Peri-Urban Agglomerations in Southeast Asia

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Introduction

As world continues to become more even, reaching the half-way mark in 2000, (Friedmann, 2005), understanding the processes involved in newly urbanizing countries is critical for policy-making. More importantly, because urbanization is not uniform, the pattern and form of urbanization must be analyzed. For instance, not all countries are urbanizing as dramatically as others. In Southeast Asia, Laos, Cambodia and Myanmar are not urbanizing in the same way as the Philippines and Indonesia (Rigg, 1998). In the countries that urbanization is it occurring, is not taking place uniformly. Peri-urbanization is part of the uneven development landscape. Furthering reinforcing this unevenness is the process of concentrating or agglomerating in these areas. Peri-urbanization, or urbanization occurring outside established urban areas, but close enough to them that a relationship exists between the core and the periphery, is a relative new phenomena.

The purpose of this paper is to review literature regarding the processes and resulting forms of urban agglomerations in peri-urban areas of Southeast Asia. I also offer a framework for examining the process of agglomerating in peri-urban areas. Differences do exist between urban and rural definitions between countries (Cohen, 2004), not to mention the differences when urban and rural become entangled in the process of peri-urbanization. However, for this literature review, I allow the authors to define peri-urbanization instead of forcing my own definition upon the author's method of classification. In Southeast Asia, peri-urban areas are known as extended metropolitan zones/regions (Ginsburg, Koppel, and McGee, 1991), desakotas

(Lin, 2001), and ruralopolises (Qadeer, 2000). Articles covering studies of Vietnam, Philippines, Indonesia, Malaysia, the coastal region of China, and Nepal are reviewed.

This paper is organized as follows: First the processes associated with peri-urbanization and urban agglomerations in Southeast Asia are discussed. Next, the resulting forms of these agglomerations are reviewed. Then, a framework for examining peri-urban agglomerations is offered. Finally, concluding comments are made.

Urban Agglomerations in Peri-urban Areas

The urban structure functions as the primary spatial framework that enables the flow of capital, goods, people and information (Leaf, 2003). But the urban structure is no longer limited to urban areas. Urban structure, urban culture, urban lifestyles are mixing, at times quite intensely, with rural structure, rural culture and rural lifestyles. This intense mixture of urban and rural is not always visible in a physical form, but may be taking place in the activities that local inhabitants engage in. The next two sub-sections describe the processes associated with peri-urbanization and subsequent agglomeration of urban activity, culture or form, and the resulting types of agglomerations.

Processes associated with Peri-urbanization and Urban Agglomerations in Peri-urban Areas

Until the 1990s, peri-urbanization in the Southeast Asian context was not studied. Moreover, agglomerations in per-urban areas were not often studied. This is problematic for policy-makers in places that want to encourage agglomerations (Yeung, Liu, Dicken, 2006). Urban agglomerations in peri-urban areas can be considered as being part of a two-step process. The first is the opening up of the peri-urban area to any kind of urban development. The second step is the concentration or agglomeration of urban activities (though not all urban activity in this peri-urban region concentrates). For instance, Sjoberg and Sjoholm (2004) refer to the process

of sprawl and urbanization of industry as a “concentrated dispersal” (page 304). Some of the processes associated with these two steps are uniquely Southeast Asian and some that are not. Some of these processes have direct impacts for the resultant agglomerations or dispersal and some have indirect effects. Many of these processes described in this section are related--feeding to, feeding from, reinforcing to or detracting from one another.

According to Douglass (2000), no longer do places have a comparative advantage because of local natural resources. The built environment now determines advantage. The built environment includes access to electricity and water, to transportation infrastructure, and to higher order functions, such as universities, hospitals and other amenities (Douglass, 2000). Transportation, indeed, takes a “front seat” when it comes to both peri-urbanization and peri-urban agglomeration, both as a cause and effect. Improved infrastructure allows firms to supply an entire economy from one locale versus a segmented market with poor infrastructure (in which the firm would need to located in a specific market) (Sjoberg and Sjoholm, 2004). In Southeast Asia, new trucking highway systems have extended fields of metropolitan interaction to include vast stretches of peri-urban areas (Douglass, 2000). The development of ring roads, like the several found encircling Beijing, pushes the service- and commuter-sheds further out. As transportation costs go down, labor-intensive, primary production manufacturers can locate further and further from markets and closer to other inputs (such as raw materials and cheap, unskilled labor) (Qi, Henderson, Xu, Chen, Shi, He and Skinner, 2004). Another recent transportation trend is the development of mega-international airports, such as the one Kuala Lumpur. These new airports are erected in the middle of resource lands further away than the traditional airports (Douglass, 2000). Then the corridor from the airport to the nearby city becomes and urban complex of its own, with the airport as its center piece (Douglass, 2000). For

instance, the “cyberjaya” cluster of creative industries is located on the corridor from Kuala Lumpur International Airport to the city (Douglass, 2000). New industries, particularly foreign-owned industries, appear to prefer developing near the airports. This is not isolated to the Southeast Asian experience. The same can be seen outside airports serving cities such as Accra, Ghana.

However, neither peri-urbanization nor peri-urban agglomeration solely relies on new infrastructure. One of the unique preconditions of peri-urban areas in Southeast Asia is the dense road and canal system that is already in place because of the type of agriculture. Part of a transportation improvement can be just from improving these lines of transport. Also an increase in low-tech (such as motorbikes) transport can be seen around Southeast Asia (Ginsburg, Koppel, and McGee, 1991).

Major contributors to both the built environment and the economic structure of Southeast Asian countries are transnational corporations who organize production processes internationally through the creation of an international division of labor (Clark, 1998). The reorganization of production, labor, finance, service provision and competition is occurring on a transnational basis (Clark, 1998). As of late, much of this production has shifted to countries of the south as a means of both penetrating local market and using low-cost labor in labor intensive manufacturing. The new international division of labor, reinforced by investments, is one of peripheral production and manufacturing and core research and design and control (Clark, 1998). If these industries are export-oriented, the agglomeration of these industries in peripheral areas then occurs because the need to be near ports (shipping, airports) or other industries involved in exporting. Export-oriented industries do not need to be near the heart of the local market because this is not their market.

Another often cited driver of peri-urbanization and agglomeration in these areas is the use of foreign direct investments (FDI). FDI comes in for industry and the property market (Goldblum and Wong, 2000). For countries that, up until the last few decades, had only internal markets, this sudden influx of investment from the "outside" directed at specific activities has an impact on what industries grow and where they are located. Johnson and Woon (1997) found that the presence of FDI affected the composition of the industrial mix found in clusters. Sit and Yang (1997) use the term "exo(genous)-urbanisation" to refer FDI-induced urbanization. For many countries, like China, Vietnam, and Indonesia, urbanization was driven internally because of the structure of foreign policy and hence, the markets. Now, in the Pearl River Delta (PRD) in China, for instance, Sit and Yang (1997) argue that it is external forces that are causing urbanization, particularly peri-urbanization, in the form of small and medium-scale, labor-intensive manufacturing and trade-creative investments. Because of the type of industries that are being encouraged, it is better for these industries (namely labor intensive industries) to locate closer to low-cost labor (rural people from the country side).

In the case of PRD, these investments are mainly coming from Hong Kong and Macao. (Other authors, such as Friedman (2005), would argue that Hong Kong and Macao are not necessarily "foreign" to China.) Because the biggest investors are Hong Kong and Macao, firms are concentrated in poles that are easier for the transnational corporate representatives to get to for interactions with the manufacturing firms. These poles are concentrated in areas along the coast near the investors. Efficiencies are achieved because the investors and their manufacturing sites are geographically proximate, making face-to-face contact, information exchange, and personnel and input flow, more easier (Sit and Yang, 1997).

For industries directly receiving FDI, another popular location criterion for investors is to develop the industry near established infrastructure. This can be seen with movement towards new international airports as mentioned earlier. Foreign-owned firms, according to Sjoberg and Sjoholm (2004), tend to be more spatially concentrated. The authors contend that lack of local knowledge, all else being equal, causes this concentration. Furthermore, foreign firms are sometimes part of larger networks that collaborate with the host market resulting in the co-location of producers and suppliers. Finally, infrastructure used by foreigners and their families, such as foreign language schools, may be another reason for foreign firms agglomerating in specific areas that hose these institutions. Foreigners may also have kinship or ancestral ties that cause them to locate in certain areas, such as Chinese-American investors locating in the PRD (Johnson and Woon, 1997). Foreign investors also agglomerate near government facilities to interact with decision-makers (Sjoberg and Sjoholm, 2004). As governments decentralize power, as Indonesia is doing now, this could translate into firms following decision-makers (Sjoberg and Sjoholm, 2004).

Trade liberalization goes hand in hand with the opening up of borders to FDI. It was theorized that when firms produce solely for domestic customers, they minimize transportation costs by located near the market. It is also theorized that trade liberalization would mitigate some of the problems in developing economies like the excessive concentration of population and economic activity in a primary city (Sjoberg and Sjoholm, 2004). However, Sjoberg and Sjoholm (2004) do not concur. They found that in Indonesia the expansion of global trade may increase, not decrease, urban and industrial concentrations. If anything, the dispersal of economic activity just meant that the activity went to the adjacent peri-urban areas and concentrated there. In Indonesia, as types of manufactured items changed because of

engagement with the world market, for instance going from tobacco to electronics, so did the need for newer production facilities. The search for lower land prices and wages, infrastructure enhanced by local investments, and new production facilities has led firms to the desakota.

With the globalization of the production process, low-cost labor is a sought after input. The low-cost labor must have a source. The source is typically created from shifts in agriculture that result in less labor needed for food production. In Southeast Asia, shifts to monoculture agriculture and shifts in the use of agricultural technology and mechanization have bolstered productivity and lessened the need for labor (Rigg, 1998; Picard and Zeng, 2005). Both of these shifts have resulted in the freeing-up of farm laborers for other types of work. In addition, there has been a shift from central control to private control of crop production. Farmers no longer are forced to make a living on marginal ground (Xiaoli and Wei, 1997). Plus, the ability to grow crops in response to market demand enables farmers to make more profit (Sit and Yang, 1997; Leaf, 2003). This in turn allows family members to leave farm work and shift to the information sector or to work in nearby manufacturing plants. The need for unskilled workers causes firms to seek out locales in the hinterland (Picard and Zeng, 2005). Labor intensive manufacturing firms tend to spatially favor smaller peri-urban places because of their proximate rural regions (Sit and Yang, 1997).

Along with this shift in agriculture has been a change in the internal migration policy that has allowed rural dwellers in many Southeast Asian countries (such as Vietnam, Indonesia and China) to either temporarily or permanently migrate to peri-urban areas. These migrants are moving to take advantage of manufacturing opportunities, or work in the informal industries that have arisen because of the diversification of peri-urban areas, or, in some cases, replace peri-urban farm laborers as the former laborers seek better wages in manufacturing. For instance, in

China, the hukou system once designated households as rural or urban. Opening up of the markets and the relaxation of the hukou system provided the impetus for movement to informal edge cities where people would seek financial opportunities, mostly in the form of better wages (Xiaoli and Wei, 1997). In 1997, an estimated 400 million excess laborers were in the Chinese countryside. When migrants find opportunities, chain migration of family members or fellow villagers often results, causing certain places to develop into cultural agglomerations (Xiaoli and Wei, 1997). For instance, so many migrants from the Henan province live in the Haidian district doing garbage collection that the place is now referred to as Henancun or "Henan Village." Migration to peri-urban areas is not limited to just formally rural dwellers (Kelly, 1999). But migration is not limited to rural dwellers. Rising incomes, as a result of new economic opportunities from engaging in the world economy, allow urbanites to decentralize. The urban elite are attracted to new infrastructure and amenities both natural and man-made (such as golf-courses).

Associated with shifts in agriculture, FDI, and development of infrastructure, has been the process of "rural" or peri-urban industrialization. The role of the urban core and the periphery is changing from typical urban-rural interactions to complex core and periphery interactions. Peri-urban communities can now compete because of the availability of cheaper land and cheaper labor (Sit and Yang, 1997; Yeh and Li, 1999). In China, it is not as much the large cities deconcentrating as it is the small satellite cities growing (Sit and Yang, 1997). And the core is beginning to rely on the periphery for urban functions. But what makes these areas sometimes even more attractive for industrialization are the relaxed environmental and development controls (Yeh and Li, 1999). So *rural*, or peri-urban, industrialization of labor-

intensive industries or industries that rely on local natural resources is outpacing *urban* industrialization (Sit and Yang, 1997).

Interdependence theory claims that places already favored for urbanization become more favored (Clark, 1998). Dominant urban areas are able to better utilize opportunities. However, these opportunities are just spilling over into peri-urban areas (Sjoberg and Sjoholm, 2004). Local governments can play a role in drawing and attracting development either in the form of rural industrialization or ex-urban wealthy enclaves. So despite the power and the speed of capitalism, the *political*-economy can have a large influence. With the new scale and rate of change of the economy, globalization creates more linkages and interdependencies, reinforcing local advantage (Cohen, 2004). Coupled with this is the financial deregulation and trade liberalization, which changes the role of Southeast Asian local governments.

The devolution of decision-making, particularly in regards to land use, is occurring or has already taken place in countries like China, India, Indonesia and the Philippines. Now local governments are able to keep part of the profit when land is sold. These local governments put the profit into small and medium village enterprises, transforming the rural landscape into rural urbanization. In the Pearl River Delta, this "rise of localism" has led local governments to create infrastructure (energy communications, transportation), provide services (medical, finance, housing), provide a labor force, and lessen environment controls (Sit and Yang, 2997; Lin, 2001). Worker dormitories are built so that more rural migrants can come from the country's interior (Yeh and Li, 1999). Furthermore, towns on the edge of the large cities have allowed for migration from the country-side when migration to the central cities is more difficult (Lin, 2001). Often times the really large FDIs go through the central government, small and medium-size FDIs go to local governments. Private land markets have been introduced, such as China's in

1987 (Yeh and Li, 199). As the periphery plays a more important regional role in the economy, the independent decision-making of the landowner heightens the importance of the individual as well (Goldblum and Wong, 2000). The private housing market is booming. The loosening of the land market is coupled with hasty provisions of land development permits (Firman, 2000). Local governments are more than willing to lessen the amount of red tape. Finally, Southeast capital cities enjoy the benefits of a central place of political and economic power and to protect this center from traffic, influx of migrants, new developments have been directed to the periphery (Goldblum and Wong, 2000). This all has contributed to rural industrialization (Yeh and Li, 1999). Unfortunately as their role in local land use decision-making changes, local governments are often not able to keep up with the growing responsibility. They either lack the authority or the ability to manage and control land conversion (Firman, 2000).

This is not to say that national governments are no longer effective, or that global-local interactions overshadow the role of national governments. Given that transnational corporations provide access to the world market, many national governments react to transnational corporations by adopting policies to create favorable climates for their operation. Governments can deregulate specific geographic areas to attract initial investment by eliminating barriers, such as export process zones, tax holidays and free infrastructure, thereby developing mini-international divisions of labor (Douglass, 2000). Places like Singapore are moving labor-intensive production into regions of Malaysia and Indonesia for these very reasons. In Jakarta, under a 1989 presidential decree, new industrial concentrations covering over 38,000 hectares of land were developed between two locales outside the city (Goldblum and Wong, 2000). However, national governments have not always been successful in focusing development. For instance, China developed special economic zones, but the growth still favors coastal areas

(Douglas, 2000), near where FDI originated. China has centralized land protection polices. But in 1985, a review found that 1,550 illegal peasant homes and 778 firm violations took place in the peri-urban area of Zhejiang (Xu, 2004).

Types of Agglomerations

While the preceding section provided a review of the processes associated with peri-urban agglomerating, the following section describes what form these agglomerations take. One characteristic that all agglomerations have in this geography is that they are dynamic. Change is rapidly taking place. Also, the type of agriculture that preceded development affects the spatial configuration and type of cluster found (Hara et al, 2005). For example, rice growing regions (that have pre-existing, very dense population densities) that had good canal and/or road networks host different types of agglomerations than green-field sites that had no existing transportation networks, which tend to attract mega-developments. The physical signature of peri-urban areas is unique in Southeast Asia, mostly as a result of the significant population densities (Qadeer, 2000). Sometimes very little changes in appearance of a peri-urban locale, while much changes in urban nature of the occupations of the residents and the functions of village structures (which can become small and medium manufacturing facilities).

Rural industrial agglomerations are quite prevalent in Southeast Asia. Rural industrial agglomerations take two forms, large-scale, high-tech west-world industrial complexes (along with the support housing and services for workers) that move to green-field sites outside of cities. The other type of rural industrialization is what Friedman (2005) refers to in-situ urbanization, small and medium low-tech cottage industries, perhaps hundreds of them, agglomerating in a village. Large high-tech projects occur on ring roads and other green-fields that are readily accessible (Qi, Henderson, Xu, Chen, Shi, He and Skinner, 2004). They create

what looks like agro-industrial landscape (Kelly, 1999). Despite policies to disaggregate growth, it still has concentrated in agricultural areas. For instance, the Cavit Export processing zone outside of Manila grew from a few factories employing 100 people in 1986, to 144 factories employing 38,000 workers in 1995 (Kelly, 1999).

Oftentimes luxury estates and elite enclaves go hand in hand with high-end, more specialized industrial estates creating new towns where services then follow (hotels and office, including leisure activities such as golf) (Goldblum and Wong, 2000). For instance, Phu Gia, Vietnam, because of its proximity to Hanoi and because it was a green-field, was ripe for a mega-project (Leaf, 2003). Indonesia's largest real estate development firm operating out of Singapore has proposed a 4,000 hectare new town development with a significant office core and housing for 50,000 new residents. Combination industrial estates and residential enclaves of luxury single-family housing can also be found outside of Jakarta (Firman, 2000).

In the case of the in-situ rural industrialization, urbanization occurs because the people in that area transition from rural activities to urban ones. Their farming responsibility may be taken up by in-migrants from more rural areas. These in-migrants may also work in these cottage industries. In addition, because family members in these villages are often times freed from farm labor, they may commute into the major urban area (Cohen, 2004). These industries are supported by local governments and serve both local markets and export markets. These agglomerations are more endogenous in that primarily they were developed by endogenous actions. So while these peri-urban places may *look* rural, they are not (Cohen, 2004).

Also found are informal migrant villages on the edges of major urban areas. One example is Zheijiancun, outside of Zhejiang (Xiaoli and Wei, 1997). Local officials essentially ignored the in-migrants to the Zhejiangcun area, allowing an informal settlement to be built.

These new residents were looking for income opportunities. As a result of chain migration to the area, this settlement has grown to be a major settlement (an estimated 80,000 migrants to Zheijiancun from the rural village of Wenzhou) and manufacturing center, serving Beijing. It is explained that these former rural village dwellers were very entrepreneurial because they were forced to live in an areas with very marginal agricultural land and because of the hokou system and therefore had to find an alternative way to make a living.

Finally, these types of agglomerations can occur together. For instance, a mixture of formal and informal settlements is Dong Mei, China, outside of Quanzhou. Professionals from Qyanzhou wanted to suburbanize. The village of Dong Mei sold 20% of its land for an elite residential enclave. With the portion of the profit that village received from the sale, they invested in local small and medium sized factories. Needing workers, people migrated from the country-side that had been freed up from farm labor (Leaf, 2003). These people live in informal housing. This peri-urbanization was all orchestrated by the local government.

What about the peri-urban agglomerations of poverty? Much literature was found concerning these types of agglomerations in Mexico, Turkey, countries in Africa, but not as much was found concerning Southeast Asian peri-urban agglomerations of squatter communities. One case that does concern this region and the concentration of poverty is an article by Nayabasti (2005). Nayabasti writes about a peri-urban squatter settlement outside of Katmandu. This is an informal (not officially recognized) settlement. As with most informal settlements, there are no legal ties of the inhabitants to the land and almost no services are available. The inhabitants of this settlement remain concentrated in this area for many reasons. Foremost, they were able to settle without yet being evicted by local authorities. But, what keeps them in this concentrated settlement is the presence of social capital. Through collective action

they have built a security funds that aids residents in cases of emergences. The security funds are also used to make investments. Finally, they feel more secure as a group than individually in attempting to remain in the area. However, this is an economically and politically vulnerable settlement.

Framework for Understanding Urban Agglomerations in Peri-urban Areas

In an attempt to frame urban agglomerations in Southeast Asian Peri-urban areas to better understand the dynamics of dispersion (peri-urbanization) and agglomeration, and the resulting form, it is helpful to summarize some of the key characteristics drawn from the literature. These characteristics are not necessarily an either/or for an agglomeration. Meaning, agglomerations do not have to fall directly into one or the other, but can be a combination of both characteristics as some of the agglomerations described in the previous section. But these characteristics are useful for considering how agglomerations development and the resulting form. They are: endogenously versus exogenously driven development; formal or recognized agglomerations versus informal agglomerations; top-down direction versus bottom-up creation; and, in-situ versus green-field. Using these characteristics, Southeast Asian peri-urban agglomerations can be analyzed systematically.

Conclusion

Shifts in agricultural production, opening of trade, attraction of FDI, improvement of infrastructure, devolution of decision-making, *rural* or peri-urban industrialization, and engaging in the world market all contribute to peri-urban agglomerating. Furthermore, this process has created a greater interdependence between the core and the periphery that reinforces peri-urbanization process. Peri-urbanization and does not necessitate agglomeration, but as I have demonstrated in this literature review, it can and does lead to “relatively concentrated dispersal”

(Sit and Yang 1997, 668). It is clear that globalization has not resulted in convergence and an evening out of the economic landscape as some have predicted through theories such as convergence. Nations, states and local communities, not to mention entrepreneurs, engage directly in the world market differently. These levels of activity engage with each other different, all resulting in different manifestations of economic activity.

I would agree with authors such as Kelly (1999; 2003), Ginsburg, Koppel and McGee (1991), and Friedman (2005) that the Southeast Asian peri-urban experience is unique. The pace of change, the attraction of FDI, the recent shifts in agriculture, and most of all, the density that pre-existed urbanization that ultimately affects the processes all uniquely a Southeast Asian experience. Agglomeration economies can happen in situ because rice regions, by nature of the agriculture, are densely populated. Also, because of the nature of agriculture, there are established networks of roads and canals, meaning that transport is easier in non-urban environments[1]. As the process of peri-urbanization and agglomeration unfolds in Southeast Asia, it is clear that governments can no longer rely on "rural" and "urban" development policies for less developed countries. The rural/urban dichotomy needs to be re-examined as peri-urban areas increase in importance.

[1] This is where I do not agree with these authors. They argue that concentrations of urban activity do not arise from agglomeration economies because the transportation system preceded agglomerations. But the improvement and the new geographic proximity of these networks to urban activity mean that they are utilized in ways that generate new efficiencies. Furthermore, increased transport efficiency, as shown in the new economic geography model, reinforces agglomeration.

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