ПОЛІТИЧНИЙ ТА СОЦІАЛЬНО-ЕКОНОМІЧНИЙ РОЗВИТОК КИТАЮ

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CHINESE MEGACITIES: ECONOMIC GROWTH AND DEVELOPMENT

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The last trend of urban development is urbanization, according to the United Nations Organization in 2018, in the world there were 33 cities with populations more than 10 million and the number of megacities is projected to rise to 43 in 2030. The urbanization process has the key consequences, including urban growth driven by the developing world; the interrelationship between the built environment and the natural environment; large-scale infrastructure needs; urban poverty pressures including growing populations living in informal settlements.

The level of urbanization in China is higher than the global average and reached 59.6 % in 2018. Large-scale urbanization was facilitated by China's state policy, which began with the launch of the Reform and Openness Policy in 1978. Each five-year plan included points for developing urban infrastructure and enhancing urbanization. One of the key elements of China's current economic and social policy is its urbanization strategy, which was adopted in 2014 and outlined in the National Urbanization Plan for 2014–2020.

The main points of research are to identify the key theories of urbanization and their classification; to determine the methodologies for assessing the global competitiveness of cities; to implement a retrospective analysis of the stages of China's urbanization policy; to calculate a cluster analysis for the determination of the Chinese topcities.

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Keywords: China, megacities, economic growth, economic development, urbanization

According to the United Nations Organization in 2018, in the world there were 33 cities with populations more than 10 million and the number of megacities is projected to rise to 43 in 2030 [UN. Population Division 2018]. The modern Chinese

development is based on innovation strategy on every level: state, regions, and cities. Since 1978 the Chinese State Council has focused on urban policy.

Theoretical background. Under the hypothesis of the research group of GlobalScan (Toronto) and MRC McLean Hazel (Edinburgh), which was developed in the study "Megacity Challenges: a Stakeholder Perspective", the cities are defined by three archetypes: emerging cities, transitional cities, and mature cities. Emerging cities are characterized by high growth rates driven by migration and natural growth (annual growth rates are between 3 % and 6 %), these cities are typically in countries with urban population of less than 50 %. Transitional cities have growth rates of 2 %–3 % and developed a mechanism to more effective dynamic growth and these cities are often in countries that are more than 50 % urbanized. Mature cities have much slower growth rates than both emerging and transitional cities, at around 1 %, and this is typically for countries around 75 % urbanized [GlobeScan and MRC McLean Hazel 2007].

Modern theories of geographical, urban, social, economic sciences define a city into different characteristics: number of population (megacities, ultra-large, big, medium-sized, and small cities), knowledge level (knowledge, smart, sustainable, innovation cities), network integration (global, world, super, leading cities).

The idea of "megacity regions" represents a new phase of development in urban cities. As defined by Hall and Pain [Hall & Pain 2006], a megacity region is a cluster of contiguous cities or metropolises that are administratively separated but intensively networked and clustered around one or more larger central cities [Xu & Yeh 2011]. These places exist both as separate jurisdictional entities, in which most residents work locally. In this sense, the megacity region represents a "new scale of urban agglomeration" because of its highly polycentric nature, its wide geographical coverage, and its privileged position in the global economy.

Edvisson defined knowledge city as "a city that is purposefully designed to encourage the nurturing of knowledge" [Edvinsson 2006]. Carrillo identified knowledge city as a permanent settlement of a relatively higher rank in which the citizenship undertakes a deliberate, systematic attempt to identify and develop its capital system in a balanced, sustainable manner [Carrillo 2006].

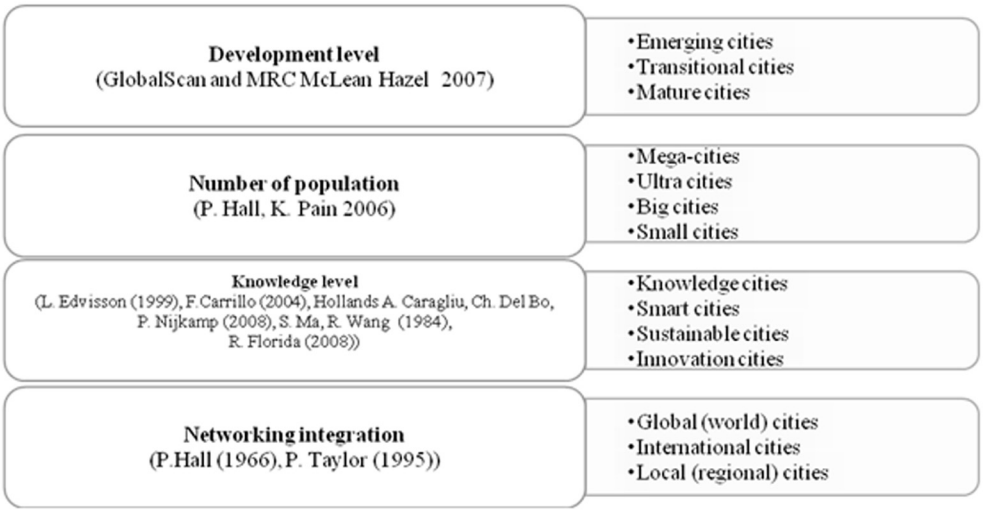
In the major theories, smart city and creative city is identical, because the creative class is a development background of both city types. The main point of the smart city concept is a high role of ICT infrastructure, human, social capital, education, and environment. The key characteristics of the smart cities are the utilization of networked infrastructure to improve economic and political efficiency and social, culture, and urban development; an underlying emphasis on business-led development; a stress on the crucial role of high-tech and creative industries in long-run urban growth; a strong focus on the aim of achieving the social inclusion of various urban residents in public services; social and environmental sustainability as a major strategic component of smart cities [Caragliu, Bo, & Nijkamp 2013].

The term "sustainable city" is identical with "eco-city" and means by a stable, harmonious and sustainable complex ecosystem that makes possible development among social, economic, and environmental factors; full fusion of technology and nature; maximal motivation of human creativity; increasingly improved urban civilization; and a clean and comfortable urban environment [Ma and Wang 1984; Yang 2013]. The key principles of planning of eco-city are harmony between economic growth and environmental improvement; ecological culture and behavior;

ecological production and green consumption modes, ecological investment to support the development of eco-agriculture, industry, the green GDP; ecological efficiency by energy and resources; protection of the natural ecological process and relationships.

The innovation cities differ by following types, according to the Global Innovation Cities Index: NEXUS (critical nexus for multiple economic and social innovation segments); HUB (dominance or influence on key economic and social innovation segments, based on global rends); NODE (broad performance across many innovation segments, with key imbalances); INFLUENCER (competitive in some segments, potential or imbalanced); UPSTART (potential steps towards relative future performance in a few innovation segments) [Innovation Cities Index 2014]. Globally, there are over 450 megacity regions with more than million residents.

In the work "The World Cities" (1966), Peter Hall introduced the concept of world cities. According to the concept of Hall, the world cities are centers of political power; of national and international trade; of banking, insurance, and related financial services; of the advanced professional activity of all kinds and in all areas, of information gathering and diffusion; of arts, culture, and entertainment [Hall & Pain 2006].



Source: author-developed figure
Figure 1. The theoretical background of the city's classification

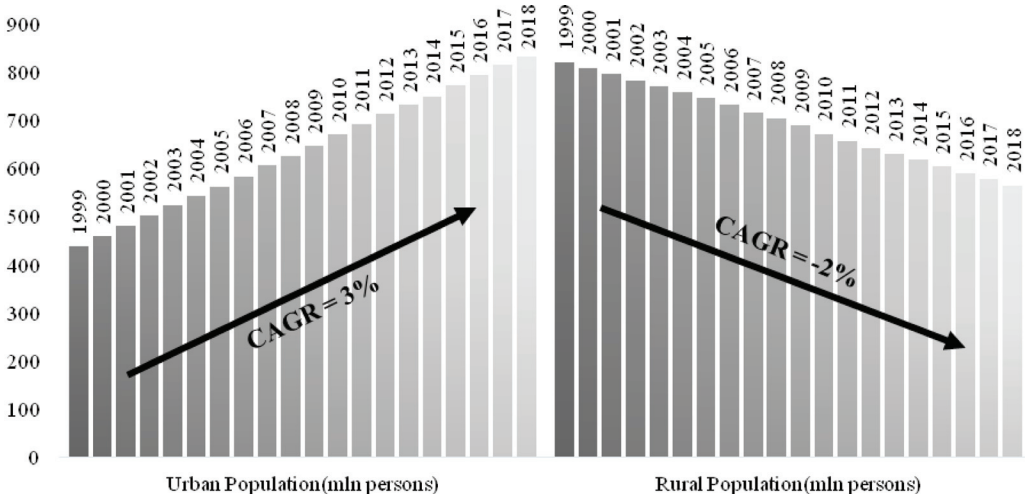
Evolution of Chinese urbanization policy. Since the reform policy in 1978, China has been trending to urbanization, and in 1981, after a successful pilot project in several regions of China,w the Central government implemented the Household Responsibility System for assessment of land responsibility between local owners. This process was the first stage of Chinese urbanization and the most important driving force for China's economic development and growth. The Notice on Rural Work for the Year 1984 established the foundation of the present Chinese rural land rights system, according to this Central document the collective ownership is separated from individual land and the collective land be contacted to households for 15 years. The next central document, which has been regulating urban process, was The Several Measures on Current Agricultural and Rural Economic Development; it endorsed transfers of farmland rights for value with prior

consent from the collective. Consequently, the policy of the Chinese government was directed to the introduction of private ownership in land economics and the development of small cities. The whole urban development policy of 1970s–1980s was codified in the National Urban Planning Law in 1989. So the Chinese urban law system was based on three pillars – controlling the big cities, moderating the development of medium-sized cities, encouraging the growth of small cities. In the context of the Chinese Open Door Policy, special attention was given to fourteen coastal cities in urban development policy – Dalian, Qinhuangdao, Tianjin, Yantai, Qingdao, Lianyungang, Nantong, Shanghai, Ningbo, Wenzhou, Fuzhou, Guangzhou, Zhanjiang, and Beihai. These cities are the open cities of the Special Economy Zones and the urban policy has been focusing on the formation of the investment climate for foreign direct investments.

For the first time, the term "urbanization" in Chinese state policy was explicitly addressed in the 8th Five-Year Plan (1991–95). However, in the next 9th Five-Year Plan (1996–00) the State Council decided to control the growing large cities, development of middle and small cities. In the 10th Five-Year Plan (2001–05) Chinese State Council took urbanization as an important strategy of country's development, the main points of which were fostering the reasonable systems of cities; coordination of growth of large, medium and small cities and making regional relationship more efficient; encouraging economic growth labor; development of small cities on a selective basis with emphasis on county seats with high potential; elimination of the urban system and policy refers to the hukou system; reformation of the land-use system in cities; improving of the investment for a construction of cities by pursuing systems of investment; stipulation of the standards for the cities' establishment in a scientific manner; establishment of an administrative system conforming to the demands of the economy and urbanization; absorbing surplus rural and strengthening policy coordination of urbanization [McGee, Lin, Wang, Marton, & Wu 2007].

The next stage of the urban process was the 11th Five-Year Plan (2006–10), which was focused on building a "harmonious socialist society" with increased rural incomes, improved infrastructural, educational, medical, social security systems in rural areas. The most important part of the urban policy from 2006 to 2010 was the development of the suburban towns in metropolitan, and State Council took cities' strategies for strongly developed Shanghai, Beijing, and Chongqing as satellite cities with strong connections to their respective metropolitan centers [Kamal-Chaoui, Leman, & Rufei 2009]. The 12th Five-Year Plan (2011–15) prioritized the development of small and medium cities for regional advantage and stronger resource and environmental capacity, and the 13th Five-Year Plan is based on key goals: maintaining economic growth with transformation growth mode, optimization industrial structure, promotion of innovation, and agriculture modernization, strong ecological progress, improving people's living quality.

So it is important to note that the primary mechanism for state-driven urbanization in both rural and urban areas has been the transfer of land development rights from the state to private owners [Angotti 2013]. In 2020, the Chinese government will complete National New-type Urbanization Plan (2014–2020). During the last six years, China is actively promoting a new people-centered path to urbanization, which has greatly improved the level and quality of urbanization. The degree of urbanization in China from 2008 to 2018 increased to 12.6 pp. and to 59.6 % (Figure 2).



Source: National Bureau of Statistics of China
Figure 2. Trends of urbanization in China, 1999–2018 yrs

Chinese cities are classified into three levels according to administrative division: county-level cities, prefecture-level cities (incl. sub-provincial cities) and municipalities. Prefecture-level divisions usually govern the country-level cities, but a few are governed directly by province-level divisions. Prefecture-level cities are completely ruled by their provinces, and sub-provincial cities are ruled by their provinces but are administrated independently about the economy and law. Municipalities are independent and equivalent to a province [Zhang 2014]. In December 2019 in China there were 293 cities of prefecture-level and 376 cities of county-level. According to the annual China Integrated City Index by Cloud River Urban Research Institute, the top 30 Chinese cities on the manufacturing list contributed nearly 75 % of China's export value of goods [Zhang 2019].

In 2018, according to issue of The Globalization and World Cities Research Network, several Chinese cities belonged to the following groups: *Alpha+*[1] *(Shanghai, Beijing), Alpha* (Guangzhou), *Alpha–* (Shenzhen), *Beta+* (Chengdu, Hangzhou), *Beta* (Tianjin, Nanjing, Wuhan), *Beta–* (Chongqing, Suzhou, Dalian, Xiamen, Changsha, Shenyang, Qingdao, Jinan), *Gamma+* (Xi'an, Zhengzhou), *Gamma* (Hefei, Taiyuan), Gamma– (Fuzhou), High sufficiency (Ningbo) [The Globalization and World Cities Research Network 2018]. Corresponding to this classification several Chinese cities grew up and strengthened their hand in the global world economy. Thus in 2014 there was the following case: Shanghai, Beijing – *Alpha+*, Guangzhou – *Beta+*, Shenzhen – *Beta–*, Tianjin – *Gamma–*, Qingdao, Hangzhou, Nanjing, Chongqing – *High sufficiency*, Dalian, Xiamen, Wuhan, Xi'an – *Sufficiency level*.

[1] **Alpha** level cities are linked to major economic states and regions into the world economy, and are classified into four groups, Alpha ++, Alpha +, Alpha, and Alpha −.

Beta level cities are important world cities that are instrumental in linking their region or state into the world economy and are classified into three groups, Beta +, Beta, and Beta −.

Gamma level cities are cities that link smaller economic regions into the world economy, and are classified into three groups, Gamma +, Gamma, and Gamma –.

Sufficiency level cities are cities that have a sufficient degree of services so as not to be overly dependent on world cities [The Globalization and World Cities Research Network 2018].

Table 1

China's city-tier classification by GDP and population

	Tier 1	Tier 2	Tier 3	Tier 4
GDP, $US bn	>300	68 – 299	18 – 67	<17
Population, mln	>15	3 – 15	0.15 – 3	<0.15
Examples	Beijing, Shanghai, Guangzhou, Shenzhen	Chengdu, Hangzhou, Wuhan, Chongqing, Nanjing, Tianjin, Suzhou, Xi'an, Changsha, Shenyang, Qingdao, Zhengzhou, Dalian, Dongguan, Ningbo	Xiamen, Fuzhou, Wuxi, Hefei, Kunming, Harbin, Jinan, Foshan, Changchun, Wenzhou, Shijiazhuang, Nanning, Changzhou, Quanzhou, Nanchang, Guiyang, Taiyuan, Yantai, Jiaxing, Nantong, Jinhua, Zhuhai, Huizhou, Xuzhou, Haikou, Ürümqi, Shaoxing, Zhongshan, Taizhou, Lanzhou	Weifang, Baoding, Zhenjiang, Yangzhou, Guilin, Tangshan, Sanya, Huzhou, Hohhot, Langfang, Luoyang, Weihai, Yancheng, Linyi, Jiangmen, Shantou, Taizhou, Quzhou, Handan, Jining, Wuhu, Zibo, Yinchuan, Liuzhou, Mianyang, Zhanjiang, Anshan, Quzhou, Daqing, Yichang, Baotou, Xianyang, Qinhuangdao, Zhuzhou, Putian, Jilin, Huai'an, Zhaoqing, Ningde, Hengyang, Nanping, Lianyungang, Dandong, Lijiang, Jieyang, Yanbian Korean Autonomous Prefecture, Zhoushan, Jiujiang, Longyan, Luzhou, Fushun, Xiangyang, Shangrao, Yingkou, Sanming, Handan, Lishui, Yueyang, Qingyuan, Jingzhou, Tai'an, Luzhou, Panjin, Dongying, Nanyang, Ma'anshan, Nanchong, Xining, Xiaogan, Qiqihar

Source: [Wong 2019]

The methodology of research. Cluster analysis is used to classify cases into groups that are relatively homogeneous within themselves and heterogeneous between each other, on the basis of a defined set of variables. The clustering groups were obtained using software SPSS 22 during the following steps: 1) selection of a distance measure; 2) selection of a clustering algorithm; 3) determination of the number of clusters; 4) validation of the analysis.

The group distance is calculated using the Euclidean distance (1):

$$D_{ij} = \sqrt{\sum_{k=1}^{n}(x_{ki} - x_{kj})^2}, \quad (1)$$

D_{ij} – the distance between cases i and j;
x_{ki} and x_{kj} – the value of variable x_k for case i and j.
For correlation test we use the Pearson correlation formula (2):

$$r = \frac{\Sigma(x-m_x)(y-m_y)}{\sqrt{\Sigma(x-m_x)^2 \Sigma(y-m_y)^2}}, \quad (2)$$

m_x and m_y – the means of x and y variables.

The p-value (significance level) of the correlation determined by calculating the t value as follow (3):

$$t = \frac{r}{\sqrt{1-r^2}}\sqrt{n-2}, \quad (3)$$

In this case, the corresponding *p-value* is determined using *t* distribution table for df=n−2. If the p-value (α) is < 5 %, then the correlation between *x* and *y* is significant [Statistical tools for high-throughput data analysis 2019].

Data sources, description and correlation test. For analysis of the economic development of cities, we used the following indicator groups: economic, human capital, infrastructure, quality of life.

Table 2

Indicator groups for analysis of China's cities' economic development

Economic indicators	**Infrastructure indicators**
1. GRP (100 mln. RMB) Primary Industry Secondary Industry Tertiary Industry 2. Budgetary Revenue of Local Governments (10000 RMB) 3. Budgetary Expenditure of Local Governments (10000 RMB) 4. Total Investment in Fixed Assets (10000 RMB) 5. Balance of Saving Deposit of Urban and Rural Residents at Year-end (10000 RMB) 6. Total Retail Sales of Consumer Goods (10000 RMB) 7. Total Value of Import and Export	1. Passenger Traffic (10000 persons) 2. Freight Traffic (10000 tons) 3. Number of Postal Offices at Year-end (unit) 4. Number of Subscribers of Fixed Telephones at Year-end (10000 subscribers) 5. Number of Public Vehicles under Operation at Year-end (unit) 6. Number of Theater and Music Halls, Cinemas (unit)
Human capital	**Quality of life indicators**
1. Total Population (year-end) (10000 persons) 2. Licensed (Assistant) Doctors (person) 3. Total Enrollment of Regular Institutions of Higher Education (person)	1. Hospital and Health Centers (unit) 2. Total Volume of Industrial Waste Water Discharged (10000 tons) 3. Average Wage of Staff and Workers (RMB)

Source: author's hypothesis

Table 3

Correlation test between selected indicators

Indicators	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Population, mln	1	,705**	,748**	,802**	,729**	,813**	,702**	,723**	-0,06	,787**	,789**	,694**	,521**	,731**	-0,01	,572**	,865**	,755**	,490**
2. GRP (100 mln. RMB)	,705**	1	,566**	,754**	,872**	,862**	,792**	,888**	-0,10	,507**	,900**	,970**	,840**	,869**	0,10	,619**	,599**	,820**	,466**
3. Passenger Traffic (10000 persons)	,748**	,566**	1	,741**	,473**	,566**	,651**	,594**	-0,06	,576**	,672**	,603**	,291*	,671**	-0,15	,649**	,805**	,740**	0,16
4. Freight Traffic (10000 tons)	,802**	,754**	,741**	1	,681**	,723**	,678**	,750**	-0,10	,476**	,814**	,773**	,471**	,765**	-0,19	,722**	,714**	,730**	,420**
5. Budgetary Revenue of Local Governments (10000 RMB)	,729**	,872**	,473**	,681**	1	,973**	,670**	,936**	-0,07	,538**	,923**	,869**	,843**	,901**	0,17	,547**	,630**	,846**	,388**
6. Budgetary Expenditure of Local Governments (10000 RMB)	,813**	,862**	,566**	,723**	,973**	1	,715**	,933**	-0,06	,655**	,931**	,851**	,817**	,903**	0,14	,527**	,744**	,873**	,388**
7. Total Investment in Fixed Assets (10000 RMB)	,702**	,792**	,651**	,678**	,670**	,715**	1	,625**	-0,12	,582**	,709**	,751**	,498**	,700**	-0,12	,625**	,784**	,740**	,283*
8. Balance of Saving Deposit of Urban and Rural Residents at Year-end (10000 RMB)	,723**	,888**	,594**	,750**	,936**	,933**	,625**	1	-0,06	,496**	,978**	,929**	,822**	,969**	0,14	,632**	,645**	,921**	,359**
9. Average Wage of Staff and Workers (RMB)	-0,06	-0,10	-0,06	-0,10	-0,07	-0,06	-0,12	-0,06	1	-0,03	-0,07	-0,11	-0,05	-0,05	-0,12	-0,09	-0,05	-0,07	-0,13
10. Number of Postal Offices at Year-end (unit)	,787**	,507**	,576**	,476**	,538**	,655**	,582**	,496**	-0,03	1	,552**	,456**	,442**	,514**	0,13	0,25	,735**	,596**	,530**

11. Number of Subscribers of Fixed Telephones at Year-end (10000 subscribers)	,789**	,900**	,672**	,814**	,923**	,931**	,709**	,978**	-0,07	,552**	1	,940**	,780**	,978**	0,06	,704**	,727**	,936**	,407**
12. Total Retail Sales of Consumer Goods (10000 RMB)	,694**	,970**	,603**	,773**	,869**	,851**	,751**	,929**	-0,11	,456**	,940**	1	,790**	,925**	0,09	,713**	,605**	,875**	,395**
13. Total Value of Import and Export	,521**	,840**	,291*	,471**	,843**	,817**	,498**	,822**	-0,05	,442**	,780**	,790**	1	,739**	,275*	,290*	,390**	,665**	,473**
14. Number of Public Vehicles under Operation at Year-end (unit)	,731**	,869**	,671**	,765**	,901**	,903**	,700**	,969**	-0,05	,514**	,978**	,925**	,739**	1	0,052	,736**	,713**	,961**	,298*
15. Number of Theater and Music Halls, Cinemas (unit)	-0,01	0,10	-0,15	-0,19	0,17	0,14	-0,12	0,14	-0,12	0,13	0,06	0,09	,275*	0,05	1	-0,22	-0,15	0,03	0,10
16. Total Enrollment of Regular Institutions of Higher Education (person)	,572**	,619**	,649**	,722**	,547**	,527**	,625**	,632**	-0,09	0,25	,704**	,713**	,290*	,736**	-0,22	1	,587**	,717**	0,08
17. Hospital and Health Centers (unit)	,865**	,599**	,805**	,714**	,630**	,744**	,784**	,645**	-0,05	,735**	,727**	,605**	,390**	,713**	-0,15	,587**	1	,804**	0,22
18. Licensed (Assistant) Doctors (person)	,755**	,820**	,740**	,730**	,846**	,873**	,740**	,921**	-0,07	,596**	,936**	,875**	,665**	,961**	0,03	,717**	,804**	1	,262*
19. Total Volume of Industrial Waste Water Discharged (10000 tons)	,490**	,466**	0,16	,420**	,388**	,388**	,283*	,359**	-0,13	,530**	,407**	,395**	,473**	,298*	0,10	0,08	0,22	,262*	1
	**** α = 0,01** *** α = 0,05**																		

Source: author's calculation based on statistical information of the National Bureau of Statistics of China

Empirical results. By using the cluster analysis based on the statistical data, we have defined three groups of Chinese cities by gravity level: global cities (Beijing, Shanghai), international cities (Tianjin, Guangzhou, Chongqing, and Chengdu), and local (regional) cities (Table 4).

Table 4

Three groups of Chinese cities by gravity level

Belonging to clusters			
Monitoring	Cities	Clustering	Distance
1	Beijing	1	,738
2	Tianjin	2	,740
3	Shijiazhuang	.	.
4	Taiyang	3	,426
5	Hohhot	3	,530
6	Shenyang	3	,439
7	Dalian	3	,664
8	Changchun	3	,255
9	Harbin	3	,564
10	Shanghai	1	,738
11	Nanjing	3	,708
12	Hangzhou	3	,839
13	Ningbo	3	,547
14	Hefei	3	,315
15	Fuzhou	3	,272
16	Xiamen	3	,668
17	Nanchang	3	,344
18	Jinan	3	,366
19	Qingdao	3	,432
20	Zhengzhou	3	,481
21	Wuhan	3	,938
22	Changsha	3	,387
23	Guangzhou	2	,877
24	Shenzhen	.	.
25	Nanning	3	,333
26	Haikou	3	,756
27	Chongqing	2	1,335
28	Chengdu	2	,725
29	Guiyang	3	,482
30	Kunming	3	,259
31	Lhasa	.	.
32	Xi'an	3	,545
33	Lanzhou	3	,518
34	Xining	.	.
35	Yinchuan	3	,684
36	Urumqi	3	,548

Source: author's calculation based on statistical information of the National Bureau of Statistics of China

Beijing is the national political, cultural, education center with a history stretching back over 3000 years and the second city by population in China. Beijing has become the regulating center of China and the headquarters of financial regulatory

authorities and four major national banks are located in this city. Over 10 % of Fortune Global 500 companies are located in Beijing, which most ly belong to sector of engineering and construction (6 companies), financial sectors (6), aerospace and defense (6). The rest of companies are in following sectors: metals (4); energy, telecommunication, insurance, trading (in threes); mining & crude-oil production, utilities, industrial machinery, petroleum refining, shipping (in twos); motor vehicles and parts, real estate, chemicals, building materials, pharmaceuticals, mail, package & freight delivery (in ones). According to the Global Finance Centers Index Beijing is on the 9th position in the world and is classified as "global leader" (in 2014 Beijing was on the 29th place and as "global specialist") [Long Finance & Financial Centre Futures 2019].

Shanghai is a Dragon's head of China's economy and its urban development in Early Modern China incorporated many western elements. Shanghai is the hub of traditional trade, commerce, and finance. Due to the pilot program of the Shanghai Free-Trade Zone it has opened the financial sector to the outside world and in the future, Shanghai strengthens its status as a global finance center. Shanghai 7 headquarters of Fortune Global 500 companies are located, which specialize in banking services (2), insurance, motor vehicles and parts, metals, energy, real estate (in ones).

Tianjin is one of the four municipalities with 10.8 million people and is an integral part of the Bohai Bay Economic Zone, which is one of three biggest economic zones in China. Tianjin is the international transport hub for shipping, and logistics, modern manufacturing and research and development. Tianjin has undergone rapid development in recent years due to rapid growth in infrastructure and other fixed asset investments.

Guangzhou, the provincial capital and the economic center of the Pearl River Delta, is not only the transportation, industrial, financial and trade center of Southern China, but also a Special Economic Zone and an important trading point with Hong Kong. For instance, it is home to many multinational companies that developed links with Mainland China through their Hong Kong headquarters. Electronics, communications, petrochemicals and high-tech industry represent the city's pillar industries.

Chongqing is one of China's four municipalities directly under the central government, but its structure is substantially different from the other three. For instance, the area of Chongqing is 12 times that of Shanghai. The vast majority of the Chongqing area is still rural. In 2018, Chongqing's urban population only accounted for 65.5 % of its total population, while the percentage was 88 % in Shanghai.

Chengdu is one of the Chinese largest cities with 14.8 million people and located in Western China as the capital of Sichuan province. The 38 % of Sichuan's GDP is estimated by Chengdu part of the province's economy and amounts to 1.53 trillion RMB. Chengdu is part of the "western triangle development zone" which includes Chengdu, Chongqing, and Xian. According to the World Bank's assessment of the investment climate, Chengdu has become a top investment destination in China and has ranked No. 1 for the number of foreign banks and insurers in Central and Western China.

Moreover, experts of the Milken Institute identify 10 Chinese cities as Best-Performing Cities of China in 2019: Chengdu, Shenzhen, Beijing, Lanzhou, Zhengzhou, Xi'an, Guiyang, Changchun, Wuhan, Xiamen [Wong, Lin, & Jackson 2019].

Table 5

Comparative analysis of megacities

	Beijing	**Shanghai**	**Tianjin**	**Guangzhou**	**Chongqing**	**Chengdu**
Global functions	The global airport hub (the second busiest in the world), cultural center	The global financial and trading center, global manufacturing management, transport hub with the world's busiest container ports	The hub city for international shipping and logistics, modern manufacturing and research and development	The international commercial and trade center	One of the largest financial, industrial and scientific centers in China	The cultural center, city of gastronomy and home of the giant panda
National functions	The national political, cultural, educational center, a major hub for the national highway, expressway, railway, and high-speed rail networks	The national economic and trade center, regional port, the leading city of Yangtze River Delta	The national zone of economic and technology development	The industrial, political, educational, science and technological, cultural and transport center of South China	The chemic, machinery industry and commercial center	The western center of logistics, commerce, finance, science, and technology, as well as a hub of transportation and communication
The Global City Competitiveness Index (place and score)	49 (54,9)	38 (57,3)	81 (46,7)	89 (45,2)	98 (41,0)	86 (45,4)
Globalization and World Cities Research Network, 2018	Alpha+	Alpha+	Beta	Alpha	Beta –	Beta+
Innovation Cities Index 2019 (place and score)	26 (50) NEXUS	33 (49) NEXUS	242 (39) NODE	74 (45) HUB	237 (39) NODE	307 (37) NODE
The Global Metro Monitor 2018 (place)	5 Emerging	99 Emerging	9 Emerging	45 Emerging	13 Emerging	3 Emerging
The Global Finance Cities Index 2018 (place and score)	9 (738) Global Leaders	5 (770) Global Leaders	81 (589) Evolving Centers	24 (708) International Specialists	N/A	87 (583) Global Contenders

The Global Cities Index 2019 by A. T. Kearney (place and score)	9	19	88	71	105	73
Gross regional product (tn RMB), 2018	3.03	3.27	1.88	2.03	2.04	1.53
Share in China's GDP (%)	*3.4*	*3.6*	*2.1*	*2.3*	*2.3*	*1.7*
Industrial specialization (tn RMB), 2018	Tertiary – 2.5	Tertiary – 2.3	Secondary – 0.8 and tertiary – 1.1	Tertiary industry – 1.6	Secondary – 0.8 and tertiary – 1.05	Secondary – 0.7 and tertiary – 0.8
Total Value of Imports and Exports (tn USD), 2017	324	476	113	143	67	58
Share in the total value of China's Imports and Exports (%)	*7.9*	*11.6*	*2.8*	*3.5*	*1.6*	*1.4*
Population (mln persons), 2018	13.8	14.6	10.8	9.3	34.0	14.8
Top 500 companies	53	7	0	3	0	0

Conclusion. China's urban system is growing more concentrated in prefecture cities (7 cities with a population of more than 10 mln. persons, located in the northwest, central and south parts of China). China's urbanization is unprecedented in scale and speed (59.6 % in 2018, and the annual growth rate between 1950 and 2018 is 9 %). Urbanization is driving by China's fast economic development (GRP of 6 megacities amounts to 15.4 % of total GDP) and it has raised the living standards and transformed the life chances of hundreds of millions, but also generates important social challenge (interpersonal inequality remains great, with the Gini Index for income above 46 %). The economic specializations of Chinese megacities are secondary and tertiary industries (over 60 % GRP of 6 megacities is tertiary industry and over 40 % GRP – secondary industries). According to the city archetypes of GlobalScan Chinese megacities are emerging cities; and in accordance with the City competitiveness index, the most competitive cities are Beijing, Shanghai, Chongqing (economic driven), Tianjin, Guangzhou, Shenzhen, Wuhan, Chengdu, Hangzhou.

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КИТАЙСЬКІ МЕГАПОЛІСИ: ЕКОНОМІЧНЕ ЗРОСТАННЯ ТА РОЗВИТОК

О. В. Дроботюк

Однією з ключових тенденцій розвитку країн та міст – є урбанізація. Станом на 2018 рік середній рівень урбанізації в світі становить 55,3 % та до 2030 року цей показник зросте до 60 %. За даними ООН, налічується 33 міста з населенням понад 10 мільйонів у 2018 році, а у 2030 прогнозується зростання до 43 мегаполісів. Глобальна урбанізація має суттєві наслідки, що впливають на темпи зростання міст та їхніх економік у країнах, що розвиваються; взаємозв'язок між створеним людиною середовищем та навколишнім; масштабні потреби у інфраструктурі; зростання бідності в містах, включаючи зростаюче населення, яке живе в неформальних поселеннях.

Рівень урбанізації в Китаї перевищує середньосвітовий показник та досягнув 59,6 % у 2018 році. Масштабній урбанізації сприяла державна політика КНР, яка розпочалася разом із стартом Політики реформ та відкритості у 1978 році. Кожний п'ятирічний план містив пункти з розвитку міської інфраструктури та посилення урбанізації. Одним із ключових елементів сучасної економічної та соціальної політики Китаю є стратегія урбанізації, яка була прийнята у 2014 році та викладена у Національному плані урбанізації на 2014–2020 роки.

Основними пунктами дослідження є визначення ключових теорій урбанізації та їхня класифікація; систематизація методології оцінки глобальної конкурентоспроможності міст; проведення ретроспективного аналізу етапів політики урбанізації Китаю; визначення групи провідних міст КНР на основі кластерного аналізу.

Пропоноване дослідження фінансувалося Німецькою службою академічного обміну (ДААД) та проводилось у Кельнському університеті, Інститут географії (вересень – грудень 2015 року). Ця стаття представлена з останніми оновленнями у 2019 році.

Ключові слова: Китай, мегаполіси, економічне зростання, економічний розвиток, урбанізація

КИТАЙСКИЕ МЕГАПОЛИСЫ: ЭКОНОМИЧЕСКИЙ РОСТ И РАЗВИТИЕ

О. В. Дроботюк

Одной из ключевых тенденций развития стран и городов является урбанизация. По состоянию на 2018 год средний уровень урбанизации в мире составляет 55,3 % и к 2030 году этот показатель вырастет до 60 %. По данным ООН, насчитывается 33 города с населением более 10 млн в 2018 году, а в 2030 прогнозируется рост до 43 городов. Глобальная урбанизация имеет существенные последствия, влияющие на темпы роста городов и их экономик в развивающихся странах; взаимосвязь между созданной человеком средой и окружающей; масштабные потребности в инфраструктуре; рост бедности в городах, включая растущее население, которое живет в неформальных поселениях.

Уровень урбанизации в Китае превышает среднемировой показатель и достиг 59,6 % в 2018 году. Масштабной урбанизации способствовала государственная политика КНР, которая началась вместе со стартом Политики реформ и открытости в 1978 году. Каждый пятилетний план содержал пункты по развитию городской инфраструктуры и усилению урбанизации. Одним из ключевых элементов современной экономической и социальной политики Китая является стратегия урбанизации, которая была принята в 2014 году и изложена в Национальном плане урбанизации на 2014–2020 годы.

Основными пунктами исследования является определение ключевых теорий урбанизации и их классификация; систематизация методологии оценки глобальной конкурентоспособности городов; проведение ретроспективного анализа этапов политики урбанизации Китая; определение группы ведущих городов КНР на основе кластерного анализа.

Данное исследование финансировалось Немецкой службой академических обменов (ДААД) и проводилось в Кельнском университете, Институт географии (сентябрь – декабрь 2015 года). Эта статья представлена с последними обновлениями в 2019 году.

Ключевые слова: Китай, мегаполисы, экономический рост, экономическое развитие, урбанизация

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