



**TOWARD CADP 3:  
REGIONAL CONNECTIVITY, THE COMPREHENSIVE  
ASIA DEVELOPMENT PLAN (CADP) AND  
MYANMAR COMPREHENSIVE DEVELOPMENT VISION (MCDV)**

**Economic Research Institute for ASEAN and East Asia  
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The connectivity enhancement in ASEAN and East Asia, consisting of physical connectivity, institutional connectivity, and people-to-people connectivity, is a key driving force toward deepening economic integration in ASEAN and East Asia and reinforces economic positioning of the region as a hub of the worldwide economic growth. We here revisit the Comprehensive Asia Development Plan (CADP), the Phase 2 project of the CADP (CADP 2), the first and second phase follow-up studies on the CADP projects, and the Mid-term Review (MTR) of the implementation of the AEC Blueprint. All studies showed that Myanmar is the weakest link compared with its high potentiality. In this regard, ERIA is supporting the Myanmar Government to develop the Myanmar Comprehensive Development Vision (MCDV)<sup>1</sup> because a better spatial design within Myanmar should be drawn properly together with better connectivity enhancement with other countries. The MCDV can be a core component of CADP Phase 3 (CADP 3), since connectivity enhancement and better spatial design will maximize the potential of Myanmar and will dramatically change the shape of East Asia.

When we try to envisage a long-term development in Myanmar with high economic growth and narrowing development gaps, we should discuss how to achieve "high" and "balanced" growth, given the condition that the Myanmar government wants to catch up with forerunner ASEAN countries. This paper tries to address this issue and propose a two-polar growth strategy with border development and better connectivity, an idea that kills two birds with one stone.

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<sup>1</sup> MCDV was referred in the 3rd Mekong-Japan Summit on 18 November 2011 to be implemented with the use of Japan-ASEAN Integration Fund (JAIF) and to make an important contribution to enhancement of intra Mekong and ASEAN Connectivity.

The first section provides a background of this study. The second section discusses theoretical framework by reviewing literature on economic growth and regional equality and ASEAN experiences. The third section reviews economic geography in Myanmar. We propose two-polar growth strategy in the fourth section as an idea that balances “high” and “balanced” growth. Nevertheless, this strategy alone may not be able to address the development of remote and mountainous areas in Myanmar. The section five examines border development and enhanced connectivity with neighboring countries as a strategy that is complementary to two-polar growth. Then we summarize the discussion and conclude.

## **1. BACKGROUND**

ERIA wrote up the CADP and supported the Master Plan on ASEAN Connectivity (MPAC) from its drafting to implementation<sup>2</sup>. The CADP was submitted to the 5<sup>th</sup> East Asia Summit, and the MPAC was adopted by ASEAN Leaders (ERIA 2010 and ASEAN 2010). The CADP and the MPAC share the same concept, based on new waves of international trade theory, namely, the fragmentation theory and new economic geography. Both claimed that strategic combination and prioritization of the hard and soft infrastructure projects would benefit the region to pursue deepening economic integration as well as narrowing development gaps. This claim was supported by simulation analysis on the impacts of logistic enhancement in this region using the IDE/ERIA Geographical Simulation Model (IDE/ERIA-GSM). Based on the concept, the CADP proposed a long list comprising of 695 infrastructure projects.

The fragmentation theory is a new analytical framework that conceptualizes “the 2nd unbundling” or international division of labor in terms of production processes and tasks. Given current uncertainty in the US and European economies, some may worry about “connectivity” and “economic integration” that would enhance vulnerability to external shocks. However, ASEAN and East Asia have the most advanced 2nd unbundling in the world, and our research clearly shows that regional production

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<sup>2</sup> ERIA was also designated as a funding source for technical assistance by the MPAC, as ADB and World Bank.

networks are actually robust and resilient to negative shocks.

In 2011, ERIA reviewed the implementation status of the prospective infrastructure projects provided in the long list of the CADP, and more than 60% of the 695 projects have reached at least feasibility study stages by 2011 (ERIA 2011a).

The CADP 2 was developed in 2011 to examine the connectivity between ASEAN and India (ERIA 2011b). Though both China and India are the emerging economic superpowers in the region as well as immediate neighbors to ASEAN, it is highly important to develop a basic strategy to enhance the connectivity between ASEAN and India, because there are huge potential benefits.

Especially, Myanmar was designated as a strategic node connecting ASEAN, China and India in the CADP 2. We considered two main routes, the sea route, the west link of the Mekong-India Economic Corridor (MIEC), and the land routes, with various optional routes, along the trilateral highway between Thailand, Myanmar, and India. Especially, MIEC was regarded as a most potential economic corridor to enhance connectivity and also a weakest link because of the lack of the gateway port in Dawei, Myanmar. We emphasized the need to address this link, because an economic corridor is only as strong as its weakest link<sup>3</sup>.

The CADP and the CADP 2 emphasized the interactions among the regions in different development stages. In the geographical coverage of these report, there are existing industrial agglomerations such as Singapore, Bangkok and Chennai (Tier 1), potential growth nodes to be linked with production networks (Tier 2) and other regions (Tier 3). Agglomerations or Tier 1 regions are expected to lead the regional economy by providing large markets of final and intermediate goods and raw materials for neighboring Tier 2 and Tier 3 regions, and by continuously upgrading themselves to be more innovative to expand the frontiers of economic activities in the region as a whole. As far as ASEAN-India connectivity concerned, Kolkata, Dhaka, and Kunming can be regarded as

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<sup>3</sup> Another key action of MPAC is enhancing of maritime connectivity among the archipelagic are of ASEAN. Based on the research in CADP that we need enhanced sea routes or Roll-on/Roll-off (RoRo) vessels, JICA was conducting feasibility study on Ro-Ro prospects.

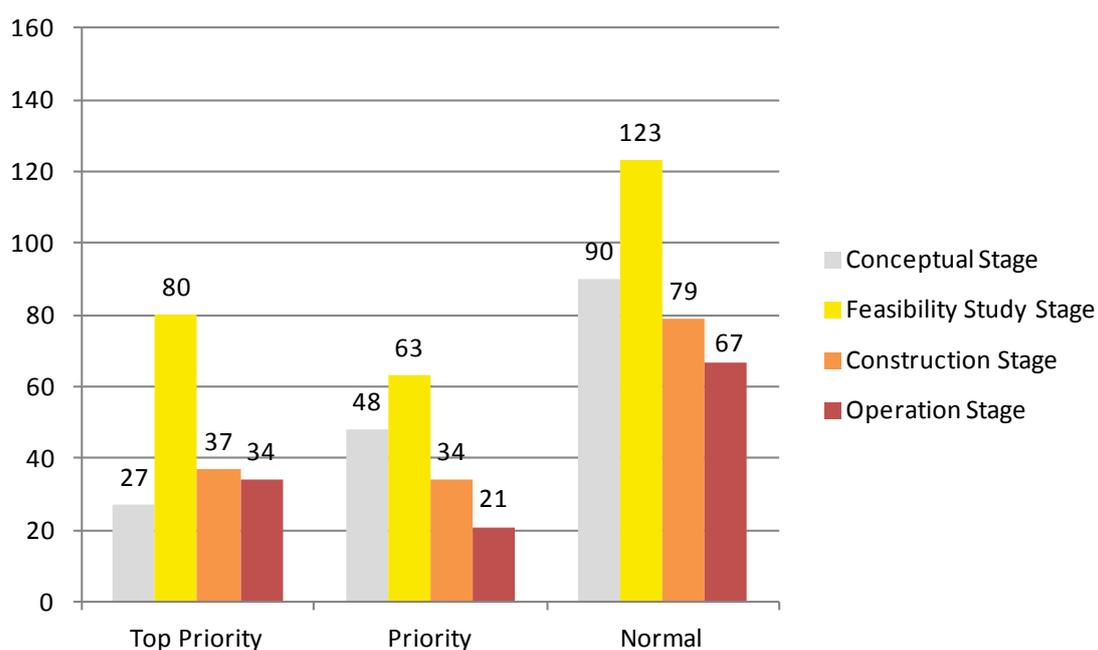
existing Tier 2 regions, followed by emerging Tier 2 regions such as Yangon and Mandalay. In addition, taking account of the ongoing development plans and geographical location, Dawei, which will be connected with Bangkok, is expected to join into the regional production network as a Tier 2 city. The major role of Tier 2 is to be the sources of economic dynamism in the region by attracting production processes from neighboring Tier 1 or other places through fragmentation, which are suitable to the location advantage of the region. Needless to say, enhanced connectivity is crucial for Tier 3, which is expected to expand their economic activities, such as agriculture, mining, and tourism, based on their own location advantages including the endowment of natural and cultural resources. In fact, Myanmar is endowed with natural and mineral resources such as natural gas, oil, coal and copper, and has potentials as agricultural production base or tourism destination. These opportunities would not be materialized without efficient and reliable connectivity with neighboring regions.

In 2012, ERIA undertook the MTR of the implementation of the AEC Blueprint. Through the analyses of the MTR, we monitor the implementation of MPAC from the angle of physical connectivity and institutional connectivity. In physical connectivity, MTR study pointed out the importance of upgrading of the weak links such as Myawaddy and Kawkaeik (AH 1) along the East West Economic Corridor, Dawei-Kawthaung (AH 112), Dawei-Maesameepass (AH 123) that is an integral part of MIEC connecting Dawei and Thai border near Kanchanaburi, Chaun U-Kalay (AH 1), and Kengtong-Taunggyi (AH 2). All these sections are in Myanmar and the upgrading is designated as an AEC measure and one of the prioritized strategies in the MPAC. MTR study also claimed that the timely implementation of transport facilitation agreement in ASEAN is highly important for the success of the comprehensive development plan in Dawei, as the crucial link in MIEC.

Now, we updated the implementation status of the infrastructure projects provided in the long list of the CADP through cooperation with local experts and national authorities of relevant countries, which showed 75% of the 695 projects being in more than feasibility study stage in 2011. As for the “Top Priority” projects (170 out of 695), 85% were found to be in the feasibility study stage or more. **Figure 1** shows the

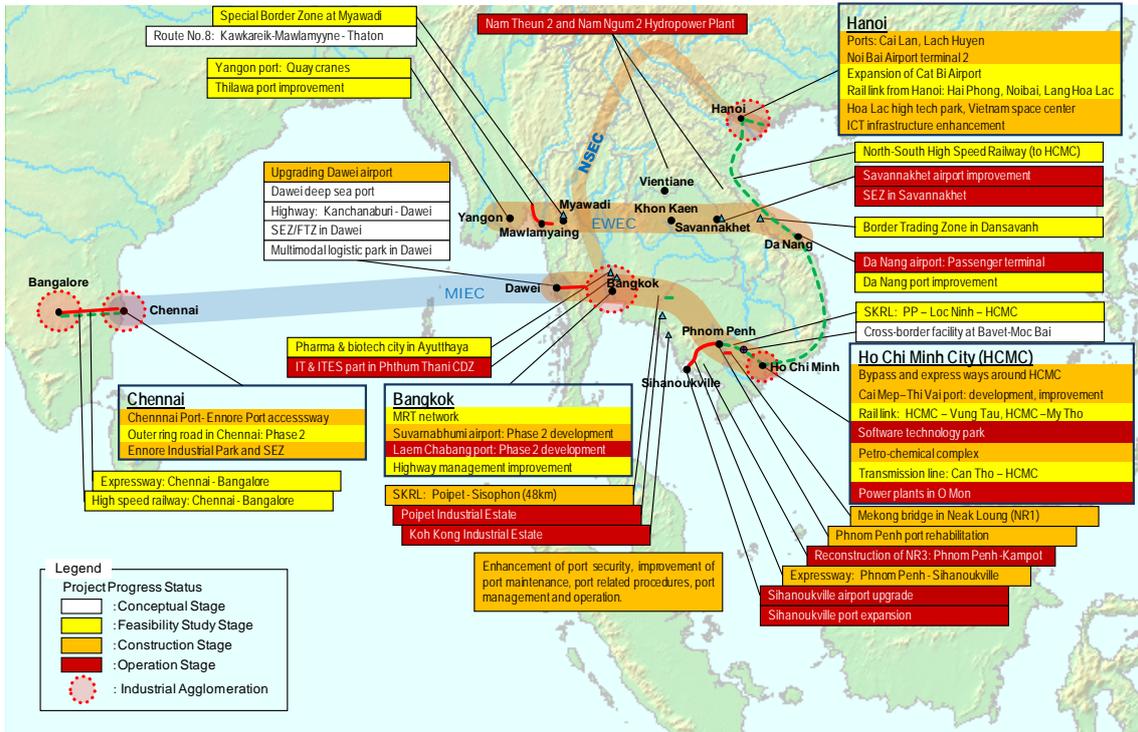
overall updated implementation status of CADP 695 projects and **Figures 2, Figure 3** and **Figure 4** illustrate the updated implementation status of the selected infrastructure projects in three sub-regions, namely, the Mekong sub-region, the Indonesia-Malaysia-Thailand Growth Triangle Plus (IMT+) sub-region, and the Brunei Darussalam-Indonesia -Malaysia-Philippines East ASEAN Growth Area Plus (BIMP+) sub-region. Among the three sub-regions, the Mekong sub-region has a larger number of projects, which are in more advanced stages than those of other sub-regions. We found however, there remains much room to accelerate infrastructure projects in Myanmar to further enhance the connectivity among ASEAN countries as well as between ASEAN and surrounding countries.

**Figure 1: Updated Implementation Status of CADP 695 Projects (2012)**



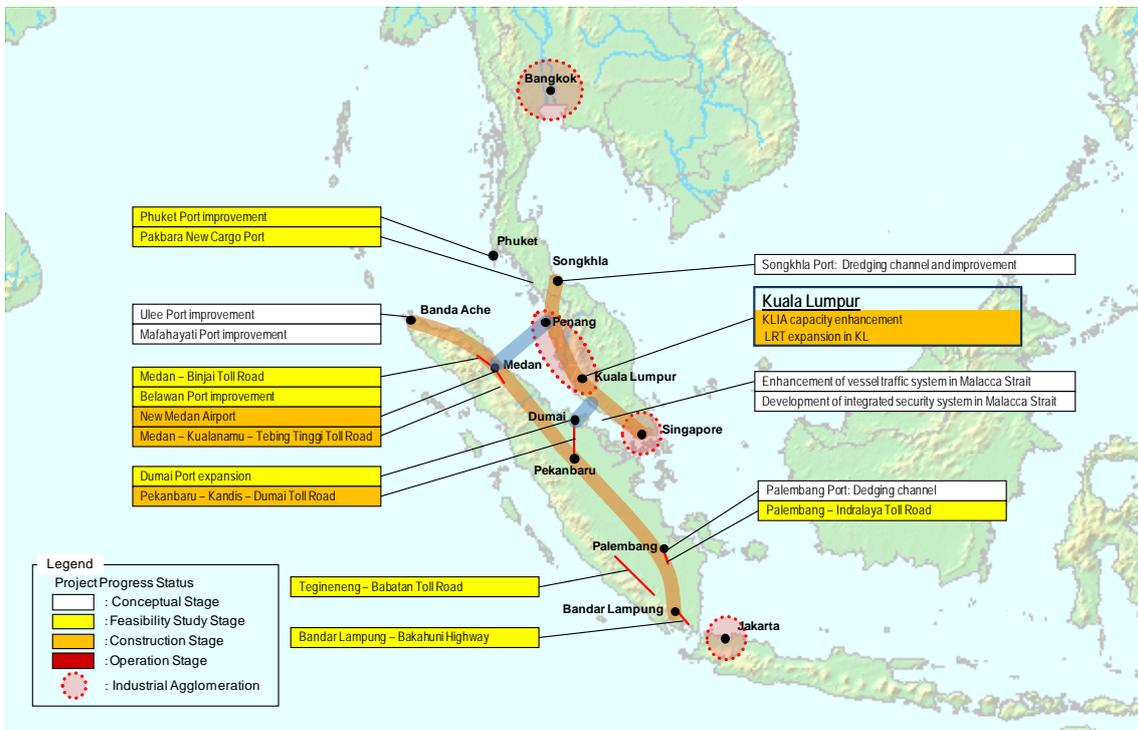
Source: ERIA.

**Figure 2: Updated Implementation Status in the Mekong region**



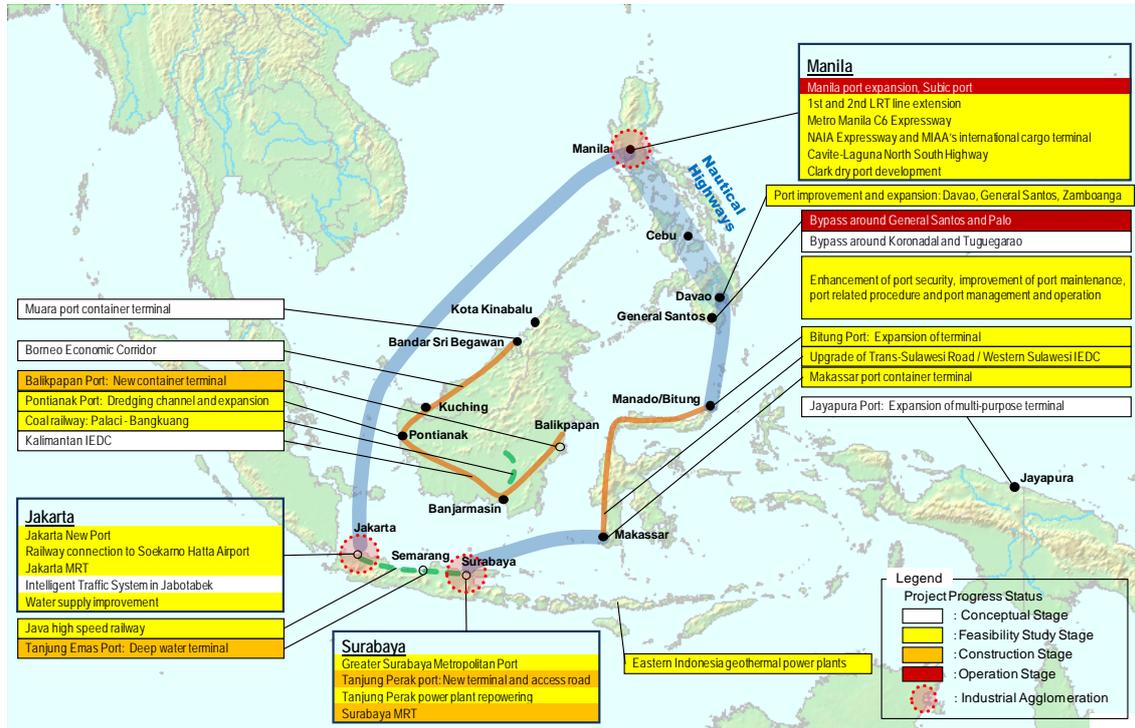
Source: ERIA.

**Figure 3: Updated Implementation Status in the IMT+ region**



Source: ERIA.

**Figure 4: Updated Implementation Status in the BIMP+ region**



Source: ERIA.

As CADP and CADP 2 stated, Myanmar has long been the weakest link in the region in spite of its huge potential and strategic location. However, now the Myanmar government inaugurated the wide-ranging reforms in both economic and political arenas. The government improved monetary and fiscal management, facilitated trade and foreign direct investment (FDI), and started to build physical, legal and institutional infrastructure (ADB 2012:1). On 19 June 2012, President U Thein Sein declared that the government entered into the second phase of reform strategy, which focused on economic development (NLM dated 20 June, 2012). The government has already drawn up the five-year short-term National Plan (FY2011-FY2015) and submitted it to the Parliament. The Myanmar government targets a 1.7-fold rise in per capita GDP during the National Plan. President said their aspired goal is to triple per capita GDP in the same period. The government is surely seeking for a very high economic growth. At the same time, President U Thein Sein announced four economic policies, that is, (1) Sustaining agriculture development towards industrialization and all round development; (2) balanced and proportionate development among states and regions;

(3) inclusive growth for entire population; and (4) Quality of statistics and statistical systems.

Given its rich endowment of resources including diligent and literate sixty-million population and rich investment opportunities in a range of sectors, the prospects for Myanmar's high growth is now bright. It is also understandable that the government prioritizes agriculture as sources of broad-based development and poverty reduction, since agriculture accounts for 36% of GDP, employs majority of the workforce and generates 25-30% of export earnings. People-centred development is a new word for Myanmar, but no one disagree the concept. Myanmar's official statistics need to be improved with international statistics system, and released in timely manner. It is critically important for policy makers to have timely and accurate statistics. Thus, three policies out of four are good and reasonable.

However, the third economic policy, i.e. balanced economic growth with equal share of budget and investment, could be inconsistent with high economic growth. As we discuss later, it is argued that the cost of policies that inhibit economic agglomeration can be harmful on economic growth, particularly for those economies in their early development stage (Brülhart and Sbergami, 2009). Myanmar government is endeavouring to reduce the regional income gap among regions and states and between urban and rural areas, and also to reduce the poverty incidence that substantially varies by regions and states.

## **2. THEORETICAL FRAMEWORK**

### **2.1. Literature on economic growth and regional income inequality**

“Balanced regional economic growth” is such an attractive policy slogan in the present world where many countries have hard time to manage regional income inequality. But the question is whether it is feasible in the first place? Or is it true that ‘the one who runs after two hares will catch neither’?

There are a number of studies that examine the relationship between economic growth and regional income inequality. Williamson (1965) examined 24 countries in both

cross-section and time-series and found that the regional income inequality increases in the early stage of development but starts decreasing as an economy become more mature (Williamson Hypothesis, so called). He proposed a concern of the widening regional inequality in developing countries by citing Kuznetz' word, 'can...the underdeveloped societies withstand the strain which further widening of income inequality is likely to generate?' and this concern is still valid in the 21<sup>st</sup> century.

However, regional income inequality is not just an adverse effect of economic growth. The theoretical studies in spatial economics generally agree on that these two phenomena have a circular causation, i.e., not only economic growth enhances economic agglomeration, but also economic agglomeration enhances economic growth. The rationale is as follows. Economic growth is inevitably geographically uneven, because some regions have advantages in doing business than other regions. Workers and firms tend to agglomerate in developed regions, seeking higher wages and larger markets, i.e., economic growth enhances economic agglomeration. At the same time, economic agglomeration is a source of positive externalities, such as labour pooling and knowledge spillover, and makes it possible to provide physical and institutional infrastructures efficiently with limited resources. So, economic agglomeration enhances economic growth.

Empirically, Henderson (2003) statistically examines the growth enhancing effects of urban concentration for some 70-80 countries from 1960 and 1990. He insists that (1) economic concentration in the country's primary city has pro-growth effects at the beginning, but this effect peaks out once the degree of concentration reaches some 'optimal' level, (2) the 'optimal' level of economic concentration declines as the output per worker increases, i.e., the country becomes richer. Brulhart and Sbergami (2009) also confirmed that the agglomeration of economic activity boosts economic growth until the per capital income of the country reaches around USD 10,000 (in 2006 prices).

These studies imply that there is a trade-off between higher economic growth and lower regional inequality, at least, for countries below some income level. So, we need to avoid putting too much emphasis on regional equality, especially at the very early stage of economic development. Otherwise, uniform distribution of limited development

resources is likely to result in 'equally poor.' Basically, economic agglomeration is good for everyone. As Fujita and Thisse (2002) say, 'even those who stay put in the periphery are better off than under dispersion provided that the growth effect triggered by the agglomeration is strong enough' (p.391). This means that the economic growth of the economic centre is faster enough, boosted by the agglomeration effects, even the income of the people lives in economic periphery increases because of the spillover effects from the richer economic centre.

World Bank (2009) conducted an across-the-board study on spatial aspects of economic development, and the main message of the study is 'Economic growth will be unbalanced, but development still can be inclusive. ... The way to get both the immediate benefits of the concentration of production and the long-term benefits of a convergence in living standards is economic integration' (p.1). We will be back to this point, the economic integration, economic growth and regional inequality, later in this paper.

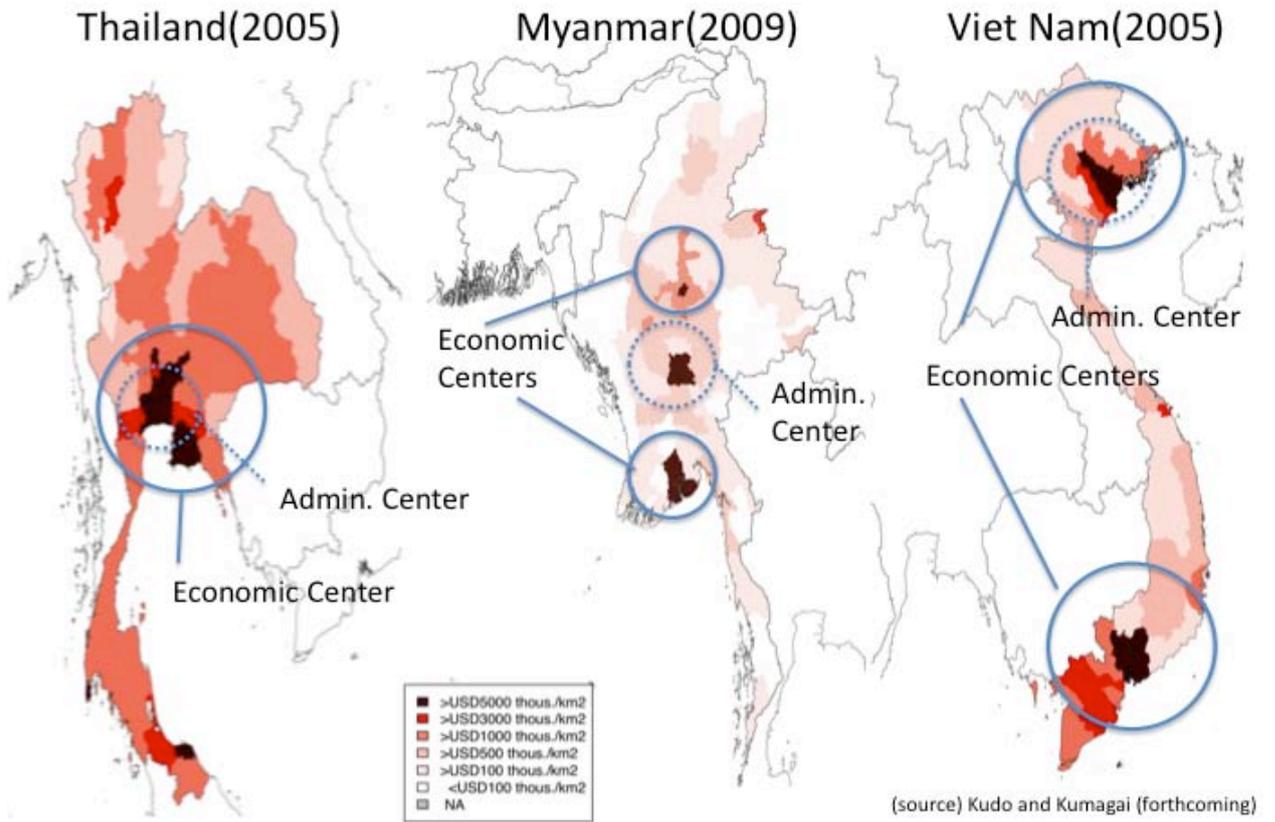
## **2.2. Experience of ASEAN countries**

Most of the ASEAN countries have recorded fairly high economic growth rates for the last several decades. We need to learn how the geographical concentration of economic activity in these countries has changed along this rapid economic growth period. What can be learned from the experiences of these ASEAN countries for Myanmar? The benchmarks for Myanmar seem to be Thailand and Vietnam, both of which have relatively similar land area and population size with Myanmar among ASEAN countries.

Thailand and Vietnam have contrasting spatial structure of economic activities with each other. Thailand is a typical 'one-polar' country while Vietnam is a clear-cut 'two-polar' country. **Figure 5** shows the GDP density (GDP per km<sup>2</sup>) of Thailand, Myanmar, and Vietnam. For Thailand, it is obvious that the country's economic activity is concentrated around Bangkok, showing that Thailand is a mono-centric country. For Vietnam, there are two agglomerations of economic activities around Ha Noi in Northern Vietnam and Ho Chi Minh in Southern Vietnam, showing that Vietnam has two poles of economic activity, distantly located with each other.

Considering the spatial development strategy of Myanmar, it is an important point to choose whether one-polar or two-polar. We will investigate this question in the next section.

**Figure 5: GDP density of Thailand, Myanmar, and Vietnam**



Source: Authors based on IDE/ERIA-GSM dataset.

### **3. ECONOMIC GEOGRAPHY IN MYANMAR**

The territory of Myanmar is 1.8 times larger than that in Japan, and the country has geographical and climatic diversity, with levels of population and industrial concentration that vary from district to district. To form a long-term development vision for Myanmar, we need to investigate the current situation of economic geography in Myanmar.

#### **3.1. Population and Population Density by State/Region (and District)**

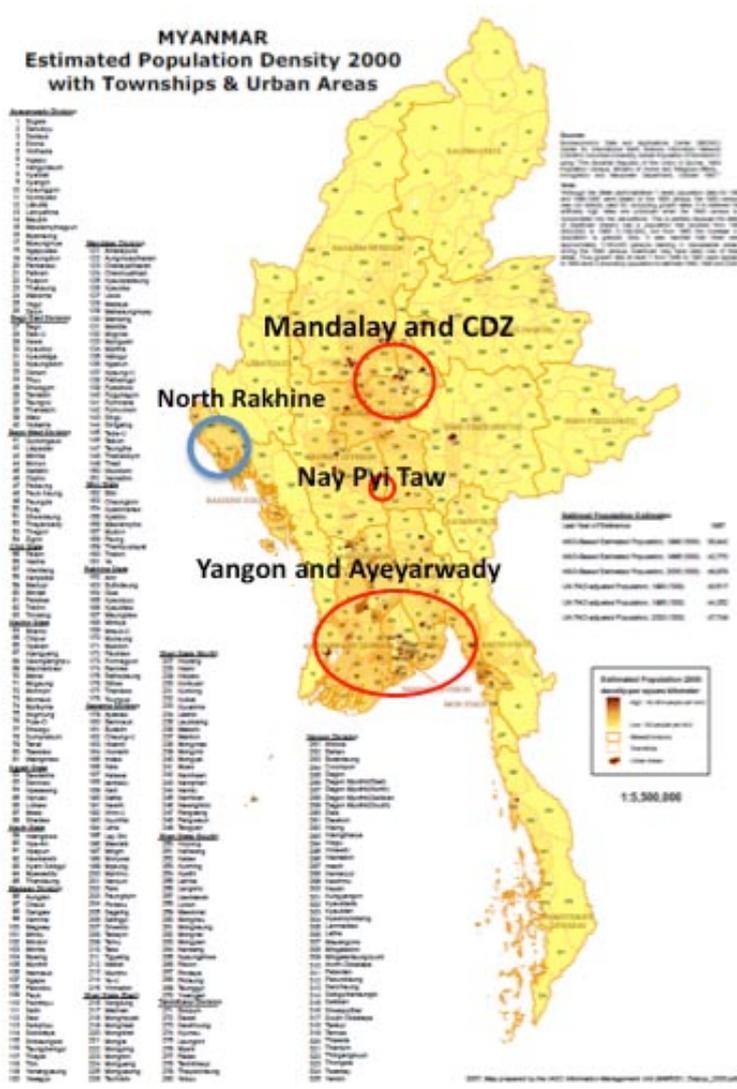
Myanmar's official statistics provide considerably outdated and narrowly covered data on its economic and industrial situation. Data on geographical economic activities are particularly lacking. Even population by region, one of the most important geo-economic data, is not reliable. The population census in Myanmar has not been conducted since 1983, and most of the population data published later on depends on the estimation based on that outdated 1983 census.

Here, we combined various available sources to compile the population data at the district level in 2009. Specifically, population by district in a state/division is estimated based on the share of eligible voters in the general elections held in November 2010, and the population shares of states/divisions are based on the population estimation 2008.

At the national level, Myanmar's population density is about 70-90 people/sq. km. It is lower than Vietnam (260 people/sq. km) and Thailand (130 people/sq. km). However, the Myanmar's population densities by district significantly differ each other, and the national average doesn't have much meaning.

**Figure 6** shows the population density by district. The population density of the regions along the Ayeyarwady River is generally high. Specifically, Mandalay is the highest (1,440 people/sq. km), and Yangon (589 people/sq. km) follows. These two areas are the centres of population agglomeration. On the other hand, the population of mountainous districts is very low. There are some areas where the population density is less than 10 people per square km, such as Puta-O, Bawlake, Hkamti, Monghast, and Langkho.

**Figure 6: Estimated population density by township (2000)**



*Source:* Based on Myanmar Information Management Unit (MIMU).

### 3.2. Estimation of GDP by district

The official data of GDP by region is not released; therefore an alternative way to estimate economic activities in development economies is invented to use the strength and distribution of nighttime lights. It is now widely known that the strength of nighttime lights and economic activity are firmly correlated. Normally, the relationship between these two data is determined by some coefficients derived from regression analyses using ‘actual’ data and nighttime lights satellite imagery (Ghosh et al. 2010). Here, we use the nighttime lights to estimate the distribution of GDP at a district level, taking the national GDP as given.

GDP by district is estimated assuming that non-agricultural economic activities are distributed as the same share as the nighttime lights while agricultural production is distributed as the same share as the share of agricultural land of each district appeared in the agriculture census 2003.

As **Figure 5** shows, there are three regions that have high GDP density, namely, Yangon, Nay Pyi Taw, and Mandalay.<sup>4</sup> It is sure that Yangon and Mandalay are the centres of economic activities. In case of Nay Pyi Taw, the newly established capital city in 2005, the GDP estimation based on light emission is likely to be over-estimation, because the supply of electricity in Nay Pyi Taw is exceptionally good compared with other cities and it surely affects the relationship between economic activity and nighttime light emission.

### **3.3. Geographical distribution of industries**

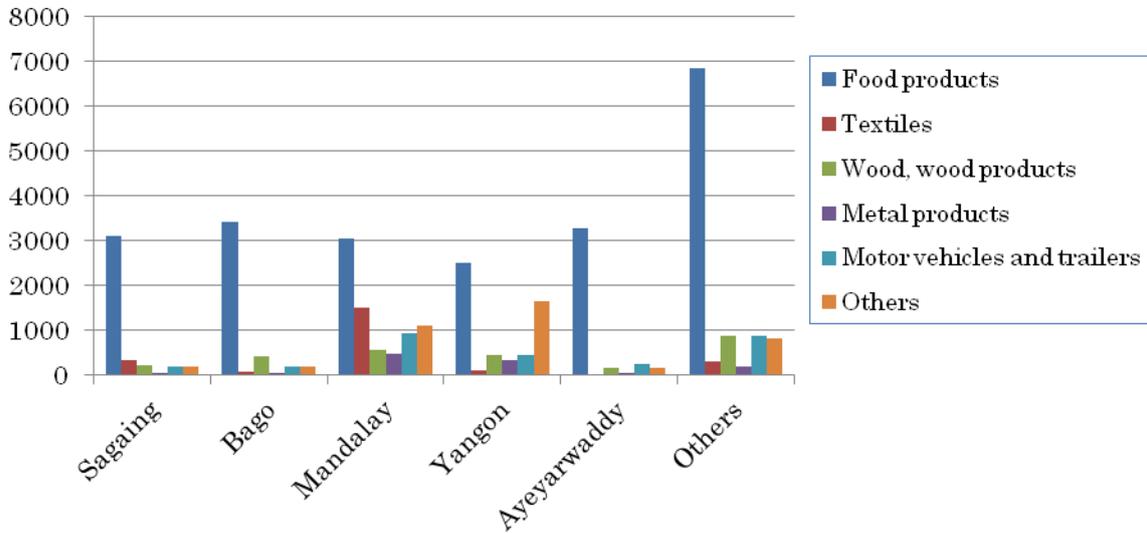
**Figure 7** shows the number of plants of major business categories in the five major industry concentration areas as of April 1997.<sup>5</sup> About 70% of the privately owned plants registered at the Directorate of Industrial Supervision and Inspection (DISI) were concentrated in these five major areas (i.e., Yangon, Mandalay, Bago, Ayeyarwady, and Sagaing), and the five business categories (i.e., food products, textiles, wood and wood products, metal products, and motor vehicles and trailers) accounted for 88% of the total private registered industries in Myanmar. We see some features in industrial distribution in Myanmar.

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<sup>4</sup> See also Kumagai, et al. (2012).

<sup>5</sup> The data for this figure are from the Directorate of Industrial Supervision and Inspection (DISI) of Ministry of Industry (1), now Ministry of Industry. The data are outdated, but the industrial structure had little changed for the last decade, and the picture presented here shall be of relevance to the present.

**Figure 7: Number of private industries in major regions by business categories, as of April 1997**



Source: DISI, Ministry of Industry (1).

First, the food processing industry constituted the largest share for all regions and states. The food processing industry accounted for 63% of all industries in Myanmar in terms of the number of enterprises (and about 75% in areas other than Yangon and Mandalay). The five business categories shown in **Figure 7** accounted for 88% of the total number of enterprises, which indicated that manufacturing in Myanmar was still centred on simple processing of agricultural products, weaving textiles, sawing timbers, and blacksmith activities,<sup>6</sup> with business categories being non-diversified and processing technologies remaining at low levels.

Second, textile, wood processing, metal processing, and machine manufacturing industries made up a large percentage of the industries in the Yangon and Mandalay, suggesting that some level of diversification exists here. The food processing industry accounted for 46% and 40% of all industries in these two regions, respectively.

Third, the concentration of textile, metal, automobile, and trailer manufacturing industries (centring on automobile parts, metal and machine processing, and repair

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<sup>6</sup> “Textiles” mainly includes weaving textiles. “Wood, wood products” mainly include timber sawing mills. “Metal products” mainly include blacksmith activities. “Motor vehicles and trailers” mainly include vehicle repair workshops.

workshops) in Mandalay was noteworthy. More than 60% of textile manufacturers in the country were located in Mandalay, and when those in the adjacent Magway were included, nearly 80% of the nation's textile manufacturers were seen to be concentrated in the central part of Myanmar. Most of these establishments appear to be those making "longyi" (sarongs) and cotton blankets, as well as other textile manufactures.

Industries that repair automobiles and manufacture automobile spare parts and machine parts were concentrated in the Mandalay industrial zone, where about 150 small automobile repair workshops were located. Reportedly, nearly 70% of the medium- and large-size trucks and buses that connect Yangon and Mandalay are serviced and repaired in this industrial zone. Automobiles in Myanmar are mostly secondhand models that were made more than ten years ago, which generate great demand for spare parts and repair services. As a result of its skills in imitating other's technologies and many shops of it that repair antiquated vehicles, Mandalay has been the largest base for automobile-related businesses. In addition to automobile-related workshops, there are a number of plants where electric appliances, agricultural machines and equipment, and other types of machinery are actively being manufactured, making this area the country's largest concentration of machine manufacturing.

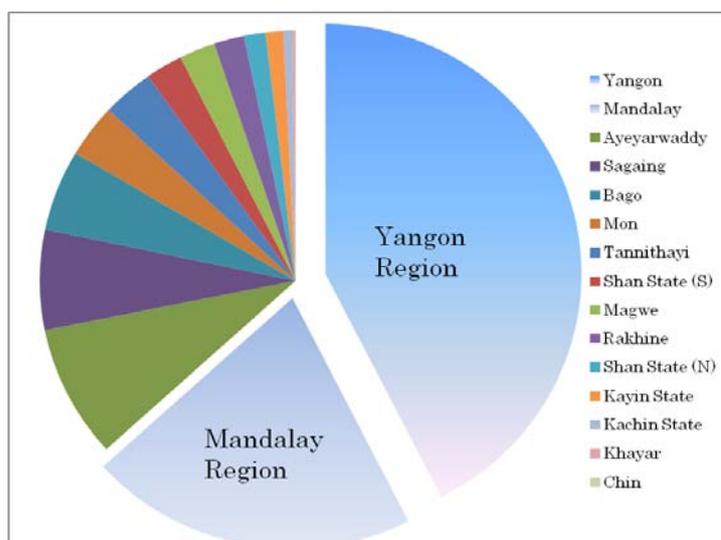
Fourth, in Yangon there were a considerable number of plants other than those related to the five major business categories. About 40% of those classified as "others" in **Figure 7** were concentrated in this area. They included business categories such as rubber and plastic products, base metal products, publishing and printing, chemical products, and paper manufacturing. In this sense, it can be said that the industrial concentration in Yangon is the most diversified in the country.

In Myanmar a "large-scale plant" is defined as the one that satisfies at least one of the following conditions: (1) an amount of investment in excess of 5 million Kyat (about 6,250 US dollars), (2) yearly production output of over 10 million Kyat (about 12,500 US dollars), (3) power equipment of 50 HP or higher, or (4) more than 100 employees. This means that they include plant sizes equivalent to those of medium- and small-scale enterprises in other countries such as Japan.

Regarding the number of private industries in Myanmar, small-scale plants were dominant, accounting for 80% of the total number of plants in 2000, while large-scale plants accounted for only 5%. However, in terms of production output and the amount of investment, large-scale plants accounted for 37% and 40%, respectively. Given the corresponding figures for small-scale plants, 36% and 37%, respectively, large-scale plants had slightly larger shares compared to small-scale plants. Despite large-scale plants having fewer employees (24% of the total, which was less than half that of small-scale plants, 57%), they play a vital role in relatively capital-intensive business categories (Kudo, 2012).

**Figure 8** shows that 43% of private large-scale plants were located in Yangon in 2009, followed by Mandalay (21%), Ayeyarwady (9%), Sagaing (6%) and Bago (5%). In other areas, there were virtually no large-scale plants.<sup>7</sup> Majority of the large-scale plants were located in Yangon and Mandalay. Moreover, the factories in Yangon accounted for 26% of the total number of employees of the whole country in 2000, 30% of production output, and 37% of total investment. Yangon was ahead of Mandalay. Therefore, Yangon can be regarded as the largest centre of private industries in the country. In Yangon, more than half of all workers were employed at large-scale plants in 2000. This is in sharp contrast to the situation in other regions and states where most of workers were employed in small- and medium-scale plants.

**Figure 8: Distribution of large-sized private industries in 2009**



Source: DISI, Ministry of Industry (1).

<sup>7</sup> With regard to medium-scale plants, Mandalay had 28%, followed by Yangon (24%), Sagaing (11%), Ayeyarwady and Bago with 9%.

## 4. TWO-POLAR GROWTH STRATEGY

### 4.1. A question: one-polar or two-polar

From the population and GDP density by district, and industrial distribution, we found that Yangon is eligible to be the first pole of economic growth, because both economic activities and population are already agglomerated in Yangon region. We also found that the second pole of economic growth would be Mandalay, if we would take two-polar development strategy. Mandalay and surrounding area already have a certain level of economic activities and population though the agglomeration is smaller than that of Yangon.

**Tables 1** and **Table 2** compare the population and GDP of the secondary city<sup>8</sup> against the primary city for Thailand, Myanmar, and Vietnam. The population ratios of the secondary cities against the primary cities for Myanmar and Thailand are very similar, around 1:4. On the other hand, the GDP ratios of the secondary cities against the primary cities for Myanmar and Vietnam are very similar, around 1:3.5. From the viewpoint of population, Yangon is already considerably larger than the second city in terms of population, while not that large from the viewpoint of GDP, at this moment.

**Table 1: Population of secondary city against primary city (2005)**

	Primary/Secondary City	Primary/Secondary Ratio
Thailand	Bangkok : Chaing Mai	4.3 : 1
Myanmar	Yangon : Mandalay	4.4 : 1
Viet Nam	Ho Chi Minh : Hanoi	1.9 : 1

*Source:* Authors based on IDE/ERIA-GSM dataset.

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<sup>8</sup> The secondary cities are selected from the comprehensive viewpoint. The cities with second largest population or GDP in each country are different from the secondary cities selected here.

**Table 2: GDP of secondary city against primary city (2005)**

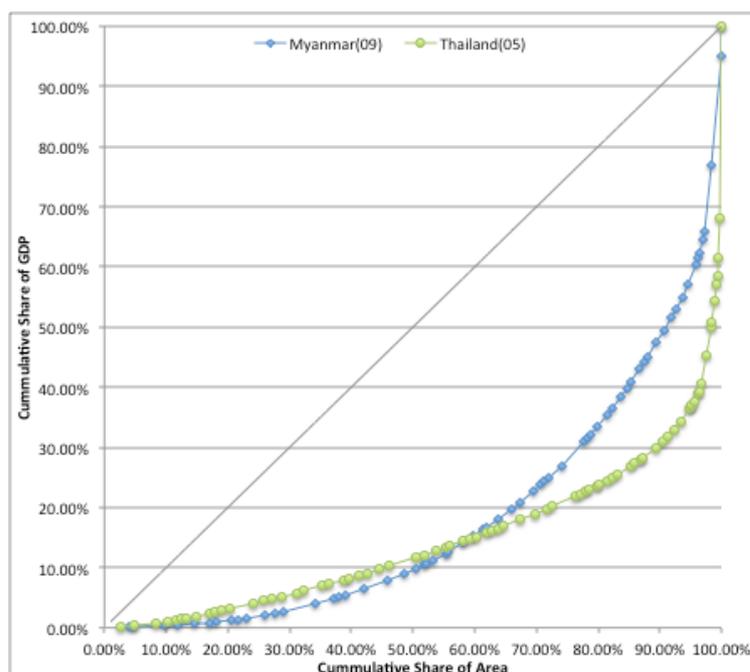
	Primary/Secondary City	Primary/Secondary Ratio
Thailand	Bangkok : Chaing Mai	21.8 : 1
Myanmar	Yangon : Mandalay	3.7 : 1
Viet Nam	Ho Chi Minh : Hanoi	3.4 : 1

Source: Authors based on IDE/ERIA-GSM dataset.

The similar tendency is also observed at the national level. **Figure 9** compares the spatial distribution of estimated GDP in Myanmar for year 2009 and in Thailand for year 2005. The figure is so-called “Lorenz curve.” The horizontal axis is the cumulative share of area, and the vertical axis is the cumulative share of GDP. If economic activities are distributed with perfect equality, the points line up on the 45-degree line. The more the distribution of economic activities become uneven, the more the curve becomes convex.

**Figure 9** shows that the economic activities in Myanmar are less concentrated compared with those in Thailand. In Thailand, more than 60% of national GDP concentrate in less than 5% of land area. In Myanmar, the same 60% of national GDP concentrate in about 15% of land area. There is a tendency that the economic development in developing countries accelerates the concentration of economic activities. So the economic activities in Myanmar are also likely to be more concentrated in the future.

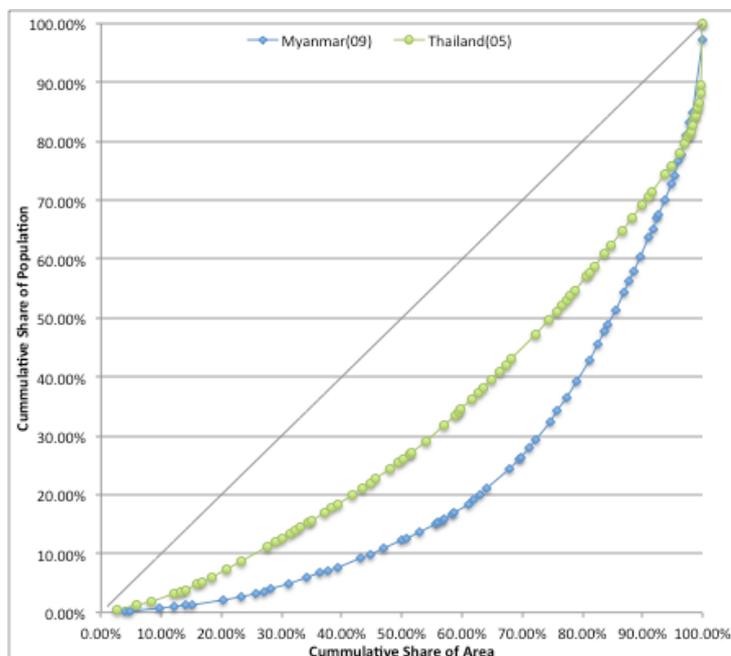
**Figure 9: Spatial distribution of GDP in Myanmar and Thailand**



Source: Authors based on IDE/ERIA-GSM dataset.

On the other hand, **Figure 10** compares the spatial distribution of population in Myanmar for year 2009 and in Thailand for year 2005. The population in Myanmar is already spatially more concentrated than that in Thailand. This is partly because Myanmar contains some mountainous area where the population density is very low.

**Figure 10: Spatial distribution of population in Myanmar and Thailand**



*Source:* Authors based on IDE/ERIA-GSM dataset.

This already uneven distribution of population with expected concentration of economic activities in economic centre leads to the concern of an excessive agglomeration of income and population in the future. Henderson (ibid) warns that an over or under concentration<sup>9</sup> of economic activities in the primary city reduces the annual growth rate 0.6%. In case of Myanmar, it seems that we need to concern about over-concentration, rather than under-concentration, of population and economic activities in Yangon.<sup>10</sup>

#### **4.2. A Simulation Analysis**

The analysis of economic geography in Myanmar leads us to choose two-polar strategy rather than one-polar strategy. Here, we will discuss the validity of two-polar strategy by the simulation analysis using IDE/ERIA Geographical Simulation Model (IDE/ERIA-GSM). We will analyze the relationship between the number of

<sup>9</sup> Henderson (ibid) calculated the effects of the over or under concentration by 0.10 point deviation from the optimal share of economic activities in the primary city.

<sup>10</sup> However, industrial policies forcing “balanced-growth” may cause under-concentration, and they can be harmful on economic growth.

development poles, the national GDP of Myanmar, and Yangon and Mandalay's GDP shares in national GDP. For the detail of the simulation model, see Kumagai, et al. (2012).

First, we see the economic impacts of one-polar strategy. In the one-polar strategy, we assume the productivity parameter of Yangon doubled in 2013 by public investments. Compared with the baseline case, "no public investment," at year 2030, the national GDP increases 1.49 (GDP under no public investment = 1.0), and Yangon's GDP share increases to 55.1% of national GDP from 26.3%. On the other hand, Mandalay's GDP share decreases to 6.0% from 10.8%. The simulation results show that the one-polar strategy is likely to cause an over-concentration of economic activities in Yangon.

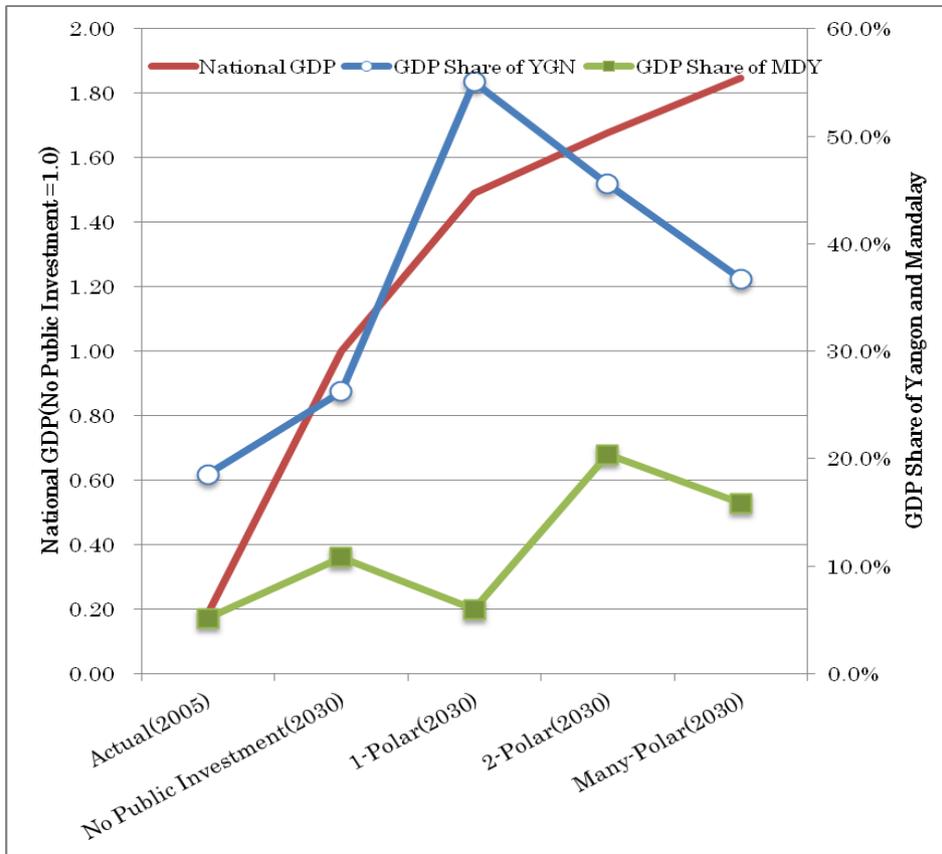
Next, we investigate the effects of increasing the number of development poles with two different assumptions. The first assumption is that we can increase the number of development poles arbitrarily with no cost. It is an extreme assumption, but 'proper exchange rate policy' might be this kind of public investment. Under this assumption, we compare the one-polar strategy with two-polar strategy (the second pole is Mandalay) and many-polar strategy (the additional poles are the 13 regions with industrial zones<sup>11</sup>). The productivity parameter of each region is doubled in 2013.

Under this assumption, the more the number of growth poles, the higher the level of national GDP and the lower the Yangon's GDP share. There is no trade-off between higher economic development and lower inequality (**Figure 11**).

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<sup>11</sup> Thirteen regions include Taunggyi in Shan State, Kalay in Chin State, Monywa in Sagaing Region, Pakokku and Ye Nan Chaung in Magway Region, Meiktila and Myin Chan in Mandalay Region, Pyay in Bago Region, Mawlamyine in Mon State, Myaung Mya, Hinthada and Patheingyi in Ayeyarwady Region, and Myeik in Tanintharyi Region.

**Figure 11: The number of growth poles, national GDP and GDP share of Yangon and Mandalay (2030: Assumption 1)**



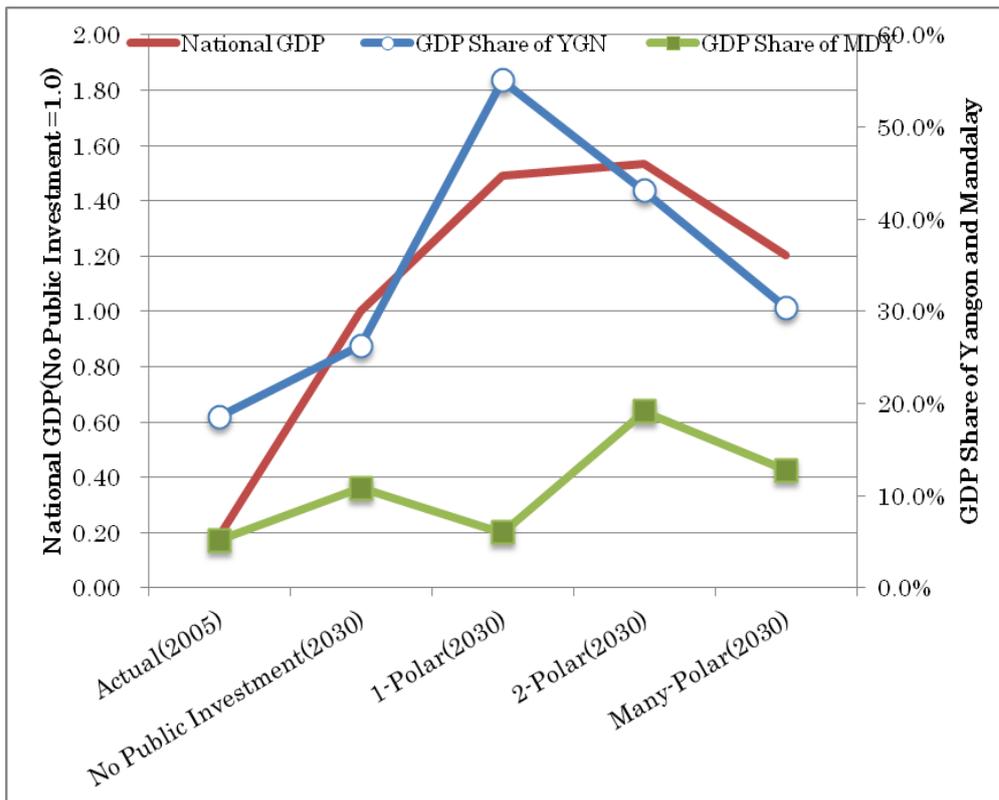
Source: Authors based on IDE/ERIA-GSM simulation results.

However, the increasing the productivity of arbitrarily number of regions with no additional costs is unrealistic. The second assumption is more realistic. We assume that the costs of increasing the productivity parameter in a region are proportional to its population. The costs of doubling the productivity of a city with 5 million population is assumed to be five times larger than that of a city with 1 million population. We also assume that the available public development expenditure is fixed and if we increase the number of development poles, the expenditure should be shared by all the growth pole regions proportionally to their population. In addition to that, the increase in productivity of each region is assumed to be proportional to the development expenditure per capita. For instance, suppose we have a budget to double the productivity of the first polar region with 5 million population. If we share this budget with second polar regions with 1 million population, then per capita development

expenditure in both regions becomes 500 million/600 million = 0.8 compared with that under one-polar strategy, and the increase in productivity of both regions is now 80%.

Under this second assumption, the two-polar strategy decreases Yangon’s GDP share to 43.1% from 55.1%, while the national GDP slightly increases to 1.54 from 1.49, compared with the one-polar strategy. Mandalay’s GDP share increases to 19.1% from 10.8%. There seems to be no trade off between higher growth and lower inequality for the two-polar strategy. However, if we spread the development resources to 15 regions, the national GDP decreases to 1.20, while the share of Yangon’s GDP decreases to 30.4% (Figure 12).

**Figure 12: The number of growth poles, national GDP and GDP share of Yangon and Mandalay (2030: Assumption 2)**



Source: Authors based on IDE/ERIA-GSM simulation results.

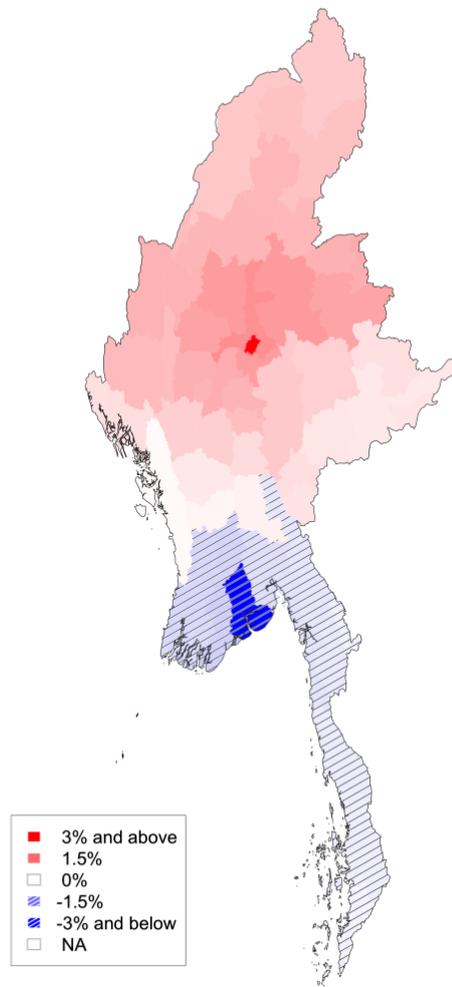
The simulation results above give us suggestions to the development policy of Myanmar. First, the share of Yangon’s GDP under the one-polar strategy seems to be too high, and increasing the number of development poles reduces the share of

Yangon’s GDP. Second, however, assuming development costs with limited budget, spreading the resources to too many growth poles reduces the national GDP significantly compared with the one-polar strategy, i.e., there exists a trade-off between higher growth and lower inequality.

Considering these results, the two-polar strategy seems to be ‘balanced’ between higher growth and lower inequality. **Figure 13** compares the GDP per capita of each region with the two-polar strategy and that with the one-polar strategy in 2030 under assumption 2. The two-polar strategy shifts some economic activities from Yangon and other southern regions to Mandalay and northern regions.

It depends on many assumptions, and we are not sure that the two-polar strategy actually increases the national GDP as **Figure 13**. However, it seems to be a reasonable stagey to put aside a part of the development expenditure for Yangon and use it for the development of Mandalay, if we see the picture like **Figure 13** desirable.

**Figure 13: Differences in GDP per capita (2030: Assumption 2) between two-polar compared with one-polar Strategy**



*Source:* Authors based on IDE/ERIA-GSM simulation results.

### 4.3. Two-polar growth and poverty reduction

Here, we consider the two-polar strategy with complemented development policy in detail from the viewpoint of poverty eradication. **Figure 14** shows the poverty situation by state/region<sup>12</sup>. The horizontal axis shows the state/region share of poverty population in national poverty population, representing the size of poor people. The vertical axis shows the share of poverty population in total population of each state/region, representing how common the poverty is.

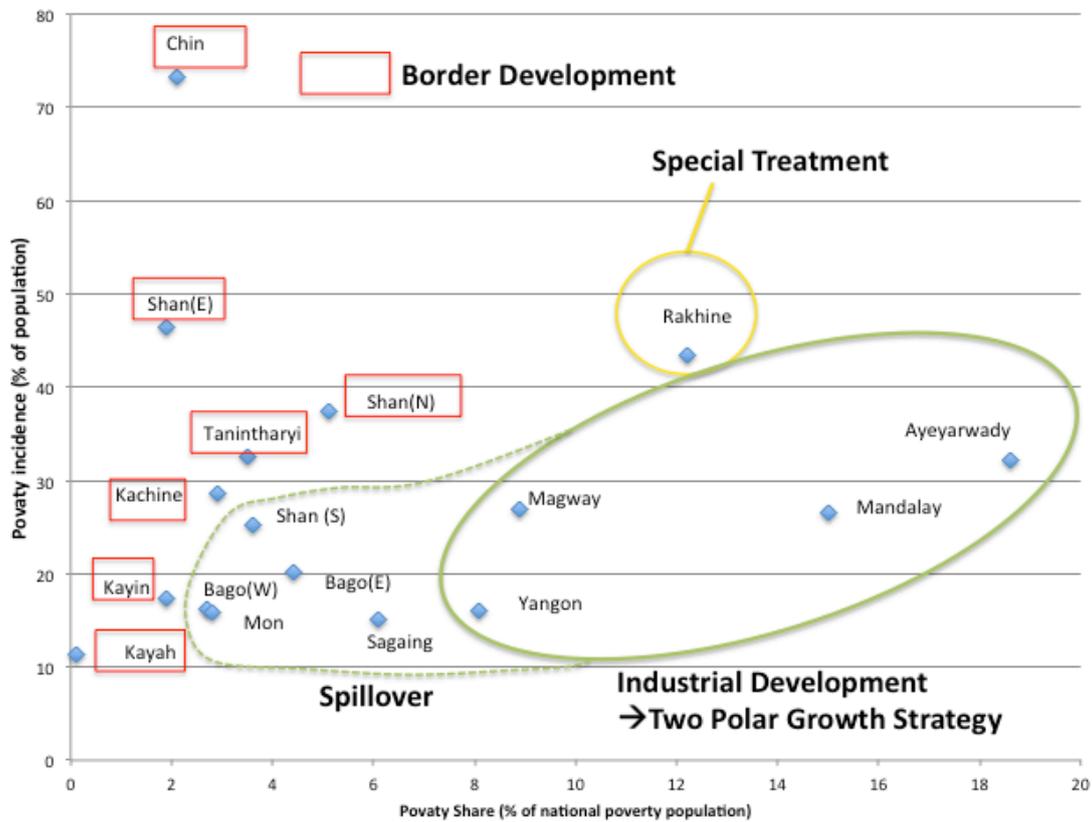
The state/region with the highest poverty share is Ayeyarwady (18.6%), followed by Mandalay (15.0%) and Rakhine (12.2%). On the other hand, the state/region with highest poverty incidence rate is Chin (73.3%), followed by Shan East (46.4%) and Rakhine (43.5%).

We need to set different strategies of poverty eradication for the states/regions where the poverty incidence is not too high but the poverty share is high (locates lower-right), and for the states/regions the poverty incidence is high while the poverty share is low (locates upper-left). The former case includes Ayeyarwady, Mandalay, and Magway, and the latter case includes Chin and Shan East. For the former case, the industrial development in and around these states to absorb surplus labor force is a possible strategy to take. For the latter case, re-distribution of income might be a better solution, because it is difficult to develop industries in the place where the number of population is very small or the population density is very low. For Rakhine, the state with both high poverty share and high poverty incidence, a specific policy is needed.

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<sup>12</sup> In the Figures 14 and 15, Shan State is divided into Shan East, Shan North and Shan South; and Bago Region is divided into Bago East and Bago West.

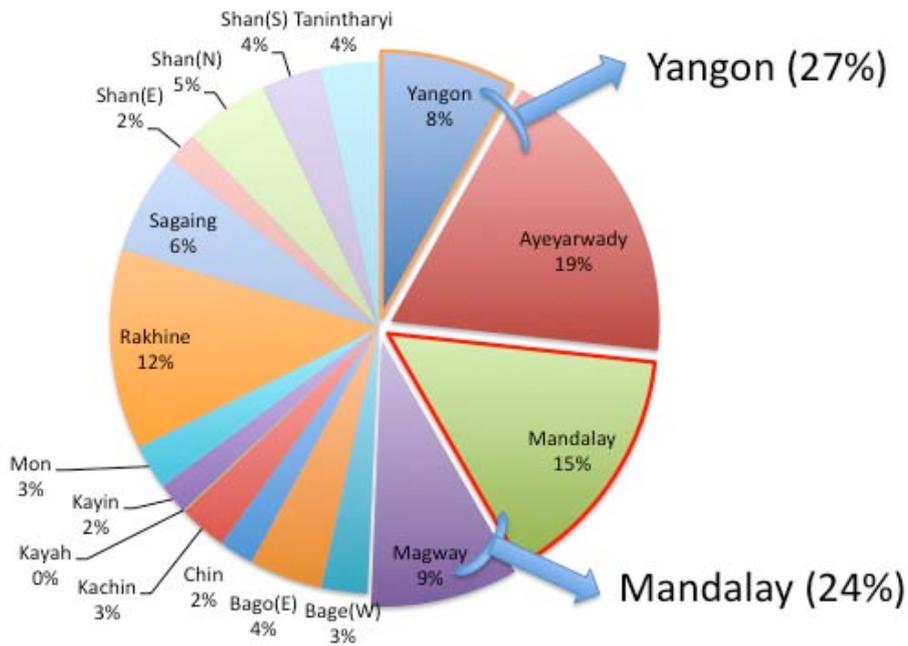
**Figure 14: Poverty situation and development strategy by state/region (2010)**



Source: Authors based on UNDP (2011).

As depicted in **Figure 15**, Yangon, the economic centre of Myanmar, has the poverty share of 8.1%. Combined with neighboring Ayeyarwady, the poverty share becomes 26.7%. Suppose that Yangon also takes care of the poverty population in Mandalay and Magway, part of populated and poor Central Dry Zone (CDZ), the share reaches 50.6%, just above the half of national poverty population. This is clearly too much and the poverty eradication strategy depending on the mono-centric economic agglomeration in Yangon has some risks to take. Considering that Mandalay already has relatively high economic agglomeration, it is more reasonable that Mandalay takes care of own poverty population as well as the poverty population of neighboring Magway (and Sagaing). So, for Myanmar, it seems to be desirable to aim at a two-polar economic structure like Vietnam.

**Figure 15: Poverty share by state/region (2010)**



Source: Authors based on UNDP (2011).

## 5. BORDER DEVELOPMENT AND ENHANCING CONNECTIVITY

### 5.1. Regional inequality

As we discussed, some degree of concentration of economic activities is inevitable and even desirable for developing countries, at least for the least developed countries. However, we should take care of the regions that become economic periphery. In case of Myanmar, mountainous border regions need a due attention. It is difficult to invite or develop certain kinds of industry to less developed regions with small population.

In the earlier stage of economic development for Myanmar, the limited development resources should be concentrated first in Yangon, and in some extent, in Mandalay. Even though the two-polar strategy is more “balanced” than the one-polar strategy, and more “efficient” than the many-polar strategy, it doesn’t dissolve the gap between economic centres and peripheries, unfortunately. **Table 3** shows the spatial gini coefficients for each country by development strategy. The spatial gini coefficient takes 1 if the all the activities are concentrated in one region, and takes 0 if n regions

have the equal share of economic activities.<sup>13</sup> For Myanmar, the spatial gini coefficient increases even under the ‘no public investment’ scenario but increases dramatically under the one-polar strategy. The coefficient under the two-polar strategy shows the ‘unevenness’ of economic activities is actually little bit worse compared with that of the one-polar strategy. This is interpreted that the gap between two economic centres, i.e., Yangon and Mandalay, and the rest of the regions widen in the two-polar strategy.

**Table 3: Spatial gini coefficients for each country by development strategy**

	Actual(2005)	Simulated(2030)			
		No public investment	1-polar	2-polar	many-polar
Myanmar	0.626	0.698	0.745	0.748	0.715
Malaysia	0.489	0.535	0.535	0.535	0.535
Thailand	0.739	0.900	0.900	0.900	0.900
Cambodia	0.678	0.686	0.686	0.686	0.686
Laos	0.726	0.857	0.857	0.857	0.857
Vietnam	0.539	0.712	0.712	0.712	0.712
China	0.687	0.769	0.769	0.769	0.769
Bangladesh	0.603	0.723	0.723	0.723	0.723
India	0.827	0.918	0.918	0.918	0.918
Indonesia	0.942	0.983	0.983	0.983	0.983
Philippines	0.934	0.935	0.935	0.935	0.935
Japan	0.521	0.565	0.565	0.565	0.565
Taiwan	0.932	0.965	0.965	0.965	0.965
Korea	0.568	0.580	0.580	0.580	0.580
East Asia	0.970	0.941	0.941	0.941	0.941

*Source:* Authors based on IDE/ERIA-GSM simulation results.

<sup>13</sup> Note that it is not proper to compare the spatial gini coefficients for different countries because it is affected by the definition of region, but one tendency is that the coefficients increase for all the countries in 2030 compared with 2005, while the coefficient for East Asia as a region decreases during the same period in the simulation by IDE/ERIA-GSM. This means that the economic activities are expected to agglomerate intra-nationally, but disperse inter-nationally.

**Table 4** compares the gap of GDP and GDP per capita between 7 regions and 7 states in Myanmar by development strategy. Generally, the inequality between 7 regions and 7 states widen even under the ‘no public investment’ scenario, and worsen under the one-polar development strategy. Although the two-polar strategy increases the GDP per capita for both 7 regions and 7 states slightly compared with that under the one-polar strategy, the inequality of GDP and GDP capita between 7 regions and 7 states also worsen slightly.

**Table 4: Inequality between 7 regions and 7 states in Myanmar by development strategy**

	7 Regions (vs 7 States=1.0)		GDP per capita (national avg.(2005)=1.0)		
	GDP	GDP per capita	7 Regions	7 States	National
Actual (2005)	3.01	1.12	1.03	0.92	1.00
No Public Investment (2030)	3.58	1.21	3.02	2.51	2.89
1-Polar (2030)	6.48	1.97	4.87	2.47	4.31
2-Polar (2030)	6.72	2.03	5.03	2.48	4.44
Many-Polar (2030)	4.30	1.40	3.74	2.68	3.48

*Source:* Authors based on IDE/ERIA-GSM simulation results

The simulations using IDE/ERIA-GSM and related numerical analyses revealed that the two-polar strategy is reasonable to avoid the overconcentration of economic activities in Yangon without giving up higher economic growth. At the same time we notice that it alone doesn’t resolve the gap between economic centres and peripheries.

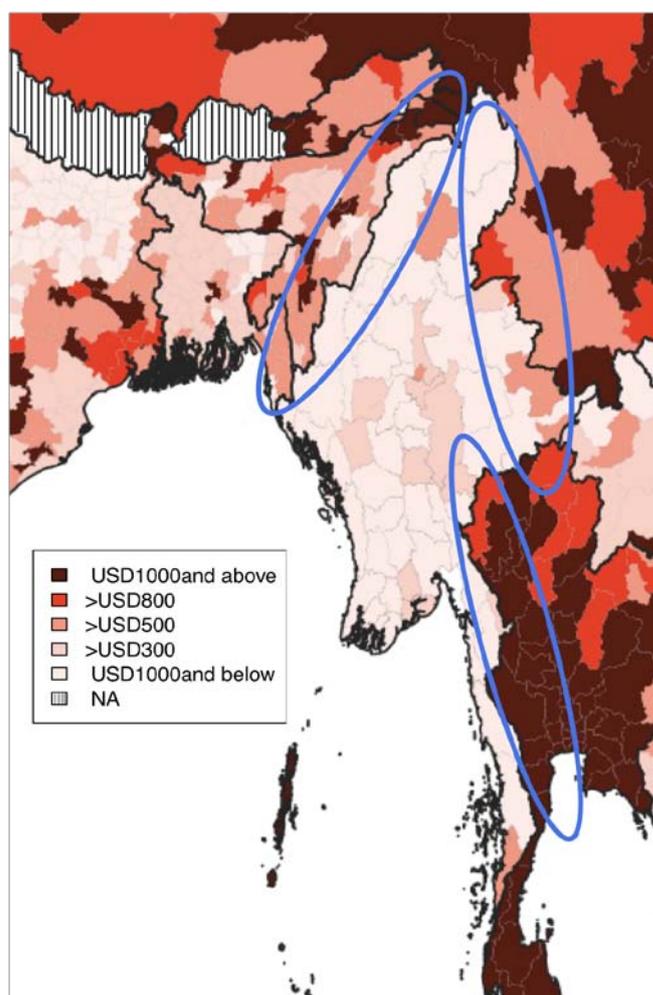
Now, we need to consider the complemented strategy to develop the economic periphery in Myanmar. However, we need to remind that the strategy to develop the economic periphery should not draw much development resource from the development of economic centres, in order to avoid ‘equally poor’ situation.

Fortunately, Myanmar is surrounded by more developed economies with high economic growth, i.e. China, Thailand, India, Bangladesh and Lao PDR. **Figure 16** also shows

that some of eastern border cities of Myanmar have higher level of income, and this is probably through closer links with its emerging neighbors, i.e., China and Thailand. On the contrary, western border cities have thus far failed to develop through links with their neighbors, i.e., India and Bangladesh. However, given the experiences of border cities with China and Thailand, there are ways for the western border cities to develop via enhanced connectivity with emerging India and Bangladesh.

Thus, border development that connects the neighboring countries can be a complemented strategy to mitigate the widening regional gap by two-polar growth strategy. Let us examine how border development can enhance economic growth in the border areas in the next section.

**Figure 16: GDP per capita for Myanmar and its neighbors (2005)**



*Source:* Authors based on IDE/ERIA-GSM dataset.

## 5.2. Open-door policy<sup>14</sup>

Myanmar shares long borders with five neighboring countries, namely China (a border of 1357 miles), Thailand (1314 miles), India (857 miles), Bangladesh (152 miles), and Laos (128 miles) and shares coastal water with Malaysia and Singapore. There are differences in natural resource endowments and industrial development stages among them. It should be natural for Myanmar to have stronger economic ties with its neighbors.

In reality, however, Myanmar's national borders had long been closed, for all practical purposes, throughout its socialist period (1962-1988). Myanmar pursued a strict non-aligned foreign policy and operated on an economic strategy of self-reliance and self-sufficiency. However, the military government (SLORC/SPDC) that came into power in 1988 drastically changed policy, introducing open-door actions such as the liberalization of external trade, legalization of cross-border trade with neighboring countries, and acceptance of foreign investment by enacting the Foreign Investment Law (FIL).

The open-door policy adopted by Myanmar's military government was welcomed by neighboring countries, China and Thailand in particular. Following the end of the Cold War, China ceased its dual-track foreign policy toward Myanmar, in which it endorsed party-to-party relations between the China Communist Party (CCP) and Burma Communist Party (BCP), in addition to state-to-state relations (Tin Maung Maung Than, 2003:194). Thailand abandoned its secret strategy of using the Karen and other ethnic insurgents deployed alongside the border areas as a buffer against the Myanmar army and the BCP. Chatichai Choonhavan, the Thai Prime Minister from 1988 to 1991, coined the famous phrase: "Change Indochina from a battlefield to a commercial field." The then military government in Myanmar also initiated a ceasefire policy with ethnic insurgents, most of whom occupied the border areas, in 1989. Thus, peace was realized in these areas for the first time.

Moreover, Myanmar joined the Greater Mekong Sub-region (GMS) Economic

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<sup>14</sup> This section is excerpted and modified from Kudo (2009).

Cooperation in 1992, which was a significant departure from its traditional neutralist foreign policy. Following this, Myanmar joined the Association of Southeast Asian Nations (ASEAN) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) in 1997, the Mekong-Ganga Cooperation in 2000 and the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) in 2003. Myanmar's open-door policy was well received by East Asian regionalism throughout the 1990s and the first decade of the 21<sup>st</sup> century. Thus, the opening of the Myanmar border to neighbors has made border trade and border industry possible by enhanced connectivity with its neighbors.

### **5.3. A simulation analysis of enhancement of connectivity**

The first principle of economic development discussed in this paper is that we should not spread scarce development resources to too many regions, especially at the early stage of economic development. If we remind the fact that Myanmar is surrounded by richer neighboring nations, enhancing the connectivity with these nations is a key to more balanced development while not diverging too much development resources from economic centres.

We analyze the economic effects of enhancing connectivity by IDE/ERIA-GSM. In this 'enhanced connectivity' scenario, we combined a) the customs facilitation measures at some national borders in 2015 and 2020, b) upgrading the roads connecting these borders through major cities in Myanmar in 2015 and 2020, and c) connecting Dawei and Kyaukphyu Ports with India and Europe in 2020.

For a), we reduce the time and money costs at the following national borders in half. The borders are Tachileik-Mae Sai, Mongla-Daluo, Tamu-Moreh Kanchanaburi-Dawei, Kawthoung-Ranong, Myawaddy-Mae Sot, and Muse-Ruilli.

For b), we assumed the following routes are upgraded. 1) Yangon-Mandalay (2015), 2) Muse-Mandalay-Kyaukphyu (2015, then upgrading the route to Sittwe in 2020), 3) Myawaddy-Paan-Yangon (2015, then upgrading the route to Patheingyi in 2020), 4) Yangon-Mandalay second link on the western side of Bago Yoma (2020), 5) Mandalay-Monywa-Tamu (2020), 6) Mongla-Kyinetone-Tachileik (2020) and

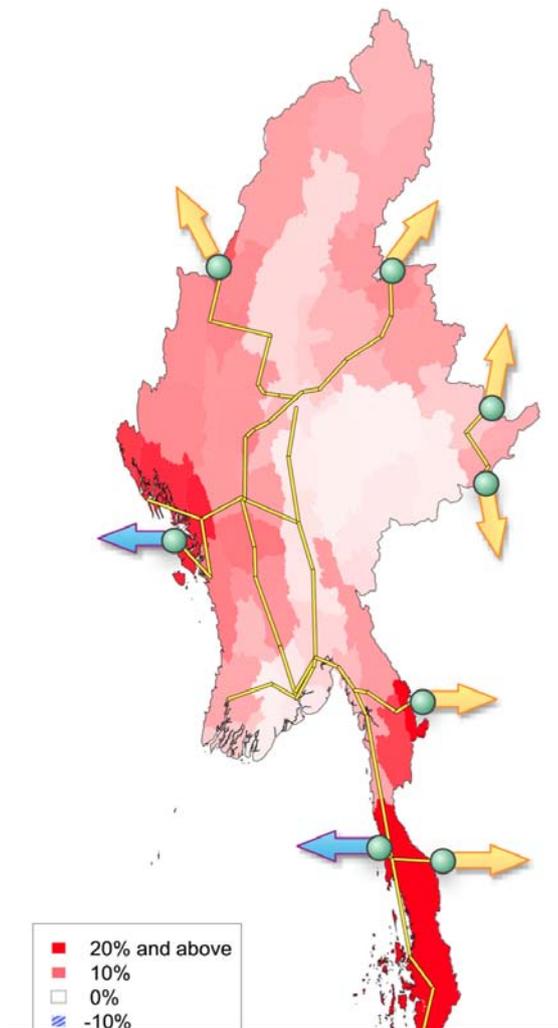
7) Yangon-Mawlamyine-Dawei-Myeik-Kawthoung. All these routes can be developed as economic corridors in Myanmar.

For c), Dawei and Kyaukphyu ports are connected with Kolkata, Chennai and Rotterdam in 2020, and the ‘transit trade’ through Myanmar is now possible for Thailand and China.

**Figure 17** shows the economic effects of enhancing connectivity given the two-polar strategy is implemented.

The figure shows that the enhancement of connectivity increases the GDP in periphery regions considerably without reducing the GDP in economic centres. The inequality measures are all improved compared with the two-polar strategy without enhancement of connectivity. **Table 5** shows the GDP share of Yangon is slightly reduced by the enhancement of connectivity, while the national GDP is improved. **Table 6** shows the income gap between 7 regions and 7 states narrowed by enhancement of connectivity, while the average incomes of 7 regions and 7 states improved, compared with the two-polar strategy without enhancing connectivity.

**Figure 17: GRDP differences between two-polar strategy with and without enhancement of connectivity (2030)**



Source: Authors based on IDE/ERIA-GSM simulation results.

**Table 5: National GDP and GDP share of Yangn and Mandalay by development strategy (2030: Assumption 2)**

	GDP Share of YGN	GDP Share of MDY	National GDP
Actual (2005)	0.19	0.05	0.19
No Public Investment (2030)	0.26	0.11	1.00
1-Polar (2030)	0.55	0.06	1.49
2-Polar (2030)	0.43	0.19	1.54
<b>2-Polar+Connectivity (2030)</b>	<b>0.42</b>	<b>0.19</b>	<b>1.58</b>
Many-Polar (2030)	0.30	0.13	1.20

*Source:* Authors based on IDE/ERIA-GSM simulation results.

**Table 6: Inequality between 7 regions and 7 states in Myanmar by development strategy**

	7 Regions (vs 7 States=1.0)		GDP per capita (national avg.(2005)=1.0)		
	GDP	GDP per capita	7 Regions	7 States	National
Actual (2005)	3.01	1.12	1.03	0.92	1.00
No Public Investment (2030)	3.58	1.21	3.02	2.51	2.89
1-Polar (2030)	6.48	1.97	4.87	2.47	4.31
2-Polar (2030)	6.72	2.03	5.03	2.48	4.44
<b>2-Polar+Connectivity (2030)</b>	<b>6.53</b>	<b>1.98</b>	<b>5.15</b>	<b>2.60</b>	<b>4.56</b>
Many-Polar (2030)	4.30	1.40	3.74	2.68	3.48

*Source:* Authors based on IDE/ERIA-GSM simulation results.

The simulation results above show that the enhancement of connectivity complements the two-polar growth strategy nicely and is effective to narrow the gap between economic centres and peripheries. Given that financing this strategy doesn't draw much development resources from the development of economic centres, 'connectivity' seems to be a key strategy to attain the balanced growth for Myanmar.

#### **5.4. Border industry**

Another important component of border development is border industry. Border industry here is simply defined as industry located in border areas of two or more

countries (Kudo and Kuroiwa, 2009). What factors promote or hinder border industry? There are two factors that influence the competitiveness of border industry, i.e., complementary resource endowment and cross-border infrastructure.

The first factor is existence of complementary resource endowment in border areas. From an economic point of view, a border is nothing but an impediment to free mobility of productive inputs, such as labor, capital, technology and information. As a result, a border creates differences in factor prices across the border, and complementary inputs become available alongside each other in border areas. Such complementary inputs can be easily transported across the border and combined for production on either side of the border. A border industry can grow by exploiting the differences in the endowment of productive inputs across the border.

In the Greater Mekong Sub-region (GMS), Thailand and China are relatively advanced economies, while Cambodia, Lao PDR and Myanmar (CLM) are still in their rudimentary development stages. On the other hand, Vietnam is apparently entering a more advanced stage of economic development. Border areas between relatively advanced and less developed economies offer their respective complementary location advantages. For example, CLM economies provide a labor force, while Thailand offers major inputs (materials, parts, and components), technology, and capital. In border areas, those complementary resources, which exist side by side across borders, are combined to produce cost-competitive products. Of course, some of these resources must be transported across the border to be utilized for production in a border town. Thus, a certain degree of cross-border mobility of productive inputs is required for the birth and growth of a border industry.

The second factor is cross-border infrastructure. In East Asia, service link costs – costs for connecting remotely located production blocks – have been reduced substantially. This made it possible for multinational corporations (MNCs) to aggressively exploit wage differences between developed and less developed economies in East Asia and to develop extensive production and distribution networks in the region.

However, Myanmar has yet to be integrated into such networks in spite of their abundant, reasonably well-educated and low-waged labor force. Underdeveloped infrastructure, notably in transportation and communication, hinders the country from participating in production and distribution networks and, unless good infrastructure is developed, the savings in labor costs by relocating labor-intensive activities to Myanmar are more than being offset by increases in service link costs and other costs (fixed costs of setting up new factories, high utility service costs, etc.). Particularly in labor-intensive export sectors, high transport costs could easily wipe out export profitability even if wage levels fell substantially. We should note that Myanmar's industrial sector is, and will be for a foreseeable future, highly dependent on labor-intensive industries.

Here, a border industry could offer a solution for overcoming such a problem. Myanmar can participate in the production network via border areas. The required infrastructure investment to connect its border areas with the existing infrastructure in neighboring countries may be far smaller than that for developing a nationwide infrastructure system. For example, firms in Myanmar-Thai border areas can gain access to the well-developed Laemg Chabang Port via well-connected road networks in Thailand.

In border areas, firms would also have better access to utility services such as electricity, water, and telecommunications that are provided by more advanced neighboring countries. Thus firms located in border areas can enjoy all the benefits of lower service link costs (i.e. lower transport and communication costs) and more reliable and cheaper utility services (especially electricity) as well as lower labor costs. In this way, border industry can grow and complement the two-polar growth strategy. Border areas in Myanmar are no longer regions that depend on assistance from the centre. On the contrary, they are frontiers and conduits that absorb the economic energy of emerging countries, such as Thailand and China at present and India and Bangladesh in the future, into the centres of the Myanmar economy by the enhancement of connectivity and the growth of border industry.

## 6. CONCLUSION

Two-polar growth strategy and border development with enhancement of connectivity prevent from either over- or under-concentration and makes “high” and “balanced” growth possible. To make the strategy feasible, spatially targeted investment, including physical and institutional infrastructure, in Yangon, Mandalay, and some border areas is required.

How to make Yangon and Mandalay growth poles and make them contribute to poverty alleviation is a challenge. For that, the establishment of special economic zones (SEZs) can be an effective policy tool to promote industrial clusters in the targeted areas. SEZs that include export processing zones (EPZs) and free trade zones (FTZs) have been widely established in East Asia and export-oriented industries that led the developing economies in the region were typically located in such zones. SEZs are designed to insulate themselves from the rest of the economy, where the business and investment climate is sometimes unfavorable, as is the case of Myanmar. SEZs are also provided with better infrastructure services such as transportation, telecommunications and energy.

Another important policy tool can be promotion of FDI. Without substantial inflows of FDI, Myanmar, one of the least developed economies in the region, will not be possibly integrated into the production and distribution networks in East Asia. In the full-fledged MCDV, we will tackle these challenges.

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