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THE EFFICIENCY OF LOCATION DETERMINATION IN CHINA'S MARKET SOCIALIST ECONOMIC DEVELOPMENT*

CHEONG YOUNG-ROK
Seoul National University

Location theory is often downplayed in the orthodox development economics discipline because the limitations of natural endowments are less restrictive in the wake of mass transformation and industrialization. However, good determination of location-friendly economic development policies has largely been responsible for the development in China. Moreover, these policies have sacrificed the balanced development discipline, which has been regarded as an untouchable rule in the traditional socialist method of development. By first reviving the importance of location theory using the economic development in China as a primary example, this paper then extends location theory to the Korean international development strategy and the East Asian region. While the Chinese regional development strategy was based on economically plausible conditions supported by location theory, Korea's strategy was biased toward a political rationale, which disregarded the logic of the market. The long-term success of government initiated special economic zones depends heavily on finding compatible location elements supported by economic factors. Thus, regional development should be based on rational consideration of economic needs, practical comparative advantages, and diversified promotional stimulations faithful to location theory.

INTRODUCTION

In traditional Chinese culture, *fengshui* (風水), a geomantic omen, was believed to influence the fortunes of a family and, under this custom, the location of houses or tombs were viewed as crucial. This tradition also appears in Korean history. For example, if a man became a high-ranking official, he commonly consulted an expert on *fengshui* on how to utilize the land passed down from his ancestors. Furthermore, villages were generally built with the hills behind and the water in front based on *fengshui*.[1] The fact that temperate terrains used as village sites were located by testing where the snow melts the fastest remains intriguing to this day.

With the launch of the new millennium, no other country has come close to China's economic or political dynamism. The 1978 economic reform and

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[1] In Chinese, towns were formed according to the *beishan mian shui* (背山面水).

open-door policy (*gaigekaifang*[2]) marked a milestone in China's economic development in which the highly centralized economy gradually transformed into a more dynamic and market-oriented system. The result has been startling: China's GDP exploded to eight-times its original in 20 years. In 2002, with its enormous population of 1.28 billion people, China emerged as the sixth largest economy in the world following the US, Japan, Germany, France, and Great Britain. Inundation of foreign investment has spurred the output of both domestic and export goods, which earned China the nickname "The Global Manufacturer (*shijie gongchang*)." In 2002, China absorbed US $52.7 billion of foreign direct investment, surpassing the United States as the world's largest FDI recipient. Despite this phenomenal record, China's economic achievements remained unbalanced occurring unevenly in certain sectors and regions. The most dynamic region in China became the coastal areas near Hong Kong and the Taiwan straits; where the most of favorable policies were granted.

Unbalanced regional development, though, is common in the initial stages of development. In fact, many countries have deliberately adopted "zoning policies" to utilize land more efficiently, often through mediated allocation of functional business districts. In Korea, urban planning was first adopted during the early 1960s with the launch of full-scale development plans initiated by president Park Chung Hee. In the United States, zoning policies protect residential areas from bustling business districts to provide better living environments for residents. Moreover, through national industry development agendas, governments have constructed industrial clusters, which range from steel, chemical to export goods production. In Korea, for instance, the Masan Export Processing Zone was set up in 1960s to attract investment from neighboring Japan; a policy duplicated by China in the late 1970s. Also, certain Korean cities, like Pohang and Ulsan, rapidly expanded from villages to large-scale cities accommodating large populations because of the construction of steel mills and automobile factories. In the examples above, the importance of location in the economic development of specific countries is apparent.

While orthodox economic theory stresses the importance of "economies of region" in addition to the concept of "economies of scale" and "economies of scope," it, nevertheless, underplays the role of location elements in explaining economic activities.[3] Ironically, even under the large size orienta-

[2] In this paper, the Chinese pinyin is routinely inserted to clarify the original meaning.

[3] Neo-classical economists seem to stress more about behaviors economic agents and factors based on the rule of supply and demand.

tion of globalization, countries have continued to reveal interest in optimizing the size of their national coverage.[4] This tendency is exemplified by the increasing discussion on regionalism, which has a direct correlation with location and economic activities. Location elements are, therefore, still very important in a practical sense.

Since 1949 the People's Republic of China (PRC) initiated regional development planning on several occasions, sometimes defying traditional wisdom. Cai and Lin (2003) explain China underwent vast changes as a result of the regional development strategies that were implemented throughout the years, beginning with the Three Regional Areas, Third Line Construction Strategy, the Coastal Area Development Strategy, and finally the Go-West Policy. The "three regional areas" simply refers to the grouping of the 31 provincial areas into eastern, middle, and western region according to their respective locations. The Chinese statistical authority adopted this practice in all its publications. Development of industrial cities has occurred near populated areas, or areas with convenient transportation, or coastal areas that allowed access to international interactions. The revival of Shanghai in the mid-1990s is a typical example. Concerned for China's national security in the early 1960s, Mao Zedong established the "Third Line Construction" strategy, which protected China against possible invasion from the United States and the Soviet Union (Cai and Lin, 2003). It concluded in total failure, however, as huge amounts of resources were misallocated. Deng Xiaoping rectified the Third Line Construction Strategy by taking the Coastal Area Developing strategy in the late 1970s. Turning into a new millennium, the Chinese political leadership has once again switched its strategies, this time with the Go-West Policy to decrease the income disparity between the coastal and inner areas and to spark new momentum for growth.

The Chinese example reminds us of the importance of location theory, which has been greatly overshadowed by the emphasis placed on markets and institutions by capital theorists and the rising importance of distribution of income. One of the key factors of China's exceptional growth over the past 25 years has been the regionally unbalanced growth strategy. China was highly praised for the gradualism of its development projects, in which four SEZs (special economic zones) were opened as the first batch, then 14 coastal cities as the second batch, prior to the development of the delta

[4] Good examples are the recent phenomena of large-scale mergers and acquisitions. In the banking sector, for example, only large banks have survived the massive restructuring both at the domestic level and the international level.

areas. This strategy, termed *xianfulun,* consciously developed coastal areas first. In this respect, location theory has been instrumental in the unparalleled economic growth of China. The government policies based on China's geographical characteristics and resources' endowments have proved to be very efficient.

While Korea has experienced some degree of success on the national level, the results have been less than satisfactory on the regional level up to now.[5] In the past, Korea considered developing the Tumen River Delta Area encompassing North Korea, Northeast China, and even Russia. Explorations into the development this North East Asian border-area, however, produced results that were far below original expectations and the project was eventually abandoned. The gap between the ideal and reality stemmed from the inferior nature of that area, which had a small market, poor infrastructure construction and underdeveloped transportation, an uneducated labor force, and an unfavorable climate. In recent days, however, regional development strategy is once again stirring interest in Korea. The new government under President Roh Moo-hyun has revealed a desire to assume the role of the so-called Business Hub of East Asia.

With inauguration of new president Roh in February 2003, the new regime announced to accelerate the development of the Korean economy by assuming the role as a North East Asian Business Hub. It is still far too early to determine the achievements of this government policy. However, China's experience demonstrates that the success of a country's regional development process hinges on whether it is in keeping with natural location.

The following sections first summarize the location theory and then apply location theory to China's unbalanced regional development policy focusing on two Special Economic Zones: Shenzhen and Xiamen. Subsequent sections explore the function of Hong Kong and determine whether it will shift to a booming area such as Shanghai. This example is then contrasted with Korea's experiences in the Tumen River Delta Area Development and its efforts to become the Business Hub of Northeast Asia. This paper, thus, contrasts the successes and failures of location theory at the regional level applying to China's regional economic development and Korea's regional development initiatives.

[5] In here, the concept of regional includes more than two countries than the previous concept involving a couple of cities or provinces.

LOCATION THEORY REVISITED

In the field of orthodox economics, location theory of economic activity has always been less emphasized. Orthodox economics put more emphasis on the behavior of economic agents and production factors. Mark Blaug (1997) argues “curious distain of location theory on the part of mainstream economics” and “this neglect largely continues to this day.” Though location theory is not cited as often as some other economic theories, it does indicate a general and effective rule in economic activity and should be paid due regard when firms and households make plans on where to produce and consume. Location theory is also relevant to a country’s regional economic development strategy.

The origin of location theory can be traced back to Von Thünen, who was a German economist in early 19th century. He originally aimed to explain the birth of cities by using location theory. Von Thünen envisioned an isolated town supplied by farmers in the surrounding countryside. He assumed that crops differ in both their yield per acre and their transportation costs. He also allowed for the possibility that each crop could be produced with different intensities of cultivation. Von Thünen showed that competition among farmers leads to a gradient of land rents that declines from a maximum at the town to zero at the outermost limit of cultivation. Each farmer faces a trade-off between land rents and transportation costs. Differing transportation costs and yields among crops result in a pattern of concentric rings of production. In equilibrium, the land-rent gradient must be such as to induce farmers to grow just enough of each crop to meet the demand, and it turns out that this condition together with the condition that rents be zero for the outermost farmer suffices to fully determine the outcome. As the Von Th?nen town grows bigger and bigger with the development of urban industries, the rings also expand outward. Thus a town’s development leads to a development of related areas, many of which are sure to bring about a country’s prosperity. Von Thünen took the existing town as given, which was not the case in reality, but it does not reduce the value of his theory.

There are many other complementary works on this subject. Alfred Marshall (1920) first introduced the concept of external economies by discussing the advantages of producing in an “industrial district.” According to Marshall, there are three reasons why a producer might find it advantageous to locate near other producers in the same industry. First, a geographically concentrated industry supports specialized local providers of inputs.

Second, a concentration of firms employing similar workers creates a labor market pooling; workers are less likely to remain unemployed if their current employer performed poorly, and firms would be more likely to find available labor if they did well. Finally, geographic proximity facilitates the spread of information.

Peter Nijkamp (1984), a Dutch economist and editor of the Handbook of Regional and Urban Economics, argues the regional development potential depends on regional potentiality and mobile production factors.[6] The potentiality factors determine the regional development potential, although the impacts of these factors may differ, depending on their mobility, indivisibility, non-substitutability, polyvalence and non-exclusiveness. By means of these five characteristics the regional potentiality factors may be distinguished from other productive resources. According to the relative contribution of infrastructure categories to the regional development potential, Nijkamp divides infrastructure of a certain region into 12 categories: transport, communication, energy supply, water, environment, education, health care, special urban (local), sportive and tourist facilities, social facilities, cultural facilities, and natural endowment. When there is *laissez-faire*, the combination of these infrastructures determines the allocation of the production factors like capital, labor and technology in the most efficient way. The government's interference in the economic activity is effective and helpful only when its policy goes together with these given infrastructures; otherwise it would end up in failure. Therefore, a comprehensive study of these infrastructures is needed before a government makes any regional development policy.

Jeffrey Sachs of Columbia University explains underdevelopment is mostly ascribable to transportation disadvantages. Many African countries and Middle East Asian countries, for example, are classified as having semi-arid climates, "*land-locked*" (exports and imports are difficult to transport), and lacking large mineral deposits. Sachs is one of the few orthodox economists to become famous for emphasizing the importance of location in launching development strategy. He also listed limitations of land-locked countries in expanding their economic prosperity.

These arguments not only emphasize the importance of location factors in national level but also in regional level. When we apply location theory to the financial industry, the issue becomes why a financial center grows and

[6] Regional potentiality factors are composed of availability of natural resources, locational conditions, sectoral compositions, international linkages and existing capital stock, while mobile production factors include various kinds of labor and new investments.

develops in one particular location and not in others. The financial sector has historically developed in response to the need for financial services from the real sector — namely, the mining, agriculture and manufacturing industries. At early stages of development, financial activity arises in a particular place because of the information passing through that location due to trade flows or real sector activity. Porteous (1998) argues that there were two levels of geographic elements that explain the growth of particular financial centers. The first is the immediate hinterland of the center, pointing to the area over which the center is the dominant supplier or consumer of goods or services; and the second is the broader region comprised of various interacting hinterlands which determine how particular city-hinterland systems fit into global or regional patterns. A two-way flow of information is required for any industry's development, from the hinterland to the core city and from the core to peripheral areas. Such flow is largely affected by natural geographical features and complemented by man-made developments such as transport networks, which countervail original disadvantages. The value of information flows is expected to grow over time. This may be initially shaped by natural endowments, but the patterns of exploitation of natural resources and of secondary and tertiary sector developments in the region are equally, if not more, important in the long run.

Another factor to consider when erecting a financial center is the potential for profitable exploitation. This potential is determined by soundness of the financial infrastructure, judging whether the existing financial markets are mature enough to support high trading volumes that mollify liquidity risks. There may be a trade-off between locating close to the source of new information and locating to where the information can be used profitably. Meanwhile, technological, economic and institutional changes are constantly transforming the information hinterlands of financial centers and undermining natural location advantages. The strengthening of transportation networks and inter-connected information webs enable the mobility of production factors and, ultimately, reduce the reliability on natural endowments. Some cities are favored over others during the shift of world economic patterns not only because of their natural endowment, but also for their basic infrastructures, which once built up form additional advantages.

Finally, Nijkamp finds *laissez-faire* government policies are preferable when implementing regional development strategies. Similarly, Hoover (1948: 277) argues government policies on regional development should be determined on the strength of the existing infrastructure and powered by competition among self-interested individuals, not simply motivated by the politician's will. The policies can only be justified when they aid firms to make more knowledgeable selections on location, increase inter occupational and geographic mobility for labor, and remove unnecessary barriers to trade and competition. The costs associated with a development policy must always be weighed against the securable benefits. Negligence or underestimation of these costs often has often had disastrous consequences even for theoretically sound policies.

APPLICATION TO CHINA'S REGIONAL ECONOMIC DEVELOPMENT STRATEGY

Over the past two decades, China, one of the largest countries in the world, has stunned the world with its rapid economic development and phenomenal economic achievements.[7] In 1978, when China decided to open her doors and stimulate her economy, the GDP was a meager US $43.67 billion. In 2002, however, with the success of the reform policies, China's GDP miraculously rose to US $1,155.82 billion, with an average annual growth rate of 9.3% on GDP and 7.9% on GDP per capita since 1989. The GDP in 2002 was twice the size of 1990 figures and ranked sixth in the world after the US, Japan, German, France and the UK (*World Development Report*, 2003). Analysis on China's rapid development must include discussions on the optimal regional development strategies, especially the 4 special economic zones (SEZs): 14 coastal open cities (COEs), 3 delta areas, central and western China, and the Go-West Policy. In addition, there are hot debates on whether Hong Kong will continue to assume its role as a regional and international financial center or possibly be replaced by Shanghai or Wuhan, which had been the historical centers in China.

When China launched its reform and open-door policy, political leaders decided to develop the eastern coastal cities first expecting spillover effects to spread along the whole coastal area and eventually into inland China. This decision was a good application of the location theory, which emphasizes the infrastructure and inborn natures of certain areas. Generally speaking, China's eastern coastal area has a favorable climate and a convenient transportation network. Its industrial infrastructures and trade traditions existed prior to the founding of the People's Republic of China and was, thus, much more advanced than the other areas in China. Shanghai, for example, was considered as the Paris of Asia.

In 1980, critical changes in the first step of implementing China's econom-

[7] As of 2002, China is the third largest country having 9.6 million square meters of area with population of 1.27 billion and GDP of US $1.2 trillion.

ic reform and open door policy took place as Shenzhen, Zhuhai, Shantou and Xiamen were designated as four Special Economic Zones (SEZs). The open door policy expected these SEZs to attract foreign investment, advanced technology and management skills to the mainland. Before implementing a full-scale open door policy, the Chinese leadership intended to test the effectiveness of the market economy. In an apt comparison, Deng Xiaoping summarized the functions of a special economic zone as “the window of technology, management, knowledge and foreign policy” (Deng Xiaoping, 1993).

Based on the successful experience of the four Special Economic Zones, 14 new coastal cities were designated in 1984 to accelerate national economic development by absorbing larger amounts of foreign capital, technology and experience.[8] These coastal cities were granted greater favorable government policies and more decision-making power was released to the local governments so as to improve the efficiency of these port cities and increase their competitive advantages in the world market.[9]

In the following year, construction intensified further opening China’s economy. The Yangtze River Delta Area, Pearl River Delta Area and South Fujian Delta Area were to be developed as three coastal delta economic zones, which could link cities and neighboring rural areas together and stand as the vanguard in China’s economic transformation. Studies estimate more than 200 million people mainly engaged in trade and manufacturing reside in these areas. The gross output of industries in these areas account for half of entire country’s total output.[10] In 1988, the Hainan province was separated from the Guangdong province and assigned as the Hainan Special Economic Zone. By then there had formed an opening belt along China’s eastern and southern coast line, including five special economic zones and 293 coastal cities and counties, with 280 million people covering 426,000 square kilometers in China. In 1999, the “Go-West Policy” was launched in order to stimulate the local economies in the central and western areas, reduce the gap between eastern and western China, and improve the business environment and living conditions in the West. The Go-West Policy marks the final stage of the gradual opening agenda, completing the full-scale open market reforms .

[8] The cities include Tianjin, Shanghai, Dalian, Qin huangdao, Yantai, Qingdao, Dalian yungang, Nantong, Ningbo, Wenzhou, Guangzhou, Zhanjiang, and Beihai.

[9] Key measures include preferential tax treatments and effective land allocation.

[10] This signifies the seriousness of the recent unbalanced development in China. As a result, the coastal area records more than a 15% annual growth rate dwarfing the single digit growth rate in the inner land.

Until the early 1990s, most economic activities in China, including the coastal development plans, were carried out according to the planned-economy system. However, even without the central government's favorable measures accorded to coastal areas, like the preferential tax policy, the areas with these inherent advantages would have likely developed to the same degree. "An invisible hand" would have gradually drawn capital and well-educated labors into these areas anyway since the production factors independently allocate themselves in an efficient manner in the market. Had not the government set up the four Special Economic Zones and other cities, other autonomous "Von Thünen towns" would have appeared along the long coastal area of China. These towns would have become centers of that region leading the development of local economy and contributing to China's overall economic development.

With precise timing and thorough understanding of the different infrastructures of each city, the SEZ policies, nevertheless, played a significant part in the rapid growth of China's economy. When the Special Economic Zones were first initiated, China has just survived the Ten-Year Cultural Revolution. A century-long closed-door policy had left China far behind the world. During this time most industries reverted back to infant stages due to the lack of capital and modern technology. The Chinese government chose the proper location and proper time to transform the economy and regain what had been previously lost. The open-door policy proved to be the correct choice for these cities to attract the much needed foreign investment, technology and modern experience. The section below provides a more detailed analysis of two SEZs examining the applicability and effectiveness of location theory in China.

Case of Special Economic Zone: Shenzhen and Xiamen

Enjoying the title of the "South Gate to China," Shenzhen city has become the symbol of the economic reform and open door. Before the reforms, Shenzhen was a small coastal village in the Guangdong province located near the Hong Kong border adjacent to the Pearl River Harbor. Presently, Shenzhen is one of the most important ports that connect China with the world. Covering 327.5 square kilometers, it is endowed with abundant economic resources ranging from tropical plants to diverse sea products. The close connection with overseas Chinese brought in large investment from successful overseas Chinese, which greatly contributed to Shenzhen's initial development.[11] Low land rents and other favorable tax policies in Shenzhen have continued to seize the attention of foreign investors.

Shenzhen, which used to be a small town with a population of 20,000 has transformed into a booming metropolis through sustained economic prosperity of the construction industry. Shenzhen's annual growth rate averaged 30% and soon "Shenzhen Speed" became the main driving force for China's national economic development inspiring other cities as well. Shenzhen's prosperity mainly derives from the successful application of location theory. First of all, neighboring Hong Kong was crucial to Shenzhen's success. Hong Kong directly supplies capital and also provides many conveniences for the foreign capital looking to invest in Shenzhen. At present, 80% of the foreign capital in Shenzhen comes from Hong Kong and the lion's share of investment from foreign countries comes into Shenzhen via Hong Kong (Li, 2000).[12] Hong Kong also supplies Shenzhen with advanced technology and facilities. Among all the technology and facility suppliers to Shenzhen, Hong Kong ranks second closely following Japan. Through intensive contact with Hong Kong, Shenzhen gained the modern management methods and experience needed to improve efficiency and profits. Shenzhen's achievements in turn set an example to the inland economies where management skills were desperately required. Much useful information has also spread into Shenzhen from Hong Kong. Advanced telecommunication and service facilities in Hong Kong have provided Shenzhen with new technologies and market information, accelerating its export-oriented economic development. Lastly, by trading with Hong Kong, Asia-Pacific's trade center, Shenzhen has benefited by exploring the overseas market channels.[13]

Shenzhen has emerged as a window to internal financing, international trade, technology transfer, and personnel training for the region. The actualization of this function was made possible only through years of horizontal economic and technological cooperation between Shenzhen and Hong Kong.[14] Through this window, cooperative funds and investment were established promoting the inland economy. Shenzhen has made remarkable achievements by absorbing foreign capital and associating with inland areas since the establishment of the special zone.

[11] Overseas Chinese refers to those who left through the southern territories of China due to the closed-door policies in both the Ming and Qing dynasties.

[12] In many cases, local Chinese companies with investments in Hong Kong later transferred their money to Shenzhen thereby enjoying more favorable treatment as foreign companies.

[13] The CEPA intends to aggressively combat the economic depression in Hong Kong caused by booming neighboring areas of China, such as Shenzhen, Zhuhai, Shantou, etc., through stronger alliances.

[14] Every morning, *Luowoo* station in Shenzhen bustles with migrating workers who commute to Hong Kong. By crossing the bridge that connects these two areas, these workers enjoy the high wages in Hong Kong and low living expenses in Shenzhen.

Situated in the south of Fujian Province facing the Taiwan Strait, the 13.1 square kilometer Xiamen SEZ is another successful case of location theory application in China.[15] Since its establishment in 1980, the Xiamen SEZ has been granted province-level authority in economic management. It also has a relatively developed transportation and telecommunication network: the Xiamen International Airport is one of the four leading international airports in China with first-rate services and facilities and the Xiamen harbor is one of the ten major seaports in China. In 2002, Xiamen's total amount of import and export ranked at the third in China. As for education, the Xiamen University serves as a platform that attracts and cultivates intellectuals for local development.

Historically, Xiamen has been an important port for foreign trade on the eastern coast of China. Xiamen is famous as the hometown of some 350,000 overseas Chinese. Xiamen and Taiwan have a close link in geography and lineage. People in both places speak the same dialect and observe similar customs.[16] At present, over 70% of the Taiwanese population is estimated to originate from the South Fujian ancestry. As the facilitator for trade and cultural exchanges between Mainland China and Taiwan, Xiamen plays an important role in promoting the relationships between two sides. As Shenzhen benefited from Hong Kong, Xiamen's development was made possible because of Taiwan. By the end of September 2001, the Taiwanese investment to Xiamen topped US $3.46 billion reaching 1,569 projects. Its trade volume with Taiwan by the end of June 2001 rose to US $7.75 billion.

Since the Xianmen Special Economic Zone was established, the local government has been making enormous efforts to create a favorable environment for economic and trade cooperation with Taiwan. The Xiamen government improved many related services, set up an exclusive Taiwan investment zones, carried out the pilot work of direct shipping across the Strait so as to integrate Taiwan's capital, equipment and management with the local market, labor and talents with Mainland China. Thus, Xiamen has become an important channel through which Taiwanese investment enters Mainland China.

Through constant efforts, Xiamen has evolved from an isolated and backward island city into a scenic port with strong infrastructure facilities actively promoting domestic and international economic exchanges. Xiamen has become an important window leading the nationwide open reform policies.

[15] *Zheng He* is a famous eunuch who traveled from Xiamen to South East seas during the Ming dynasty. Incidentally, many overseas Chinese settled in the South using this route.

[16] Within Fuzhou is located a *Min* — a river separating the south and north of the city.

Since 1978 when China initiated the opening and reform policy, Xiamen's gross domestic product, gross industrial product and local finance income has maintained a rapid growth rate of 18.4%, 23.4%, and 19.7%, respectively, for 20 years.

Constructing Financial Centers: Hong Kong vs. Shanghai

The examples in the sections above have examined the results of location theory applied to the national level. In this section, analysis of location theory takes place at the regional and international level specifically examining the issues that surround the competition between the dominant regional financial centers — Hong Kong, Shanghai and Wuhan. When choosing a financial center, natural conditions must be considered first. Then consideration on the artificial advantages like infrastructure construction and encouragement of trading activity follows. In order to elaborate on the application of location theory on regional financial centers, a comparison on three cities of Shanghai, Wuhan and Hong Kong in terms of their financial characteristics of location is given. These cities are instrumental to China's economic development. The precise functions of location theory are apparent as these cities develop into financial centers.

Hong Kong is now the world's seventh largest trading economy and the world's ninth largest trader in services. It has the world's most service-oriented economy, generating more than 80% of its GDP through services. The well-established infrastructure, well-educated labor, developed market system, and long tradition of openness are key components positioning Hong Kong as the economic and financial center of not only in Asia but also the entire globe .

Hong Kong is the third biggest international financial center. There are no major constraints inside or outside Hong Kong. The city provides equally suitable environments for local banking institutions and foreign financial institutions. Many financial institutions in Hong Kong participate in local and overseas financial activities. Hong Kong offers several advantages for investors: excellent telecommunication facilities, globalized finance, the usage of English by the general public, many practical entrepreneurs and talented professionals, an efficient banking sector, low income taxes and free-harbor policies, minimum foreign exchange controls and efficient, fair and transparent markets.

Hong Kong's uniqueness stems from its human resources. Hong Kong boasts not only an impressive array of mainland Chinese who have been educated and trained in the West, but a standing force of lawyers, accountants and other professionals. In addition, Hong Kong's supremacy originates from its history. The political legacy bequeathed by the British legal and economic system offers a more mature market economy effectively allocating resources. Moreover, English has long been integrated into its socioeconomic fabric. A wide using of English eliminated communication barriers with foreigners who transferred knowledge and skills. Meanwhile, the inherited Cantonese kept Hong Kong linked with mainland China which is now its biggest trading partner. This bilingual workforce became a unique and attractive advantage for Hong Kong during globalization.

In addition to the factors mentioned above, the Hong Kong government's centralization of important foreign banks and financial institutions accelerated the development of its financial center. Fewer limitations and less interference in business activity motivated competition and information flows among the commercial banks and securities and insurance companies operating in Hong Kong. Free of transactional activities also produced other conveniences, which welcomed foreign companies and institutions to invest in the local market. In this regard, Hong Kong is expected to retain its role as an international financial center for the time being. Also, it will remain a gateway for foreign investment into China, and a trade hub for the Pearl River Delta of southern China as well.

However, Shanghai, once nick-named as "*Paris of the East*," threatens Hong Kong's status as a regional and international financial center. Shanghai has the biggest scale of economy of the four municipal cities in China.[17] This region recorded a 540.9 billion Yuan (equivalent to US $65.4 billion gross domestic product (GDP) in 2002. It attracted US $5 billion in actual foreign direct investment increasing foreign trade to US $73 billion and comprising 12% of China's total trade. Located on the mouth of the Yangtze River Delta — which is coincidentally the most populous, the most developed and the wealthiest area in China — Shanghai has achieved rapid industrialization supported by the vast fertile agricultural land located in its periphery.

Positioned at the mouth of Yangtze River, Shanghai links the mainland to the Pacific through active trading. Functioning as an eastern gate to China, Shanghai is the only city possessing two international airports. Pudong International Airport is China's largest cargo airport and second largest passenger airport, while Hongqiao airport is one of the busiest domestic airports. Shanghai's seaport has surpassed Taiwan's Kaoshiung to become the

[17] Beijing, Tianjin, Shanghai, and Chongqing are the only municipal cities, which have provincial level authority.

TABLE 1. COMPARISON OF REGIONS (year of 2001)

	Population (million)	Area (km^2)	GRP (US $ billion)	Per capita income (US $)
Hong Kong	672	1,091	167.5	24,926
Shanghai	1,327	6,340.5	59.7	4,499
Wuhan	758	8,467	16.2	2,137

Source: *China's Statistical Yearbook*, 2003.

fourth largest container port in the world. The transportation network is so well developed that people from Shanghai can access other domestic or international cities by air, train or ship. Shanghai also boasts the largest industry basis and technical center. 16 national key labs offer a dominant advantage in this field. In recent years, information technology has become the engine of local economic growth enabling great advances in the service and finance industries and ensuring continuous rapid growth.

As the prototype of modern Chinese banks, Shanghai has a 150-year history in the financial industry. International financial activities took place as early as 1847 when the first British bank branch was established. Foreign banks from Germany, Japan, Russia, France and US soon followed suit and eventually located in Shanghai as well. By 1936, a total of 29 foreign banks opened in Shanghai. From 1927 to 1937, Shanghai's financial industry was so prosperously that it became the biggest domestic and regional financial center in East Asia. At the time, Shanghai had money market, capital market, foreign exchange market, gold and silver market. The Shanghai Gold Market was the biggest in East Asia issuing domestic currencies and absorbing other Chinese and foreign companies.[18]

The Chinese government is now in the process of developing Shanghai as an international financial and trade center. Shanghai already has a sound financial system composed of an array of market instruments covering bonds, foreign exchanges, money, futures, forward, and gold. Shanghai has more than 3,300 financial institutions with more than 80,000 working employees. China's financial system reform bore fruit in 2002 with the establishment of the Shanghai Gold Exchange completing Shanghai's efforts to become an international financial center. The Shanghai Stock Exchange is the 13th largest among 200 stock exchange markets in the world and second after the Tokyo Stock Exchange in Asia.

[18] Around that time, the foreign currency was also circulated as medium of exchange and store value in Shanghai.

More importantly, as the core city of the Yangtze Delta, Shanghai has motivated the economic integration of neighboring cities, which are also rapidly increasing local economic development. Injected with huge amounts of foreign investment, the Yangtze Delta has become the center of the Chinese economy with a large labor force, sound infrastructure and abundant land. Larger numbers of multinationals have relocated their headquarters to Shanghai from Hong Kong, Beijing and Singapore due to these characteristics. The flow of information and movement of production factors to and from its periphery facilitating profitable exploitation attest to Shanghai's role as a legitimate financial center.

Shanghai and the Yangtze Delta mutually benefit from an educated labor force, considerable natural resources, stable economic environments, high investments, advanced skills and knowledge, scientific research, etc. With the support of enormous economic resources in the Yangtze Delta, Shanghai's infrastructure is in the process of being upgraded and modernized. The city boasts an advanced science and technology base and an abundant supply of well-trained professionals. The interrelationship between the real and financial sector is best described by Porteous (1998):

> Not only does the value of the information on the real sector in the hinterland shape the strength of the financial center which is the gateway to the region, but the strength of the financial gateway may in turn promote economic development in the hinterland by providing better financial services at more competitive rates.

Another competitor to Hong Kong is Wuhan, the capital city of the Hubei province. In fact, location theory reveals that development of Wuhan into a financial center of Central China is very feasible. Located in central China, Wuhan was one of the four famous cities that prospered by engaging in trade during the Ming dynasty.[19] This city produced a large economy, an advanced culture, and mature financial and commercial markets hundreds of years ago. During the 19th century, Hankou, an area in Wuhan, was forced to open its gates to foreign merchants. From 1865 to 1931, the export quantity of the Hankou Port was the second largest in China after Shanghai. Historically, Wuhan had been a large financial center second only to Shanghai. Before the anti-Japanese war, Jianghan Road in Wuhan was referred to as the "Hankou Wall Street."

Wuhan is the most prominent city in central China enclosing 8,467 square kilometers and 8.31 million residents. The Hanshui River, the largest branch

[19] Other cities were including Shanghai, Tianjin, and Guangzhou.

of the Yangtze River, runs through the city of Wuhan, providing a convenient water transportation. Located at the junction of the Beijing-Guangzhou railway and the Yangtze River waterway, Wuhan connects 9 provinces reaching Shanghai in the East, Chongqing in the West, Guangzhou in the South and Beijing in the North. Also, the Wuhan Port is one of the largest river ports in the mainland with an annual cargo handling capacity of 40 million tons. The Tianhe airport in Wuhan is the fourth biggest in China, with direct flights to many domestic and foreign cities.

When the Chinese government adopted the Go-West policy, Wuhan assumed a more important role of connecting its hinterland. In terms of transportation, most cities in China are within the reach of Wuhan thanks to its developed water, land and air transportation network. In terms of communication, Wuhan has easy access to information and knowledge from its hinterland. Wuhan's status as a financial center in Central China stems from its strong tradition of commercial activities and sound financial infrastructure founded when it was once one of four financial centers. Wuhan has advanced scientific and research abilities, ranking third behind Beijing and Shanghai. There are 35 colleges, 736 scientific institutes and 10 national labs, which produce a well educated work force. The impressive development of high-tech knowledge has enhanced the productivity and competitiveness Wuhan.

During the process of China's economic development, Wuhan's financial industry thrived and the volumes of savings and lending increased steadily. Among the 17 national banks, only the Shenzhen Development Bank has not opened its branches in Wuhan. There are more than 2,200 financial institutes and 9 foreign financial institutions including 7 offices and 2 branches. Many experts believe that the "bank density" has a lot to do with the local economy and banking industry. Based on these measurements, Wuhan is ranked as fifth largest banking industry following Beijing, Shanghai, Guangzhou and Shenzhen. The insurance industry also developed rapidly in Wuhan. At the end of 2000, there were 52 security companies and 84 related divisions. These numbers indicate the potential of Wuhan as a financial center in China and Asia.

However, the underdevelopment of the Central Area inhibits Wuhan's drive to become a regional financial center. Compared with the Yangtze Delta and Pearl River Delta, the Central Area has fallen far behind in terms of infrastructure, information communication and industry productivity. Lacking a rich hinterland, it will be difficult for Wuhan to develop into an international financial center at least for the time being. With the deepening of China's Go-West Project, however, the central areas will gradually develop through information, technology and capital flows from the more prosperous coastal areas enabling Wuhan to assume a larger role in the region.

Hong Kong's role as a regional financial center will continue for another few decades. However, the rapid growth in other cities has caused the leaders in China to search for the optimal division of labor between Hong Kong and other domestic. In 2003, for example, Mainland political leaders worried about fast decline of Hong Kong's economy affected by the rise of neighboring areas. As a result, the CEPA (Closer Economic Partnership Arrangement) was agreed upon by both the Chinese and Hong Kong governments. At least in the medium term, the Hong Kong economy seems to be maintaining the same advantages it had since the first outbreak of the Opium War 150 years ago. As such, while Shanghai and Wuhan are "emerging economic powerhouses" in the domestic level, their relationship with Hong Kong is more complementary than competitive.

APPLICATION TO KOREA'S REGIONAL ECONOMIC DEVELOPMENT STRATEGY

As we have seen above, location theory has worked very well in China's regional economic development strategy at the national level (SEZs) and the international level (Hong Kong as a regional financial center). The Korean government should have considered location theory before implementing regional development policies either in the national or international level. Objectively speaking, Korea achieved greater success in domestic regional development and witnessed failure internationally. In this section, we focus on the analysis of two regional development strategies of Korean government utilizing location theory; the Tumen River Delta Area Development Project and the Business Hub Project of East Asia under president Roh Moohyun.

Tumen River Delta Area Development Project

In 1992, the United Nations Development Program (UNDP) launched the Tumen River Delta Area Development Program (TRADP) as a regional development program inviting five countries: China, South and North Korea, Russia, and Mongolia. The TRADP intended to turn the Tumen River Delta Area into an international trade center. Each country expressed strong interest in developing this territory and only the Hunchun local government in Northeast China, Rajin-Sonbong in North Korea and Posyet in East Russia voiced some concern.

The prospects of developing this area into a regional trade hub was very bright in the beginning. First, the TRADP managed to recruit several countries that support the goal of the UNDP. Second, the area could serve as a transportation center between Northeast Asia and Europe. Moreover, geographically it was well-positioned to serve as a production base covering Northeast Asian markets. Third, the TRADP itself had the potential to become a large consumer market with a population of 35 million people. Opportunities existed for the manufacturing of light consumer goods. Fourth, the presence of rich natural resources, such as timber, allowed good investment opportunities for processing industries. Finally, the region's scenic landscape and the famous *Changbai* mountain range on the Sino-Korean border offered the potential development of a tourism industry. Allured by such potential, the concerned parties all paid a lot of attention to this region. South Korea also acted actively during this period but it did so for its own interests.[20]

While the prospects were bright, a decade has passed without any significant achievements. Most projects attracted little attention from the investing parties. Although the UNDP imagined this area as a second Shenzhen, the TRADP was a failure except for the partial development of the Rajin-Sonbong in North Korea. Some experts criticized the project as wasting money, labor, resources and time. This case taught an important lesson to all the participants.

Why did TRADP not develop as well as the SEZs in China? Following the location theory, we find that this area lacks the infrastructure mentioned by Nijkamp to actualize the governments' expectations. The Tumen Delta was located in a remote area with poor transportation facilities. Even though several new roads and railways were built over the course of the years, national sovereignty proved to be an insurmountable barrier restricting the movement between countries and lowering efficiency. Moreover, the Northeast Asian region is one of the most complicated regions in the world still retaining cold war tensions. Despite some improvements, political and military instabilities prevail. Uncontrolled instability could seriously damage the TRADP and without a stable political environment, economic developments will continue to remain conservative. The divergent nature of the political economies of Northeast Asia has produced low levels of economic interdependence. In 1996, the national economies of the DPRK and

[20] Korea has additional interest of opening dialogue channel with North Korea through this project. As a result, the investments by the South Korean were the largest among the parties amounting to over $100 million.

Mongolia were the only two countries in the Northeast Asia sub-region to have a high level of interdependency. Because the Tumen lies in a barren area bordering on China, Russia and North Korea, it lacks the necessary factors for economic development. Large investments are necessary to reinvigorate the project but individual investors are overly cautious because of the nuclear crisis on the Korean peninsula. Raising funds from international institutions is also limited due to the non-membership status of Russia and North Korea in international financial institutions, such as the Asian Development Bank.

The Northeast Asian Business Hub Strategy Pursued by the New Korean Regime

Korea's decision to become the business hub in North East Asia is another international regional development strategy. Former Korean President Kim Dae-jung set the basic policy direction for the Business Hub project at his New Year address in January 2002. According to the government's Action Plan, the area near the Incheon International Airport will be designated as a special economic zone, as well as the areas near the Busan and Gwangyang ports. Incheon will become a business hub, while the two port cities will become logistics hubs. The main aim of government's plan is to improve the business environment and living conditions for foreign business, which offer tremendous benefits to the Korean economy.

Korea's locational advantages are explained below. First of all, Korea is located between two economic giants — Japan and China. These three countries account for 20.6% of the world GDP. Secondly, Incheon has 43 cities with populations over one million within a three-hour flight radius. It is well positioned to become a hub for both air passengers and freight in Northeast Asia. Busan is already the world's third largest container port. With further expansion, Busan, along with the port of Gwangyang, will become a major transshipment hub and distribution center in Northeast Asia. Finally, through years of accumulation, the Han River Miracle has produced a sound infrastructure. Some Korean industries have even acquired competitiveness in the world market, such as electronics, automobiles, shipbuilding and steel industries. Many world-class R&D bases have been established, as well.

Although Korea is endowed with favorable geography and has a relatively sound infrastructure, it is still far from being the hub among Northeast Asian economies, namely Japan, China and Russia. The disadvantages of Korea are so dismaying that they threaten to permanently damage this project. First, Korea has a much smaller market than China and Japan. Also, the

Korean market has been shrinking recently as China's huge market attracts more and more foreign investment. Though Japan continues to suffer from its stagnant economy, the high-income consumers provide a large domestic market. Second, even though Korea continually expands its domestic infrastructure, it lags behind the logistics network in Hong Kong and Singapore. Compared with Japan and China, Korea is also weaker in advanced marketization, openness and transparency of laws and regulations, flexibility of labor market and stable labor relations. Being far less internationalized than Hong Kong or Singapore, another serious problem for Korea is the language barrier.

Third, although Hong Kong and Singapore have been developing into international trade centers in Asian for more than half century, Korea has just launched its internationalization program in 2002. Meanwhile, there is potential competition from Shanghai and Taiwan, whose economic ambitions are growing with their rapid development. Korea is not as competitive as Hong Kong and Singapore in terms of infrastructure and not as active as Shanghai in welcoming foreigners. Korea has often been blamed by foreign investors for having one of the strongest protectionist sentiments.

Fourth, Korean labors are much more expensive than those in China and other Southeast Asian countries. The Chosun Daily, a leading Korean newspaper, once remarked: "The average wage for blue-color workers at the domestic production plants of the nation's top business groups is as much as 10 times more expensive than wages for workers at overseas plants." The average annual wage for Korean blue-color workers in 21 plants of the six biggest firms in the country and their subsidiaries amounted to about W36 million each, about 10 times higher than the average of W3.4 million for workers at the groups' plants in China.[21]

Finally, while Korea's position in the middle of the Northeast Asian countries brings favorable geographical advantages, political instability in the region remains very high. The most disconcerting problem is the nuclear threat posed by North Korea. Military ventures are detrimental to the economic environment and Korea's hub strategy. In the face of such conflicts, Korea has to secure national security by negotiating with neighboring super powers, like China, Japan, and even the US.

[21] See the details from
http://english.chosun.com/w21data/html/news/200307/200307310008.html.

CONCLUDING REMARKS

China's economic development strategies evince the relevance of location theory, which gives priority to the natural geographical advantages, when discussing regional economic development. However, in international competition, human factors also matter, especially in the long run. Man-made infrastructure plays just a significant role as the natural infrastructure. Both the inborn advantages and constructed infrastructure determine the future of the concerned region.

China's brilliant performance in the recent past have largely been through accurate policy implementations. However, China may confront some problems in the future as urbanization accelerates and the local governments competing for foreign investments over-invest in specific industries. In addition, the role of urban clusters should be modified in the international level. For example, Hong Kong and Guangzhou would function as business centers for a China + ASEAN 10 scheme. On the other hand, Shanghai and Nanjing could be business centers for China + Japan and Korea.

While government strategic policies can accelerate the process of regional development and promote a country's development by stimulating a city or a region's economy, the selection of location is rarely unbiased. Thus, government policies must be implement only upon consideration of a region potential factors and existing advantages.

Although Korea has a sound infrastructure that can enhance its domestic economy, this does not automatically guarantee that Korea will become the Business Hub of Northeast Asia. Even though Korean cities, such as Incheon, Busan, and Seoul, are mutually complementary and have leading industries, in order for Korea to become the center of Northeast Asia, it must nurture the economic elements which were easily observed in Hong Kong and Singapore. Besides infrastructure, Korea falls behind in all other categories, including population, market, capital, or economic size. This fact indicates that for now it is more realistic and feasible for Korea to increase efforts into becoming a dynamic economy in Asia rather than the hub of Northeast Asia.

In sum, while the Chinese regional development strategy was based on economically plausible conditions supported by location theory, Korea's strategy was biased toward a political rationale, which disregarded the logic of the market. In this regard, location theory reveals that the market knows best; a concept that is in line with orthodox economics. The long-term success of government initiated special economic zones depends heavily on finding compatible location elements supported by economic factors. Thus, new towns, including areas and clusters, should be based on rational consideration of economic needs, practical advantages, and diversified promotional stimulations faithful to location theory.

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CHEONG YOUNG-ROK *is Associate Professor of Graduate School of International Studies at Seoul National University. He earned his PhD degree in economics from University of Southern California. He worked for the Korea Institute for International Economic Policy as research fellow. His major concern covers from economic reform of China in general and banking and financial reform in particular.*