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Role of Bangkok and Its Periphery in the Asia-Pacific Region: Toward Globalization Economy and Sustainable Development*

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The Asia Pacific region (APR) has become an important center in the global economy. Within this region, Thailand has emerged as a strategic location for the destination of foreign direct investment (FDI) and flows of trade, information, and people. These transnational movements have affected the social behavior of Thai people and the spatial economy of the country and its cities. The capital city, Bangkok, and its extended periphery have undergone extensive transformations over the past three decades. The provinces most affected by the economic boom and recent bust are contained within the "Extended Bangkok Region" (EBR), which consists of the Bangkok Metropolitan Region (BMR)[1] and the core Eastern Seaboard (ESB).[2] This region remains important for the national economy, despite the current economic crisis.

The EBR is, no doubt, Thailand's strategic point of international linkages for both trade and people. The region is highly linked to the global economy and the APR. Most of international trade flows through the 'Klong-Tuey' Bangkok port and the 'Laem Chabang' port in ESB, which have been highly integrated with Asian ports—especially from Singapore, followed by Hong Kong and Japan. The Bangkok international airport (Don Muang) is an important transportation hub in Asia-Pacific. The majority of tourists (more than 60%) visiting Thailand during 1995-1998 came from East Asian countries. Toward the millennium, the EBR continues to transform itself both in function and form.

CHANGES IN ECONOMIC DEVELOPMENT OF BANGKOK AND ITS PERIPHERY

No matter what geographical scale is considered, the role of Bangkok and its surrounding area within the national economy is evident. In 1995, the per capita income of the metropolitan area of Bangkok was about four times as much as the national average, and the share of Bangkok in national GDP was approximately 40 percent. Until the mid-1990s the regional income disparity between the EBR and the rest of the nation still increased as trends of per capita regional income of the five surrounding provinces and the three core ESB provinces also continued to increase, growing more rapidly than the national average. These trends confirmed the role of the capital area and the continuing regional divergence within the country.

There are internal and external factors impacting the spatial development and urban transformation in Thailand. There have been changes in migration and industrial location trends in the recent past, resulting from domestic and foreign impacts of linkages to the global economy.

While the Bangkok area's central role in Thailand's growth has been attributed to its geographical location[3] and agglomeration economies advantages, governmental policies have also played an important part in the concentration of economic activities in the area. Previous Economic and Social development plans (Plans I to V) have enhanced urban-based industrialization and led to a high concentration of economic activities in Bangkok, which was the only international trade point in the country and a domestic transportation hub.

Before the mid-1980s, global investment was concentrated in the city of Bangkok as a destination, but during the latter years of the decade investment spread to its periphery. Industrial development in Thailand during the mid-1980s to the early-1990s, when the Thai economy expanded drastically with double digit growth, led to the spatial restructuring of Bangkok and the EBR. As a result of the so-called "flying-geese" pattern of development, Thailand, which had comparative advantages in location specific endowments (i.e., labor, raw materials, basic infrastructure) and macro economic policies (i.e., investment promotion, exchange rate stability, etc.), emerged as an important manufacturing center in East and Southeast Asia beginning in the mid-1980s. At the same time, operating costs, particularly land and labor, in Bangkok

continued to rise. Peripheral regions (the BMR and the ESB) eventually became more competitive, affecting domestic location choices of industry.

The shifts in the location of investment are still limited to the EBR because Bangkok and it surrounding regions have the nation's highest quality of infrastructure, social facilities, and human capital and therefore continue to gain the highest share of FDI and industrial investment. In 1994, the EBR accounted for 33 percent of all new firms and 40 percent of new investments; however, the location of manufacturing establishments within the EBR shifted from Bangkok proper to the ESB. Thus, while most industrial firm growth continued to take place within the EBR, the direction of new manufacturing establishments shifted to the eastern corridor. Transportation infrastructure now makes the trip from Bangkok to the ESB convenient. This accompanied major infrastructure developments (such as ports and industrial estate facilities). At the same time, Bangkok's core area became a center for clusters of services and small scale manufacturing activities. The dispersal phenomena within the EBR was somewhat similar to what had taken place in Jabotabek, Indonesia, in the late 1980s (Soegijoko and Kusbiantoro 1998).

RESTRUCTURING WITHIN THE EXTENDED BANGKOK REGION

Global forces are increasingly driving the structural changes in the economy of the EBR. With the increasing industrial FDI inflows to Thailand, and more specifically into the EBR, the region underwent spatial and economic restructuring. At first, manufacturing firms chose Bangkok as a location, but as the costs of land and labor in the city rose and major infrastructure investment projects in the Eastern Seaboard developed, large new firms, especially heavy industries, chose to locate in the five surrounding provinces or in the ESB. Bangkok, however, continued to be the home of a large number of small-scale industries[4] and has the highest concentration of workers. Consequently, Bangkok's economy is increasingly dominated by the service sector and small-scale operations.

The importance of the service sector to Bangkok's economy, and the importance of industry to both the five surrounding provinces and the ESB, are indicated by sectoral location quotients of employment[5] (LQ) and sectoral GDP growth.[6] Bangkok service sector LQ has dominated its industrial sector LQ since the late 1980s. The five surrounding provinces have specialized in industrial production since 1977, while in the Eastern region the industrial sector has clearly dominated since 1989, corresponding to the development of the ESB. Although the five surrounding provinces and the ESB specialize in manufacturing industry, their sectoral characteristics are quite different. Industries in the five surrounding provinces are mainly light industries such as electronics and textiles, while industrial clusters in the ESB are heavy industries such as petrochemicals, oil refineries, and steel.

Among the service sub-sectors in Bangkok, retail and wholesale trade, banking and finance, and transportation and utilities are the most important in terms of GDP share. In 1995, these sectors accounted for 46.3 percent of Bangkok's GDP (outweighing the manufacturing sector share which contributed 31.1 percent). During the bubble period of 1989-1993, within the BMR's GDP, the banking, insurance, and real estate sectors had grown the fastest, followed by the manufacturing sector. Bangkok city dominates the business and professional service sector of the country with all of the nation's commercial banking headquarters located within it. Bangkok's domination of the service sector[7] (i.e., indicated by variables of service value added, commercial bank loans and deposits) increased from 1990 to 1995, demonstrating the continuing concentration of service activities, while the industrial value added component declined. While Bangkok has lost some of its share of the industrial population, Bangkok's share of the nation's urban population has also declined from 57 percent in 1990 to 36 percent in 1995.

For the five surrounding provinces and the ESB, the contribution of manufacturing to GDP dominates other sectors of the economy. The sub-regions gained the highest proportion of new employment of BOI approved industries during the 1988-1993 period.[8] Employment in light industries, textiles and garments, services and agro-industries were the engines of growth for the five surrounding provinces, while the ESB's employment gains were the highest among metal fabrication and parts, ceramics and glassware, and chemical and paper products. The ESB also attracted the highest percentage of new BOI-approved foreign registered capital (approximately 70% in 1995).

Although the five surrounding provinces had the highest share in terms of the number of projects and total employment of BOI-approved industries during 1988-1993, the value of capital investment still lagged

behind that of Bangkok and the ESB. That reflects the fact that large scale capital investment projects (heavy industries) have recently been located in the ESB, and production units in Bangkok are likely to be for high value-added functions. As industries located in the five surrounding provinces are mostly light and labor-intensive industries, the area has not dominated capital investment but rather large-scale labor employment projects.

Bangkok has passed the industrial development stage and its economy has restructured toward higher value services activities. The five surrounding provinces absorbed the economic sprawl as manufacturing production moved away from the city. The core ESB region is increasingly becoming an important center for heavy industries. Its future depends on accessibility to global economy and increasing investments in infrastructure, agglomeration economies from existing industrial clusters, and national promotion programs.

Sub-regional specialization is expected to increase along with the increase in trade flows among regions/nations. The increase in global economic integration, with trends to lower trade barriers (i.e., AFTA tariff removal), would be factors supporting the enhancement of specialization in industrial locations resulting from increasing import and export activities. Then, these sub-regions in the EBR will face economic restructuring—more specialized in different functions of economic activities—although they are very closely related and interact as if they were one region. The developing specialization among these sub-regions, driven by their unique comparative advantages, has also led to structural interdependence within the entire EBR.

How fast the sub-regions' specialization has restructured also depends on many factors. As Krugman (1996) pointed out, the observation of such mega-city growth may in part be a result of the pattern of development of the national transportation infrastructure in which the primal city is also a hub of national transport network. Therefore, future development patterns in the provision of communication infrastructure as well as the competition between regional factors of production will be crucial factors determining the spatial development of Thai industry.

TOWARD GLOBALIZATION AND SUSTAINABLE DEVELOPMENT

Global movements in communication, international trade, and human capital will be significant factors affecting national and spatial development. In the 21th century, trends in globalization will be driven by revolutions in telecommunications rather than manufacturing and production. Distance costs become less important while time-responsiveness will become crucial in productivity competitiveness.

As communication tools (e.g., computers) are portable, the spatial location of working units can be more dispersed because of the ease of communicating through computing information technology. Thus, more independent working units can be located outside the expensive core business areas which will be left to do face-to-face communication and business activities. Because of decreased distance costs in communications, individual units (offices and production bases) can be dispersed. At the same time, clusters of particular industries or sectors may become more concentrated in order to take advantage of rapid changes in technology and “just in time” production. However, industrial clusters also depend on historical and supporting factors of particular activities and locations (see examples in Krugman 1991).

As technological innovation and information will become more crucial than traditional endownment factors such as natural resources, “creative assets” of people-made advantages (from technological advantages to particular labor skills) will increasingly become the determining factor in attracting FDI. Thus, enhancing the skills of local people is very important to sustained economic investment and growth.

CONSTRAINTS FOR BANGKOK'S SUSTAINABLE DEVELOPMENT AND MANAGEMENT

In order to make Bangkok a livable city, three main areas currently constraining Bangkok's sustainable development in the global economy are the provision of transportation and communication infrastructure, environmental deterioration, and human resource development.

The limited authority of the local government, sectoral fragmentation among government agencies and inter-governmental relationships, however, somewhat limit the ability of the BMA government to directly improve the living conditions of the city.[9] Nevertheless, progress has been made in these three areas.

Infrastructure Development

Communication infrastructure is considered a key factor to future global competitiveness in the information age and having reached this, privatization and sectoral reform regulations are underway. Telecommunication projects within Bangkok include the expansion of telephone lines, national satellite projects, cable networks, and new high-technology installations such as the Integrated Service Digital Network (ISDN) and fiber optic networks.

There has been a great increase in the number of telephone lines in Thailand since the late 1980s,[10] specially after the Telephone Organization of Thailand (TOT) granted concessions for providing new telephone lines and services to private companies, which facilitated the installation. Presently, many of these advanced communication services, including mobile phones, paging services, ISDN, leased circuits, data communications, and internet services are under Build-Transfer-Operate (BTO) concessions given to private-sector investors by the two state monopolies: the TOT for domestic services, and the Communications Authority of Thailand (CAT) for international services. Private investment, including foreign joint ventures through BTO's, has led to a drastic expansion in telecommunication infrastructure, which enables the country as a whole, and Bangkok in particular, to move higher up the ladder of development into a more value-added manufacturing and service based economy. According to WTO regulations, all telecommunication businesses must be liberalized by 2006 after TOT and CAT are privatized. A more competitive structure within these industries as well as technological innovations in the future are expected to lower costs and offer people easier access to information. With market liberalization toward the millennium, the costs should become more affordable and should enhance the economic growth of the city and the APR linkages.

The main infrastructure bottleneck in Bangkok continues to be in the area of transportation. Traffic congestion has been a serious problem for Bangkok for several decades. Time consuming commutes and wasted energy are responsible for significant losses of economic production[11] and negative health effects.[12] The root cause is the city's lack of efficient public and mass transportation systems. Though many mass transit systems have been planned over the past 25 years, they were not effectively implemented. Mass transit systems and express-ways were not coordinated between the jurisdictions of various government agencies; for example, these projects required coordination between the Highways Department within the Ministry of Transport and Communications, the State Railways of Thailand (SRT), the Expressways and Rapid Transit Authority (ETA), and the Bangkok Metropolitan Administration (BMA), among others.

The current efforts to relieve the problems have met with mixed success. Positive signs, however, include the current construction of subway and elevated rail systems. Several different mass transit plans were designed or constructed in Bangkok in 1990 (Unger 1998).

Before the crisis the ESB was slated to be the location for a variety of major transportation related infrastructure developments designed to serve industrial development. Projects included the expansion of the major port (Laem Chabang Port Phase II), a high-speed train system, a dual rail train system, the Second Bangkok International Airport (at Nong Ngu Hao), and a Global Transpark at U-Tapao. Most of these projects had to be financed through private means rather than government investment. The major deep-sea ports in the ESB will continue to draw shipping activities away from the Bangkok port and thus increase export and import related activities in the ESB. The global transpark facility was planned to provide inter-connections between air, land, sea, and telecommunications systems, thereby facilitating the delivery of components on "just in time" schedules. As a result of the financial crisis, some projects have been delayed (such as the high speed train), while some are being scaled down (such as the global transpark project).

Infrastructure development projects require strong institutional arrangements for their swift and successful completion. Within Thailand, as many agencies are involved in projects in overlapping areas, conflicts between different agencies commonly occur. The coordination of the proposals, planning, and construction (of mass transit systems, for example) fall under the authority of different agencies. Needless to say, these agencies are not coordinating their efforts. Local governments have no authority to manage major development projects in their jurisdictions because most such projects, such as expressways, subways, and elevated rail systems, and utilities such as piped water and electricity in Bangkok are under the

authority of central government agencies. The BMA has no authority to manage or build up integrated development plans for solving infrastructure bottlenecks in the city effectively. Traffic in Bangkok, for example, is a long-term problem handled by more than ten central government agencies, which has led to delays and difficulties in solving the problem.

Environmental Problems

A serious obstacle to Bangkok's sustainable development is the high level of urban environmental degradation. The most serious problems are those of air quality, traffic, the shortage of open space (public parks), slums, sewerage service, and land pollution (i.e., due to the dumping of chemical pollutants and hazardous substances) (Kruger Consult 1996). Pollution in cities is very much from traffic-related activities. The most serious problem—air pollution—and in Bangkok approximately 60-70 percent of it is the product of the city's traffic (Utis and Webster 1995).

Traffic-related noise levels are also a problem within Bangkok. In certain locations the noise levels are above 80 decibels, vs. the 70 decibels standard. As truck traffic contributes significantly to noise problem, measures to control the access routes of truck traffic to the inner city during certain times may help reduce noise problem.

The second most serious environmental problem within Bangkok is water pollution caused by domestic waste. Flooding seems to be a perennial problem for Bangkok because there is no long-term flood prevention plan for this city of low elevation and high land subsidence.

Another problem that was generated by urbanization resulting from rapid industrialization is the creation of poor working environments for the employees. Many factories contribute to work-related injuries or have dangerous working conditions. This problem requires the effective enforcement of accident prevention and health regulations. In addition, workers are affected by the poor environment from spending a long time in traffic and air pollution while commuting to work.

While Bangkok city's industrial base shifts to services and light-industry, the type of urban environmental stresses will change. While vehicle emission is the largest source of air pollution in Bangkok and continues to be a problem in the city, emissions from industrial sources are also harmful, particularly for the industrial areas in ESB, because major industrial problems causing health risks have shifted to the ESB. In this area, the heavy industry is a significant contributor to declining air quality. Industrial zones, especially those with petrochemical plants or oil refineries, are blamed for health problems in their neighborhoods. As evidenced by the contemporary history of Bangkok, these problems are difficult to solve once the land development has taken place. Relocating industries or communities later is costly. Obviously, new forms of urban management and regulation are needed to tackle these issues, for they will be the way to prevent environmental stress into the twenty-first century.

Human Resource Development

The new knowledge society of the twenty-first century places a premium on human resources as a determining factor for a country's successful economic development. As the Thai economy is highly integrated into the global economy, the country's workforce must be prepared, with the skills necessary for the rapidly changing needs and demands of the global market. The country currently has relatively low human capital for higher-value production and knowledge-intensive activities. Education and training systems must adjust to meet these challenges so as to gain comparative advantages. To be competitive in the global economy of the twenty-first century, Bangkok needs to offer various kinds of effective training in order to prepare people for the dynamic changes of a modern economy.

Modern technology also demands high level skills which can be gained through both education and on job training. A shortage of skilled labor is currently a major constraint for Thailand in its attempt to climb up to the "late industry" stage; Thailand is currently far behind the Newly Industrialized Countries (NICs) in enrollment in technical training and tertiary institutions. At any rate, Bangkok has gained the highest share of the country's human resources.

As well-timed responses will be more critical in production than cheap labor in the future global economy, the training of human capital has to be supported by information technology infrastructure as well. As

"created assets" from human capital are likely to be the most important factors underlining growth in the globalization economy, local institutions and policy planners will have to deal seriously with preparing human resources for the dynamic changes in the EBR.

STRATEGIC ROLES FOR BANGKOK AND CITY MANAGEMENT TOWARD THE MILLENIUM

Flows of international trade as well as human resources will affect the economic growth of these sub-regions. Strategic roles of Bangkok, the five surrounding provinces, and the core ESB regions, for Thailand and for the APR should be based on their comparative advantages, nationally and internationally. While, Bangkok's surrounding provinces and the ESB have emerged as important industrial bases for multinational operations, Bangkok itself has more advantages in attracting a number of service sectors.

Concerning the constraints to Bangkok's development to date, the city should strengthen its role in the sectors in which it has comparative advantages compared with other Asian Pacific cities. Bangkok may be able to well serve the APR in a number of service functions. Bangkok should concern itself with the service functions associated with manufacturing production, such as front office functions of multinational operations, rather than the back offices of production functions. Apart from manufacturing-support service functions, Bangkok has been famous for its excellent tourism-related services (such as hotel accommodations, food, shopping, entertainment, etc.) and still attracts foreign tourists from virtually every part of the world. Increasing flows of global visitors along with the relatively greater freedom of the Thai media (compared to other Southeast Asian countries) may also enable the city to support and develop international mass media, assuming that good infrastructure like telecommunications can be provided.

As Bangkok is in a strategic location for international transportation within the Indo-china region, Bangkok has opportunities to strengthen its position as a regional transportation hub (especially air transportation), as well as plays a leading role in the regional development of various aspects, such as education, trade, and tourism services. With further development of transnational transport links, Bangkok can serve as a gateway to the Indochina region while the ESB can also serve as an important manufacturing center and a major port for the region.

Development Management

Given the current limitions on government revenue, more private sector involvement is necessary to finance prioritized projects for urban infrastructure and environment. Currently, regulatory reform for the privatization of state enterprises and infrastructure projects are underway, although private investment levels are being affected by the current crisis. Many infrastructure projects in Bangkok have been planned for privatization such as expressway systems, the state-owned Bangkok Metropolitan Transit Authority, metropolitan rail transit systems, community trains and elevated highway projects, as well as many telecommunication projects.

To finance the much needed urban environmental infrastructure, privatization of environmental management activities (e.g., solid waste disposal and wastewater treatment) is recommended. Also, methods such as the cost-recovery pricing of environmental infrastructure (i.e., for wastewater or solid waste management) would help the supply of environmental facilities meets the demand.

In addition to environmental regulations, policy options should take the costs of environmental degradation into account in pricing policies. The implementation of pollution pricing (i.e., fuel taxes, charges on old vehicles) would be an effective way to reduce pollution from traffic-related activities. In addition, the pollution pricing would be an undistorted mechanism for deconcentrating industry away from Bangkok. Currently, energy prices and taxes, for example, are national prices with the same rates across the board. Thus, the cost of local environmental degradation cannot be taken into account without local pricing policies. Similar to infrastructure development, the local government has limited authority in dealing with local environmental pricing policies and regulations. To that end, local governments which currently have no authority should be empowered to implement local pricing policies. Increasing local empowerment and decentralization can help management in integrating infrastructure development plans.

Bangkok also has to move forward in upgrading products and services. To be competitive in the future global economy of the APR, products and services have to meet globally acceptable standards of quality, with competitive production costs. The ability of workers to use modern technology and information is

essential for cost-competitive quality manufacturing and production, as well as for the provision of advanced business services.

Think "Global" Act "Local"

It is important for local people, planners, and policy makers to prepare for future changes. This also calls for increasing public and private participation and the empowerment of local authorities in managing city development. Education systems should be able to adjust training programs that respond to the rapid dynamic changes. Only with global thinking, knowledge, and ideas will Bangkok have the capability to manage challenges and take advantage of new opportunities and intelligently adjust to the global economy of the twenty-first century.

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