection.

FUTURE STUDY SUGGESTION

Although attempts have been in this study to identify potentials, challenges and prospects of CDTA, some important information is still lacking. Additional research on the following topics will help to get socio-economic benefit from trade maximizing in Cambodian Development Triangle Area (CDTA):

- **Capital development:** Even Cambodia is rich in natural resources but it is poor in capital resource, includes financial and physical capital resource, according to the research observation. However, the information cannot be proved by data of the research. Therefore,

this study suggest that further research had better focus on capital investment of the FDI flew to CDTA with technology.

- Impact of Trade in CDTA on Local People Livelihood: After we found the potentials, challenges, and prospects related to international trade development, it is necessary to assess its impact on local people livelihood on how trade development contributes in improving living standard of local people.
- Trade Development and Changing Social Relations: Trade development does not only impact on local people livelihood, but it could impact on local social relations as well. So through this topic we will have chance to know the level of progressing of social relation changing among the local people. It means that we expect that people more active in working for improvement their lives, more understanding the social phenomena, and more sharing their effort in community development.
- CDTA Eco-tourism Potentials: As CDTA provinces are rich in natural resources such as forest, mountainous areas, hills, waterfalls, wildlife, bio-diversity and different indigenous people's cultures as great potentials for eco-tourism. Therefore, sustainable and environment-friendly ecotourism management should be studied.
- Effect of Trade in DTA on Socio-economic Development: It is the basic point that we should focus on, when we talk about the trade development. At the beginning we should start from the question "What happens to local people who are involved in the trade development". And then, we continue to seek for its significant impact on social and economic aspects of development, contributing to the capacity to improve and diversify livelihoods, market relations, institutional development, and reductions in poverty, gender equity and sustainable development.

REFERENCES

1- Asian Development Bank (ADB), 2010a, ***3S River Basin – Provincial Sector Development Briefing Note***, Ratanak Kiri Province.

2- Asian Development Bank (ADB), 2010b, ***3S River Basin – Provincial Sector Development Briefing Note***, SteungTreng Province.

3- ADB. 2009. ***Transport Sector in Cambodia—Focusing on Results***, Sector Assistance Program Evaluation September 2009

4- Baldwin, E. Richard and Elena Seghezza. 996. *Trade-induced Investment-led Growth*, Working Paper No. 5582 (Cambridge, MA: National Bureau of Economic Research)

5- Bues Andrea. 2011. *Increasing Pressure for Land - Implications forRural Livelihoods in Developing Countries: The Case of Cambodia*. Welthungerhilfe. in https://www.welthungerhilfe.de/fileadmin/user_upload/Mediathek/Mediathek_int/HIntergrundmaterial/cambodia-increasing-pressure-welthungerhilfe.pdf

6- Caves, Richard. 1974. "Multinational Firms, Competition, and Productivity in Host-Country Markets,"*Economica*, Vol. 41, no. 162, pp. 176-193

7- Coe, David and Elhanan Helpman. 1995. "International R&D Spillovers," *European Economic Review* 39 (5): 859–87

8- Cosslett, Tuyet L. 1987. "The Economy". *Cambodia: A Country Study* (Russell R. Ross, editor). Library of Congress Federal Research Division (December 1987). *This article incorporates text from this source, which is in the public domain.*

9- Costinot Arnaud (2009). On the origin of comparative advantage. Journal of International Economics.

10- Edwards, Sebastian. 1990. *"Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries,"* NBER Working Paper No. 3497

11- Felbermayr, Jung, and Larch. 2013. *Icebergs versus Tariffs: A Quantitative Perspective on the Gains from Trade*. Working Paper in Economics and Finance Nº 53. University of Tubingen.

12- Frankel, Jeffrey and David Romer. 1996. *Trade and Growth: An Empirical Investigation*, NBER Working Paper no. 5476 (Cambridge, MA: National Bureau of Economic Research)

13- Freeman, Nick J. 2002. "Foreign Direct Investment in Cambodia, Laos and Vietnam: a Regional Overview." Paper prepared for the Conference on Foreign Direct Investment: Opportunities and Challenges for Cambodia, Laos and Vietnam. Hanoi: 16-17 August

14- Findlay, Ronald. 1978. "Relative Backwardness, Direct Foreign Investment, and the Transfer of Technology:A Simple Dynamic Model", *Quarterly Journal of Economics*, Vol. 92, pp. 1-16

15- Grossman, Gene. and Elhanan Helpman. 1991. *Innovation and Growth in the Global Economy* (Cambridge, MA: MIT Press).

16- Gottesman, E. (2004). Cambodia after the Khmer Rouge: Inside the politics of nation building. New Haven & London: Yale University Press

17- Hang, C.N. 2009. *Cambodian Economy: Charting the Course of a Brighter Future*. Phnom Penh

18- Hang, C. N. 2011. "Cambodian Economy: Priorities for National Development." Paper presented at The 4th Cambodian Economic Forum. Phnom Penh. (February).

19- Harrison, Ann and Ana Revenga. 1995. *The Effects of Trade Policy Reform: What Do We Really Know?*, NBER Working Paper No. 5225

20- Harrison, Ann and Andres Rodriguez-Clare. 2010. *"*Trade, Foreign Investment and Industrial Policy in Developing Countries,*" Chapter 63 in Handbook Development Economics*, Vol. 5

21- Hing Vutha. 2013. *Leveraging Trade for Economic Growth in Cambodia.* Working Paper Nº81. CDRI. Phnom Penh. Cambodia.

22- Hitt, Michael A. Ireland, Duane R. and Hoskission Robert E. 2007. ***Strategic Management: Competitiveness and Globalization,*** 7e, Thomson, USA

23- Krueger, Anne and BaranTuncer. 1982. "Growth of Factor Productivity in Turkish Manufacturing Industries," *Journal of Development Economics* 11:307-25

24- Krueger, Anne. 1997. "Trade Policy and Economic Development: How We Learn," *American Economic Review* 87 (1), 1-22

25- Krugman, Obstfeld, and Melitz, Obstfeld, Melitz. 2012. ***International Economics***, 9e, Addision Wesley, ISBN 13: 978-0-13-214665-4

26- Ky Sereyvath. 2011. ***Economic Analysis of Cassava Farming in Cambodia***, Changwon National University, December 2011

27- Ky, Sereyvath. Lee, Cheon-woo. and Stauverman Peter J. 2012. "A Comparative Study on Characteristics of ODA of China-Japan-Korea to Cambodia", *Journal of East Asian Economic Integration, Korean Institute for International Economic Policy*, Vol 16, No 4, December 2012, pp 333-361

28- Infrastructure and Regional Integration Technical Working Group (IRITWG), ***Overview on Transport Infrastructure Sectors in the Kingdom of Cambodia***, January 2009.

29- Lal Deepak. 2006. *Reviving the Invisible Hand: The case of classical liberalism in the twenty first century.* Princeton University Press. America.

30- Lee, Jong-Wha. 1995. "Capital Goods Imports and Long-run Growth", *Journal of Development Economics*, Vol. 48, pp. 91–110

31- MAFF. 2012. *Annual Report 2010-2011 and Future direction 2011-2012*

32- MAFF. 2008. *Report of Ratanak Kiri provincial department of Agriculture 2007 and plan for 2008.* Phnom Penh.

33- MAFF. 2008. *Report of Stung Treng Agricultural provincial department 2007 and plan for 2008.* Phnom Penh.

34- Malcolm Gill et al. 1996. *Economics of Development*. Fourth Edition, New York, W. W. Norton & Company

35- MPWT. 2011. *Master Plan of Infrastructure Development in Cambodian DTA*

36- Mineral discovery in Cambodia, Brorcheabrey Magazine, year 14, number 411, issued February, 2008

37- Ministry of Planning. 2014. CMDGs Development Report 2013. Phnom Penh April, 2014.

38- Mondul Kiri. 2013. Report on DTA of CLV 2013

39- NIS, 2009. *National Census 2008*

40- NIS, MOP & ILO. 2010. *Labour and Social Trends in Cambodia 2010,* Phnom Penh, NIS

41- Paul A. Samuelson and William D. Nordhaus. 2004. *Economics*, 18th ed. Mc.Graw-Hill

42- Peter Leuprecht. 2004. *Land concessions for economic purposes in Cambodia : A human rights perspective*. United Nations, Bureau du Haut Commissaire aux droits de l'homme au Cambodge, November

43- Romalis, J. (2004). Factor Proportions and the Structure of Commodity Trade. *American Economic Review*, 94(1), 67-97.

44- RGC. ?. National Strategic Development Plan Update 2009 – 2013

45- RGC. 2005. Sub-Decree No. 146 ANK/BK on Economic Land Concessions (SD-ELC) was issued on December 27

46- RGC. 2006. Rectangular Strategy

47- RGC. 2008. Sub-decree No.131 on Modification on the Sub-decree on Economic Land Concessions

48- Sau Sisovanna, 2012. "The Cambodia Development Triangle Area". In *Five Triangle Areas in The Greater Mekong Su-bregion,* edited by Masami Ishada, BRC Research Report No. 11, Bangkok Research Center, IDE-JETRO, Bangkok, Thailand

49- Slocomb, Margaret. 2010. "An Economic History of Cambodia in the Twentieth Century"

50- Sum, M. 2008. 'Infrastructure Development in Cambodia', in Kumar, N. (ed.), *International Infrastructure Development in East Asia – Towards Balanced Regional Development and Integration*, ERIA Research Project Report 2007-2, Chiba: IDE-JETRO

51- Sullivan, Arthur; Steven M. Sheffrin. 2003. *Economics: Principles in action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall

52- Tadesse, Bedassa and Michael Ryan. 2004. *"*Host Market Characteristics, FDI and the FDI-trade Relationship*"*, *The Journal of International Trade and Economic Development: An International and Comparative Review*, Vol 13, No 2, 199-229

53- The Forestry Administration. 2010. ***Cambodia Forestry Outlook Study***, Working Paper No APFSOSII/WP/2010/32

54- Try, T. & Chambers, M. 2005. *Situation Review and Analysis of the SteungTreng Demonstration Site of the Mekong Wetlands Biodiversity programme (MWBP), Cambodia*. IUCN, The World Conservation Union

55- Un, K. (2005). Patronage politics and hybrid democracy: Political change in Cambodia 1993-2003. Asian Perspective, 29(2).

56- Un, K. (2009). the judicial system and democratization in post-conflict Cambodia. In J. Ojendal & M. Lilja (Eds.), Beyond democracy in Cambodia: Political reconstruction in post-conflict society. Copenhagen: NIAS Press.

57- Un, K., & So, S. (2009). The politics of natural resource use in Cambodia. Asian Affairs: An American Review, 36(3).

58- UNDP. 2004. *Human Development Report, 2004: Cultural Liberty in Today's Diverse World*. New York: UNDP.

59- UNDP. 2006. *Human Development Report, 2006: Beyond scarcity:Power, poverty and the global water crisis*. New York: UNDP.

60- Wacziarg, Roman. 1998. *Measuring the Dynamic Gains from Trade*, Policy Research Working Paper No. WPS200I (Washington, DC: World Bank)

61- Weil, David. 2012. *Economic Growth*, 3e, Pearson.

62- World Bank. 2004 *Cambodia Seizing the Global Opportunity: Investment Climate Assessment and Reform Strategy for Cambodia*. Phnom Penh: World Bank.

63- WTO. 2013. *World trade report 2013: Factors shaping the future of world trade*.

WEBSITE

1- http://clv-triangle.vn/portal/page/portal/clv_en/817327 (2014-01-22)

2- http://www.cambodiancommunityday.org/index.php/en/provinces/north-east-region/stung-treng (2014-01-22)

3- http://en.wikipedia.org/wiki/Mineral_industry_of_Cambodia
4- http://en.wikipedia.org/wiki/Mineral_industry_of_Cambodia#cite_note-usgs, (2014-02-09)
5- http://www.opendevelopmentcambodia.net/briefing/the-cambodian-mining-sector (2014-02-09)
6- http://www.unesco.org/new/en/phnompenh/education/learning-throughout-life/literacy/ (2014-01-26)
7- http://www.opendevelopmentcambodia.net/company-profiles/profile/?id=26&cat=0&type=0&map=elc&tier=1 (2014-02-02)
8- http://www.transparency.org/country#KHM
9- http://en.wikipedia.org/wiki/Resource#Land_or_natural_resources (2014-01-13).
10- http://en.wikipedia.org/wiki/Economic_history_of_Cambodia (2014-06-14)
11- http://www.theodora.com/wfbcurrent/cambodia/cambodia_people.html (2014-08-11)
12- http://www.quandl.com/ODA/KHM_NGSD_NGDP-Cambodia-Gross-National-Savings-of-GDP (2014-08-11)

NEWSPAPERS

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The Cambodia Daily issued April 11th, 2013

LAWS AND REGULATIONS

Constitution of the Kingdom of Cambodia 1993

Law on Mineral Resource Management and Exploitation 2001

Law on Forestry 2002