

Chapter 3

Assessing the Gauteng City-Region's Global Presence and Positioning Through Current Global-City Measures

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3.1 Introduction

Traditionally, cities were considered as localized centres of economic and social organization brought about by agglomeration forces (Mumford 1937; Scott and Storper 2015). From these initial stages of urban inquiry there was already a realization that cities and the forces that shape them are varied, but, of these processes, economic processes are the most prevalent as shaping tools. The role of cities has undoubtedly changed over the past few decades, from an extremely localized and inward-focused dynamic to a more outward emphasis and placement within a broader global network of activities. Today, a city's development trajectory is shaped by dynamics beyond its traditional area of influence. Castells' work, although not explicitly focused on cities and their positioning within networks, discusses the idea of networks that transcend borders, invigorated by global networks and connectivity:

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it [the network society] is pervasive throughout the planet, its logic transforms extends to every country in the planet, as it is diffused by the power embedded in global networks of capital, goods, services, labor, communication, information, science, and technology. (2004, pp. 4–5)

With the rapid expansion of the world economy from the 1960s, and the large-scale adoption of neoliberal economic processes, cities now play crucial roles in global economic and social networks, and in knowledge creation and dissemination. Cities and urban hubs now actively compete against each other in an effort to attract, secure and retain global social, economic, cultural and knowledge capital. Cities rely quite heavily on their positioning in various rankings produced by corporations, universities, consulting firms and various other entities measuring a diverse set of criteria. Consequently, the rankings ‘industry’ has ascended in prominence and use.

This chapter aims to determine the positioning of the Gauteng City-Region (GCR) within global (mainly economic) rankings, ratings, hierarchies, benchmarks, and linkages.¹ The GCR is understood to be “an integrated cluster of cities, towns and urban nodes that together make up the economic heartland of South Africa” (GCRO 2016). The GCR is anchored by three metros, Johannesburg, Tshwane (Pretoria), and Ekurhuleni, with Johannesburg being its key economic/financial node. Johannesburg is also the most widely measured and represented South African city in global city-based rankings, hierarchies and benchmarks.

The chapter is structured as follows: After the Introduction (Sect. 3.1), Sect. 3.2 explores the meaning of global city-regions and how they have become important in the present-day geography of the world economy. Section 3.3 focuses on exploring how the GCR is represented in some of the global city-based rankings, ratings, hierarchies and benchmarks, with specific emphasis on how the GCR is represented primarily by Johannesburg (with a few mentions of Pretoria). Section 3.4 provides a summary of the city-based literature on ranking and benchmarking and some insights and concluding remarks.

3.2 Understanding Global City-Regions

Global city-regions differ from global cities in many respects: global city-regions usually extend beyond multiple administrative units (Scott 2001a, b), incorporating multiple nodes or centres, with shared resources and markets, all connected by

¹The JLL (Jones Lang LaSalle) report (2015, p. 4) uses the following definitions: A city **index** is a tool that measures performance over time, a city **benchmark** serves as a standard by which other cities are measured or judged, a city **ranking** is a straightforward list that does not seek to utilize a replicable methodology, and a city **rating** is the use of a point scale to assess city performance.

transportation links. The GCR is an illustration of this. According to Robinson, global cities/world cities² are cities that:

articulate regional, national and international economies into a global economy. They serve as the organizing nodes of a global economic system... [and] can be arranged hierarchically, roughly in accord with the economic power they command... [C]ompetition between world cities and the impact of external shocks shape the fortunes of world cities and their position in the hierarchy. Cities can rise and fall through the hierarchy, and their position is determined by the relative balance of global, national and regional influence. (Robinson 2002, p. 534)

A regional networks of cities, the GCR is comprised of three metropolitan municipalities (City of Johannesburg, City of Tshwane, and City of Ekurhuleni) and two district municipalities (West Rand and Sedibeng). Johannesburg is the economic/financial capital of the country, and Pretoria (in Tshwane) is the political administrative capital. Ekurhuleni, as home to OR Tambo International Airport, is the air transportation capital. Each of these cities plays a particular role within the regional, national and global realm, with some degree of overlap across activities.

But why are city-regions important? Scott (2001b) recognizes that, as key players in the geography of the world economy, city-regions increase efficiency in global networks, and enhance higher innovation, specialization and clustering of similar and/or complementary activities. As engines of economic production and exchange, city-regions have become “closely tied in with clustered flexible networks of firms that compete on increasingly extended markets” (Scott et al. 2001, p. 18). City-regions also demonstrate a distinctive experimentation of new forms of regionalism and governance systems. Available data indicate that these ever-growing large urban agglomerations are found around the world. A United Nations report (United Nations 2014) shows that in 1990 there were only 10 megacities (with 10 million or more inhabitants). In 2014, there were 28 megacities, and these are projected to be 41 by 2030. According to the UN report, there were 21 large cities (with 5–10 million inhabitants) in 1990, 43 in 2014, and these are expected to be 63 by 2030. There were 239 medium-sized cities (with 1–5 million inhabitants) in 1990, 417 in 2014, and there are expected to be 558 in 2030 (United Nations 2014).

Although this chapter aims to gauge how the GCR is positioned in global rankings, hierarchies and benchmarks, this is not a simple feat. Most credible and temporal global rankings, hierarchies and benchmarking studies consider the cities alone, with very limited or no mention of city-regions. Faced with the fact that global city-regions have attracted much attention in academia of late, there is undoubtedly a rationale for focusing on city-regions even if, at best, we use their cores as proxies for what goes on in those regions. The cores do, after all, exert

²Urban scholars remain divided on whether the terms global city and world city are interchangeable, or whether there is a distinct difference. Saskia Sassen (1991) believes that there is a difference. To her, all cities are world cities, but only a few are global, depending on their function and positioning in the global economy. John Friedmann (1986) does not make any such distinction – he refers to cities with increased global function as world cities. For the purposes of this study, the terms global city and world city will be used interchangeably, drawing no difference between the two.

more influence on the city-regions than the non-core areas do. As a result, in this chapter the meaning and positioning of the GCR in global rankings, hierarchies and benchmarks will be inferred through city-based rankings, which consider Johannesburg primarily, and Pretoria and Ekurhuleni only peripherally, if at all. Johannesburg, specifically, will be employed as the proxy for the city-region in most instances. The reason for Johannesburg's prominence and dominance in city-based rankings, hierarchies and benchmarks compared to the other two cities has much to do with the history and functioning of the city within the broader context of the city-region.

Johannesburg was established as a temporary mining camp soon after the discovery of gold in 1886 (see Sect. 2.2 in Chap. 2 of this volume). The Witwatersrand gold mining industry laid the foundation for present-day Johannesburg and all subsequent economic activity in the area. Large-scale gold mining in the region resulted in the Boer Republic, which governed the area at the time, experiencing a spectacular overhaul in function as well as national, regional and international importance. As this unfolded, mining firms with strong links to Europe and North America (e.g., Anglo American Corporation, Johannesburg Consolidated Investment Company and General Mining and Finance Corporation) set up offices and established large-scale production facilities. With the establishment of these large mining firms, complementary functions such as banking and financial services, which were needed to support the burgeoning mining activity, developed as well. This laid the foundation for the financial services industry that currently still dominates the economy of the city, and established Johannesburg as the economic centre of the country, the broader SADC³ region, and the African continent as a whole.

Given that the large majority of global city-based rankings, hierarchies and benchmarks consider (mainly) economic activity, Johannesburg is continually well represented in comparison to Pretoria (in Tshwane) and Ekurhuleni. Pretoria, although prominent in its own right, being the country's administrative capital and hosting a large number of foreign embassies and consulates, does not have a large amount of globally influential economic activity, as the head offices of large banking, accountancy and insurance firms are typically located in Johannesburg. The situation is similar for Ekurhuleni, which functions as an industrial hub and a major air transportation hub with the OR Tambo International Airport and the smaller Rand Airport being located within its environs. Although each city demonstrates a level of speciality, these specializations are all complementary and contribute to the overall functioning of the GCR. There are many examples of successful, high functioning city-regions across the world (e.g., Randstad in the Netherlands) that have recognized and harnessed the potential of agglomerated production systems in an increasingly competitive global economic order (Scott 2001a). The GCR, in contrast, is still developing in many regards. Unlike its more

³Fifteen southern African countries make up the Southern African Development Community (SADC). These are; Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia, and Zimbabwe (<http://www.sadc.int/member-states/>).

developed counterparts, the GCR is functioning sub-optimally with much room for expansion and improvement. Consequently, there is significant motivation for understanding the city-region's viability and performance as an actor within the global capital and financial flows and networks.

3.3 How the GCR Is Faring in the Global City-Regions or Global Cities Measures

Within the broad and densely-populated ambit of city-based literature, this chapter focuses particularly on global city-based rankings, ratings, hierarchies and benchmarks, with specific emphasis on how the GCR is represented, primarily by Johannesburg, with a few mentions of Pretoria. Some rankings incontrovertibly employ rigorous and sound methodologies whereas others rely on a set of pseudo methodologies that cannot hold up when scrutinized closely. In its 2013 research report, the Jones Lang LaSalle (JLL) Cities Research Centre generated a compendium of all noteworthy city-based hierarchies, indices, rankings and benchmarkings, covering global, regional and national geographical scales. It examined a total of 150 reports, in the process categorizing rankings under broad themes as follows: Comprehensive Studies (a grouping of multiple sectors—social, economic, and political); Finance, Investment and Business Environment Indices; Macroeconomic Performance Indices; Quality of Life Indices; Knowledge Economy, Human Capital and Technology Indices; Infrastructure and Real Estate Indices; Environment and Sustainability Indices; Image, Brand and Destination Power Indices; Culture and Diversity Indices; and Cost of Living and Affordability Indices.⁴

This chapter has, however, selected and focused on a few of the indices, which were scaled down by considering: whether the focus area was global and comprehensive (as defined by the JLL 2013 report), whether the index covered economic attributes, and most importantly, if the index focused on Johannesburg, a proxy for the GCR. As space does not allow for a review of all indices, even after scaling down, Table 3.1 documents the full list of all other indices that have a global focus, with respect to the most recent year the JLL 2013 report was published. It records the number of cities surveyed, and Johannesburg's global and regional rank.

3.3.1 Global and World Cities Studies, and Related Work

At the outset, it is important to note that many scholars have contributed to the theoretical and empirical work done on the extensive global or world city system.

⁴For a review of the detailed compendium of 150 city-based measures, see JLL 2013, pp. 8–17.

Table 3.1 Johannesburg's rank across several studies with a global scope

Index name	Year (latest)	No. of cities surveyed	Johannesburg's rank (globally)	Johannesburg's rank (regionally)	Website
Finance, investment, and business environment indices					
Tholons top 100 outsourcing destinations (Tholons 2016)	2016	100	20	1 (7)	www.tholons.com
Foreign direct investments (FDI)					
UN-Habitat City Propensity Index (UN-Habitat 2017b)	2017	100+	104	7 (30)	http://unhabitat.org
IBM: Global Location Trends (IBM 2014)	2014				https://docs.google.com
Macroeconomic performance indices					
Global Metropolitan Monitor (Brookings Institution 2016)	2014	300	173	5(7)	www.brookings.edu
GDP and household income forecast					
McKinsey Urban World Top 25 Hot Spots by 2025 (McKinsey 2011)	2011	24	14	3(4)	http://www.mckinsey.com
Quality of life indices					
Global liveability ranking (EIU 2016)	2016	88	140	1(13)	http://www.eiu.com
IBM: Commuter pain survey (IBM 2011)	2011	16	20	2(3)	http://www-03.ibm.com
Mercer consulting human resources: Quality of living survey (Mercer Consulting 2016b)	2016	440	92	2(3)	https://www.mercer.com
Knowledge economy, human capital and technology indices					
2thinknow consulting: innovation cities (2thinknow Consulting 2015)	2015	441	347	2(14)	http://www.innovation-cities.com
Infrastructure and real estate indices					
Cushman and wakefield: Main street across the world(Cushman & Wakefield 2016)	2016	71	38	1(8)	http://www.cushmanwakefield.com/en

(continued)

Table 3.1 (continued)

Index name	Year (latest)	No. of cities surveyed	Johannesburg's rank (globally)	Johannesburg's rank (regionally)	Website
Mercer consulting: infrastructure survey (Mercer Consulting 2016a)	2016	230	95	4(43)	https://www.mercer.com
Environment and sustainability indices					
EIU best cities spatially adjusted liveability index (EIU 2012a)	2012	70	40	1(8)	http://pages.eiu.com
Image, brand and destination power indices					
Euromonitor international's top city destination (Euromonitor International 2015)	2015	37	100	1(5)	www.euromonitor.com
HRG (Hogg robinson group) hotel survey (HRG 2016)	2016	42	55	3(4)	http://www.hrgworldwide.com
Anholt/GfK roper brands index (Anholt/GfK Roper 2016)	2016	50	5	5(5)	http://www.gfk.com
MasterCard global destination cities index (Mastercard 2016)	2016	132	10	3(10)	https://newsroom.mastercard.com
Cost of living and affordability indices					
UBS: Prices and earnings (UBS 2016)	2016	71	3	2(3)	https://www.ubs.com

Note The numbers in brackets behind Johannesburg's rank in column 5 indicate the number of African cities that were investigated in each index

Earlier academic work by Hall (1966); Bhagwati 1972); Cohen (1981), and Hymer (1982), among others, centred upon the decision-making corporate activities and power of multinational companies (MNCs), in the context of the new international division of labour identified in the late 1970s (Fröbel et al. 1980). See also Friedmann and Wolff (1982), Friedmann (1986), Glickman (1987), Feagin and Smith (1987), Knox (1995), Knox and Taylor (1995), Thrift (1989), and more recently Sassen (1991, 1994).

The Globalization and World Cities Research Network (GaWC), housed at Loughborough University, United Kingdom, has been defining, categorizing, and ranking global cities using ‘relational’ data since 1998. GaWC views the world as a city-centred world of flows in terms of advanced producer services (APS). Taylor (2001) argues that, through cities, these APS firms operate as the prime actors in world city network formation and hence create an interlocking network through their global location strategies of placing offices. The APS selected by GaWC are: Accountancy, Advertising, Banking/Finance, and Law. In related work, GaWC researchers included a fifth category, Management Consultancy (Taylor et al. 2011). A firm qualifies as a global firm when it has offices in at least 15 different cities around the world. Indirect measures of flows between global firms are derived and used to compute a city’s network connectivity, which provides the measure of a city’s integration into the world city network.

GaWC developed a roster of world cities using three levels of global cities, each with several sub-ranks, namely *Alpha* world cities (with four sub-categories), *Beta* world cities (three sub-categories), and *Gamma* world cities (three sub-categories). Other cities were ranked according to *High Sufficiency* or *Sufficiency* world city presence (GaWC 2016). The various grades of cities are discussed in more detail below:

- *Alpha++ cities* are cities such as New York and London, which exhibit high levels of integration with other global cities.
- *Alpha+ cities* are cities which complement London and New York in activity and connectivity, mostly providing advanced producer services needs for areas in Pacific Asia.
- *Alpha* and *Alpha-* cities are extremely important world cities that link major economic regions and states to the world economy.
- *Beta cities* (*Beta+* , *Beta* and *Beta-*) are important world cities that are instrumental in linking their region or state to the world economy.
- *Gamma cities* (*Gamma+* , *Gamma* and *Gamma-*) are world cities linking smaller regions or states to the world economy, or important world cities whose major global capacity is not in advanced producer services.
- Cities with *Sufficiency* of services are cities that are not world cities as defined here, but they have sufficient services that they are not overly dependent on world cities. Two specialised categories of city are common at this level of integration: smaller capital cities, and traditional centres of manufacturing regions.

Johannesburg features quite prominently in the GaWC rankings, in relation to the presence of APS firms. In 2000, 2004, and 2008, the city was rated as a *Beta+* city, the only city in Africa to have a rank that high on the GaWC roster of world cities. The position of the city improved considerably over time. At *Beta+* level,

Table 3.2 Johannesburg's position in the GaWC rankings, in relation to other cities, 2000–2012

	2000	2004	2008	2010	2012
<i>Alpha++</i>	New York London	New York London	New York London	New York London	New York London
<i>Alpha+</i>	Tokyo Singapore	Tokyo Paris Singapore	Paris Tokyo Milan Beijing Singapore	Tokyo Singapore	Paris Tokyo Singapore Beijing
<i>Alpha</i>	Milan Madrid Amsterdam Brussels	Madrid Milan Brussels	Madrid Moscow Brussels Bueno Aires	Moscow Madrid Beijing Jakarta Bueno Aires Mexico City	Milan Moscow Madrid Mexico City Brussels Kuala Lumpur
<i>Alpha–</i>	Zurich Barcelona Prague Buenos Aires	Bueno Aires Beijing Seoul	Warsaw Taipei Rome Lisbon Istanbul Prague Vienna	Johannesburg Taipei Lisbon Warsaw Barcelona	Johannesburg Seoul Bueno Aires Jakarta Taipei Barcelona
<i>Beta+</i>	Johannesburg Manila Vienna	Johannesburg Moscow Berlin Prague	Johannesburg Barcelona Manila Bogota New Delhi	Cairo Rome Manila Bogota Berlin Athens	Cairo Cape Town Kiev Beirut Manila Athens
<i>Beta</i>	Cairo New Delhi Caracas	Cairo Rome Bogota Athens	Oslo Cairo Helsinki Riyadh Geneva	Beirut Oslo Kiev Cape Town Karachi Riyadh	Bogota Caracas Oslo Helsinki Karachi Casablanca
<i>Beta–</i>	Beirut Oslo Luxembourg	Caracas New Delhi Geneva	Kiev Karachi Sofia	Geneva Casablanca Sofia Helsinki Lagos	Tunis Nairobi Lagos Sofia Amman
<i>Gamma+</i>	Karachi Bucharest Helsinki	Manila Beirut Helsinki Bucharest	Nairobi Cape Town Casablanca	Nairobi Tunis Belgrade Edinburgh	Durban San Salvador
<i>Gamma</i>	Nairobi Cape Town Riyadh	Cape Town Karachi	Lagos Amman Calcutta	San Salvador	Ankara Colombo, Muscat
<i>Gamma–</i>	Casablanca Sofia Kiev	Riyadh Edinburgh	Edinburgh Wellington	Ottawa Colombo Durban	Accra, Algiers, Dar es Salaam

(continued)

Table 3.2 (continued)

	2000	2004	2008	2010	2012
				Accra	
<i>High Sufficiency</i>	Lagos Tunis Harare Abidjan Accra Lusaka, Durban	Tunis Lagos Brasilia Casablanca Belgrade	Colombo Tunis Accra Ottawa	Pretoria Brasilia	Gaborone Lusaka Kampala Abidjan Dakar Ottawa
<i>Sufficiency</i>	Windhoek Kampala Dar es Salaam Maputo Dakar Gaborone	Dar es Salaam Nairobi Durban Harare Accra Kampala Luanda Pretoria	Lusaka Harare Gaborone Durban Dar es Salaam	Dar es Salaam Dakar Gaborone Luanda Kampala Abidjan Windhoek Harare	Pretoria Luanda Maputo Harare Abuja Windhoek

Source GaWC (2016)

Johannesburg was on a par with some European cities (e.g., Vienna, Moscow and Berlin) and several cities in developing countries (e.g., Manila, Bogota and New Delhi). The next closest African cities were Cairo (*Beta* status), Nairobi and Cape Town (*Beta-* status) in 2000 and 2004, and Lagos, which was ranked as a *Gamma* city in 2008. In 2010 and 2012 (the most recent GaWC ranking), Johannesburg joined the ranks of *Alpha-* cities, albeit at the lowest level of the *Alpha* city category, the only African city to hold such a high position. At this higher status, it joined the likes of world cities such as Taipei, Buenos Aires, Seoul, and Barcelona. Table 3.2 shows that most African cities qualifying as world cities occupy the lower ranks, *High Sufficiency* and *Sufficiency*.

For their part, Alderson and Beckfield (2004) use relational data (which focuses on MNCs in all industrial sectors) between multinational enterprises (MNEs) and their subsidiaries to (1) assess the power and prestige of world cities in light of three measures of point centrality (i.e., Outdegree, Closeness, and Betweenness) and (2) generalize about ties between *positions* and the *roles* played by different sets (blocks) of cities within the world city system. At the top of their global city hierarchy, where New York, London, and Tokyo appear, their results were similar (notwithstanding a few surprises) to other studies such those by Friedmann (1986, 1995) and Sassen (1991, 1994). The prominence of Paris in the three measures of point centrality is notable here, unlike in other studies. At the lower levels of the hierarchy, however, Alderson and Beckfield's (2004) results show greater discrepancies with past studies. For instance, cities such as Miami, Singapore, Mexico

City, Sao Paulo, and Sydney, did not appear among the 50 high level cities in Alderson and Beckfield's (2004) hierarchy, unlike in the work of Friedmann's (1995) and Beaverstock et al. (1999). Neither did Johannesburg, which by multiple other measures (such as the GaWC study mentioned above) is considered as a powerful world city.

Wall and Van der Knaap (2011) combined GaWC's and Alderson and Beckfield's (2004) approaches (i.e., the focus on APS and multinational corporations in all industrial sectors, respectively) to explore firms' global and regional interdependencies. Wall and Van der Knaap's (2011) analysis of the top 100 global multinationals in 2005 and their ownership linkages with thousands of subsidiaries in 2,259 cities worldwide revealed: (1) nodal centralities and linkage structures within the "all industrial sector" network and the "producer service sector" network, (2) a strong correlation between these two networks, specifically toward the apex of the economic systems, and (3) evidence of the coexistence of hierarchical and heterarchical city network structures. Their results further confirmed the East–West triad (Friedmann 1986; Carroll 2007) of North America, Europe, and Pacific Asia. Wall and Van der Knaap, like Alderson and Beckfield (2004, p. 835), show that southern hemisphere linkages are mainly to Commonwealth countries and South America, and state that "Africa is primarily bound through Johannesburg, Abidjan, Lagos, and Cairo, but the relative share of connectivity to this continent is sparse (1% of the total)" (2011, p. 287).

3.3.2 *Foreign Direct Investments*

Foreign direct investment (FDI) linkages are used as a primary indicator of economic globalization as well as a city's integration into the global economy (Wall 2011; Burger et al. 2013; Wall and Stavropoulos 2016; UN-Habitat 2017b). Wall (2011) argues that Johannesburg is the most globally connected city in Africa and is considered a world player in the global city network. In fact, Johannesburg has gradually caught up with Cairo, and, since 2007, overtaken it to lead in terms of FDI projects on the African continent. In his discussion of the UN-Habitat commissioned study, *The State of African Cities*, Wall (2016) uses inbound and outbound FDI flows to measure African cities' overall globality. He measures Johannesburg's positioning specifically within global, regional and local economic networks, based on both inbound and outbound FDI. Noting that a city's development is not only determined by local urban characteristics, but increasingly by its position within regional and global flows of investment, Wall and Stavropoulos (2016) demonstrate the prominent role of Johannesburg in global financial flows.

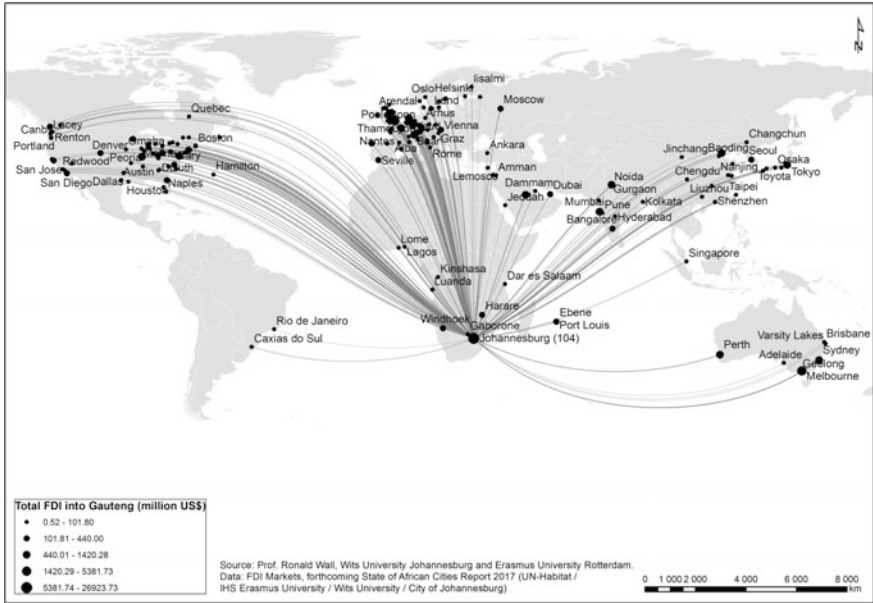


Fig. 3.1 Total FDI into Gauteng (million US\$)

This broad understanding of the interdependence of the three scales—local, regional and global—is crucially needed for effective urban policy development (UN-Habitat 2017a).

Based on an aggregate of global FDI investment from 2003 to 2014, Fig. 3.1 shows that Johannesburg was placed in position 104 globally, attracting US \$8,126 million FDI, excluding resource FDI, and US\$26,924 million FDI, including resource FDI. Comparatively, the total FDI (including resource FDI) attracted by its regional counterparts was as follows: Windhoek (US\$165 million), Luanda (US\$22 million), Lome (US\$11 million), Kinshasa (US\$7 million), Dar es Salaam (US\$6 million), and Lagos (US\$1 million).

In terms of total FDI from Gauteng, Fig. 3.2 shows that Johannesburg’s ability to invest in other cities is significant—the city is in position 71 globally and in the top rank in Africa, with a total of US\$12,640 million out-bound investments excluding resource FDI, increasing to US\$38,029 million when resource FDI is included. Broadly, more than half of Johannesburg’s investments go to North America and slightly more than one-fifth to the rest of Africa. The rest is distributed across the Asian and Pacific realm, the Middle East, Western Europe, Latin America, and the rest of Europe. In terms of services FDI inflows over the period 2003–2014, Gauteng attracted US\$7,113 million. It attracted in-bound investments from several African cities—Windhoek, Harare, Lome, Kinshasa, Dar es Salaam, and Lagos—of US\$165.3, 136.2, 11, 6.8, 5.8, and 1.1 million respectively (see Fig. 3.3). With respect to manufacturing, FDI into Gauteng, Fig. 3.4 shows that the

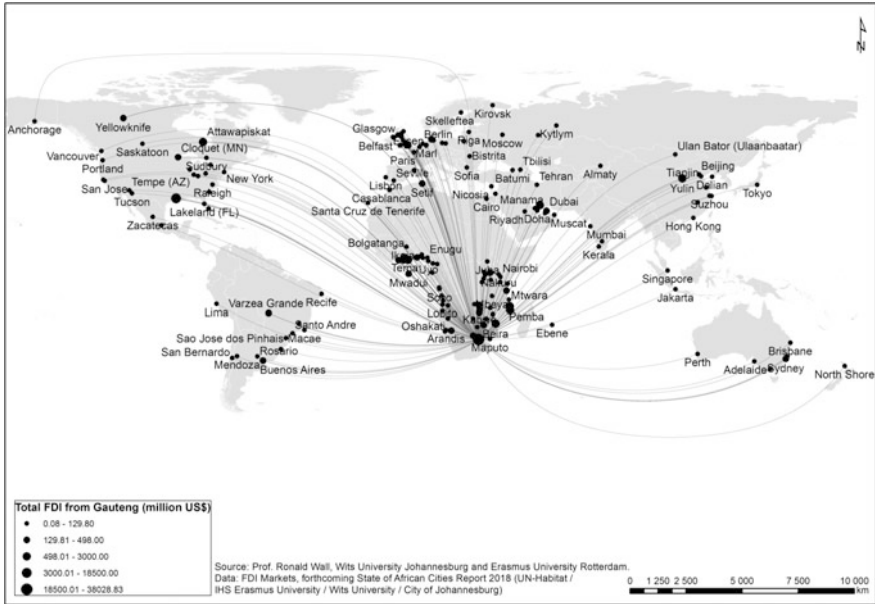


Fig. 3.2 Total FDI from Gauteng (2003–2014)

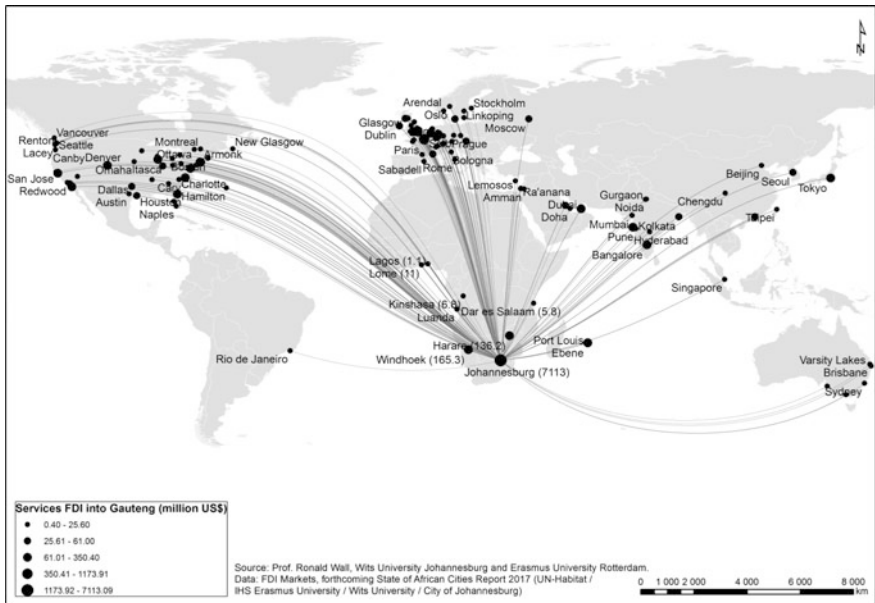


Fig. 3.3 Services FDI into Gauteng (2003–2014)

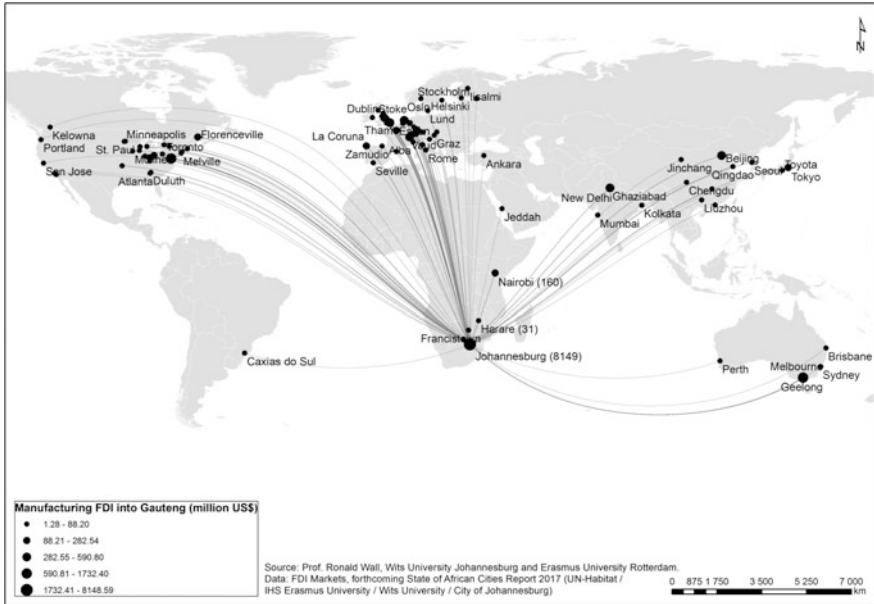


Fig. 3.4 Manufacturing FDI from Gauteng (2003–2014)

city-region attracted a total of US\$8,149 million. This amount includes in-bound investments from Nairobi (US\$160 million), Gaborone (US\$33 million), and Harare (US\$31 million).

Table 3.3 details Johannesburg’s aggregate performance in relation to growth of FDI (excluding resource FDI) from 2003 to 2014. Johannesburg was ranked 16 among 30 African cities cited. Other South African cities and their positions (in brackets) are Cape Town (15), Port Elizabeth (27), and Pretoria (29).

3.3.3 AT Kearney’s Global Cities Index and Global Cities Outlook

The first AT Kearney report, commissioned in 2008, assessed 60 cities’ indices. Since then, it has continuously improved its measurements by including more cities. The total number of cities assessed currently stands at 125. AT Kearney’s measurement indicators are unique because, unlike other global index measurements, they consider the global engagement of cities across five crucial dimensions: Business Activity, Human Capital, Information Exchange, Cultural Experience, and Political Engagement. AT Kearney’s global cities measurements consist of two parts: the Global Cities Index (GCI) and the Global Cities Outlook (GCO). The GCI is intended to provide a view of current performance, while GCO looks at the future

Table 3.3 African city ranking by exponential growth of FDI (Destination 2003–2014)

Rank	City	Country	Exponential growth
1	Harare	Zimbabwe	192
2	Abidjan	Ivory Coast	180
3	Kigali	Rwanda	135
4	Freetown	Sierra Leone	104
5	Ouagadougou	Burkina Faso	96
6	Nairobi	Kenya	93
7	Addis Ababa	Ethiopia	89
8	Mombasa	Kenya	84
9	Kampala	Uganda	66
10	Port Harcourt	Nigeria	43
11	Cairo	Egypt	42
12	Giza	Egypt	41
13	Lusaka	Zambia	40
14	Brazzaville	Congo (DRC)	38
15	Cape Town	South Africa	27
16	Johannesburg	South Africa	25
17	Dakar	Senegal	25
18	Dar es Salaam	Tanzania	23
19	Accra	Ghana	22
20	Kinshasa	Congo (DRC)	18
21	Windhoek	Namibia	17
22	Tangier	Morocco	16
23	Djibouti	Djibouti	16
24	Casablanca	Morocco	12
25	Juba	South Sudan	12
26	Maputo	Mozambique	11
27	Port Elizabeth	South Africa	5
28	Alexandria	Egypt	4
29	Pretoria	South Africa	-7
30	Luanda	Angola	-9

Source UN-Habitat (2017b)

Table 3.4 Johannesburg's Global Cities Index and Global Cities Outlook Index ranking

Year	2008	2010	2012	2014	2015	2016
Johannesburg's GCI rank	50	52	52	56	55	60
Johannesburg's GCO rank					99	102
Total number of cities surveyed	60	65	66	84	125	125

Source AT Kearney global cities index website

potential of the world's 125 largest and most influential cities. The GCI is an all-inclusive index which factors in many elements that are looked at separately in other global measures. It ranks 125 cities according to 27 metrics across five dimensions, hence is useful in comparing various world cities in terms of global reach, performance, and level of development. In contrast, the GCO examines 125 cities and ranks 13 leading indicators across four dimensions: Personal Well-being, Economics, Innovation, and Governance. These indicators are designed to project the likelihood that a city will improve its global standing over the next 10–20 years in terms of long-term success in areas such as environmental performance, safety, and innovation capacity (AT Kearney 2016).

In 2016, the GCI ranked Johannesburg 60 out of 125 of the world's largest and most influential cities. Previously, in the years 2008, 2010, 2012, 2014, 2015, it was ranked 50, 52, 52, 56, and 55, respectively. According to the GCO results, out of the world's 125 largest and most influential cities, Johannesburg was ranked number 99 in 2015 and 102 in 2016 (see Table 3.4).

3.3.4 Economist Intelligence Unit Hotspots

The Economist Intelligence Unit (EIU), a research and analysis division of the Economist Group and the world leader in global business intelligence since 1946, is been a significant source of information on business developments, economic and political trends, government regulations and corporate practice worldwide. The 2010 report states that with over half the world's population now living in cities, cities are crucial sites in terms of global capital flows (EIU 2010). Around 80% of global GDP is generated by cities. The EIU asserts that global businesses now consider cities, rather than countries, as points of actual business exchanges—thus the competition between and among cities for a piece of the global capital pie. In measuring city competitiveness, the EIU has a unique approach, particularly in its understanding of competitiveness not being primarily economically based—other equally important, non-economic factors, are taken into consideration.

The EIU's compiled scores are weighted (as per percentages in brackets in Table 3.5) between 1 and 100, where 1 implies intolerable and 100 is considered ideal. According to the EIU 2012 report (see Table 3.5), Johannesburg ranked 67 out of 120 cities, with a cumulative score of 47.1, the highest of the seven African cities present in the ranking. The other African cities in the EIU 2012 report were

Table 3.5 EIU hotspots showing Johannesburg's rank and score, 2012

Rank	Overall	Economic strength (30%)	Physical capital (10%)	Financial maturity (10%)	Institutional effectiveness (15%)	Social and cultural capital (5%)	Human capital (15%)	Environment and natural hazards (5%)	Global appeal (10%)
1	71.4	54	92	100	85.8	95	76.5	66.7	35.7
2	70.4	41.9	90.2	100	83.8	92.5	75.6	75	65.1
67	47.1	28.7	66.1	50	70.8	61.7	64.3	54.2	8.5
119	27.6	29.6	39.3	16.7	23.2	22.5	44.2	33.3	2.8
120	27.2	25.7	42.9	16.7	21.2	15.8	40.6	66.7	1.3

Source EIU (2012b)

(scores in brackets): Cape Town (45.9), Durban (41.2), Cairo (35), Nairobi (34.6), Alexandria (31.8), and Lagos (27.6). In Table 3.4, New York and London are in first and second places, while Lagos and Tehran were ranked at 119 and 120, respectively.

What further sets the EIU ranking apart from others is the incorporation of a 2025 forecast report for the same 120 cities ranked in 2012. The EIU argues that the need for 2025 projections is necessitated by the fact that as cities rise in prominence, competitiveness between them grows. In the forecast 2025 scores, Johannesburg is ranked 66, with an average weighted score of 50.5.

3.3.5 PricewaterhouseCoopers's 'Cities of Opportunity'

PricewaterhouseCoopers (PwC)—in partnership with the City of New York—collects and analyzes publicly available data⁵ from various sources to produce *City of Opportunity* (CoO) reports, which are among the most comprehensive examinations of cities in the world. Beginning in 2007, PwC has so far produced seven editions of these reports. With a methodology that is continuously evolving, the CoO reports capture current trends in urban reality and devise ways to support and sustain urban development.

Unlike other studies, which consider all major world cities in their rankings, CoO reports currently examine 30 (up from 11 in 2007, 21 in 2010, and 27 in 2012) of the leading world cities—business, finance and culture hubs. Moreover, the CoO reports have continuously widened their analytical infrastructure to incorporate what are now 67 variables in the 2016 edition (up from 59 variables in 2014). Once the data is collected, it is ranked and scored in terms of 10 indicator groups: Intellectual Capital and Innovation; Technology Readiness; How accessible a city is to the rest of the world; Transportation and Infrastructure; Health, Safety, and Security; Sustainability and the Natural Environment; Demographics and Liveability; Economic Clout; Ease of doing business; and Costs (PwC 2014, 2015b). The latest CoO (2016) report ranks Johannesburg at 7 out of 30 cities, with 30 being the best performing city, and 1 being the worst performing city. This position is an improvement from its rank of 3 out of 27 cities in 2012, attributable to Johannesburg outperforming all cities in cost competitiveness.

Importantly, in 2015 PwC published a CoO edition entitled *Into Africa: The Continent's Cities of Opportunity Report, 2015*, which focused on Africa alone. This report was designed to highlight Africa's growth and universal importance in the global economy. The *Into Africa* report assessed the relative merits of 20 African cities across 29 variables grouped under four indicator headings:

⁵PwC collects data from three main sources: global multilateral development organizations (e.g. the World Bank and the International Monetary Fund); national statistics organizations (e.g., UK National Statistics and the US Census Bureau); and various commercial data providers (PwC 2015b).

Infrastructure; Human Capital; Economics; and Society and Demographics. For each variable, the 20 cities are ranked from 20 (best performing) to 1 (worst performing). In this indicator, Johannesburg was ranked 4, with Cairo, Tunis and Addis Ababa at 1, 2, and 3, respectively, and Casablanca at 5. This is attributable to its municipal organisation and infrastructural, and social and cultural bases that are likely to ensure it thrives and prospers into the future (PwC 2015a).

3.3.6 *Z/Yen Global Financial Centres Index*

The Z/Yen group—sponsored by the Qatar Financial Centre Authority—calculates its Global Financial Centres Index (GFCI) as an indicator of the competitiveness of 87 major financial centres (a third of them in emerging economies), recognizing the changing priorities and concerns of finance professionals. According to Goldberg et al. (1988, p. 83), global financial centres are “major urban concentrations of financial services with a large portion of those services directed towards international financial transactions, as well as leading domestic centres for financial services in their own countries”. Global financial centres have become another key feature in the study of world cities.

Reed (1981) was the first to refer to the presence of international financial centres as a key component of global cities. He identified and ranked so called world cities on the strength of their financial centres. However, Reed's interpretation of global financial centres failed to unpack how international financial centres came into being. Sassen (1999) attempts to identify the factors that differentiate global financial centres from other so called ordinary cities (Faulconbridge 2004). She indicates that there are two key factors responsible for turning an ordinary city into a global financial centre: the first factor is the shift of scattered equity holdings from various areas to a highly consolidated regional centre. Major institutional banks and investment houses, establishments with significant equity holdings, are typically located within the consolidated regional centre. The second factor is emerging markets, which start receiving new financial investments, and take the first steps towards becoming global financial centres. Sassen (1999) suggests that as these global financial centres emerge, they will connect with other international financial centres to take advantage of various business synergies.

The GFCI, produced biannually since its inception in 2007, incorporates data from online questionnaires of over 26,000 financial centre assessments, together with over 80 indices from organizations such as the World Bank, the Organization for Economic Co-operation and Development (OECD) and the Economist Intelligence Unit. These data include elements such as people, business, environment, infrastructure, market access and general competitiveness. Table 3.6 shows that Johannesburg's rank has fluctuated, perhaps partly because of the number of cities surveyed. The latest report, GFCI 2015b, ranks Johannesburg at 33 out of 84 cities surveyed—the only African city on the list of global financial centres.

Table 3.6 Johannesburg's ranking according to Z/Yen Group

Year	Johannesburg's ranking	No. of cities surveyed	Year	Johannesburg's ranking	No. of cities surveyed
2007a	–	46	2011b	52	75
2007b	43	50	2012a	55	77
2008a	41	50	2012b	54	77
2008b	44	59	2013a	62	79
2009a	48	62	2013b	61	80
2009b	50	75	2014a	50	83
2010a	54	75	2014b	38	83
2010b	54	75	2015a	32	82
2011a	54	75	2015b	33	84

Source Z/Yen Group (various years)

Note a and b refer to midyear (June) and year end (December) reports for the respective years

Table 3.7 Function-specific and actor-specific ranking of Johannesburg

Function	Rank (out of 42)	Actor	Rank (out of 42)
Economy	39	Manager	42
Research and development	41	Researcher	42
Cultural interaction	39	Artist	39
Liveability	42	Visitor	42
Environment	37	Resident	42
Accessibility	42		

Source The Mori Memorial Foundation (2016)

3.3.7 *The Mori Memorial Foundation's Global Power City Index*

The Global Power City Index (GPCI) is calculated by the Mori Memorial Foundation's (MMF) Institute for Urban Strategies. According to its website, since the release of its first GPCI report in 2008, MMF has continued to update its rankings every year, based on new research and data (Mori Memorial Foundation 2016). Currently, it is considered to be one of the leading city indices strategies not only by analysts in Tokyo and Japan, it's 'home' terrain, but also by analysts in many other cities and countries worldwide. It is also considered a good reference for urban policies and business strategies. Methodologically, MMF evaluates and ranks major world cities according to their 'magnetism' or comprehensive power to attract creative people and business enterprises from around the world. The level of magnetism is based on six main functions representing city strength (Economy; Research and Development; Cultural Interaction; Liveability; Environment; and Accessibility), and five global actors leading urban activities (Manager; Researcher; Artist; Visitor; and Resident). This is designed to provide an all-encompassing view

of a city. In this way, the GPCI points to the strengths and weaknesses of each city and uncovers problems that need to be overcome.

From 2008 to 2015, 40 world cities were selected and evaluated, with Cairo as the only African city listed during this period. In 2016, however, 42 cities were selected and Johannesburg, which the index considered to be one of Africa's rapidly developing cities, is one of the new additions to the ranking. It was ranked 42 overall. Table 3.7 shows that Johannesburg's performance in the 2016 GPCI assessment was dismal—it was ranked last or close to last in all given functions, suggesting that the city has many challenges to overcome if it is to compete with the world's leading urban centres.

3.3.8 *The Arcadis Sustainability City Index*

Arcadis has a long and rich history dating back to 1888.⁶ It has grown through various mergers and acquisitions to be the leading design and consultancy firm for natural and built assets (Arcadis 2015, 2016). Its Sustainability City Index (SCI), first launched in 2015, considers the world's 50 most prominent cities, in 31 countries, and examines their viability as places to live, their environmental impact, their financial stability and how these elements complement one another (Ibid.). Its 2016 SCI provides an even more comprehensive indication of sustainability and has a wider coverage of 100 cities around the world, both in developed and emerging economies (Ibid).

The Arcadis SCI ranks cities based on three indices: People, Planet and Profit, with a city receiving a score of sustainability for each of the three indices and an overall score equal to the average of the three sub-indices. The *People* sub-index measures social performance and the quality of life in cities in terms of health (life expectancy and obesity); education (literacy and universities); income inequality; work–life balance; dependency ratio; crime and housing; and living costs. The *Planet* sub-index measures 'green' factors such as energy consumption and renewable energy share; green space within cities; recycling and composting rates; greenhouse gas emissions; natural catastrophe risk; drinking water; sanitation; and air pollution. The *Profit* sub-index assesses business environment and economic health by examining performance, and combines measures of transport infrastructure (rail, air and traffic congestion); ease of doing business; tourism; GDP per capita; the city's importance in global economic networks; connectivity in terms of mobile and broadband access; and employment rates (Arcadis 2016).

In the two comprehensive 2015 and 2016 reports, Johannesburg is ranked among the world's cities at 37 (out of 50) and 90 (out of 100), respectively. With respect to the sub-indices People, Planet and Profit, Johannesburg ranked 41, 35

⁶Arcadis was founded in the Netherlands as the Association for Wasteland Redevelopment, promoting agricultural development of Dutch heather lands (www.arcadis.com).

and 32 respectively, in 2015, and 99, 72 and 73 respectively, in 2016. However, exactly how Arcadis identifies and assigns scores to these cities based on these metrics is not transparent. Its emphasis on specific metrics (i.e. by assessing cities through the narrower lenses of sustainability, resilience, and reputation) has a tendency to expose a global city's weaknesses, while negating some of its strengths (Leff and Petersen 2015).

3.4 Summary and Conclusion

The chapter has shown that Johannesburg is a global city and, by extension, a gateway to Africa, especially sub-Saharan Africa. However, its rank fluctuates across many of the variables used by the various organizations and academics that participate in global city ranking and benchmarking. From a synthesis of the myriad city-based literatures on ranking and benchmarking, the next sections will draw several insights and conclusions.

3.4.1 *Academic Rankings Versus Non-academic Rankings*

At the risk of oversimplifying, it is worth noting that city-based rankings are undertaken by both academics and non-academic institutions, for various reasons and to serve different purposes. Academic rankings are observation-based with the aim, in most instances, of understanding why things or phenomena happen, whereas non-academic rankings are far more concerned with outcomes and projections, considering the value to be derived from the product. The variety of non-academic rankings is testament to this, serving largely niche audiences and using an assorted set of gauges. Academic rankings vary in focus and methodologies, the most popular form being economically based, and consider an array of economic functions as a way to determine globality. According to Beaverstock et al. (1999, p. 446), the first phase of global city studies sought to identify the strategic domination of certain world cities in the world system by analyzing and ranking the locational preferences and roles of multinational corporation (MNC) headquarters in the developed world (see also Hall 1966; Heenan 1977; and Hymer 1982).

Later academic work focused on decision-making corporate activities and power of MNCs in the context of the new international division of labour first mentioned by Fröbel and others in the 1970s (Fröbel et al. 1980; Cohen 1981). Authors such as Friedmann and Wolff (1982), Friedmann (1986), Glickman (1987), Feagin and Smith (1987), Knox (1995) and Thrift (1989) enriched the 'theoretical' approach taken by world city studies. This work also acted as a major catalyst for work in the 1990s, principally by Sassen (Beaverstock et al. 1999). Later, academics started to examine cities within a global urban hierarchy as part of internationalization

observed in the concentration and intensity of producer services in the world economy (Beaverstock et al. 1999; Alderson and Beckfield 2004; Wall and Van der Knaap 2011). Sassen (1991, 1994) is prominent here, among others, especially within the GaWC Group and Network. Other less popular academic rankings include the approach of measuring the level of international migration into cities and transportation and telecommunication network infrastructures.

Benton-Short et al. (2005) confirm that most global city ranking mechanisms are economically based and, concurring with those who advocate for a broader conceptualization of globalization beyond just the internationalization of capital and finance, or over reliance on economic indicators (see for example, Sassen 1999; Samers 2002), maintain that immigration is also a very important tool to measure global city-ness. They challenge us to contemplate the fact that cities that do not feature strongly in global economic rankings, for example, Dubai, Miami, Muscat and Medina, appear on the lists when immigration (percent foreign-born) to cities is explored. Curiously, in this instance, economic powerhouses such as New York and London are ranked only 15 and 24, respectively.

Elsewhere, those advocating for solely infrastructural measures of the global city argue that “what flows in and out of cities [is] just as important as what is fixed within” (Allen 1999; Castells 2001). These aspects have been covered in some form in the previous sections (e.g., considering inflows and outflows of FDI investments). Nevertheless, infrastructural measures of the global city cannot be wished away. Many scholars have applied infrastructural measures, such as air transport statistics (Smith and Timberlake 1995, 2001, 2002; Derudder and Witlox 2005; Derudder 2008), freight networks in the form of sea-land and airfreights (Rimmer 1991, 1996), and transfer of telecommunications data (Moss 1987, 1991) to measure global city-ness, albeit with varying results. For instance, Rimmer (1996) cautions that while cities such as Kaohsiung (Taiwan) and Pusan (South Korea) appeared alongside better known world cities such as Singapore, Hong Kong, New York and Tokyo, they cannot be regarded as world cities per se (see also Derudder (2008) and Rutherford (2004) who caution about drawing conclusions).

Work by Otiso et al. (2011) is worth mentioning as it relates to an examination of African cities globally and among themselves. They focus explicitly on airline connectivity of African cities as a measure of globalisation, considering firstly, the position of African cities in global transnational urban networks, and secondly, the inter-urban relationships of major African cities. Using data from the MIDT database, which has airline booking, transit stops and final destinations data, Otiso et al. (2011) established that whilst African cities generally have poor airline connectivity internationally and between themselves, certain cities such as Johannesburg (Ekurhuleni), Cape Town, Durban, Cairo, Casablanca and Nairobi have steadily increased their global connectivity and are experiencing heightened levels of integration. This is most true of Johannesburg (Ekurhuleni) which has increased its air connectivity dramatically post-1994. Otiso et al. (2011) note that all Africa's air transportation hubs increased their number of origin/destination passengers from 2001 to 2009. In 2009, Johannesburg increased its number of O/D passengers to

11,689,885 million, doubling its 2001 total. Johannesburg was followed by Cairo, Cape Town, Durban, Casablanca, Nairobi, and Tunis.

Extending the work by Otiso et al. (2011), Bassens et al. (2012) used the Computer Reservation System (CRS), which holds information from 2003 onwards and details all travel bookings made, including transit stops, to examine changes in airline connectivity for 61 major African centres to 464 major non-African cities across the globe, in the period 2003–2009. With change in connectivity represented as a percentage (still a crude measure), Bassens et al. (2012) concurred with Otiso et al. (2011) that Africa has seen an increase in the number of air travel passengers.

Outside of academic investigations, the measures of a global city are varied with respect to focus and outcomes. The first ever global study producing a city-based hierarchy was commissioned by the Swiss Bank UBS in 1970. Its *Prices and Earnings Survey*, as a typical comparative study, looked at the purchasing power of citizens in 72 countries worldwide. It was followed by other large global firms compiling similar reports gauging, for example, the cost of doing business and comparative salary scales in different locales, in an effort to guide investment decisions (Leff and Petersen 2015). In JLL (2013), a rich list of the non-academic reports is highlighted. It is important to appreciate that these non-academic rankings are usually commissioned with specific intent, utilising distinct methodologies, and are churned out more regularly, that is, yearly or bi-annually. Usually, non-academic rankings focus on economic aspects of a city (as most non-academic rankings are used as business decision-making tools), while a few collate economic and some of the other variables, including proxies for political environments, social elements, physical infrastructure and the natural environment.

3.4.2 The Relativeness Inherent in Global-City Measures

Although a few of the global city research indices recognized Johannesburg as a city with global promise, a general survey of other global city research has not shown the city in an overly favourable light. Although it is an African city typically well represented in global indices, it is undeniably correct to note that its ranking fluctuates depending on the rankings used. Dangschat (2001) cautions that because rankings operate at different scales and employ a variety of methodologies, it is difficult to gauge whether rankings are useful instruments for cities at all. More often than not, they highlight inconsistencies and contradictions between different studies, depict quite complex, confusing and differing pictures of cities, and frequently negate local dynamics, which influence a city and its distinctive growth trajectory.

In the case of Johannesburg (Gauteng city-region) its position is dependent on the ranking utilized—the city fluctuates in terms of performance based on what

variables are measured. However, rankings still attract attention. Leff and Petersen (2015) emphasize that “regardless of completeness, any methodology that offers sources, date of collection, and/or reasoning behind their selections, is more useful to cities that seek to understand the scoring system”. Leff and Petersen stress that in order:

[t]o draw value from these indices, cities must understand their history, differences, and continuing evolution. Most importantly, they must look beyond the scorecard to understand that these reports can paint a more nuanced portrait of a city and what it needs to do to improve its global reach and its quality of life at home. (2015, p. 1)

For a multitude of reasons, cities and regions across the globe continue to utilize and depend on rankings as a means of improving competitiveness and overall positioning in comparison to other global cities (Begg 1999). Within the current global economy characterized by increased integration and fluidity of capital, for example, Johannesburg has established itself as an emerging global city, and, just like other cities, it has utilized rankings as a way to highlight competitive advantage in a bid to attract global economic and social capital, tourism and so forth.

While cities themselves use global rankings as marketing tools, MNCs commission rankings to determine the best possible locations for investment as a precursor to maximizing profit (Giffinger et al. 2010). The use of rankings is not a new phenomenon, as stressed earlier, and regardless of their use, the rise and proliferation of commissioned rankings is of particular interest. Questions to contemplate going forward are: What are the overall benefits of city-based rankings? Why have they become so popular in the last few decades? Should we accept what rankings say about cities and city-regions without question?

Rankings needs to be carefully scrutinized, and understood within the larger context of their purpose and target audience. In an internal newsletter, the then Executive Mayor of Johannesburg, Mpho Parks Tau wrote that according to the Good City Index conducted by US-based *Good* magazine:

Johannesburg has emerged as the second most inspiring city in the world, the most visited city in Africa, and a city that is relatively peaceful.... [T]hese global rankings confirm Johannesburg's status as a world-class African City, an economic powerhouse and the heartland of trade and economic activity on the continent. (City of Johannesburg (CoJ) 2014, p. 2)

It is necessary to question the overall benefit of such city-based rankings, hierarchies and benchmarks and whether they can be taken seriously. The Good City Index (GCI) gives little detail regarding its methods, and does not justify how cities were chosen or why they occupy the positions they do in the rankings.⁷

⁷The various sub-indices used by the Good City Index are: Hub for progress (improvements to civic life); Civic engagement (engaging with citizens); Street life (support and creation of vibrant street life); Defining moments (reaction in times of crisis); Connectivity (connections between people in the city); Green life (promoted in urban environments); Diversity (encouraging multiculturalism); and Work/Life balance (optimum balance between the two). No weighting is provided for understanding the contributions of the various sub-indices to the overall index.

According to the GCI, the following event contributed to Johannesburg's high ranking:

After the public outcry that followed rats eating three of the fingers and parts of the nose of a one-month-old baby in Alexandria, the city implemented a radical solution: barn owls. In September, owl boxes were placed around schools in Alexandria (sic) and Marlboro with the intent of ridding townships of rat infestations. Only a few minor hiccups ensued: some superstitious local residents thought the owls were evil, and thus rejected the plan, while the NSPCA responded to several incidents of these misinformed residents attacking owls. Despite this, the plan moves forward—a positive example of city government trying a creative solution to mitigate a quality of life issue. (Good Magazine 2014)

Although such a narrative shows the overall dedication of the city to improving its citizens' quality of life using non-conventional methods, it is not the right sort of example to justify the city's placement in the GCI and validate a high ranking—it is possibly not a 'virtue' to be ranked at all. It is a 'feel good' episode that is not quantifiable, yet the City of Johannesburg latched on to this index and used it as a marketing tool to promote its image as a 'world-class city'. In the broader scope of world cities, do rankings such as these bring a city and region the right sort of attention on a global scale? City-based rankings should always be considered in light of the methods that are employed and the politics and motivations that drive their design and formulation as well as their use. Rankings are not innately valuable, or dangerous, but they need to be carefully considered.

In the final analysis, it must be stressed that rankings can be effective or ineffective, depending on what it is that corporates and city governments choose to focus on. Leff and Petersen (2015, p. 3) rightly argue that when "read correctly, they can be an important tool for cities wanting to strengthen their ability to compete globally. Read incorrectly, they are little more than fodder for civic bragging rights".

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