Urban Connectivity in Air Passenger Flows, 2002-2012:The Case of Seoul and its Implications

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Abstract

Thisstudy explores the changing patterns of spatial articulation of Seoul in terms of connectivity to other international cities in the Asian city networks. By observing the number of air passenger flows in 2001 and 2011, it reports the increase in volume of air traffic and number of inter-city pairs of Seoul, and its implications for the rising tourism industry in the region of Asia. It is found that the Seoul's connection to Asian cities has become much denser between 2001 and 2011, and the number of city-pairs has grown remarkably from 137 to 179 during the period. Seoul is more closely linked to big cities in Asia than other regions of North America and Europe, and Seoul's major international connections with Japanese cities have been replaced by those of the Chinese, which in turn demonstrates Korea's current intermediate status in the global economy. It is also noted that the increased number of tourists and city contacts reflects the dynamism of a rising Asian economy in general. This study has implications for future research in examining not only the status of Seoul within the city system, but also analysis of the cliques that Seoul belongs to as both a destination and an origin city of tourist groups.

Key Words: Urban Connectivity, Air Passenger Flow, Seoul, Asian City Network, Tourism

1. Introduction

As globalization proceeds, the relationships among cities become more intensified and dense. Cities are connected through the flows of commodities, information, and travelers. In other words, cities function as nodes in the global economy. The trends have generated a stream of studies examining the pattern of air passenger flows aimed at understanding the global city network (Smith & Timberlake 1995; Shin & Timberlake 2000; Taylor & Walker 2002; Derudder 2005; Mahutga et al 2010). The inter-city relationships in terms of the flows of goods and persons at the regional and global levels shape the structure of the global economy, and a city's location in the network of global urban relationships has significant implications for a people's way of life within a city (Taylor 2004). Recently, scholars began focusing on the connections of individual cities and their status within the global or regional city networks. This study attempts to extend this line of thought by examining the Seoul's connectivity in air passenger flows from 2001 and 2011 within the Asian city network.

Seoul has been identified as one of the rising global cities in several studies (Friedmann 1986; Hill & Kim 2000; Ma & Timberlake 2008; Taylor 2004). Its rising position as a global city (or world city) indicates the fact that South Korea (hereafter Korea) has successfully ascended to become a major player in the global economy and one of the most urbanized states in the world since the 1990s. Although studies on Korean economic growth and export-led industrialization in East Asia are numerous (Arrighi 1998; Appelbaum and Henderson 1992; Deyo 1989; Evans 1996; Koo and Kim 1992), a few scholarly efforts were made to investigate their impact on urban development in Korea on an empirical basis (Cho 1997; Shin & Timberlake 2006). The Korean economy, with its accumulation of capital and advanced technology (e.g., information technology) has expanded its connections into the cities of Northeast China and Central Asia. In particular, the so-called "Rise of East Asia" has been vigorously discussed since the 1990's (Arrighi 1998; Shin 2012), but the influence of this phenomenon on the development of the city network in the region of Asia has yet to be sufficiently studied. Accordingly, this study addresses Seoul's status in the Asian city network by examining its air passenger flows with other cities for business and tourism. The analysis focuses on the volume of air passenger arrivals, number of inter-city contacts, and the location of Seoul in the global city network. It begins with a review of recent studies on globalization and the Asian city network, and then the hypotheses for discussion in the study will be offered.

2. Globalization, Asian City Network, and Tourism[1]

As globalization progresses, there emerge new patterns of urban development. A number of the world's major cities are becoming increasingly important loci that contribute to the synergy of the global economy (Sassen 1991). Those cities that are located in Asia have become pivotal spaces where key actors of transnational organizations and multinational corporations and information are concentrated and exchanged in vast quantities (Shin and Timberlake 2000; Smith 2004). Knox (1995) described world cities as "basing points and control centers for the independent skein of financial and cultural flows which, together, support and sustain the globalization of industry" (p.6). Thus, global cities are considered to be "linchpins in the spatial organization of the world-economy" (Smith & Timberlake 1995:287), serving as the nodes through which capital and information circulate. The multiple branches of advanced business services provided via a world city's network have come to be organized in a hierarchy centered on the three cores of the world economy: the U.S., Europe and Pacific Asia (Taylor 2004). Not surprisingly, there is a high level of competitiveness among peripheral and semi-peripheral cities, in Asia particularly, to attract foreign capital by utilizing the key terms of "globalization," or more broadly, "developmentalism," as political symbols (Machimura 1998; Kim 2004). In order to attract tourists and businessmen, the city as a destination needs to demonstrate its competitiveness, which is determined by tourism-specific conditions as well as a range of other factors relating to service providers.[2]

This study conceptualizes the Asian city network[3] as a regional sub-boundary of the global urban system that in turn echoes the restructuring of the global economic system and the "rising East Asian economy" (Arrighi 1998; Shin and Timberlake 2000; Shin 2012) in its pattern of urban connectivity and cliques. The signs of a rising East Asia (e.g. Singapore's heavy involvement in the Asian Dollar market, Hong Kong as financial center after London and New York, and South Korea's attractiveness for foreign direct investment) indicate that Asian countries have advanced in the value-added and financial hierarchy of the global economy. Recent foreign direct investments made in Japan, the Asian NICs, and China had both a direct and indirect impacts on international migration. Hence, Asian cities are becoming more interconnected with increased exchanges of people, investment, and information, by which the Asian city network as a part of the global city system has been reorganized. Understanding each East Asian global city with regard to its specific role in the global urban system requires knowledge of how the dynamics of its national economy are interwoven with those of the region's political/economic as a whole (Orum and Chen 2003).

For example, examination of Los Angeles as a center of the world's film culture and mass media requires knowledge of how this particular city is connected to the economies of those Asian cities where the film industry's products are marketed and consumed. As an extension of what the "World City Hypothesis" (Friedmann 1986) proposes, this study asserts that the urban developmental pattern in Seoul needs to be understood in the context of not only the Korean national economy but also as evincing the dynamics of a rising East Asian economy within the re-structuring patterns of the world economy. For instance, an examination of Korean urban development patterns should consider the fact that the Korean economy plays an intermediary role in the global manufacturing networks by *mediating* the order flows from the core to the low-wage manufacturing areas of the periphery, the latter being located mostly in China (Smith 2004: 404). It simultaneously needs to consider the immigration of foreign workers to Seoul as well as the impact of the Korean government's policy, and the rising tourism (Seol 2000; Kim 2008).

The East Asian economy is displaying dynamic changes: The rise of China's economy, with its globally outreach of trade networks, in addition to the transformation of the Japanese economy in the efforts to maintain its previous roles of control and command that have had a dramatic impact on global markets, especially in Southeast Asia (Chen 2009: Ma and Timberlake 2008). Cities in East Asia are thus engaged in a fierce competition to secure a relatively advantageous position in regional and global markets, which results in remarkable changes in the urban hierarchical system. The Asian city network seems much more volatile and dynamic than those of Europe and America, as evidenced by stronger signs of upward mobility among cities (Shin & Timberlake 2000; Mahutga et al 2010). Supporting this contention emerges an expectation that the Asia Pacific region will be recording the fastest rates of growth in terms of the global airline industry. In its Global Traffic Forecast, Airports Council International (ACI) estimated that the Asia Pacific region will record an annual growth of 8.3% between 2009 and 2014 and 6.3% between 2009 and 2029. It would constitute the highest rates among the regions of the world.

The region would also become the largest market, occupying 38.5% of the global airline industry in 2029 (recited from Geum& Cho 2011:70).

These factors are creating a unique position of Seoul within the Asian city network; the increasing numbers of tourists travelling from one city to another can be taken as an indication of the spatial articulation of the global regional economy. This is because globalization tends to encourage the improvement of infrastructure, leading to the facilitation of connections for tourists in different cities in Asia: "Tourism lies at the forefront (along with global manufacturing) of this region's transformation, but it has not received a great deal of attention from scholars and policy analysts" (Herzog 2003:216). In a point of view, the tourism industry that produces goods and services within high-performance intra- and inter-city networks has already been incorporated into the global economic system; "…inevitably come to form part of the international division of labor" (Wackermann 1997:35). Given the discussion above, the following questions need to be addressed: what are the major changes that occurred in the flows of airline passengers? How dense are Seoul's connections to major cities in Asia such as Tokyo, Beijing, Hong Kong, or Shanghai? And, what are the implications to be drawn from such changes in the Asian city network perspective with the rising Chinese economy in terms of the rapid growth of international tourism? These considerations lead to establish the following hypothetical propositions (HP):

HP1: Over time between 2001 and 2011, there will be greater number of air passengers between Seoul and Asian cities.

HP2: Over time, the number of city-pairs, between Seoul and Asian cities, will be increased and become more dense in absolute terms, and

HP 3:Over time, the connections of Seoul with other cities will display dynamic change of Asian city network, reflecting different modes of mobility, travelling for business and tourism.

3. Air Passenger Flow and Source of Data

A trade structure that is constituted in part by seaborne and air transport facilities underlies the global economic system. It has been documented that air transport is a crucial part of the global economy: "The construction of global air travel, air freight, and telecommunications networks have had a profound impact on the flows of goods, capital, people, and information in the world economy" (Ciccantell and Bunker 1998:2). With the advancing technology of aircraft, the global economic system has undergone far-reaching transformations in terms of the speed of delivery processes. Air transport subtends business travelling and tourism in sustaining this system. The expansion of business mobility brings out the growth of tourism businesses; "Mobility of leisure time activities has given tourism a leading role in the movement of persons to the point where the recreational sector has become a full-fledged player in economic deployment" (Wackermann 1997:23).

The increased in the volume of tourism over the past decades appears to confirm this contention. The total number of international tourist arrivals has steadily grown: From 25 million in 1950 to 69 million in 1960, 165 million in 1970, 287 million in 1980, 455 million in 1990, 476 million in 2000, and 935 million in 2010 (World Tourism Organization 1993, 2001, 2012). Although it is difficult to clearly differentiate air passengers that are "must-go travelers" from those that come as "leisure travelers" (Rimmer 1996), it is estimated that around sixty to seventy percent of tourist arrivals among international airline trips are made for recreational, social, and personal purposes. Moreover, the number of tourist arrivals from abroad in the region of Asia has been growing rapidly, coinciding with the increase in tourism expenditures (WTO 1993). Keeling (1995) has provided five reasons why the flow of airline passengers among cities around the world could be a good indicator for identifying the global city system, three of which are insightful for the current study: 1) global airline flows are one of the few indices available of inter-urban connectivity 2) air transport is preferred for inter-city movement by transnational capital, migrants, tourists, and purveyors of high-value, low-bulk goods, and 3) airline connections are an important component of a city's aspiration to world city status.

This study utilizes data on airline passenger flows between Seoul and other cities in Asia for the examination of the changes in the region's urban network. Ideally, a dataset for this project would contain measures of *all* major flows of information, commodities, and people between *all* cities within the region to measure the relations in its city system and urban hierarchy. Such data does not yet exist. However, airline passenger data can provide a reasonable proxy for these kinds of flows (Smith and Timberlake 1995), even though rectifiable deficiency issues in using airline data have been noted (Derudder 2005).

The data source is *Korean Aviation Statistics* (KADA 2002, 2012) and *On-Flight Origin and Destination* (2000) by ICAO (International Civil Aviation Organization). In continuation of the discussion above, domestic air passenger flow reflects the national urban system, which is closely linked to international urban system. The study depends on a data from the Korea National Statistical Office and supplementary articles, including those from media. The analysis also requires another source of supplementary data: the number of tourists around the world in the two years 2001 and 2011, obtained from the World Tourism Organization.

4. Seoul's Connections to the Asian City Network

The changes in number of passengers arriving at and departing from a city show how the city is connected to the global city network. The total number of foreign travelers arriving in Korea has increased from 5.14 million in 2001 to 9.79 million in 2011, an increase of 90% (see Table 1). This trend might be due to several factors, such as the rising Asian economy in general and the entry of low cost carriers (LCC) into the Asian airline market since 2009. The latter's entry into the Asian airline markets, coupled with relatively short routes of travel times of less than six hours, seems to be working positively in attracting more foreign tourists (Geum& Cho 2011).

Official government policies, such as hosting international conferences and major events such as the 2012 Exposition, have also functioned to improve the image of Korea as a tourist destination.Most visitors to Seoul are apparently coming from somewhere else in Asia. It is found that 74.7 percent of 5.1 million visitors in 2001 were from the countries in Asia. This figure increases to 79.2 percent in 2012. The number of travelers from the U.S. and Europe visiting Korea increased from 855,610 in 2001 to 1,342,528 in 2011. However, the proportion of travelers from these two regions in terms of the total number of travelers visiting Korea declined from 16.5% to13.7%, which is attributable to the accelerated increase in the number of Asian travelers. In Table 1, it is notable that most travelers from high-income countries such as Japan, Hong Kong, and Singapore are visiting Seoul for tourism *per se*, while those from low-income countries like Thailand, Philippine and Vietnam are making trips for multiple purposes, including work, business, and possibly tourism. An important fact to consider is that Chinese tourists are visiting Seoul for tourism, especially to take advantage of shopping opportunities, a trend that has increased from 38% in 2007 to 53.2% in 2010 (Lee & Park 2012).

Table 1. Foreign Travelers Arriving in Korea, 2001 and 2011

	2001		2011	
	Tourist %	Total	Tourist %	Total
Japan	96.7	2,377,038	97.5	3,289,051
Hong Kong	96.1	204,959	96.5	280,849
Thailand	57	73,127	80.1	309,143
Philippine	15.5	210,726	25.9	337,268
Singapore	73.6	71,238	86.2	124,565
Vietnam	38.4	20,360	42.2	150,531
China	46.1	481,782	59.1	2,220,196
US	73.8	426,808	73.6	661,503
Europe	56.9	428,802	62.8	681,025
Asia	80.5	3,846,011	77.7	7,766,292
TOTAL	73.2	5,146,012	73.5	9,794,796

Source: Korea National Statistical Office, 2012. http://kosis.kr.

Tourists, overall, have constituted around 73% of all visitors to Korea in both 2001 and 2011.[4] In this group, it was Japan that sent the most visitors to Seoul in both 2001 and 2011. There was an increase of 38% in the number of Japanese visitors between these years, with over 96% of them coming for purposes of tourism.[5]

A more astonishing finding, however, is that the number of Chinese visitors showed a growth of 360% with tourism as the primary reason for travel during the short period of time.

The numbers of international air passengers between Seoul and major cities around the world are charted in Table 2. It is clearly noticeable that the Seoul's connection to Asian cities has become much denser between 2001 and 2011, and the number of city-pairs belonging to Seoul has grown remarkably from 137 to 179 (KADA 2002 and 2012) during this period.

Tokyo as a world city remains the top destination with regard to Seoul's outbound connections over the last decade. Tokyo no doubt has stronger ties with other world cities across the globe, such as Los Angeles, Sydney, London, and New York than any other Asian city (Smith & Timberlake 1995). The Seoul-Tokyo pair, as one of the most critical Asian city pairs, has remained solid over the years, displaying strong relations in trade, Asian geopolitics, and even cultural exchange (Shin & Timberlake 2000). But, with the exception of Tokyo, Seoul's connections with other Japanese cities have become less significant: Seoul's connections toOsaka and Nagoya have significantly declined over time.

Table 2: Number of Passengers in Top 20 Contacts with Seoul

2001		2011	
City	Number of Passengers	City	Number of Passengers
1.Tokyo	2,527,559	1. Tokyo	4,151,777*
2.Osaka	1,456,223	2. Hong Kong	2,099,483
3.Hong Kong	1,408,065	3. Bangkok	1,743,512
4.Bangkok	1,106,723	4. Beijing	1,426,649**
5.L.A.	794,239	5. Shanghai	1,390,967
6.Beijing	754,105	6. Manila	1,252,029
7.Singapore	668,714	7. Taipei	1,140,949
8.Nagoya	616,426	8. L.A.	957,245
9.Manila	533,069	9. Singapore	916,358
10.Hukuoka	521,170	10. Tsingdao	810,575
11.Shanghai	448,195	11. Osaka	786,020
12.San Francisco	425,490	12. Hukuoka	770,088
13.Taipei	407,036	13. Guangzhou	628,491***
14.Frankfurt	382,964	14. Cebu	598,725
15.New York	382,528	15. Hochimin	580,379
16.Sydney	302,945	16. San Francisco	575,471
17.Shenyang	276,183	17. New York	564,080
18.Paris	250,917	18. Kuala Lumpur	513,875
19.Tsingdao	243,318	19. Paris	453,079
20.Vancouver	237,926	20. Frankfurt	490,539

Source: KADA (2002 and 2012) .and JAA (2002 and 2012)
Note: *Narita plus Haneda; **Inchon plus Gimpo; ***Shenzhen plus Guangzhou

Instead, cities in China, such as Beijing, Shanghai, Tsingdao, and Guangzhou have come to replace them. Among Seoul's topten connections, four of these were Japanese cities in 2001. In 2011, however, four out of ten were Chinese cities. Although the absolute number of air passengers traveling between Seouland the Japanese cities of Tokyo, Osaka, and Fukuoka combined were still greater than those traveling to and from China, the numbers of city connections between cities in China and Korea has been growing rapidly after 2000.

The number of Seoul's air passenger connections for Chinese cities was 23 in 2001 and 47 in 2011 (KADA 2002 and 2012). The number of city-pairs belonging to Beijing increased to 20 in 2000; that same year, the highest numbers of air passenger flows for Beijing are with Tokyo (318,332), Seoul (284,615), and Singapore (143,454) (ICAO 2000). The major destinations for travelers coming from Shanghai in that year were Tokyo (395,000), Osaka (231,000), and Seoul (127,000) (Ibid). It is to be mentioned that Seoul, especially its metropolitan area (broadly defined as *Gyeonggi-do*), with its well-established infrastructures of advanced information technology—as well as the recent wave of globally popularized Korean culture, a phenomenon known as *Hallyu*—will continue to witness this increase in connections with Chinese cities in the near future. These changes indicate a significant transition that Seoul's links to Japanese cities have been replaced by those with Chinese cities in the Asian city network. One possible explanation for this change is that it is a result of the rising Chinese economy. This in turn implies a transformation of the Korean economy from being a recipient of sub-contracts in traditional manufacturing industries, mostly coming from Japan and the U.S., to becoming an intermediary in the global commodity chain by connecting or providing the orders received from multinational corporations of the core to the factories located in China (Gereffi and Korzeniewicz 1994; Smith 2004).

Another important change between 2001 and 2011, as shown in Table 2, is that there has been a great upward movement by Southeast Asian cities of Bangkok, Manila, Cebu, and Hochimin City, partly attributable to an increase in Korean tourists.[6] Bangkok as an international hub in Southeast Asia was a favorite destination for Japanese tourists in the 1960's and 70's, a popularity that has been repeated with Koreans since the 1990's. An interesting finding to note is that despite the number of passengers remaining quite small, there emerged two new air connections between the cities of North and South Korea in 2006, between Pyongyang and the cities of Cheju and Inchon. The Korean economy, as an emerging player in the global economy, has also generated a necessity for the establishment of connections with cities in Central Asia, the latter being a source from which large numbers of both legal and illegal immigrants are sent (Seol 2000). Another remarkable change during this time period is that North American cities dropped in their positions from four cities in 2001 to two in 2012 by being replaced by Asian cities. Juxtaposing two lists of cities with dense connections to Seoul allows us to explain the change in its position with regards to the dynamics of the Asian city network. It is inferred that the increase in city connections between Seoul and other Asian cities reflect the 'rising East Asian economies' (Arrighi 1998) by which highly activated economic transactions stimulated the frequency of the movement of human capital in Asia as a whole.

This study does not attempt to provide an explanation for Seoul's centrality in the Asian city network, which would require a formal network analysis. However, an indirect understanding of the extent to which Seoul is central compared to other cities in Asia, as several studies significantly deal with the issue (Shin and Timberlake 2000; Taylor 2004; Derudder et al 2010), is possible. Friedman's earlier study (1995) listed Seoul as representing important national articulations in a theoretical list of world cities. Table 3 provides the Seoul's position in terms of its ranking among global cities as proposed by previous work.

As shown in the Tables, Seoul is located in the second cohort of rank between 10th or 20th or so, below the top cohort with Tokyo, Singapore, and Hong Kong in the studies.[7] Seoul as a global city in the region is in competition with other Asian global cities. Moreover, as the growth of the Chinese economy continues, Seoul's development is being rapidly followed by Chinese global cities such as Shanghai and Beijing. Shanghai, which ranks fifth in the list of contacts with Seoul (seeTable 2 above), is displaying the fastest rate of upward mobility in the world (Mahutga et. al. 2010). According to the statistics by the WTO (2013), Seoul, with 8 million tourists, is ranked 11th as a destination for of international tourists (see Table 3). In terms of global tourism, London, Paris, and Bangkok lead in the number of visitors, with 16.9 million, 16 million, and 12.2 million respectively. Surprisingly, New York as a world city, was ranked relatively low. Out of twenty leading cities in the chart, eight of them are Asian cities, including Bangkok, Singapore, Hong Kong, Kuala Lumpur, Seoul, Shanghai, Beijing,and

Taipei. In looking at the cities in Table 3 for the levels of business services, air passenger flows, and attractiveness as a tourist destination, it is notable that some of those cities with the highest levels are located within developing countries such as Bangkok, Istanbul, and Dubai. This might be due to a combination of factors, such as geography, government policy, and broad trends in global tourism (Mowforth and Munt 2009).

Table 3: Seoul's Position in Global City Network

Advanced Business Services	Air Passenger Flows	Int'l Tourist Destination (in million)
1. London	1. New York	1. London (16.9)
2. New York	2. London	2. Paris (16)
3. Tokyo	3. Hong Kong	3. Bangkok (12.2)
4. Hong Kong	4. Paris	4. Singapore (11.8)
5. Singapore	5. Singapore	5. Istanbul (11.6)
6. Paris	6. Tokyo	6. Hong Kong (11.1)
7. Frankfurt	7. Sydney	7. Madrid (9.7)
8. Madrid	8. Shanghai	8. Dubai (8.8)
9. Jakarta	9. Milan	9. Frankfurt (8.1)
10.Chicago	10. Beijing	10.Kuala Lumpur (8.1)
11.Milan	11. Madrid	11.Seoul (8.0)
12.Sydney	12. Moscow	12. Rome (7.8)
13.Los Angeles	13. Brussel	13.New York (7.6)
14.Mumbai	14. Seoul	14.Shanghai (7.5)
15.San Francisco	15. Toronto	15.Barcelona (7.3)
16.Sao Paulo	16. Buenos Aires	16.Milan (7.1)
17.Taipei	17. Mumbai	17.Amsterdam (6.9)
18.Shanghai	18. Kuala Lumpur	18.Vienna (6.7)
19.Brussel	19. Chicago	19.Beijing (6.2)
20. Seoul	20. Taipei	20.Taipei (5.4)

Sources: Taylor (2004:99), Derudder et al (2010), and WTO (2013)

The annual growth rate of tourists in Pacific Asia between 2005 and 2011 is around 10% (WTO 2012). In 2012, the Asia Pacific region has exhibited the highest growth rate compared tothat of 2011 in the number of visitors and total cross-border spending among all the regions of the world (see Table 4). The Table 4 shows the number of and amount spent by visitors in the top ten cities of each region around the world, including the Asia Pacific, Europe, North America, the Middle East and Africa, and Latin America. The top ten cities in the Asia Pacific region are: Bangkok, Singapore, Hong Kong, Kuala Lumpur, Seoul, Shanghai, Beijing, Taipei, Tokyo, and Jakarta. With regards to rates of growth, it is likely that the number of visitors to the Asia Pacific will surpass that of Europe within a few years.

Table 4: Tourist Visitor Numbers and Spending in Different Regions (2012)

	Asia/Pacific & Africa	Europe	N. America	Middle East	Latin America
Visitors Number	77.6 M (9.5)	98.2 M (2.8)	30.2 M (4.1)	28.9 M (7.2)	16.6 M (7.3)
Total Spending	104.7 Billion (15.3)	115 Billion (8.1)	73.8 Billion (5.8)	34.1 Billion (10.4)	16.3 Billion (7.9)

*numbers in ( ) are percentage of growth rate to previous year.
Source: Hedrick-Wong (2012:6-15).

The total number of tourists for the world in 2011 was 0.98 billion and the total revenue from tourism in 2010 approximately equal to U.S. $926 billion. The number of international tourist arrivals by state in 2010 are as follows: China 55.6 million, France 77.1 million, Hong Kong 20 million, Italy 43.2 million, Japan 8.6 million, Korea 8.79 million, Philippines 3.5 million, Singapore 9.16 million, Thailand 15.9 million, and the U.S. 59.7 million (World Bank 2013).

5. Discussion: Implications for the Tourism Industry

The number of foreign tourists visiting Korea has increased by an average of 5.7 % annually over the last decade, going from 5.32 million in 2000 to over 9.79 million in 2011. The total number of tourists in 2012 was 11.05 million, of whom 8.88 million were from Asia. More specifically, around 3.74 million (27.8%) were from China, and 3.51 million (27%) from Japan (KCTI 2013). In the last decade, the growth of tourist arrivals in Pacific Asia has been driven by both an increasing volume of Chinese tourists to Hong Kong and Macau, as well as tourists to Southeast Asia, the latter being a traditionally favorite destiny for tourism. The UNWTO anticipates that China's outbound tourists alone will record 83 million travelers abroad in 2020, making it the biggest sending nation in Asia, with annual increases of 12.8% between 1995 and 2020 (recited from Lee & Park 2012). Interestingly, among Chinese tourists which was over 70 million in 2011, only 3.4% (1.97 million) visited Korea.

The rapid increase in air passenger arrivals in Seoul invites new challenges for both researchers and policy-makers regarding tourism. Despite the global economic crises of 2008 and 2009, the number of tourists in the world has been growing over the last few years. Accordingly, if the city of Seoul is to figure out how to secure an edge in maintaining its international competitiveness, a task requires the incorporation of conditions that can enhance its attractiveness as a destination for both tourism and business into policy (Enright & Newton 2005). For example, the demand for the development of "industrial tourism resources," is on the rise (Ban 2011). It has also been pointed out that tourism policy needs to focus on the increased number of Chinese tourists visiting Korea in light of the situation after Japan's earthquake (Lee and Park 2012). Secondly, the over-concentration of foreign tourists, over 80 % of them, staying in Seoul requires policy consideration of not only the development of "urban tourism" (Kim 2011), but also the impact of such marginalization on local Korean cities. This marginalization is related to the long-standing issue of the overgrowth Seoul's metropolitan area, due partly to imbalances in Korea's urban development under the influence of globalization.[8]The diversification of cultural products especially in local Korean cities will require a close examination of measures such as the improvement of transportation systems, lodging services, the development of tourism-related content, and effective advertisement of these sites (Kim 2012: 101-128).

Thirdly, based on a prediction that the number of international air passengers using Incheon International Airport will increase from 48 to 60 million in 2020, and 63 to 111 million, in comparison with the air passengers using Kimpo Airport, with a projected increase from 6.8 to 9.5 million in 2020. Seoul's metropolitan airports may predictably reach their capacities around 2025. These predictions demand policy measures to boost their limits (Geum and Cho 2011). Seoul has been identified as the second most upwardly mobile city in the world during the time period of 1977 and 1995, and seventh during 1995 and 2005 in the study of world city system using airline passenger flow data (Mahutga et al 2010). Given that the Seoul metropolitan area has been under the influence of globalization and regional dynamics of competition among East Asian economies, it is necessary for policy-makers to approach the transformation of its economic infrastructure with the goals of providing high-end services and serving as a "symbolic land-bridge linking China and Japan," while keeping in mind the dispersal policy and the implicit spatial consequences for its larger metropolitan (namely Seoul) cities in a balanced way (Choe 2005).

6. Conclusion

Utilizing the perspective of the political economy of globalization and tourism, this study examined important changes in air passenger flow patterns in and out of Seoul. What this study finds is the recent decline of cities with traditional manufacturing structures and the rise of those areas with tight connections to the world economy, mostly expressed in increased engagement with the activities of the regional economy (i.e., the Chinese economy) as shown by Asia's tourism industry. It seems that despite the Asian financial crisis in 1997/1998 and the long-term recession in the Japanese economy, the myth of the "Rise of Asia" has not completely faded away. This pattern of the rise and fall of cities is vividly demonstrated by the air passenger flows between international city pairs.

The global tourism will become the largest industry within decades, and therefore, it is not at all surprising to see Asian global cities make efforts to prepare themselves through various policy measures for competitiveness in attracting global tourists (Herzog 2003). The increased number of air passengers between the city pairs of Seoul and other Asian cities, in addition to the city contacts that reflect the shift of economic power in Asia from the cities in Japan to those in China clearly support the hypothetical propositions presented earlier. In this regard, it is plausible to expect that Seoul's overgrowth (or primacy) will continue, and simultaneously the global status of Seoul will be challenged by other Asian global cities such as Shanghai and Beijing as spatial nodes for China's rising economy.

This study needs to be extended by incorporating a formal social network analysis of air passenger flows between international cities and national cities. In doing so, it would become possible to not only compare the global city-ness of Asian cities, including Seoul, Beijing, Shanghai, Tokyo, and Singapore, but also to examine more specifically the broader picture that shows the cliques around which certain numbers of cities cluster. This would enable us to see more clearly the cities of destination and origin, which might provide crucial information for researchers of global city network and policy-makers of tourism. Another fruitful avenue for future research might be the qualitative investigation of each Korean city's social and political structures that determines the pattern of interplays between the state and global forces, resulting in the attraction of more travelers into the city of Seoul.

Notes

1. Tourism refers to all travel that involves a stay of at least one night, but less than one year away from home, by which the provision and purchase of commodity in travel accommodation connections and its associated industry are included. For an intensive discussion about the definition of tourism, see (Franklin 2006: 387-389).
2. In urban tourism, international competitiveness refers to the degree to which a city "can produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real incomes of its citizens" (Enright & Newton 2005:340).
3. A city network or city system is a "collective hinterland of city network" (Timberlake 1985) and it implies a certain degree of integration among cities wherein the flows are more dense than ones between system. The Asian city network is newly conceptualized as an urban network that has unique features in terms of density, city-pairs, and intra- and inter-connections to cities of other continents of Europe and North America. The empirical mapping of Asian city network requires a data matrix of all city-pairs in the network, which is beyond the scope of current study.
4. Around 62 % of local residents of Korean travelling Asian cities were for tourism in 2005. However, the proportion of Korean travelers for tourism varies depending upon destination; Japan (58.5), Hong Kong (57) and China (55.3), but Thailand (85.5), Philippine (81.4), and Vietnam (71) respectively (NSO 2005).
5. The fluctuation in number of Japanese travelers might be related to the exchange values of Yen currency.
6. "Tourism is considered as being a factor in foreign trade, in that inflows of foreign exchange are assimilated to exports and outflows to imports" (Wackermann 1997:35).
7. For the global city-ness of Seoul, see Paquin (2001), Shin and Timberlake (2006). For theoretical discussions of global city, see Sassen (1991) and Orum& Chen (2003).
8. There have been debates on the overgrowth of Seoul between an argument seeing Seoul as a critical space for economic growth axis and the other favoring a balanced development of nation. Overconcentration of Seoul as a part of Korean urban system (Kim and Choe 1997; KUGS 1999) produces urban problems such as traffic congestion, environmental pollution, and volatile housing market of metropolitan area with unilateral high rising flat housing apartments (Gelegeau 2007). The urban policies of Korean administrations have had the priority of economic growth over decades: the Kim Young-Sam administration's (1992-1997) campaign, *Seigyewha,* for open and freer economy toward globalization; the Kim Dae-jung administration's post-Asian Financial crisis policy focused on increase of foreign currency (US Dollar) reserve by attracting foreign direct investment and opening real estate market; and the Noh Moo-Hyun government intended to succeed Kim Dae-Jung's urban policy bystrengthening market-oriented policies (Choi 2011).

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