

Global Urban Development in China: A Case Study of Shanghai in the Context of Globalization

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ABSTRACT

In the context of robust economic transformation and urban restructuring of Chinese cities, Shanghai has been become the predominant strategic site and frontier in the East Asia region embedded in globalization circumstance. The purpose of this paper is aiming to examine the global urban development of Shanghai with reference to its global city connectivity incorporated into world city network. Basically, the application of interlocking city network model proposed by GaWC research group is able to detect the relative connectivity and rankings of Shanghai in the combination of global scale and national scale. Based upon the comprehensive modelling application, as well as qualitative analysis, we can corroborate that Shanghai has been deemed as leading world city in the Chinese urban hierarchy, this unprecedented urban development and city revival is attributed to global strategy of multinational advanced producer services firms in Shanghai, and global provision of foreign direct investment in this prosperous metropolis thereby transforming this preeminent world city into new trajectory in globalization.

Keywords: Urban Development, World City, Global Advanced Producer Services Firms, Shanghai, Globalization

1. INTRODUCTION

History and development of Shanghai

Shanghai is the leading metropolis in the Chinese territory with long history and huge amount of population. During this decade, Shanghai has been deemed as a predominant economic and trading center in the East Asian region. Locating at the strategic position of Yangzi River Delta

region, Shanghai is built along with large territory of economic hinterland which provides sufficient environment and human resources for its development. This densely populated metropolitan area near Huangpu River makes a dramatic contribution for Chinese economy growth in contemporary era, notably for financial and commercial industry development. As we trace back to the history of Shanghai, from 19th century, a part of foreign community and urban amenities in Shanghai is governed by foreign colonial government, a series of urban infrastructure and utilities are constructed during this period thereby consolidating its predominant business and trading center in the Far East region. After 1949, due to the government replacement and Great Proletarian Cultural Revolution, Shanghai is underlying slowly economic growth and tight government restriction policy for around 30 years. This trend of collapse in terms of Chinese economy is sustained until 1980s century, since the initiation of open market policy and Pudong new area strategy, Shanghai is overwhelming transformed to new era of development. Urban revival of Shanghai is best characterized by opening a wide range of new urban districts, which encompass Lujiazui financial and trade zone, Jingqiao export processing zone, Waigaoqiao free trade zone, as well as Zhangjiang Hi-Tech Park in the strategic location of Pudong New Area. Meanwhile, a large amount of infrastructure is manufacturing after 1990s, Pudong international airport, Huangpu and Yangpu Bridges, several new subway lines, as well as skyscrapers in the Lujiazui CBD are major representative mega projects during this decade. Not surprisingly, these impressive strategies are reflected the world city status of Shanghai. This significant reformation is enhanced after 21st century, urban restructuring and lands allocation strategy significantly relieve the pressure of old city of Puxi area. At the same time, with the establishment of new industrial district in Pudong New Area, urban spatial structure of Shanghai have been experience the pattern of west-east divide. Pudong is a prosperous financial, industrial and trading new district in China, this joint project proposed by the Central government and municipal government tend to reshape the positions of Shanghai in global urban hierarchy. Not surprisingly, foreign direct investment is major driving forces affecting the regional economic development of Pudong New Area (Li & Dawood, 2016). Specifically, tax exemption and duty-free policy significantly attract the local firms to make a strategic alliance with foreign companies while foreign companies are keen on setting regional offices in some industrial districts of Pudong New Area. Meanwhile, the expansion of Shanghai port, which is the largest seaport in China, plays a dominant role in enhancing global export and import; these capabilities are largely reinforcing the international trading and business center of Shanghai. On the other hand, Lujiazui financial and busies district has been the new CBD of Shanghai; it has been grounded recognized as the leading financial district in the Asia, even in the world. As so far, a vast number of multinational company headquarters, financial firms, as well as a host of financial and business regulatory department are housed in the Lujiazui CBD of Shanghai. In conclude, shanghai has been embarked on new stage of development in this millennium. A handful of urban restructuring, government preferential, housing updating, as well as industrial reformation strategy accommodates the rapid urban and economic development of Shanghai.

Foreign direct investment and multinational companies in Shanghai

In the era of unprecedented economic globalization, world cities have been articulated in the predominant position of global urban hierarchy. In line with New York, London, Tokyo, Shanghai is deemed as the strategic site and frontier embedded in robust emerging Chinese economy, having acquired a large amount of foreign direct investment thereby sustaining its fastest economic development as compared to some other rival vanguards in the Chinese national territory (Zeyun & Dawood, 2016b). In order to retain prosperous urban development of this miracle, Chinese central government and Shanghai municipal government sought to implement a handful of policies and strategies, which encompass two spectrums in terms of greater openness and competitiveness & liability (Zeyun & Dawood, 2016a). These enlightened incentives significantly contribute to world city development in Shanghai in a long-term prospect (Yusuf & Wu, 2002). Meanwhile, Wei, Leung, and Luo (2006) have emphasized the importance of foreign direct investment on the implication of world city development in Shanghai. The transformation of this dynamic metropolis to world city in contemporary globalization is greatly attributed to conspicuous foreign direct investment, as well as urban restructuring strategies.

Since the emergence of world city is not restricted to one or two factors, Cai and Sit (2003) elaborate analysed some measurement parameters affecting underlying world city formation in Shanghai based upon case study and comparative research using world city index. Not surprisingly, multinational companies headquarters agglomeration and transportation capacity are two most dominant indicators influencing world city formation in the study area of Shanghai. From 20th century, due to the development of Pudong New Area and several industrial and trading districts, the urban landscape and infrastructure system were undergoing a dramatic restructuring and redevelopment. Meanwhile, the housing reform strategy can largely compensate the high density and dilapidated living environment in Shanghai (W. Wu, 1999). In addition, place promotion is a profound strategy which is implemented in the scenario of Shanghai, this mushrooming pattern of technology-based policies in combination with an amount of government preferential incentives is able to facilitate new tactics of urban development in the era of post-industrial internationalization (F. Wu, 2000). In addition to industrial expansion and urban restructuring, the urban planning of new financial district in Shanghai, which also refers to Lujiazui Central financial center in Pudong New Area, is underpinned by a myriad of intrinsic visible and invisible human materials. Clearly, these dynamic dimensions of information play a critical implication in reshaping the global city status of Shanghai in the new cross-board space (Olds, 1997). In terms of world city development in Shanghai, there are two streams of mechanisms close associated with its development, which composite of financial center development and multinational company headquarter agglomeration. Lai (2012) examine the financial center development of Shanghai in conjunction with some other major competitors in China's financial center network, this pattern of inter-city collaboration generally enhances the complementary relationship between major financial centers in China, at the same time, the distinctive financial center development in Shanghai is transformed into new trajectory. In contrast, Shanghai strives to become an international financial center in East Asia region in competition with Hong Kong over recent years, this

aggressive strategy is ascribed to consistent economic development in Chinese context intertwined by global economy and domestic economy (Zhao, 2013).

The second stream is about multinational company headquarters agglomeration, in line with central financial center development, based upon the application of information hinterland and asymmetric information theory, Wang, Zhao, and Wang (2007) explain the tendency of multinational company operation headquarters tend to agglomerate in Shanghai, which is a leading financial center in China where provides high-end financial services.

World city development of Shanghai in the global and regional scale

As the above chapter already discusses about foreign direct investment and multinational companies in Shanghai, the implication of pervasive global connection have been enclosed shanghai to penetrate into world city network. It is remarkable that globalization is a profound mechanism in driving this pattern of world city formation. Meanwhile, we cannot ignore the importance of regional dimension on the implication of globalization of Shanghai. From 1990s, the power and regulation of central government has decentralized to municipal government, this incentive of power diffusion has enhanced the autonomy status of Shanghai in the globalization stage. On the other hand, global- local linkage of Shanghai is also appropriate for urban development of Shanghai. In fact, this interactive pattern of urban development is occurred in many developed and emerging Asian counties, for instance, Hong kong, Korea, Singapore and Malaysia. Although China is undergoing the process of transitional economy from planned economy to market economy , the current achievement of Shanghai's development have been corroborate the applicable of market economy in the scenario of China. In particular comprehensive interactive linkage of magnificent urban development is highly accessible for the industrial base and social structure of Shanghai. In order to enhance the urban development of Shanghai in the context of transnational economy, socialist market economy in line with globalization sought to underpin the irreplaceable position of Shanghai embedded in world economy. However, such level of urban development is restricted to some challengers in terms of global connections and urban capacity. In this situation, local authorities are aiming to develop Shanghai as top level of world city with reference to some other cities in the world city network. These strategies tend to associate with attracting of MNC inward invest and enlarging the international transportation linkage. Nonetheless, the emergence of world city development is still tightly controlled by local government and regulatory institutions, the overlapping planning and market environment in this contemporary age enable Shanghai to sustain its urban dynamics in the globalization.

Hence, the purpose of this paper is aiming to examine global urban development of Shanghai in the context of globalization from the lens of global advanced producer network and world city development.

2. METHODOLOGY

2.1 Interlocking city network modelling

In order to examine the Shanghai's position in the context of globalization, the premise of applicable model in this research is the interlocking city network model. This model is created

and proposed by the GaWC research group (P. J. Taylor, 2001; P. J. Taylor, Catalano, & Walker, 2002), which is a premier global urban study group of world cities. In general, the fundamental purpose of this model is aiming to examine global urban connectivity of world cities in world economy with reference to seamless global scale provision of advanced producer services, According to the comprehensive model specification constructed by GaWC, this model is simplified in a matrix of V_{ij} , this matrix is decomposed into two parts, which is n cities and m firms, this matrix reveals the service of m firms in n cities. Based upon this model, we could examine the following details, the global network connectivity $R_{ab,j}$ of each dyad city with reference to one selected firms is indicated below:

$$R_{ab,j} = V_{aj} \times V_{bj} \tag{1}$$

Where V_{aj} refers to service value of firm j in city a whilst V_{bj} refers to service value of firm j in city b.

In addition, the network connectivity of each dyad city in terms of all of selected advanced producer services firms between city a and city b is demonstrated below, interlocking city network model gives the formula as followings:

$$R_{ab} = \sum R_{ab,j} \tag{2}$$

Lastly, we attempt to investigate the global network connectivity of one city based upon all of advanced producer service firms in all of corresponding dyad cities, the formula is demonstrated below:

$$GNC_a = \sum R_{ai} \quad (a \neq i) \tag{3}$$

2.2 Data collection

Based upon the specific interpretation of interlocking city network modelling, a through data collection is conducted in order to detect the cross border location strategy of multinational advanced producer services companies in different cities. The procedure of data collection method is constituted by three sections, which encompass city selection, firm selection and assigning of service value.

In the first step of this research, GaWC research group investigates a dataset of multinational advanced producer services firms, these firms tend to have a global network connection of their offices or branches in more than 15 cities, on the other hand, offices network of these firms possess a spatial distribution covering in three global arenas, which are Asia-Pacific, North America and West Europe regions (Derudder, Taylor, Witlox, & Catalano, 2003; Li & Sheikh Dawood, 2017). Hence, a total of 100 firms is identified in the 2004 database of GaWC, and advanced producers services firms are derive from banking/Finance, accounting, insurance, advertising, law and management consultancy (Taylor, 2004).

In addition, the second step of this research is aiming to examine the cities in conjunction with aforementioned firms' selection, based upon previous world city research experience, a total of 316 cities are underpinned this database. These 315 metropolises in world city network

significantly cover all of global urban arena. Clearly, these seamless cities selection greatly contribute to the subsequent service value assigning procedure.

Based upon previous research experience, GaWC assign the service value in accordance with two criterions: first, size of company, for instance, the number of practitioners of a firm in terms of its corresponding city (Li, Dawood & Zhang, 2017). Second, the extra-locational functions, for example, global headquarter, Asia-pacific headquarters, national headquarter, regional office or branches. In this process, the secondary data is acquired through company website and some other essential statistical documents. In consequence, a service value is assigned so that we can clearly evaluate the provision of a firm in a city. In this regard, the service value is scaling in a range between 1 and 5. Specifically, a city possess a company's headquarter is denoted in 5 while a city has no firm office is considered with score of 0. Similarly, an ordinary office of a firm in a city is designed at 2, if this firm has no partner, the score will be reduced to 1. In addition, a dominant office of a firm will be scored at 3 and this score will be increased to 4 if this city is occupied by a regional headquarter or national headquarter.

Eventually, a relational matrix of 315 firms in 100 cities is constructed in this research.

3. RESULTS AND DISCUSSION

Table 1 : Network Connectivity and Rankings of Top 15 Chinese cities

City	Network Connectivity(Percentage of London =1.000)	Chinese Ranking	World Ranking
Shanghai	0.627	1	7
Beijing	0.584	2	12
Guangzhou	0.341	3	67
ShenZhen	0.258	4	106
Tianjin	0.168	5	188
Nanjing	0.135	6	245
Chengdu	0.131	7	252
Hangzhou	0.125	8	262
Qingdao	0.123	9	267
Dalian	0.120	10	275
Chongqing	0.089	11	319
Xi'an	0.087	12	323
Suzhou	0.086	13	325
Wuhan	0.08	14	337
Xiamen	0.075	15	346

Sources : Compiled and analysed by authors from Dataset 11 of the GaWC research network

The table 1 above summaries the top 15 world cities in the Chinese ranking with reference to their global network connectivity using interlocking city network model. Meanwhile, this table also reveals the ranking of these 15 cities in the global scale in terms of their world ranking in the roster of 316 cities.

Clearly, Shanghai is located at 1st position in the national scale of Chinese cities ranking while it is ranked at 7th in the global scale of world cities ranking. Based upon this preliminary finding, it collaborates the dominant status of Shanghai to be maintained as world city in the both of global sale and national scale, most importantly, this circumstance is attributed to dramatic urban development and economic transformation of Shanghai. According to the business network of world cities, Shanghai has been deemed as an indispensable articulation of this network, the huge network connectivity of Shanghai embedded in world city network demonstrate that it has acquired robust capacity to attract the multinational companies' headquarters in this metropolis. The multifaceted provisions of global advanced producer services firms in Shanghai are characterized by quantity and level of companies' headquarters in this regard. Given the information of this table, we could also find the hierarchical structure of Chinese cities embedded in world city network. Shanghai and Beijing as the economic and business center in China, they are articulated as dual preeminent positions of this work city network. Similarly, Guangzhou and Shenzhen are leading trading hub in China. Besides, the remaining capital cities of each province and some renowned metropolises in China appear in the third tier of Chinese world cities hierarchy.

Table 2: Top 10 nantional city dyads and World city dyads including Chinese cities

Ranking	National City-Dyads	CDC ^a	World City-Dyads including Chinese cities	CDC ^b
1	Beijing–Shanghai	1	HongKong-London	0.75
2	Beijing–Guangzhou	0.586	Hong Kong and New York	0.69
3	Beijing–Shenzhen	0.577	London and Shanghai	0.621
4	Shanghai–Guangzhou	0.534	New York and Shanghai	0.587
5	Shanghai–Shenzhen	0.492	Beijing and London	0.556
6	Beijing- chengdu	0.363	Beijing and New York	0.523
7	Beijing–Tianjin	0.351	Hong Kong and Singapore	0.516
8	Guangzhou–Shenzhen	0.346	Hong Kong and Shanghai	0.475
9	Shanghai–Chengdu	0.318	Hong Kong and Paris	0.472
10	Beijing–Wuhan	0.316	Hong Kong and Tokyo	0.449

Notes : CDC^a indicates the relative percentage of most connected city dyads in China (Beijing–Shanghai= 1.000), CDC^b indicates the relative percentage of most connected city dyads in world (London- New York=1.000)

Sources: Compiled and analysed by authors from Dataset 11 of the GaWC research network

Based upon the table 2, it features the top 10 city-dyad in terms of Chinese cities, which encompasses of Mainland Chinese cities and Hong Kong. In terms of National City dyad of Chinese cities, Shanghai has the highest connections with Beijing from the global advanced producer services provision. Not surprisingly, this phenomenon is attributed to Beijing is a leading headquarter city with highest quantity of multinational headquarters in China in the Chinese urban hierarchy. Meanwhile, Shanghai is also displayed in this table with close integration with some other leading world cities across Chinese's urban territory, this city-dyad spatial distribution with reference to Shanghai is characterised by the clear regional structure. In specific, one city from North China (Beijing), two cities from south china (Guangzhou and Shenzhen), and one city from middle china (Chengdu). On the other hand, in terms of city-dyad of Chinese cities across world, Shanghai appeals two times in this list, this is associated with London and Hong Kong. In this case, we could find that Shanghai has the robust integration with two preeminent global arenas, which is Asia-Pacific region and East Europe region.

4. CONCLUSIONS

According to tentative examination of network connectivity and city-dyad connectivity of Shanghai embedded in world city network using interlocking city network model, we could identify the relative global urban development of Shanghai in the context of globalization, in particular its world city development progress. Although Shanghai is ranked first position of network connectivity in national scale, it still exists some slight distinctions compared to leading world cities, such as London and Hong Kong. Therefore, some extensive urban development strategy has been suggested by the central and municipal government in order to consolidate the world city status of Shanghai in the Asia-Pacific region. At the same time, Hong Kong and Tokyo still maintain their irreplaceable position in the East Asia region, this comprehensive global urban discovery will consider about regional competition of Shanghai with these dominant world cities.

In addition, as some scholars have widely discussed about foreign direct investment and multinational companies in Shanghai, the implication of pervasive global connection have been enclosed shanghai to penetrate into world city network (Li & Dawood, 2017). It is remarkable that globalization is a profound mechanism in driving this pattern of world city formation. Meanwhile, we cannot ignore the importance of regional dimension on the implication of globalization of Shanghai. From 1990s, the power and regulation of central government has decentralized to municipal government, this incentive of power diffusion has enhanced the autonomy status of Shanghai in the globalization stage. On the other hand, global- local linkage of Shanghai is also appropriate for global urban development of Shanghai. In fact, this interactive pattern of urban development is occurred in many developed and emerging Asian counties, for instance, Hong Kong, Korea, Singapore and Malaysia (Dawood & Zhang, 2017).

Although China is undergoing the process of transitional economy from planned economy to market economy, the current achievement of Shanghai's global urban development have been corroborate the applicable of market economy in the scenario of China. In particular, comprehensive interactive linkage of magnificent urban development is highly accessible for the industrial base and social structure of Shanghai. In order to enhance the global urban development of Shanghai in the context of transnational economy socialist market economy in line with globalization sought to underpin the irreplaceable position of Shanghai embedded in world economy. However, such level of urban development is restricted to some challengers in terms of global connections and urban capacity. In this situation, local authorities are aiming to develop Shanghai as top level of world city with reference to some other cities in the world city network. These strategies tend to associate with attracting of MNC inward invest and enlarging the international transportation linkage. Nonetheless, the emergence of world city development is still tightly controlled by local government and regulatory institutions, the overlapping planning and market environment in this contemporary age enable Shanghai to sustain its urban dynamics in the globalization. In future research, we will conduct some quantitative method based upon local scenario to discover the global urban development of Shanghai in the new era.

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