TOKYO UNIVERSITY OF FOREIGN STUDIES

Determinants of Economic Growth in Mekong Region Countries

Analysis on Cambodia, Lao PDR, Thailand and Vietnam

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Abstract

This paper examines the difference of economic growth between Thailand and a group which consists of three countries (Vietnam, Cambodia, and Lao PDR), analyzing determinants of the growth with a multiple regression model.

Although all those countries are parts of Mekong region and have had a historic relation of cooperation in various fields, the situations of economic growth are different at present among them. Regarding Gross Domestic Product and Gross Domestic Product per capita, Thailand is at the top of the four. However, GDP growth rates of Cambodia, Lao PDR, and Vietnam are higher than that of Thailand in recent years. In this study, we call three countries other than Thailand a “developing group”, and compare the economic growth of Thailand with that of the developing group. Using data of foreign aid, domestic investment, trade openness, and government expenditure as explanatory variables, each correlation with GDP per capita is to be observed.

The results of the analyses show that as for trade openness, it is negatively related with GDP per capita in the case of the developing group, while it has a positive effect in Thailand as a theory goes. Moreover, although domestic investment and government expenditure have a positive impact on GDP per capita in both cases, much stronger links are observed in the developing group than Thailand. Regarding foreign aid, it works positively in the developing group, but in Thailand it turns out to be a negative factor to the economic growth.

Acknowledgements

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1. Introduction

In recent years, much attention has been paid on the economic growth in Southeast Asian countries. Each country in this region has experienced remarkable economic or social developments, and is attractive to other countries as investment destinations.

However, it is true that the level or speed of the economic growth was different among the countries. Some countries achieved the growth a decade ago, while other countries are in their boom right now. Also it is assumable that economic factors that led to the growth were different among them. For instance, some countries may have evolved thanks to FDI, on the other hand, there could be a possibility that foreign aid was a key to achieve economic growth in a case of other countries.

The purpose of this paper is to examine the difference of the economic growth in Mekong region, especially in the following four countries: Cambodia, Lao PDR, Thailand, and Vietnam. Data on Cambodia, Lao PDR, and Vietnam are to be pooled and compared with those on Thailand. Using a multiple regression analysis, we investigate the difference of the determinants of economic growth between two parties.

This thesis is organized as follows. The first section mentions a trend of ASEAN, whose members include the four countries mentioned above, and a present state of Mekong Region. Several previous researches are introduced in the second section, and the third section explains a model and method adopted in this research. The fourth section shows the result of the multiple regression model, and based on that result, the final section makes observations and leads to a conclusion.

1.1 Regional trends

In 1967, the Association of South East Asian Nations, or ASEAN, was established with the Declaration of the Association of South East Asian Nations (Bangkok Declaration). It consisted of five original countries (Indonesia, Malaysia, Singapore, Thailand, the Philippines) at the beginning, and other five countries became a member of this organization later (See figure 1). At present, the total population of ASEAN is 600 million and nominal GDP reaches 8,100 billion US$.

Through this organization, regional cooperation has been promoted in every aspect and contributed to the economic growth in member countries. In 2009, "Roadmap for an ASEAN Community" was issued and a guideline was announced, which was concerned with the establishment of these following communities:

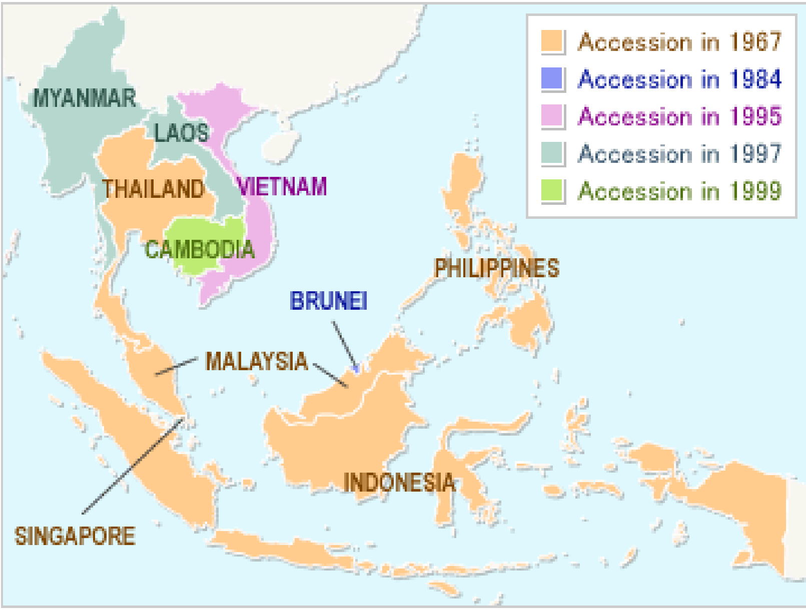
(a) ASEAN Political-Security Community
(b) ASEAN Economic Community
(c) ASEAN Socio-Cultural Community

As for ASEAN Economic Community, or AEC, it is scheduled to be established at the end of 2015, and it is aimed that economic integration will broaden and deepen in this region through this foundation. To be concrete, elimination of tariffs will be accelerated and liberalization of trade will be activated further. And movements of goods, services and people will cross the border more easily.

1.2 About Mekong Region

Of course ten countries that belong to ASEAN have historically shared various experiences in many fields, however, they have different characteristics in political, cultural, or historical aspects and it is possible to categorize them under some condition. From a geographical point of view, about half of ASEAN nations are island countries,

Figure 1. Accession Year and Country of ASEAN



(Source: ASEAN-JAPAN Centre)

while rest of them lie on the Eurasian Continent. The latter includes Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam, and these are parts of “Mekong region.”

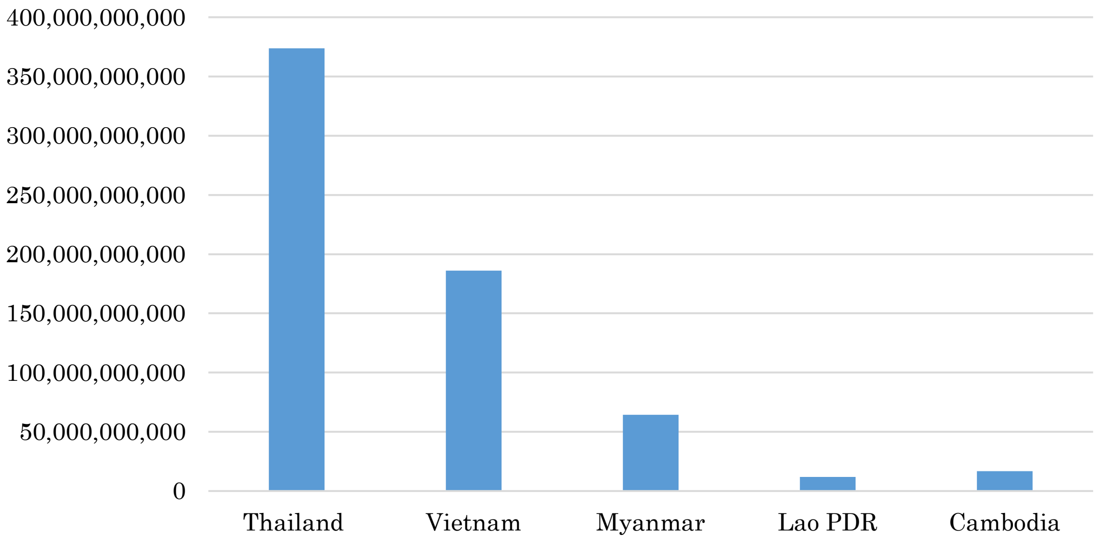
This name, “Mekong region” is partly originated from “the Greater Mekong Subregion Program” in 1992 implemented by Asian Development Bank. In this project, it was intended to push forward the regional economic cooperation and elevate the level of developments among the following countries and regions: Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam, and China (specifically Yunnan Province and Guangxi Zhuang Autonomous Region). In total, the target area held about 330 million people, and 2.6 million square kilometers (Takeuchi&Yasunaga, 2014). Utilizing their geographical trait, which means they are connected each other, a transportation network was built up. Moreover, in order to narrow the gap between rich and poor countries various projects were implemented in fields of transport, energy, telecommunications, environment, human resource development, tourism, trade, private sector investment, and agriculture. As a result, infrastructures showed improvements and conditions for economic activities were gradually met.

Thus, countries in “Mekong region” have historically cooperated each other, apart from ASEAN. Incidentally, “Mekong Region” in this thesis means five countries (Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam), excluding Yunnan Province and Guangxi Zhuang Autonomous Region.

1.3 The present situation in Mekong Region

As we noted in the former chapter, the regional cooperation has been promoted and a variety of projects for developments have been implemented in Mekong region countries (Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam). Nevertheless, the levels of economic growth are different among them and the economic disparity exists at present. As shown in figure 2, Thailand is at the top in five countries, followed by

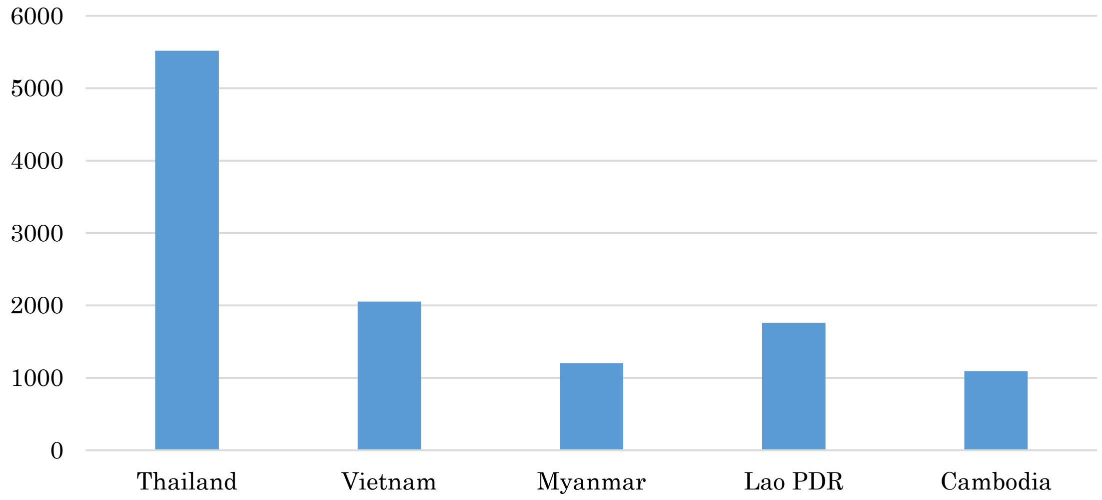
Figure 2. GDP (current US$) in 2014



(Source: World Development Indicators)

Vietnam. The other countries (Myanmar, Lao PDR, and Cambodia) fall behind. Moreover, as shown in figure 3, there is a large gap between Thailand and the other four countries regarding GDP per capita.

Figure 3. GDP per capita (current US$) in 2014



(Source: World Development Indicators)

Table 1 shows a income clasiffication according to GNI per capita by World Bank. As demonstrated below, only Thailand is clasified as an upper middle income country, while Vietnam, Lao PDR, and Myanmar belong to the lower middle income. As for Cambodia, it is included into the low income group, which is the poorest group in the world. In brief, among Mekong region countries, Thailand is relatively rich, followed by the other four countries, Vietnam, Cambodia, Lao PDR, and Myanmar. In this paper, we call these countries except for Thailand as a "developing group."

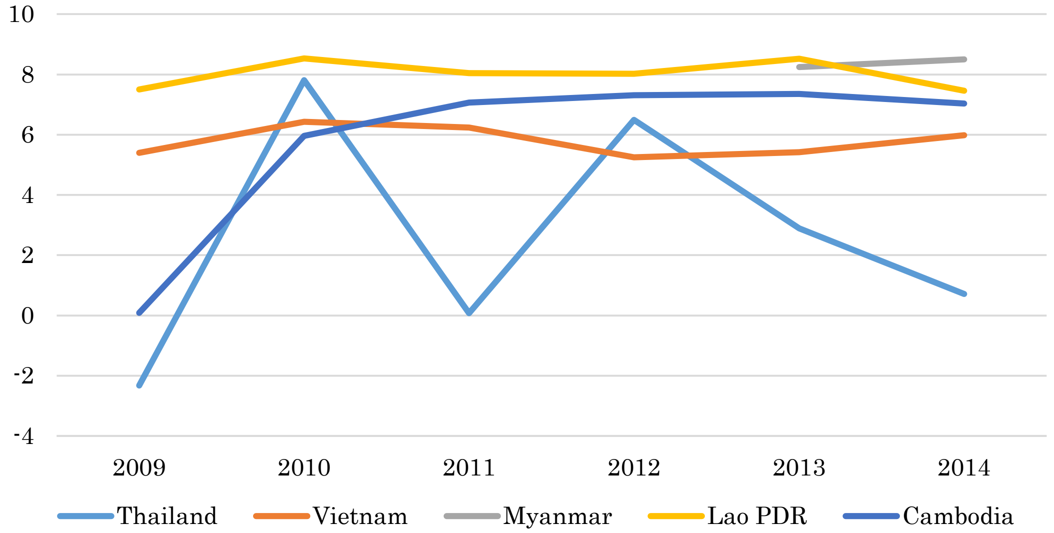
Thus, the level of economic growth of Thailand has been much more advanced than that of the developing group. However, the situation has changed recently. As shown in figure 4, all countries in the developing group have higher GDP growth rates than Thailand. Moreover, as shown in table 2, it is expected that this trend will continue hereafter. Cambodia, Lao PDR, and Myanmar are especially vigorous in the developing group. It is assumable that as Thailand reaches its maturity, countries of the developing group receive much more attentions as an Asian new frontier.

Table 1. Income Classification by GNI per capita[1]

Country	Classification
Thailand	Upper middle income
Vietnam	Lower middle income
Lao PDR	Lower middle income
Myanmar	Lower middle income
Cambodia	Low income

(Source: World Bank)

Figure 4. GDP growth (annual %)



(Source: World Development Indicators)

[1] Criterion of this classification

GNI per capita in 2014 $1,045 or less : low income country

$1,046 - 4,125 : lower middle income country

$4,126 – 12,735 : upper middle income country

Although countries in Mekong Region have cooperated historically and each country experienced developments or is in the boom right now, the level and the times of the economic growth are different among them. This thesis examines the difference of the economic growth between Thailand and the developing group (Cambodia, Lao PDR, Myanmar, and Vietnam), analyzing which economic determinants contributed to the growth. Incidentally, since little data is issued officially as for Myanmar, the developing group means especially Cambodia, Lao PDR, and Vietnam in this thesis.

Table 2. The Prospect for the Economic Growth

Country and region	Average annual GDP growth rate (2010-2013)	GDP per capita in 2030	
		Estimated amount (US$)	Multiple compared with year 2010
ASEAN average	5.8	6,564	2.5
Cambodia	**8.2**	**3,244**	**3.9**
Lao PDR	**7.8**	**3,575**	**3.6**
Myanmar	**9.0**	**2,149**	**5.0**
Brunei	3.8	43,587	1.6
Indonesia	5.6	6,080	2.6
Malaysia	5.5	15,912	2.2
the Philippines	7.0	5,224	2.9
Thailand	4.8	9,702	2.4
Singapore	2.6	54,206	1.4
East Timor	5.0	937	1.5
Vietnam	7.3	4,136	3.6
China	7.0	15,748	3.7
India	7.6	4,312	3.5
NIES	3.4	33,539	1.9
Japan	1.1	52,749	1.3
World	3.6	15,135	1.4

(Source: Japan Center for Economic Research)

2. Literature Review

Determinants of the economic growth

As for determinants of the economic growth, there are more than a few studies related with varied countries or regions, from various points of view. Phimphanthavong (2014) investigates factors that contributed to the economic growth in Lao PDR and finds that both internal and external factors influenced the growth. In this paper, it is revealed that the internal factors (domestic investment, government expenditure, and industry) show their strong correlation with economic growth, while the external factor (participation in ASEAN) also plays an important role in economic growth. On the other hand, the other external factors (FDI, AID and OPEN) show a weaker link to domestic growth of Lao PDR. Moreover, to ensure the effectiveness of external factors on domestic growth, it is suggested that exploiting more effectively the opportunities provided by foreign direct investment, through the openness of the system to globalization and international trade, together with better management of aid allocation.

Betyák (2012) investigates the impact of several macroeconomic variables on economic growth of five selected European countries which are considered to be "crisis countries" of the European Union: Portugal, Ireland, Italy, Greece, and Spain. This paper demonstrates that domestic investment and saving rates are positively associated with GDP growth rate for each country. However, the impact of inflation rate and trade openness are different according to the countries. While in the cases of Portugal, Italy, Ireland and Spain, inflation rate has been found to be positively correlated growth rate of GDP, in Greece inflation seems to have had negative effect on economic growth. It is also revealed that as to trade openness, it is positively related to GDP growth in

Portugal, Italy and Spain, whereas in Ireland and Greece its association with economic growth seems to be negative, which is contrary to theoretical expectation.

Assbring (2012) finds out what factors have been the main sources of economic growth in China in 2003 and 2010. In this paper, it is demonstrated that the main factors most significant to growth are the level of GDP per capita, investments, and population growth. This thesis compares the growth in rich regions with poor regions in China, and finds that investments, GDP per capita and population growth have influence positively on both regions. In poor regions, both investments and population growth are more significant than in rich regions, whereas healthcare is more significant in rich regions.

Ndambiri, Ritho, Ng'ang'a, Kubowon, Mairura, Nyangweso, Muiruri, and Cherotwo (2012) investigate the determinants of economic growth in nineteen sub-Saharan countries. This study demonstrates that physical capital formation, a vibrant export sector and human capital formation significantly contribute to the economic growth among sub-Saharan countries. However, government expenditure, nominal discount rate and foreign aid significantly lead to negative economic growth.

Based on these prior researches, some determinants (Foreign Aid, Trade Openness, and Government Expenditure) are controversial as shown in table 3. In this thesis, a goal is to be identify the difference of the economic growth between Thailand and the developing group (Vietnam, Cambodia, and Lao PDR), focusing on those debatable variables.

Table 3. Explanatory Variables and Correlation with the Economic Growth

Explanatory Variable	Correlation with the economic growth			
	Phimphanthavong (2014)	Betyák (2012)	Assbring (2012)	Ndambiri and others (2012)
Domestic Investment	+	+	+	
Foreign Aid	+ (slightly)			−
Trade Openness	+ (slightly)	+/−		
Government Expenditure	+			−

3. Research Method

This thesis attempts to compare the economic growth of Thailand with that of the developing group (Cambodia, Lao PDR, and Vietnam), analyzing the determinants of the growth.

One of the models introduced in Phimphanthavong (2014) is as bellows:

$$GDPP_t = a_0 + a_1DI_t + a_2GoEx_t + a_3AID_t + a_4OPEN_t + a_5FDI_t + \varepsilon_t$$

GDPP: GDP per capita in US$

DI: Domestic investment

GoEx: Government Expenditure

AID: Foreign aid inflows

OPEN: Trade openness degree

FDI: Foreign direct investment

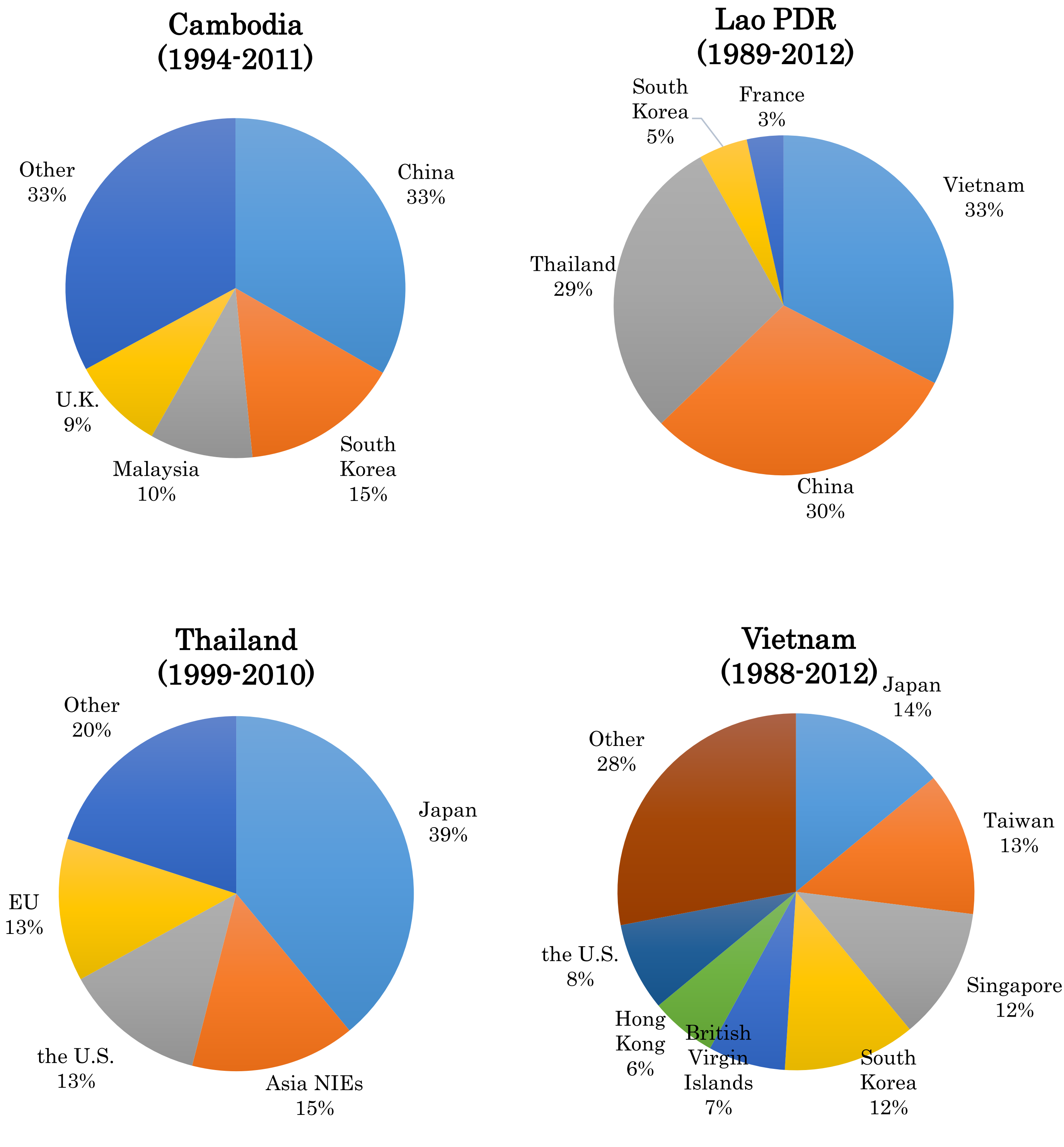
Ɛ: error term

t: time

This model includes FDI and the controversial explanatory variables mentioned in the former chapter, that is, Domestic investment, Foreign aid, Trade openness, and Government expenditure.

As for FDI, there are plenty of empirical studies that analyze the relationship between economic growth and inflow of FDI, and the overall benefits of FDI for the economy of developing countries are well documented (OECD, 2002). In Mekong region, sources of FDI inflows into each country tend to overlap as shown in figure 5. Moreover, in a case of Lao PDR, the amount of FDI from Vietnam is the largest. In other words, that FDI derives within the same region, or Mekong region, and FDI into Lao PDR is not a little affected by Vietnam's expenditure on overseas economic activities. Since we are to pool data on Lao PDR and Vietnam in a multiple regression analysis, it is assumable that some data are too influential reciprocally under such conditions. For those reasons, we exclude FDI as an explanatory variable and employ the following model.

Figure 5. Source of FDI Inflows into Mekong Region Countries



(Source: JBIC)

$$GDPP_t = a_0 + a_1DI_t + a_2GoEx_t + a_3AID_t + a_4OPEN_t + a_5Year_t + \varepsilon_t$$

GDPP: GDP per capita in US$

DI: Domestic investment

GoEx: Government Expenditure

AID: Foreign aid inflows

OPEN: Trade openness degree

Year: dummy variable

Ɛ: error term

t: time

An explained variable is GDP per capita, which functions as an indicator to measure the level of economic growth. Each explanatory variable is a macroeconomic factor that is considered to work as determinants of economic growth and have some influence on the explained variable. (Appendix 1 lists detailed definitions of the variables.) All data sources are World Development Indicators (World Bank).

Using this model, we implement a multiple regression analysis in both cases of Thailand and the developing group. As shown in Table 4, the analysis is based on a dataset for 39 years (1975-2013) as for Thailand. Regarding the developing group, data on three countries (Cambodia, Lao PDR, and Vietnam) are pooled. Since the number of years are different among the three, a dummy variable “Year” is adopted for adjustments. (In and after 2000 = 1, before 2000 = 0)

Table 4. Country and period of data used in multiple regression

Country	Period	Number of Years
Thailand	1975 – 2013	39 years
Vietnam	1989 – 2013	25 years
Cambodia	1993 – 2013	21 years
Lao PDR	2000 – 2013	14 years

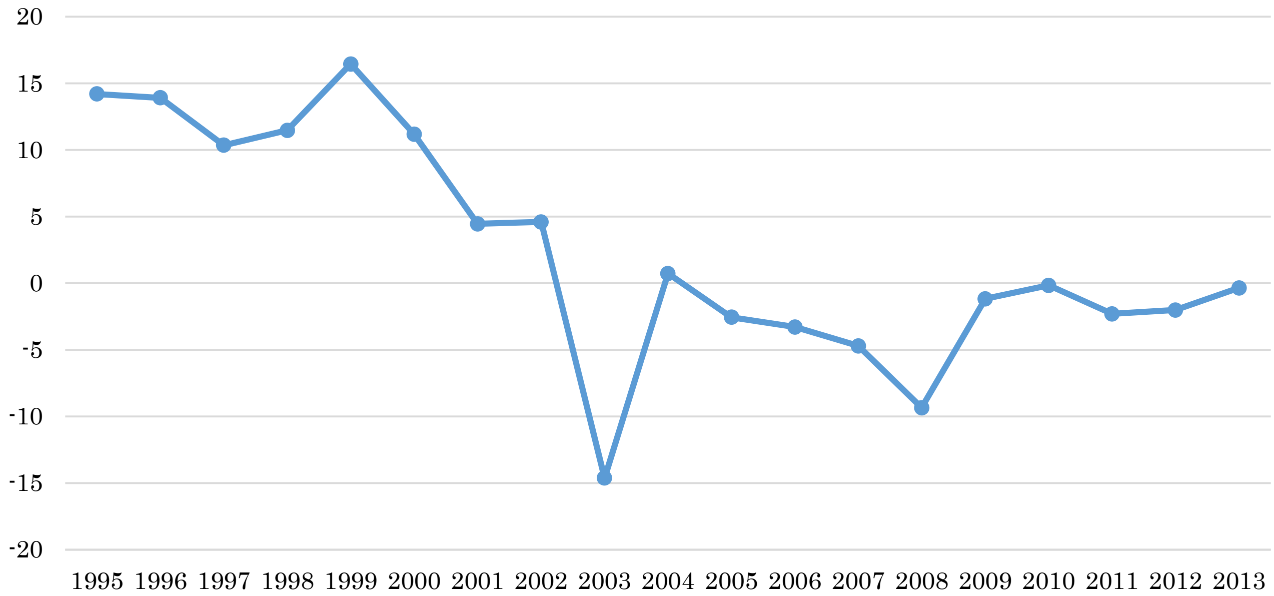
Expected results are shown in table 5. Although some explanatory variables had negative influence on the explained one in the prior studies, theoretically all explanatory variables are to have positive effects on GDP per capita.

As for the effect of foreign aid in Thailand, however, we expect that it is possible to have a negative correlation with the explained variable. For, according to the indicator of foreign aid that inflows into Thailand, there has been deficits since 2003 expect for 2004. (See figure 6 as below.)

Table 5. Expected Results

Explanatory Variable	**Expected Results (+ or -)**	
	Thailand	The developing group
Foreign Aid	-	+
Domestic Investment	+	+
Trade Openness	+	+
Government Expenditure	+	+

Figure 6. Net ODA Received per capita (current US$) : Thailand



4. Results and Analysis

We employed two multiple regression analyses: Thailand and the developing countries (based on pooled data on Cambodia, Lao PDR, and Vietnam). Results are as follows.

Table 6. Results of multiple regression analysis: Thailand

Regression Statistics	
Multiple R	0.92989433
R Square	0.86470347
Adjusted R Square	0.84420399
Standard Error	587.369397
Observations	39

ANOVA

	df	SS	MS	F	Significance F
Regression	5	72764090.79	14552818.16	42.18174	2.12517E-13
Residual	33	11385092.67	345002.8081		
Total	38	84149183.46			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
intercept	-8261.66194	1429.77746	-5.7782852	1.85E-06	-11170.56606	-5352.76
DI	78.8044039	20.12786416	3.915189573	0.000428	37.85395634	119.7549
GoEx	491.940113	109.0128355	4.512680648	7.69E-05	270.1518316	713.7284
AID	-16.3729507	21.48804636	-0.76195623	0.451498	-60.09070975	27.34481
OPEN	19.9913681	8.735397414	2.288547063	0.028643	2.219068427	37.76367
Year	988.09448	621.584561	1.589638067	0.121452	-276.528818	2252.718

Table 7. Results of multiple regression analysis: The developing group (pooled data on Vietnam, Cambodia, and Lao PDR)

Regression Statistics	
Multiple R	0.92489927
R Square	0.85543866
Adjusted R Square	0.84205336
Standard Error	151193.318
Observations	60

ANOVA

	df	SS	MS	F	Significance F
Regression	5	7.30459E+12	1.46092E+12	63.90877	1.89002E-21
Residual	54	1.23441E+12	22859419500		
Total	59	8.539E+12			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
intercept	-709588.54	134879.0608	-5.26092438	2.53E-06	-980004.775	-439172
DI	9381.076	3498.91906	2.681135471	0.009711	2366.165647	16395.99
GoEx	95156.8248	13166.16364	7.227376735	1.76E-09	68760.25599	121553.4
AID	8287.11484	1554.270946	5.331834109	1.96E-06	5170.989216	11403.24
OPEN	-3822.41303	986.2470589	-3.875715519	0.00029	-5799.719333	-1845.11
Year	157355.973	73957.31887	2.127659238	0.037948	9080.475904	305631.5

Judging by t Stat, it would be possible to declare that almost all variables are statistically significant. Based on the results of two multiple regression analyses, table 8 could be written as follows.

As for domestic investment and government expenditure, they have positive effects on GDP per capita in both parties, as a theory goes. Moreover, both variables of the developing group show much stronger links to GDP per capita than Thailand. This would indicate that economy in the developing group is more vigorous than in Thailand.

Table 8. Results of multiple regression analyses,

Correlation with the explained variable

Explanatory Variable	Result	
	Thailand	Developing group
Foreign Aid	−	+
Domestic Investment	+	+
Trade Openness	+	-
Government Expenditure	+	+

Regarding foreign aid in Thailand, while it is not significant enough, it turns out to be a negative factor to the economic growth. Deficits shown in figure 7 would disturb its growth.

With respect to a variable of trade openness, it has minus correlation with GDP per capita in a case of the developing group. Theoretically it should function positively, but the result proves to be inverse. One of the reason for this would be a geographical feature of Lao PDR. Since it is a landlocked country, it tend to be relatively weak when it comes to trade. Therefore it depends on the regional trade, especially within Mekong region (JETRO, 2015), where a market is limited.

5. Concluding Remarks

This paper examined the difference of the economic growth between Thailand and the developing group (Cambodia, Lao PDR, and Vietnam), analyzing determinants of the growth through a multiple regression model. Using the data of foreign aid, domestic investment, trade openness, and government expenditure as explanatory variables, we looked into their correlation with GDP per capita.

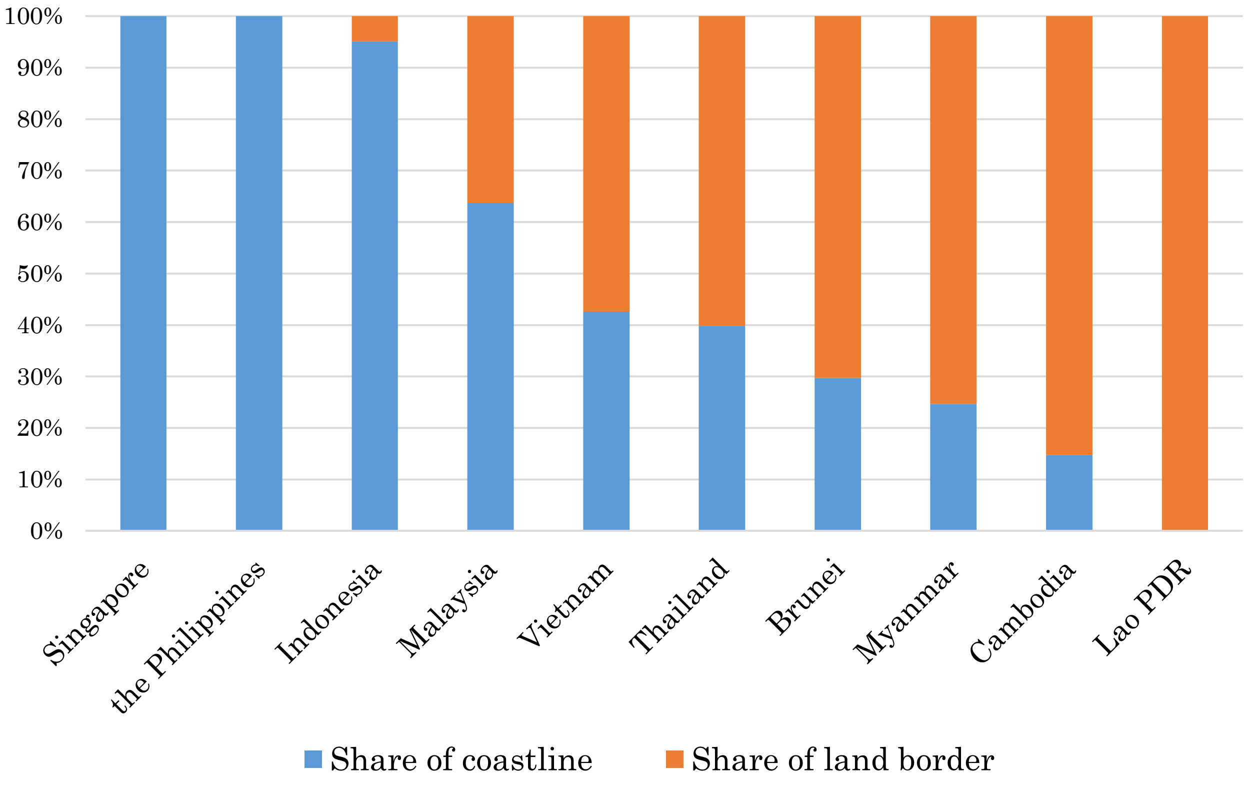
The results of the analyses show that as for trade openness, it is negatively related with GDP per capita in the case of countries in the developing group, while it has a positive effect in Thailand as a theory goes. Moreover, although domestic investment and government expenditure have a positive impact on GDP per capita in both cases, much stronger links were observed in the developing group than Thailand. Foreign aid influence on economic growth positively in the developing group, however, it has a negative effect in Thailand.

Theoretically, while all explanatory variables employed in this thesis should have a positive correlation with the explained variable, foreign aid in Thailand and trade openness in the developing group prove to be inverse, which corresponds to the difference of determinants of economic growth between two parties.

Yasunaga and Taketani (2014) mention current traits of Mekong region as follows: (1)There exists a promising market, holding a population of 240 million in total. (2) It lies adjacent to China and India, which maintain huge markets. (3) It has abundant and inexpensive manpower. (4) Regional cooperation will be accelerated thanks to the foundation of AEC. (5) Physical distribution system will be improved by developing transportation network.

Although the developing group is more vigorous than Thailand in economy at present, it reveals vulnerability when it comes to international trade. However, those characteristics above mentioned would be a key to strengthen its competitiveness if the countries utilize them appropriately. In particular, (5) is quite important for Lao PDR as a landlocked country. For a country that does not have a coastline, transportation by land is a lifeline to engage in the international trade. Figure 7 demonstrates the share of coastline and land border in ASEAN countries. Obviously, the share of land border reaches 100% in a case of Lao PDR, Cambodia has also a small share of coastline.

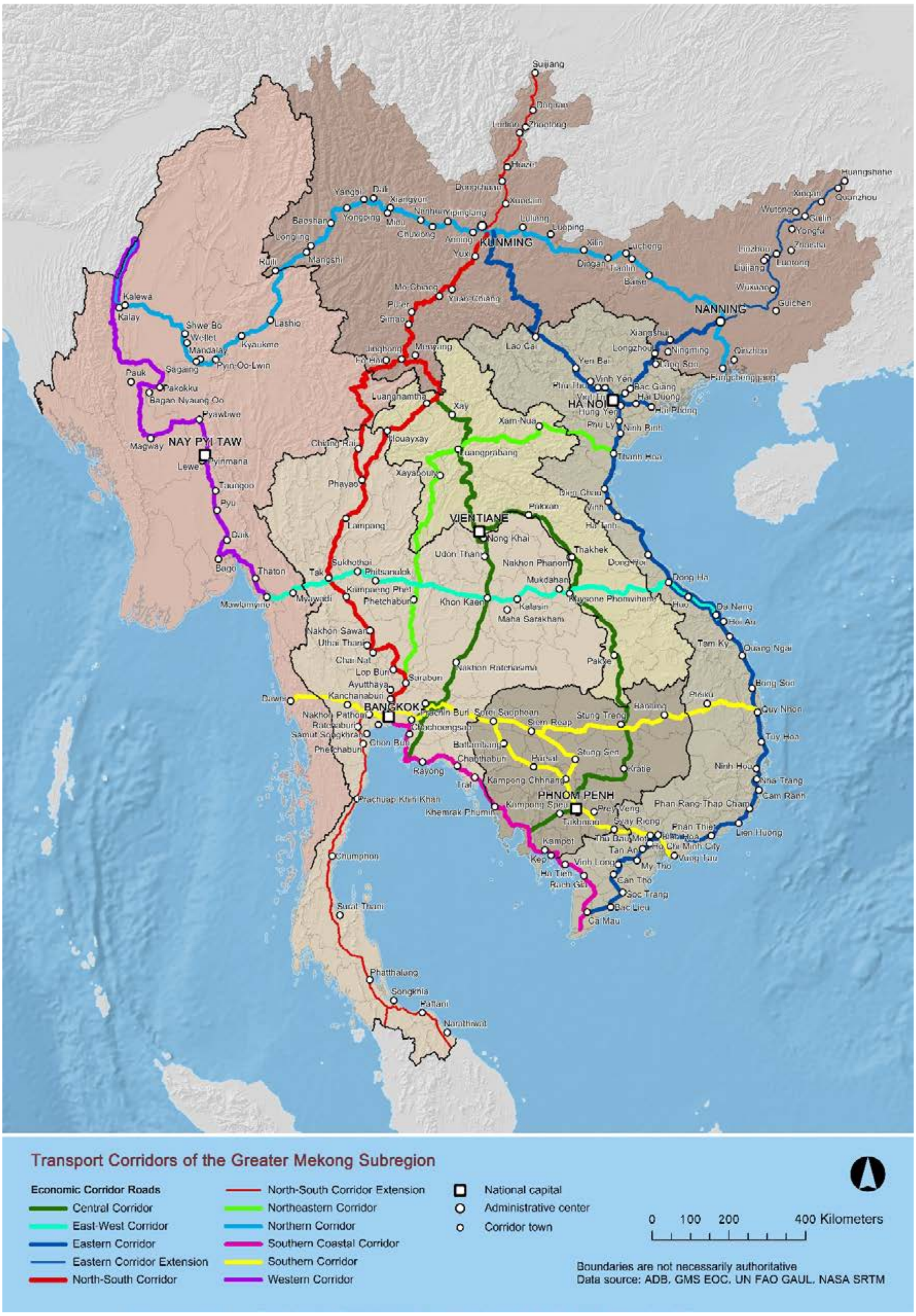
Figure 7. Share of Coastline and Land Border in ASEAN countries



(Source: Bank of Tokyo Mitsubishi UFJ)

Regarding (5), three economic corridors have been developed in Mekong region as of now. These are: (a) East-West Economic Corridor, (b) North-South Economic Corridor, and (c) Southern Economic Corridor. As shown in figure 8, they stretch across borders and will be completed in the near future. Utilizing them, countries in the developing group, especially Cambodia and Lao PDR, are expected to strengthen their competitiveness in the international trade.

Figure 8. Map of Economic Corridors in Mekong region



(Source: Asian Development Bank)

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Appendix 1. Definitions of variables used in a model

Variable	Definition
GDP per capita	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. (World Development Indicators)
Foreign Aid : Net ODA received per capita	Net official development assistance (ODA) per capita consists of disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions, and by non-DAC countries to promote economic development and welfare in countries and territories in the DAC list of ODA recipients; and is calculated by dividing net ODA received by the midyear population estimate. It includes loans with a grant element of at least 25 percent (calculated at a rate of discount of 10 percent). (World Development Indicators)
Domestic Investment : Gross capital formation	Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and "work in progress." According to the 1993 SNA,

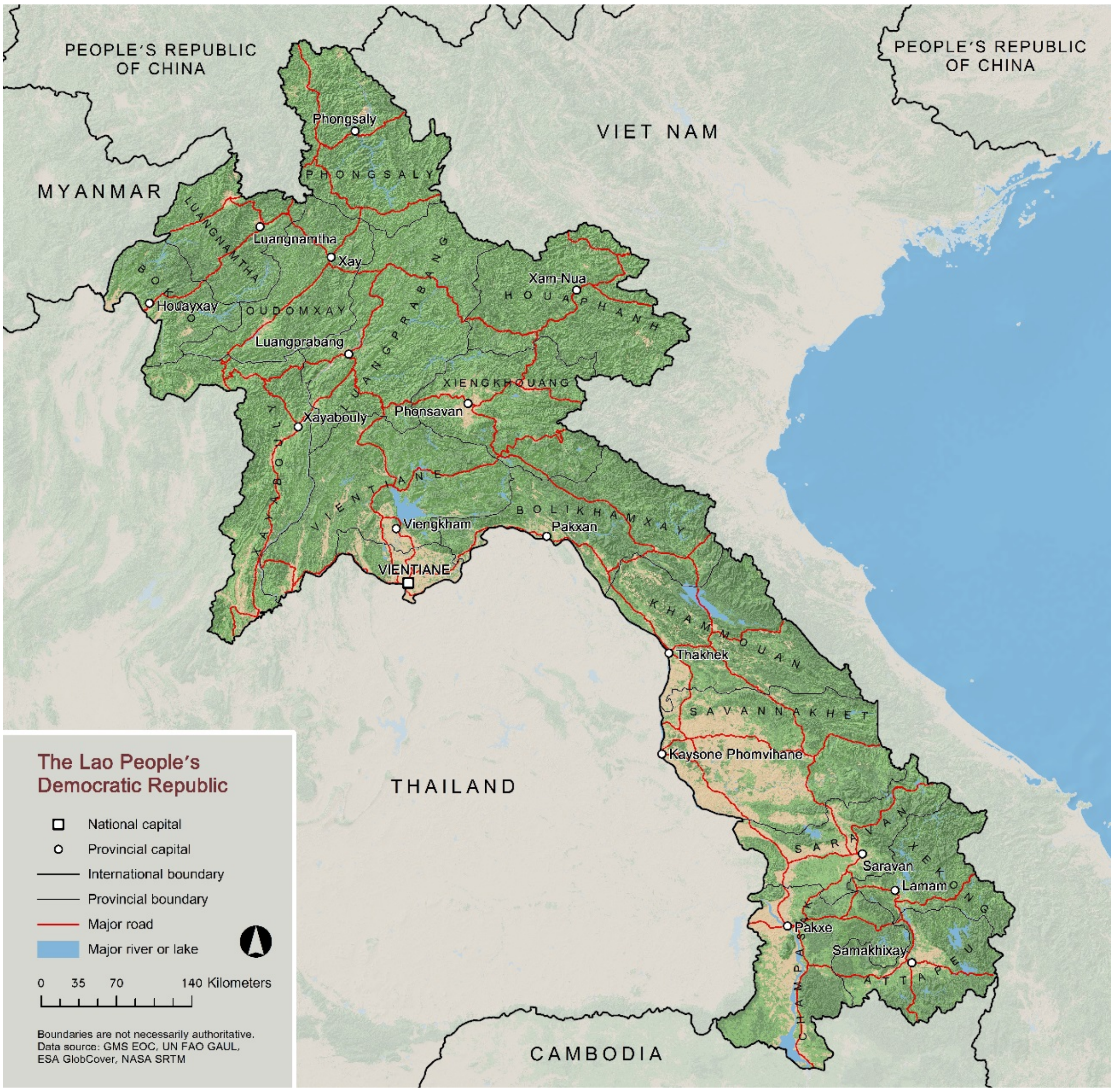
	net acquisitions of valuables are also considered capital formation. (World Development Indicators)
Trade Openness	The degree of trade openness = (Import + Export) / GDP In percentage (%) (Phimphanthavong, 2014)
Government Expenditure	General government final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. (World Development Indicators)

Appendix 2. Maps of countries in Mekong region

(All maps are cited from Asian Development Bank.)

1. Cambodia

2. Lao PDR



PEOPLE'S REPUBLIC OF CHINA
PEOPLE'S REPUBLIC OF CHINA
VIET NAM
MYANMAR
THAILAND
CAMBODIA
PHONGSALY
LUANGNAMTHA
BOKEO
OUDOMXAY
LUANGPRABANG
HOUAPHANH
XIENGKHOUANG
XAYABOULY
VIENTIANE
BOLIKHAMXAY
KHAMMOUAN
SAVANNAKHET
SARAVAN
XEKONG
CHAMPASACK
ATTAPEU
Phongsaly
Luangnamtha
Xay
Houayxay
Luangprabang
Xam-Nua
Xayabouly
Phonsavan
Viengkham
Pakxan
VIENTIANE
Thakhek
Kaysone Phomvihane
Saravan
Lamam
Pakxe
Samakhixay
The Lao People's Democratic Republic
National capital
Provincial capital
International boundary
Provincial boundary
Major road
Major river or lake
0 35 70 140 Kilometers
Boundaries are not necessarily authoritative.
Data source: GMS EOC, UN FAO GAUL, ESA GlobCover, NASA SRTM

3. Myanmar

Myitkyina
KACHIN STATE
SAGAING REGION
Hakha
CHIN STATE
Mandalay
Sagaing
MANDALAY REGION
SHAN STATE
Taunggyi
LAO PDR
Sittwe
Magway
NAY PYI TAW
MAGWAY REGION
Loikaw
KAYAH STATE
RAKHINE STATE
BAGO REGION
THAILAND
KAYIN STATE
AYEYARWADY REGION
YANGON REGION
Bago
Pathein
Yangon
Hpa-an
MON STATE
Mawlamyine
Dawei
TANINTHARYI REGION
Myanmar
National capital
State / Region capital
International boundary
State / Region boundary
Major road
Feeder road
Major river
Major lake
0 62.5 125 250 Kilometers
Boundaries are not necessarily authoritative.
Data sources: GMS EOC, UN FAO GAUL, UNDP MIMU, ESA GlobCover, NASA SRTM.

4. Thailand

MYANMAR
VIET NAM
LAO PDR
CAMBODIA
Chiang Rai
Mae Hong Son
Phayao
Chiang Mai
Nan
Lamphun
Lampang
Phrae
Uttaradit
Bueng Kan
Nong Khai
Loei
Udon Thani
Nakhon Phanom
Nong Bua Lam Phu
Sakhon Nakhon
Sukhothai
Tak
Phitsanulok
Mukdahan
Kampaeng Phet
Khon Kaen
Kalasin
Phichit
Phetchabun
Maha Sarakham
Roi Et
Chaiyaphum
Yasothon
Amnat Charoen
Nakhon Sawan
Uthai Thani
Ubon Ratchathani
Chai Nat
Si Sa Ket
Nakhon Ratchasima
Buri Ram
Surin
Sing Buri
Lop Buri
Ang Thong
Saraburi
Suphan Buri
Phra Nakhon Si Ayutthaya
Nakhon Nayok
Kanchanaburi
Prachin Buri
Sa Kaeo
Pathum Thani
Nonthaburi
Nakhon Pathom
BANGKOK
Chachoengsao
Samut Sakhon
Ratchaburi
Chon Buri
Samut Songkhram
Phetchaburi
Rayong
Chanthaburi
Trat
Prachuap Khiri Khan
Chumphon
Ranong
Surat Thani
Nakhon Si Thammarat
Phangnga
Krabi
Phuket
Phatthalung
Trang
Songkhla
Pattani
Satun
Yala
Narathiwat
Thailand
National capital
Provincial capital
International boundary
Provincial boundary
National road
Provincial road
Major river
Major lake
0 60 120 240 Km
Boundaries are not necessarily authoritative
Data source: GMS EOC, UN FAO GAUL, ESA GlobCover, NASA SRTM

5. Vietnam


PEOPLE'S REPUBLIC OF CHINA
LAO PDR
THAILAND
CAMBODIA
HA NOI
Ha Giang
Cao Bang
Lao Cai
Bac Kan
Lai Chau
Tuyen Quang
Yen Bai
Lang Son
Thai Nguyen
Dien Bien Phu
Son La
Viet Tri
Vinh Yen
Bac Ninh
Bac Giang
Hai Duong
Hai Phong
Ha Long
Hoa Binh
Hung Yen
Phu Ly
Thai Binh
Ninh Binh
Nam Dinh
Thanh Hoa
Vinh
Ha Tinh
Dong Hoi
Dong Ha
Hue
Da Nang
Tam Ky
Quang Ngai
Kon Tum
Pleiku
Quy Nhon
Tuy Hoa
Buon Ma Thuot
Nha Trang
Gia Nghia
Da Lat
Dong Xoai
Phan Rang-Thap Cham
Tay Ninh
Thu Dau Mot
Bien Hoa
Phan Thiet
Ho Chi Minh City
Tan An
Vung Tau
Cao Lanh
Long Xuyen
Vinh Long
My Tho
Ben Tre
Rach Gia
Can Tho
Tra Vinh
Vi Thanh
Soc Trang
Bac Lieu
Ca Mau
Viet Nam
National capital
Provincial capital
International boundary
Provincial boundary
Major road
Major river or lake
0 40 80 160 Kilometers
Boundaries are not necessarily authoritative
Data source: GMS EOC, UN FAO GAUL, ESA GlobCover, NASA SRTM