Volume 29.4 December 2005 945–959 International Journal of Urban and Regional Research

Globalization from Below: The Ranking of Global Immigrant Cities

LISA BENTON-SHORT, MARIE D. PRICE and SAMANTHA FRIEDMAN

The purpose of this essay is to present a new database and index for urban immigrant destinations and contrast it with existing rankings of world cities. Most world city rankings privilege economic measurements, ignoring immigration as an important component of world city formation. We argue that immigration is a powerful example of 'globalization from below' and needs to be integrated into our understanding of global city dynamics. By linking global cities and immigration, this research highlights those cities that are experiencing dramatic socio-cultural changes brought about by large and often diverse streams of immigrants.

With the systematic assessment of urban immigrant destinations, cities that are often ignored in the global cities literature (such as Dubai or Tel Aviv) may invite more scholarly attention. Our research also demonstrates that many global cities are largely bypassed by immigrants. Thus, the value of ranking urban immigrant destinations lies in revealing a range of urban outcomes from the hyper diversity of London to the largely bypassed nature of Tokyo. Since a systematic study of the world's urban immigrant destinations does not exist, this study begins to fill the empirical void and in the process we hope to generate new ways of conceptualizing socio-cultural change in global cities.

In cities around the world, unprecedented levels of global immigration challenge us to assess how and where immigrants are influencing the political, economic, social and cultural dimensions of cities. This huge task is beyond any one scholar or research team but will best be carried out by a number of detailed urban case studies (for example see Ley and Murphy, 2001; Anisef and Lanphier, 2003; Stepick *et al.*, 2003; Price *et al.*, 2005). The goal of this research is to expand the range of criteria used to assess the 'globalness' of cities, to inspire others to include immigration in world cities research, and to call attention to cities experiencing dramatic social and demographic change due to immigration.

It is impossible to understand the processes of globalization without studying cities, since they are the central locale for globalization. Urban geographers and sociologists, among others, have attempted to give meaning and coherence to the rapid and dramatic changes to cities in the past 30 years (for example, Hall, 1984; Sassen, 1991; 1994; Knox and Taylor, 1995; Clark, 1996; Short and Kim, 1999; Nijman, 2000; Robinson, 2002; Samers, 2002). There appears to be consensus that cities and the dynamics of urbanization have been changed by the intensification of global processes. The most important cities — the command and control centers for economic, political or cultural globalization — are called world cities. World cities have been defined as: major sites for the accumulation of capital; command points in the world economy; headquarters for corporations; important hubs of global transportation and communication; intensified

This research was supported by a grant from the GW Center for the Study of Globalization. The authors would like to acknowledge the help of several graduate research assistants: Jennifer Brown, Sapna Shah, Devin Keithley and Corrie Drummond.

areas of social polarization; and points of destination for domestic and international migrants (Short and Kim, 1999). In the past 20 years, research on global cities has focused either on networks (Taylor, 2004) or on rankings (Beaverstock *et al.*, 1999; 2000b). While there are limitations to both (Samers, 2002), the outcome has been to concentrate on major economic arenas such as North America, Western Europe and Pacific Asia. As a result of this regional bias, cities in these regions are seen as the most networked or most highly ranked.

Despite considerable attention to cities and global dynamics, ironically, there remains a lack of available data to support world city research (Beaverstock *et al.*, 2000b). Even relationships between economic globalization and urban development (one of the most studied areas of globalization) remain difficult to trace empirically (Shachar, 1997: 22). Short *et al.* (1996: 698) describe this data deficiency as 'the dirty little secret of world cities research'. Beaverstock *et al.*, (2000a) contend that the lack of standardized and available data to measure and compare globalization in cities remains a major problem for research on the global urban hierarchy.

Regardless of the poverty of data and empirical analysis, there is a broad consensus as to which cities sit atop the world city hierarchy — London, Tokyo and New York (Beaverstock *et al.*, 1999; Sassen, 1991). But, below this level, there is much less agreement because there is no consensus on the variables to consider when ranking world cities and the urban system itself is dynamic and constantly changing (Smith and Timberlake, 2002).

A city's ranking in the global urban hierarchy is more than an academic exercise. Cities tend to celebrate top rankings and often promote projects that may further enhance their reputation and ranking (such as Olympic Games, new corporate headquarters or expanded transportation hubs). There are several reasons for this informal competition. First, in the business and financial worlds a high ranking reflects economic prestige and instills confidence in future investors. Since businesses still rely on face-to-face contacts, globally networked cities (which tend to be highly ranked) are preferred. Second, a city's ranking is often connected to a country's sense of global significance. For example, the highly ranked cities of Tokyo and London elevate the significance of Japan and the United Kingdom as central players in the global economy. This is even true for mid-ranked cities such as Sydney and Toronto. Thirdly, highly ranked cities are able to self-perpetuate their status. In cultural terms, major art exhibits or international music stars tend to tour at the top of the urban hierarchy. A city's status in the global urban hierarchy will often have economic, political and social impacts, and hence there are often attempts to 'improve' a city's ranking in the hierarchy (Derudder *et al.*, 2003). 'Cities compete to position themselves in the global flow of capital, images and narrative, and selling the city has become an important part of urban promotion campaigns' (Short, 2004: 23).

Much of the literature on world cities disproportionately weighs economic power when discussing either the global urban hierarchy or global networks. This has been true since the late 1980s (Meyer, 1986; Warf, 1989; O'Brien, 1992). As a result, there are numerous criteria used to evaluate economic power. One approach is to consider criteria that measure the importance of international finance centers (Thrift, 1994). A second approach, proposed by Hall (1984), argues that cities atop the urban hierarchy have superior functional abilities with regard to trade, finance, technology, communications and politics. Friedmann's (1986) seminal article on world cities constructs a hierarchy based on the control of capital in the new international division of labor, assessing multiple criteria such as financial centers, headquarters for multinational corporations, international institutions and transportation nodes. More recently, there has been a focus on producer services: accounting, advertising, banking and law, and how cities function as command points in the global economy (Sassen, 1991; Beaverstock *et al.*, 1999). However such variables or criteria are used, weighted and factored to create these hierarchies, there is no consistency from study to study. While there have been numerous criteria used in evaluating global city

networks and linkages, the criteria tend to focus on measurements of economic globalization or the use of technology (i.e. measuring internet connections, cellular phone accounts, etc).

The privileging of economic measurements as criteria for world city functions is one-dimensional. It is only a partial conceptualization of globalization because it ignores political, environmental and socio-cultural aspects of globalization. Sassen (1999) argues that we need to conceptualize globalization in broader terms than just the internationalization of capital and finance. Globalization is as much a cultural as an economic phenomenon. Political globalization (such as movements for democratization or human rights) and cultural globalization (immigration, popular culture and ideas) can be as influential in globalization dynamics as the movement of capital and goods. The gap in the literature with regards to the relationship between the globalization of culture and the global urban hierarchy was first commented on in 1996 (Short *et al.*, 1996: 709). The relative silence on the link between cultural globalization and cities may be a result of the difficulty inherent in quantifying cultural factors, although this is an emerging area of study, particularly with regards to cultural festivals and global spectacles (Olympic Games, World Fairs, Carnival, Film Festivals, etc.) (Scott, 2000; Shoval, 2002). The global/world cities literature has not tackled immigration to the extent that it should (Samers, 2002).

Signs are there that global cities research is expanding beyond the focus on economic criteria. For example, Samers (2002) called for a different set of networks than the one that Globalization and World Cities (GaWC) researchers offer by including international labor migration and urban labor markets. *Foreign Policy's* Annual Globalization Index (of countries, alas, not cities) now considers four categories of criteria: economic integration (foreign direct investment, trade and capital flows), political engagement (membership in international organizations, the number of embassies, international treaties ratified), technological connectivity (internet users, internet hosts and secure servers) and personal contact (international travel and tourism, international telephone traffic, and cross-border transfers such as remittances) (Foreign Policy, 2004). However, there is still much to be done to analyze cultural globalization, particularly with regard to the movement of people.

Cultural globalization, immigration and world cities

The connections between immigration and globalization are powerful and present. In the last 50 years, immigration at a global scale has intensified as more countries (and hence cities) are affected by migratory movements (Castles and Miller, 2003: 7–8).[1] Through globalization, rates of migration have accelerated and the diversity of origin points has increased. We recognize that much of this immigration is driven by economic factors, most notably wage differentials between countries. Differing national policies are also extremely important in explaining the flow and composition of immigrant groups to cities around the world. The cultural consequences of large numbers of people from diverse countries settling in particular points on the globe (almost always cities) are real. Figure 1 illustrates the internationalization of present-day London. We contend that such hyper-diverse cities are a product of globalization that has both economic and cultural implications. With nearly two million foreign-born residents, no one group dominates the immigrant stock. In fact, no fewer than 14 countries account for half of

1 We recognize, however, that the volume of international migration (in 2002 175 million people out of 6.2 billion resided in a country other than where they were born) involves only a tiny share of the world population (approximately 2.5% in 2001) (Simon, 2002: 2). However, the number of global immigrants between 1990 and 2000 grew by 13.5%, much faster than world population growth (1.4%) (United Nations, 2002).

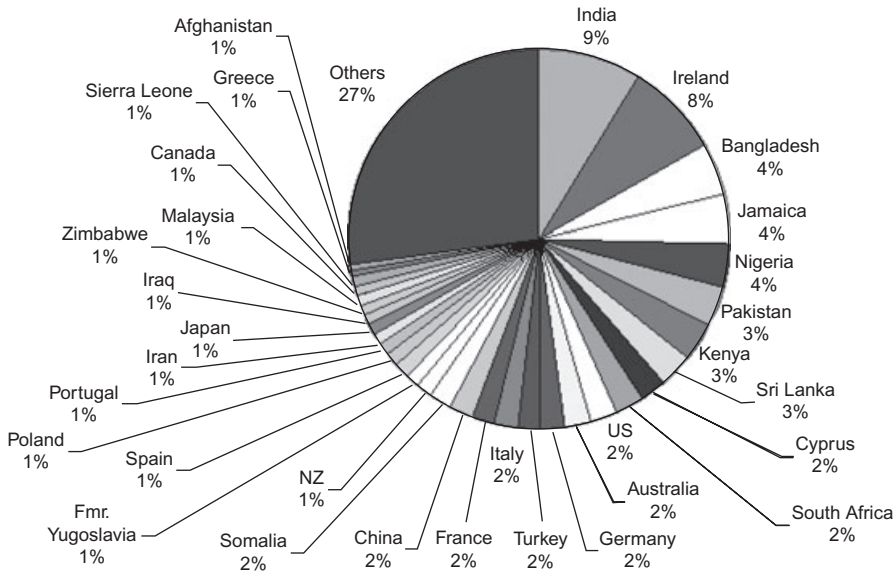

Figure 1 Foreign-born population in London, 2001 (*source*: authors using census data from Office of National Statistics, Census 2001, UK)

the foreign-born population; the remainder of the immigrant stock come from nearly every country in the world.

A 2002 issue of *The Economist* devoted itself to surveying migration, concluding 'it is impossible to separate the globalization of trade and capital from the global movement of people' (*The Economist*, 2002: 3). Castles and Miller have held that 'while movements of people across borders have shaped states and societies since time immemorial, what is distinctive in recent years is their global scope, their centrality to domestic and international politics and their enormous economic and social consequences' (2003:1). Migratory networks develop, intensifying the links between areas of origin and destination. Sassen (1999: xi) concurs, noting that people who travel and move help shape the material and spiritual culture of places: migration should therefore be seen as an equally central component of globalization as trade and finance. The relationship between globalization and immigration makes a strong case for studying immigration and world cities.

Immigration and its impact on the changing urban landscape are an important part of the process of globalization, although they are not included as criteria for inclusion in the global urban hierarchy. One problem is that much of the international migration data are at the country level; there is no standardized institutional data for immigration to cities around the world.[2] Some have noted this shortcoming. Waldinger has called for the 'urban' to be brought back into immigration research, noting that since 1965 immigrants have been overwhelmingly city-bound (Waldinger, 1996). Interestingly, migration was identified as an important factor in the original formulation of the world city hypothesis of Friedmann (1986: 75), who observed that 'world cities are points of destination for large numbers of both domestic and/or international migrants'. While

2 An additional challenge is that no universal definition of 'urban' exists. According to the UN Statistics Division, because of national differences in the characteristics that distinguish urban from rural areas and the distinction between urban and rural population, there is no single definition that is applicable to all countries.

there have been numerous studies of immigrants in particular cities, not much empirical work has been done to look at immigration and the formulation of world city status. Much of the research on migration, globalization and the global urban hierarchy has analyzed inter-city migration or transnational business elites, or focused on migration in one or two specific cities as case studies (Godfrey, 1996; Ley and Tutchener, 2001; Deurloo and Musterd, 2001; Fan, 2002). The concentration on skilled international labor within transnational corporations (TNCs) is another area of urban migration research (Beaverstock and Smith, 1996). Beaverstock (1994) has noted skilled international labor migration is a vital ingredient to, and outcome of, being a world city, and both Friedmann (1986) and Castells (1996) studied flows of skilled migrants between world cities. These are important contributions to understanding the connection among globalization, migration and world cities, yet they focus on a very narrow range of migrants.

In this research, we consider the overall impact of both skilled and unskilled labor — in other words, all foreign-born counted in national censuses. This is because, with the globalization of migration, most countries do not host one category of migrant (i.e. elite labor or refugees), but receive a diverse range (Castles and Miller, 2003). Employment in both highly specialized labor and low-skilled service jobs is characteristic of global cities. There has been much research on the impact of skilled (or elite labor); less on unskilled migration. Both forms not only affect the host city and country, they also affect the sending city and country. A prime example is remittances. The World Bank conservatively estimates that $80 billion in worker remittances were transferred from immigrants to their countries of origin in 2002 (World Bank Group, 2003). Other sources suggest the figure may have totaled $100 to $200 billion in 2003 (Sander, 2003). Remittances are just one example of how immigration is establishing new socio-economic networks that link world cities to each other and to other peripheral locales around the world. Remittances are an increasingly important topic of interest, but their impact at the urban scale has not been well researched.

Our argument for including some measurement of immigration in world city status is not to prioritize data over theory, but to expand the criteria considered when analyzing the dynamics of world cities. By linking global cities and immigration, this research identifies many overlooked and understudied cities where globalization as a 'bottom up' process is transforming urban social, political and cultural space. Through ranking immigrant urban destinations, a range of immigrant outcomes emerges — from the hyper-diversity of London and New York, to the emerging gateways of Dubai and Johannesburg, and to the largely bypassed global cities of Tokyo and Mexico City. We use the data to position the world cities on a continuum that better illuminates the dynamics of migration to key urban areas, thus adding significantly to our understanding of global cities and the human networks that create them.

Research design

We selected 150 cities to begin this study based, in part, on the Globalization and World Cities (GaWC) study group's roster of world cities (Beaverstock *et al.*, 1999). The GaWC roster is one of the more cited rosters in urban geography literature. The GaWC Study Group and Network at Loughborough University in the UK operates as a network of researchers who use and develop methods and data sets for world city research.

The GaWC roster consists of 55 world cities at three distinct levels. There are 10 'Alpha Cities', 10 'Beta Cities' and 35 'Gamma Cities' (Table 1). Most of the GaWC cities are located in major regions of economic globalization: North America, Western Europe and Pacific Asia. We selected all 55 of the GaWC roster cities, and expanded our list to include cities from regions often overlooked in globalization and world city research (Latin America, Western Africa, Southern Africa, South Asia and the Middle

Table 1 GaWC roster of world cities

Alpha Cities
London, New York, Tokyo, Paris, Chicago, Frankfurt, Hong Kong, Los Angeles, Milan, Singapore
Beta Cities
San Francisco, Sydney, Toronto, Zurich, Brussels, Madrid, Mexico City, Sao Paolo, Moscow, Seoul
Gamma Cities
Amsterdam, Boston, Caracas, Dallas, Düsseldorf, Geneva, Houston, Jakarta, Johannesburg, Melbourne, Osaka, Prague, Santiago, Taipei, Washington DC, Bangkok, Beijing, Montreal, Rome, Stockholm, Warsaw, Atlanta, Barcelona, Berlin, Budapest, Buenos Aires, Copenhagen, Hamburg, Istanbul, Kuala Lumpur, Manila, Miami, Minneapolis-St. Paul, Munich, Shanghai

Source: *www.gwac.loboro.uk*

East). Our final list included 116 cities; nearly all the cities had a minimum metropolitan population of 1 million.[3] Figure 2 shows all the cities in our study and highlights those cities where more than 500,000 foreign-born reside. Numbers do matter in migration research, thus it seems worthwhile to note those localities with half a million or more foreign-born residents, even though the foreign-born may only constitute a small percentage of the total urban population.

What is striking about Figure 2 is the prominence of traditional settler societies (North America, Australia and Argentina) but also the rise of immigrant settlements in Europe and the Middle East. Both Moscow and Kiev have large immigrant numbers, but this is due to boundary changes with the break-up of the former Soviet Union. Individuals once classified as citizens of the Soviet Union are now the foreign-born if they were born in a republic other than the one in which they reside. Since this is a unique case that was less about migration and more about changing designation of citizenship, we did not include these cities when calculating the Immigrant Index.

The primary immigration data sought was the percentage of foreign-born at the urban level. Collecting this data proved challenging because there is no centralized database for comparing global urban data. Most countries collect foreign-born data, but may report it only at the national level.[4] First, we utilized the collections at the US Census International Program Center Library outside Washington DC, which houses official government census publications from countries around the world. We accessed United Nations Population Division immigration databases as well, although all of this data was at the country level.[5] This has been a long-standing challenge to urban immigration work: most of the comparative data is at the country level, despite the fact that most

3 We began this project with a working list of 150 cities. We were unable to find urban immigrant data for Dublin, Edinburgh, Glasgow, Beirut, Warsaw and Lagos. We were also unable to find data for any Chinese and Indian cites (with the exception of Hong Kong). However, we are confident there is not a significant flow of international migrants to these countries, although there are important internal flows from rural to urban areas in these states (Nyiri and Saveliev, 2003). India and China are both major recipients of remittances. India is the world leader in terms of total remittances received in 2000. China, Mexico and the Philippines were the second largest recipients of remittances (Orozco, 2003). Although these countries may not receive many foreign-born, they are beneficiaries of immigrant remittance flows that link their economies to these urban immigrant destinations.

4 On 6 February 2003 the United Nations released its International Migration Report 2002 at a press release at The Brookings Institution in Washington DC. At the event, we asked the UN Director of the Population Division, Joseph Chamie, whether there were data at the urban level. He acknowledged that the reporting of urban-level data – as for all census data – is voluntary for countries. Many countries may collect the data but do not report it. Other countries may not even collect data at that scale. In addition, he noted that in the aftermath of September 11th, many countries felt urban-level data on foreign-born was too sensitive and declined to make it available to the United Nations.

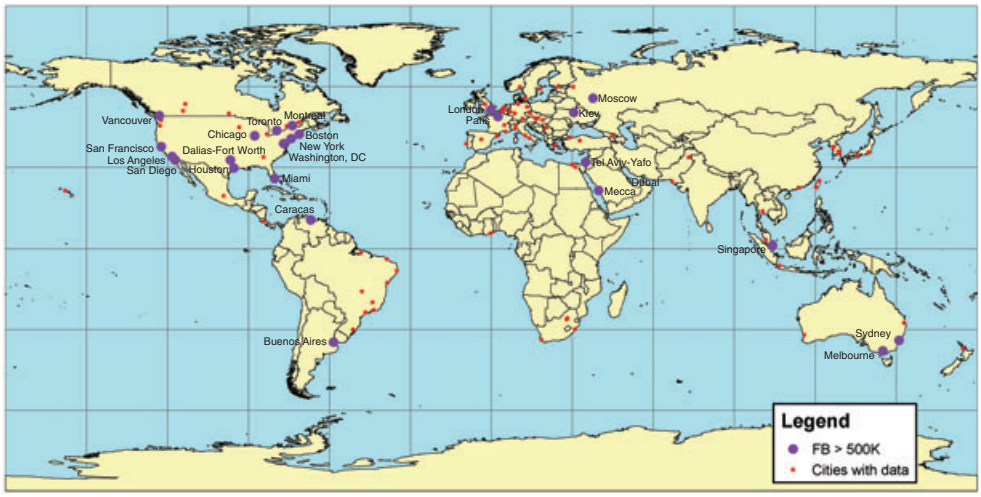

Figure 2 Map of major immigrant destinations and study cities

immigrants migrate to cities. In the second phase of data collection, we sought data from official government websites.[6] Increasingly, government agencies are making data available through the internet, and during 2003 we found more and more developing countries making data available in this format. In all cases, we used the most recent available data to rank cities, but the data do range from the mid-1990s to 2002. Once the data were collected, a table was constructed of the percentage of foreign-born per city.

Our second task, once we had collected the foreign-born population data, was to characterize the origin countries of the immigrant stock. A prime example is Dubai, United Arab Emirates, where 82% of the population was foreign-born in 2002. A closer examination of the data reveals that 61% of the foreign-born came from South Asia (India and Pakistan). Thus, while Dubai is mostly a city of immigrants, it is not that diverse with regards to its immigrants' countries of origin. Nor is it a country that encourages immigrants to become citizens (Caryl, 2000).

Beyond simply determining the percentage of foreign-born in a given city, a weighted index was constructed to account for the total numbers of immigrants, the diversity of the immigrant stock, and the relative distance traveled. Of the 116 cities in the database we had adequate demographic information for 90 cities. In this index we considered four criteria and weighted them differently:

- The percentage of foreign-born in a given city;
- The total number of foreign-born in a given city;
- The percentage of foreign-born in a given city not from a neighboring country.
- Cities where no one group represented more than 25% of the foreign-born stock were considered diverse.

5 For example, the United Nations 1999 publication *World Urbanization Prospects* has a variety of economic and social indicators on urban growth for most cities around the world, but nothing on immigration or foreign-born.

6 We should note that most of the data we located were free; however, some countries required us to purchase census data, which we could not do because of budgetary constraints. Hence we do not have data for cities in Scotland or Ireland, for example, but we know the data exist.

For each characteristic, we found the average and standard deviation. For each city, we then took the value for each characteristic and subtracted from it the overall average for that characteristic and divided this value by the standard deviation, creating a z-score. To create the final index score for each city, we added together the z-scores across the four characteristics.

Before adding the scores, however, we weighted these criteria differently. The most important measure for this work is the percentage of foreign-born, which was weighted at 40% of the index score. The absolute number of immigrants does matter, so we gave that figure a weight of 30% in the index calculation. The percentage of immigrants not from neighboring countries accounted for 15% in the creation of the index. This indicator was a surrogate measure for distance traveled; we felt that those cities that attracted immigrants from around the world should be more highly ranked than those cities that only attracted immigrants from neighboring countries. Lastly, those cities where no one group represented more than 25% of the immigrant stock received a positive weight of 15%. Those cities that had a dominant group received a negative weight of 15%. This indicator was a surrogate for measuring a diverse composition of the foreign-born.

The final index value for each country is the sum of the four z-scores weighted according to these standards. In the final analysis, the cities were ranked with scores ranging from 2.1 to −1.1, with 2.1 meaning these cities were more culturally globalized by immigration and −1.1 representing less globalized cities with regards to immigration.

Results

Our first result is the ranking of cities based upon the percentage of foreign-born. Table 2 reports the foreign-born percentages for the top 25 cities in our database. In these top 25 cities at least one-quarter of the urban population is foreign-born. Many of the 'usual suspects' — cities that appear on most world city rosters for their economic importance — also attract many foreign-born settlers. These include Miami, Amsterdam, Toronto, Vancouver, Los Angeles, New York, Sydney, Frankfurt, London and Brussels. Our results indicate that many of the influential economic centers are also important with regard to cultural globalization factors, such as immigration and diversity. The North American and Australian cities are traditional areas of settlement for immigrants. However, the percentage of foreign-born in many of these cities far exceeds the national percentage of foreign-born for their respective countries. For example, at 51% Miami's foreign-born population is nearly five times greater than the US national average of 11.5%.

There are also unlikely suspects in Table 2. Seven of our top 25 cities are in the Middle East (Dubai, Muscat, Mecca, Tel Aviv, Medina, Riyadh and Jerusalem). This is a region and set of cities often excluded from the rosters of global cities. The substantial guest workforce in the Persian Gulf is widely known but not documented with any precision by the sending or the receiving countries. The draw of major religious centers, such as Mecca, Jerusalem and Medina, begs the question of whether these immigrants are settling there primarily for religious reasons, employment or as a result of the pull of social networks (Massey *et al.*, 1998). The absence of Tokyo, considered a top-tier world city, highlights the differences between economic and cultural globalization. Tokyo is ranked 92 with only 2.41% foreign-born. Even lower is Seoul (ranked 96) and Jakarta (ranked 105), both cited as regional economic powers in the global economy. Two Latin American mega-cities, São Paulo (ranked 100) with 1.4% foreign-born, and Mexico City (ranked 109) with 0.42% foreign-born, are regional economic leaders and yet attract very few international migrants.

Admittedly, the percentage of foreign-born is a useful but crude measure of cultural globalization. It does not reveal the diversity of the immigrant stock or flow; it does not

Table 2 Top 25 cities by percent foreign-born

	City	Year	City Population	FB Population	% FB
1	Dubai	2002	857,233	702,931	82.00
2	Miami	2000	2,253,362	1,147,765	50.94
3	Amsterdam	2002	735,328	347,634	47.28
4	Toronto	2001	4,647,960	2,091,100	44.99
5	Muscat	2000	661,000	294,881	44.61
6	Vancouver	2001	1,967,475	767,715	39.02
7	Auckland	2001	367,737	143,417	39.00
8	Geneva	2002	427,700	164,118	38.37
9	Mecca	1996	4,467,670	1,686,595	37.75
10	The Hague	1995	441,595	161,509	36.57
11	Los Angeles	2000	9,519,338	3,449,444	36.24
12	Tel Aviv	2002	2,075,500	747,400	36.01
13	Kiev	1992	2,616,000	941,760	36.00
14	Medina	2000	5,448,773	1,893,213	34.75
15	New York	2000	9,314,235	3,139,647	33.71
16	San Francisco	2000	1,731,183	554,819	32.05
17	Riyadh	2000	4,730,330	1,477,601	31.24
18	Perth	2001	1,336,239	422,547	31.62
19	Sydney	2001	3,961,451	1,235,908	31.20
20	Jerusalem	2002	678,300	208,700	30.77
21	Melbourne	2001	3,367,169	960,145	28.51
22	Frankfurt	2000	650,705	181,184	27.84
23	Tbilisi	1999	1,339,105	370,932	27.70
24	London	2001	7,172,091	1,940,390	27.05
25	Brussels	2002	978,384	260,040	26.58

Source: Authors using data from numerous national census statistics (for a complete listing of all data, see *http://gwstudynet.com/gum*)

tell us if immigrants are crossing one border or many to get to their new city. And, perhaps most importantly, it does not explain the spatial integration or segregation of immigrants in these new localities, nor does it indicate the status of immigrants or their impact on the host cities. A city such as Tokyo with a very small percentage of foreign-born may exude a global cosmopolitanism that may be lacking in Dubai (our top city with 82% foreign-born).[7] While this essay cannot answer all of these complex questions, it offers a way to take immigrant diversity and composition into account when assessing a city's level of cultural globalness.

Consider the cases of New York City and Los Angeles. Both cities are home to more than three million foreign-born residents according to the 2000 US Census. New York's percentage of foreign-born is 33.7; Los Angeles' is 36.2. As Figures 3 and 4 illustrate, the crude measurement of percent foreign-born hides the true level of diversity in these

7 For a productive discussion of global versus cosmopolitanism see Nijman, 1997; Marcuse and van Kempen, 2000; Short, 2004.

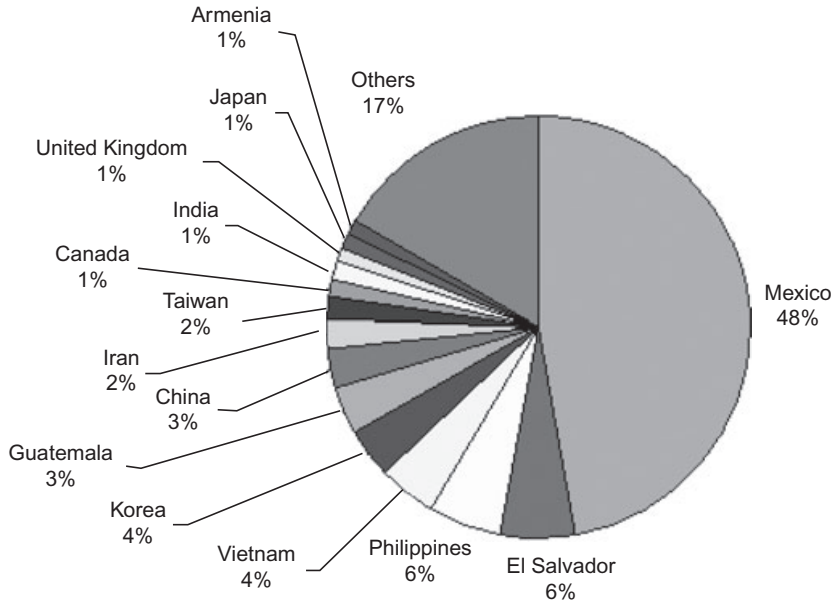

Figure 3 Foreign-born population in Los Angeles, 2000

two cities. In the case of Los Angeles, Mexican immigrants account for 44% of the foreign-born population. In New York City, the largest group — from the Dominican Republic — accounts for just 12%. Two countries (Mexico and El Salvador) account for half of all the foreign-born in Los Angeles, while in New York City ten countries account for half of the foreign-born. By examining the composition of the foreign-born in these two cities, it is clear that New York City has a more diverse stock of foreign-born residents. Also, in New York City no one group dominates the flow compared to Los Angeles where Mexicans dominate.

The examples of New York City and Los Angeles point to the need for a multiple variable index to appreciate more fully the role of immigration in cultural globalization. Our Urban Immigrant Index is a weighted ranking that considers four criteria: (1) percent foreign-born; (2) total number of foreign-born; (3) percent of foreign-born not from a neighboring country; and (4) cities where no one group represents more than 25% of the foreign-born stock. There was sufficient demographic information for 90 of the 116 cities in this study. For easier comparison with the GaWC roster of world cities, we took the top 55 cities in the Urban Immigrant Index and classified them similarly as Alpha, Beta and Gamma cities. The results are below in Table 3.

Because several different aspects of immigration are taken into consideration, the Urban Immigrant Index 'Alpha cities' do diverge from the top-ten cities ranked simply by the percentage of foreign-born (again, see Table 2). Five of the Immigrant Index Alpha cities are also top-ten cities in terms of the percent foreign-born (Toronto, Dubai, Miami, Amsterdam, Vancouver); yet other important global immigrant destinations move up in the rankings when the sheer number and complexity of their immigrant populations is accounted for (New York, Los Angeles, London, Sydney and Melbourne). In addition, our Alpha list looks similar to the GaWC Alpha cities with notable exceptions of Dubai[8] and Amsterdam.

8 Several Middle Eastern cities (Muscat, Mecca and Medina) were not included in the index because there was insufficient data on the composition of the foreign-born.

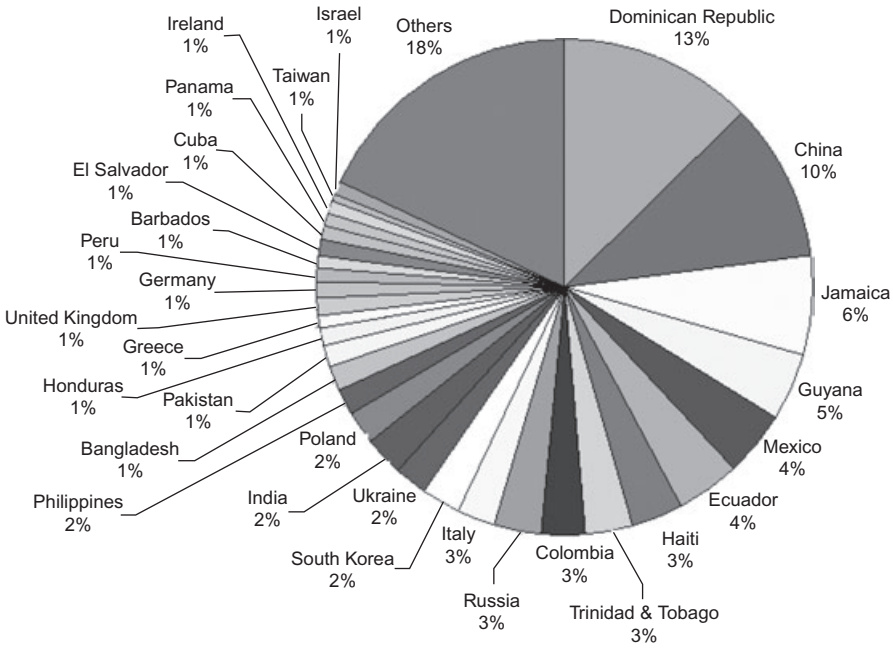

Figure 4 Foreign-born population in New York PMSA, 2000

Table 3 Urban Immigrant Index cities

Alpha Cities
New York, Toronto, Dubai, Los Angeles, London, Sydney, Miami, Melbourne, Amsterdam, Vancouver
Beta Cities
Riyadh, Geneva, Paris, Tel Aviv, Montreal, Washington DC, The Hague, Kiev, San Francisco, Perth
Gamma Cities
Munich, Calgary, Jerusalem, Boston, Chicago, Ottawa, Edmonton, Frankfurt, Winnipeg, Brussels, Düsseldorf, Seattle, Rotterdam, Houston, Brisbane, San Diego, Copenhagen, Bonn, Detroit, Milan, Cologne, Zurich, Rome, Berlin, Vienna, Portland, Hamburg, Minneapolis-St. Paul, Singapore, Stockholm, Dallas-Ft. Worth, Tbilisi, Quebec City, Buenos Aires, Oslo

The second-tier 'Beta cities' have virtually no overlap with the GaWC roster, with the exception of San Francisco. Cities that rank as Betas on our list (Riyadh, Tel-Aviv, the Hague) are not on any GaWC rankings. Washington DC, which is a GaWC Gamma city, receives a Beta ranking when taking immigration into account. There are several GaWC Alpha and Beta cities that are not ranked as Alpha, Beta or Gamma cities in the Urban Immigrant Index. These include Tokyo, Singapore, Hong Kong, Madrid, Mexico City, São Paulo, Moscow, and Seoul.

The Urban Immigrant Index cities differ from the GaWC roster for several reasons. First, it is worth recalling that we were unable to locate foreign-born information for most cities in Africa, East Asia and South Asia. We are confident that there is more international movement among African countries than the data show. In particular, South Africa is a major destination for African immigrants, but most of the formal data fail to capture this. As for East Asia, it is worth noting that Tokyo has seen an increase in immigration (Douglass and Roberts, 2000); however, the foreign-born still

represent a very small percentage (2.4%) of the city of Tokyo's population. The overall trend for South and East Asian cities is rapid urban growth due to internal migration.

The Urban Immigrant Index underscores the continued significance of traditional settler societies (North America and Australia) and the rise of Europe as a major destination for the world's immigrants. These findings challenge researchers to investigate the increasing cultural complexity of cities in a globalized world and to see globalization beyond economic indicators such as foreign direct investment and TNC corporate headquarters. It also accentuates the uneven nature of globalization processes when entire regions are left off the map.

Data problems

Admittedly, the data in this study are problematic. This is true for any attempt to measure international migration; there is an almost total lack of any systematic observation within the data, and the data are often not comparable (Simon, 2002). The most obvious problem is that the definition of 'urban' varies. Some census data report foreign-born information at the city level, some at the metropolitan level. For US cities, the data are at the Primary Metropolitan Statistical Area (PMSA) level. In contrast, the Tokyo data are based on the city of Tokyo (approximately eight million), not the super-conurbation of Tokyo-Yokohama (of some 27 million). This is a problem shared by any comparative international urban research, and it makes meaningful 'urban' comparisons difficult (Short *et al.*, 1996).

Second, not all census data are published at the same time. The US data come from the 2000 census; but some countries conduct their decennial census at the mid-decade (hence our data for Japan, Korea and some European countries date back to 1995 or 1996).Yet for 92 of the 116 cities in this study the data date from 2000 to the present. The difference of a few years, it could be argued, is critical with regard to globalization, urbanization and immigration. At the same time we recognize there is no way to standardize the timing of data collection.

A third potential problem with the data is that some sources account for illegal immigration, refugees and asylees, while others do not distinguish the foreign-born population by their legal status (Bardsley and Storkey, 2000). Hence, some cities may under-report foreign-born. In some countries, the definition of foreign-born considers the children of immigrants to be 'foreign-born' even if they were born in the host country (The Netherlands, for example; see Hogendoorn *et al.*, 2003) which could result in over-counting the foreign-born.

Fourth, there is a significant gap between the quality and detail of data collected by many industrialized countries versus developing countries. The censuses for many developing countries lacked much of the detail found in industrialized countries, particularly at the urban level, which in part explains why we were unable to find data for many cities in South Asia, the Middle East and Latin American. We are uncertain whether or not urban-level foreign-born data exist and can be accessed. For example, the Philippines census contains thorough information on emigrants but no counting of foreign-born individuals in Manila. Overall, global city research on cities in the developing world has been overshadowed by research on cities in the developed world where data are more readily obtained (Lo and Yeung, 1998; Grant and Nijman, 2002; Sassen, 2002; Gugler, 2003).

The results of this study call attention to the need for the generation, collection and storage of urban immigration data for scholars and policymakers to access. In order to improve data access and quality, we have created a website in which all of the Urban Immigrant Index data are posted (http://gstudynet.com/gum). A full list of all the cities, data and their sources used in this study is found on the GUM webpage. It also includes figures, maps and tables not included in this essay.

Conclusions

A more complete understanding of globalization should take into account immigration and the impacts, both positive and negative, of the cultural diversity that immigrants create in urban spaces. This preliminary analysis offers a new way to measure the globalness of world cities through a detailed study of immigrant flows and composition at the urban level. Cities are the functional nodes of the global economy, and yet they are also the stages on which diverse peoples settle, interact and transform urban space. This research is a first step in gathering the necessary data on how immigrants are changing the social and cultural realms of the cities they settle in. Using these data, the creation of the Urban Immigrant Index yields some provocative results. In particular, this research invites closer examination of the significance of urban immigration to both Europe and the Middle East, areas that are not traditional settler societies. The virtual exclusion of East Asia, Latin America and Southeast Asia in the data also calls for a rethinking of the dynamics between economic and cultural globalization. It may be useful to understand why economic centers such as Seoul, Mexico City and Jakarta fail to attract diverse settlers and thus lack the cosmopolitanism that is often associated with world city status.

The value of linking immigration and world cities is that globalization dynamics can be analyzed at the local/global scale as well as the local/nodal scale. Recent global cities literature emphasizes the network among global cities (Beaverstock *et al*., 2000a; Scott, 2001; Taylor and Catalano, 2002). But this approach may overlook important linkages from the global city to the periphery. Global immigrant destinations are the nodes from which complex linkages are formed with the economic periphery. For example, the immigrant population in Amsterdam has formed transnational networks with communities in Suriname, Morocco, Turkey and the Netherland Antilles (Deurloo and Musterd, 2001). We need to better understand these nodes and linkages, and one way to do this is to focus on immigrants and the transnational associations they form back to their sending communities.

This study presents data on international urban migration that has never been assembled before. By creating this comprehensive (albeit incomplete) database and index, cities often ignored in world city research take on greater importance in revealing globalization processes. This study of global immigration creates a vantage point to view the personal choices that millions of individuals make in response to global economic forces. Yet the movement of these same individuals results in complex cultural consequences at the urban scale that are not fully appreciated. The linking of immigration and cities is a view of globalization from below. This study is a first step in deepening the empirical connections between truly global cities and the foreign-born that reside in them. Finally, this research will enliven the conceptualization of globalization as a bottom-up process instigated, in part, by migrants. We believe this project will stimulate new discussions among global cities scholars and immigration scholars, perhaps producing a new synergy on this topic.

Lisa Benton-Short (lbenton@gwu.edu), **Marie D. Price** (mprice@gwu.edu), Department of Geography, the George Washington University, 1957 E Street, NW Suite 512, Washington, DC 20052 and **Samantha Friedman** (s.friedman@neu.edu), Department of Sociology and Anthropology, Northeastern University, 535 Holmes Hall, Boston, MA 02115, USA.

References

Anisef, P. and M. Lanphier (eds.) (2003) *The world in a city*. University of Toronto Press, Toronto.

Bardsley, M. and M. Storkey (2000) Estimating the numbers of refugees in London. *Journal of Public Health Medicine* 22.3, 406.

Beaverstock, J.V. (1994) Re-thinking skilled international labor migration: world cities and banking organizations. *Geoforum* 25, 323–38.

—— and J. Smith (1996) Lending jobs to global cities: skilled international labour

migration, investment banking and the City of London. *Urban Studies* 33.8, 1377–400.
——, R.G. Smith and P.J. Taylor (1999) A roster of world cities. *Cities* 16.6, 445–58.
——, R.G. Smith and P.J. Taylor (2000a) World-city network: a new metageography. *Annals of the Association of American Geographers* 90.1, 123–34.
——, R.G. Smith, P.J. Taylor, D.R.F. Walker and H. Lorimer (2000b) Globalization and world cities: some measurement methodologies. *Applied Geography* 20.1, 43–63.
Caryl, C. (2000) The citizens of nowhere in Arabia's Hong Kong. *New Statesman* 13.599, 32–4.
Castells, M. (1996) *The rise of the network society*. Blackwell: Oxford.
Castles, S. and M. Miller (2003) *The age of migration*. Third edition, Guildford Press, New York.
Clark, D. (1996) *Urban world, global city*. Routledge, New York.
Derudder, B., P.J. Taylor, F. Witlox and G. Catalano (2003) Hierarchical tendencies and regional patterns in the world city network: a global urban analysis of 234 cities. *Regional Studies: The Journal of the Regional Studies Association* 37.9, 875–86.
Deurloo, R. and S. Musterd (2001) Residential profiles of Surinamese and Moroccans in Amsterdam. *Urban Studies* 38.3, 467–85.
Douglass, M. and G. Roberts (2000) *Japan and global migration: foreign workers and the advent of a multicultural society*. University of Hawaii Press, Honolulu.
The Economist (2002) The longest journey: a survey of migration. 2 November, 3–16.
Fan, C.C. (2002) The elite, the natives, and the outsiders: migration and labor market segmentation in urban China. *Annals of the Association of American Geographers* 92.1, 103–24.
Foreign Policy (2004) Measuring globalization: economic reversals, forward momentum. *Foreign Policy*, March/April 54–69.
Friedmann, J. (1986) The world city hypothesis. *Development and Change* 17, 69–83.
Godfrey, B. (1996) Restructuring and decentralization in a world city. *Geographical Review* 85.4, 436–57.
Grant, R. and J. Nijman (2002) Globalization and the corporate geography of cities in the less-developed world. *Annals of the Association of American Geographers* 92.2, 320–40.
Gugler, J. (2003) World cities in poor countries: conclusions from case studies of the principal regional and global players. *International Journal of Urban and Regional Research* 27.3, 707–12.
Hagendoorn, L., J. Veenman and W. Vollebergh (eds.) (2003) *Integrating immigrants in the Netherlands*. Ashgate, Burlington, VT.
Hall, P. (1984) *The world cities*. Weidenfeld & Nicolson, London.
Jokisch, B. and J. Pribilsky (2002) The panic to leave: economic crisis and the 'new emigration' from Ecuador. *International Migration* 40.4, 75–101.
Knox, P. and P.J. Taylor (eds.) (1995) *World cities in a world-system*. Cambridge University Press, Cambridge.
Ley, D. and P. Murphy (2001) Immigration in gateway cities: Sydney and Vancouver in comparative perspective. *Progress in Planning* 55, 119–94.
—— and J. Tutchener (2001) Immigration, globalization and house prices in Canada's gateway cities. *Housing Studies* 16.2, 199–223.
Lo, F.C. and Y.M. Yeung (eds.) (1998) *Globalization and the world of large cities*. United Nations University Press, Tokyo.
Marcuse, P. and R. van Kempen (2000) *Globalizing cities: a new spatial order?* Blackwell, Malden, MA.
Massey, D., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino and J.E. Taylor (1998) *The world in motion: understanding international migration at the end of the millennium*. Clarendon Press, Oxford.
Meyer, D.R. (1986) The world system of cities: relations between international financial metropolises and South American cities. *Social Forces* 64.3, 553–81.
Nijman, J. (1997) Globalization to a Latin beat: the Miami growth machine. *Annals of the American Academy of Political and Social Science* 551, 164–78.
—— (2000) The paradigmatic city. *Annals of the Association of American Geographers* 90.1, 135–45.
Nyiri, P. and I. Saveliev (eds.) (2003) *Globalizing Chinese migration*. Ashgate, Burlington VT.
O'Brien, R. (1992) *Global financial integration: the end of geography*. Council of Foreign Relations Press, New York.
Orozco, M. (2003) Worker remittances: an international comparison. Presentation to

the Inter-American Development Bank, 28 February 2003.
Price, M., I. Cheung, S. Friedman and A. Singer (2005) The world settles in: Washington, DC as an immigrant gateway. *Urban Geography* 26.1, 61–83.
Robinson, J. (2002) Global and world cities: a view from off the map. *International Journal of Urban and Regional Research* 26.3, 531–54.
Samers, M. (2002) Immigration and the global city hypothesis: towards an alternative research agenda. *International Journal of Urban and Regional Research* 26.2, 389–402.
Sander, C. (2003) *Migrant remittances to developing countries: a scoping study*. Bannock Consulting, London.
Sassen, S. (1991) *The global city*. Princeton University Press, Princeton, NJ.
—— (1994) *Cities in a world economy*. Pine Forge Press, London.
—— (1999) *Guests and aliens*. The New Press, New York.
—— (ed.) (2002) *Global networks, linked cities*. Routledge, New York.
Scott, A.J. (2000) *The cultural economy of cities*. Sage, London.
—— (ed.) (2001) *Global city-regions: trends, theory, policy*. Oxford University Press, Oxford.
Shachar, A. (1997) Economic globalization and urban dynamics. In F. Moulaert and A. Scott (eds.), *Cities, enterprises and society on the eve of the 21st Century*, Pinter, London.
Short, J.R. (2004) *Global metropolitan: globalizing cities in a capitalist world*. Routledge, London.
—— and Y. Kim (1999) *Globalization and the city*. Addison, Harlow.
——, Y. Kim, M. Kuus and H. Wells (1996) The dirty little secret of world cities research: data problems in comparative analysis. *International Journal of Urban and Regional Research* 20.4, 697–717.
Shoval, N. (2002) A new phase in the competition for the Olympic gold: the London and New York bids for the 2012 Games. *Journal of Urban Affairs* 24.5, 583–99.
Simon, G. (2002) International migration trends. *Population & Societies* 382 (September), 1–4.
Smith, D. and M. Timberlake (2002) Hierarchies of dominance among world cities: a network approach. In S. Sassen (ed.), *Global networks: linked cities*, Routledge, New York.
Stepick, A., G. Grenier, M. Castro and M. Dunn (2003) *This land is our land: immigrants and power in Miami*. University of California Press, Berkeley.
Taylor, P.J. (2004) *World city network: a global urban analysis*. Routledge, New York.
—— and G. Catalano (2002) Measurement of the world city network. *Urban Studies* 29.13, 2367–76.
Thrift, N. (1994) On the social and cultural determinants of international financial centres: the case of the City of London. In S. Corbridge, N. Thrift and R. Martin (eds.), *Money, Power and Space*, Blackwell, Oxford.
United Nations (2003) *International migration report. United Nations Publications*, New York.
Waldinger, R. (1996) From Ellis Island to LAX: immigrant prospects in the American city. *International Migration Review* 30.4, 1078–86.
Warf, B. (1989) Telecommunications and the globalization of financial services. *Professional Geographer* 41.3, 257–71.
World Bank Group (2003) Foreign investment, remittances outpace debt as sources of finance for developing countries: World Bank-Europe and Central Asia. On line DevNews Media Center, 2 April 2003, *www.worldbank.org/prospects/gdf2003* [accessed 5 July 2005].