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Re-examining global urban hierarchy of corporate geography: The rise of Pacific Rim cities and shifting command-and-control

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Abstract

Patrik Vaněk, Luděk Kouba, Eleanor Doyle: **Re-examining global urban hierarchy of corporate geography: The rise of Pacific Rim cities and shifting command-and-control**

This paper investigates the dynamic evolution of world city hierarchy from 1996 to 2023, emphasising metropolitan areas as global command-and-control centres. The paper proposes a classification of the diverse literature on world/global cities and develops an analytical framework revisiting Godfrey and Zhou's (1999) approach. Using the Fortune Global 500 list and Refinitiv Eikon database data, the paper explores trends in global command-and-control centres by analysing the locations of corporate and regional headquarters. The paper reveals a shift towards Pacific Rim cities, a strengthening position of US cities, Europe's decline, and persistent command and control disparity. Beijing has surpassed traditional leaders such as New York, Tokyo, and London, emerging as a dominant economic command-and-control centre.

Key words

world city hierarchy, corporate geography, metropolitan areas, command-and-control, Fortune Global 500

JEL: F23, R30

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Introduction

Since the 1980s, globalisation has dramatically changed the economic landscape across the world (Cuervo-Cazurra et al., 2020). Multinational enterprises (MNEs)[1] have become crucial players in the global economy, significantly affecting the allocation of resources, employment, international trade, and the spread of technologies (Dicken, 2007; Stutz & Warf, 2005). Already at the turn of the millennium, 53 out of the world's 100 largest economies were corporations, surpassing the economic output of over 120 countries (Gabel & Bruner, 2003). The rising importance of cities has accompanied the diminishing role of nation-based states (Knox, 1995; Neal et al., 2020; Sassen, 1991, 2018; Scott et al., 2001).

Cities and their metropolitan areas have become concentrated sites of economic power, serving as strategic command-and-control centres in the global economy (Chakravarty et al., 2021; Sassen, 2018; Wood & Roberts, 2011). Corporate and regional headquarters, responsible for corporate decisions, place cities with a concentration of such entities as command centres (Pan & Xia, 2014; Rice, 2010; Rice & Lyons, 2010; Tonts & Taylor, 2010). The dynamics between regional/subsidiary headquarters and corporate strategy reveal how MNEs navigate local adaptation and global integration (Rice, 2010; Rice & Pooler, 2009).

Previous research demonstrates that cities are hierarchical and integrated into the network of global cities to varying degrees (Acuto & Leffel, 2021; Timberlake et al., 2014). Research on the hierarchy of world cities related to international business traditionally dealt with the concentration of corporate headquarters (CHQ hereafter) (Holloway & Wheeler, 1991; Knox, 1995; Lyons & Salmon, 1995). However, Godfrey and Zhou (1999) argued that focusing solely on CHQ location distorts urban hierarchies by overstating the importance of urban centres in developed countries. Therefore, they advocated for evaluating world cities by adding the distribution of regional headquarters (RHQ), i.e., CHQs *plus* RHQs. Literature emerged documenting the strategic role of RHQs in global business operations and the importance of global cities RHQ locations to mitigate the liability of foreignness introduced in Hymer (1972) (Belderbos et al., 2020; Goerzen et al., 2013; Kola-Bezka & Kuzel, 2023; Taylor & Derudder, 2022).

Nevertheless, contemporary literature is not homogeneous. Besides the *World City* concept developed in Friedmann (1986) and elaborated in Godfrey and Zhou (1999), there are the *Global City* concept

[1] MNEs operate through networks of a parent company and foreign entities (subsidiaries, affiliates, and joint ventures) centrally coordinated from the corporate headquarters in their home country (UNCTAD, 2017).

developed in Sassen (1991, 1994) and the *World City Network* by Beaverstock et al. (1999). Various modifications and fusions of these fundamental approaches were founded on geographical and functional criteria (Alderson & Beckfield, 2004; Csomós, 2017; Derudder & Taylor, 2016, 2020; Knox & Taylor, 1995; Taylor, 2001). However, a research gap exists since there is no comprehensive organisation of these approaches in the literature.

In this paper, we pursue three main aims. First, we organise heterogeneous contemporary literature on global urban hierarchy and the role of MNEs. Second, we develop an analytical framework re-examining the principal approach in Godfrey and Zhou (1999). Third, we apply the framework to explore trends in the global hierarchy of command centres since 1996. We employ the same foundational dataset as Godfrey and Zhou (1999): the 100 largest corporations from the Fortune Global 500 list for 2023 and consider evolution relative to their findings.

We delineate our contributions into two areas: methodological and empirical. In the former, we contribute with a proposed framework for classifying world and global city concepts. We extend Godfrey and Zhou's approach (1999), focusing on metropolitan areas. To define these, we use EU-OECD functional urban areas (Dijkstra et al., 2019; OECD/European Commission, 2020) as a novel approach to corporate geography. Our findings highlight four trends typical for the early 21st century in international economic decision-making processes: the pronounced dominance of Pacific Rim cities, the strengthening of US cities, Europe's decline, and persistent command-and-control disparity in the global economy. In summary, we observe a significant geographical shift toward the Pacific Rim rather than a West-to-East transition.

This paper is divided into four sections. The first section summarises the evolution of the world/global city literature and proposes a classification of world/global city approaches. The second section introduces the method in Godfrey and Zhou (1999) used for our analysis. The third section presents our framework developed as an extension of their approach, data sources, and limitations. The last section presents changes in the world city hierarchy between 1996 and 2023, which are discussed in relation to previous literature.

1 The development of world/global city literature

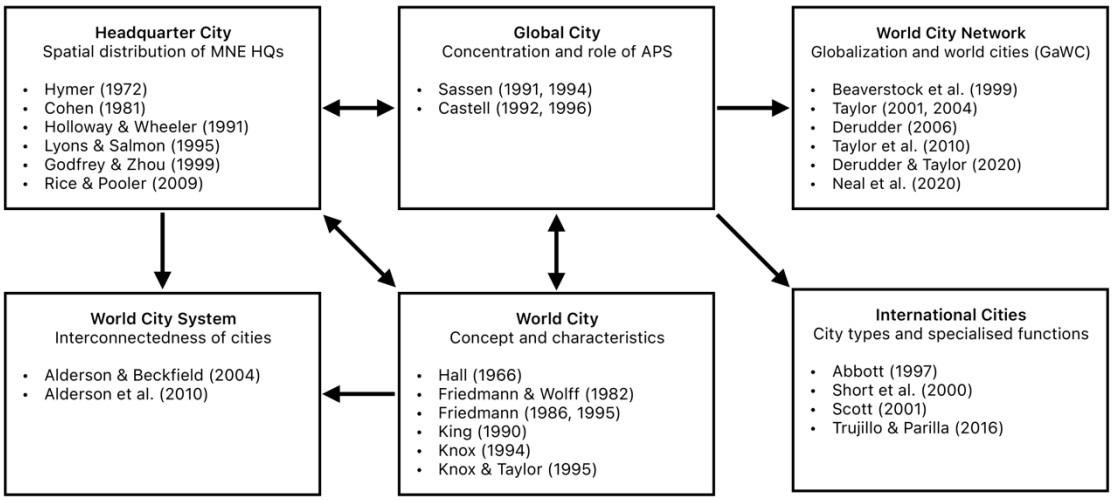
Literature on cities can be categorised into two primary strands: demographic or functional traditions (Beaverstock et al., 1999). The demographic tradition explores the sociological and ecological effects of large population concentrations in the context of national urban systems (Gilbert, 1996), whereas

the functional tradition reinterprets the global economic role of cities (Cohen, 1981; Friedmann, 1986; Sassen, 1991).

Within the functional tradition, Chakravarty et al. (2021) identify three generally converged approaches: 1. the corporate *organisation* approach, which relies on indicators such as the presence of CHQs or advanced producer services (APS hereafter) to generate ranked lists of global cities; 2. the *infrastructure* perspective, which uses indicators such as telecommunications and transportation; 3. more recent research including additional aspects of *globalness*, resulting in several indices such as the Global Cities Index (Lohmeyer et al., 2023) and the Global Power City Index (Yamato et al., 2023).

In this paper, we focus on the organisational approach within the broader functional tradition and propose its classification into six themes, outlined in Figure 1.[2]

Figure 1. Proposed classification of world/global city literature



Source: By authors.

Note: Arrows indicate evolutionary relationships between identified concepts.

1.1 Cities as command-and-control centers

The concept of *World City* and the use of spatial concentration of large MNE CHQs can be traced to Hall's (1966) pioneering study, which linked urbanisation and globalisation. Hall identified seven major nodes in the global urban network – London, Paris, Randstad, Rhine-Ruhr, Moscow, New York, and Tokyo – highlighting their role as centres of political power, economic control, and cultural influence.

[2] See Beaverstock et al. (1999) for a review of foundational literature, Csomós (2017) for a review of command-centres-focused literature, and Chakravarty et al. (2021) for a broader review of global city literature in the context of international business.

Later, Hymer (1972) proposed the first global hierarchy of cities, predicting the dominance of New York, London, Paris, Bonn, Tokyo, Moscow, and Beijing as central hubs for leading MNEs. Following Cohen's (1981), ranking cities based on the concentration of headquarters and the economic performance of the MNEs they host has become prevalent – therefore, the *Headquarter City* concept. These authors can be seen as pioneers of the corporate organisation approach.

Building upon Friedmann & Wolff (1982), Friedmann (1986) introduced a classification for world cities based on criteria such as being a major financial hub, hosting MNE CHQs and international institutions, and witnessing significant growth in the business services sector. Cities like New York, Los Angeles, Tokyo, London, Paris, and Chicago emerged from the classification as primary world cities, emphasising the importance of the spatial concentration of CHQs. Later, New York, London, and Tokyo were identified as quintessential command and control centres (Friedmann, 1995). The concept was further developed by King (1990), Knox (1994), and Short et al. (1996) and culminated in Knox and Taylor (1995). Nonetheless, this approach to defining world cities was criticised as casual empiricism (Beaverstock et al., 1999).

Within the Headquarter City concept, early scholars focused on the concentration of CHQs (Cohen, 1981; Holloway & Wheeler, 1991; Knox, 1995; Lyons & Salmon, 1995). Following the critique of this approach (Godfrey & Zhou, 1999; Short et al., 1996; Smith & Timberlake, 1995), the subsequent literature went two ways. Authors such as Godfrey and Zhou (1999) suggested that the unique distribution of RHQ should be incorporated within the Headquarter City approach, recognising the different special distributions of CHQs and RHQs (Rice & Pooler, 2009). However, research on world cities continues to utilise the concentration of CHQs as an indicator of command-and-control centres and delineate their positions in the global economy (Csomós, 2017; Pan & Xia, 2014).

Alternatively, Alderson and Beckfield (2004) made significant contributions to this field by analysing the *World City System* – the structural relationships between cities and their interconnectedness in the global economy, using the headquarters network of corporate and regional headquarters. This unique approach was further developed in Alderson et al. (2010).

1.2 Cities as service centers

Since Sassen's (1991) work on the *Global City* concept, there has been an emphasis on the role and concentration of advanced producer services (APS) in major urban centres, challenging the earlier prominence of MNE headquarters. In Sassen's approach, global cities are key production centres capable of global control, supported by financial and professional services. Castells' (1992, 1994)

contribution further elucidated the role of information and communication technologies in facilitating the rise of global cities.

The Globalization and World Cities (GaWC) research network has been instrumental in advancing the APS-focused literature that has evolved into the *World City Network* concept, classifying cities according to their degree of global connectivity. Beaverstock et al. (1999) explored this perspective and proposed a theory-driven, empirically validated hierarchy of global cities, further developed in Taylor (2001). The Globalization and World Cities (GaWC) research network has been updating the list, with the most recent update being in 2020. This classification is commonly used by international business researchers (e.g., Goerzen et al., 2013). Taylor (2004), Derudder (2006) and Taylor et al. (2010) expanded the literature further. Recent contributions by Derudder and Taylor (2020) and Neal et al. (2020) continue to refine the understanding of the dynamics and evolving nature of the world city network.

1.3 Cities as specialised centers

The literature on *International Cities* focuses on cities' diverse types and specialised functions within the global context, building on the Global City concept. Abbott (1997) differentiated between world and international cities, focusing on the urban specialisation in the world economy. Short et al. (2000) extend the literature by introducing the concept of gateway cities and argue that they differ from traditional world cities, playing a unique role in globalisation. Scott (2001) explores the concept of global city-regions, which are large metropolitan areas that serve as crucial nodes in the global economy. Trujillo and Parilla (2016) identified seven types of international cities, offering a new framework with a broader perspective on global urbanisation, emphasising that cities contribute uniquely to global commerce and economic development, even if they do not fit the traditional image of a global city.

1.4 Territorial demarcation

In the debate on world and global cities, Derudder (2006) highlights distinctions in territorial demarcation. Sassen's (1991, 1994) Global City concept focuses on cities with traditional central business districts. In the APS-focused empirical literature, the geographical definition of a city is usually unspecified (Beaverstock et al., 1999; Taylor, 2001) but is linked to the location of APS. Conversely, Friedmann's (1986, 1995) World City concept encompasses broader metropolitan areas where CHQs may be spread out, suggesting a broader scope in the empirical analysis of world cities (Derudder, 2006). The MNE-focused strand of literature refers to metropolitan areas as territorial boundaries, although the definition of these metropolitan areas varies.

In MNE-focused studies on a single country, a unified approach is commonly used, with the US case typically employing combined statistical areas (Holloway & Wheeler, 1991; Lyons & Salmon, 1995; Pilka & Sluka, 2019; Pilka et al., 2022). These identify metropolitan and micropolitan statistical areas defined by the Census Bureau. Globally focused empirical studies, however, use multiple sources to define metropolitan areas (outside the US), including National Geographic Society, MapQuest, and ESPON (Alderson & Beckfield, 2004; Csomós, 2017), or employ an unspecified aggregation process (Godfrey & Zhou, 1999). The remaining research does not specify spatial aggregation (Friedmann, 1986, 1995; Knox, 1995; Pan & Xia, 2019). To date, a unified global approach defining metropolitan areas in empirical studies on global cities is still absent in the literature.

2 Ranking world cities: beyond CHQs

While the prevalent CHQ-focused approach is beneficial in understanding command-and-control functions, it can be significantly enhanced by considering RHQ locations (Godfrey & Zhou, 1999). Csomós (2017) argue that cities hosting the CHQs of large corporations, such as Bentonville for Walmart, act as crucial command-and-control centres. However, focusing solely on CHQs can inadequately capture a city's influence, as it overlooks strategic decisions made at the RHQ level (Godfrey & Zhou, 1999).

Godfrey and Zhou (1999) also point out that although the Global City approach is conceptually sophisticated and offers potential insights, it faces empirical challenges. These challenges include the need for more extensive information than general HQ-focused studies, along with data inconsistencies and biases. They argue that a straightforward approach based on the CHQ and RHQ location data more accurately characterises the global urban hierarchy, as the geography of corporate spatial strategies provides important indices of world city status. Their approach has four main advantages:

- **Capturing international influence:** Focusing solely on CHQs overlooks the impact of national borders, as MNEs are multinational in their subsidiaries (Godfrey & Zhou, 1999). Given the rarity of international relocations of CHQs (Coeurderoy & Verbeke, 2016), including RHQs provides a more accurate depiction of the geography of command-and-control centres, recognising their unique distribution (Rice & Pooler, 2009) and acknowledging the strategic importance of RHQs in MNEs' local adaptation and global strategies (Godfrey & Zhou, 1999).

- **Acknowledging geographical and political-economic factors:** Reliance on CHQ data ignores geographical and political-economic factors shaping urban economic landscapes. For example, cities in the US, like New York, compete for CHQs with *both* foreign and domestic cities,

a phenomenon less pronounced in European and Japanese cities with more stable urban primacy (Godfrey & Zhou, 1999; Sassen, 2018).

- **Highlighting strategic locations in emerging economies:** The CHQ-centric view tends to emphasise economies dominated by large corporations, such as Japan and other developed countries, while underestimating the significance of strategic locations for MNE subsidiaries in places like Singapore and emerging markets in general (Godfrey & Zhou, 1999; Sassen, 2018).

- **Reflecting the diverse locational strategies:** Although CHQs are disproportionately concentrated in large cities for their central location and advanced services network, they may also be located near factories outside cities for operational costs reasons or in the city of the company's founding (Evans, 1985; Sassen, 2018). Many firms also maintain secondary HQs or RHQs in world cities for specialised functions (Godfrey & Zhou, 1999; Sassen, 2018).

3 Research materials and methods

To maintain consistency with Godfrey and Zhou's (1999) methodology, we employ the same foundational dataset: the 100 largest MNEs[3] by revenue from the Fortune Global 500 list for 2023. This dataset features US (35) and Chinese (29) corporations.

We adopt Godfrey and Zhou's (1999) pragmatic approach to identify RHQ locations using first-level subsidiaries as proxies due to the complexities of MNE structures. We collect data on subsidiary locations from the Refinitiv Eikon database using the Refinitiv Company Tree Structure (as of October 2023), replacing the Directory of Corporate Affiliations (1997) employed in Godfrey and Zhou's study since we do not have access to the Directory of Corporate Affiliations data.

Our analysis applies an innovative EU-OECD functional urban areas framework (Dijkstra et al., 2019; OECD/European Commission, 2020) via *The Cities in the World* web tool.[4] This tool recognises an urban centre and its commuting zone, providing a refined and globally unified geographical scope for metropolitan areas. To our knowledge, this approach is novel in its application to corporate geography.

[3] In line with previous literature, we use the term MNE, recognising that many firms in the Fortune Global 500 include large, nationally successful firms with some international presence (Rugman & Nguyen, 2014; Vaněk, 2024).

[4] The Cities in the World tool is accessible at https://www.oecd.org/regional/regional-statistics/.

Following Godfrey and Zhou (1999), we aggregated CHQ and RHQ locations within metropolitan areas, counting only one first-level subsidiary per metropolitan area for each firm.[5] This approach means an MNE could contribute either 1 (CHQ *or* RHQ presence) or 2 (CHQ *and* RHQ) to a metropolitan area's total. We excluded affiliate and joint venture relationships to align our focus on core command-and-control functions.

Challenges included polycentric conurbations, cross-border urban areas, and data gaps. For polycentric regions – such as Guangdong and the Rhine-Ruhr – we examine individual urban areas (and discuss the possible influence on rankings later). Cross-border metropolitan areas –Detroit, San Diego, and Ciudad Juarez – were allocated to the country with a larger share of the urban centre's population. Due to missing data, we aggregated headquarters for the San Francisco metropolitan area using two Metropolitan Statistical Areas by the US Census Bureau (San Francisco-Oakland-Berkeley and San Jose-Sunnyvale-Santa Clara).

4 Results

The widely accepted global hierarchy at the end of the 20th century was dominated by cities in developed economies, notably New York, London, and Tokyo, which functioned as the primary nodes of economic decision-making and command-and-control centres (Alderson & Beckfield, 2004; Godfrey & Zhou, 1999; Sassen, 2018). Since then, especially after the Great Recession in 2009, the landscape has changed with the increasing prevalence of cities in emerging economies. Previous literature challenged the traditional hierarchy of global cities and pointed to a shift of global economic governance from the West to the East (Friedman, 2005; Csomós, 2017). However, we observe a significant geographical shift toward the Pacific Rim rather than the West-to-East transition.

Our analysis, illustrated in Figure 2 (visualisation of dominant and major world cities), Table 1 (regional level), and Table 2 (metropolitan level), reveals four pivotal trends in the early 21st century regarding the global hierarchy of metropolitan areas. These are the dominance of Pacific Rim cities, the strengthening position of US cities, the decline of European cities, and persistent command-and-control disparity.

4.1 Global-regions focus

Beginning with an analysis of global regions (Table 1), the impact of economic globalisation on decision-making power is evident. Three regions from the Global South (South Asia, Middle East & North Africa,

[5] For 2023, CHQs and RHQs of the top 100 MNEs from the Fortune Global 500 list are distributed across 2,488 individual cities and integrated into 1016 functional urban areas for our analysis.

and Sub-Saharan Africa), unrepresented in the top 50 metropolitan areas in 1996, now have four cities (Delhi, Mumbai, Dubai, and Johannesburg) making up 8% of the list. Their breakthrough into the list provides evidence of the positive effects of globalisation on developing and emerging economies during the last four decades.

Metropolitan areas in the East Asia & Pacific region have retained their position, with almost one-third attributable to China's rise. The relative importance of Europe & Central Asia has diminished while North America has risen.

Table 1. Comparison of the global distribution of metropolitan areas among the top 50 by region in 1996 and 2023

Global Region	**2023**		**1996**	
	Metropolitan areas	**%**	**Metropolitan areas**	**%**
North America	15	30	7	14
East Asia & Pacific	14	28	15	30
Europe & Central Asia	13	26	20	40
Latin America & Caribbean	4	8	8	16
South Asia	2	4	0	0
Middle East & North Africa	1	2	0	0
Sub-Saharan Africa	1	2	0	0
Total	**50**	**100**	**50**	**100**

Sources: 2023 values calculated by authors using Fortune Global 500 and Refinitiv Eikon data. See Godfrey and Zhou (1999) for 1996 values.

Note: Based on the location of CHQs and RHQs of the world's 100 largest corporations. Global regions classification by the World Bank (2024) is used.

Notwithstanding these changes, the distribution of the top 50 metropolitan areas across countries by income levels (World Bank, 2024) has remained unchanged: 34 in high-income countries, 11 in upper-middle-income countries, and five in lower-middle-income countries. Therefore, most of the world's leading command-and-control centres remain in wealthier countries, indicating a persistent disparity.

4.2 Metropolitan-areas focus

Recognising urban hierarchy as outlined in Knox (1994) and using the metric for categorisation by Godfrey and Zhou (1999), one may observe that the number of dominant world cities (exhibiting over 40 HQs) has risen from three in 1996 to seven in 2023, as Beijing, Hong Kong, Singapore, and San Francisco joined New York, Tokyo, and London. The second tier, so-called major world cities (hosting

over 20 HQs), includes 29 cities, compared to 17 in 1996. This further supports the contention that economic globalisation impacts decision-making as the world has become increasingly multipolar. Using this metric, two cities, Osaka and Brussels, have lost their status as major world cities since 1996. Dominant and major world cities for 2023 are visualised in Figure 2, together with their HQ change since 1996.

Figure 2. World cities with over 25 HQs (CHQs + RHQs) of the 100 largest corporations in 2023

Sources: 2023 values calculated by authors using Fortune Global 500 and Eikon Refinitiv data. Comparative values for 1996 taken from Godfrey and Zhou (1999).

Note: Based on the CHQs and RHQ of the 100 largest MNEs by Fortune Global 500.

A comparison of the geographical location of the top 10 metropolitan areas in 1996 and 2023 reveals a shift in command and control towards the Pacific Rim region. In 2023, eight of these metropolitan areas were in the Pacific Rim, compared to just four in 1996 (see Table 2).

Additionally, we identify a general trend of increasing HQs since 1996 across 41 out of the top 50 metropolitan areas in 2023 (see Table 2, which covers the top 30 metropolitan areas). While in 1996, only 12 metropolitan areas had over 25 HQs, their number doubled by 2023. This spread is attributed to the strategic establishment of RHQs designed to oversee corporate activities on a regional or continental scale. It also indicates that the largest MNEs have evolved to adopt global operations (Wood & Roberts, 2011). The highest growth occurred in the United States (Houston, San Francisco, and Dallas-Fort Worth) and China (Beijing and Shanghai), where the increase of HQs was over 20 (see Figure 2). In Europe, the highest growth occurred in Dublin and Amsterdam, with lower levels: this trend highlights their potential strengthening roles as decisive European command-and-control hubs.

The CHQ change (see Table 2) has significantly affected rankings in four metropolitan areas. Of the 41 new HQs in Beijing since 1996, 21 have been CHQs of Chinese firms. This indicates that the importance of Beijing is primarily attributed to the rise of the Chinese economy. On the contrary, Tokyo's decline in the list (down by 21 HQs) can be attributed solely to the loss of 21 CHQs, as its importance as a location for RHQs has not changed. Similarly, New York has experienced the loss of 14 HQs, out of which five were CHQs. Tokyo and New York are the only metropolitan areas with over 25 HQs that experienced HQ losses (see Figure 2). While experiencing a decline of eight CHQs, Paris has become a more important location for RHQs, resulting in its overall rise of HQs by three.

Our results support Csomós' (2017) findings, highlighting Beijing's rise as a dominant and San Francisco-San Jose's role as a major command-and-control centre in the global economy. However, Csomós (2017) focuses solely on CHQ locations, underlining the significance of metropolitan areas such as Singapore, Philadelphia, and Los Angeles, which are essential for RHQs.

Our ranking correlates with a commonly used GaWC classification of world cities, suggesting the robustness of Godfrey and Zhou's (1999) method. However, a close look reveals nuances using the most recent publication by GaWC (2020). Cities such as Beijing (first in our analysis and classified as Alpha+ in GaWC), San Francisco (seventh; Alpha−), and Philadelphia (ninth; Beta) rank significantly higher in our analysis. Other cities rank higher in the GaWC classification, such as Paris and Dubai (Alpha+), which we rank 13th and 21st, respectively. These nuances can be attributed to the different analysis focuses, as we build on the World City concept, while GaWC builds on the Global City concept.

Table 2: Top 30 metropolitan areas by location of CHQs and RHQs of the world's 100 largest corporations in 2023 and their changes since 1996

Metropolitan area	Country	2023			1996			Rank change	HQ change	CHQ change
		Rank	HQ total	CHQ total	Rank	HQ total	CHQ total			
Beijing	China	1	64	21	14	23	0	**13**	41	21
London	UK	2	58	2	3	50	1	1	8	1
New York	USA	3	55	3	1	69	8	-2	-14	-5
Hong Kong	China	4	54	2	4	40	0	0	14	2
Metropolitan area	**Country**	**2023**			**1996**			**Rank change**	**HQ change**	**CHQ change**
		Rank	**HQ total**	**CHQ total**	**Rank**	**HQ total**	**CHQ total**			
Tokyo	Japan	5	45	4	2	66	25	-3	-21	-21
Singapore	Singapore	5	45	1	5	35	0	0	10	1
San Francisco	USA	7	41	3	20	21	2	**13**	20	1

Shanghai	China	8	40	2	28	17	0	**20**	23	2
Philadelphia	USA	9	38	2	N/A	N/A	1	N/A	N/A	1
Los Angeles	USA	10	37	0	21	20	0	**11**	17	0
Houston	USA	11	36	2	34	14	0	**23**	22	2
Amsterdam	Netherlands	12	33	1	24	18	1	**12**	15	0
Paris	France	13	32	4	7	29	12	-6	3	-8
Dallas-Fort Worth	USA	14	31	2	42	11	1	**28**	20	1
Mexico City	Mexico	15	30	1	8	28	0	-7	2	1
Toronto	USA	15	30	0	24	18	0	9	12	0
Dublin	Ireland	15	30	0	40	12	0	**25**	18	0
Madrid	Spain	18	29	0	8	28	0	**-10**	1	0
Seoul	South Korea	18	29	4	10	26	2	-8	3	2
Sydney	Australia	20	28	0	15	22	1	-5	6	-1
Chicago	USA	21	27	2	15	22	2	-6	5	0
Luxembourg	Luxembourg	21	27	0	N/A	N/A	0	N/A	N/A	0
Dubai	UAE	21	27	0	N/A	N/A	0	N/A	N/A	0
Jakarta	Indonesia	24	25	0	31	15	0	7	10	0
Milan	Italy	25	23	0	6	30	0	**-19**	-7	0
Zurich	Switzerland	25	23	1	11	25	2	**-14**	-2	-1
Bangkok	Thailand	25	23	0	15	22	0	**-10**	1	0
Buenos Aires	Argentina	25	23	0	23	19	0	-2	4	0
Moscow	Russia	25	23	0	N/A	N/A	0	N/A	N/A	0
Washington, D.C.	USA	25	23	1	N/A	N/A	2	N/A	N/A	-1

Sources: 2023 values calculated by authors using Fortune Global 500 and Refinitiv Eikon data. See Godfrey and Zhou (1999) for 1996 values.

Note: N/A indicates metropolitan areas not included among the top 50 in 1996. Rank changes of 10 or more places are in bold. Colours indicate the main geographical locations of North America, Europe, and East Asia.

4.3 China's rise

The increasing importance of Chinese cities in the global economy has been evidenced (Csomós, 2017; Derudder & Taylor, 2020; GaWC, 2020). Beijing, which was identified as a central hub for leading MNEs already by Hymer (1972), has emerged as a formidable command-and-control centre, surpassing

traditional leaders such as New York, Tokyo, and London by 2015 (Csomós, 2017; Derudder & Taylor, 2020). Our findings also exhibit this trend. The rise of Beijing appears to be caused by the growth of domestic, state-owned firms (Csomós, 2017; Pan & Xia, 2014).

However, we show that Beijing's importance is partly a consequence of the substantial aggregation of Chinese firms' CHQs within its metropolitan area, which is in accord with Pan and Xia (2014) and Csomós (2017). Including CHQs in our method significantly overestimates Beijing's global economic stature.[6] If only RHQs were considered, Beijing would rank fifth with 43 RHQs, after London (56), New York (52), Hong Kong (52), and Singapore (44).

Other Chinese cities, such as Shanghai and Shenzhen, have emerged as important economic control centres, hosting a significant share of China's publicly listed firms (Pan & Xia, 2014). Large-firm headquarters in China are less centralised than in the US and other Western countries, although, in recent decades, several relocations have been made to Beijing and Shanghai (Pan & Xia, 2014). Projections indicate a significant rise in East Asian global cities as they play vital roles in shaping future global value chains (Chakravarty et al., 2021) and are a primary location for newly opened RHQs (Belderbos et al., 2017; Derudder & Taylor, 2020).

If we aggregated metropolitan areas considering the agglomerations of contiguous cities, the Greater Bay Area in southern China (including Hong Kong, Guangzhou, Shenzhen, Foshan, and Zhuhai) would be second in our ranking, with a total of 62 HQs in 2023. The Greater Bay Area demonstrates numerous features typical for global cities, such as interconnectedness, cosmopolitanism, and abundant APS (Goerzen et al., 2013), supporting its potential inclusion in our ranking. However, following the original approach by Godfrey and Zhou (1999), we treat these urban centres separately.

4.4 Divergent trends across the Atlantic

The economic landscape in the US has undergone a diversification of command centres in recent decades (Csomós, 2017). A trend of relocating US headquarters from New York and Chicago to second-tier cities such as Atlanta, Dallas, and Houston (Holloway & Wheeler, 1999) has strengthened North America's standing in the rankings (Table 1), illustrating a more multipolar urban system within the United States. This evolution contrasts with Friedman's (2005) prediction that American cities might struggle to retain their leading positions in the global hierarchy.

[6] For comparison, Seoul, ranking second in the number of CHQs in 2023, hosts only four CHQs.

New York maintained its premier position as the leading command-and-control hub. However, Chicago fell to the eighth position in the *national* hierarchy. This descent is attributed to the growth in RHQs within metropolitan areas like San Francisco, Philadelphia, Los Angeles, Houston, and Dallas. At the same time, Chicago suffered from the Rust Belt crisis (Pilka & Sluka, 2019). Notably, the Philadelphia metropolitan area (including Wilmington, Delaware) has risen to the global top 10 from outside the top 50, mainly due to Delaware's corporate-friendly tax and regulatory environment (Wood & Roberts, 2011). Similarly, Los Angeles and San Francisco have become central US locations for foreign MNEs (Csomós, 2017; Pilka & Sluka, 2019; Pilka et al., 2022; Stutz & Warf, 2005).

Unlike the US, European cities have experienced mixed trajectories, with a 35% drop in the *top 50* ranking. London and Paris maintained their top positions in the *regional* hierarchy. However, other European cities have shifted diversely. Whereas Milan and Madrid declined, Amsterdam and Dublin strengthened their positions in the global economy. Dublin's significant improvement in global rankings has partially resulted from the move of RHQs from locations like Hamilton and Bermuda, following the Obama administration's stance against tax havens (Csomós, 2017). These findings align with the fDi Intelligence (2020) report, which identifies London, Paris, Dublin, Munich, and Amsterdam as the European cities of the future, characterised by their high investment attractiveness.

Europe's largest continuous urban area – the Rhine-Ruhr metropolitan area – was identified by Hall (1996) and Hymer (1972) as a central hub for leading MNEs. In our analysis, we treated it as separate urban areas. When aggregated, the Rhine-Ruhr area ranks within the top 40 globally, with 21 headquarters. Thus, our approach does not affect our ranking in Table 2.

Conclusions

This paper reveals significant shifts in the global economic decision-making landscape of the early 21st century from a corporate geography perspective. We can place the analyses within the 'third globalisation' outlined in Derudder and Taylor (2020). This corporate globalisation has been enabled by coincidences and a combination of communication and computing industry development (Sassen, 2018). Employing Godfrey and Zhou's (1999) method and applying the EU-OECD definition of metropolitan areas (Dijkstra et al., 2019; OECD/European Commission, 2020), we examined corporate geography, focusing on corporate and regional headquarters. Our findings highlight four key trends:

1. **Dominance of Pacific Rim cities:** East Asian cities (Beijing, Hong Kong, Tokyo, Singapore, and Shanghai) and the US West Coast cities (San Francisco and Los Angeles) have strengthened

their command-and-control footprint in the global economy, rivalling traditional centres like New York and London.

2. **Strengthening US cities:** The number of US cities in the top 50 has more than doubled, driven by HQ relocations from New York and Chicago to second-tier US cities.

3. **Europe's decline:** Despite some cities strengthening their position (Dublin, Amsterdam, London), Europe's overall standing has declined, with a significant 35% decline among the top 50 cities.

4. **Persistent command-and-control disparity:** Despite the global shifts, the distribution of the top 50 metropolitan areas across locations by income levels has remained unchanged.

These shifts indicate a move towards a multipolar world economy with particular governance pressure from Chinese and US cities. The role of China and "a new important Chinese globalisation" is called out in Derudder and Taylor (2020: 1850), particularly concerning developments in banking and knowledge-intensive business services. The increasing number of HQs in 41 of the top 50 world cities underscores the continued globalisation of MNE operations. The shift is primarily toward East Asian emerging economies, where the newly opened RHQs are primarily located (Belderbos et al., 2017; Derudder & Taylor, 2020).

Our research provides insight into the global urban hierarchy. It emphasises the role of the MNE network in regional economic interdependence, guiding policymakers, urban planners, and economists in enhancing their cities' competitiveness and resilience in the global economy.

We acknowledge several limitations, including the approximation of RHQs using first-level subsidiaries, the limited dataset of the 100 largest corporations, the significance of CHQ inclusion for Beijing's ranking, and the sole economic focus.

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