CHAPTER 5

Regional Development along Economic Corridors: Southern Coastal and Northern Sub-Corridors in Vietnam

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CHAPTER 5
REGIONAL DEVELOPMENT ALONG ECONOMIC CORRIDORS: SOUTHERN COASTAL AND NORTHERN SUB-CORRIDORS IN VIETNAM

Phi Vinh Tuong

INTRODUCTION

Economic growth and poverty reduction depend on the business activities, which in turn depend on the agglomeration of enterprises. Naturally, business activities often concentrate in areas with favorable business environments, such as near roads, ports and available energy for production. Unfortunately, these factors are not equally distributed across localities either domestically or internationally.

The economic corridor approach creates new chances for the remote and landlocked areas that have location disadvantages, as it fosters economic growth and sustains their poverty reduction. From this view point, the Southern Economic Corridor (SEC) will play an important role for the development of a large part of Vietnam, from the Central Highland region and Coastal Central region in the North to the East Southern region in the central area and the Mekong Delta region in the south of the corridor.

Provinces and cities across the regions mentioned above experienced different development stages. In this context, the road transportation utilization levels for economic activities across sub-corridors of the SEC are quite different. While provinces in the East Southern region benefit by the enhancement of the central sub-corridor, provinces in other regions seem to need more business activities so that they could internalize sub-corridors enhancement to their own benefit such as through economic growth and poverty reduction.

Therefore, this chapter will focus on the economic activities of the provinces along

the two sub-corridors, the Northern and the Southern Coastal Sub-corridors, and their potential to utilize the sub-corridors for economic development. The first section presents the overview on the SEC, including the history of investment for upgrading the SEC in Vietnam. Then, the chapter divides into two major sections, each examining the development of provinces along a sub-corridor.

The second section examines the economic development of Kien Giang and Ca Mau provinces along the Southern Coastal Sub-corridor. This section has three sub-sections. The first sub-section presents the role of two provinces in the economic development of the Mekong Delta region. The second sub-section examines the economic development of these two provinces, presenting their strengths and weaknesses as well as some threats to their development in the future. The third sub-section will evaluate the potential industries that may allow them to internalize the benefits of sub-corridors enhancement physically into their economic benefit and some major issues that they need to address in that context.

The third section presents the economic development of provinces along the Northern Sub-corridor. They are Gia Lai province of the Central Highland region and Binh Dinh province of the Coastal Central region. This section also has three sub-sections. The first sub-section examines the economic development of these two provinces within their regional development. The second sub-section presents their investment and development results. The third sub-section evaluates the potential industries that may help to foster their economic development and utilize the sub-corridor. Besides the opportunity provided by the sub-corridor, this sub-section presents their strengths and weaknesses as well as some issues that they have to cope with during their development process.

1. OVERVIEW

1.1. Overview of the Southern Economic Corridor

The Greater Mekong Sub-region (GMS) covers 5 ASEAN countries, namely Cambodia, Lao People's Democratic Republic (Laos), Myanmar, Thailand, Vietnam, and provinces of the People's Republic of China, namely Yunnan province and the Guangxi Zhuang

Table 1: GDP of GMS Countries (Nominal Price in US$)

Country	2001	2006	2007	2008	2009
Lao PDR	1.740	3.522	4.128	5.285	5.579
Cambodia	3.783	7.258	8.636	11.073	10.359
Myanmar	6.935	13.188	19.132	22.858	24.973
Viet Nam	32.647	60.965	70.965	90.515	96.317
Thailand	115.595	207.468	247.095	272.789	264.323
ASEAN	575.073	1.087.999	1.303.981	1.512.707	1.496.341
GMS Countries	160.699	292.401	349.956	402.521	401.551
GMS 5 out of ASEAN	28%	27%	27%	27%	27%

Source: ASEAN statistical data, http://www.aseansec.org/18135.htm, accessed date November 12, 2011.

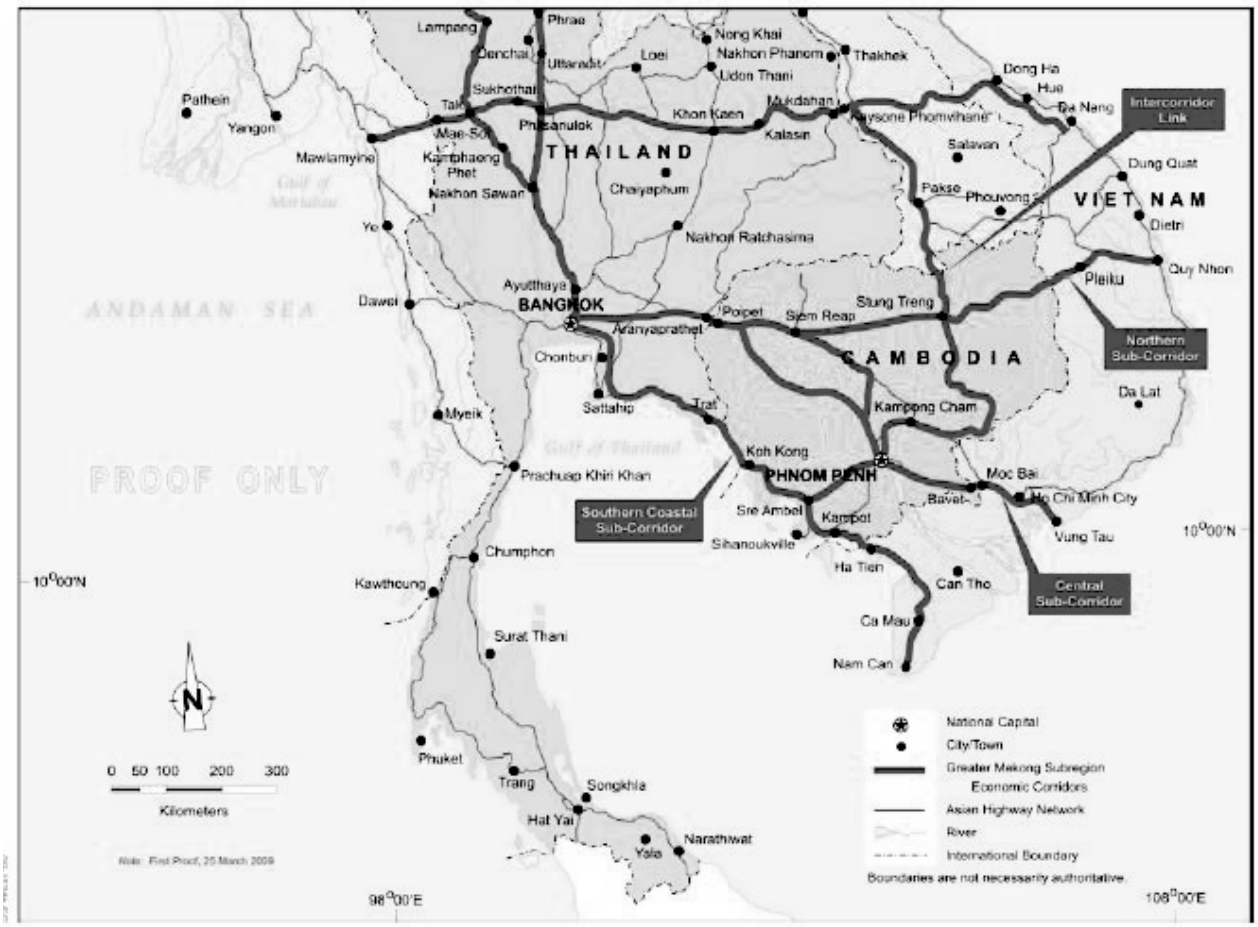
Autonomous Region. Countries and regions across the GMS experienced different development stages (Table 1). The development level of provinces and cities across countries are also quite varying. Generally, the development level of remote and mountainous areas lags behind that of the large cities.

From the beginning of the 1990s, the GMS activated a regional cooperation program with the support of donors. The two ultimate objectives were to promote economic growth and reduce the level of poverty for a population of 326 million people living in an area of 2.6 million sq. km. From the regional development viewpoint, much effort has been allocated to upgrading the quality of the infrastructure, especially the roads, to facilitate the connection across regions in the GMS.

That effort generated a network of roads infrastructure, helping countries and regions across the GMS to connect with each other. This roads transportation network, consisting of the North-South Economic Corridor (NSEC), the East-West Economic Corridor (EWEC) and the SEC, became the transportation backbone for GMS development (Figure 1).

The economic corridor approach to develop the remote and landlocked areas had been adopted by leaders of the GMS countries in the Ministerial Meeting in Manila (1998), and was emphasized again in the GMS Summit Conference in Laos (2008). This approach aims at assisting the sustainable development and poverty reduction of the remote and landlocked areas (across GMS countries) by providing them chances to

Figure 1: The Southern Economic Corridor



Source: ADB.

connect with earlier developed and prosperous areas through the constructed roads transportation network.

GMS countries expected to maximize the utilization of the roads infrastructure for the remote and landlocked areas to cope with the poverty issue and to foster their economic development. The corridors created large potential for transporting production materials and mobilizing laborers from remote and landlocked areas to large cities, where business activities are often agglomerating. This also created chances for remote and landlocked areas to attract investment, generally starting with the mining, planting and processing industries, for their economic growth.

In the GMS transportation network, the SEC connects parts of Thailand, Cambodia and Vietnam together. The SEC consists of three sub-corridors and an inter-corridors

link, connecting them with the EWEC. They are:

- The Central Sub-corridor connects Bangkok (Thailand), Phnom Penh (Cambodia), Ho Chi Minh City and Vung Tau (Vietnam)
- The Northern Sub-corridor connects Bangkok (Thailand), Siem Reap, Stung Treng, Rattanakiri, O Yadov (Cambodia), Pleiku and Quy Nhon (Vietnam)
- The southern costal sub-corridor connects Bangkok, Trat (Thailand), Koh Kong, Kampot (Cambodia), Ha Tien, Rach Gia, Ca Mau and Nam Can (Vietnam)
- The inter-corridors link connects Shihanoukville, Phnom Penh, Kratie, Stung Treng, Trapang Kreal (Cambodia) and Pakse, Savannakhet (Laos). This inter-corridors link connects the Sub-corridors of the SEC with the EWEC.

The SEC is expected to provide development opportunities for these provinces and cities through the integration of their advantages. Provinces and cities along the Central Sub-corridor are given the advantages of the early development of Bangkok (Thailand) and the east southern region of Vietnam (Greater Ho Chi Minh City), having great chances to promote industrialization and urbanization. The Central Sub-corridor could further help to foster the industrial agglomeration and the mobilization of factors of production along it to these industrial bases. It also provides chances for provinces along this sub-corridor to develop new industrial clusters for supporting the two industrial bases above, relying on Japanese experiences to promote regional development along the Tokyo-Osaka corridor. It may also diffuse the development chances to other sub-corridors when the link roads in Vietnam are completed.

In addition to the potential development in the industrial sector, the SEC also has great potential to help these provinces in promoting the tourism industry, especially along the Southern Coastal Sub-corridor. With plentiful and beautiful natural scenery as well as historically famous places such as Shihanoukville and Siem Reap in Cambodia and Phu Quoc, Ha Tien and Cam Mau in Vietnam, provinces along this sub-corridor have a great chances to cooperate and integrate into the tourism chain led by Thailand. Benefits from the tourist attraction capacity of Thailand, Cambodia and Vietnam could be increased when the sight-seeing and leisure network expands.

The SEC enters Vietnam from three different routes (via the Le Thanh international border gate from the north, via the Moc Bai international border gate from the center and via the Xa Xia international border gate from the south), covering a large area in Vietnam. More specifically, the SEC crosses the Central Highland region and the Coastal Central region (the Northern Sub-corridor), the east southern region (the Central Sub-corridor) and the Mekong Delta region (the Southern Coastal Sub-corridor).

Provinces along the three sub-corridors experienced different development levels. Located in a dynamic region, with early developed large industrial estates, the people in Ho Chi Minh City and Ba Ria-Vung Tau province are enjoying the results of high economic growth. An earlier survey in 2010 showed that provinces and cities connected to the Central Sub-corridor entered a new period of cooperation for development, where Ho Chi Minh City will specialize in providing services while Ba Ria-Vung Tau province will foster the development of logistic services.

In contrast to the prosperity of provinces and cities along the Central Sub-corridor, the development of provinces along the two other sub-corridors still lags far behind. While Vietnam has already reached the Millennium Development Goals (MDG) of reducing its poverty rate by half during the 1990-2015 period, poverty in some remote and landlocked areas is still very high. This poverty ratio is especially higher with the new poverty line introduced in 2010 (Table 2). [1]

The poverty situation in Vietnam provinces along the two sub-corridors (the Northern Sub-corridor and the Southern Coastal Sub-corridor) was still at high levels. Especially, the poverty ratio in Gia Lai province was even much higher, and Binh Dinh province also had a high poverty ratio (Table 2). The poverty situations in provinces in the Mekong Delta region (MDR hereafter), which were slightly lower than the national level and the regional level, are of a better position compared with that of Binh Dinh and Gia Lai provinces.

There are many determinants that may influence the development of the localities. At the country level, becoming a member of the WTO created chances to access international markets for all. At the provincial level, the administrative deregulation had

[1] The new poverty line, which applies for the 2011-2015 period, is 400,000 VND/capita/month in rural area and is 500,000 VND/capita/month in urban areas.

Table 2: GDP and Poverty Ratio of Provinces along SEC

Province / City	GDP (billion VND – 1994 price)		Poverty (%)	
	2008	2010	2008	2010
Gia Lai	5,145	–	23.7	25.9 (n.a.)
Central Highland	–	–	21.0	22.2 (17.1)
Binh Dinh		9,363	14.2	16.0 (n.a.)
Coastal Central region	–	–	14.7	16.9 (12.7)
Ho Chi Minh city	124,303	150,943	0.3	0.3 (n.a.)
Ba Ria – Vung Tau	33,651	33,079	6.3	6.9 (n.a.)
East southern region	–	–	3.7	3.4 (2.2)
Kien Giang	15,183	18,930	9.3	9.3 (n.a.)
Ca Mau	11,676	14,605	12.7	12.3 (n.a.)
Mekong Delta region	131,037	161,395	11.4	12.6 (8.9)
Country	490,473	551,609	13.4	14.2 (10.7)

Note: The numbers in brackets are the poverty ratios by applying the old poverty line.

Source: Summarized by the author in accordance with GSO and MOLISA statistical data.

provided localities in Vietnam with more autonomy to foster economic development through integration into the global production network.

Trade and non-trade barriers are also considered as determinants of development. Given the fact that conventional trade barriers, such as tariffs and quotas, have been reduced recently, much effort to attract investors and to promote business activities now focuses on non-trade barrier issues. Enhancing trade facilitation, including the development of logistic services and customs facilities, are measures to create more incentives for enterprises to come, which consequently helps the localities to reach the target of economic growth and development.

1.2. Historical Investment of Southern Economic Corridor - Section in Vietnam

According to the ADB data, the total length of the Southern Coastal Sub-corridor is 924 km. In Vietnam, this corridor could be divided into three sectors. The first sector starts from the Xa Xia (Ha Tien) international border gate and goes along Route No. 80 via Ha Tien town to Rach Gia city of Kien Giang province. The length of this sector, which was measured during the field trip in the middle of 2011, is around 97 km.

The second sector starts from Rach Gia city and goes via Kien Thanh (Route No.

80) and Minh Luong (Route No. 61), ending in Ca Mau city (Ca Mau province, Route No. 63). The total length of this sector is around 130 km. The last sector, which was not estimated in the last survey due to low quality of the road, is from Ca Mau city to Nam Can town (Ca Mau province) on Route No. 1A. Therefore, the length of the Southern Coastal Sub-corridor in Vietnam accounts for about 25% of the corridor's total length.

Since "Doi Moi" (1986), the government has identified that making a good transportation infrastructure is one of the first priority tasks. Integrating into the region and the world economy allowed the government to mobilize different sources in financing the construction of transportation infrastructure.

During the earlier period of development (1990-2000), the government mainly used national budget for the investment to develop the transportation backbone. This investment included the construction and upgrading of Route No. 1A, the link road that connects the international border gates and international ports to the backbone. To finance the increasing need of upgrading transportation infrastructure, other measures had been applied in the form of BOT, BT, etc., to encourage private funds. Projects using this measure include the Route No. 14 upgrading.

From the second period (2001-2010), to vitalize the national budget condition, the government also mobilized preferential loans and credits for transportation infrastructure upgrading in complement with the government budget (including ODA). The quality of roads infrastructure therefore changed significantly during this period. Table 3 summaries the investment for the roads infrastructure along the two sub-corridors of the SEC, classified by major sources of investment.

2. SOUTHERN COASTAL SUB-CORRIDOR AND THE DEVELOPMENT OF PROVINCES IN VIETNAM

2.1. Development of MDR and Provinces along SEC-Southern Coastal Sub-Corridor

The two provinces that benefit directly from the Southern Coastal Sub-corridor are Kien Giang and Ca Mau. In Vietnam, the two provinces belong to the MDR and their

Table 3: Investment on Roads Infrastructure in Vietnam

Government Budget

Project	Province	Started - Finished	Design Capacity	Investment Amount	Disbursement Amount
Route No. 80	Kien Giang	1996-2001	214 km	197,331	194,852
"Kenh 9" bridge on Route No. 80	Kien Giang	1998-2000	74 m	8,533	8,103
Route No. 19 (DucCo Town)	Gia Lai	1999-2001	5.5 km	15,243	14,273
Route No. 24 (embankment and drainage)	Kon Tum	2000-2003	30 km	12,130	11,099
Route No. 24 (from km 69 to km 115)		1999-2001	46 km	19,946	19,946
Route No. 24 (Mang Den Pass)		2000-2003	14 km	14,087	12,758

Government Bond [1)]

Project	Province	Started - Finished	Design Capacity	Investment Amount	Disbursement Amount
Route No. 14 (Ho Chi Minh Road – Phase II, from Tan-Canh to Buon-Me-Thuot)	Gia Lai and Kon Tum	2006-2010	289 km	2,324,000	627,000
Nam Can – Dat Mui (Ho Chi Minh Road – Phase II)	Ca Mau	2008-2010	59 km	3,540,000	96,000
Dam Cung Bridge (Ho Chi Minh Road – Phase II)	Ca Mau	n.a.	n.a.	351,000	65,000
Route No. 19 (Pleiku – Kon Don)	Gia Lai	2003-2006	72 km	273,000	203,000
Route No. 63 CaMau (km43 – km 85)	Ca Mau	2003-2006	39 km	120,000	67,000
Route No. 63	Kien Giang	2003-2006	74 km	417,000	195,000

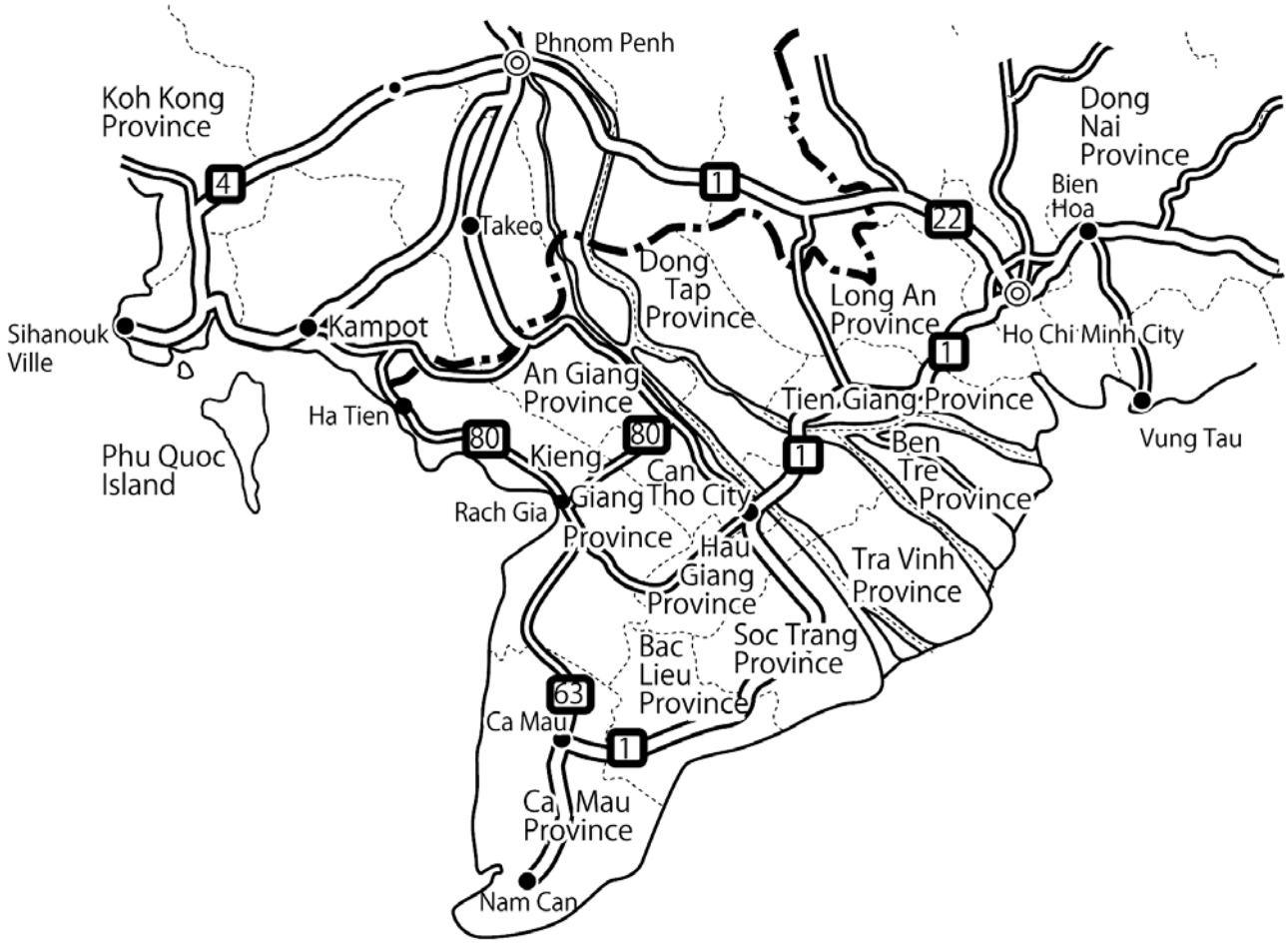
Note: 1) Disbursement amount for investments from government bonds was estimated by the end of 2009.
Source: Summarized by the author based on MPI and Party Central Office, (2010).

development also influences the MDR's development. The MDR is one of the 6 large regions in the administrative system of Vietnam.

The MDR consists of 12 provinces (Figure 2), namely An Giang, Bac Lieu, Ben Tre, Ca Mau, Dong Thap, Hau Giang, Kien Giang, Long An, Soc Trang, Tien Giang, Tra Vinh and Vinh Long, the city of Can Tho. The MDR, having favorable conditions for the development of agriculture and fishery, became the center of agriculture, aquaculture, and tropical fruits of Vietnam.

Located at the southernmost part of the MDR and of the country, Ca Mau province became independent from Kien Giang province in the 19th century. After some merging

Figure 2: Southern Coastal Sub-corridor and Mekong Delta Region



Source: Drawn by the editor.

Table 4: Distance across Provinces and the City in MDR

Section			Distance (km)
Ca Mau province	–	Bac Lieu province	68.0
Bac Lieu province	–	Soc Trang province	52.0
Soc Trang province	–	Can Tho city	63.0
Can Tho city	–	Vinh Long province	40.0
Vinh Long province	–	Tien Giang province	38.0
Tien Giang province	–	Ho Chi Minh city	87.0
Can Tho city	–	Ho Chi Minh city	165.0
Ca Mau province	–	CanTho city	183.0
Ca Mau province	–	Ho Chi Minh city	348.0

Source: Measured by the editor.

and separation, the current administration of Ca Mau province was formally established in 1997. Ca Mau connects with other provinces (Kien Giang and Bac Lieu) in the MDR via Routes No. 63, No. 61 and No. 1A. Route No. 1A, therefore, is considered as the inter-corridors link of the SEC in Vietnam. Table 4 presents the distance from Ca Mau city of Ca Mau province to major cities, including Can Tho and Ho Chi Minh City, through Route No. 1A. Kien Giang province, the neighboring province of Ca Mau, links with other provinces in the MDR via Routes No. 80 and No. 61. The distance from Kien Giang to Can Tho is around 116 km (via Route No. 91B and No. 80).

Today, the MDR supplies 50% of the total rice production, 52% of the total seafood products and around 70% of the total fruits for the country, as well as shipping to the international market. This region is not only an important source of revenue for government budget but also the main source of food security for the whole country. In the MDR, Can Tho city is the center of the region while Kien Giang and Ca Mau provinces are two of the largest provinces, accounting for over 28% of the total MDR area (Table 5). Provinces in the MDR allocate over 75% of their land for the agriculture sector.

Together with An Giang province, the three provinces and the city mentioned above form the Mekong Delta Focal Economic Zone (MDFEZ). The formation of the MDFEZ aims to promote the economic growth and poverty reduction of the MDR via the early

Table 5: Structure of Land Use by 2008 in MDR

MDR Province	Total Area	Structure (%)		
		Agriculture	**Non-agriculture**	**Homestead**
Can Tho city	140,162	82	13	4
An Giang	353,676	84	11	4
Kien Giang	634,626	91	6	2
Ca Mau	533,164	89	4	1
MDR	4,055,349	85	10	3

Source: Summarized by the author in accordance with the socio-economic statistical data of Mekong River Delta 2000-2009.

Table 6: Major Indicators of Development Status in MDR and MDFEZ by 2009

Province	Population (persons)	Population density (persons/square km)	GDP at constant price 1994 (Million VND)	Poverty ratio (2010)
CanTho city	1,190,264	849	15,029,436	7.2
AnGiang	2,273,150	643	15,928,238	9.2
KienGiang	1,688,228	266	16,876,000	9.3
CaMau	1,261,971	237	13,021,045	12.3
MDR	17,360,234	409	143,917,144	12.6

Source: Summarized by the author in accordance with provincial statistical data.

development of the 4 major provinces and the city. The development results of major provinces and the city in the MDR are summarized in Table 6.

In the MDR, the total population of Kien Giang and Ca Mau provinces experienced a slight decrease in 2009 compared with 2008, while the total population of Can Tho city and An Giang province experienced an increased in the same period. Nevertheless, the total population of the MDR decreased by nearly 400,000 people in 2009 compared with that of 2008.

2.2. Economic Development of Kien Giang and Ca Mau Provinces

2.2.1. Overview

The MDR is a young region of Vietnam, which was formed over 300 years ago and is characterized by alluvial soil, silt and loam. Endowed with rich agriculture land areas and a sophisticated network of canals and rivers, the MDR became an agriculture base of Vietnam. Rice and aquaculture production are two major industries in which Kien Giang and Ca Mau provinces have advantages.

Within the framework of the Socio-economic Development Strategy designed by the central government, the development strategies of Kien Giang and Ca Mau provinces insisted on fostering industrialization and modernization, and shifting their economic structures toward higher contribution from the service, industry and construction sectors while lower the contribution of the agriculture sector relatively.

Nevertheless, the agriculture sector still accounts for a large proportion in the

Table 7: Economic Structure of MDR and MDFEZ during 2000 - 2009

Year	Province	Agriculture (%)	Industry (%)	Service (%)
2000	CanTho	23	31	46
	AnGiang	42	11	47
	KienGiang	48	28	**24**
	CaMau	59	**20**	20
	MDR	**53**	**18**	**29**
2005	CanTho	19	40	41
	AnGiang	38	12	49
	KienGiang	47	25	28
	CaMau	52	**24**	23
	MDR	**47**	**22**	**31**
2009	CanTho	14	42	43
	AnGiang	32	12	57
	KienGiang	47	20	**34**
	CaMau	42	**34**	24
	MDR	**42**	**24**	**35**

Source: Calculated by the author in accordance with provincial statistical data.

economic structure of the MDR provinces, even the major provinces such as Kien Giang and Ca Mau (Table 7) after a decade of industrialization. In the MDR, the economic structure of the two major provinces mentioned above (Kien Giang and Ca Mau) experienced changes but with diverse directions.

In the economic structure of Kien Giang province, the service sector increased significantly by 10 percentage points, from 24% (2000) to 34% (2009). Perhaps the advantages of having a border with Cambodia and improvement in the roads infrastructure (with the 1996-2001 Route No. 80 Upgrading Project) that was finished at the beginning of the development decade were the two major factors that spurred the growth of the service sector in Kien Giang province.

In the case of Ca Mau province, development of the service sector lagged behind that of the other two sectors. Although Ca Mau province is considered as the final destination of the southern costal sub-corridor, the under-developed roads infrastructure and other development issues did not allow the province to take advantage of the corridor for local business activities.

Firstly, the investment history shows that the roads infrastructure in Ca Mau province (including the Southern Coastal Sub-corridor from Ca Mau to Nam Can) has

received attention from the government recently, with the implementation of two upgrading projects for Route No. 63, the section in Ca Mau province (km 43-km 85) during the 2003-2006 period, and the Nam Can-Dat Mui sector during the 2008-2010 period. The two projects were financed by government bonds.

Secondly, Ca Mau province has lacked a comprehensive plan for upgrading infrastructure to make it the Southern Coastal Sub-corridor's gateway to global markets. The Ca Mau airport, which was originally constructed by the French, was put into commercial operation in 1996 with a short runway of 1,050 m. The capacity of this airport only allows ground handling services for small-body aircraft. Since 1999, after the runway was upgraded to 1,500 m, the airport could provide ground handling services for the Airbus-ATR 72 and equivalent. The development of the Nam Can seaport was just recently approved (2010). The port was approved to become a specialized seaport, serving the transportation of a large volume of seafood products, fertilizers, wood chips and other agriculture-related products.

In that context, having the advantage of exploiting natural gas from the southwest sea, the industry sector of Ca Mau province soon developed. After 2005, when the Ca Mau Gas-Power-Fertilizer Complex was completed and went into operation, the industrial gross output of Ca Mau increased significantly (Table 7).

The economic structure of provinces and of the MDR implies that the current major industries in this area are closely related to agriculture and aquaculture products or to

Table 8: Volume and Value of Major Products (Current Price)

Product	Province	2000		2005		2009	
		Volume	Share (%)	Volume	Share (%)	Volume	Share (%)
Rice (1,000 tons)	Kien Giang	2,284	13.8	2,944	15.1	3,400	15.0
	Ca Mau	850	5.1	386	1.9	490	2.1
Aquaculture (Shrimp – 1,000 tons)	Kien Giang	n.a.	n.a.	18	7.6	(28)	9.1
	Ca Mau	35	51.4	81	34.3	(94)	30.6
Electricity and gas supply (billion VND)	Kien Giang	23	1.7	39	2.4	(429)	4.4

Notes: 1) Share means that out of the value of total MDR.

2) Numbers in the parentheses are of the year 2008.

Source: Summarized by the author in accordance with the provincial statistical data.

the natural resources endowment. Existing industries in Kien Giang and Ca Mau provinces include rice production, wood and forest products, fishery and aquatic products (including shrimp products), food processing, mining (in the case of Kien Giang province) and electricity and gas supply as shown in Table 8 (in the case of Ca Mau province).

With relation to the rice production industry, the total area of paddy field in Kien Giang province was around 354,000 hectares in 2009, which accounted for 61.5% of the total agricultural land area.[2] The rice production in 2009 was 3.4 million tons,[3] slightly below the rice production of An Giang province (3.459 million tons). Together with An Giang province, Kien Giang province became one of the two provinces having the largest paddy field areas in the region, as well as the highest contribution of rice production for the MDR (Table 9).

Compared with Kien Giang province, the second largest paddy field production in the MDR, the available paddy field in Ca Mau province was very small. The total area

Table 9: Rice Production Area and Yield of MDFEZ and MDR

		2000		2005		2008	
		Quantity	Share (%)	Quantity	Share (%)	Quantity	Share (%)
Production Area (hectares)	Can Tho	209,486	5.3	231,951	6.1	218,589	5.7
	An Giang	464,533	11.8	529,698	13.8	564,428	14.6
	Kien Giang	540,923	13.7	595,797	15.6	609,203	15.8
	Ca Mau	248,241	6.3	109,640	2.9	132,891	3.4
	MDR	3,947,476	100.0	3,824,887	100.0	3,858,878	100.0
Yield (tons)	Can Tho	997,111	6.0	1,233,705	6.4	1,198,441	5.7
	An Giang	2,349,377	14.2	3,218,383	16.6	3,519,343	16.6
	Kien Giang	2,284,288	13.8	2,944,315	15.2	3,387,148	16.0
	Ca Mau	850,339	5.1	386,950	2.0	970,190	4.6
	MDR	16,519,021	100.0	19,385,620	100.0	21,166,627	100.0

Note: Share means that out of the value of total MDR.

Source: Calculated by the author in accordance with the Socio-Economic Statistical Data of Mekong River Delta 2000 - 2009.

[2] Kien Giang information portal, accessed date November 10, 2011.

[3] The productivity of paddy field increased from year to year. By 2010, the total production of paddy field increased to nearly 3.5 million tons, which is 0.1 million ton higher than that of 2009. (Report from DPI in July 2011).

for paddy field in 2010 was around 125,000 hectares, which accounted for around 25% of the total agriculture land in Ca Mau province.[4] Although the paddy field area reduced by 14,000 hectares compared with that of 2009, the yield of paddy field increased so that the total production of paddy field in Ca Mau province over the past two years was almost unchanged (503,000 tons in 2009 and 498,000 tons in 2010).

While Kien Giang province has the advantage in rice production, Ca Mau province has the advantage in aquaculture shrimp production. Over the past decade, the area of water surface allocated for aquaculture increased by nearly 50%, from 204,000 hectares (2000) to nearly 294,000 hectares (2008) (Table 10). By the year 2010, the area of water surface allocated for aquaculture increased to 296,000 hectares. The aquaculture shrimp share of total aquaculture production increased from 48.0% in 2000 (35,377 tons) to 54.1% in 2008 (94,291 tons).

In addition to the two major agriculture products, the two provinces also have thousands of hectares of sugar cane, peppers, pineapples, coconut trees and vegetables. Nevertheless, the lack of irrigation water made the plantation areas vary and caused a great impact on the productivity of these agriculture products.

Table 10: Aquaculture Area and Yield of MDFEZ and MDR

		2000		2005		2008	
		Quantity	Share (%)	Quantity	Share (%)	Quantity	Share (%)
Area of Surface for breeding aquatic product (hectares)	Can Tho	7,104	2.0	12,404	2.1	12,725	1.7
	An Giang	1,252	0.3	1,836	0.3	2,777	0.4
	Kien Giang	n.a.		n.a.		134,564	18.2
	Ca Mau	204,381	57.1	279,230	46.8	293,223	39.7
	MDR	357,805	100.0	596,557	100.0	738,491	100.0
Production of Aquaculture (tons)	Can Tho	9,112	2.5	83,783	8.4	181,743	9.9
	An Giang	80,156	22.0	180,809	18.0	315,447	17.3
	Kien Giang	9,991	2.7	48,231	4.8	110,230	6.0
	Ca Mau	73,139	20.0	120,086	12.0	174,402	9.5
	MDR	365,171	100.0	1,002,805	100.0	1,828,167	100.0

Note: Share means that out of the value of total MDR.

Source: Calculated by the author from the Socio-Economic Statistical Data of Mekong River Delta 2000 - 2009.

[4] Statistical yearbook of Ca Mau province 2010.

In the industrial sector, the two provinces have different major products. In the MDR, Kien Giang province is the only locality with rich mineral resources. The abundant resources enable the province to develop the construction material industry such as cement, and Ha Tien Cement Company plays an important role in the development of the industry sector in Kien Giang.

The original designed capacity of cement production of the company was 240,000 tons of clinker and 280,000 tons of cement per annum (1964) with two establishments, one in Kien Luong and one in Thu Duc. During the development process, the company gradually expanded its capacity and diversified. By 1986, with the new production line introduced in the Kien Luong establishment, the total capacity of the industry increased to 1,100,000 tons of clinker and 1,300,000 tons of cement per annum.

Thanks to the regional and the world economic integration, the cement industry particularly benefited from this process. The capacity of cement production has increased to 1,760,000 tons per annum after a joint venture company between Ha Tien 1 and Holder Bank of Switzerland was enacted in 1993. The joint venture company was established with a registered capital of US$ 112.4 million and also attracted US$ 441.0 million in investment for the province. Later, in 1995, a joint venture between Vietnam and Supermix Asia Pte Ltd (Malaysia and Singapore) formed Vietnam Super Mix Concrete with a capacity of 100,000 m^3 of concrete per year.

One of the three largest projects of Vietnam during the 5-year development plan

Table 11: Structure of Industry in Ca Mau Province

Industry sector	2008	2009	2010
Gross output at current price (billion VND)	22.424	27.074	34.248
Structure (%)	100.00	100.00	100.00
Mining	0.03	0.02	0.02
Manufacturing	73.86	53.43	48.75
Producing gas, electricity, steam	25.87	46.36	51.04
Water supply and drainage management	0.22	0.18	0.17

Source: Calculated by the author in accordance with provincial statistical data.

of 2000-2005 was implemented in Ca Mau province as the Ca Mau Gas-Power-Fertilizer Complex. With this project, Ca Mau received US$ 1.4 billion of investment. The project was design to exploit the natural gas in the overlapping area between Malaysia and Vietnam. This complex included an 18-inch-wide (460 mm) and 325-km-long gas pipeline (design capacity of 2 billion m^3 of gas), two thermal gas-fuelled power plants with a total capacity of 1,500 MW and a urea plant (designed capacity of 800,000 tons per annum). These three separate sub-projects, namely gas, electricity and fertilizer, were completed in 2006, 2008 and 2009, respectively. The structure of the industry sector of Ca Mau has changed significantly since then (Table 11).

2.2.2. Investment and Development Results

Total investment for economic growth in Kien Giang and Ca Mau provinces increased sharply and has surpassed the average investment rate of the country in the past decade. In 2000, the total investment of Kien Giang and Ca Mau provinces only accounted for 22% and 27% of their gross product, respectively (the regional investment rate was 23% of GDP). By 2005, Kien Giang province experienced a sharp increase in investment ratio (33% provincial gross product) that was one percentage point higher than the average investment ratio of the MDR. During this period, Ca Mau province experienced a slight decrease in its investment ratio (24%). Nevertheless, the investment ratio of Ca Mau province later surpassed 44% of its gross product (2009), while the trend of the

Table 12: Investment Ratio of MDFEZ and of MDR

(Unit: %)

	2000	2005	2009
Can Tho	28	51	61
An Giang	28	25	50
Kien Giang	22	33	36
Ca Mau	27	24	44
MDR	23	32	40

Source: Calculated by the author from the Socio-Economic Statistical Data of Mekong River Delta 2000 - 2009.

Table 13: Gross Output of Major Provinces in MDR (1994 Price)

(Unit: billion VND)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Can Tho	9,115	10,477	11,967	13,728	16,118	19,030	22,533	27,043	32,132
An Giang	12,641	13,259	15,006	16,880	18,760	20,561	22,565	25,628	29,544
Kien Giang	12,498	13,538	15,426	16,956	19,316	21,986	24,443	27,538	30,945
Ca Mau	10,541	14,966	15,518	16,150	16,885	18,248	22,003	23,579	27,249
MDR	106,082	112,140	121,736	138,834	157,510	190,813	218,098	250,679	289,093

Source: Socio-Economic Statistical Data of Mekong River Delta 2000 - 2009.

investment ratio of Kien Giang in the next period was relatively flat with an increase to 36% in 2009 (Table 12).

Many factors, including changes in the legal framework, changes in the electricity supply, and access to new markets, may influence the investment trend and therefore affect the variation of the investment ratio of these provinces. Therefore, one may have to carefully examine the causative of roads infrastructure investment to the increase in total investment.

Nevertheless, in the case of Kien Giang and Ca Mau provinces, investment in roads infrastructure from the past (Table 3) seems to have a great impact on the total investment later. In other words, public investment in transportation infrastructure probably had induced the increase in total investment (including the private sector's investment) later, which led to higher economic growth in the case of Kien Giang and Ca Mau provinces (Table 13). After a decade of development, the gross output of these provinces was increased by more than double, and the development of Ha Tien town in Kien Giang is a good example for consideration (Box 1).

Box 1: Development of Ha Tien Town in Southern Coastal Sub-corridor

Ha Tien is a small town located at the northwest of Kien Giang province, with a total area of 8,851 hectares. By 2010, the population of this town had increased to 45,801 people. The town has nearly 14 km of border, including the Xa Xia international border gate with Cambodia, and around 22 km of seashore with beautiful beaches and landscapes. The town has over 23 km of national road and over 60 km of other types of roads.

The gross output of the town is mainly from the service sector (62.38%). Thanks to the

development of the roads infrastructure and the simplification of the customs procedures across the border, the service sector has achieved a high growth rate and plays an important role in the town's growth. The agriculture sector contributes over 22% of gross output, with industry and construction as the lowest contribution sector at only 15.27%. With improvement in the trading conditions, the number of households registering their businesses in this sector increased 58%, from 1,250 business establishments in 2006 to 1,975 business establishments in 2010. Investment capital in the trading service also doubled over the same period, from 66.8 billion VND in 2006 to 142 billion VND in 2010.

Having beautiful landscapes and beaches allowed Ha Tien town to attract more people to come. The number of tourists increased from over 700,000 people in 2006 to over 1,100,000 people in 2010. Income from the tourism sector increased 22.35% annually. Other services also achieved a high growth rate. Given the potential of tourism in this region, including the development plan of Phu Quoc island, private enterprises started to invest in the service sector, including hotels and restaurants, to meet tourists' demands.

Logistic service has also achieved some significant development results. The number of vehicles for land transportation of passengers and cargo increase from 60 units and 30 units, respectively, in 2006 to 80 units and 35 units, respectively, in 2010. The number of river-sea transportation crafts also increased from 11 units for passengers and two units for cargo in 2006 to 15 units for passengers and 5 units for cargo in 2010. The higher capacity allowed the town to increase the volume of cargo transportation from 72,000 tons in 2006 to over 114,000 tons in 2010. The number of passengers also nearly doubled from 696,000 passengers in 2006 to 1,199,000 passengers in 2010.

Achieving a high economic growth rate of 17.35% over the past five years, higher than the target of 13%, the income of the people in Ha Tien town has been improved. The average gross output per capita has been increased from US$ 629 in 2006 to over US$ 1,316 in 2010, which was higher than the GDP per capita of the country at the same time (US$ 1,168).

Source: Ha Tien town's people committee report on the five years development plan 2011-2015.

To promote industrialization and modernization, provinces in the MDR also developed industrial estates even though the land of the MDR is not favorable to such kind of investment. The number of industrial estates by 2020 will increase to 43 zones, with a total area of nearly 14,000 hectares. Within the MDFEZ, industrial estates have been developed earliest in Can Tho city, some already starting to operate, while the

Table 14: Industrial Estate of Some Provinces in MDR

Locality	Name of Industrial Zone	Total approved area for 2020 (hectares)	Already constructed area (hectares)	Available area for construction (hectares)
Can Tho	Thot Not	600	600	0
	O Mon	600	600	0
	North O Mon Hightech Park	400	400	0
	Hung Phu 2	226		226
An Giang	Binh Long	67		67
	Vam Cong	200		200
	Hoi An	100		100
	Binh Hoa (Expansion)	150		150
	Binh Long (Expansion)	83		83
Kien Giang	Xeo Ro	200		200
	Tac Cau	68		68
	Kien Luong II	100		100
	Rach Vuot	100		100
Ca Mau	Nam Can	515		515
	Song Doc	250		250
MDR		13,903	4,347	9,556

Source: Summarized by the author.

industrial estates in Kien Giang and Ca Mau provinces are under construction. Compared with Long An province, where industrial estates have been actively promoted, the number of industrial estates in Kien Giang and Ca Mau provinces is relatively small (Table 14) but these still have potential for development, making them a new source of development.

2.3. Potential Industry and Utilization of Southern Coastal Sub-corridor Issue

The MDR has potential to grow and become a new pole of economic growth in Vietnam. It not only has the advantage in agriculture production but also has the advantage in marine economy and this should be utilized in the future.

2.3.1. Advantage of Location

Within the country, this southernmost area is closely connected with the Southern Focal Economic Zone as led by Ho Chi Minh City, the most dynamic pole of the country currently. In the Southeast Asia, the MDR is located in a dynamic economic

development area with potential markets and investors from neighboring countries such as Thailand, Malaysia and Singapore.

The MDR is located in one of the busiest air and sea transportation routes, connecting Southeast Asia to East Asia, Australia. The MDR is also one of the gateways to the west coast for GMS countries, including Laos, Cambodia, Thailand and Myanmar. With a coastline of 700 km, the MDR has potential to develop seaports, serving as the gateway of GMS to international markets via international seaport either in Ba Ria-Vung Tau or Singapore

2.3.2. Potential Industry in Kien Giang and Ca Mau Provinces

Having a coastline of 454 km is the biggest advantage for the two provinces in the MDR to develop in the future. Along the coastline, the two provinces have beautiful islands and landscapes such as Phu Quoc island, Tho Chu island in Kien Giang province and the flooded U-Minh-Ha melaleuca forest in Ca Mau province.

Especially, Kien Giang province also has the coastal and islands biosphere reserve with a total area of 1.1 million hectares. This is the second largest biosphere reserve in Vietnam. The area contains rich, diverse and distinctive landscapes and ecosystems. This biosphere reserve covers the territory of Phu Quoc island, An Minh, Vinh Thuan, Kien Luong and Kien Hai and consists of three core areas of the U Minh Thuong National Park, Phu Quoc National Park and Kien Luong-Kien Hai coastal protection forests.

In this area, Phu Quoc island is a beautiful place with many streams, rivers and

Table 15: Distance between Sihanoukville and Kien Giang

Section	Distance (km)
Rach Gia (Vietnam) – Ha Tien (Vietnam)	97.0
Prek Chak (Cambodia) – Kampot (Cambodia)	39.1
Kampot (Cambodia) – Veal Renh (Cambodia)	53.4
Veal Renh (Cambodia) – Sihanoukville (Cambodia)	39.4
Ha Tien (Vietnam) - Sihanoukville (Cambodia)	131.9
Rach Gia (Vietnam) - Sihanoukville (Cambodia)	228.9

Source: Measured by the editor.

beaches along the coastline such as Gieng Ngu beach, Khem beach, Sao beach, Vong beach, Thom beach and Vung Bau beach, creating the potential of an eco-tourism chain. In future development, the government plans to make Phu Quoc island an international resort center.

Development of the Southern Coastal Sub-corridor also creates advantages for the two provinces to connect with other famous tourism places in Cambodia, such as Sihanoukville and Siem Reap where there are attractive landscapes. Table 15 presents the distances from Ha Tien to Sihanoukville.

The distance from Sihanoukville and Kampot in Cambodia to Phu Quox island must be shorter than Kien Giang Province when tourists are allowed to travel between the two places directly by sea or air transportation. Moreover, the services that support tourism are gradually developing in Ha Tien town. Therefore, it is believed that tourism will be the potential industry of Kien Giang and Ca Mau province and much effort should be made to attract investors in this service sector to come.

The processing industry, especially seafood processing, also has great potential for development in the future. Although currently Kien Giang is the center of rice production, the areas of paddy field have recently reduced. The degradation of cultivation land for rice production induced both Kien Giang and Ca Mau provinces to reallocate these areas to the shrimp farms gradually, making them the two largest suppliers of shrimp for the seafood processing industry. In addition, the development of industrial estates and improvement of transportation (the road connecting Ca Mau city to Nam Can, the hub of shrimp farming in Ca Mau, is under construction) will create chances for this industry to continue developing in the near future.

Besides the two potential industries mentioned above, Kien Giang and Ca Mau provinces also have potential to develop green energy such as wind power along their coastlines. Of course, it requires more feasibility study to evaluate this potential of the two provinces.

2.3.3. Development Issues

According to the observations from the field study in mid-2011, the quality of the road from Ha Tien town to Rach Gia city (Kien Giang province) was relatively good. The

connections of this sub-corridor (from Rach Gia city and Ca Mau city) with Can Tho city were also of good quality. Nevertheless, the road connecting Rach Gia city and Ca Mau city was not so good, though traffic was relatively busy.

Besides, the characteristic of weak ground implies that this area requires more funds for roads maintenance activities, especially after the rainy season. Having a sophisticated network of canals may enable provinces to develop a waterway transportation network for both passengers and cargo. Nevertheless, constructing roads infrastructure is also the disadvantage of the provinces, as the construction costs to make the land consolidated before building a road on it or the cost of building bridges across small canals are very high. It is estimated that the cost of constructing infrastructure in the MDR is often 30% higher than that of other regions, especially of the highland region.

In this context, it is not suitable to build more manufacturing industry here except the processing industry. Given the fact that the MDR generally and Kien Giang and Ca Mau provinces particularly are the centers of agriculture products, these provinces should promote industrialization toward the development of agriculture-related processing industries as well as industry that supports the development of the agriculture sector (agriculture machinery, equipment) rather than diversifying the field of businesses (such as into steel or textiles).

The choice of promoting the industrial estates should be carefully considered in their development plans. Exploiting natural resources for the industrial estates may harm the resources that could be used for the service sector, including the tourism sector. Even the processing industry may pollute the environment if the level of manufacturing technologies is not strictly examined before the installation and operation processes.

Population is another issue for their future development. Thanks to the roads infrastructure, especially of the Southern Coastal Sub-corridor, the business environment has improved, helping provinces of the MDFEZ and of the MDR to develop over the past decade. The population growth rate in these provinces ranges from 1.0% to 1.5% annually.

Compared with other provinces and the city in the MDR, Kien Giang and Ca Mau provinces experienced the highest population growth rate over the past 10 years, at 0.3 to 0.5 of a percentage point higher than the regional average population growth rate.

Nevertheless, their population densities are still lower than the average.

In 2008, the population densities of Kien Giang and Ca Mau provinces were 272 persons/km^2 and 237 persons/km^2 respectively, while the average density of the MDR was 437 persons/km^2. This implies that these provinces face the challenge to mobilize their labor force for socio-economic development. To promote the development of potential industries such as tourism, it is necessary to promote human resource development, attracting more people to come and reducing the chance of leaving this region.

The past development of tourism services implies that these provinces need to create more incentive, in addition to the preparation of human resources, to attract large enterprises' investment in the tourism sector. Raising revenue from the service sector depends not only on the number of visitors but also on the duration of each visitor's stay in the province. Given the fact that these places were often the stop-over of tourists, much effort is necessary to create services for them to stay longer, besides attracting international tourism enterprises. Moreover, tourism services could be more attractive if there is an international program, in cooperation with Cambodia. In this context, it requires more involvement of institutions such as customs and even higher level government cooperation to make it possible.

3. NORTHERN SUB-CORRIDOR AND THE DEVELOPMENT OF GIA LAI AND BINH DINH PROVINCES

3.1. Overview on the Development of Gia Lai and Binh Dinh Provinces

Different from the Southern Coastal Sub-corridor, the Northern Sub-corridor crosses two provinces of two different regions in Vietnam, namely the Central Highland region and the Coastal Central region (now belonging to a larger region of the North Central and Coastal Central region). In Vietnam, the Northern Sub-corridor goes along Route No. 19, from the Le Thanh international border gate, via Pleiku (Gia Lai province) to Quy Nhon port of Binh Dinh province. The total length of the Northern Sub-corridor across major places is shown in Table 16.

The Central Highland region includes Kon Tum, Gia Lai, Dak Lak, Dak Nong and

Lam Dong provinces. The North Central and Coastal Central region includes 12 provinces and a city. Table 17 summarizes the population of these areas, which shows that they are very small.

Gia Lai province is located in a mountainous and landlocked area, having a border with Kon Tum province in the north, Dak Lak province in the south, Quang Ngai, Binh Dinh and Phu Yen provinces in the east, and sharing a 90 km border with Cambodia in the west. The population of Gia Lai province consists of two major groups. The first group are indigenous ethnic minorities such as the Jrai and the Bahnar, and the second group are people who migrated from other provinces such as the Kinh. Among the 34 ethnic groups, the Kinh account for 52.0% of the population, the Jrai minority 33.5% and the Bahnar minority 13.7%. These are the three largest population ethnic groups in Gia Lai province.

Binh Dinh is located at the south of the Coastal Central region of Vietnam with a 134 km coastline. Most of the population are the Kinh (98%), and the three other ethnic

Table 16: Distance across Provinces and the City

Section	Distance (km)
Le Thanh border gate – Pleiku	68.2
Pleiku – Kontum	52.4
Pleiku – Qui Nhon	160.0
Le Thanh border gate – Kontum	120.6
Le Thanh border gate – Qui Nhon	228.2

Source: Measured by the editor.

Table 17: Major Indicators of Development Status in Gia Lai and Binh Dinh

Province	Population[1)] (person)	Population density (person/km^2)	GDP at 1994 price[2)] (Billion VND)	Poverty ratio (2010)
Gia Lai	1,300,900	84	5,145	25.9
Central Highland	5,214,200	95	-	22.2
Binh Dinh	1,489,700	247	9,363	16.0
North and Coastal Central	18,935,500	197	-	20.4

Notes: 1) 2010 data from GSO.
2) GDP of Gialai is from the provincial data of 2008.

Source: Summary by the author.

groups are the Bahnar, H're and Khmer minorities. Although the population density of Binh Dinh is 247 persons/km^2, most people live in urban areas. Especially in Quy Nhon city, the population density has increased to 982 persons/km^2, 4 times higher than that of the whole province.

The economic structures of the two provinces are similar, with the major contribution coming from the agriculture, forestry and fishery sectors, leaving a minor contribution equally for the remaining sectors (Table 18). By 2010, the GDP per capita of Gia Lai province was US$ 769 and Binh Dinh province was at US$ 901.[5] These levels were much lower than the average of the country.

Nevertheless, the structure of the agriculture sector between the two provinces is different. In Gia Lai province, within the 500,000 hectares of agriculture land, 291,000 hectares are allocated for annual planting. Most of the 291,000 hectares of annual planting land are allocated for the development of perennial trees and industrial plants such as rubber, pepper, coffee, cashew nut and cotton. The province also plants sugar cane in the area near Binh Dinh province, providing raw materials for the An Khe and the Ayun Pa sugar cane processing factories, having total processing capacity of 4,000 tons of sugar cane per annum. Besides, the province also has 1.1 million hectares of forest land, of which over 770,000 hectares could be exploited for the processing industry. It means that, Gia Lai has potential to develop the forestry industry and related

Table 18: Economic Structure of Provinces along Northern Sub-corridor in Vietnam

Year	Province	Agriculture (%)	Industry (%)	Service (%)
2000	Gia Lai	57.76	17.89	24.35
	Binh Dinh	42.20	22.80	35.00
2005	Gia Lai	48.79	23.71	27.49
	Binh Dinh	38.40	26.70	34.90
2010	Gia Lai	39.84	32.08	28.07
	Binh Dinh	35.70	27.20	37.10

Source: Summarized by the author in accordance with provincial statistical data.

[5] Estimated from the socio-economic development reports of localities.

industries.

The land for agriculture in Binh Dinh province is much less than that of Gia Lai, at only 136,000 hectares. It also has only 249,000 hectares of forest land. The non-agriculture land area in Binh Dinh province is 62,000 hectares. Nevertheless, the province still has over 150,000 hectares of land reserve area that could be allocated for any development purpose, even to develop the agriculture sector.

The major products of Gia Lai province are closely related to perennial plants. The economic activities over the past decade showed that the agriculture sector (agriculture, forestry and fishery) still accounted for a large proportion in the economic structure of Gia Lai province, and that the manufacturing industry only accounted for a minor proportion. Besides, the logistic services (transportation service, warehouses) almost did not exist (Table 19).

In the industrial sector, major industries in Gia Lai include wood and wood products, wood chips, furniture, rubber latex, coffee beans, cashew nuts, peppers and cassava. Within the perennial areas, there are over 76,000 hectares of coffee plantation with productivity of 133,000 tons, over 73,000 hectares of rubber plantation with productivity of 63,000 tons, over 5,000 hectares of pepper plantation with productivity of 20,000 tons, and around 28,000 hectares of land for short-term industrial plants, providing input materials for the manufacturing in the province.

By 2010, total traded value between Gia Lai province and Cambodia via the Le Thanh boder gate was US$ 46.38 million. The major trading products are summarized in Table 20. Enterprises in Gia Lai contributed nearly 55% of the cross-border trading

Table 19: Structure of GDP of Gia Lai by Economic Activities

Economic Activities	2000	2005	2008
Agriculture	57.76	48.79	47.38
Manufacturing industry	8.73	13.07	12.35
Logistic services	3.32	0.00	0.00
Others	30.19	38.14	40.27
Total	100.00	100.00	100.00

Source: Summarized by the author in accordance with provincial statistical yearbook 2008.

Table 20: Major Import and Export Value via Le Thanh Border Gate 2010

(Unit: US$ million)

Product	Import	Export
Gasoline		12
Lumber	4.2	9.08
Natural rubber latex	7.8	-
Soya bean	1.09	
Cashew nut (raw)	2.2	

Source: Summarized by the author in accordance with annual report of the province.

value. The number of households involved in the cross-border trading activities increased to 40 households by 2010, which was double that of 2009. The number of entries and exits via the Le Thanh international border gate was over 16,000 passengers, which was 1.7 times higher than in 2009, and there were 1,600 transportation vehicle turns. Travelling between two neighbour localities increased to over 10,000 passengers, which was 1.3 times higher than in 2009. Transportation vehicles crossing the border increased to nearly 4,000 times.

The major industries in Binh Dinh are food processing (cassava), seafood processing, sugar, furniture (both interior and outdoor products), wood chips, granite tiles and titan slag. These products are exported to Europe (wood furniture); Europe, Japan and the U.S. (seafood); Europe and Asia (granite tiles); Japan (wood chips); and Japan and China (Titan).

By 2010, the industrial output value of Binh Dinh province was 6,600 billion VND (1994 constant price), which was 14.0% higher than that of 2009. The major products of Binh Dinh province experienced a high growth rate. In the furniture industry, chair production increased by 48.1%, eating tables increased by 17.0% and interior furniture increased by 30.7%. The production of wood chips also increased by 32.7%. In the food processing industry, frozen shrimp production increased by 49.6% and cassava powder production increased by 33%. Especially, the titan slag increased five times compared with that of 2009.

3.2. Investment and Development Results

Over the past three years (2006-2008), the total investment of Gia Lai province reached 16,000 billion VND, which was 22.5% higher than the total amount of investment during the 2000-2005 period. Within the year 2008, the investment amount surpassed 6,000 billion VND (Table 21), which was 10% higher than in 2007. Most of the investment came from the government (central and local governments) budget and was allocated to basic construction in order to enhance infrastructure in the province.

The total investment capital in Binh Dinh province also increased rapidly. Within the past five years (2006-2010), the total investment amount was 37,800 billion VND, which was equivalent to 40.3% of the GDP of the province. This amount of investment increased 2.63 times compared with that of the 5-year period of 2001-2005. Most of the investment was allocated for the development of infrastructure such as roads, electricity and water supply as well as the development of industrial parks (Table 22), including the Nhon Hoi Economic Zone, industrial clusters and seaport.

Table 21: Investment Amount and Structure at Current Price

Province			2000	2005	2008
Gia Lai	Total Capital (billion VND)		1,924.00	4,230.00	6,139.00
	by Ownership	State sector (%)	75.00	76.67	64.68
		Private sector (%)	24.74	22.92	35.32
		FDI sector (%)	0.29	1.09	0.00
		Total (%)	100.00	100.00	100.00
	by Major Activity	Basic construction (%)	91.32	89.48	82.97
		Others (%)	8.68	10.52	17.03
		Total (%)	100.00	100.00	100.00
Binh Dinh	Total Capital (billion VND)		2,209.00	4,099.00	8,000.00
	by Ownership	State sector (%)	41.69	51.72	34.53
		Private sector (%)	50.39	47.45	64.51
		FDI sector (%)	7.92	0.85	0.96
		Total (%)	100.00	100.00	100.00
	by Major Activity	Basic construction (%)	83.70	83.40	84.00
		Others (%)	16.30	16.60	16.00
		Total (%)	100.00	100.00	100.00

Source: Summarized by the author in accordance with provincial annual statistical data.

Table 22: Industrial Estates in Gia Lai and Binh Dinh

Locality	Name of Industrial Zone	Total approved area for 2020 (hectares)	Already constructed area (hectares)	Available area for construction (hectares)
Gia Lai	Pleiku West	399,24		
	Le Thanh Border Gate EZ	210	Under construction	
	Tra Da		124.5	
	Le Thanh	210	110	100
Binh Dinh	Phu Tai		348	0
	Long My		210	0
	Nhon Hoa		272	0
	Hoa Hoi		265	
	Nhon Hoi EZ	12,000		

Source: Summarized by the author based on MPI and Party Central Office, (2010).

In Binh Dinh, these industrial estates are aimed at attracting foreign investment in the fields of processing agriculture and forest products, manufacturing leather, plastic and rubber, construction materials, and machinery to support the industries mentioned above. Especially within the Nhon Hoi Economic Zone, over 1,600 hectares will be allocated for industrial estates, including 1,300 hectares for industrial parks and 280 hectares will be allocated for a wind-power farm (Table 22).

The structure of investment between two provinces along the northern economic sub-corridor showed that the private sector in Binh Dinh province was relatively stronger than that in Gia Lai province, even though the proportion of capital allocated for the basic construction in Binh Dinh province was greater than that of Gia Lai province. Consequently, the two provinces experienced different economic development results, in which the gross industrial output of Binh Dinh province doubled that of Gia Lai province (Table 23).

3.3. Potential Industry and Utilization of the Northern Sub-corridor Issues

3.3.1. The Advantage of Location

Gia Lai province's geographical location makes it the center of the region, connecting provinces from the north area with the south area, from the west to the east. The total

Table 23: Gross Industrial Output of Major Provinces and the City along the Northern Sub-corridor

(Unit: billion VND)

	2005	2006	2007	2008	2009	2010
Da Nang City	6,662.9	6,899.9	7,831.4	7,965.7	8,106.4	9,265.6
Binh Dinh	2,396.1	2,850.6	3,628.8	4,229.3	4,230.2	4,822.4
Phu Yen	1,532.6	1,826.3	2,228.1	2,439.8	2,972.2	3,429.9
Khanh Hoa	7,101.2	8,251.3	9,233.2	10,359.1	11,200.0	1,2320
Northern Central and Coastal Central Region	39,374.5	44,503.3	51,223.3	58,605.5	66,734.4	86,484.1
Kon Tum	250.5	282.1	338.5	352.4	379.4	482.2
Gia Lai	839.0	1,010.2	1,201.1	1,586.4	1,627.3	1,920.2
Dak Lak	722.2	867.7	1,047.3	1,182.7	1,423.3	1,625.5
Dak Nong	238.7	286.0	344.0	535.6	668.8	926.9
Lam Dong	1,456.5	1,628.9	1,962.8	2,290.9	2,293.1	2,446.7
Central Highland	3,506.9	4,074.7	4,893.7	5,948.0	6,391.9	7,401.5
Country	415,895.8	485,829.0	567,448.3	646,353.0	701,183.8	808,745.4

Note: Statistical data at 1994 constant price.

Source: Summarized by the author in accordance with statistical data of Ministry of Industry and Trade.

length of national roads in Gia Lai is about 500 km. Route No. 14, with 112 km in Gia Lai province, connects Kon Tum province, Quang Nam province and Danang city with Dak Lak province and Dak Nong province as well as the east southern region provinces and city. Route No. 19, the Northern Sub-corridor, connects Rattanakiri province with Quy Nhon port in Binh Dinh province. This is the oldest route of trading in this region, between people who live in the remote and landlocked area with people who live in the coastal area, since the beginning of the last century. Other national roads, including the Ho Chi Minh Road, created a convenient transportation network for the trading between the minorities across this region.

Binh Dinh province is located at the major transportation network of Vietnam. Route No. 1A and the North-South Railway cross the province at 118 km and 150 km long, respectively. Route No. 19 (228 km), connecting the Le Thanh international border gate to the Quy Nhon international seaport, allows other provinces in the remote and landlocked region of Vietnam as well as provinces in Laos, Cambodia and Thailand to access global markets.

With large rivers crossing the province, such as the Kon, Lai Giang, La Tinh and Ha Thanh rivers, and a network of streams, Binh Dinh has advantages for the development of an irrigation system for the agriculture sector (rice production, perennial plantation).

Like Gia Lai province, Binh Dinh province also has an advantage in development of a hydro-power plant.

A long coastline of 134 km not only provides beautiful beaches for the development of tourism service but also provides Binh Dinh with a deep-water seaport, making the province an international gateway for its region, the Central Highland, Laos and Cambodia. The Quy Nhon port could play the role of a "spoke", connecting with the major "hub" of Ba Ria-Vung Tau for transhipments to the world markets as well as a "hub" to distribute tourist who arrived at Quy Nhon to visit other provinces in the GMS by using the Northern Sub-corridor. The coastline also creates advantages for Binh Dinh to develop green energy through the development of wind-power farms.

3.3.2. Potential Industry

Two important rivers, namely the Ba river (304 km) and the Se San river and their branches, originate from mountainous areas with a height of 1,000 m and 2,000 m above sea level, respectively, providing 23 billion m^3 of water as an important source of hydro-power generation. In principle, these rivers have a capacity of 10.5 to 11.0 billion MW of electricity.

Currently, Gia Lai province has 82 hydro-power projects, with a total capacity of 1,841 MW. In addition to electricity generation, some of these power plants also help to control floods as well as providing irrigation water for the downstream delta area. Table 24 presents some major hydro-power plants in Gia Lai. Besides these power plants, the

Table 24: Major Hydro-Power Plants in Gia Lai Province

Name of the Hydro-power plant	Construction period		Design capacity (MW)	Production (billion KWh)
	Started	Finished		
Ia Ly (Se San river)	1993	2002	720	3.700
Se San 3 (Se San river)	2002	2006	260	1.127
Se San 3A (Se San river)	2003	2006	180	0.479
Se San 4 (Se San river)	2004	2010	360	1.500
Ba Ha River (Ba river)	2004	2009	220	0.825
An Khe – Ka Nak (Ba river)	-	-	173	0.701
Se San 4A (Se San river)	2008	2011	63	0.300

Source: summarized by the author in accordance with information from Gia Lai province home page (accessed on November 10, 2011).

province has also attracted 75 small and medium power plant projects with a total design capacity of nearly 495 MW, of which 21 plants with a total design capacity of 57 MW are under operation.

Besides, the natural resources endowment such as 1,112,452 hectares of forest and the large plantation of rubber trees, coffee, cashew nuts and peppers, provides the two provinces important production materials for the manufacturing industries, especially for the agriculture processing industries. Between the two provinces, Binh Dinh has more of an advantage in the development of these processing industries for it has more favorable conditions, such as a deep-water seaport and a water port for transporting the manufacturing goods to global markets. The two provinces should consider a kind of division of labor to make the combination of their advantages generate a greater impact than when these advantages are utilized in a separate way. Logistic services should be promoted in the two provinces, especially in Gia Lai, to meet the increasing demand of cross-border trade, especially after the roads in Rattanakiri province of Cambodia are completed.

Natural resources such as mountains, streams, waterfalls, valleys and beaches as well as historical places and the culture of minorities living in this region also provide abundant sources for the tourism sector. Cooperation between the two provinces may create attractive tourism courses where tourists may experience the beauty of natural landscapes and the special features of the minorities' cultures in both mountainous areas and coastal areas.

As presented above, Binh Dinh has an important location for remote and landlocked regions to access international markets. Therefore, there is a great chance for the province to promote the development of logistic services, especially of seaport transportation, while the land transportation services may be develop by enterprises in Gia Lai province to fully utilize the cross-border trade.

3.3.4 Development Issues

One of the most challenging issues is the lack of human resources and enterprises in the two provinces. The population in these areas is very low. In addition, nearly half of the population are minorities in the case of Gia Lai province, having no experience on industrial production customs. Therefore, it is a challenge for these two provinces to

develop human resources in the near future. In addition to the provision of quality roads infrastructure and electricity supply (hard infrastructure), it is necessary to guarantee the ability of providing soft infrastructure (human resources, especially of skilled labor, simple and harmonized customs procedures) to attract investment from the private sector.

The second issue is to promote the development of logistic services in this area. The lack of transportation enterprises and gasoline stations may increase the cost of transportation for logistic enterprises and consequently increase the cost of production for manufacturing enterprises invested in these provinces.

CONCLUSION

Provinces along the two sub-corridors have not fully utilized the road infrastructure yet. Many reasons influence their capacity to exploit the benefit of connections provided by this transportation network for their development.

Topography is one of the major reasons. The MDR is characterized by a sophisticated network of rivers and canals. Therefore, the road's ground is very weak, which requires more technical effort to make it consolidated. The cost of maintenance is also higher than at the other regions due to the problem of water increasing recently. Technicians consultation also pointed out that the only way to solve this problem completely is to build overhead roads.

It implies that this area does not have the advantage of using roads infrastructure for heavy transportation. Currently, people often use the network of canals for both passengers and cargo (high volume) transportation, and the policy makers in these provinces should consider investing more and exploiting waterway transportation for economic development. Building more roads and bridges may harm the flow of water, making the flooding period longer and consequently the assets of both public (roads, bridges) and private (houses, other architecture) to be damaged or to require more expenditure to maintain activities.

Besides, inter-connection across sub-corridors in Vietnam has not been completed yet. For example, the highway from Ho Chi Minh City to Can Tho is not yet finished, so

that the benefits of an early developed city such as Ho Chi Minh City are not able to be diffused across provinces in the region.

The lack of human resources, and therefore the lack of entrepreneurship, is one of the other challenging issues for these provinces. This is especially important with the two provinces in the Northern Sub-corridor. Potential industries, mostly characterized by labor-intensive industry, could only contribute for their economic development if these provinces can attract more enterprises to come, and one important condition is commitment to provide them with enough laborers for sustaining their production plans.

The role of the Quy Nhon port could be enhanced if logistic services could be developed further. Currently, investment in the warehouse system and the transportation between the border gate and the seaport has not been developed. Given the fact that the plantation in Cambodia will come to the operation period soon, it is necessary to conduct more research and prepare well for the logistic services to meet the new and increasing demand in the near future.

Furthermore, provinces should consider their development strategies, setting clear targets of shifting their economic structure toward the development of the service sector, especially for tourism services to utilize the connection and the natural resources to integrate into the supply chain of international tourism service, especially for the provinces in the Southern Coastal Sub-corridor that have a chance to cooperate with Cambodia in the field of tourism service.

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