

# TALES OF TWO CITIES: POLITICAL CAPITALS AND ECONOMIC CENTRES IN THE WORLD CITY NETWORK

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*Abstract:* The majority of major cities in the world city network are capital cities. Between primacy and political specialization there are examples of countries where the capital city and a second city remain as major rival cities in contemporary globalization. In this paper we focus upon situations where the capital city is less important in global economic capacity: Rome and Milan, Berlin and Frankfurt, Abu Dhabi and Dubai, Delhi and Mumbai, Islamabad and Karachi. This is an exercise in double comparisons: between cities in each pairing and between the pairings. Despite the massive differences – economic, cultural and political – amongst our chosen pairs of cities we have found communalities relating to the specific circumstance we are investigating. First, there is some evidence that economic centres are more global and less local than their capital cities. Second, more particularly, we have shown that in terms of global economic connections there is a very consistent pattern: economic centres have a much more coherent and telling integration into the world city network.

*Keywords:* city network, economic globalization, capital cities, economic centres, global service centres.

## INTRODUCTION

Capital cities come in very many types and sizes. At one extreme there are national primate cities where the capital dominates economic and cultural activities of a country. London in the UK and Paris in France are generally recognized as extreme cases of this situation with there being no rival to the capital amongst other cities in the country. Such primacy is particularly common in post-colonial countries across the world from Mexico City and Buenos Aires to Manila and Jakarta. With globalization, primacy processes seem to have been accentuated in many other countries as transnational firms concentrate their advanced functions on one city per

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country, usually the capital city. This can be seen in the increasing importance of Tokyo over Osaka, Moscow over St Petersburg, Stockholm over Gothenburg, Santiago over Valparaiso, and Cairo over Alexandria. The result is that the majority of major cities in the world city network are capital cities (Hall 2006).

But there is another tradition of capital city formation that creates specialist political centres with relatively little economic or cultural power. Sometimes these are completely new capital cities such as Washington, DC, Brasilia, Abuja, Canberra, and Dodoma. Capital city functions do provide economic opportunities and therefore such cities may grow their economic functions but still not becoming dominant outside the political sphere. Washington, DC is the best example of this process (Abbott 1999) but it really does not rival New York economically and neither do the other cities above rival Sao Paulo, Lagos, Sydney or Dar es Salaam respectively. Also relatively minor cities are sometimes chosen as capital for reasons of regional compromise or territorial centralization. Thus Ottawa, Ankara, and Astana are not economic rivals to Toronto, Istanbul or Almaty.

Between primacy and political specialization there are examples of countries where the capital city and a second city remain as major rival cities in contemporary globalization. Thus both Madrid and Barcelona are important cities in the world city network and the same is true for Milan and Rome. The difference between these two cases is that in the Spanish example the capital city is more important in global economic capacity whereas in Italy the obverse prevails. In this paper we focus upon tales of two cities that appear to mirror the Milan/Rome situation in contemporary globalization. Other cases considered are Berlin/Frankfurt, Abu Dhabi/Dubai, Delhi/Mumbai and Islamabad/Karachi.

This is an exercise in double comparisons: between cities in each pairing and between the pairings. We use a quantitative methodology, world city network analysis (Taylor 2004), that focuses on how advanced producer service firms (financial, accountancy, advertising, law, and management consultancy) use cities to carry out their work. Such analysis provides measures of potential working links between cities as global service centres. Although these firms are not generally the largest transnational corporations, they are at the cutting edge of economic globalization and as such they are vital indicators of a city's global capacity. The data we use below is for 2012

and includes 175 firms and their offices in 526 cities. There is a technical appendix that specifies the measures we use. The paper is an updating and comparative extension of a previous world city network study of Milan and Rome (Taylor 2012).

As a comparative exercise in the world city network there will be two basic tendencies that we are keen to separate. On the one hand there is the common circumstance that we are investigating (capital city/economic centre similarities), and on the other hand there are particular national histories through which the pairs of cities have come to global prominence. The separation between these two processes is usually done through intensive qualitative studies (e.g. Ruble 2001), the subtleties and nuances of which cannot match here, but our quantitative approach does produce interesting contrasts in how different cities are economically connected and thereby how they are faring in contemporary globalization. This is in itself a fascinating tale to tell.

The argument is developed in two parts. We begin by considering the globality of cities and then move on to the details of cities' external geographies.

## CONTRASTING CITY GLOBALITIES

Table 1 shows the global network connectivities of our ten cities. This is the basic overall measure of a city's global importance; it indicates a city's degree of integration into the world city network through the advanced producer service firms in the city. It is presented as percentages of the most integrated city's (London's) connectivity: thus we see from column 2 that there are four cities – Milan, Frankfurt, Dubai and Mumbai – whose connectivity is more than half of London's connectivity. In column 1 the global rank of each city (out of 526 cities in the overall analysis) is given to show the overall global context – the same four cities are all in the global top 20.

The first point to make about table 1 is that it clearly shows the global connectivities of the five capital cities far below their national economic rivals. The smallest difference is between Delhi and Mumbai, the largest between Abu Dhabi and Dubai. Rome/ Milan has a narrower difference than Berlin/Frankfurt.

Tab. 1. *Global network connectivities of the five city pairs*

City pair	GNC rank	GNC	Standardized change 00-12
<i>Rome</i>	46	42.29	0.61
<i>Milan</i>	13	59.30	-0.35
Berlin	64	35.01	-0.87
Frankfurt	15	57.92	-0.13
<i>Abu Dhabi</i>	94	26.81	0.34
<i>Dubai</i>	8	63.14	4.44
Delhi	36	46.70	1.18
Mumbai	12	59.42	1.57
<i>Islamabad</i>	129	23.00	0.04
<i>Karachi</i>	82	30.41	-0.03

Tab. 2. *Globalism and localism*

City pair	Globalism		Localism	
	With Top10	With Top20	Within country	Within world region
<i>Rome</i>	1.22	2.18	-0.25	2.07
<i>Milan</i>	2.04	3.36	-0.63	0.59
Berlin	0.33	0.68	1.13	2.36
Frankfurt	2.98	4.40	-0.13	0.23
<i>Abu Dhabi</i>	1.59	2.63	-0.14	0.19
<i>Dubai</i>	2.34	3.74	-0.66	-0.66
Delhi	1.14	2.15	0.21	0.35
Mumbai	1.80	2.84	0.19	0.28
<i>Islamabad</i>	-1.47	-2.32	0.19	0.46
<i>Karachi</i>	-0.26	-0.23	-0.01	0.55

We have been collecting data for world city network analysis since 2000 and column 3 in table 1 shows relative change from 2000 to 2012. In general this period saw an enhanced globalization of services across the world so that in relative terms many cities outside the tradition core of the world-economy (western Europe, northern America, Japan) increased their connectivity less than cities in other parts of the world. Thus Milan, Berlin and Frankfurt (but not Rome) have relatively declined in their integration into the world city network. But beyond this global pattern there is no clear pattern at the national scale; we can make the following statements: Rome is relatively catching up on Milan, but Berlin is falling further behind Frankfurt, Dubai is pulling far ahead of Abu Dhabi, and Mumbai is moderately improving its position in comparison to Delhi, whereas there is actually little change for Islamabad and Karachi. For understanding these changes we would need a qualitative approach to discern the particular differences across the national contexts.

Where our quantitative approach is specifically useful is in disaggregating the overall global network into constituent parts. Table 2 shows two simple forms of disaggregation that indicate how 'global' and how 'local' are each cities' pattern of connections. Globalism is shown by the relative importance of connections to the leading cities in the world city network – the top 10 and top 20. Notice straightaway that all but the Pakistan pair of cities are above average on this measure (i.e. positive). This is because our cities are important cities that have a general bias in linking to the most important cities. But of more relevance to this study, we find a common pattern: the economic centre is more connected to both top 10 and top 20 cities than the capital city. This difference is clearest for Berlin/Frankfurt, with Rome/Milan second. The difference includes Islamabad/Karachi even though this pair is untypically negative is their globalism.

Localism is also measured in two ways: a city's connections with other cities in its country, and with other cities in its world region (the regions for our city pairs are Europe, Middle East/North Africa and South Asia). The relative values on the national measure are quite variable (6 negative, 4 positive) and may be related to the number of other important cities in the country (notable in Germany and India). In contrast all cities show a bias in connections to their own world region except Dubai. The latter probably relates to the city's special relationship with London (Bassens 2013). But despite these

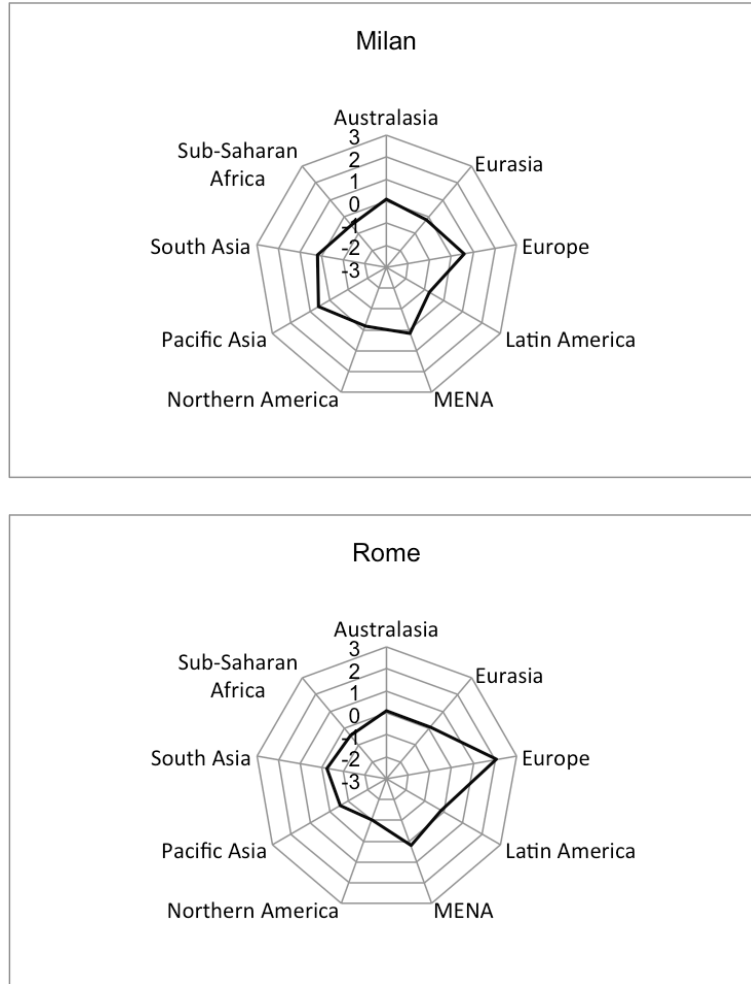


Fig. 1. *Milan and Rome*

variations in sizes of connectivity, there is again a pattern: capital cities tend to have greater localism than economic centres. But in the cases of Mumbai/Delhi and Islamabad/Karachi, there are little differences within the pairs. The fact that Islamabad/Karachi expresses a slight opposite pattern may indicate a particular weakness of the latter city as an economic centre (it has by far the lowest world rank of the economic centres in table 1).

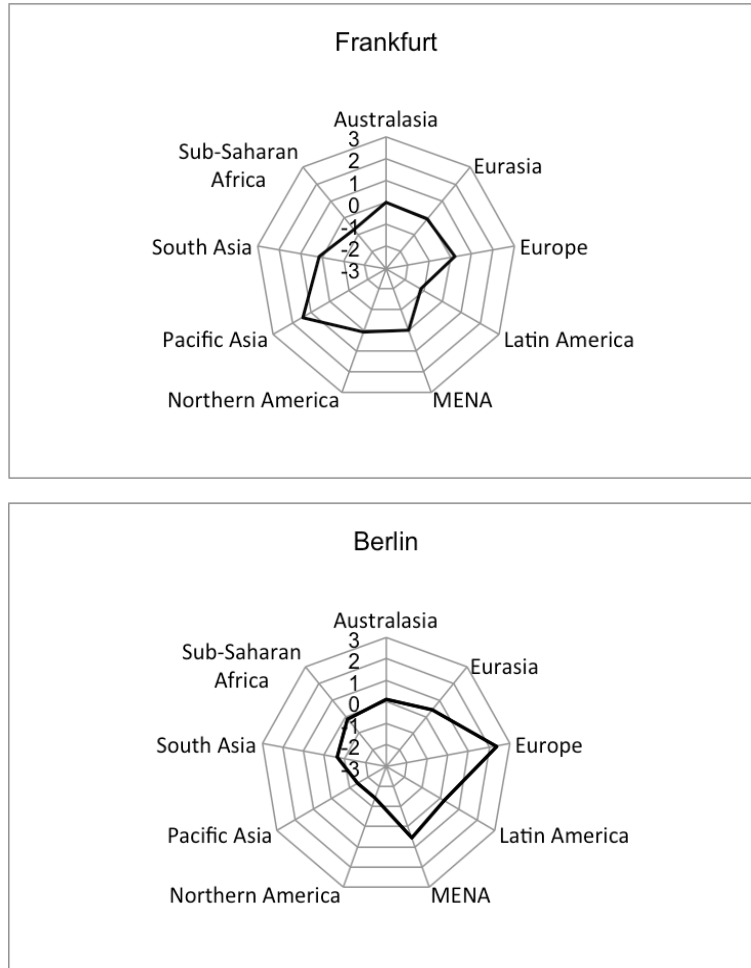


Fig. 2. Frankfurt and Berlin

## GEOGRAPHIES OF CONNECTIONS

Economic globalization is not an even process with a worldwide ‘blanket’ effect (Taylor et al 2013), rather it encompasses a particular geography of change. Broadly speaking this involves a shift in global capacity from ‘west’ to ‘east’. How our pairs of cities relate to this macro-geographical transformation can be measured by disaggregating global network connectivity into connections with cities within world regions.

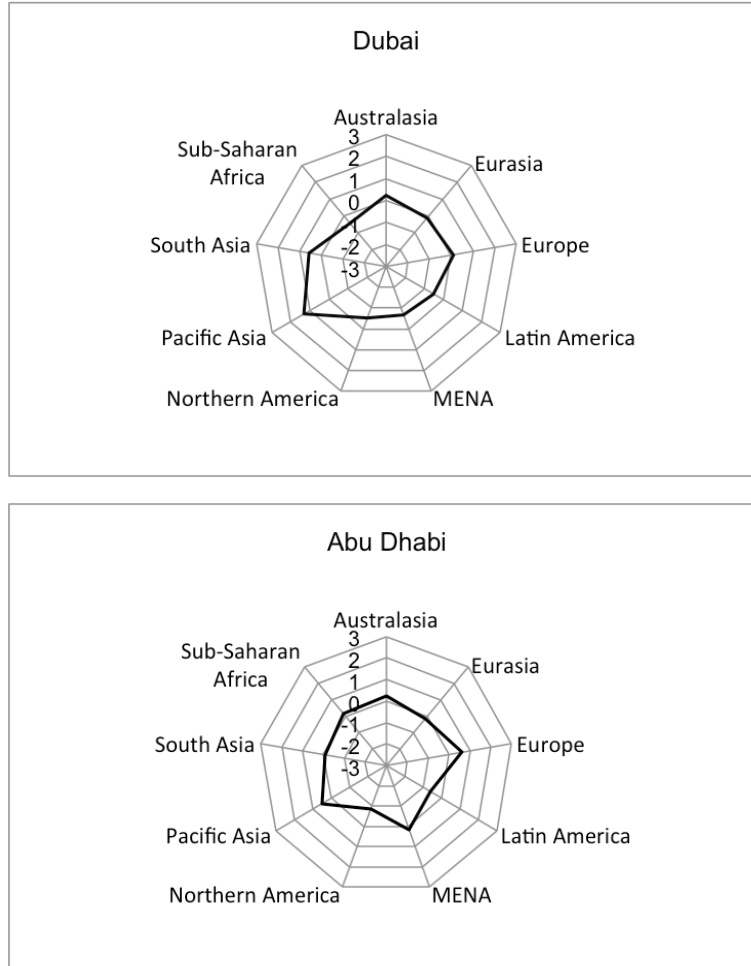


Fig. 3. *Dubai and Abu Dhabi*

This goes beyond focus on a city's local region to measure connections to all other regions. For this exercise we use regions as follows: Australasia, Eurasia, Europe, Latin America, Middle East and North Africa (MENA), Northern America (USA plus Canada), Pacific Asia, South Asia and Sub-Saharan Africa (from Taylor et al 2011). Results are shown as circular profiles where nearer the centre indicates under-connectivity to a region.



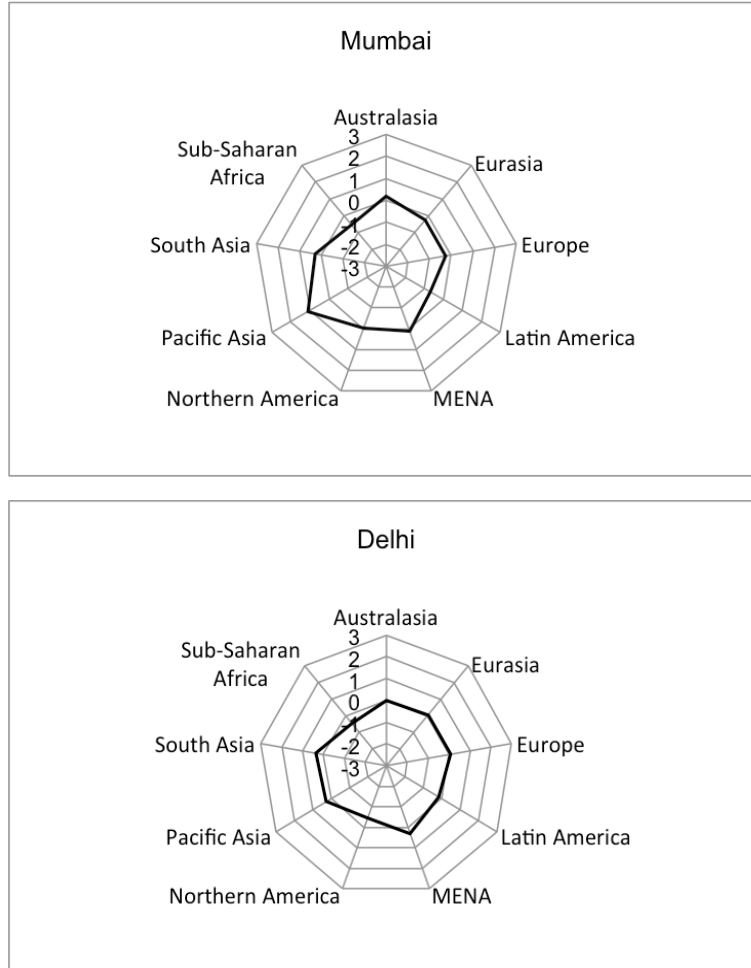


Fig. 4. *Mumbai and Delhi*

Rome and Milan are shown in figure 1 and the extra local (Europe) bias of Rome compared to Milan in table 2 can be clearly observed. What these diagrams show in addition is that Milan compensates for its relative dearth of local connections with more connections than Rome on the other side of the figure: especially to Pacific Asia and also to Northern America. To some extent this reflects the globality results in table 1 but the Pacific Asian bias reflects a broader leaning towards where

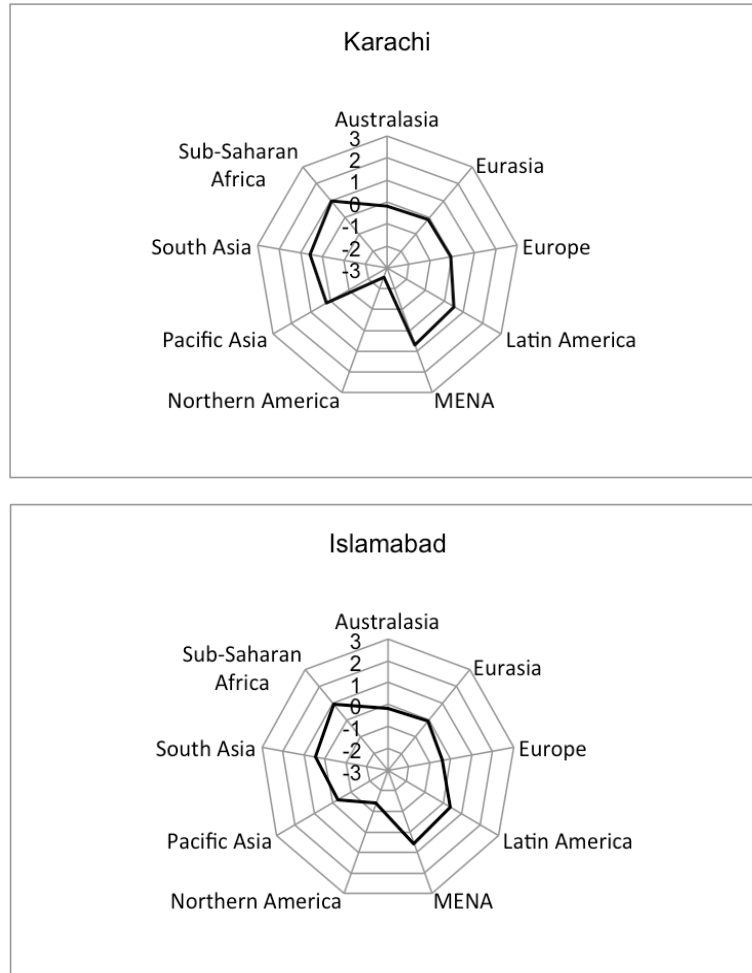


Fig. 5. *Karachi and Islamabad*

economic globalization is growing fastest. In other words, the political centre's external geography is much better attuned to what is going on the world-economy than the capital city's external geography.

Figure 2 shows similar results for Berlin and Frankfurt. It illustrates the same general pattern as in figure 1 but in a much more accentuated form. Not only is Berlin much more local (Europe) than Frankfurt (as shown in table 2) but it is extremely weak in several other regions. In this case there is a

massive difference between the two cities in connectivity to Pacific Asia and a large difference to Northern America.

In the case of Abu Dhabi/Dubai (figure 3) we find a similar pattern but with a slight variation. Dubai was the only one of our cities without a local (MENA) bias in table 2 and this contrast with Abu Dhabi is clearly shown on figure 3. The compensation for this difference is a very strong over-connectivity of Dubai with Pacific Asia. In other words this rapidly globalizing city (table 1) is extremely linked to the most rapidly globalizing region, Pacific Asia. There is a slight difference with the previous two figures: although Abu Dhabi does not meet Dubai's level of connectivity to Pacific Asia, this capital city is nevertheless not under-connected: the United Arab Emirates have both their major cities well linked the growing 'east'.

Figure 4 shows the profiles for Delhi and Mumbai and these are more similar than the previous cases but still show the biases reported above. Again the difference in localism (table 2) is shown; and the other main difference is Mumbai's stronger connections to Pacific Asia.

Finally the profiles of Islamabad and Karachi (figure 5) are relatively alike. In addition to their similar local biases as shown in table 2, the cities have highly distinctive profiles: they are especially weakly linked to Northern America, which is compensated by stronger links to MENA and Sub-Saharan Africa. And yet despite this particularity, there is still a clear extra connectivity to Pacific Asia for Karachi relative to Islamabad.

The circular profiles show a variety of patterns but one relationship occur in all the paired comparisons, albeit to different degrees; the economic centres have specifically stronger links to Pacific Asia than the capital cities. There appears to be no global pattern of compensation for the latter except their greater localism. This suggests a rather under developed integration of capital cities into the world city network when they are not the economic centre of their country. We can get a further glimpse of this 'un-globalness' of the capital cities by looking at the cities outside each pair to which the cities have their greatest relative connectivities: for Rome it is Paris, for Milan it is Abu Dhabi; for Berlin it is Cologne, for Frankfurt it is Washington, DC; for Abu Dhabi it is Doha, for Dubai it is Bangkok; for Delhi it is Bangalore, for Mumbai it is Singapore; for Islamabad it is Lahore, for Karachi it is Nairobi.

## CONCLUSION

This paper treats a special case of city/state relations (Taylor 2013) by comparing political capitals and economic centres. Despite the massive differences – economic, cultural and political – amongst our chosen pairs of cities we have found communalities relating to the specific circumstance we are investigating. First, there is some evidence that economic centres are more global and less local than their capital cities. Second, more particularly, we have shown that in terms of global economic connections there is a very consistent pattern: economic centres have a much more coherent and telling integration into the world city network. What are the implications of this? If globalization continues on its corporate route, these capital cities will likely keep their near monopoly of global political links but will continue to fall short in terms of economic globalization, the main game on the planet (Brenner 2014).

## TECHNICAL APPENDIX

The data and calculations used throughout this paper are drawn from Taylor and Derudder (2015). In this technical appendix we provide a straightforward overview of the main features of our data collection and subsequent calculations. Our connectivity measures are based on a model that calculates the strength of inter-city connections based on the (importance of) co-presence of service firms in cities. We proceed in three steps. We first detail the input data; this is followed by a brief discussion of the gist of model used to calculate the strength of inter-city connections; the final part of this appendix discusses a number of more specific measures.

### *Data*

The basic data used in this paper describes the urban location strategies of 175 producer service firms in 5 different sectors, and was collected between October 2012 and February 2013. Firms were selected based on sectoral rankings for 2012, which tended to be based upon 2011 data. We selected 75 financial services firms from BrandFinance's Top 500 financial services and insurance companies', which is based on a benchmark study of the strength, risk and future potential of

financial services firms; 25 accountancy firms were chosen from World Accounting Intelligence's ranking, which is based on an analysis of aggregated company revenues; 25 advertising agencies were selected based on Brandirectory's analysis of the valuable brands in the advertising sector; 25 law firms were selected based on Chambers' ranking of leading corporate law firms; and 25 management consultancy firms were selected from Vault Management & Strategy Consulting's Survey, which ranks firms in terms of their 'prestige' based on a large survey of professionals. For each sector, the top-ranked firms were chosen, and we also identified substitute firms (i.e. ranked just below 75 and 25) to cover for situations where a firm had disappeared (e.g. been taken over) during the actual data collection.

A few of the 175 firms have branches in many hundreds, even thousands, of cities and towns. The data collection has been restricted to the more important cities. We devised a comprehensive roster of cities, which includes all cities with a population of more than 1.5 million inhabitants in 2008; all capital cities of states with a population of more than one million; and every city with a headquarter office of one of our selected firms. This led to the selection of 526 cities, and it is this roster of cities that we used in recording information on the global service networks of the firms.

Selecting firms and cities is relatively straightforward, attempts to gather standardized information on the importance of a given city to a firm's global service provision are more difficult. We use the concept of a 'service value'  $v_{ij}$ , which is standardized measure of the importance of a city to a firm's office network. Assigning service values to city/firm-pairs focused on two features of a firm's office(s) in a city as shown on their corporate websites: first, the size of office (e.g. number of practitioners), and second, their extra-locational functions (e.g. regional headquarters). Information for every firm was simplified into service values ranging from 0 to 5 as follows. The city housing a firm's headquarters was scored 5, a city with no office of that firm was scored 0. An 'ordinary' or 'typical' office of the firm resulted in a city scoring 2. With something missing (e.g. no partners in a law office), the score reduced to 1. Particularly large offices were scored 3 and those with important extra-territorial functions (e.g. regional headquarters) scored 4. All such assessments were made firm by firm. The end result is a service value matrix  $V$ , a 526x175 data array with  $v_{ij}$  ranging from 0 to 5.

### *The interlocking network model*

Although we use various measures in our research, there is an analytical ‘core’ to the approach we use. This analytical core is the ‘interlocking network model’ that allows inferring inter-city connections from the (importance of the) presence of firms in cities as measured in the input matrix  $V$ . The most important measure (also used in table 1) is the global network connectivity  $GNC_a$  of any city  $a$ , which is an aggregation of all its city-dyad connectivities  $CDC_{a-b}$  with all other cities  $b$ , and can be defined as follows:

$$GNC_a = \sum_b CDC_{a-b} = \sum_{bi} V_{aj} \cdot V_{bi} \quad a \neq b \quad (1)$$

The conjecture behind conceiving the product of service values as a surrogate for actual flows of inter-firm information and knowledge between cities is that the more important the office, the more connections there will be with other offices in a firm's network. The limiting case is a city that shares no firms with any other city so that all of its service value products in equation (1) are 0 and it has no connectivity. To make GNC measures manageable in our use (i.e. independent from the number of firms/cities), we express connectivities as proportions of the largest computed connectivity in the data, thus creating a scale from 0% to 100%.

In addition to cities' GNC, table 1 also features a measure of *relative* change of this value between 2000 and 2012. Rather than the absolute change in GNC, this measure of change needs to be understood as a z-score vis-à-vis change in the world city network at large, and this after controlling for differences in measurement framework, overall rising levels of connectivity, and the fact that it is above all secondary cities that have become more connected. Interpreting this measure of change as a z-score implies, for instance, that Dubai has witnessed an exceptional connectivity growth and Berlin a moderate connectivity decline between 2000 and 2012 when taking into account overall levels and patterns of change in the world city network.

### *Supplementary measures*

In addition to a city's GNC, we also calculate and use a number of supplementary measures, most of which are essen-

tially geographical disaggregations of a city's overall connectivity. The calculations used in figure 1-5 reveal the strength of a city's connections  $WR_a$  with cities in the 9 world regions defined in the text. This is based on the following calculation of any city a's connections with cities located in any world region WR:

$$WR_a = 100 * \left( \frac{\sum_{i=1}^{WR} CDC_{a-i}}{\sum_{i=1}^{525} CDC_{a-i}} - \frac{\sum_{i=1}^{WR} GNC_i}{\sum_{i=1}^{525} GNC_i} \right) \quad (2)$$

The first part of the formula calculates the percentage of connectivity represented by city a's connections  $CDC_{a-i}$  with cities located in world region WR; the second part calculates the proportion of connectivity represented by world region WR in the world city network at large. A positive value of  $WR_a$  therefore implies that city a has, on average, relatively strong connections with cities located in a world region; a negative value of  $WR_a$  implies that city a has, on average, relatively weak connections with cities located in a world region. The larger the absolute value of  $WR_a$ , the stronger the tendency. Thus in figure 1 it can be seen that Rome is above all strongly connected with European cities.

The measures presented in table 2 follow the same logic, but here we focus on the 10 or 20 most connected cities ('Globalism') or cities within the same country or the same world-region (Localism). Calculations and interpretations are similar to those presented in (2). For instance, the large positive values of Milan and Frankfurt for Globalism suggest that both cities are much stronger connected to the world's most connected cities than expected.

#### REFERENCES

- C. Abbott (1999), *Political Terrain: Washington, DC from Tidewater Town to Global Metropolis* (Chapel Hill, NC., University of North Carolina Press).
- D. Bassens (2013), *The City-upon-the-Gulf: the relational growth and decline of 'world city' Dubai*, in M. Acuto and W. Steele (eds.), *Global city challenges: Debating a Concept, Improving the Practice* (London: Palgrave).
- N. Brenner (2014) ed., *Implosions/Explosions: Towards a Study of Planetary Urbanization* (Berlin: Jovis).
- P. Hall (2006), *What is the future of capital cities?*, in D.L.A. Gordon (ed.) *Planning Twentieth Century Capital Cities* (London: Routledge).
- B.A. Ruble (2001), *Second Metropolis* (Washington, DC.: Woodrow Wilson Center Press).
- P.J. Taylor (2004), *World City Network: a Global Urban Analysis* (London: Routledge).

P.J. Taylor (2012), *Milano nella rete delle città mondiali*, in P. Perulli (ed.), *Nord: Una città-regionale globale* (Bologna: il Mulino).

P.J. Taylor (2013), *Extraordinary Cities: Millennia of Moral Syndromes, World-Systems and City/State Relations* (Cheltenham, UK: Edward Elgar).

P.J. Taylor, P. Ni, B. Derudder, M. Hoyler, J. Huang, and F. Witlox (2011) eds., *Global Urban Analysis: A Survey of Cities in Globalization* (London: Earthscan).

P.J. Taylor, B. Derudder, M. Hoyler, P. Ni (2013), *New regional geographies of the world as practiced by leading advanced producer service firms in 2010*, "Transactions: Institute of British Geographers", 38, pp. 497-511.

P.J. Taylor and B. Derudder (2015), *World City Network: a Global Urban Analysis* (2<sup>nd</sup> edition) (London: Routledge).

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