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Bulletin of Geography. Socio-economic Series, No. 46 (2019): 137–147
http://doi.org/10.2478/bog-2019-0039

ISSN 1732–4254 quarterly

BULLETIN OF GEOGRAPHY. SOCIO–ECONOMIC SERIES

journal homepages:
https://content.sciendo.com/view/journals/bog/bog-overview.xml
http://apcz.umk.pl/czasopisma/index.php/BGSS/index

US Global Cities as Centres of Attraction of Foreign TNCs

Martin Pilka[1, CDFMR], **Nikolay Sluka**[2, CDFMR]

Lomonosov Moscow State University, [1]e-mail: martinpilka92@gmail.com *(corresponding author),* [2]e-mail: sluka2011@yandex.ru

How to cite:
Pilka, M. and Sluka, N. (2019). US Global Cities as Centres of Attraction of Foreign TNCs. *Bulletin of Geography. Socio-economic Series*, 46(46): 137-147. DOI: http://doi.org/10.2478/bog-2019-0039

Abstract. The concept of global cities and the importance of transnationalisation processes in their formation are widely acknowledged. However, the debate surrounding global city identification continues. The study introduces a new approach to evaluating global cities by primarily looking at them as locales for foreign multinational corporations. By analysing the location decisions made by foreign TNCs in the Forbes 2000 rankings, two things become apparent: the "nodality" of US global cities and their hierarchical pattern. Our findings show the key role that Alpha global cities play in attracting and fostering international business. We identify five uneven groups of cities. These groups are defined in accordance with our methodology and are as follows: the New York city-hegemon, leading cities, heavyweight cities, middleweight cities and outsider cities. The article specifies several key factors determining a city's attractiveness to foreign corporations: its geo-economical power, functional specialisation, location, historical and cultural ties, and position on different sectoral markets.

Article details:
Received: 28 December 2018
Revised: 27 May 2019
Accepted: 27 October 2019

Key words:
global cities,
foreign TNCs,
United States,
city hierarchy

Contents:

1. Introduction

The study of the global city phenomenon summarised in the early 1990s in S. Sassen's writings (Sassen, 1991) and primarily empirically interpreted in the works of the international research group "Globalization and World Cities" (GaWC) (Beaverstock, Smith, Taylor, 1999; GaWC, 2000) has been recently addressed in many publications. For example, an intermediate summary of the twenty years of studies is found in a special article of the reputable international periodical "Urban Studies" (Derudder, Timberlake, Wiltox, 2010). Wide practical approval of various methods finally resulted in developing an idea of the main source and the base for the phenomenon of global centres and their consolidation in the form of an "urban archipelago", which represents the process of the transnationalisation of the world economy. Powerful corporations emerged with an extensive network of branches located in agglomerations. They consolidated the entire world urban community through a web of intra- and inter-firm ties. On this basis, the main composition and subordination of global centres, as well as the patterns of their location, which closely correspond to the geography of the world richest and fastest growing countries and regions, are determined. The GaWC group 2012 ranking identifies 526 global centres (55 existing and 67 emerging ones in 2000) which form three main territorial subsystems, namely, the European, the Asian-Pacific and the North American, the core of which is built up by the US agglomerations (GaWC, 2000, 2012). At that, the command and control functions of global cities are particularly well studied, due to the headquarters of the world's largest TNCs being situated in the above cities (see Csomós, 2017). Currently, according to Forbes 2000, about 30% of them are in US cities, 11% in Japan, 10% in China, 5% in the UK, 3% on the Republic of Korea, and less than 2.5% each on the centres of France, Germany, India and Taiwan, as well as Hong Kong. Moreover, more than 50 of headquarters of international companies are located in just seven centres, that is New York City (109), Tokyo (147), London (79), Beijing (72), Paris (57), Seoul (61) and Hong Kong (54) (Forbes, 2016).

However, in the context of globalisation and the intense emergence of major companies' branches, the prevailing opinion is that it is less important to study cities as domestic TNCs concentrators, but more as hubs for units of the largest foreign corporations. Their territorial concentration, together with the "think tanks" of the local TNCs, has a decisive impact on the individual centre's competitiveness, the nature of the overall pulse of inter-city interaction and power redistribution among global cities, as well as the functional and territorial structure of their economy. Revealing the role of agglomerations as centres of attraction of foreign TNCs may morph into a new approach to economic geography and to disciplines analysing the spatial projection of the world economy transnationalisation processes. Moreover, the approach presented in the study could improve our understanding of the factors determining the attractiveness of metropolises to large businesses, and improve local establishment activities. At the same time, the scope of presence, composition, principles, mechanisms, and priorities in how the world largest corporations locate their branches in global cities remain relatively unexplored. The purpose of this study is to assess the extent and particulars of foreign TNCs' location in US global cities based on the analysis of available statistical data and using the econometric method.

2. Data and Methods

In order to achieve the main goal of the study, it is necessary to start with an explanation of three aspects. First, the composition and boundaries of the global US cities involved in the study shall be analysed, as their number varies significantly depending on classifications of global cities. Second, we will select and adapt the input information on the foreign branches of the largest TNCs in the world, the composition of which also varies in reputable rankings. Third, the list of indicators used for the analysis shall be justified, and a proper comparative mechanism shall be applied.

2.1. Composition and Delimitation of Urban Areas

Due to the special economic importance, as well as the large number and various hierarchical categories of cities, US global cities represent a very good field to study the location of both the headquarters of domestic TNCs and foreign structures of transnational business. According to the 2012 classification by GaWC (GaWC, 2012), there are 30 global cities in the country. To provide a complete representation of the phenomenon in the study, they are taken within combined statistical areas (see Note 1). It is for this reason that San Jose and Baltimore, which are global cities according to GaWC, are in this study included in the global agglomerations of San Francisco and Washington. As a result, the study involved 28 US agglomerations, of which eight centres are in the α-group (highest category), nine centres are in the β-group and eleven centres are in the γ-group. The population of each exceeds 2 million, and the GDP based on PPP amounts to $100 billion. In the aggregate, while occupying 7% of the territory, they accumulate 52% of the population and 58% of the country's GDP.

2.2. Accounting of Foreign Corporation Branches

The main sources of factual material are *Forbes 2000* data for the year 2016 (Forbes, 2016) and the websites of TNCs. The following restrictions and assumptions exist in consideration of corporations and their divisions: 1) Retailers and dealers of auto manufacturers are intentionally excluded from the analysis because of their ubiquitousness. 2) We exclude several companies from the study due to the lack of reliable data on their branches (for example, Teva of Israel, Schneider Electric of Switzerland; a total of 27 companies). 3) Calculations are made considering both the number of certain corporation offices in one city and using the "one company – one office" principle. At the same time, the functional profile of branches (production, sales office, R&B etc.) is not explained. 4) Only those representative offices that are 100% owned by the main company and registered under the same trademark are considered. 5) Due to the lack of official statistics data, LinkedIn data business contacts are used to assess the size of branches in terms of staff (see Note 2).

2.3. Main Indicators and the Comparative Method

In order to ensure the reliability of the analysis, four indicators appeared to be the most acceptable and accessible, and each responds well to a general rule, which is, the higher the value of the indicator the more attractive the city is to major transnational businesses: 1) Total number of foreign TNC branches. 2) Number of regional TNC headquarters, which adds further importance to them, as opposed to ordinary branches. 3) Number of countries represented by the TNCs. All companies are transnational, but the website of each of them has an official reference to the country of origin. 4) Number of employees in foreign TNC branches, which is important for a qualitative assessment of the presence of a transnational business in the city. This indicator complements the idea of the sizes of the foreign companies. On the one hand, there may be many relatively small offices in the city, and on the other hand, there may be a limited number of large representative offices of TNCs.

To summarise the role that US global cities play in attracting foreign transnational business structures we calculate a corporate activity index (CAI), which takes the following form:

$$CAI_i = \frac{1}{4}\left(\frac{a_i\text{-}a_{min}}{a_{max}\text{-}a_{min}} + \frac{b_i\text{-}b_{min}}{b_{max}\text{-}b_{min}} + \frac{c_i\text{-}c_{min}}{c_{max}\text{-}c_{min}} + \frac{d_i\text{-}d_{min}}{d_{max}\text{-}d_{min}}\right),$$

where CAI_i CAI_i is the CAI for the city *i*: $a_i a_i$ is the number of offices of the foreign TNCs in the city i i; $b_i b_i$ is the number of countries represented by the TNCs in the city i i; *c* is the number of regional headquarters of the foreign TNCs in city i i; *d* is the number of employees of foreign TNCs in city i i; $a_{min} a_{min}$, $b_{min} b_{min}$, $c_{min} c_{min}$, d_{min} d_{min}, and $a_{max} a_{max}$, $b_{max} b_{max}$, $c_{max} c_{max}$, d_{max} d_{max} are the minimum and maximum indicator values for the aggregate of cities under consideration (Pilka, Sluka, 2014).

The index values may range from 4 (maximum value) where all variables reach 1 for one city, to 0 where the phenomenon is completely absent. A logical assessment in accordance with the size range of the index makes it possible to determine not only the overall level of differentiation of the global US cities as hubs of foreign TNCs, but also to group these cities.

3. Study Results

According to our estimates, as of 2016, in the US there were 590 out of 1,413 non-US TNCs represented in the Forbes 2000 rating, with more than 7,000 branches. In the countries' global cities, there were 583 foreign companies with 4,588 branches and a total staff number of more than 717,000 people (78%). Against this background, it is not unexpected that the 47 non-US corporations out of those 50 corporations included in the top hundred of the Forbes 2000 rating have representative branches in the cities studied. There are giants of the financial sector (ICBC, BNP Paribas, ING, HSBC), insurance (Allianz, Prudential), the automotive industry (Toyota Motor, Volkswagen Group), the oil industry (Petro China, Total), the chemical industry (BASF, Novartis) and many other companies. Annual sales of the top ten TNCs operating in the United States exceed $1.5 trillion, while the same of the 583 TNCs with branches in the country's global cities amount to over $14 trillion (Forbes, 2016).

At the same time, the cities significantly differ by degree of attractiveness to foreign transnational businesses and the scope of their presence. The cities were divided into six categories in accordance to their CAI values, from highest to lowest. At that, the first value can be considered as a kind of "extra-scale" (the maximum CAI value is 4), and the remaining values are singled out in the course of data sampling, according to the range of the scale divisible by 0.35 (from 1.80 to 1.45, from 1.45 to 1.05, from 1.05 to 0.70, from 0.70 to 0.35 and less than 0.35). The categories include 1, 4, 0, 7, 3 and 13 cities, respectively (see Table 1). Table 2 gives an overview of the main average characteristics of each category of cities.

The first category is represented only by New York City, which is superior to other agglomerations of the country by all indicators and leaves them far behind. The importance of New York City as the focus of world business has been noted many times in the special literature (Verhetsel, Sel, 2009; Walker, 1989; and many others). It is known that a huge number of US companies are based in the city. There are headquarters of many prominent structures of both the financial sector, including Citigroup, JPMorgan Chase & Co., Goldman Sachs Group, Morgan Stanley, etc., and other industries, including Verizon Communications, Pfizer, Alcoa, NewsCorp., Colgate-Palmolive, etc. That is why the supremacy of New York City in terms of the foreign transnational business location is not particularly surprising. There are 383 foreign companies from 41 countries present with 727 branches in the economic capital of the US, including such giants as HSBC, Samsung, Nestle, Panasonic, and others. TNCs primarily represent the finance and insurance industry (48% of employees), the chemical industry (17%) and professional services (10%), and by home countries, they are distributed among Japan (26%), the UK (8%), France (6%) and China (6%) (Pilka, Sluka, 2017).

The second category is formed by Los Angeles, Houston, Chicago and San Francisco, which accumulate almost one third of both the regional headquarters and total employees of foreign TNCs. Los Angeles especially stands out for the number of branches, Houston for the number of regional headquarters and the vastness of transnational relations, and Chicago, although more than three times less than New York City, for the number of employees. Finally, San Francisco is in the top five by all indicators under consideration. At the same time, attention is drawn to the varying genesis of the cities' leadership. Chicago has long remained a major centre of traditional industries, but, like other cities of the Rust Belt, it survived a severe crisis. It is currently an exponent of a complex economy and the main transport hub of the US Midwest. By contrast, the other three agglomerations are the leading centres in specific sectors of the global economy. After passing through a series of economic and industrial ups and downs and being a major centre of oil production in the beginning of the twentieth century, a centre of the automotive industry in the

Table 1. Aggregated ranking of global US cities as hubs of foreign TNCs branches, 2016

Level	Rank	Global cities	CAI value	Categories of the global cities, according to GaWC
1	1	New York City	4.00	Alpha ++
	2	Los Angeles	1.76	Alpha
2	3	Houston	1.74	Beta +
	4	Chicago	1.56	Alpha
	5	San Francisco	1.54	Alpha
3		-	-	-
	6	Atlanta	0.92	Alpha -
	7	Dallas	0.92	Beta +
	8	Boston	0.91	Alpha -
4	9	Washington	0.90	Alpha
	10	Detroit	0.84	Beta -
	11	Philadelphia	0.77	Beta +
	12	Miami	0.74	Alpha -
	13	San Diego	0.53	Beta -
5	14	Raleigh	0.53	Gamma
	15	Seattle	0.51	Beta -
	16	Charlotte	0.34	Gamma +
	17	Minneapolis	0.33	Beta -
	18	Cleveland	0.33	Beta -
	19	Phoenix	0.33	Gamma +
	20	Denver	0.23	Beta -
6	21	Tampa	0.20	Gamma +
	22	Cincinnati	0.20	Gamma
	23	Kansas City	0.20	Gamma -
	24	Columbus	0.15	Gamma -
	25	St. Louis	0.12	Gamma +
	26	Portland	0.12	Gamma -
	27	Orlando	0.05	Gamma -
	28	Milwaukee	0.03	Gamma

Source: Author's calculations

Table 2. Main characteristics of global US cities as hubs of foreign TNCs branches, 2016

Categories of global cities, according to CAI	Number of centres	Indicators of cohorts of global cities:			
		Number of branches of foreign TNCs	Number of regional headquarters of foreign TNCs	Number of employees of foreign TNCs, (in thousands)	Number of countries represented by the TNCs
1	1	383	98	184.8	41
2	4	180–250	20–35	50–70	~30
4	7	90–150	10–15	20–35	20–25
5	3	50–90	3–5	10–15	~20
6	13	30–60	<3	<10	<20
Total	28	4,588	327	717.0	43

Source: Author's calculations

mid-twentieth century and the main aviation and aerospace industry centre during the Cold War, Los Angeles has firmly established itself as the world capital of the entertainment industry. San Francisco dominates the world's high-tech industry. Houston has been one of the main players in the oil business for many decades and is regularly called the "energy capital of the world", although the city's economy has diversified significantly. However, the foreign corporations' activity is still directly related to the oil industry, and its multiplier effect is very pronounced. The agglomeration accommodates 173 foreign companies with 249 affiliates and a staff of 57,000 people, of which 34% are directly employed by the energy, oil and gas sector and the chemical industry, and 44% indirectly interact with these industries, whether rendering engineering services or being engaged in the production of steel products, etc. Almost all major energy companies from 32 countries are represented here, including Total, Sinopec, Royal Dutch Shell and many others.

The third category, according to the CAI scale interval, has no representation, although the fourth category includes seven cities: Washington, Dallas, Atlanta, Boston, Detroit, Miami and Philadelphia. Their CAI value is almost half that of the cities in the category above, but they nevertheless play an important role in attracting transnational capital due to an extensive range of factors. Historical and cultural ties with Europe are essential for Philadelphia and Boston, which are among the oldest cities in the country and have been its main industrial centres for a long time. Its position as the birthplace of the global automotive industry is of exceptional importance for Detroit. The fact that Washington is the capital of the US presents a key argument for the city to serve as a major corporate hub. Many foreign TNCs open representative offices in Washington to establish public relations, receive government contracts, or enter into direct interaction with government agencies. For example, the initial task of the SAP branch was to commence cooperating with local government and non-governmental organisations. Due to geographical location and deep economic and cultural ties, Miami acquired a reputation as the unofficial capital of Latin America. Atlanta – the world's largest air hub – is one of the main centres for the finance, automotive and electronics industries in the US. The opportunities related to increased mobility in the United States and in the world in general, attract many foreign firms to the city.

The fifth category consist of three dynamically developing cities – Seattle, San Diego and Raleigh. The economy of these agglomerations is focused on advanced and science-driven industries which are extremely attractive to specialised foreign TNCs.

The sixth category – or a kind of an "outsider" block – is, by contrast, the most representative and includes 13 agglomerations: Minneapolis, Cleveland, Denver, Phoenix, Charlotte, Tampa, Cincinnati, Kansas City, St. Louis, Milwaukee, Columbus, Orlando and Portland. They fall into two groups in terms of the cyclic and genetic dynamics of urban development and their potential to accommodate transnational businesses. First, these are centres that have lost their former positions due to certain circumstances and are currently characterised by an unfavourable economic situation. Cities like Cleveland and Milwaukee still rank as global due to their past dominance in some sectors of the economy. They may well suffer the same fate as Gary, one of the largest steel centres of the country in the first half of the twentieth century, which went through an economic recession due to increased competition from foreign steel producers. Second, there are centres that are just beginning to "climb to the top", like Phoenix, Charlotte, Tampa, etc., and yet are not able to attract many foreign companies due to limited growth resources. In addition, many of them are "in the shadow" of larger global cities. For example, the proximity of Los Angeles as an alternative for the location of a company office is adverse for Phoenix, and the same goes for Miami with Orlando, etc. In the near future, all "outsiders" are unlikely to significantly improve their positions, and moreover are experiencing a real pressure from many "non-global" centres such as Memphis, Nashville, Austin and Salt Lake City that are trying to "pull over" foreign branches by all means necessary.

A preliminary analysis of location of foreign TNC branches in the global US cities combined with several other characteristics has revealed at least two major dependencies. First, the following rule stands: the larger the city in general geographical terms (area, population, economy), the greater the interest from foreign TNCs. At the same time, an ultra-high correlation is observed between

the parameters "number of foreign branches" and "number of employees in them", on the one hand, and "GDP by PPP" of the cities studied on the other (respectively, 0.96 and 0.94). Second, there is every indication that the hierarchy of US cities by presence of foreign business almost completely concords with the GaWC ranking based solely on the evaluation of business services. Such a close relationship between rankings highlights the importance of the specialised service sector for both domestic and foreign companies, and once again affirms the foundation of the global city theory expressed by S. Sassen (Sassen, 1991; 2001) (Fig. 1).

4. Discussion

Despite a substantial body of scientific work (Abrahamson, 2004; Alderson, Beckfield, Sprague-Jones, 2010; Clark, 2003; Brade, et al., 2014; Kratke, 2014; Liu, Derudder, Taylor, 2014; Sluka, Tikunov, Chereshnia, 2019; Taylor, 2001–2018 and many others), the knowledge of the city's role in the course of profound changes to the world economy's spatial structure as affected by globalisation cannot be considered exhaustive, and neither can the discourse within the global city theory be considered complete. To the present day, the criteria for their

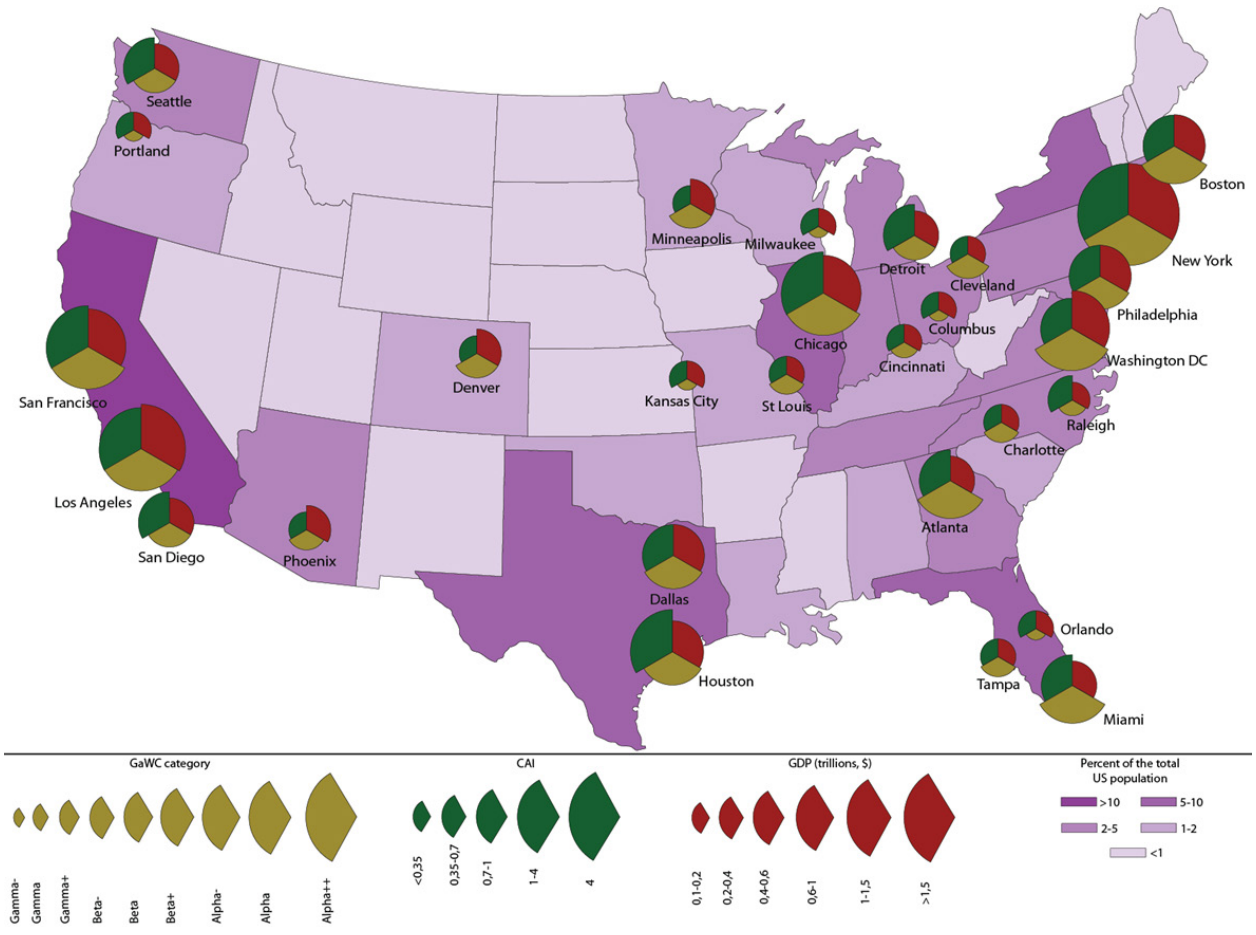

Fig. 1. Composition of US Global Cities Hierarchy by CAI Values, GaWC Ranking and GDP Scope by PPP.
Source: Author's calculations

designation have not been clearly formulated. Our point of view is as follows: the transnational mechanism affecting a city's competitiveness is changing, which makes the analysis of their economic globality using the "input-output" or "donor-acceptor" principle crucial. A city's true strength in the international division of labour and its role in managing the world economy are reflected in the activity of not only the parent TNCs (the output), but also of branches of the world's largest corporations from other countries (the input). According to UNCTAD data for 2017, there are about 100,000 TNCs in the world, with over 800,000 branches in other countries and a staff of 73.2 million people. The added value produced by those companies exceeds the world's GDP by 9%, and their export amounts to one third of world trade (World Investment Report 2018, p. 20). These figures are growing. Compared to 1990, the contribution of foreign units of TNCs to global GDP has increased by 170%, the number of employees – by 270%, and foreign direct investment (FDI) stock – by 1400%. By the end of 2017, the global FDI stock amounted to around $31 trillion including an annual FDI flow of over $1.4 trillion (this amounts to around 7% of all global fixed capital investments for the year) (Kuznetsov, 2019).

The increased urban attractiveness and the attraction of foreign companies remain the centre of attention for the municipal authorities of most cities, as it is a crucial resource for their continued growth. It is no coincidence that the subject literature today pays ever-increasing attention to analysing the location of foreign companies' branches. Despite this, a unified approach and a system of reliable indicators have not been yet developed and the study principles vary. For instance, to combat Eurocentrism in the global cities study, B.J. Godfrey and Y. Zhou have proposed accessing global cities based on the number of "home" TNCs headquarters and regional offices of foreign companies. Having considered the locations of the top 100 TNCs from the "Fortune 500" ranking, as well as subsidiaries thereof, they assigned the leading positions to New York City (69 offices), Tokyo (60) and London (50 offices) (Godfrey, Zhou, 2013). R. Belderbos and colleagues synthesised the data for the 2003–2012 period received from the *Financial Times* regarding the investment into opening new regional headquarters of TNCs, and traced their locations to 75 global cities as ranked by MasterCard. It turned out that only 57% (1,438 out of 2,510) of regional affiliates are concentrated in 72 cities. Singapore, Hong Kong and Shanghai take the leading positions, and Tokyo and New York City are not even in the top 20 (Belderbos, Du, Goren, 2015).

In the US global cities, compared to the power of the parent TNCs, which largely provide them with management and control functions (see Abu-Lughod, 1999; Csomós, 2013; Taylor, Csomós, 2012 etc.), the weight of the foreign TNCs is presumably relatively small, but their importance should not be underestimated. There are no known estimates of their economic activity. Moreover, there are no specific comparative data on the composition and dynamics of the representative branches of foreign companies in these cities. Given the great practical significance of the phenomenon, clarifying all these issues is likely to be a promising, separate area of interdisciplinary research. Geographers would be particularly interested in several areas in order to further discuss the global city as a centre for receiving foreign business. First, the role of a purely spatial component in the system of attraction factors of the global US cities for TNCs shall be determined. According to our preliminary data, the geographical proximity of the donor companies to business acceptor cities plays a significant role. Second, the spatial and sectoral structure of foreign companies shall be analysed to establish or refute the hypothesis that they have the "standard" composition for a global city. Third, models describing the location patterns of foreign TNCs within global cities shall be developed. What does the "outside" business prefer? Pathos, but the high cost of the historical business core, or the practical comfort of an edge city? According to our data, in the case of the United States, the second option remains a priority. Modernisation of the research methodology is an issue of separate importance, and it may significantly change the proposed aggregate ranking of US global cities and their grouping, which we expressly do not consider to be conclusive.

5. Conclusion

The analysis of the overall size and distribution of the branches of foreign multinational corporations in major US cities leads to several conclusions. First, the hub-like nature of countries' global centres is apparent. They accumulate over 60% of all foreign branches, more than 70% of all workers, and over 90% of headquarters. This concentration stems both from attributes that are traditionally associated with global cities (i.e. world-class universities, talent, cultural diversity), and from city-specific attributes that allow certain cities to attract certain corporations. Regarding the last point: Los Angeles and San Francisco with their respective traditions and resources in automotive and tech industries are good examples here. Second, we observe a rather rigid hierarchy. Applying our methodology, we identified several groups of cities, with New York City being a unique unipole city and all the other cities being on the outside are clearly distinguished. Third, the hierarchy of cities by CAI largely correlates with the ranking proposed by GaWC: the global centres of the α-group clearly lead in terms of all applicable indicators, while the positions of γ-cities are quite low. This generally indicates the efficiency and relevance of the applied methodology for ranking of global centres. Fourth, several US centres, including Houston, Detroit and Raleigh, receive an "additional bonus" while being positioned in the hierarchy of global cities due to attracting transnational capital. Fifth, global cities have traditionally been thought of as places where corporations locate their command and control functions. While the study does not dispute this fact, the broader functional composition of global cities is apparent by the number of sales, logistics, R&D centres and manufacturing branches that foreign companies locate in these cities. This means that by studying the companies, the countries of origin, and the types of affiliates that global cities attract, we'll get a better understanding not only of why cities draw TNCs, but of how companies are making decisions, and will in turn enhance our knowledge on the transnationalisation of the world economy. Sixth, with advancements in communication and transportation technology on the one hand, and the growing mobility of human capital on the other, when choosing a new location corporations may rely less on traditions (i.e. manufacturing in Cleveland) or geography (i.e. Japanese companies in Portland), and focus more on finding the best place to live and work. That would intensify the competition not only between different global cities, but inside metropolitan areas. Seventh, an in-depth study of US cities' experience in attracting foreign transnational business is a valuable case study for municipal governments of the world's largest agglomerations all around the world.

Notes

(1) The choice of combined statistical areas, rather than metropolitan areas, results from the formality of the division of some of the latter. For example, Riverside–San Bernardino metropolitan area is not part of the Los Angeles metropolitan area, although virtually the entire population of these vast counties resides in the immediate vicinity of Los Angeles County.

(2) As far as we know, no data on the size of TNC branches has previously been used in global city studies. The LinkedIn data is not official data but it gives a general idea of how many people a particular branch employs. Given the ubiquitousness of the Internet in the United States, especially in the largest agglomerations, one can assume that there will be no differences in the use of the network between various states. To date, 128 million Americans are registered in LinkedIn, of whom 54% are men and 46% are women. About 45% of the US population with an income of over $75,000 are registered in the network. More than 70% of UK businessmen consider LinkedIn to be a source of professional content (for comparison, 40% expressed the same opinion about Facebook). Of HR specialists, 95% use LinkedIn as the social network for selecting employees (for comparison, 58% use Facebook) (Statista, 2015). Having collected the data on total employment in the US for all companies, as well as data published by 29 corporations, we compared this information. It turned out that for every "official" employee there are on average 0.43 employees registered on LinkedIn, and the correlation between the two data pools is 0.9! Thus, the use of the data

received from this social network seems justified, especially given the lack of alternatives.

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Ministry of Science and Higher Education
Republic of Poland

The proofreading of articles, positively reviewed and approved for publishing in the 'Bulletin of Geography. Socio-economic Series', was financed from the funds of the Ministry of Science and Higher Education earmarked for activities popularizing science, in line with Agreement No 695/P-DUN/2018.