Regional Economic Cooperation and Integration through Growth Triangles: The Case of IMS - GT

Rahimah Majid
UUM College of Arts and Science

Abstract

The emergence of growth triangles at the ASEAN level such as the Indonesia-Malaysia-Singapore Growth Triangle (IMS – GT), Indonesia-Malaysia-Thailand Growth Triangle (IMT – GT), and Brunei Darussalam-Indonesia-Malaysia-Philippines Growth Area (BIMP – EAGA) was aimed at promoting faster economic growth through regional economic co-operation and the integration of economic activities among the participating countries. Through growth triangles, differences and similarities in endowments of factor of production and comparative advantages in the participating countries can be exploited to promote external trade and investment. By optimizing the economic complementarities between them would enable the region to attract both domestic and foreign investment and in promoting exports. However, a successful economic cooperation and integration in this growth area requires collaborative efforts and close cooperation among the participating countries - the government as well as the private sector. The extent of mutual benefits also depends upon the degree of exploitation of economic complementarities; geographical proximity, and infrastructure development in those countries.

Of the three growth triangles (IMT-GT; BIMP- EAGA; IMS-GT), the IMS-GT is the most successful sub-regional cooperation that has provided economic benefit to the member regions. Singapore being the most developed region acts as the engine of growth in this growth area. Rapid economic growth and industrialization process of Singapore's economy has increased the needs of Singapore to relocate its labor-intensive industries to low-cost neighbouring countries like Malaysia and Indonesia. These complementarities has developed a strong linkages between Singapore – Riau as well as Singapore – Johor, but however there is not much linkage between Johor – Riau due mainly to the lack of complementarity between these two areas. The positive spillover effects help to promote economic growth in the less developed regions particularly the Riau province – Batam and Bintan islands.

1.0 Introduction

The emergence of growth triangles as a model for economic cooperation and integration on a regional basis within ASEAN was aimed at enhancing the attractiveness of investment and to promote external trade in the participating countries. As suggested by Kumar (1991), the formation of growth triangle is to link three areas with different factor endowments and different comparative advantages to form a larger region with greater potential for economic growth. Hence, growth triangle can be a mechanism to stimulate and synergize existing local economies by exploiting their economic complementarities and in turn comparative advantages to achieve accelerated economic development by means of enhancing competitiveness of participating areas and of promoting their exports in the global marketplace. Mutual economic benefits can be generated from an enlarged markets and economies of scale. In addition, geographical proximity between the sub-regions, a well developed infrastructure can reduce costs of doing business and facilitate movements of goods and services, thus making growth triangles an attractive place for investment. Economic growth in the triangle is driven by the private sector, but it is facilitated by the participating governments who cooperate to remove barriers to the flow of factors of production and goods across borders. Therefore, a strong political commitment from the respective governments, effective policy coordination among the participating countries are also important in ensuring the success of the growth triangles in promoting faster economic growth in the contiguous regions.

For any growth triangle, there has a group of investing countries and a group of receiving countries (Tang, 1994), in which the investing countries are characterized by rapid economic growth, high productivity, a high level of investment, high labor and land costs. In contrast, the receiving countries are those who are less developed, low productivity, lack of capital, low wages and an abundant supply of land and labor. Ihe investing countries will provide capital, technology, and management skills to the receiving group. On the other hand, the receiving group provides semi-skilled and non-skilled labor, land, and other natural resources. This shows that growth triangle emphasize on resource pooling and investment cooperation rather than market integration (Chia, 1996). The availability of capital, technology, and human resources in the developed region is integrated with the availability of land, natural resources

and labor in the less developed region. This enables manufacturing firms to achieve vertical integration in their operations as well as economies of scale.

Several growth areas that have been established within the ASEAN economy were based on these framework, namely the Indonesia-Malaysia-Singapore Growth Triangle (IMS – GT), Indonesia-Malaysia-Thailand Growth Triangle (IMT – GT), and Brunei Darussalam-Indonesia-Malaysia-Philippines Growth Area (BIMP – EAGA. Unlike formal trading blocs, growth triangles are narrow sub regional economic zones, market-driven, peripheral-oriented and private sector-led regional cooperation (Kakazu, 1996). The formation of growth triangle does not require changes in administration or legislation at national level, but the cooperation between governments of the countries was mainly focused on investment and infrastructure provision. As such the political and economic risks would be reduced, and if the growth triangle succeeds the benefits can be easily extended to other parts of its member countries. Therefore, participation in growth triangle is said to be effective in promoting open regionalism through intra-regional trade and investment, and an attempt to move from national comparative advantage to sub-regional competitive advantage within the global economy (Abonyi 1996). Although past experience showed that these growth areas enhanced regional economic growth and benefiting the participating countries, its successful implementation however requires close collaboration and cooperation among the participating countries towards providing a conducive economic environment.

This paper discusses the issues of regional economic cooperation through growth triangle that focused on the success of IMS-GT. In the following section, a brief overview of the IMS-GT will be discussed. Evaluation on the performance and success of the growth triangle will be examined in the third section. Part four discuss the success of IMS-GT with respect to other growth triangles in the region: IMT-GT and BIMP-EAGA in comparison to the IMS-GT, and part five concludes the discussion.

2.0 Overview of the IMS – GT

Indonesia-Malaysia-Singapore Growth Triangle (IMS-GT), formerly known as Singapore-Johor-Indonesia growth triangle (SIJORI-GT) was the first ASEAN's sub-

regional growth area to be established. This growth triangle was proposed in late 1989 by Singapore, suggesting the formation of subregional economic cooperation with Johor of Malaysia and Riau islands of Indonesia. Higher rates of economic growth and rising labor and land costs had forced Singapore to relocate their production bases to cheaper resource destinations abroad to the surrounding regions of Malaysia and Indonesia. Since there already exists two bilateral agreements, one linking Singapore with Riau and the other linking Singapore with Johor, it indicate that the creation of a triangular arrangement were due to both economic imperatives and political will of the participating countries. Table 1 provides some basic indicators of the subregions.

Table 1: Basic Indicators for the IMS-GT, 1994

Indicator	Malaysia	Singapore	Indonesia		
	Johor		Riau	West Sumatra	Batam
Area (sq.km)	18,914	641	94,562	49,778	415
Population (million)	2.3	2.9	3.7	4.2	0.16
GDP (US$ million)	4, 338	70,200	3,320	2,836	na
GDP per capita (US$)[1]	3,594	12,890	na	na	500

Source: Thant, et.al (1994)

1)1991 figure

The IMS growth triangle was formally established in 1994, and the coverage of IMS-GT was then extended to include the Malaysian States of Negeri Sembilan, Melaka and Pahang, Indonesian province of Riau and contiguous provinces of West Sumatera, South Sumatera, Bengkulu, Jambi, Lampung and West Kalimantan. This sub-regional cooperative framework combines politically motivated and market-driven factors (Toh, 2006). Under the agreement, Singapore acted as the investor and the main financial center of the triangle, while Malaysia and Indonesia provided the workforce for the manufacturing processes. As such, Singapore would benefit from the subregional economic collaboration because Malaysia (Johor) and Indonesia would provide Singapore with land, natural resources (food, water and natural gas) and labor (semi-skilled and non-skilled). While Malaysia and Indonesia would benefit from the initiative from Singapore's well developed infrastructure, rapid economic growth, high productivity, high level of capital investment and management skills. With an efficient financial and business services sector, Singapore provides the network for foreign investors to set up their manufacturing bases in the neighboring areas, while Malaysia and Indonesia provides the tax and financial incentives for

foreign firms [multinational corporations (MNCs)] to relocate their production processes and thus increase vertical integration.

Reduction in barriers to investment and trade has spurred the development of Singapore-Riau and Johor-Singapore linkages but not the Johor-Riau link. Close economic interactions between Singapore-Johor have long been established in trade, investment and tourism, way back in the British era. The cross border activities are market-driven. Being in close proximity to Singapore - link by a 1.2km causeway and in addition, the availability of cheap land and labor has encouraged industrial relocation from Singapore to Johor. Relocation of Singapore's labor intensive industries to Johor help to enhance international competitiveness through lower production costs, as well as to help build up Johor's industrial base. Intensified economic cooperation initiated by both governments had prompted the rise of southern Johor as a retail and leisure destination for Singaporeans. The development of a special economic zone in Johor – South Johor Economic Region (SJER) has further strengthened the lingkages with other parts of the ASEAN, particularly Singapore and other parts of the IMS-GT regions. Besides, Johor is a significant source of water and power for Singapore. Johor supplies Singapore with 214 million litres of raw water a day, or more than half of Singapore's daily water needs. Singapore buys the raw water under two water agreements signed in 1961 and 1962 and which will run out in 2011 and 2061. In turn, Johor buys an average of 37 million gallons per day of treated water from the Singapore treatment plant in Johor.

In contrast, the cooperation between Singapore-Riau regions was more structurally formal, with the creation of an official bilateral arrangement between Indonesia and Singapore to provide a framework for the joint development of Riau province (Batam and Bintan). With the free trade zone status and tax and other investment incentives, strategic location with a distance of only 20km from Singapore and 25 km from Johor has turn Batam into an industrial enclave within Riau by the opening of industrial parks (eg: Batamindo Industrial Park, Kuang Hua Industrial Park and Kabil Industrial Estate) and the establishment of Batam Industrial Development Authority (BIDA). Its industrial activities has expanded and diversified and a large amount of investment generated were going mostly into the machinery, basic metals, chemical and electronic industries, trade and services, and agribusiness. Bintan island has also

experience a rapid growth. The development of flagship project like Bintan Beach International Resort and Bintan Industrial Estate (BIE) has attracted a huge amount foreign investment into the island. BIE that covers 4000 ha of industrial land was developed by a consortium led by Singapore GLCs and Indonesian conglomerate. Direct ferry connections with Singapore provide an easy access to Singapore's visitors and Singapore's 4 million resident populations to the Bintan island. Riau province was also a main source of water, natural gas and food supply for Singapore when both governments signed up agreements for collaboration.

With respect to the linkage between Malaysia (Johor) and Indonesia (Riau), only minor trade and investment links exist between these regions. This was due to the fact that both regions are similarly endowed and therefore they appear to be more competitive than complementary with each other. Among the economic linkages being developed between these two regions were the establishments of the 616 hectare Padang Industrial Park in West Sumatra by Johor Corporation and West Sumatra government in 1997. Second industrial park joint venture was develoed in Dumai in Riau province.

Although the 1997 Asian financial crisis has slightly dampened investment flows, efforts on enhancing the economic activities in the IMS-GT region still continues. Emphasis has been placed on improving the accessibility of the region and on the collaboration in the tourism sector. The linkage between Johor-Singapore has been enhanced through the second link and Indonesia proposed the development of a linkage from Dumai to Port Dickson in Malaysia.

3.0 Impact of IMS-GT on Subregional Development

As the three contiguous regions in the IMS-GT display significant differences in economic development, factor endowments, comparative advantage, and being close to each other, the triangle has succeeded in boosting up subregional economic developments in these regions. However, assessment on the success and impact of IMS-GT is rather difficult due to limitation of data and figures. Discussions that follow are based on currently available information and data, and thus may not provide an in-depth analysis.

Singapore being the most developed region, an export-oriented economy and now as a financial and IT services hub, Singapore acts as the driving force and functions as the engine of growth in the growth triangle. With modern infrastructure there exists a strong pull for large investment capital. Singapore was able to influence the nature and pace of economic growth in the triangle, enabling the spillover effects or benefits be extended to the contiguous region, particularly to the least developed region Riau. MNCs operating in Singapore are using the growth triangle as a springboard into the region as it enables the MNCs to relocate their labor-intensive manufacturing industries to Johor and Riau. Outward investment from Singapore increases to the contiguous areas, and hence scarce resources move into new areas of comparative advantage in manufacturing and services in Johor and Riau (Batam) where there is growing labor supply and lower production costs. SMEs have set up operations in Johor and Riau and local supporting industries (less attractive manufacturing industries) are taking part in cross-border out-movement from Singapore. IMS-GT has enabled the sub-region (Batam) to transform from a peripheral with poor infrastructure and a small population dependent on agriculture and fishing into a leisure-pleasure periphery and industrial enclave. Indeed, Batam has been given a status of free trade area and as such there is a significant flow of FDIs. In short, Singapore is capable of emanating dynamic spillover effects of trade and investment to the contiguous areas by expanding its economic activity into the adjacent regions of Riau and Johor. However, the biggest impact of the IMS-GT has been on the Riau province compared to that of the south Johor.

3.1 Foreign Direct Investment Inflows

The formation of IMS-GT has spurred foreign direct investment in Batam, Riau, Jambi and West Sumatera of Indonesia. The liberalization of investment regulations in Batam, Singapore's participation in developing the infrastructure in Batam and a strong endorsement of Batam as an industrial location by Singapore government has led to a surge of investment in Batam. Batam underwent a dramatic transformation, which included the development of large-scale industrial parks, tourist resorts and administrative infrastructure. Within few years after the formation of IMS-GT, investment in Batam exceeded US$5 billion in 1994 with 55 percent from domestic investment and 44 percent of foreign investment. Singapore accounts for around 48 percent of foreign investment in Batam followed by Japan at 12 percent. There are

about 700 foreign companies and 9,500 local companies operating in Batam. As can be seen in table 2, the amount of approved manufacturing investment projects has increased sharply in the period of 1995 – 2001 particularly in the regions of Riau and Batam. During the period of 1995 – 2001, investments in Batam shows a moderate pattern with an average investment of US$156 million per year but it shoot up to about US$3.089 billion in 1999. In 2004, more than 47 new foreign companies with investments exceeding US43 billion have set up production bases in Batam (Toh, 2006). Singapore is the main investor in Batam during the same period showing that investments from Singapore (including foreign MNCs based in Singapore) are the major sources of FDI in Batam. It is also evident that the 4 flagship projects developed (Batamindo Industrial Park (BIP), Bintan Industrial Estate (BIE), Bintan Beach International Resort, and Karimun marine and industrial complex) have attracted over US$4 billion in foreign investments and nearly 400 foreign manufacturing plants operating, creating employment for about 100,000 Indonesians and generated export earnings of US$2.5 billion in 2000 (Chia, *undated*). BIE offers 100 percent foreign ownership, duty-free import of raw materials and equipment, preferential exports under GSP, no value added tax for exports, 25 percent of exports permitted for Indonesian domestic market. Investment is mainly in manufacturing industry primarily electronics and basic metals and light machinery, trade and services and agribusiness.

The success of Batam led to investment cooperation being extended to other Riau islands. From table 2, Riau also experience a high inflows of foreign investment that have increased from US$32.4 million in 1995 to US$1,128.4 $million in 2001. Based on country of origin (table 3), it seems that Taiwan is the largest contributor of FDI in Riau with the share of 35% of the total foreign investment during the period of 1995 – 2001, followed by Singapore with the share of more than 13% of the total foreign investment. Foreign investment has also flow into Jambi and West Sumatra regions. The Padang Industrial Park in West Sumatra was developed jointly by the Johor Corporation, a state-owned corporation and West Sumatra government has strengthened the bilateral collaboration between Malaysia and Indonesia. The total amount of foreign investment in Jambi was US$235 million and about US345 million in West Sumatra throughout the 1995 – 2001 periods. Singapore was the major contributing country with the share of 68.0 percent of the total investment.

Table 2: Approved Manufacturing Investment Projects in IMS-GT (US$ million)

Year	Indonesia				Malaysia	Singapore
	Riau	Jambi	Batam	West Sumatra	Johor	
1995	32.4	-	152.44	34.68	1,292.26	3,424.42
1996	51.6	5.4	170.8	12.25	2,279.1	4,107.6
1997	5,553.9	-	118.1	7.1	1,515.4	4,016.0
1998	40.1	16.0	186.6	20.4	1,102.9	3,114.5
1999	24.4	1.4	3,087.1	239.6	548.3	3,691.5
2000	260.3	211.6	159.1	18.4	557.3	4,196.8
2001	1,128.4	0.25	-	12.6	502.3	3,677.7

Source: Source:ASEAN Secretariat: ASEAN FDI Database

Table 3: Approved Manufacturing Investment Projects in IMS-GT by Country of Origin, 1995-2001 (US$ million)

Source Countries	Indonesia				Malaysia	Singapore[2]
	Riau	Jambi	Batam	West Sumatra	Johor	
Japan	83.6	-	28.2	0.08	845.7	7,938.6
North America (USA, Canada)	8.2	-	101.1	0.4	1,016.6	12,156.5
European Union	111.3	-	182.1	-	643.3	7,163.4
Asia (China, India)	1.2	-	-	-	169.4	-
Republic of Korea	0.3	5.4	2.7	15.7	89.3	-
Hongkong	4.5	-	21.7	21.8	48.5	-
Taiwan	2,504.8	0.25	16.1	-	465.1	-
Indonesia	-	-	-	-	19.3	-
Malaysia	58.5	0.4	21.3	47.8	-	-
Singapore	945.4	16.0	312.7	234.6	2,195.0	-
Thailand	4.6	-	-	3.1	1.3	-
Australia	-	-	10.0	9.5	13.5	-
Central & South America	-	-	-	-	40.9	-
Other Countries	290.3	-	3,000.0	-	433.2	270.4
Joint Countries[1]	3,078.3	212.6	178.3	12.2	1,814.3	-
TOTAL	7,091.2	234.7	3,874.3	345.1	7,797.7	26,228.6

Source:ASEAN Secretariat: ASEAN FDI Database

1) *Joint countries refer to joint investment projects amongst two or more foreign investors*
2) *Based on net Fixed Asset Investment (FAI)*

A drastic transformation of Batam economy and other Riau islands were due to significant policy changes introduced by the Indonesian government to attract investment. Foreign investors were given 100 percent foreign ownership for five years and need to divest 5 percent and retain 95 percent foreign ownership, a new land leasing agreements allowing for 80 year lease instead of 30 years. A new special economic zone (SEZ) scheme was introduced in 2006 by the Indonesia and Singapore government allowing the islands of Batam, Bintan and Karimun in Indonesia as well as Singapore to benefit from the tax free shipments between these islands. The Indonesian government has also granted a full free trade zone status for Batam in 2007 and enclave status for Bintan and Karimun. This is to address the issue of legal certainty for the investors. According to the plan, Batam will be transformed into

shipyard, electronic, and mecatronic industrial development centers; Bintan into textile, footwear, and tourism industrial development centers; and Karimun into shipyard, metal, component, agricultural, and marine produce industrial development centers.

Singapore remains the important investor in Johor. During the period of 1990-1996, Singapore's investment in Johor reached RM5.85 billion for 662 manufacturing projects and most of Singapore's firms are the small and medium enterprises. The foreign investment in Johor of Malaysia however shows a declining trend during the period of 1995 – 2001, with the share of more than 28% of the total investment. Other major investors in Johor are the United States (13%) and Taiwan (6%) in Malaysia. Strong economic links between Singapore and Johor reduced the government-to-government initiatives and further Johor is one of the states in Malaysia. Policy changes towards attracting foreign investment (e.g.: the relaxation if foreign investment rules and regulations) introduced by the Malaysian government will have an impact on level of foreign investment in Johor.

3.2 Trade and Tourism

Huge flows of investments in manufacturing industries and together with tax and other incentives provided by the governments have a high impact on trade and other economic sectors particularly the tourism sector. Exports have increased at tremendous rates in IMS-GT. Total exports from Batam increased from US$20.9 milllion in 1986 to US$210 milllion in 1991. Singapore is Malaysia’s largest trade partner and nearly half of the trade between Malaysia and Singapore goes through Johor. On the other hand, Johor is Singapore's third largest trading partner after the United States and Japan, and accounts for half of Singapore's trade with and 60 percent of Singapore's investment.

The formation of IMS-GT has also promoted the development of services sector within the triangle, particularly the tourism sector. In year 2000, over 3 million visitors entered Johor from Singapore, of which Singaporeans made up nearly 70%. With the North-South Highway, Johor acts as the gateway for Singaporeans traveling to all parts of peninsular Malaysia (Chia, undated).

4.0 IMS-GT versus Other Growth Triangles in ASEAN

The IMS-GT is said to be successful sub-regional cooperation that has provided economic benefit to the member regions. The most important factors that determine the success and competitiveness of IMS-GT (and other growth triangles) are economic complementarity, geographical proximity between the subregions, strong political commitment demonstrated by the respective governments, effective policy coordination, and the provision of good infrastructure. The achievement of the IMS-GT in generating strong economic growth in its components areas has led to the development of two other growth triangles in ASEAN. The Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) represents the second major ASEAN effort at linking three regions that belong to different participating countries in the northern part of ASEAN. The natural resources of the IMT-GT represent a vast economic potential that could be realized through sub-regional cooperation. The next growth area developed within the framework of ASEAN economic cooperation is the East ASEAN Growth Area comprising Brunei Darussalam, and parts of Indonesia, Malaysia and the Philippines, currently known as BIMP-EAGA. With adequate infrastructures and close economic cooperation among the participating governments, this growth area could attract substantial foreign direct investment and thus lead to a higher rate of economic growth, greater export competitiveness and a more balanced regional development (Yusof, 2003).

The success of IMS-GT is mainly due to vertical integration with different stages of economic development. Singapore being the most developed region is the engine of growth in the growth triangle. Singapore was able to influence the nature and pace of economic growth in the triangle, enabling the spillover effects or benefits be extended to the contiguous region, particularly to the less developed region – Riau province. Nevertheless, the subnational areas in IMT-GT and BIMP-EAGA are more alike in terms of factor endowments and levels of economic and industrial development. Neither triangle has an equivalent to Singapore, a participant that provides metropolitan spillover. There is no subregion can act as a metropolitan center in these growth triangles that are capable to emanate dynamic spillover effects of trade and investment on the contiguous areas. In the IMT-GT, Penang can act as the metropolitan core, but its hinterland lies in Malaysia rather than cross border. In the BIMP-EAGA, although Brunei is financially rich and Labuan is an emerging offshore

financial centre, but these two sub areas were not an industrial centre that could act as growth pole to the growth triangle. Further, the success of the BIMP-EAGA growth triangle is constrained by lack of factors that facilitates growth, relatively similar stages of economic development (horizontal integration), and largely a commodity-based comparative advantage. Furthermore, the existence of large informal sector in the sub-regions may slow down the development of the growth triangle.

Geographical proximity between Singapore, Johor and Riau province has contributed to the success of IMS-GT. The cost of forming the triangle was relatively low. Singapore and Johor were linked by a 1.2 km causeway and meanwhile Singapore and Batam are only 20 km apart and are linked by an efficient ferry service. When geographical proximity exists, the movement of capital or flow of investment to neighboring countries will be easy and that will minimize transportation and communication costs. While in the the IMT-GT and BIMP-EAGA, geographical proximity and infrastructure are less obvious. Although IMT-GT benefits from geographical proximity, but the infrastructure in some components of the triangle is not well developed. Lack of transportation infrastructure linking the subnational areas (particularly in the BIMP-EAGA) has increased economic distance and transaction costs. These growth triangles need joint development of infrastructure, natural resources, and tourism to enable them to enjoy economies of scale and to improve competitiveness in securing investment.

Political commitment and policy coordination is another factor that contributes to the success of growth triangles. The most significant drive towards a successful regional cooperation between the three regions was done by the Indonesian government with foreign investment policy changes in the Batam island of the Riau province. They had allowed for 100 percent foreign ownership of private companies and foreign development of industrial estates in Batam. In response to these policy changes, Batam continued to be the centerpiece of the Singapore-Riau collaboration. As a result, Batam and Bintan island has become an industrial enclave with the opening of free economic zone and industrial estate such as the Batamindo Industrial Park, Karimun Industrial Estate, and Bintan Industrial Estates. However, the commitment from the governments of the participating countries in the BIMP-EAGA has not been encouraging. Although there is a firm political commitment in the development of

IMT-GT, it success were constrained by political and security sensitivities, the complexity of institutional arrangements and a less developed infrastructure.

5.0 Conclusion

The emergence of growth triangles could be seen as an example of economic cooperation at the subregional level in managing the economic interdependence. The success of IMS-GT shows that growth triangle is relevant as a mode of regional economic cooperation, and thus IMS-GT can be a role model in ASEAN. The successful of IMS-GT depends on several factors. The areas or regions participating in the growth triangle must contiguous with each other. More importantly, Singapore acts as a metropolitan center that is capable of emanating dynamic spillover effects of trade and investment on adjoining areas. Complementarity relationships in resource endowments, labor, technology and location among participants for growth triangle must exist and these have been seen in the case of IMS-GT. The role of private sector as the engine of development and a well-developed infrastructure are important to ensure the successful of growth triangle and this condition are fulfilled in the IMST-GT. In conclusion, IMS-GT continues to be a successful mode of cooperation among the three countries and will remain a key and subtle framework for regional economic collaboration.

References

Abonyi, G. 1996. "The Challenges of Growth Triangles for Regional Institution." In Lim, L. (ed.). *Growth Triangles in Southeast Asia*. Singapore: ISEAS.

Chia, S.Y. undated. *The Indonesia-Malaysia-Singapore Growth Triangle*, retrieve online at http://www.cpu.gov.hk/documents/conference/e-sychia.rtf.

Chia, S.Y. 1994. "The Sijori Growth Triangle: Challenges, Opportunities and Strategic Response." in Lim. I (ed.). *Growth Triangles in Southeast Asia: Strategy for Development*. ISIS Malaysia.

Ishak Yussof & Mohd Yusof Kassim. 2003. Human Resource Development and Regional Cooperation within BIMP-EAGA: Issues and Future Directions. *Asia-Pacific Development Journal*, Vol 10 (2), December, pp.41-56.

Kumar,S. 1994. Johor-Singapore-Riau Growth Triangle: A model of Subregional Cooperation in Thant.et.al (ed), *Growth Triangles in Asia: A New Approach to Regional Economic Cooperation*, Asian Development Bank, Oxford University Press.

Low, L. 1997. *Overall Assessment of the IMS-GT Triangle*. Paper presented at International Conference On Indonesia-Malaysia-Singapore Growth Triangle 'Borderless Area for Sustainable Progress', Institute Sultan Iskandar, UTM, 24-25 June.

Lee T. Y. ed. 1991. *Growth Triangle: The Johor-Singapore-Riau Experience*. Singapore Institute of Asian Studies and Institute of Southeast Asian Studies.

Kakazu, H. 1997. "Growth Triangles in ASEAN: A New Approach to Regional Cooperation." GSID, Nagoya University, *APEC Discussion Paper Series.*

Matthew Sparkle, et.al. 2004. Triangulating the borderless world: geographies of power in the Indonesia-Malaysia-Singapore Growth Triangle, *Transactions of the Institute of British Geographers*, New Series, vol. 29 ( ), pp. 485-498.

Sustainable Development Through Growth Triangles, in *Place-Based Public Policy in Southeast Asia: Developing, Managing, and Innovating for Sustainability*, Chapter 4, online at http://www.usaep.org/policy/reportch4.html.

Thant, M.,et.al (eds). 1994. *Growth Triangles in Asia: A New Approach to Regional Economic Cooperation*, Asian Development Bank, Oxford University Press.

Toh Mun Heng. 2006. Development in the Indonesia-Malaysia-Singapore Growth Triangle, *SCAPE Working Paper Series* No:2006/06, Department of Economics, National University of Singapore.

Weatherbee, D. E. 1997. *Subregional Growth Zone as a Development Strategy: The Mini ASEAN*. Paper presented to the 6th Tun Abdul Razak Conference on Industrialization and Development in South East Asia at Athens, Ohio University, 18-20 April.