

Thailand's Economic Cooperation with Neighboring Countries and Its Effects on Economic Development within Thailand

著者	Tsuneishi Takao
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Takao TSUNEISHI*

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Abstract

Thailand's economic cooperation with neighboring countries, including not only trade and investment but also economic assistance, is tied inseparably to regional development within Thailand. Assistance to develop infrastructure along economic corridors, for example, promotes Thai regional development. This study examines the trade and investment relationships between Thailand and its neighboring countries, as well as related economic policies of Thailand. The study also examines the type of economic assistance being extended, and the resulting regional development taking place. And lastly, the study considers policies for further cooperation by Thailand and the implications this has for Japanese economic cooperation.

Keywords: GMS, ACMECS, economic corridors, border economic zones, border trade

JEL classification: O53, R11

* Vice President, Bangkok Research Center, JETRO (takao_tsuneishi@ide-jetro.org) and Visiting Researcher at Fiscal Policy Office, Ministry of Finance, Thailand.

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INSTITUTE OF DEVELOPING ECONOMIES (IDE), JETRO
3-2-2, WAKABA, MIHAMA-KU, CHIBA-SHI
CHIBA 261-8545, JAPAN

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1 Introduction

Thailand's economic cooperation with neighboring countries, including not only trade and investment but also economic assistance, is tied inseparably to regional development within Thailand. Thai assistance is provided mostly in the form of infrastructure development, such as roads, bridges and border economic zones along the North South Economic Corridor (NSEC), the East West Economic Corridor (EWEC) and the Southern Economic Corridor (SEC). The completion of such infrastructure in the near future is also expected to facilitate regional development within Thailand.

This study confirms the importance of Thailand's role and position in regard to the economies of its neighboring countries by examining Thailand's trade and investment relationships with these countries, as well as Thailand's related economic policies. The study goes on to examine the kind of economic assistance taking place in the NSEC, EWEC and SEC in terms of border trade, formation of border economic zones and regional development. Lastly, the study considers Thailand's future policies for cooperation in the post-Thaksin era, as well as the implications for Japanese economic cooperation.

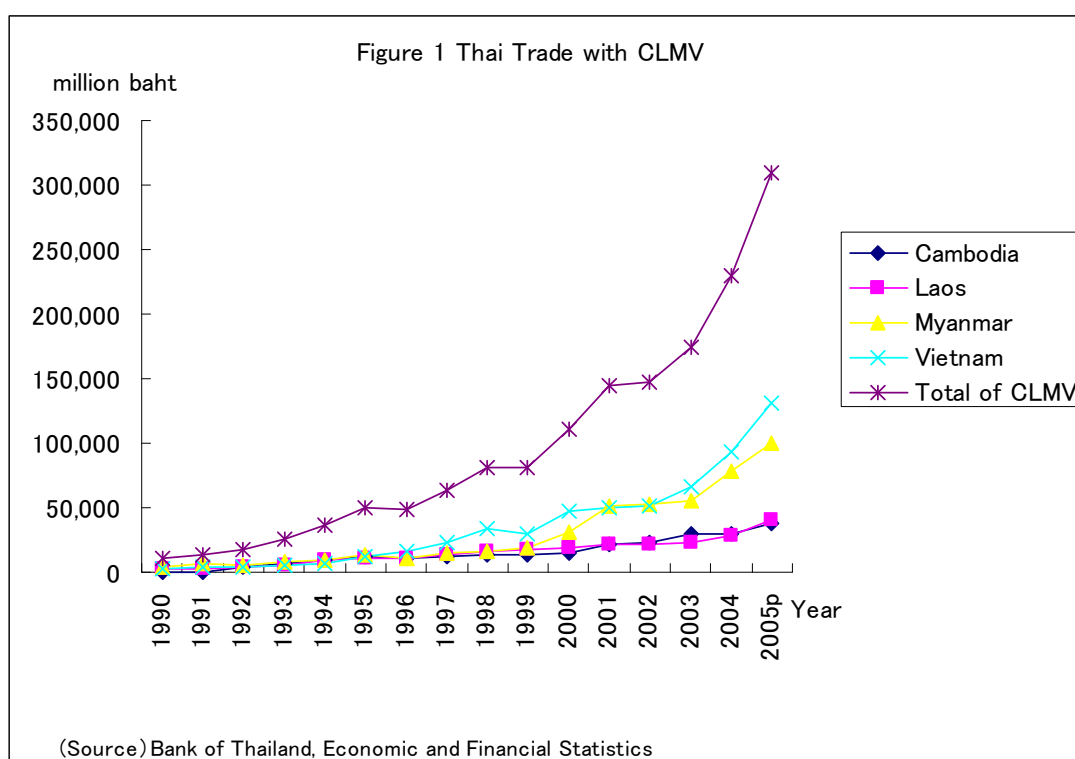
2 Economic Cooperation with Neighboring Countries

2-1 Trade

Trade between Cambodia, Laos, Myanmar and Vietnam (CLMV) expanded steadily at an average annual rate of 25.3% between 1990 and 2005 (Figure 1). Total exports from Thailand rose from 3.2 billion baht (127 million dollars) in 1990 to 191.2 billion baht (4,748.83 million dollars) in 2005, or an average annual growth rate of 31.2%. Thailand's imports from the CLMV grew more slowly, rising from 7.2 billion baht (281 million dollars) in 1990 to 182.2 billion baht (2,936.89 million dollars) in 2005, or an average annual growth rate of 20.5%. Since 1992, the CLMV has run a deficit with Thailand every year. Reflecting the vigorous development of Vietnam, trade between Thailand and Vietnam has occupied half of total Thai-CLMV trade. Trade with Myanmar began expanding in 2001 with the start of natural gas exports from Myanmar. Although the CLMV accounts for a modest

share of Thailand's global trade, its share rose from 1% in the early 1990s to 3%-4% in the 2000s.

Thailand occupies significant positions in CLMV trade. Of total imports entering Cambodia, Laos and Myanmar in 2005, Thailand's shares were 24.6%, 66.0% and 21.5%, respectively. Thailand is the principal source of imports for Cambodia and Laos (Table 1). On the other hand, Thailand purchased 29.5% of total exports from Laos and 44.5% from Myanmar in 2005, making it the chief customer of these the two countries. Although Thailand accounts for much lower shares of Vietnamese and Cambodian trade, the CLMV's dependence on Thailand is significant nevertheless.



2-2 Direct Investment

Thai investment in the CLMV began increasing in 1992 and peaked in 1996, but declined sharply between the financial crisis of 1997 and 2001, after which it started recovering in 2002 (Figure 2). From the early 1990s, Thailand began investing in Indochina under Prime Minister Chatchai and strategies promoted by the Financial Center of the Southeast Asian Continent (December 1992), the Conference of the GMS-EC (October 1992) and the formulation of the Economic Cooperation

Table 1 Thailand's Share of Trade with CLMV (2005)

(Units: Million US\$, %)

Cambodia				Laos			
Exports		Imports		Exports		Imports	
USA	1,704.3 (59.7)	Thailand	1,006.7 (24.6)	Thailand	204.4 (29.5)	Thailand	846.7 (66.0)
Germany	296.4 (10.4)	China	589.7 (14.4)	Vietnam	86.6 (12.5)	China	115.9 (9.0)
Vietnam	135.0 (4.7)	Hong Kong	548.1 (13.4)	France	41.6 (6.0)	Vietnam	89.3 (7.0)
UK	131.6 (4.6)	Vietnam	461.1 (11.3)	Germany	31.6 (4.6)	Singapore	44.1 (3.4)
Canada	108.7 (3.8)	Singapore	333.7 (8.1)	China	23.2 (3.3)	Japan	21.3 (1.7)
Japan	96.2 (3.4)	S. Korea	165.9 (4.1)	Belgium	15.7 (2.3)	Australia	21.0 (1.6)
Singapore	90.8 (3.2)	Malaysia	109.7 (2.7)	Netherlands	13.3 (1.9)	France	13.5 (1.1)
France	35.9 (1.3)	Indonesia	99.2 (2.4)	UK	10.2 (1.5)	Germany	12.4 (1.0)
China	24.8 (0.9)	Japan	86.4 (2.1)	Italy	9.7 (1.4)	S. Korea	11.8 (0.9)
Netherlands	24.1 (0.8)	USA	76.6 (1.9)	Japan	7.3 (1.1)	Hong Kong	8.3 (0.6)
Total	2,856.6 (100.0)	total	4,095.1 (100.0)	Total	693.3 (100.0)	Total	1,282.8 (100.0)

Myanmar				Vietnam			
Exports		Imports		Exports		Imports	
Thailand	1,623.0 (44.5)	China	1,028.4 (28.4)	USA	6,550.9 (21.3)	China	6,203.3 (15.5)
India	434.3 (11.9)	Thailand	777.8 (21.5)	Japan	4,122.2 (13.4)	Singapore	4,862.6 (12.2)
China	249.5 (6.8)	Singapore	656.1 (18.1)	Australia	2,502.0 (8.1)	S. Korea	4,276.2 (10.7)
Japan	184.8 (5.1)	S. Korea	212.7 (5.9)	China	2,317.6 (7.5)	Japan	3,949.3 (9.9)
Malaysia	116.0 (3.2)	Malaysia	196.2 (5.4)	Singapore	1,648.7 (5.4)	Thailand	2,588.0 (6.5)
Germany	103.2 (2.8)	India	137.5 (3.8)	Germany	1,556.6 (5.1)	Malaysia	1,498.0 (3.7)
Singapore	98.5 (2.7)	Japan	101.0 (2.8)	UK	1,194.4 (3.9)	Hong Kong	1,414.7 (3.5)
UK	62.2 (1.7)	Hong Kong	39.4 (1.1)	S. Korea	730.9 (2.4)	USA	1,310.9 (3.3)
France	39.5 (1.1)	Indonesia	83.3 (2.3)	France	686.0 (2.2)	Germany	768.0 (1.9)
		Russia	13.5 (0.4)	Netherlands	603.9 (2.0)	Russia	989.7 (2.5)
Total	3,648.4 (100.0)	Total	3,615.7 (100.0)	Total	30,801.3 (100.0)	Total	39,975.5 (100.0)

(Notes) Figures in parenthesis show percentage share.

(Source) ADB, *Key Indicators* 2006.

Rectangle (May 1993). Cumulative direct investment by Thailand from 1990-2005 came to 13.8 billion baht.¹ Of this, Vietnam accounted for 51.1%, and Cambodia, Myanmar and Laos has shares of 20.9%, 14.3% and 13.6% respectively. Thailand made significantly high levels of investment in Laos, Myanmar and Cambodia (Table 2), including 36.2%, the top position, in Laos in 2005. The

¹One dollar was equivalent to 25.59 baht in 1990 and around this rate until the financial crisis in 1997, when it declined to 31.37 baht. It further declined to 41.37 baht in 1998 and more than 40 baht continued. The average rate during 1990-2005 was 33.59 baht. The rate was around 35 baht in December 2006.

share in Myanmar from 1988 to June 2006 was 36.2%, making Thailand the largest investor. In Cambodia, Thai investment was second only to China, which has been increasing its presence in Indochina.

Although investment in Vietnam is greater in absolute terms of numbers of projects and total value than compared with figures for Cambodia, Laos and Myanmar, Thailand is only the 14th largest investor in Vietnam.

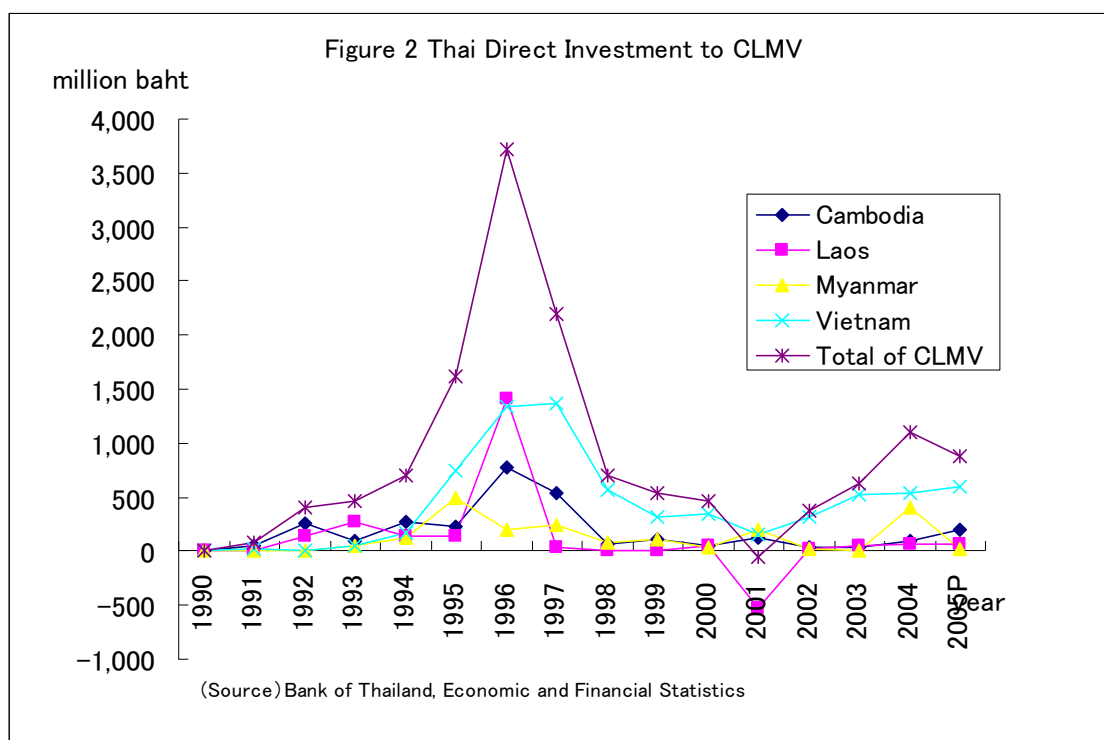


Table 2 Thailand's Share of Direct Investment in CLMV

(Units: Million US\$, %)

Cambodia		Laos			Myanmar			Vietnam		
2005		F/Y 2005			1988-May 2006 Accumulation			2005		
Country	Amount	Country	No.	Amount	Country	No.	Amount	Country	No.	Amount
China	451.96	Thailand	25	450.91	Thailand	57	7,375.6	Japan	186	842.22
Thailand	81.29	France	6	370.25	UK	43	1,591.0	Luxemburg	3	771.88
S. Korea	55.97	China	33	58.12	Singapore	70	1,434.2	S. Korea	300	755.00
Malaysia	25.87	Vietnam	23	43.27	Malaysia	33	660.7	Samoa	9	747.36
Singapore	25.42	Australia	8	21.29	Hong Kong	31	504.2	Taiwan	278	721.25
France	7.64	S. Korea	10	10.22	France	3	470.4	Hong Kong	58	490.42
Taiwan	7.51	Japan	5	4.40	USA	15	243.6	USA	64	255.61
UK	6.40	Malaysia	6	3.37	Indonesia	12	241.5	Virgin Is.	56	245.20
Canada	5.48	Canada	1	2.93	Netherlands	5	238.8	Singapore	81	238.91
USA	4.38	Singapore	3	1.20	Japan	23	215.3	Malaysia	34	179.59
Others	378.35	Others	23	279.35	Others	107	840.6	Others	261	770.66
Total	1,050.27	Total	143	1,245.31	Total	399	13,815.9	Total	1,330	6,018.10

(Notes) Amounts and numbers are approved basis. Cambodia and Laos figures include domestic investment.

(Source) Author's estimates based on investment data from JETRO and ASEAN-Japan Center

2-3 Economic Cooperation

Since Prime Minister Chatchai's progressive economic policies toward Indochina in the late 1980s, the Thai government has continuously supported and led neighboring countries under the concept of wide-ranging economic zones, especially in counties along the Mekong River Basin.

Former Prime Minister Thaksin contributed to these initiatives, as seen in the first ACMECS Summit held by Cambodia, Laos, Myanmar and Thailand in Pagan, Myanmar on November 12, 2003. In May 2004, Vietnam joined ACMECS. Formation of the organization was a concrete follow-up measure to the GMS Economic Cooperation initiated by the ADB in February 1992. The strategy encompasses various economic cooperation projects, both bilateral and multilateral, aimed at developing the region as a peaceful, stable and prosperous area between 2003 and 2012. Specific measures include (a) develop boarder areas and enhance their competitiveness, (b) relocate agriculture and manufacturing to places of relative economic advantage and (c) reduce income disparities and create employment. Seven fields are targeted: trade and investment; agriculture; industry; linkage of transportation; tourism; human resource development; and public health. The

basic idea of the strategy is to set up economic zones along borders by concluding sister-city agreements among major cities where strong relationships in transportation already exist. The zones comprise industrial estates, logistics facilities and integrated agricultural zones for contracted farming. Thailand provides grants and loans for constructing roads connecting its major border cities with those in Myanmar, Cambodia and Laos. As of October 2006, six major construction projects amounting to 4.6 billion baht had been carried out by the Neighboring Countries Economic Development Cooperation Agency (NEDA) (Figure 3)². Details of selected projects are provided in sections 3, 4 and 5.³

2-4 Thai Regional Development through Economic Cooperation with Neighbor Countries

Although Thailand attempted to build up its regional economies by developing its core cities and decentralizing industries from the 1970s, it did not achieve tangible results. From the 1990s, however, when trade and investment with Indochina began to be pursued, the policy shifted from developing key domestic cities to developing economic zones along the borders of the GMS countries. The 9th economic social development plan (2002-2006) emphasized that provinces along the NSEC and EWEC should be developed as gateways to the GMS countries (Tsuneishi [2005]).

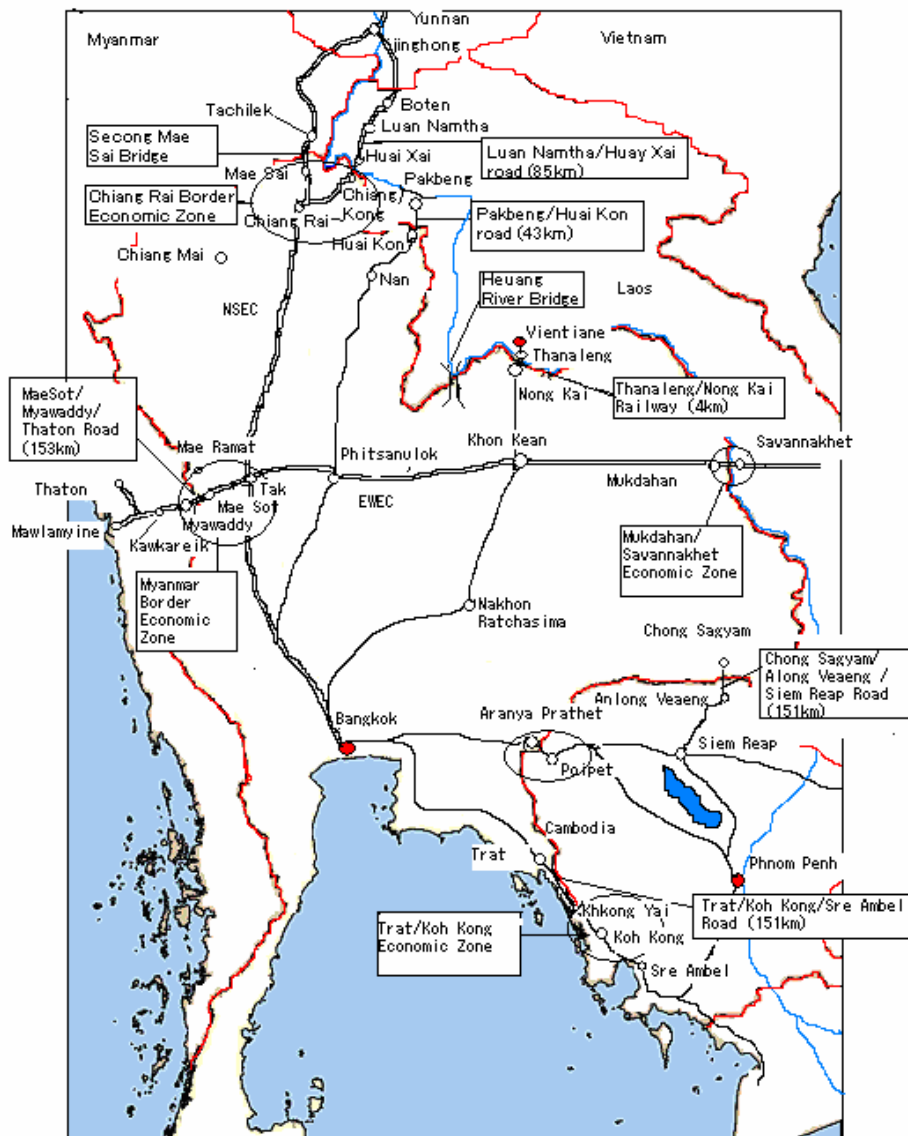
Thailand has been developing economic corridors based on GMS and ACMECS schemes. It has also tried to set up border economic zones and regional development hubs along corridors with the aim of developing relatively poor areas through mutual cooperation. The idea is that by shifting agriculture and labor-intensive manufacturing to border economic zones, Thai industries could benefit from cheap labor and resources in neighboring countries, while neighboring countries could benefit from jobs creation and the development of consumer markets.

The main border economic zones and regional development cores include Chiang Rai, Lampang, etc. along the NSEC; Tak, Phitsanulok, Khon Kaen, Kalasin, Mukdahan, etc. along the EWEC; and Sa Kaeo, Trat, etc. along the SEC. Most of these provinces are in the north or northeast, which are

² Figure and information are from Neighboring Countries Economic Development Cooperation Agency's internal report, "*Projects Under Supervision of NEDA.*"

³ For details, refer to Tsuneishi [2005].

Figure 3 Thailand's Economic Cooperation toward Neighboring Countries



(Source) NEDA and NESDB

generally poor areas of Thailand.

Economic conditions in these provinces are presented in Table 3. In these areas, 40%-50% of labor is engaged in agriculture, while the portion involved with manufacturing is less than 10%, except for Lampang, where the Northern Industrial Estate is located. Per-capita GDP is 30%-70% of the Thai national average. Daily minimum wages are about 142-147 baht, or 20% less than 184 baht average in metropolitan Bangkok. Factories registered with the Ministry of Industry are scarce,

because most are concentrated in the metropolitan and central parts of the country, or the east coast. Regional differences in terms of numbers of registered factories and BOI-approved investments are clearly observed between developing areas such as Kon Kaen, Lampang and Chiang Rai and less developed areas such as Tak and Mukdahan, where development has just started.

Provinces with border economic zones and regional development hubs have been deploying strategies to unite with neighboring countries. While provinces along the borders use economic zones for leverage, inland provinces such as Phitsanulok and Kon Kaen are taking advantage of their logistics hubs, such as where the NSEC and Route No. 2 each intersect with the EWEC. Bases expected to form either for production or logistics are shown in Figure 4.

Thailand, recognizing the importance that logistic plays in regional development, aims to become a logistics hub for Indochina. The NESDB is now drafting a master plan based on the recognition that competition with foreign logistics industries, such as that in China, could become even more severe following liberalization of the field.⁴

⁴Although the draft has completed, the present interim government has not yet approved it. Thailand's Logistics Development Strategy (2006-2010) (TLAPS [2006]) and related documents were submitted to the relevant logistics seminar "Thai-US logistic fair and symposium 2006" on October 5, 2006.

Table 3 Economic Fundamentals of Thai Provinces along Economic Corridors

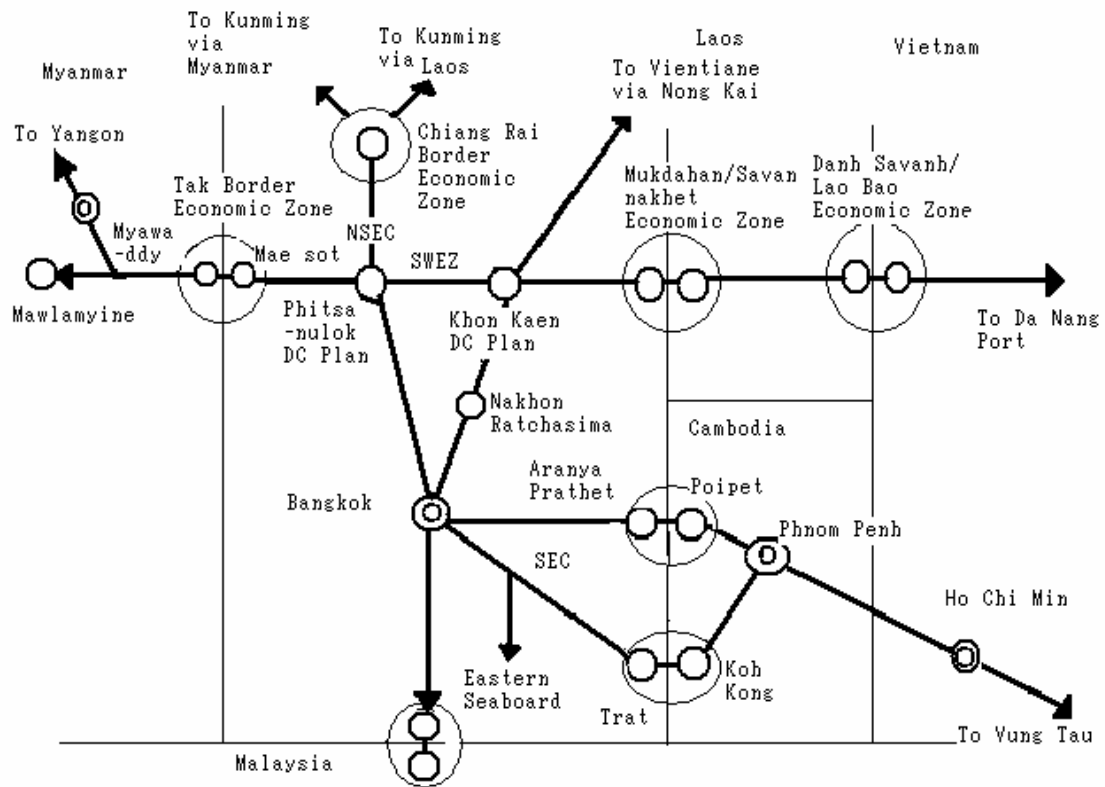
Economic corridors	NSEC		E W E C					SEC		Overall Thailand
Regions	North			North East			East			
Province	Chiang Rai	Lampang	Tak	Phitsanulok	Khon Kaen	Kalasin	Mukdahan	Sa Kaew	Trat	
Area (km ²)	11,678	12,534	16,406	10,816	10,887	6,946	4,339	7,195	2,819	513,115
Population	1,302,556	786,388	484,985	787,699	1,652,673	987,871	369,864	708,736	246,169	64,993,262
Provincial GDP (million baht)	45,796	38,629	25,062	44,167	99,348	30,534	10,639	25,615	17,855	7,104,228
(% of Thai GDP)	(0.64)	(0.54)	(0.35)	(0.62)	(1.40)	(0.43)	(0.15)	(0.36)	(0.25)	(100.00)
Per-capita GDP (baht)	35,149	48,983	51,868	55,936	59,978	30,947	28,944	36,788	73,029	109,696
(% of national average)	(32.04)	(44.65)	(47.28)	(50.99)	(54.68)	(28.21)	(26.39)	(33.54)	(66.57)	(100.00)
Daily minimum wage (baht)	142	145	143	143	144	144	142	147	145	(Metro184)
Labor (people)	715,170	448,033	251,981	448,505	882,004	548,158	203,157	397,426	142,906	36,600,507
Labor share by sector (%)										
Agriculture	(43.70)	(44.40)	(41.44)	(40.16)	(39.05)	(55.92)	(48.45)	(52.83)	(44.46)	(42.13)
Manufacture	(8.20)	(13.72)	(7.53)	(2.47)	(8.23)	(3.84)	(2.70)	(9.28)	(4.04)	(15.09)
Others	(48.10)	(41.88)	(51.03)	(57.37)	(52.72)	(40.24)	(48.85)	(37.89)	(51.50)	(42.78)
No. of factories	1,735	1,642	510	1,322	4,674	1,982	403	417	377	122,312
(% of national total)	(1.41)	(1.34)	(0.42)	(1.08)	(3.82)	(1.62)	(0.33)	(0.34)	(0.31)	(100.00)
(National rank)	(20)	(21)	(54)	(29)	(4)	(16)	(61)	(59)	(63)	
Investment (million baht)	5,642	53,020	9,734	9,552	56,810	5,429	2,028	4,689	2,171	4,045,982
(% of national total)	(0.14)	(1.31)	(0.24)	(0.23)	(1.40)	(0.13)	(0.05)	(0.12)	(0.05)	(100.00)
(National rank)	(45)	(16)	(36)	(37)	(15)	(47)	(65)	(50)	(64)	
No. of BOI investments (approved)										
2001 (million baht)	3(20)	1(45)	0(0)	1(48)	3(153)	0(0)	0(0)	3(182)	2(124)	818(266,181)
2002 (million baht)	0(0)	2(43)	0(0)	1(316)	3(269)	0(0)	0(0)	1(502)	0(0)	721(162,532)
2003 (million baht)	4(171)	1(60)	0(0)	4(268)	16(3,251)	0(0)	1(19)	1(15)	3(945)	839(283,750)
2004 (million baht)	2(99)	6(309)	0(0)	3(66)	12(3,515)	4(282)	0(0)	5(281)	1(120)	1,226(600,772)
2005 (million baht)	3(342)	1(40)	5(435)	4(119)	16(1,345)	5(339)	0(0)	4(2,067)	1(550)	1,255(571,274)

(Notes) Population and labor are fourth quarter. GDP is 2005. Number of factories as registered with Ministry of Industry at end-2005.

Minimum wage is January 2006.

(Source) Author's estimates based on data from Ministry of Industry, NESDB, and Ministry of Labour.

Figure 4 Economic Linkage along Economic Corridors



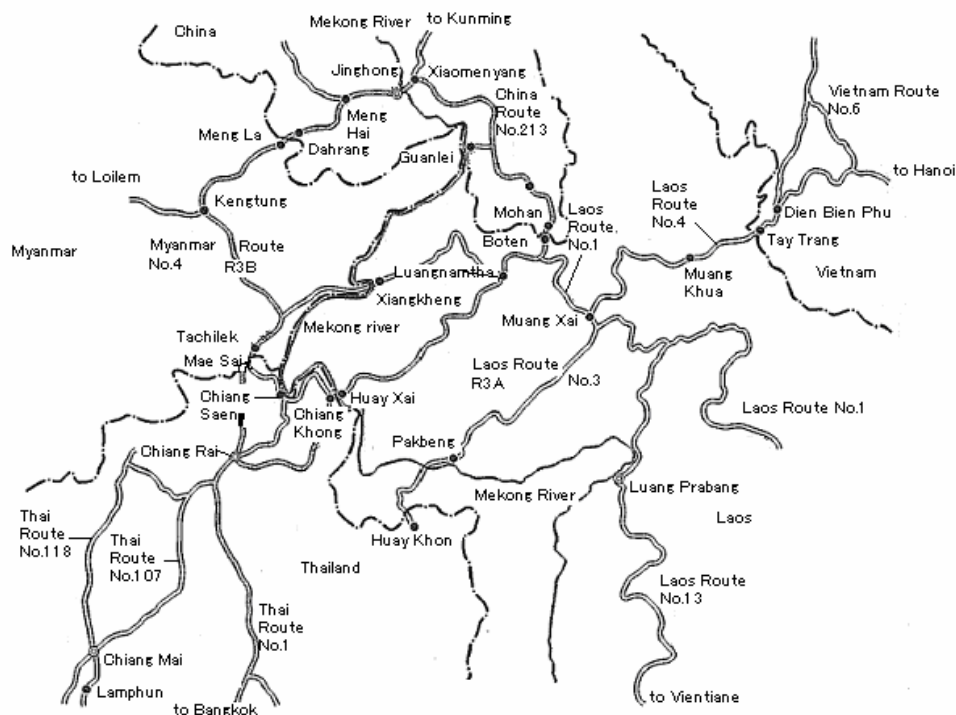
(Source) NESDB

3 Economic Cooperation and Regional Development along the NSEC

3-1 Cooperation for Construction Projects

Northern Thailand, especially Chiang Rai province, is divided by the Mekong River and has boundaries with Myanmar in the northwest and Laos in the northeast. Due north, where the Mekong leaves the province, Thailand also shares a boundary with Yunnan province, China. Border trade with each of these neighbors has been increasing. Construction of the NSEC to connect Kunming, China and Bangkok is targeted for completion in 2008. There are two routes between Jinghong and Chiang Rai: R3A to Chiang Khong through Laos, and R3B to Mae Sai through Kengtung, Myanmar. Thailand has provided assistance for work on both routes (Figure 5).

Figure 5 The North South Economic Corridor: R3A and R3B



3-1-1 Laos Route (R3A)

The Laos Route (R3A) extends 1,200 km from Chiang Kong in Thailand’s Chiang Rai province, through Huay Xai and Luang Namtha in Laos, to Kunming in China’s Yunnan province. An expressway has been completed between Kunming and Mohan near the Laotian border, except between Mohei–Simao and Xiaomenyang–Mohan. A paved two-way road between Boten and Luan Namtha, Laos has been completed with Chinese assistance. Between Luan Namtha and Huay Xai, the ADB and Thailand have agreed to give assistance. Thailand is responsible for 85 km, for which the Thai and Laotian governments agreed on a loan worth 1,385 million baht in October 2002. The 30-year loan carries an interest rate of 1.5% with a 10-year grace period. Construction started in September 2004 and is scheduled to finish within 2007.

Between Huay Xai and Chiang Khong there is a plan to construct a third “Mekong Friendship Bridge” (630 m, 31 million baht) on a site 10 km downriver (southeast) from Chiang Khong port. The site will also include construction of logistics facilities, such as container yards and an access road to national road No. 1020. Construction begins in 2007. At present, it takes 2–3 days for a ship

to go upriver (or 1–2 days downriver) between Chiang Saen and Jinghong. After completion of the bridge, the trip will be shortened to only 6–8 hours by truck. The distance between Chiang Saen and Chiang Khong is 70 km, and the distance between Chiang Khong and Jinghong is 380 km. Moreover, the distance between Kunming and Bangkok will become 1,850 km and require two days (TICU [2004]). Laos had problems providing resources for the construction, so the governments of Thailand and China decided in late 2006 to provide economic assistance.

3-1-2 Myanmar Route (R3B)

Between Tachilek, Myanmar and Mae Sai, Chiang Rai lays the First Mae Sai Bridge and a customs house for border trade. Just 3 km to the northeast is the Second Mae Sai Friendship Bridge, completed in January 2006 with Thai economic assistance. This bridge is also connected to R3B through Tachilek. A temporary customs office has been established at the bridge, but it has not operated consistently due to circumstances in Myanmar. It is reported that about 20–50 trucks cross the bridge daily. On the Thailand side of the bridge, construction has begun on a 250-rai (40-ha.) site to establish full facilities, including custom office and container yards amounting to 350 million baht, aiming at completion within 2007.⁵

3-1-3 Other Routes

Thailand has also been extending economic aid for sub-routes leading away from the NWEC. For the construction of a road (49 km) between Huai Kong, Thailand and Pakbeng, northern Laos, Thailand agreed in February 2004 to provide 840 million baht, 30% as a grant and the rest as a loan. Elsewhere, a railroad (4 km, 197 million baht) from Nong Kai, Thailand to the Thanaleng district of Vientiane will cross the First Mekong Friendship Bridge, which was built with Australian economic aid in 1994. Thailand and Laos agreed to the railroad project in March 2004, with 30% of the funds to be provided by Thailand as a grant and the rest as a 30-year loan at 1.5%. Construction was

⁵ The information is based on interviews at Mae Sai customs house on August 25 and November 6, 2006, and at the NESDB Northern Office on November 8 2006, as well as an annual report 2005 (in Thai) of the Mae Sai customs house.

scheduled to start from end of 2006 and finish in three years.

3-2 Chiang Rai Border Economic Zone

On July 29, 2003, the Thai government decided to develop Chiang Rai as the first special border economic zone by reinforcing the area's relationships with Yunnan, Laos and Myanmar along the Mekong River and the NSEC. New customs houses and logistic facilities are being constructed Thailand's Mae Sai, Chiensen and Chiang Khong areas to promote border trade, and an industrial estate is being set up in Chiang Khong. The Thai government approved a budget for 2003–2005 amounting to 1,356 million baht to develop basic infrastructure, human resources and socio-environmental projects in Chiang Rai. A budget for legislation to facilitate the special economic zone had been approved. A private legal firm was committed and completed related legal work in the middle of 2004, but details are still being considered by the government⁶.

Under a plan to set up an industrial estate in Chiensen, the Industrial Estate Authority of Thailand (IEAT) finished a feasibility study in September 2005. However, the plan met opposition from the area's traditional Lanna community, so the government modified the plan to establish Chiensen as a world heritage site. In February 7, 2006, the Thai cabinet revealed that other two places in Chiang Khong had been selected as suitable sites, including in terms of environmental-protection concerns, for development as industrial estates totaling 6,000 rai (2,560 ha).

The IEAT, anticipating that China's Yunnan province would invest in the estates, signed a memorandum for joint development with company in Kunming in 2003, but the memorandum was eventually canceled. Nevertheless, the Thai government has continued to look forward to investment from Yunnan. A Chinese mission inspected the site in June 2005, and Thailand sent a mission comprising the IEAT, the NESDB, the provincial government of Chiang Rai, the Ministry of Foreign Affairs and the BOI in July 2006. Negotiations have continued⁷. The Kunming New

⁶ From an interview at the NESDB on September 4, 2006, and NESDB's *Thai Policy on Cooperation with Neighboring Countries*, January 2006.

⁷ See the NESDB's *Executive Summary of Industrial Estate in Chiang Khong District*, May 2006. The NESDB Northern Office was afraid that China would invest in Laos rather than Chian Khong due

High-Technology Development Zone (KNTZ) has re-emerged. The targeted industries are agriculture and food processing, jewelry, textile/garments, logistics, electrical/electronic products, pharmaceutical/herbal cosmetics, agricultural machines and handicrafts/OTOP (Thai One Tambon One Product), with an emphasis on China and Thailand mutually complementing each other's technologies and capabilities.

3-3 Promotion of Border Trade

The Mae Sai customs house is used for trade with Myanmar, while the Chiang Saen and Chiang Khong customs houses are used for trade with China and Laos, respectively. Border trade in Chiang Rai has been expanding steadily as the result of the free trade agreement between Thailand and China, as well as anticipation of the border economic zone project. Total cumulative annual trade recorded by the three custom houses grew from 26.1% in fiscal 2003 to 32.4% in fiscal 2005, but declined to just 2.6% in fiscal 2006 (Table 4).

Table 4 Border Trade in Chiang Rai (2002–2006)

(Unit: million baht)

Fiscal year	Mae Sai Customs			Chiang Saen Customs			Chiang Khong Customs			Total		
	Exports	Imports	Total	Exports	Imports	Total	Exports	Imports	Total	Exports	Imports	Total
2002	1,049	91	1,140	2,515	789	3,304	481	186	667	4,045	1,066	5,111
2003	1,564	85	1,649	3,373	704	4,077	532	185	717	5,469	974	6,443
	(49. 1)	(-6. 6)	(44. 6)	(34. 1)	(-10. 8)	(23. 4)	(10. 6)	(-0. 5)	(7. 5)	(35. 2)	(-8. 6)	(26. 1)
2004	1,915	498	2,413	3,783	1,335	5,118	533	270	803	6,231	2,103	8,334
	(22. 4)	(485. 9)	(46. 3)	(12. 2)	(89. 6)	(25. 5)	(0. 2)	(45. 9)	(11. 9)	(13. 9)	(115. 9)	(29. 3)
2005	1,917	386	2,303	5,239	1,278	6,517	902	414	1,316	8,058	2,980	11,038
	(0. 1)	(-22. 5)	(-4. 6)	(38. 5)	(-4. 3)	(27. 3)	(69. 2)	(53. 3)	(63. 9)	(29. 3)	(41. 7)	(32. 4)
2006	2,112	306	2,418	6,031	1,163	7,194	1,125	587	1,712	9,268	2,056	11,324
	(10.2)	(-20. 7)	(5. 0)	(10. 4)	(-8. 9)	(10. 4)	(20. 6)	(19. 1)	(20. 1)	(15. 0)	(-31. 0)	(2. 6)

(Notes) Fiscal 2005 is from October 2004 to September 2005. Figures in parentheses are year-on-year growth rates.

(Source) Author's estimates based on data from the three customs houses.

3-3-1 Mae Sai Customs House

In addition to the existing Mae Sai customs house beside the First Mae Sai Friendship Bridge, a new custom house has been built next the Second Mae Sai Friendship Bridge. Exports to Myanmar delays in Thailand's procurement of a site (November 8, 2006).

through the Mae Sai customs house came to 2,112 million baht in fiscal 2006. The major products included refined oil, steel, foreign-made liquor, tires, medicines and cement. Imports from Myanmar totaled 306 million baht, including water buffalo, garlic, clothes, oranges and jewelry⁸. In trade between Thailand and Myanmar in 2006, imports from Myanmar declined year on year by 20.7% while exports to Myanmar increased by 10.2%, with Thailand enjoying a significant surplus.

3-3-2 Chiang Saen Port Customs

In fiscal 2006, exports passing through Chiang Saen port amounted to 6,031 million baht, up 10.4% for the year, while imports declined 8.9% to 1,163 million baht. The port is used for trade with China, Laos and Myanmar, which respectively accounted for 70.5%, 6.7% and 22.9% of exports and 90.8%, 2.6% and 6.6% of imports. Chiang Saen is mainly used for port trade with Jinghong and Guan Lei in Yunnan.

Since the free trade agreement between China and Thailand in 2003, trade through Chiang Saen has increased significantly. In fiscal 2006, Thai exports to China through the port rose 10.2% to 4,248 million baht, while imports declined 13.7% to 1,055 million baht, or a surplus of 3,193 million baht for Thailand. More than half of Thai exports were dry longan and rubber, while imports were mainly agricultural products such as vegetables, apples, pears and garlic. The roads near the port are crowded with trucks loaded with commodities, and produce such as apples is frequently transhipped between ships and trucks inside the port.

The port was opened three years ago. Since renovation of the pier in October 2005 one stop-service for immigration, quarantine and customs processing has been offered in the same building. But the facilities are insufficient, so a new port of 400 rai (64 ha) with container yards is planned to be built at a cost of 1,100 million baht about 12 km down the Mekong River from 2007.

3-3-3 Chiang Khong Port Customs

In fiscal 2006, exports from Chiang Khong increased 20.6% to 1,125 million baht, and imports

⁸ The figure is 187 million baht if foreign liquor worth 119 million baht is excluded.

increased 20.1% to 1,712 million baht. The port is used for trade with Laos and China, the former accounting for 80%. Chiang Khong has a much smaller trade volume than Chiang Saen, and ferryboats run only two times a day between the port and Huai Xai.

4 Economic Cooperation and Regional Development along the EWEC

4-1 Introduction

The EWEC extends 1,450 km from Da Nang port, Vietnam to Savannakhet, Laos and from Thailand to Maulmyaing, Myanmar. The Thai portion of the EWEC runs 777 km from Mukdahan province bordering Laos to Mae Sot in Tak province, which borders Myanmar. Thailand is providing economic assistance for the construction of a 153-km road from Mae Sot to Thaton, Myanmar. In May 2006, 18 km of the road from the Mae Sot/Myawaddy border was completed with a grant of 122 million baht. The following 40 km through mountainous territory to Kawkareik will be renovated with a grant of 400 million baht. For the last 95 km from Kawkareik to Thaton, a loan for 1 billion baht is being negotiated.

The EWEC road is targeted for completion within 2007. It comprises Thai national roads, including Routes 12, 105, 209 and 2042. Some stretches will be expanded from two lanes to four by 2009. The EWEC includes Thailand's north and northeast regions. Laos and Myanmar have helped to jointly implement economic development along their borders, while logistics hubs are being developed in land-locked provinces such as Phitsanulok and Kon Kaen.

4-2 Border Economic Zones

4-2-1 Mukdahan/Savannakhet Border

The prime minister of Laos declared on January 21, 2002 that the Seno district of Savannakhet should be developed as a special economic zone. Following the GMS scheme, renovation of the 208-km Route 9 in Laos was completed by the Asian Development Bank (ADB) with a Japanese grant and loan. The Second Mekong International Bridge was completed on December 20, 2006 with a Japanese loan. The distance between Hanoi and Bangkok, previously about 2,000 km by way of

the First Mekong Friendship Bridge in Nong Kai, was shortened to 1,500 km. The transportation time was also shortened from four days to three, including customs procedures. Since transportation takes 10-15 days by sea, the advantage of land transportation has been further increased.

In regard to development of special economic zones in Savannakhet, the Japan International Cooperation Agency (JICA) finished a feasibility study in January 2001 and recommended setting up comprehensive special economic zones including export processing zones and more. Later, the Industrial Estate Authority of Thailand (IEAT) conducted a feasibility study from February 2005 to May 2006 and made the almost same recommendations as JICA. The following facilities are now planned: site A (305 ha, along national road Route 9 and near the Mekong river) comprising factories, residences, hotels, commercial district, border administration facility, etc., and site B (20 ha, near the intersection of Routes 9 and 13) comprising factories, logistics and distribution center, warehouse and customs house. Within the site, the Savan–Seno Economic Zone Authority (SEZA) was established in 2002. Preparatory projects are under way to procure land and attract investors, but it is reported that these activities are not going well because the population of Savannakhet is small, so the attractiveness of the local market is limited. The Laotian government, expecting investment mainly from Thailand, is providing incentives such as land leases for limitless periods and five-year exemptions for corporate taxes.

The IEAT is also planning to establish a logistics center and small industrial estate for light industries, such as packing, in Mukdahan. A study finished in August 2006 has recommended that a distribution center of 50 rai (8 ha) including container yards, warehouses and services companies, be established in addition to a 500 rai (80 ha) industrial estates including export processing zone near the Second Friendship Bridge⁹.

4-2-2 Myanmar Border Economic Zone

4-2-2-1 Inside Myanmar Border

⁹ According to IEAT [2006], three candidate sites were selected out of eight total places, with the site nearest to the bridge being the most highly evaluated.

Thailand has been providing Myanmar with support under a plan to develop their border along the EWEC as a border economic zone based on the ACMECS scheme. The IEAT carried out a study from March 2005 to July 2006 regarding an industrial estate inside the Myanmar border. The report considered sites in Myawaddy (950 acres/384 ha), Maulamyaing (684 acres/276 ha) and Hpaan (981 acres/396 ha). In Myawaddy, the most highly evaluated site, 65% would be an Export Processing Zone with 227 plots. Electricity would be supplied from Mae Sot, Thailand. The population of Myawaddy is 52,600, including a labor force of 6,000. Full-scale industrialization, however, would require about 52,000 workers from the surrounding area. Since the minimum wage is 1,078 khat (49 baht), or one third of the 143-baht minimum wage across the Thai border in Tak province, investment from Thailand is highly expected. Contract farming is planned. A pilot project is already being carried out in the EWEC, in an area covering 60,200 rai (96,320 ha), to produce maize, green beans, peanuts and sugarcane¹⁰. Myanmar firms receive subsidies from the Thai government through the Tak provincial government and chamber of commerce.

According to the IEAT, the Myanmar border economic zone is very attractive thanks to its large labor market. There are political problems and security issues, however, so implementation depends on Myanmar. Development could start as early in 2008, but would require institutional arrangements for necessary incentives, such as tax exemptions under the IEAT, BOI and customs, as well as liberalization of foreign labor.

4-2-2-2 Tak Province, Thailand

On October 19, 2004, the Thai cabinet decided to create a border economic zone in Tak province and since then the plan has been implemented. The regions of Mae Sot, Mae Ramat and Phb Pra are expected to be developed, with Mae Sot as a center for industry and the others for agriculture. The Thai government approved a fiscal 2005 budget for a feasibility study of Mae Sot airport, construction of anti-flood system, city development and inland container depot. Based on a cabinet

¹⁰ Based on a hearing at the NESDB on September 4, 2006 and an NESDB internal paper, *Thai Policy on Cooperation with Neighboring Countries*, January 2006.

decision, the NESDB Northern Region Office and related organizations requested the Tak provincial government in January 2005 to conduct and finish a comprehensive survey within 2006 covering an industrial estate, environmental impact and agricultural restructuring, with development to start from 2007. Tak commissioned Chiang Mai University to conduct the study, which started in January 2006 and finished in November 2006. The development of a 2,500 rai (400 ha) industrial estate is planned and three places inside Mae Sot area were listed as the most attractive among nine candidates¹¹. At the same time, the Department of Land Transport in the Ministry of Transport commissioned a study, which was finished in August 2006, on a truck terminal in Mae Sot.

The Tak chamber of commerce has called for incentives to attract industries, such as garments, textiles, ceramics and furniture. The existing 300 factories in Mae Sot are also expected to relocate to the estate.

4-2-2-3 Border Trade

Border trade between Mae Sot and Myawaddy steadily expanded during 2002-2005, but declined slightly in 2006 due to Myanmar's decreased purchasing power and import controls implemented by the country's military regime (Table 5). In 2005, exports of Thailand exported 12.5 billion baht but imported only 700 million baht, resulting in a large surplus. Thailand exported mainly manufactured products including glutamate sodium, tin plate steel, diesel oil, motorcycles, cotton fabrics, TVs, plastic sheets and vegetable oil, and imported mainly raw materials including furniture and other processed wood products, fresh and dried fish, live cattle and water buffalos, agricultural products and tin ore.

4-3 Inland Regions of Thailand

Thai inland provinces such as Phitsanulok and Khon Kaen aim to develop as important logistics centers for the north-south and east-west economic corridors. Phitsanulok is the intersection of the

¹¹ Based on *Mahavithayalai Chiang Mai* [2006] and hearing by feasibility study team on November 8, 2006.

Table 5 Border Trade in Mae Sod (2002-2006)

(Unit: million baht)

Mae Sod Customs			
Year	Exports	Imports	Total
2002	2,764	540	3,304
2003	5,733	474	6,207
	(107.4)	(-12.2)	(87.9)
2004	11,736	645	12,381
	(104.7)	(36.1)	(99.5)
2005	12,544	743	13,287
	(6.9)	(15.2)	(7.3)
2006(Note)	7,116	867	7,983

(Notes) Figures in 2006 are for January to June.

Figures in parentheses show annual growth rates.

(Source) Author's estimates from Tak Chamber of Commerce data

EWEC (Route 12) and the NSEC (Route 11), giving it strong potential as a distribution center. The Phitsanulok provincial government commissioned Thai Chamber of Commerce University to conduct a feasibility study of this potential in 2005. According to the study, construction of distribution facilities is expected to be carried out through privatization. Khon Kaen also has a significant advantage as a crossing point. The following section examines Khon Kaen and its efforts to develop, in part by leveraging its potential as a logistics hub.¹²

4-3-1 Khon Kaen Province

Khon Kaen province has about 4,700 factories, of which 96% are small factories capitalized at less than 10 million baht, with 70% of these being for rice milling¹³. Companies are investing in the province, which has potential as a logistics hub where the EWEC and national road Route No. 2 cross. According to BOI statistics, 63 companies approved by the BOI entered the area between 1990 and 2002, or an annual average of five. In recent years, however, the numbers have been 14 in

¹² A survey report (ADB [2001]) envisioned development of Tak and Mukdahan as border economic zones and Phitsnulik and Khon Kaen as logistics or growth hubs.

¹³ According to "Khon Kaen, APEC Thailand 2003", the number of companies with more than 100 million baht in capital is 25 (0.5%); more than 10 million baht and less than 100 million baht is 158 (3%); and less than 10 million baht is 4,506 (96.5%). Among small companies, 3,272 are rice millers.

2003, 8 in 2004, 17 in 2005 and 7 in 2006 (January to August; Table 6). More than half of the investment in northeast Thailand is in the Nakhon Ratchasima/Khon Kaen region. In terms of investment projects in 2005 and 2006 (January-August), Nakhon Ratchasima recorded 25 and 37 and Khon Kaen 11 and 7, respectively. The major fields of investment include services, electrical/electronics, light industry such as garments, and agriculture (Figure 6).

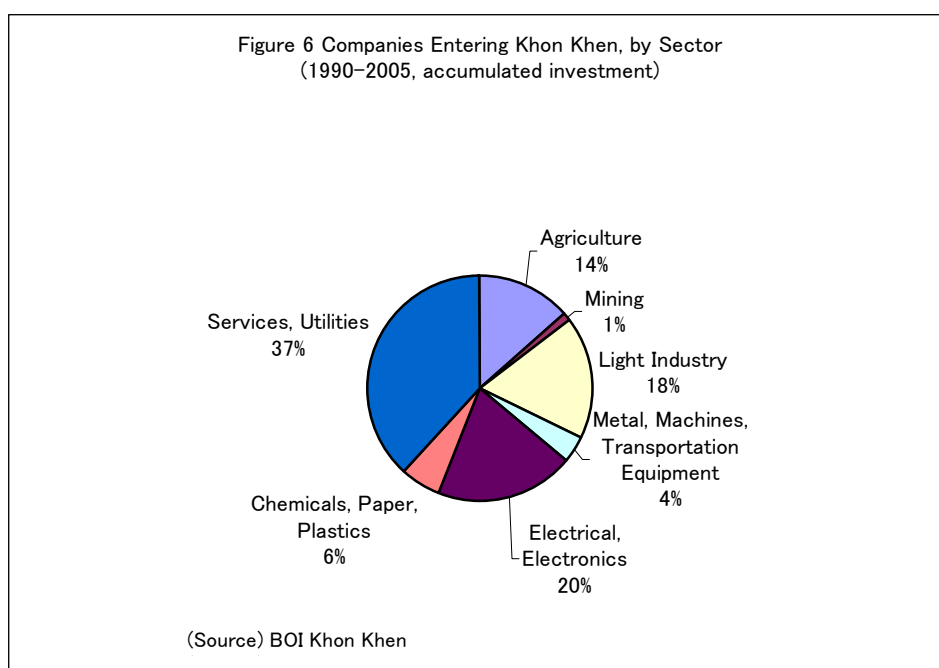


Table 6 Number of Industries Entering Khon Kaen (1990-2006)

Year	Number	Invested cap. (Million Baht)	Registered cap. (Thai) (Million Baht)	Registered cap. (Foreign) (Million Baht)	Employment: Thai	Employment: Foreign
1990-2002 accumulation (Annual Average)	63 (5.3)	8,498.5 (708.2)	2,853 (238)	1,111 (93)	18,635 (1,553)	146 (12)
2003	14	2,729.6	717	730	5,857	37
2004	8	2,633.0	648	398	3,396	5
2005	17	1,711.6	517	275	6,832	16
1990-2005 accumulation (Annual Average)	102 (6.8)	15,572.7 (1,038.2)	4,735 (316)	2,514 (168)	34,720 (2,315)	204 (14)
2006 (Jan–Aug)	7	7,622.8	4,234	75	942	-
Total	109	23,195.5	8,969	2,589	35,662	204

(Notes) Figures are based on numbers of BOI approved projects. Figures in 2006 are from January to August.

(Source) Author's estimates of BOI, Khon Kaen data

Although Japanese affiliated manufacturers are still scarce, Maxima Electronics Co., Ltd. and Panasonic Electric Works Khon Kaen Co., Ltd. are operating locally. The main reasons for investment are: (a) most workers in Bangkok are from the northeast, (b) labor is cheap, (c) BOI zone 3 offers strong tax incentives and (d) completion of the EWEC will make transportation to neighboring countries convenient¹⁴.

4-3-2 Khon Kaen's Advantages and Development¹⁵

The population of Khon Kaen is 1.75 million, of which 20% is in the capital city, making this the third largest province. It has a large labor force of 880,000 persons, and the minimum wage is 144 baht per day, or 20% less than in Bangkok (184 baht).

The Khon Kaen provincial government and neighboring provinces such as Mahasarakam and Roiet, in cooperation with the Northeast Strategic Institute of Khon Kaen University, created a regional industrial cluster plan (2005-2008) based on the GMS and ACMECS frameworks¹⁶. The aim is for Khon Kaen to by take advantage of its crossroads location to become a logistics hub with inland container depot. As part of this plan, a container yard has been established at Khon Kaen railway station.

Potential for investment has been identified in industries that utilize abundant local raw materials, such as agricultural products. Currently operating companies are engaged in the rubber industry and the production of ethanol from sugarcane and potatoes. Rubber plantations in the Northeast will peak in 4-5 years. Kon Kaen frequently receives economic missions from Da Nang, Vietnam, which will have easier access to Khon Kaen with the completion of the Second Friendship Bridge and improvement of the EWEC. New business opportunities with Vietnam are being pursued in fields

¹⁴ Interviews at BOI Khon Kaen, Khon Kaen Chamber of Commerce and Maxima Electronics Co., Ltd. on September 15, 2006.

¹⁵ Interviews at BOI Khon Kaen, Khon Kaen Chamber of Commerce, Industrial Promotion Center (September 15, 2006) and Khon Kaen Provincial Office (November 9, 2006).

¹⁶ The Action Plan 2005-2008 by Group 6.3 (Roiet-Khonkaen-Mahasarakam [2005]) was developed by neighboring provinces such as Roiet, Khon Kaen and Mahasarakam. The Northern 9 provinces also developed a plan, the Lanna Industrial Cluster Development (2005-2008).

such as food processing, which uses raw materials in Khon Kaen together with seafood imported from Vietnam. Finished products are expected to be exported from Da Nang.

5 Economic Cooperation and Regional Development along the SEC

5-1 Cambodian Cooperation

The SEC comprises three sub-economic corridors: the Central Southern Sub-Corridor (Bangkok–Aranya Prathet–Poipet–Phnom Penh–Ho Chi Min–Vung Tau port), the South Coastal Sub-Corridor (Bangkok–Eastern Seaboard Industrial Estates–Trat–Koh Kong–Sihanoukville–Nam Can) and the Northern Sub-Corridor (Aranya Prathet–Poipet–Sisophon–Siem Reap–Sttung Treng–Quang Ninh).

The Thai government is assisting the South Coastal Sub-Corridor, where a border economic zone is planned between Trat, Thailand and Koh Kong, Cambodia. Based on the ACMECS scheme, Thailand's NEDA has provided 867.8 million baht for the renovation of national road Route No. 48 (151.5km) from Trat to Koh Kong to Sre Ambel.

On July 1, 2003, the Thai cabinet also decided to support the renovation, signing a 567.8 million baht loan agreement with the Cambodian government. It also extended an additional loan of 300 million baht on August 3, 2004. Four bridges will be completed within 2007 with Thai grants. In addition, the NEDA has provided 800 million baht for renovation of Cambodia's national road No. 67, extending from Chong Sagyam, Thailand to Anlong Veang and Siem Reap in Cambodia. This will become a new route from Thailand to the Northern Sub-Corridor. Although the agreement was delayed because Cambodia frequently changed the route's course, then-Prime Minister Thaksin visited Cambodia to finally sign the loan agreement in August 2006. A feasibility study of the route's total 151 km is also covered by a Thai grant of 126 million baht.

5-2 Border Economic Zones

Following the ACMECS scheme, the IEAT studied the establishment of a Koh Kong industrial estate and released the results in January 2005 at a seminar for foreign investors organized by the

Cambodian Ministry of Commerce¹⁷. Initial development was started in November 2002 by a Cambodian developer, Koh Kong International Resort Club Co., Ltd., which runs a hotel and resort there. Although no company has made an investment yet, a 339-ha site has been developed and a management office is operating. Electricity is to be supplied from the Thai side and water will come from a nearby reservoir. The developer envisions gradual growth based on marketing efforts and the response of actual investors between 2005 and 2015. The estate is expected to attract Thai investors because it is just 229 km to Sihanoukville, which will become a major port if Route 48 is completed, and 300 km to the Eastern Seaboard Industrial Estate, a major Thai industrial zone connected via Route 318. The IEAT, however, is allegedly concerned about the relatively limited experience of the developer, which has operated only as a hotelier.

In the border area between Aranya Prathet and Poipet along the Central Southern Sub-Corridor, border trade as well as employment of Cambodian labor within Thai side is increasing. However, development of this area is based on private efforts, not the ACMECS scheme. At present, Cambodian developers Chhay Chhay Investment Ltd. and ASK&KH Group Ltd. have launched two industrial estates in the area, 12 km away from Poipet toward the East along Cambodian national road 5.

6 Conclusion

Thailand's neighbors have worried about the suspension of economic assistance since the Thaksin administration, a strong promoter of foreign economic aid, was toppled in a coup on September 19 2006. Interim Prime Minister Surayud Chulanont, soon after his inauguration, visited these countries and made clear that Thai policies, such as supporting the ACMECS, would be maintained. At the same time, Thai government bodies such as the National Economic and Social Development Board (NESDB) have made clear that the 10 development plans started since October 2006 would be

¹⁷ From IEAT seminar papers *The Feasibility Study on the Establishment of Industrial Estate in Koh Kong and Cambodia Under the Economic Cooperation Plan Between Cambodia and Thailand*, and a local interview on December 15, 2005.

maintained because such efforts in fact increase the integrity, prosperity and security of Indochina amid the challenges of globalization¹⁸. Although Thai economic aid cannot be expected to increase at the present time due to the country's unstable, transitory political situation, foreign aid will likely be maintained over the medium to long term.

It is increasingly necessary for Japan to utilize Thailand's strengths, considering its strategic geographical position and its ongoing role in regional cooperation, trade and investment. When providing economic aid within the region, Japan could benefit from Thailand's established relationships and channels of communication, as well as its specialized understanding of how to provide aid under the ACMECS scheme.

Indeed, Japan has been supporting regional frameworks, such as the GMS program and the Initiative for ASEAN Integration (IAI). For example, the Japanese Bank for International Cooperation (JBIC) has begun to provide assistance for multilateral projects, such as yen loans for the construction of the Second Mekong Bridge.

Indochina offers high potential as both a base for Japanese production and a market for Japanese goods. Japanese companies that have invested in Thailand have shown increased interest in the region by sending economic envoys to survey investment climates. While the number is still very limited, several companies have even started operating in Laos or Cambodia. In the near future, Japanese companies in Thailand might well move into neighboring countries of the region under the Thai policy of relocating industries to take advantage of cheaper labor and resources. At the moment, however, it is still too early for this to take place on a significant scale due to insufficient industrial infrastructure in the region. For this to happen, further Japanese economic assistance is needed.

References

ADB [2001], *Preinvestment Study for the Greater Mekong Subregion, East-West Economic Corridor, Industry and Industry Zones*.

Department of Land Transport, Ministry of Transport [2006], *Executive Summary for the Establishment of Truck*

¹⁸ In the NESBD's 10th economic and social development plan [2006], see Section 3, chapter 4: restructuring strategy for more balanced economies.

- Terminal at Maesod, Tak Province*, Transport Institute Chulalongkorn University, August 2006.
- IEAT [2006], *Feasibility Study on the Establishment of Special Economic Zone/Industrial Estate in Mawlamyine, Pa-an and Proposed Area*, July 2006.
- Kaannikom Utasahakam (IEAT, 2006), *Rayngan Chabubyou Samrub Puborihan: Krongkan Suksa Pattana Mukdahan Pen Soon Kanpalit Raubruam Praerub lae Grajay Sinka*, 2549, August 2006.
- MOT [2006] *Executive Summary Feasibility Study for the Establishment of Truck Terminal at Measod, Tak Province, Department of Land Transport, Ministry of Transport*, August 2006.
- Mahavithayalai (University) Chiang Mai [2006] *Raynganberngton Krongkan Suksa Kwam Mosom Kanjadtan Gnikom Utasakam Ponkratop Singvaedlom lae Ganprubkongsang Kanpalit-sanher Jangwad Tak*, February 2006.
- NESDB [2006] *Thailand in Brief 2006*.
- Roied-Khonken-Maharakam [2005] *Peen Pathibat Ratchakarn 4 Pii Krom Janwad thii 6.3*.
- Sumnukngan Janwad Chiangrai [2005] *Peen Pathibat Ratchakarn 4 Pii P.S.2548-2551*.
- Sumnukngan Kanakammakan Patthanakan Setthakij lae Sungkomhengshat (NESDB) [2006], *Phan Patthana Setthakij lae Sungkom Hengshat Chabub thii 10 2550-2554*.
- Transportation Institute, Chulalongkorn University (TICU) [2004], *Executive Summary, Determination of Proactive Strategies for the Liberalization of Trade in Road Transport Service*.
- Thai Logistics And Production Society (TLAPS) [2006], *Building World Class Logistics and Supply Chains, Volume 1 The Beginning for Thailand*.
- Tsuneishi [2005] *The Regional Development Policy of Thailand and Its Economic Cooperation with Neighboring Countries*, Discussion Paper No. 32, IDE.