Occasional Paper Series

Global Perspective on the Connections between Immigrants and World Cities

Lisa Benton-Short, Marie Price and Samantha Friedman

A Global Perspective on the Connections between
Immigration and World Cities
By
Lisa Benton-Short, Marie Price and Samantha Friedman

The purpose of this paper is to develop a database for urban immigrant destinations and contrast it with existing rankings of world cities.[1] Most world city rankings focus on economic measurements yet our research argues that through a quantitative study of immigrant destinations, we can better understand socio-cultural change in the global urban hierarchy. In cities around the world, unprecedented levels of global immigration challenge us to assess how and where immigrants are challenging the political, economic, social and cultural dimensions of our cities. Our goal is to add to the range of criteria used to establish a global urban hierarchy and to inspire others to expand their methods and measurements of socio-cultural globalization in world cities research.
Our argument is thus fourfold.

1) The empirical research used to create criteria for use in the creation of a global urban hierarchy has been dominated largely by a focus on economic criteria. Socio-cultural globalization factors have not been as relevant in situating the global urban hierarchy.

2) One of the most important socio-cultural globalization factors is immigration, identified as critical to the world city hypothesis as early as 1986, but remains neglected. We offer data that measuring of immigration's impact. We use this data set to create an Immigration Index that weights several criteria, then rank cities based on immigrant flows and diversity.

3) Empirical research on world cities has lagged behind the development of theory. There are two ways to determine a city's place in the global hierarchy: attributional studies or network analysis, this study focusing on attributional analysis. It will demonstrate, rather than just assert, the uneven impact of immigration on world cities.

4) Data on immigration and cities is problematic due to inconsistencies in definitions and data collection. We acknowledge the limits in the construction of the Immigrant Index, but believe the index draws attention to many cities overlooked in other rankings. We call for a standardization of data to measure foreign born citizens in all major world cities, and to make this data available for use in measuring globalization.

I. Introduction

Globalization and Cities

        The linking of cities with the processes of globalization is a critical area of research. Cities are where globalization takes place. 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 Clark, 1996; Hall, 1984; Knox and Taylor, 1995; Nijman, 2000; Sassen, 1991, 1994; Short and Kim, 1999; Robinson, 2002; Samers, 2002). There appears to be consensus that cities and the dynamics of urbanization have been changed by the intensification of globalization. The most important cities that command and control global economic, political or cultural processes 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 areas of social polarization and points of destination for domestic and international migrants.

        Despite considerable attention to cities and global dynamics, there is a lack of available data that quantifies world city research (Beaverstock et. al, 2000a). 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) describes this data deficiency as "the dirty little secret of world cities research." Beaverstock et.al (2000b) contends the lack of standardized and available data that measures and compares the flows of globalization remains a major problem for research on the global urban hierarchy.

        Regardless of the poverty of data and empirical analysis, urban geographers have established a roster or hierarchy of world cities (Beaverstock et. al, 1999) (Table 1).

Table 1: Globalization and World Cities Index

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: Globalization and World Cities Study Group (GaWC))

        There is broad consensus on which cities belong atop the world city hierarchy—London, Tokyo and New York (Sassen 1991). Below this level, much less agreement exists, in part because there is no consensus on what variables should be used to produce these world city rankings. However much of the literature on world cities has ranked cities according to their disproportionate economic power in the world-system. This has been true since the late 1980s (Meyer, 1986, Warf, 1989, O'Brien, 1992). As a result, there are actually numerous criteria used to evaluate economic power. One approach, perhaps the more simplistic, considers criteria that measure the importance of international finance centers (for example, the *Economist's* ongoing surveys). A second approach proposed by Hall (1984) argued those cities atop the urban hierarchy had superior functional abilities with regard to trade, finance, technology, communications and politics. Another cornerstone of global urban hierarchy writing is Friedmann (1986) whose hierarchy come from the control of capital in the new international division of labor, assessing multiple criteria such as financial centers, headquarters for multinational corporations, international institutions, 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 (Beaverstock et. al. 1999; Sassen, 1991). How such variables or criteria are used, weighted and factored to create these hierarchies varies from study to study. Despite this lack of consistency, most selected criteria focus on measurements of
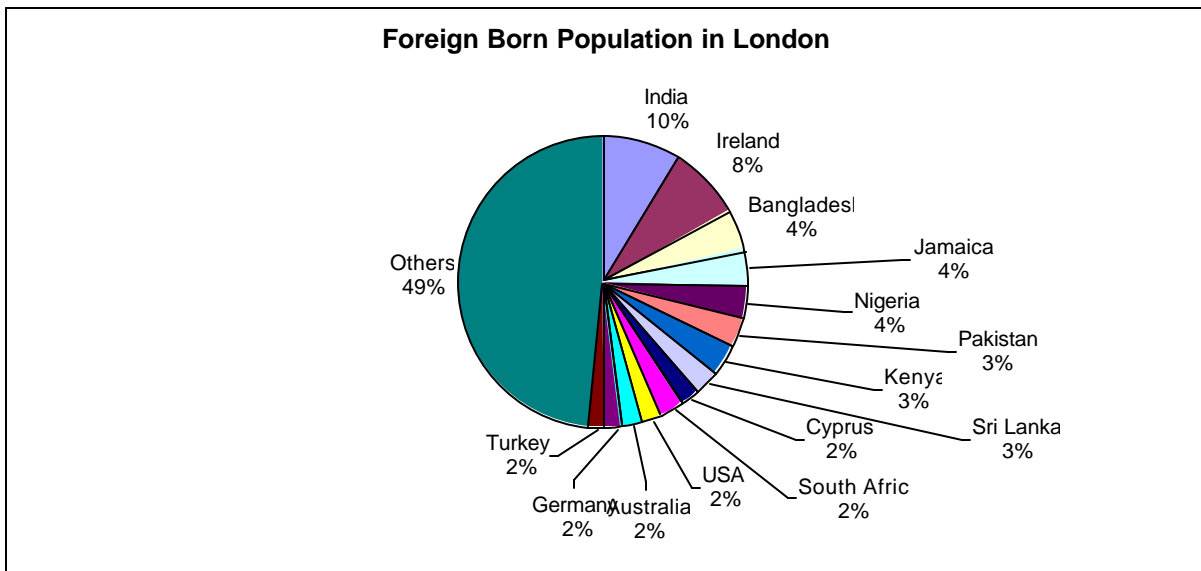
economic globalization or the use of technology (i.e. measuring internet connections, cellular phone accounts, etc).

However, 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 we need to conceptualize globalization in broader terms not 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 (people, popular culture, and ideas) can be as influential in globalization dynamics as the movement of capital and trade. The gap in the literature with regards to the relationship between the globalization of culture and the global urban hierarchy was first commented upon in 1996 (Short, et.al 1996; 709). The relative silence on the link between cultural globalization and cities may be a result of the difficultly 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, etc.) (Shoval, 2002).

Global cities research is expanding beyond the focus on economic criteria, with *Foreign Policy's* Annual Globalization Index (of countries, alas not cities) now considering 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).   In addition, recent attention on cultural globalization has begun to expand the focus beyond economic globalization. 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 fifty 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). Through globalization rate 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. Yet, the cultural implications of large numbers of people from diverse countries settling in particular points on the globe (almost always cities) have real consequences . Figure 1 illustrates the internationalization of present-day London. We contend that such hyper-diversity is part of and contributes to a culture of globalization. With nearly 2 million foreign-born residents, no one group dominates the flow. In fact, no fewer than 14 countries account for half of the foreign-born population; the remainder of the immigrant stock come from nearly every country in the world.

Figure 1 Foreign-Born Population in London, 2001

Foreign Born Population in London

India
10%

Ireland
8%

Bangladesl
4%

Jamaica
4%

Nigeria
4%

Pakistan
3%

Kenya
3%

Others
49%

Sri Lanka
3%

Cyprus
2%

South Afric
2%

USA
2%

Turkey
2%

Germany Australia
2%   2%

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" (Economist, 2002: 3). Castles and Miller hold 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 can develop, intensifying the links between areas of origin and destination. Sassen (1999: xi) concurs, noting people who travel and move help shape the material and spiritual culture of places: migration therefore should be seen as central a political project as trade and finance in globalization. The continued relationship between globalization and immigration (Sassen, 1999) makes a strong case for studying immigration and world cities.

Migration must be understood as a response to political economic shifts. Waves of new migrations occurred as a result of the end of the Cold War. The shift of East Europeans into Western Europe, the flow of Jews from the former Soviet Union to Israel, the break-up of Yugoslavia, and changes in asylum or refugee policies by individual states dramatically changed immigrant flows. Political changes, such as the break-up of the Soviet Union, turn people who were once citizens of the Soviet Union into the "foreign-born" in the newly independent republics. Changes in immigration policy can result in dramatic shifts in migrant flows. As South Americans found it more difficult to legally enter the United States, the numbers of Colombians, Ecuadorians, Brazilians and Bolivians have surged in the EU (Jokisch and Pribilsky, 2002) Figure 2).

Figure 2: Map of Net Migration, from Simon 2002.
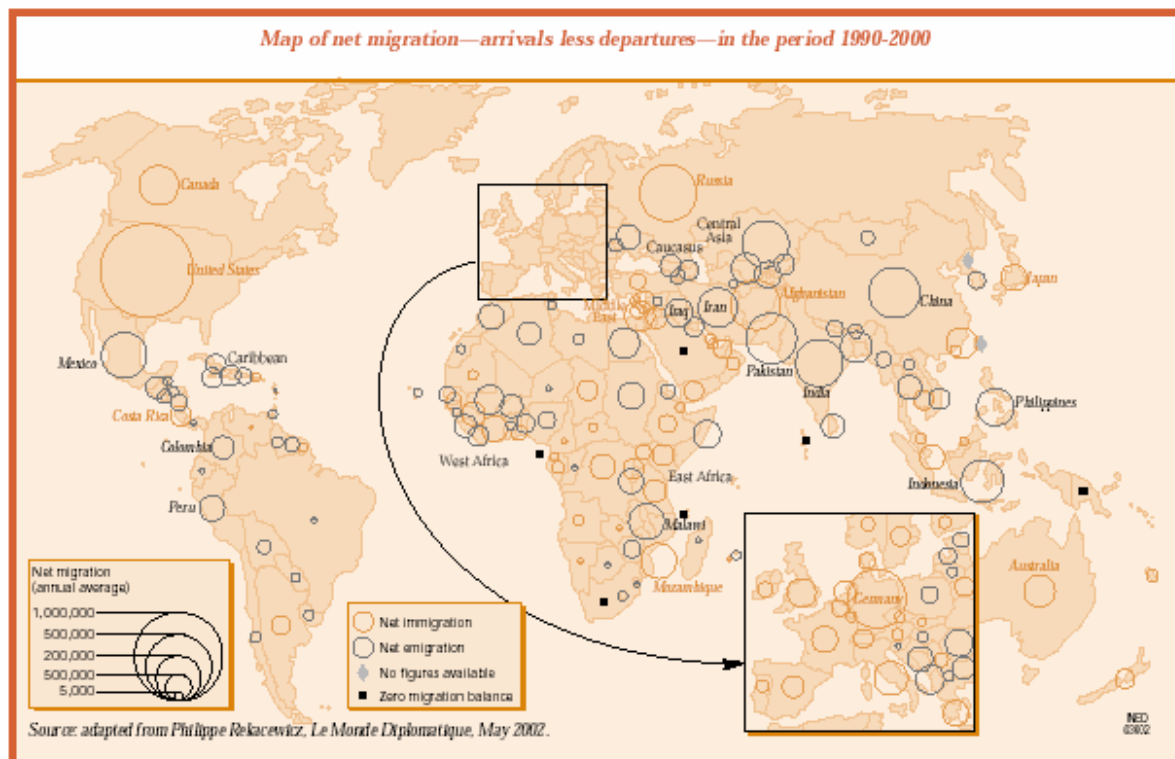
Immigration and its impact on the changing urban landscape is an important part of the process of globalization, although it remains unrecognized as criteria for inclusion in the global urban hierarchy. One problem is that much of the international migration data are gathered at the country level; there is no standardized institutional data for immigration to cities around the world.[2] Some have noted this shortcoming. Waldinger has called for bringing the "urban" 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). As Friedmann (1986:75) acknowledged "world cities are points of destination for large numbers of both domestic and/or international migrants." While 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, transnational business elites or focused on migration in one or two specific cities as case studies (Godfrey, 1996; Fan, 2002 ; Ley and Tutchener 2001; Duerloo and Musterd, 2001). 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.[3] These are important contributions to understanding the connection among globalization, migration and world cities.

In this research, we want to consider the overall impact of both skilled and unskilled labor—in other words all foreign-born citizens are 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 Miler, 2003). Employment in both highly specialized labor and

---

[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.
[3] 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).

low-skilled service jobs is characteristic of global cities (Castles and Miller, 2003). 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 $80 billion in worker remittances have been transferred from migrants to their countries of origin in 2002 (World Bank Group, April 2, 2003). Other sources suggest the figure may total $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, or to argue for a crude empiricism, but simply to attempt to expand the criteria considered in developing a global 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, Taylor, Witlox and Catalon, 2003; Short and Kim, 1999).

II. Research Design

        We selected 100 cities to begin this study based, in part, on the Globalization and World Cities (GaWC) study group's roster of world cities (Beaverstock, 1999).[4] The GaWC roster is one of the more cited rosters in urban geography literature. As shown in Table 1, the GaWC roster consists of 55 world cities at three levels. There are 10 "Alpha Cities", 10 "Beta Cities" and 35 "Gamma Cities". As Figure 3 reveals, most of these cities are geographically concentrated in key globalization arenas: 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 East). Our final list included 116 cities; nearly all the cities having a metropolitan population of at least 1 million.

Figure 3: GaWC Map of World Cities
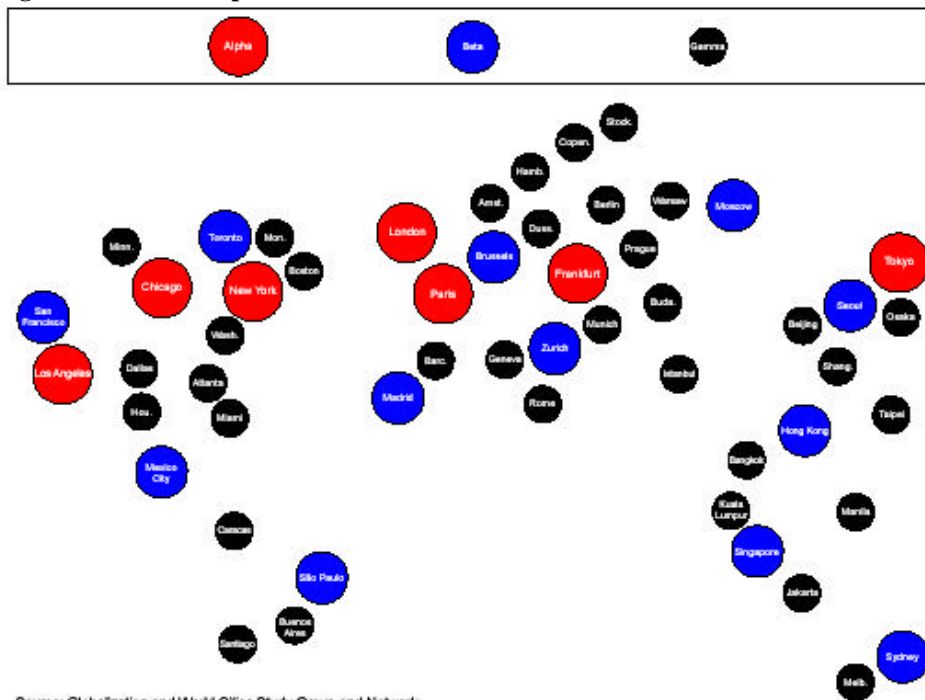
Source: Globalization and World Cities Study Group and Network

---

[4] One of the most important study groups is the Globalization and World Cities (GaWC) Study Group and Network at Loughborough University in the UK. The purpose behind this group is to operate as a network of researchers who use and develop methods for research projects and teachings. GaWC is a clearing house for data and research papers about world cities research, thus providing an important resource for building upon theory.

The working list of the 116 cities for which we collected data concerning foreign-born residents is found in Appendix 1. The primary measurement of immigration data collected was the percentage of foreign-born at the urban level. Collecting this data proved challenging because there is no centralized data base for comparing global urban data. Most countries collect foreign-born data, but may report it only at the national level.[5] First, we utilized the collections at the Census International Program Center Library outside of Washington D.C., which houses official government census publications from countries around the world. We also accessed United Nations Population Division immigration databases however most of this data was only at the country-level[6]. This has been a long-standing challenge to immigration work: most data was country level only, despite most immigrants migrating to cities. In the second phase of data collection, we sought data from official government census or statistical web sites.[7] Increasingly, government agencies are making data available through the Internet and this was most helpful in preparing this paper. In all cases, we utilized the most current data, it ranging from the mid 1990's to 2002. Once the data were collected a table was constructed of the percent foreign-born per city.

Once we had collected the foreign-born population data, was to differentiate those cities with diverse immigrant stock and those without. A prime example is Dubai, United Arab Emirates, where 82 percent of the population was foreign-born in 2002. A closer examination of the data reveal that 61 percent of the foreign born came from South Asia (India and Pakistan). Thus, while Dubai is mostly a city of immigrants, the countries of origin of the immigrants are not particularly diverse. Nor is it a county that encourages immigrants to become citizens (Caryl, 2000).

In order to account for the impact of immigration (total numbers, diversity, relative distance traveled) and create a meaningful evaluation of these demographic shifts within cities, we created an Immigration Index. 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:
1) The percentage foreign-born of the urban population.
2) The total number of foreign-born in the city.
3) The percentage of foreign-born not from a neighboring country.
4) Cities where no one group represented more than 25 percent of the foreign-born stock were considered diverse.

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 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 percent foreign-born which was weighted at 40 percent of the index score. The absolute number of immigrants does matter, so we gave that figure a weight of 30 percent in the index calculation. The percentage of immigrants not from neighboring countries accounted for 15 percent   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 attacked immigrants from neighboring countries. Lastly, those cities where no one group represented more than 25 percent of the immigrant stock received a positive weight of 15 percent. Those cities that had a dominant group received a negative weight of 15 percent. 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

---

[5] On February 6 2003 the United Nations released its International Migration Report 2002 at a press release at The Brookings Institution in Washington D.C. 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 11, 2001, many countries felt urban-level data on foreign born was too sensitive and declined to make it available to the United Nations.

[6] 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.

[7] 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.

cities. Finally the cities were grouped into categories of Alpha, Beta and Gamma cities following the GaWC rooster.

III. Results

Figure 4 illustrates the cities in our study and highlights those cities where more than 500,000 foreign-born reside. What is striking about this map 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. We were unable to locate immigrant data for the two most populous countries in the world, China and India. 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).[8]

Figure 4: Map of Major Immigrant Destinations and Study Cities
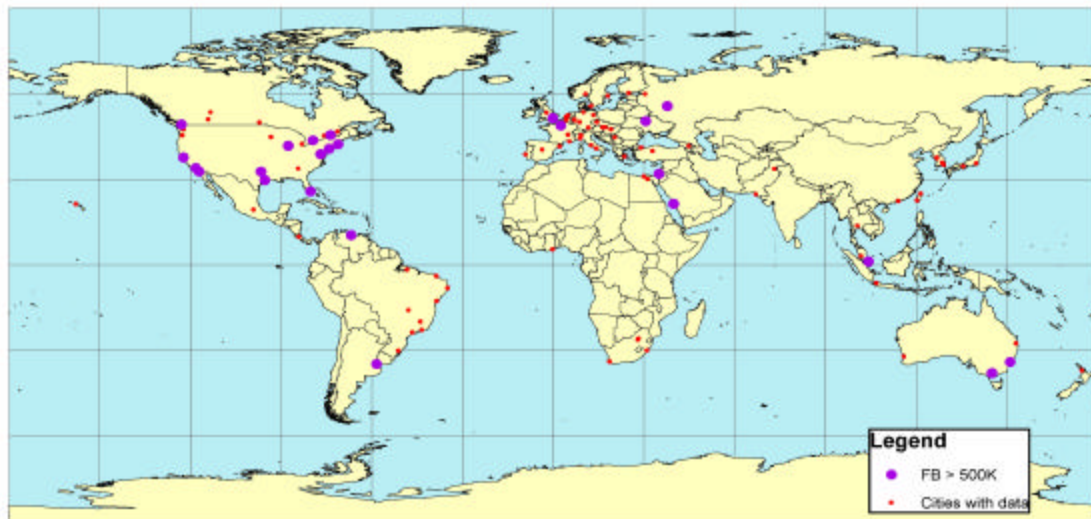
Table 2 reports the foreign-born percentages for our top 25 cities, the entire table for 116 cities is found in Appendix 2. In these top 25 cities at least one-quarter of the urban population is foreign-born. Table 2 confirms that many of the "usual suspects"—cities that appear on most global urban hierarchies-- also rank highly for the foreign-born. These include Miami, Amsterdam, Toronto, Vancouver, Los Angeles, New York, Sydney, Frankfurt, London and Brussels. Such high rankings support the idea that

---

[8] India and China are both major recipients of remittances. India is the world leader in terms of total remittances received in 2000. China was tied for second place with Mexico and the Philippines (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.

many of the alpha and beta cities are equally influential and 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 percent Miami's foreign-born citizens is nearly five times greater than the U.S. national average of 11.5 percent.

Table 2: Top 25 cities by Percent Foreign-Born

	Foreign-Born Percentages in Selected Cities				
	City	Year	City Pop	FB Pop	%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

There are also many curious entries 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 global cities' rosters. The substantial guest workforce in 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, may underscore how cultural factors are often overlooked in explaining global immigrant flows.

A surprise is the absence of Tokyo, considered a top tier world city, ranking 92nd with only 2.41% foreign-born (Appendix 2). Even lower is Seoul (ranked 96) and Jakarta (ranked 105), both cited as regional economic powerhouses in the global economy.   Two Latin American mega-cities, São Paulo (ranked 100) with 1.4 percent foreign-born and Mexico City (ranked 109) with .42 percent foreign born are regional economic leaders and yet attract very few international migrants.

Accounting for Diversity

The percent foreign-born is an important but crude measure of cultural globalization. This measure does not reveal anything about the diversity of the immigrant stock or flow; it does not 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.   Even 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 percent foreign-born) (For a productive discussion of global versus cosmopolitanism see Nijman, 1997; Marcuse and van Kempen, 2000). While this research can not hope to answer all of these complex questions, we identify the importance of immigrant diversity and composition and have created an immigrant index that takes these measures into account.

Consider the cases of New York City and Los Angeles. Both cities are home to more than 3 million foreign-born residents according to Census 2000. New York's percent-foreign born is 33.7 percent; Los Angeles percent foreign- born is 36.2. As Figures 5 and 6 illustrate, the crude measurement of percent foreign-born hides the true level of diversity in these two cities.   In the case of Los Angeles, Mexican immigrants account for 44 percent of the foreign-born stock. In New York City, the largest group--from the Dominican Republic --accounts for just 12 percent of the foreign-born population. 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 the way Mexicans dominate Los Angeles. Appendix 3 includes a dozen pie charts showing the immigrant composition for selected global cities and is reflective of the variation in immigrant flows to our top-ranked cities.

Figure 5: Foreign Born Population in Los Angeles
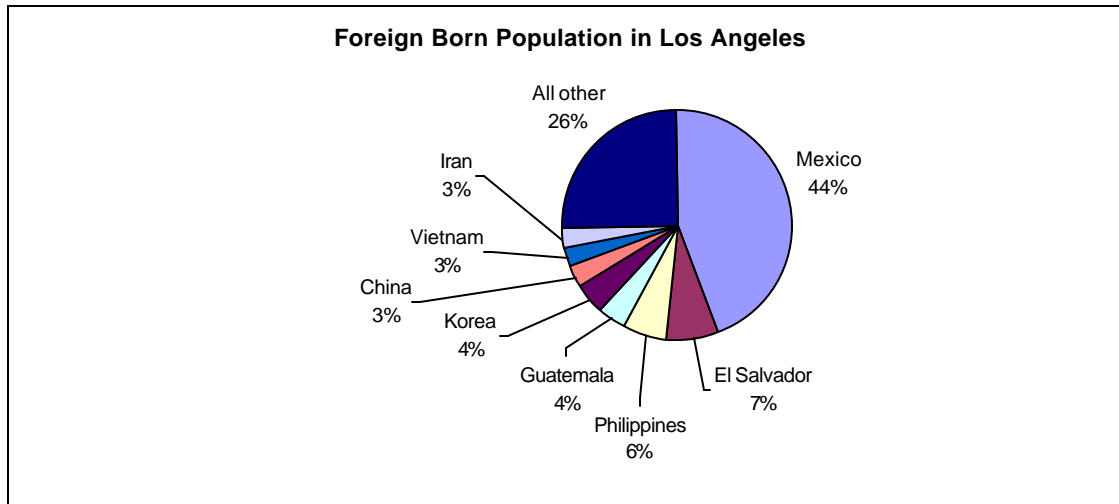
Figure 6: Foreign Born Population in New York City
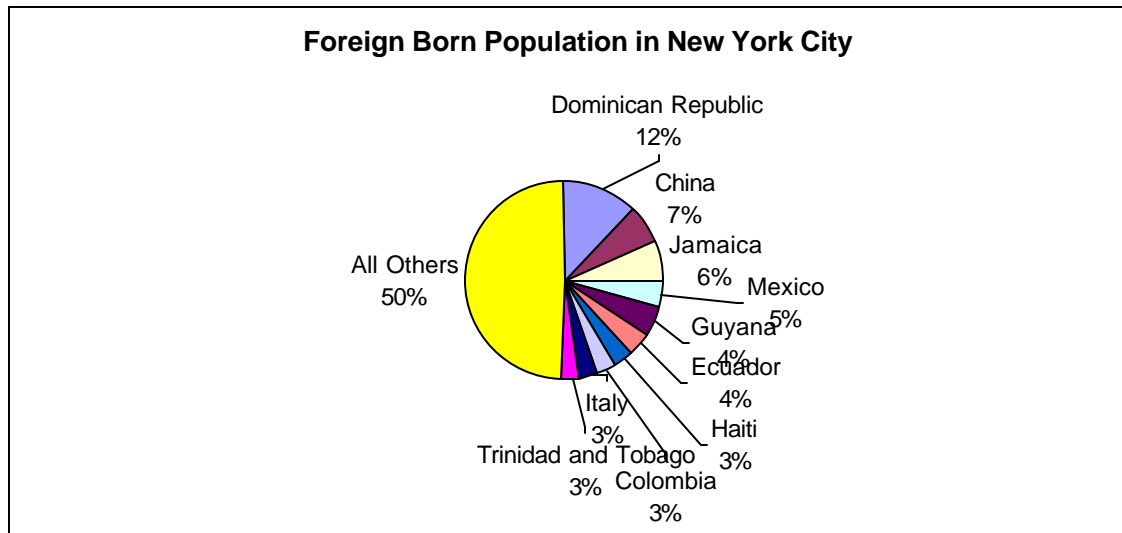
Presenting the Immigrant Index

The immigrant index is a weighted ranking that considers: 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 percent of the foreign-born stock (See Appendix 4 for the complete immigrant index). We had sufficient demographic information for 90 of the 116 cities in the study. For easier comparison with the GaWC roster of world cities, we took the top 55 cities in the Immigrant Index and classified them similarly as Alpha, Beta and Gamma cities. The results are below in Table 3.

Table 3: Immigrant Index

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

By taking in to consideration several different aspects of immigration, the Immigrant Index "Alpha cities" do diverge from the top-ten cities when just ranking the percent foreign-born (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 accounting for the sheer number and complexity of their immigrant populations (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[9] and Amsterdam.

---

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

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 Immigrant Index. These include Tokyo, Singapore, Hong Kong, Madrid, Mexico City, São Paulo, Moscow, and Seoul.

Figure 7 is a visual comparison of the two rosters. What is most striking in the top figure is the prominence of North America, Europe and Australia when compared to the GaWC figure. While Africa does not appear in either map, the Immigrant Index map lacks any cities from East Asia and only one city from the regions of Southeast Asia and Latin America.

This visual representation of immigration may be significantly different from economic representations of globalization (i.e. the GaWC figure) for several reasons. First, it is worth recalling that we were unable to locate foreign-born information for most cities in Africa, East Asia, 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 fails 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 percent) 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 Immigrant Index underscores the prominence of the continued significance of traditional settlers societies (North America and Australia) and the rise of Europe as a major center of destination for the world's migrants. These findings challenge researches to investigate the increasingly 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 underscores the unevenness of globalization processes when entire regions are left off the map.

Figure 7: Immigrant Index Alpha, Beta, Gamma cities (above) and GaWC Alpha, Beta and Gamma cities (below).
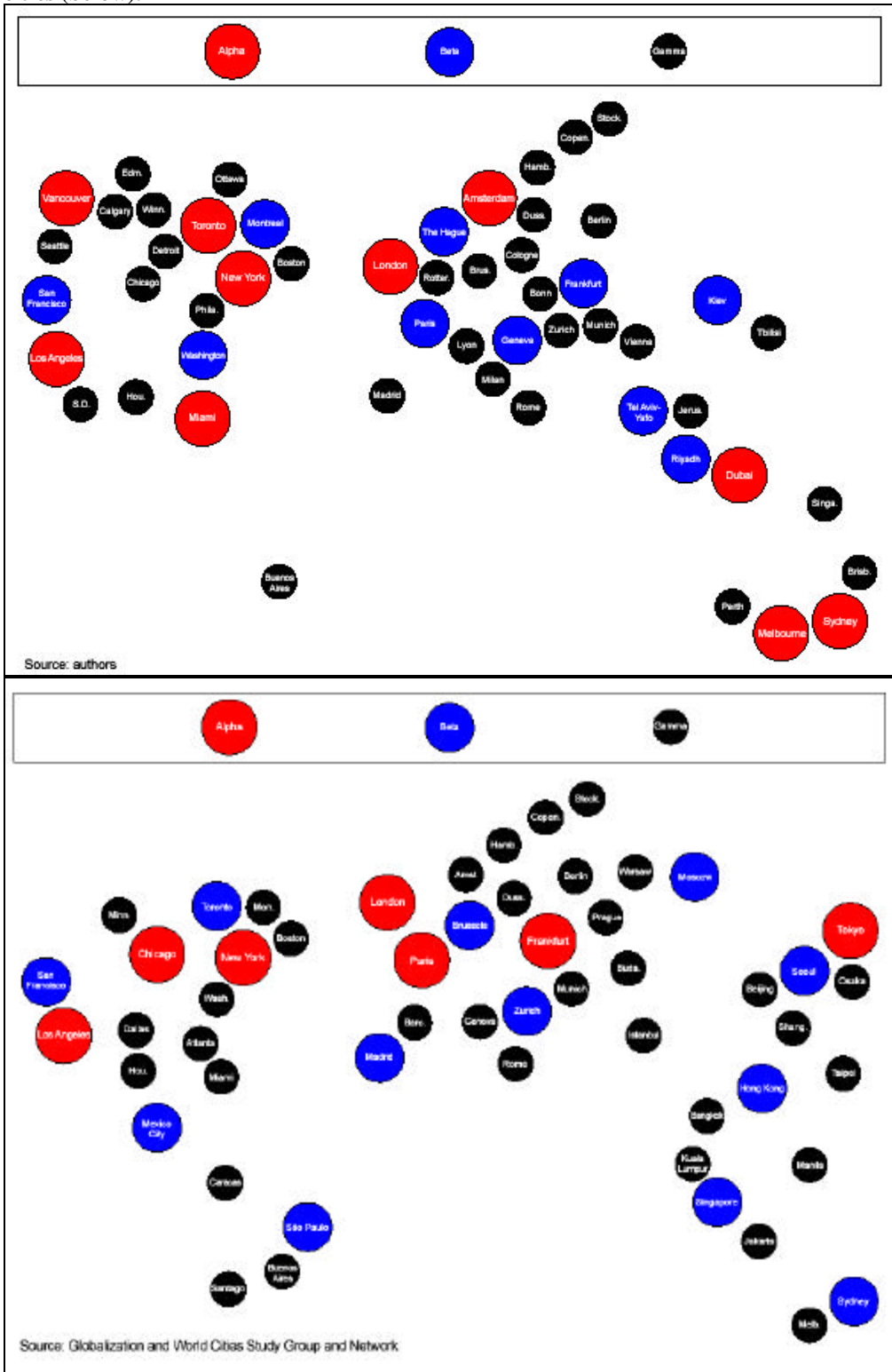
IV. Data Problems

Admittedly, our collected data is 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 reports foreign-born information at the city-level, some at the metropolitan-level. For U.S. cities, the data are at the PMSA level. In contrast, the Tokyo data are based on the city of Tokyo (approximately 8 million), not the superconurbanation 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, 1996).

Second, not all census data is published at the same time. The US data comes from the 2000 census; but some countries take their decennial census at the mid-decade (hence our data for Japan, Korea, and some European countries date back to 1995 or 1996) (see Appendix 2 for a full source listing of census data for the 116 cities). For 92 of our 116 cities 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, Veenman and Vollebergh, 2003) which could result in over-counting the foreign-born.

Fourth, we noticed a significant gap between the quality and detail of data collected by many industrialized countries versus developing countries. The census 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 if the data exist and are difficult to access, or if they simply do not exist. For example, census data for the Philippines contains thorough information on emigrants but no counting of foreign-born individuals in Manila. Overall, global city research on cities in the developing world (Grant and Nijman, 2002; Lo and Yeung, 1998; Sassen 2002), has been overshadowed by the research on cities of the first world.

 Despite these concerns, our results serve to highlight the need for the generation, collection, and storage of urban data. In order to improve data access and quality, we have created a web site on which all of this project data are posted (www.gwu/geog/…gum). We invite others to forward their urban immigration data so that we can post it and offer a data source that others may use.

V. Conclusions

A more complete understanding of globalization needs to take into account immigration and the effects, both positive and negative, of the cultural diversity that immigrants create in urban spaces. This preliminary analysis offers a new way to measure the global nature 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 it which they settle. With this data, a new ranking of global cities yields some provocative results. In particular, our research invites closer examination of the significance of immigration both to Europe and the Middle East, areas that are not traditional settler societies. The virtual exclusion of East Asia, Latin America, and Southeast Asia in our data also calls for the rethinking of the dynamics between economic and cultural globalization. It may be that economic centers like 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 the scale of analysis can shift from local/global to local/nodal. Global cities literature emphasizes the network among global cities (Scott, 2001; Beaverstock, et. al, 2000; Taylor and Catalano, 2002). We argue that 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 Su riname,

Morocco, Turkey and the Netherland Antilles (Deurloo and Musterd, 2001). We need to better understand these nodes and linkages, by focusing on immigrants in cities and the transnational associations they form with their original communities.

The next phase of our research will expand upon our understanding of immigration to world cities by documenting how immigrant flows to world cities have changed since 1970. In particular we are interested in documenting when certain areas experience an increase in the number and diversity of foreign-born. In addition, we will select several of our top ranked cities to investigate the patterns of immigrant settlement within these cities as well as levels of integration and segregation. Lastly, to articulate the linkages that world cities form with the global periphery, we will examine immigrant associations and remittance flows from selected cities to various sending countries.

References:

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** 323-338.

Beaverstock, J.V. and J. Smith. 1996. "Lending Jobs to Global Cities: Skilled International Labour Migration, Investment Banking and the City of London" *Urban Studies* 33(8): 1377-1400.

Beaverstock, J.V. R.G. Smith and P.J. Taylor. 1999. "A Roster of World Cities" *Cities* 16 (6). 445-458.

Beaverstock, JV, R.G. Smith, P.J. Taylor. 2000. "World-City Network: A New Metageography" *Annals of the Association of American Geographers* 90(1): 123-134.

Beaverstock, J.V., R.G. Smith, P.J. Taylor, D.R.F. Walker and H. Lorimer. 2000. "Globalization and World Cities: So me Measurement Methodologies" *Applied Geography* 20 (1): 43-63.

Caryl, Christian. 2000. "The Citizens of Nowhere in Arabia's Hong Kong" *New Statesman* 13(599): 32-34.

Castells, M. 1996. *The Rise of the Network Society*. Blackwell: Oxford.

Castles, S. and M. Miller. 2003. *The Age of Migration, third edition*. New York: Guildford Press.

Clark, D. 1996. *Urban World, Global City*. New York: Routledge.

Derudder, B; P. J. Taylor; F. Witlox; 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): 875-886.

Deurloo, R and S. Musterd. 2001. "Residential Profiles of Surinamese and Moroccans in Amsterdam" *Urban Studies* 38(3): 467-485.

Douglass, M. and G Roberts. 2000. *Japan and Global Migration: Foreign Workers and the Advent of a Multicultural Society*. Honolulu: University of Hawaii Press.

The Economist 2002. "The Longest Journey: a survey of Migration", November 2.

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), 103-124.

Foreign Policy. 2004. "Measuring Globalization: Economic Reversals, Forward Momentus" *Foreign Policy*, March/April 54-69.

Friedmann, Johnathan 1986. "The World City Hypothesis" *Development and Change* 17: 69-83.

Godfrey, Brain. 1996. "Restructuring and Decentralization in a World City" *Geographical Review* 85(4): 436-457.

Grant, Richard. 2002. "Globalization and the Corporate Geography of Cities in the Less-Developed World" *Annals of the Association of American Geographers* 92(2): 320-340.

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): 707-712.

Hagendoorn, L; J. Veenman, W; W. Vollebergh (editors). 2003. *Integrating Immigrants in the Netherlands.* Ashgate.

Hall, P. 1984. *The World Cities*. London: Weidenfeld & Nicolson.

Jokisch, Brad and Jason 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 (editors). 1995. *World Cities in a World-System.* Cambridge University Press: Cambridge.

Ley, D. 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 (editors) 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?* Malden, MA: Blackwell.

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, Jan. 1997. "Globalization to a Latin beat: The Miami Growth Machine" *Annals of the American Academy of Political and Social Science* 551: 164-178.

Nijman, Jan. 2000. "The Paradigmatic City" *Annals of the Association of American Geographers* 90(1): 135-145.

Nyiri, P. and I. Saveliev (editors). 2003. *Globalizing Chinese Migration*. Ashgate.

O'Brien R. 1992. Global Financial Integration: The End of Geography. *The Royal Institute of International Affairs*, New York, NY.

Orozco, Manuel. 2003. "Worker Remittances: An International Comparison" Presentation to the Inter-American Development Bank, February 28, 2003.

Robinson, Jennifer. 2002. "Global and World Cities: A View from off the Map" *International Journal of Urban and Regional Research* 26(3):531-554.

Samers, Michael. 2002. "Immigration and the Global City Hypothesis: Towards an Alternative Research Agenda" *International Journal of Urban and Regional Research* 26(2): 389-402.

Sassen, S. 1991. *The Global City*. Princeton University Press: Princeton.

Sassen, S. 1994. *Cities in a World Economy*. Pine Forge Press: London.

Sassen, S. 1999. *Guests and Aliens.* 1999. The New Press: New York.

Sassen, S. (editor) 2002. *Global Networks, Linked Cities*. New York: Routledge

Scott, A. J. (editor) 2001. *Global City-Regions: Trends, Theory, Policy.* Oxford: Oxford University Press.

Sander, C. 2003. *Migrant Remittances to Developing Countries: A Scoping Study*. Bannock Consulting: London.

Shachar. A. 1997. Economic Globalization and Urban Dynamics. In *Cities, Enterprises and Society on the eve of the 21ˢᵗ Century*. F. Moulaert and A. Scott (editors). Pp 18-32. Pinter: London.

Shoval, Noam. 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):583-599.

Simon, G. 2002. International Migration Trends. *Population & Societies*, No 382, September.

Short, J.R.; 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.

Short, J.R. and Y Kim. 1999. *Globalization and the City*. Addison

Taylor, P. J. and G. Catalano. 2002. "Measurement of the World City Network" *Urban Studies* 29(13): 2367-2376.

Waldinger, R. 1996. "From Ellis Island to LAX: immigrant Prospects in the American City" *International Migration Review* Vol xxx (4) 1078-1086

Warf, B. 1989. "Telecommunications and the globalization of financial services" *Professional Geographer* 41 (3): 257-71.

Appendix 1: List of 116 Cities

Accra	Genoa	Paris
Alexandria	Hamburg	Perth
Amman	Helsinki	Philadelphia
Amsterdam	Hong Kong	Port Louis (Mauritius)
Ankara	Honolulu	Portland
Athens	Houston	Porto Alegre
Atlanta	Inch'on	Prague
Auckland	Islamabad	Pretoria
Bangkok	Istanbul	Pusan
Barcelona	Jakarta	Quebec City
Belem	Jerusalem	Recife
Belgrade	Johannesburg	Rio de Janeiro
Belo Horizonte	Kaohsiung	Riyadh
Berlin	Karachi	Rome
Bonn	Kiev	Rotterdam
Boston	Kuala Lumpur	Salvador (Brazil)
Brasilia	Lisbon	San Diego
Bratislava	London	San Francisco
Brisbane	Los Angeles	San Jose (Costa Rica)
Brussels	Lyon	Sao Paulo
Budapest	Madrid	Seattle
Buenos Aries	Manchester	Seoul
Cairo	Marseille	Singapore
Calgary	Mecca	St. Petersburg
Cape Town	Medina	Stockholm
Caracas	Melbourne	Sydney
Chicago	Mexico City	Taegu
Cologne	Miami	Taipei
Copenhagen	Milan	Tbilisi
Dallas -Ft. Worth	Minneapolis -St. Paul	Tel Aviv-Yafo
Detroit	Montreal	The Hague
Dubai	Moscow	Tokyo
Durban	Munich	Toronto
Dusseldorf	Muscat	Vancouver
Edmonton	Naples	Vienna
Fortaleza	New York	Washington DC
Frankfurt	Osaka	Winnipeg
Gaza City	Oslo	Zurich
Geneva	Ottawa	

Appendix 2: Foreign Born Percentages and Total Population for Selected Cities

	City	City Population	Foreign Born Population	% Foreign Born	Year	Source
1	Dubai	857,233	702,931	82.00	2002	Dubai Development and Investment Authority, 2002
2	Miami	2,253,362	1,147,765	50.94	2000	Census Bureau, 2000
3	Amsterdam	735,328	347,634	47.28	2002	Amsterdam Bureau of Research and Statistics, Key Figures Amsterdam, 2002
4	Toronto	4,647,960	2,091,100	44.99	2001	Statistics Canada, Census 2001
5	Muscat	661,000	294,881	44.61	2000	Statistical Yearbook 2000, Ministry of National Economy
6	Vancouver	1,967,475	767,715	39.02	2001	Statistics Canada, Census 2001
7	Auckland	367,737	143,417	39.00	2001	Auckland City Council, 2001
8	Geneva	427,700	164,118	38.37	2002	Statistique Geneve, 2002
9	Mecca	4,467,670	1,686,595	37.75	1996	Central Department of Statistics, Statistical Yearbook 1997
10	The Hague	441,595	161,509	36.57	1995	Swing Online, Den Haag, ABF Research
11	Los Angeles	9,519,338	3,449,444	36.24	2000	Census Bureau, 2000
12	Tel Aviv	2,075,500	747,400	36.01	2002	Central Bureau of Statistics, Israel, 2002
13	Kiev	2,616,000	941,760	36.00	1992	Ukrainian Ministry of Statistics, Census 1992
14	Medina	5,448,773	1,893,213	34.75	2000	Demographic Survey, AD 2000, Central Department of Statistics
15	New York	9,314,235	3,139,647	33.71	2000	Census Bureau, 2000
16	San Francisco	1,731,183	554,819	32.05	2000	Census Bureau, 2000
17	Perth	1,336,239	422,547	31.62	2001	Western Australia Office of Multicultural Interests, 2001
18	Riyadh	4,730,330	1,477,601	31.24	2000	Demographic Survey, AD 2000, Central Department of Statistics
19	Sydney	3,961,451	1,235,908	31.20	2001	Community Relations Commission for a Multicultural New South Wales, 2001
20	Jerusalem	678,300	208,700	30.77	2002	Central Bureau of Statistics, Israel, 2002, Statistical Yearbook of Jerusalem, 2000
21	Melbourne	3,367,169	960,145	28.51	2001	Victoria Office of Multicultural Affairs, 2001
22	Frankfurt	650,705	181,184	27.84	2000	Source: Annual Statistics, City of Frankfurt, 2001
23	Tbilisi	1,339,105	370,932	27.70	1999	State Department for Statistics, 1999
24	London	7,172,091	1,940,390	27.05	2001	National Statistics, Census 2001
25	Brussels	978,384	260,040	26.58	2002	National Statistical Institute, Demographic Statistics
26	Munich	1,247,934	282,148	22.61	2001	Source: Unknown
27	Zurich	1,247,906	280,779	22.50	2000	Statistisches Amt des Kantons Zurich, Census 2000
28	Calgary	943,310	205,000	21.73	2001	Statistics Canada, Census 2001
29	San Diego	2,813,833	606,254	21.55	2000	Census Bureau, 2000
30	Brisbane	1,609,116	338,150	21.01	2001	State of Queensland Department of the Premier and Cabinet, 2001
31	Houston	4,177,646	854,669	20.46	2000	Census Bureau, 2000
32	Montreal	3,388,640	664,435	19.61	2001	Statistics Canada, Census 2001
33	Honolulu	876,156	168,246	19.20	2000	Census Bureau, 2000

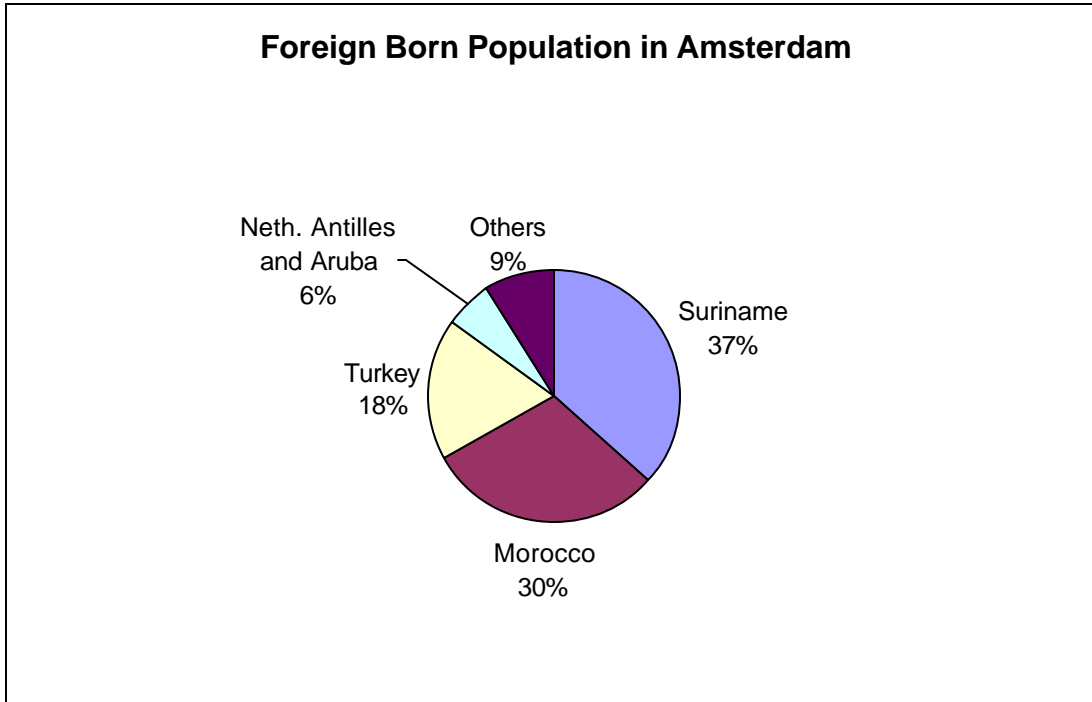|					
34	Edmonton	927,020	171,055	18.45	2001	Statistics Canada, Census 2001
35	Ottawa	1,050,755	193,665	18.43	2001	Statistics Canada, Census 2001
36	Singapore	3,319,100	607,395	18.30	2000	Singapore Department of Statistics, 2000
37	Cologne	1,019,049	182,456	17.90	2001	Source: Statistical Information Service, City of Cologne
38	Paris	6,161,887	1,081,611	17.55	1999	Institut National de la Statistique et des Etudes Economiques, Census 1999
39	Chicago	8,272,768	1,425,978	17.24	2000	Census Bureau, 2000
40	Winnipeg	661,730	112,760	17.04	2001	Statistics Canada, Census 2001
41	Washington DC	4,923,153	832,016	16.90	2000	Census Bureau, 2000
42	Stockholm	1,553,909	258,074	16.61	1998	Musterd, Sako, Wim Ostendorf, and Matthijs Breebaart. "Multi-Ethnic Metropolis: Patterns and Policies." 1998. Kluwer Academic Publishers, Dordrecth, Sweden. P. 133
43	Dusseldorf	585,168	95,089	16.25	1993	Musterd, Sako, Wim Ostendorf, and Matthijs Breebaart. "Multi-Ethnic Metropolis: Patterns and Policies." 1998. Kluwer Academic Publishers, Dordrecth, Germany. P. 86
44	Vienna	1,550,123	248,264	16.02	2001	Statistik Austria, Census 2001
45	Hamburg	1,707,901	272,604	15.96	2000	Source: Statistical Report, Hamburg State Statistical Office, 2002
46	San Jose (Costa Rica)	309,672	47,240	15.25	2000	Instituto de Estatisticas y Censos, Census 2000
47	Dallas-Ft. Worth	5,221,801	784,642	15.03	2000	Census Bureau, 2000
48	Boston	3,406,835	508,279	14.92	2000	Census Bureau, 2000
49	Bonn	311,303	42,983	13.81	2003	Source: Statistical Information Service, City of Bonn
50	Seattle	2,414,616	331,912	13.75	2000	Census Bureau, 2000
51	Berlin	3,337,000	435,117	13.04	2001	Source: Unknown
51	Rotterdam	1,078,000	134,885	12.51	1995	Amsterdam Bureau of Research and Statistics, Key Figures Amsterdam, 2002
53	Copenhagen	499,148	57,452	11.51	2001	Copenhagen City: Statistical ten-year review, 2001.
54	Portland	1,918,009	208,075	10.85	2000	Census Bureau, 2000
55	Atlanta	4,112,198	423,105	10.29	2000	Census Bureau, 2000
56	Lyon	1,579,237	156,518	9.91	1999	Institut National de la Statistique et des Etudes Economiques, Census 1999
57	Athens	2,805,262	275,080	9.81	2001	National Statistical Service of Greece, Census 2001
58	Marseille	1,834,026	175,779	9.58	1999	Institut National de la Statistique et des Etudes Economiques, Census 1999
59	Milan	1,301,551	117,691	9.04	2000	Istituto Nazionale di Statistica, 2000
60	Amman	1,387,440	124,360	8.96	1994	Department of Statistics, Survey of Population and Housing Census 1994
61	Bratislava	599,015	51,716	8.63	2001	Statistical Office of the Slovak Republic, Census 2001
62	Caracas	6,548,118	555,455	8.48	1990	El Censo 90 en Venezuela, Republica de Venezuela Oficina Central de Estadistica e Informatica
63	Gaza City	802,218	65,314	8.14	1997	Municipality of Gaza, 1997
64	Buenos Aries	11,460,625	917,491	8.01	2001	Instituto Nacional de Estadística y Censos, Census 2001

65	Accra	2,905,726	225,735	7.77	2000	Ghana Statistical Service, Census 2000
66	Detroit	4,441,551	335,107	7.54	2000	Census Bureau, 2000
67	Manchester	2,482,328	179,927	7.25	2001	2001 Census, Office of Population censuses and surveys
68	Minneapolis -St. Paul	2,968,806	210,344	7.09	2000	Census Bureau, 2000
69	Philadelphia	5,100,931	357,421	7.01	2000	Census Bureau, 2000
70	Osaka	2,602,000	179,165	6.89	1995	Final Report of the 1995 Population Census: Population of Japan Statistical Bureau, Management and Coordination Agency, Government of Japan
71	Madrid	5,423,384	366,099	6.75	2001	Instituto Nacional de Estadistica: Censos de Poblacion y Viviendas 2001, Cifras de Poblacion de los Censos 2001
72	Kuala Lumpur	1,379,310	92,414	6.70	2000	Population and Housing Census, 2000
73	Rome	2,655,970	169,064	6.37	2000	Istituto Nazionale di Statistica, 2000
74	Oslo	773,498	48,051	6.21	2000	Statistical Yearbook of Oslo 2000, Municipality of Oslo, Office of Statistics
75	St. Petersburg	6,710,000	414,788	6.18	1994	State Committee on Statistics, Census 1994
76	Johannesburg	6,664,427	375,169	5.63	2001	Statistics South Africa, Census 2001
77	Hong Kong	6,708,389	343,950	5.13	2001	Census and Statistical Department of Hong Kong, Census 2001
78	Barcelona	4,805,927	229,943	4.78	2001	Instituto Nacional de Estadistica: Censos de Poblacion y Viviendas 2001, Cifras de Poblacion de los Censos 2001
79	Moscow	15,437,000	735,832	4.77	1994	State Committee on Statistics, Census 1994
80	Istanbul	7,309,190	327,647	4.48	1990	State Institute of Statistics , 1990
81	Helsinki	1,290,618	57,435	4.45	2000	Statistical Yearbook of Finland, Statistics Finland: 2000
82	Karachi	9,339,023	371,611	3.98	1998	Population Census Organization of Pakistan, Census 1998
83	Lisbon	3,926,000	134,485	3.43	2000	Fonseca, Maria Lucinda, and Alina Esteves. "Migration and New Religion Townscapes in Lisbon." Immigration and Place in Mediterranean Metropolises. Ed. Froseca, Maria Lucinda, et. Al. Luso-American Development Foundation, Lisbon, 2002.
84	Quebec City	673,105	21,715	3.23	2001	Statistics Canada, Census 2001
85	Islamabad	1,938,948	61,069	3.15	1998	Population Census Organization of Pakistan, Census 1998
86	Cape Town	2,893,247	87,428	3.02	2001	Statistics South Africa, Census 2001
87	Prague	1,169,106	34,695	2.97	2001	Statistical Yearbook of the Czech Republic 2002, Census 2001
88	Pretoria (Tshwane)	1,985,983	57,726	2.91	2001	Statistics South Africa, Census 2001
89	Belgrade	1,576,124	42,404	2.69	2002	City of Belgrade, Census 2002
90	Genoa	632,366	16,857	2.67	2000	Istituto Nazionale di Statistica, 2000
91	Budapest	2,855,962	72,384	2.53	2001	Hungarian Central Statistical Office, 2003
92	Tokyo	7,968,000	191,915	2.41	1995	Final Report of the 1995 Population Census: Population of Japan Statistical Bureau, Management and Coordination Agency, Government of Japan
93	Inch'on	2,466,338	51,389	2.08	2000	Korea National Statistical Office, Census 2000
94	Port Louis	1,143,069	23,254	2.03	2000	Central Statistics Office Mauritius, Census 2000

	(Mauritius)				
95	Taipei	6,646,503	129,152	1.94	2000	Population and Housing Census 2000
96	Seoul	9,853,972	181,391	1.84	2000	Korea National Statistical Office, Census 2000
97	Durban (Ethekwini)	3,090,123	56,099	1.82	2001	Statistics South Africa, Census 2001
98	Pusan	3,655,437	61,355	1.68	2000	Korea National Statistical Office, Census 2000
99	Naples	1,000,470	14,666	1.47	2000	Istituto Nazionale di Statistica, 2000
100	Sao Paulo	19,198,273	271,506	1.41	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
101	Kaohsiung	3,994,503	53,485	1.34	2000	Population and Housing Census 2000
102	Ankara	3,236,626	40,770	1.26	1990	State Institute of Statistics, 1990
103	Rio de Janeiro	11,546,023	125,887	1.09	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
104	Taegu	2,473,990	25,506	1.03	2000	Korea National Statistical Office, Census 2000
105	Jakarta	9,161,000	86,054	0.94	1995	Hugo, Graeme. "The Crisis and International Population Movement in Indonesia." Asian and Pacific Migration Journal, Vol. 9, No. 1, 2000
106	Bangkok	9,411,000	87,100	0.93	2000	Population and Housing Census, National Statistics Office, Thailand
107	Cairo	6,052,836	48,350	0.80	1986	Central Agency for Public Mobilisation and Statistics, Census 1986
108	Porto Alegre	4,403,498	18,941	0.43	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
109	Mexico City	18,131,000	75,244	0.42	2000	Instituto Nacional de Estadistica Geografia e Informatica, Census 2000
110	Alexandria	2,917,327	10,834	0.37	1986	Central Agency for Public Mobilisation and Statistics, Census 1986
111	Brasilia	2,051,146	6,960	0.34	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
112	Belem	2,086,551	4,179	0.20	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
113	Salvador (Brazil)	3,717,384	7,078	0.19	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
114	Belo Horizonte	5,588,300	10,153	0.18	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
115	Recife	3,339,616	4,674	0.14	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000
116	Fortaleza	2,930,374	2,911	0.10	2000	Instituto Brasileiro de Geografia e Estatística, Censo 2000

Appendix 3: Pie Charts for Selected Cities

Figure 1: Amsterdam Bureau of Research and Statistics, Key Figures Amsterdam, 2002

Foreign Born Population in Amsterdam

- Neth. Antilles and Aruba 6%
- Others 9%
- Suriname 37%
- Turkey 18%
- Morocco 30%

Figure 2: Population and Housing Census, National Statistics Office, Thailand, 2000

Foreign Born Population in Bangkok

- Others 15%
- South Korea 2%
- Nepal 2%
- Germany 2%
- United Kingdom 3%
- Cambodia 4%
- India 4%
- United States 4%
- Myanmar 5%
- Japan 16%
- China 43%
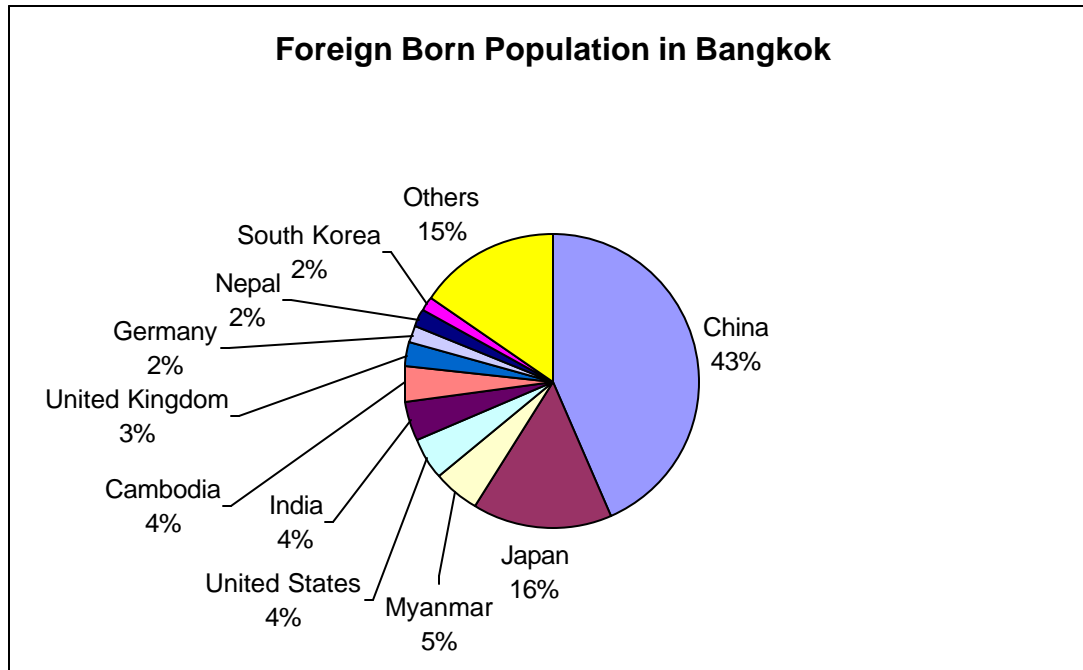
Figure 3: Instituto Nacional de Estadística y Censos, Census 2001

Foreign Born Population in Buenos Aires

- South Korea 1%
- Germany 1%
- Others 10%
- Poland 1%
- Brazil 1%
- Chile 4%
- Peru 7%
- Uruguay 10%
- Spain 10%
- Bolivia 13%
- Italy 16%
- Paraguay 26%
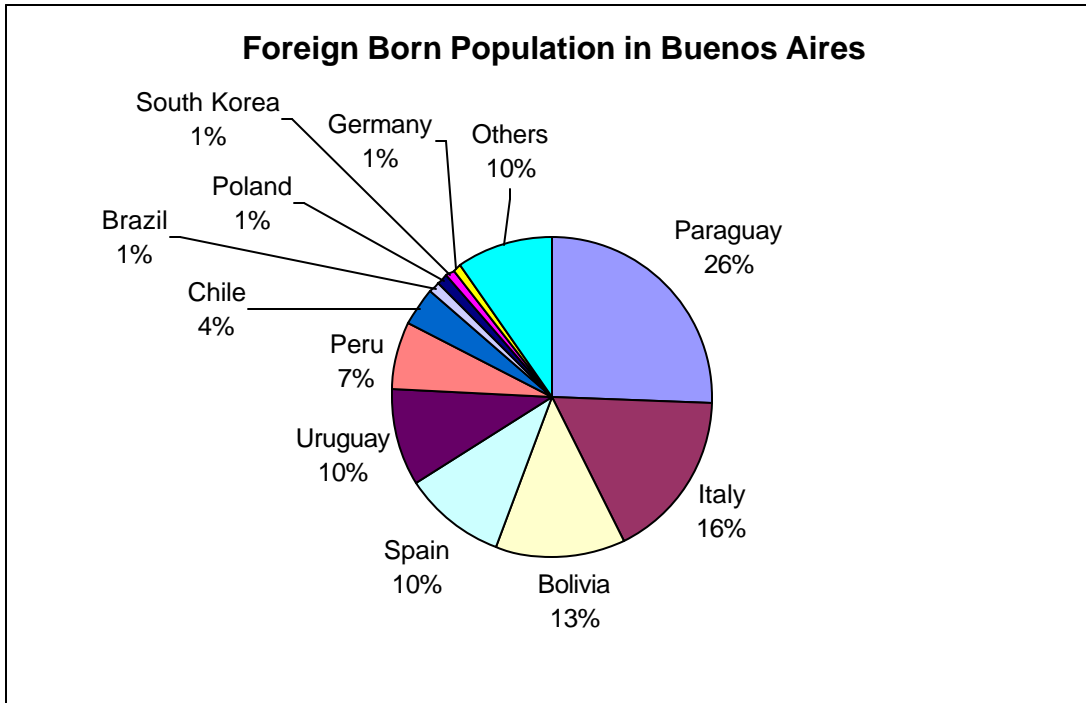
Figure 4: US Census Bureau, 2000

Foreign Born Population to Dallas/Ft. Worth

- Other 24%
- Philippines 1%
- Canada 1%
- China 2%
- South Korea 2%
- El Salvador 3%
- India 4%
- Vietnam 5%
- Mexico 58%
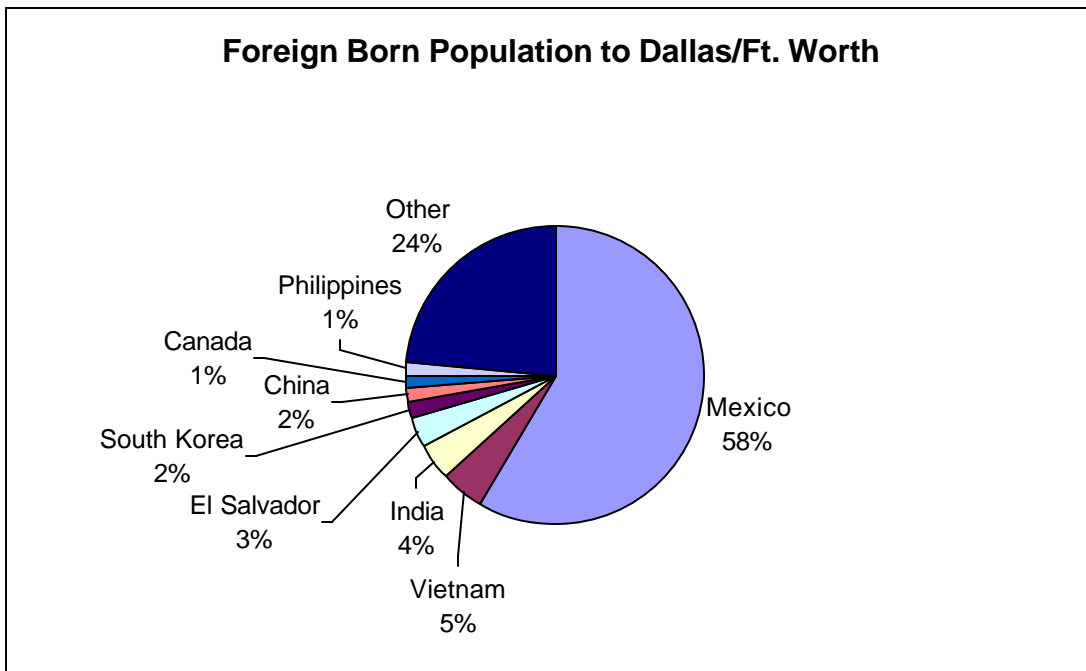
Figure 5: Dubai Development and Investment Authority, 2002

Foriegn Born Population in Dubai

- Others 5%
- rest of Asia 6%
- Iran 12%
- Middle East (excl. Iran) 16%
- South Asia 61%
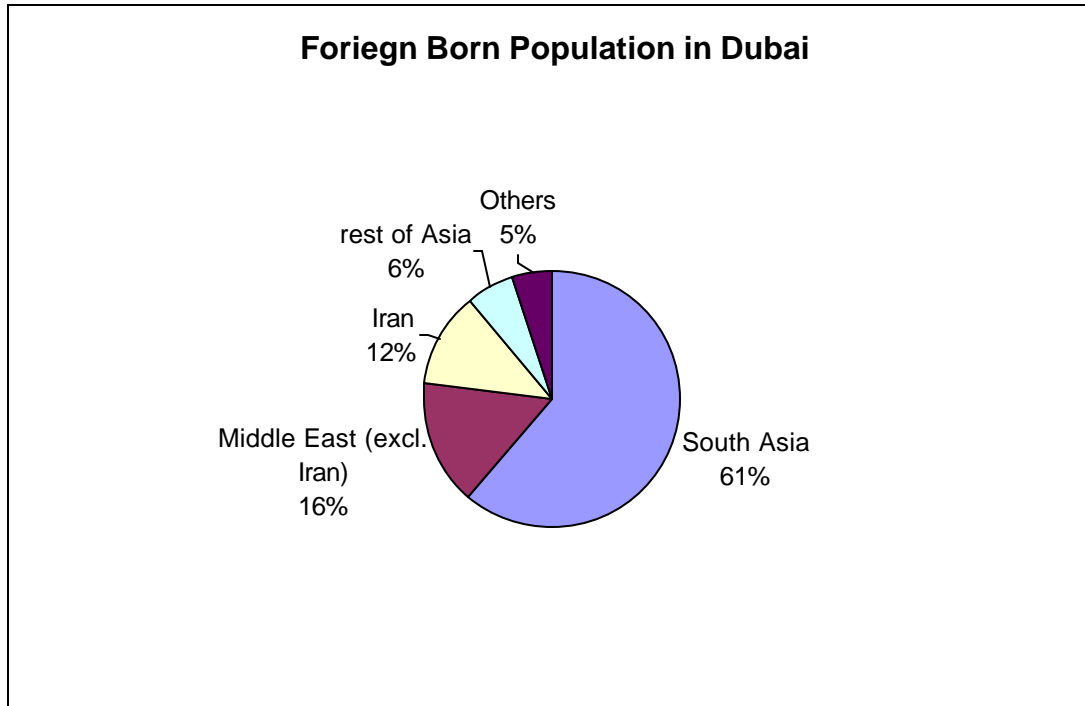
Figure 6:Central Bureau of Statistics, Israel, 2002 and Statistical Yearbook of Jerusalem, 2000

Foreign Born Population in Jerusalem

- Africa 12%
- Others 0%
- Fmr. USSR 19%
- rest of Asia 48%
- Europe & Americas 21%
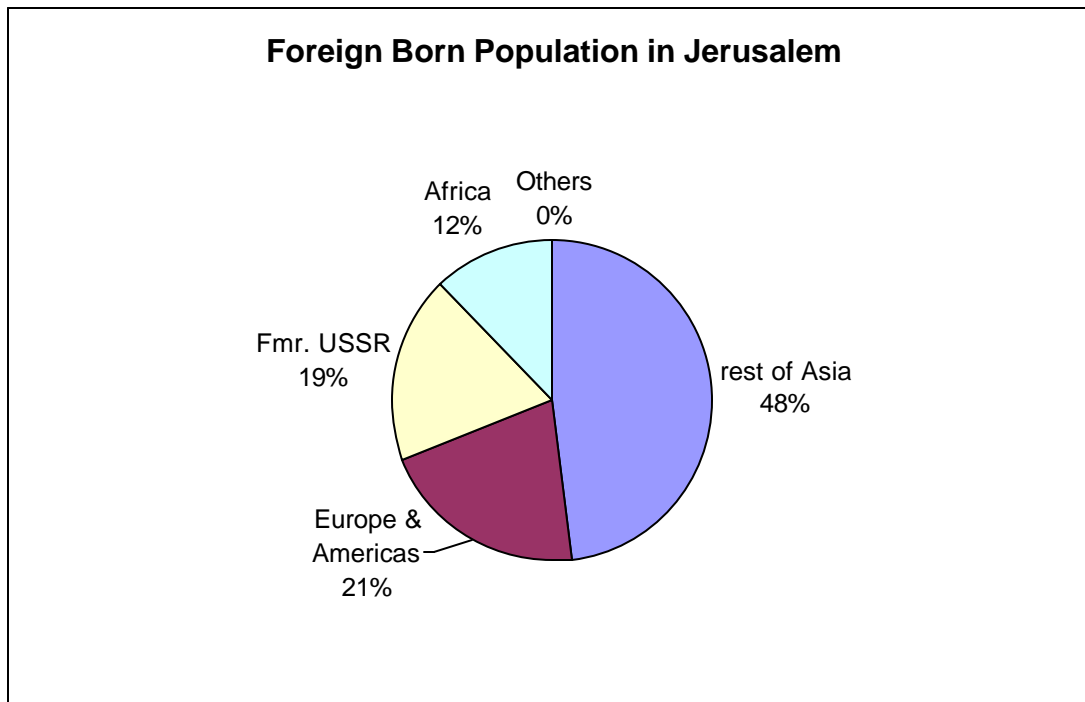
Figure 7: US Census Bureau, 2000

Foreign Born Population in Los Angeles

All other 26%

Iran 3%

Vietnam 3%

China 3%

Korea 4%

Guatemala 4%

Philippines 6%

El Salvador 7%

Mexico 44%
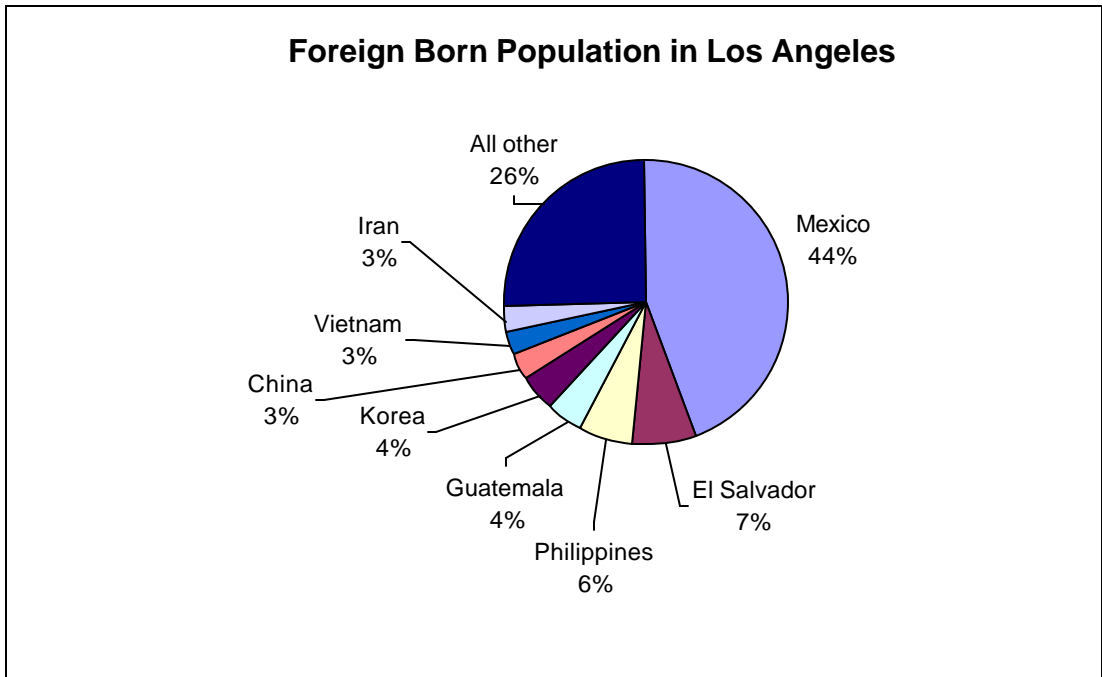
Figure 8: UK National Statistics, Census 2001

Foreign Born Population in London

India 10%

Ireland 8%

Bangladesh 4%

Jamaica 4%

Nigeria 4%

Pakistan 3%

Kenya 3%

Sri Lanka 3%

Cyprus 2%

South Africa 2%

USA 2%

Australia 2%

Germany 2%

Turkey 2%

Others 49%
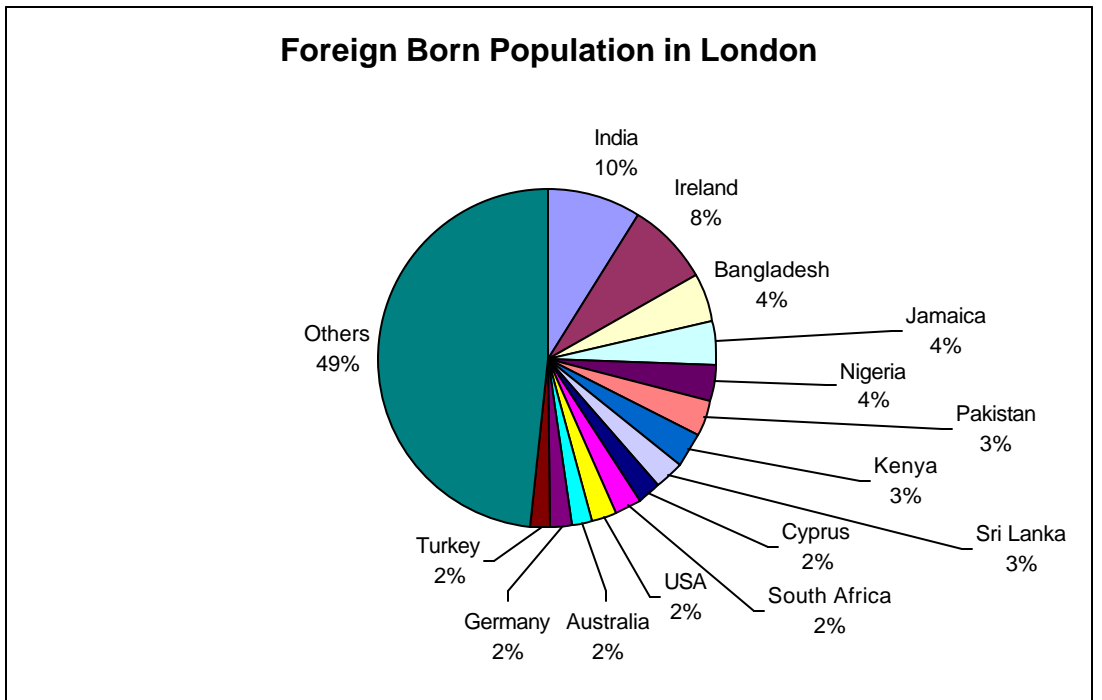
Figure 9: US Census Bureau, 2000

Foreign Born Population in Miami

Guatemala 1%
Ecuador 1%
Brazil 1%
Others 13%
Argentina 1%
Mexico 2%
Venezuela 2%
Peru 2%
Jamaica 3%
Honduras 3%
Haiti 6%
Dominican Republic 3%
Colombia 7%
Nicaragua 8%
Cuba 47%
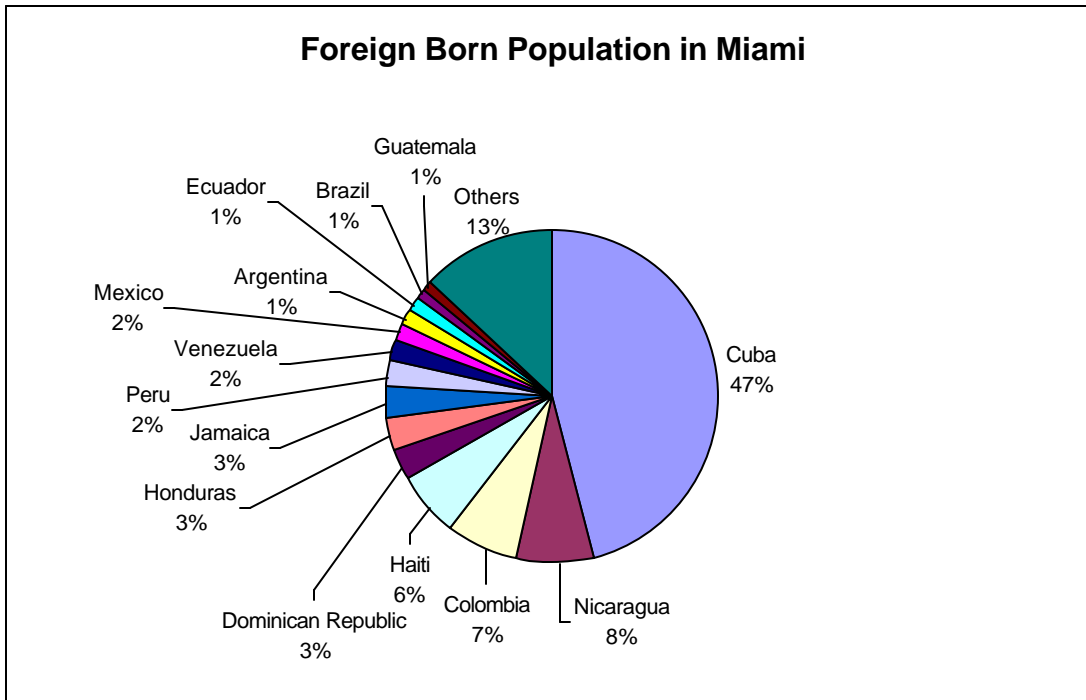
Figure 10: US Census Bureau, 2000

Foreign Born Population in New York City

Dominican Republic 12%
China 7%
Jamaica 6%
Mexico 5%
Guyana 4%
Ecuador 4%
Haiti 3%
Colombia 3%
Trinidad and Tobago 3%
Italy 3%
All Others 50%

Figure 11: US Census Bureau, 2000
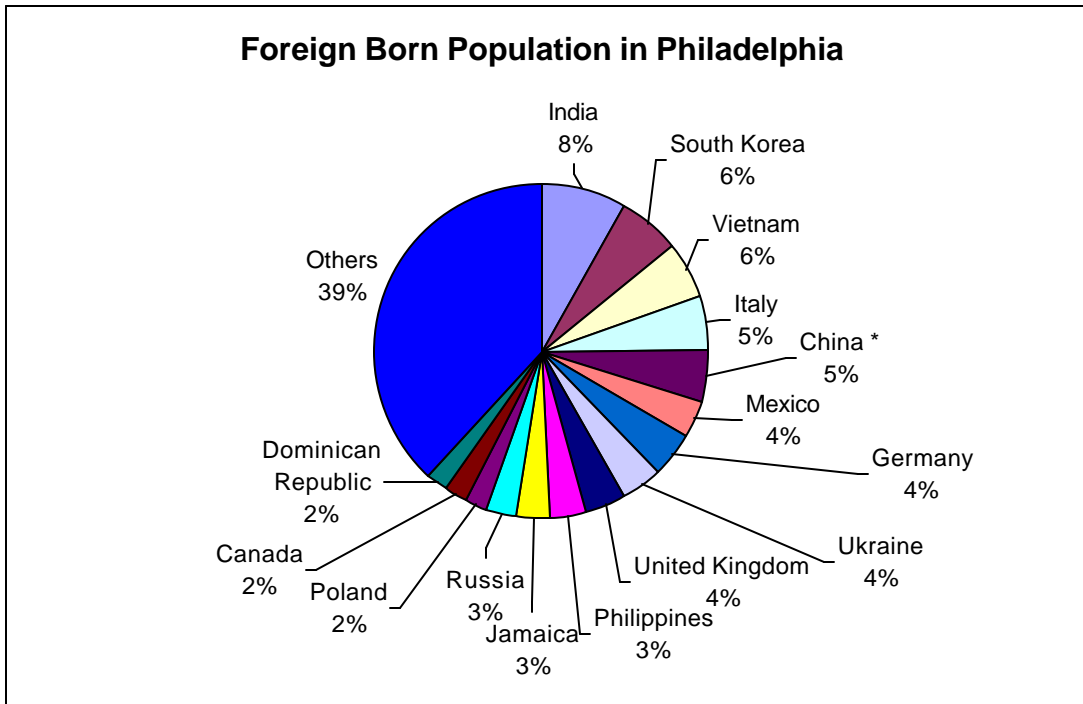
Figure 12: Singapore Department of Statistics, 2000
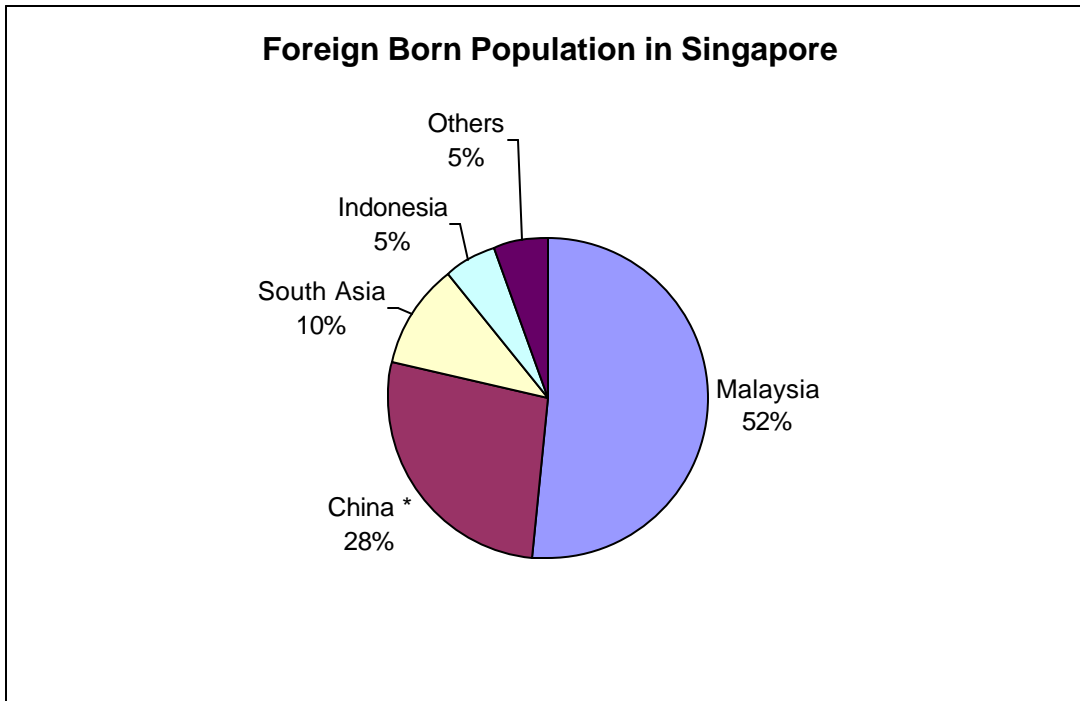
Figure 13: Final Report of the 1995 Population Census: Population of Japan Statistical Bureau, Management and Coordination Agency, Government of Japan

Foreign Born Population in Tokyo

- Thailand 2%
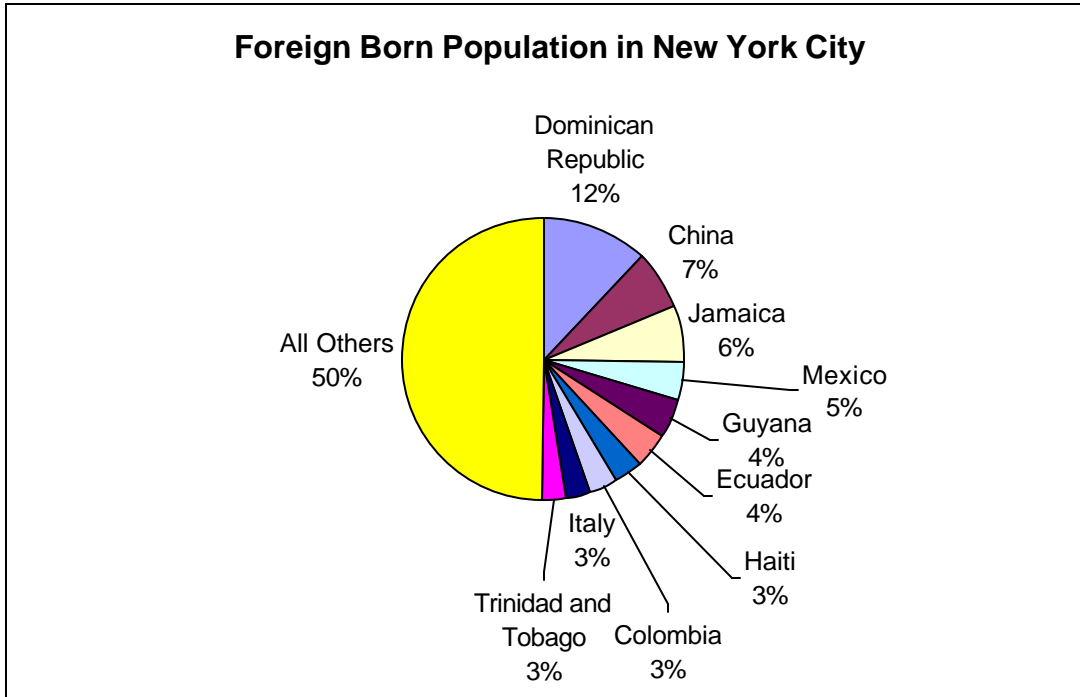- United Kingdom 2%
- Brazil 2%
- United States 7%
- Philippines 7%
- Peru 1%
- Others 9%
- South Korea 41%
- China 29%
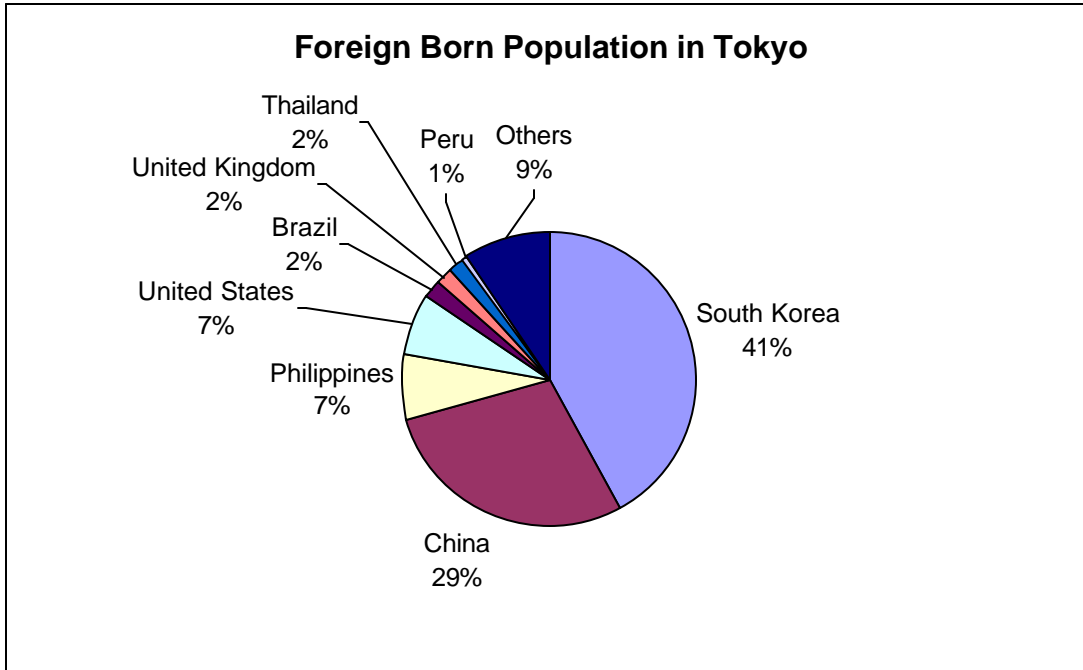
Figure 14: Statistics Canada, Cenus 2001

Foreign Born Population in Toronto

- Other 18%
- Trinidad and Tobago 3%
- Fmr. Yugoslavia 3%
- Pakistan 3%
- Vietnam 3%
- Fmr. USSR 4%
- Guyana 4%
- Sri Lanka 4%
- Poland 4%
- Portugal 5%
- Jamaica 5%
- Philippines 6%
- Italy 8%
- United Kingdom 8%
- India 8%
- China 14%
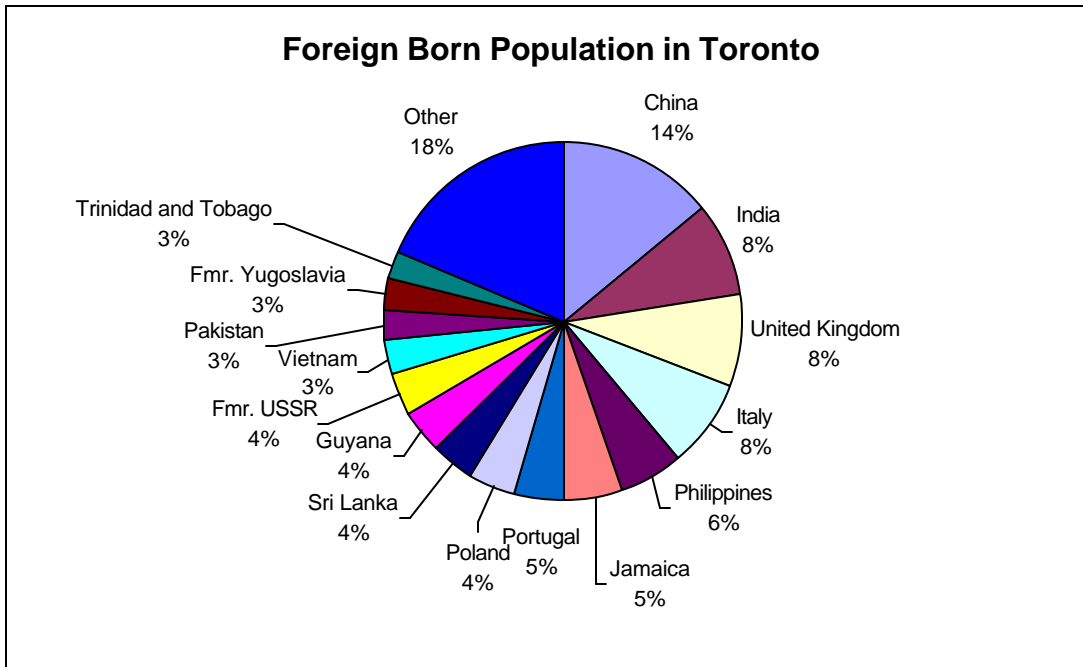
Figure 15: Community Relations Commission for a Multicultural New South Wales, 2001

Foreign Born Population in Sydney

United Kingdom
13%

Others
35%

China (incl. HK)
10%

New Zealand
7%

Malaysia
2%

Vietnam
5%

Indonesia
2%

Germany
2%

Lebanon
4%

Fiji
2%

Italy
4%

South Africa
2%

South Korea
2%

Greece
3%

India
3%

Philippines
4%
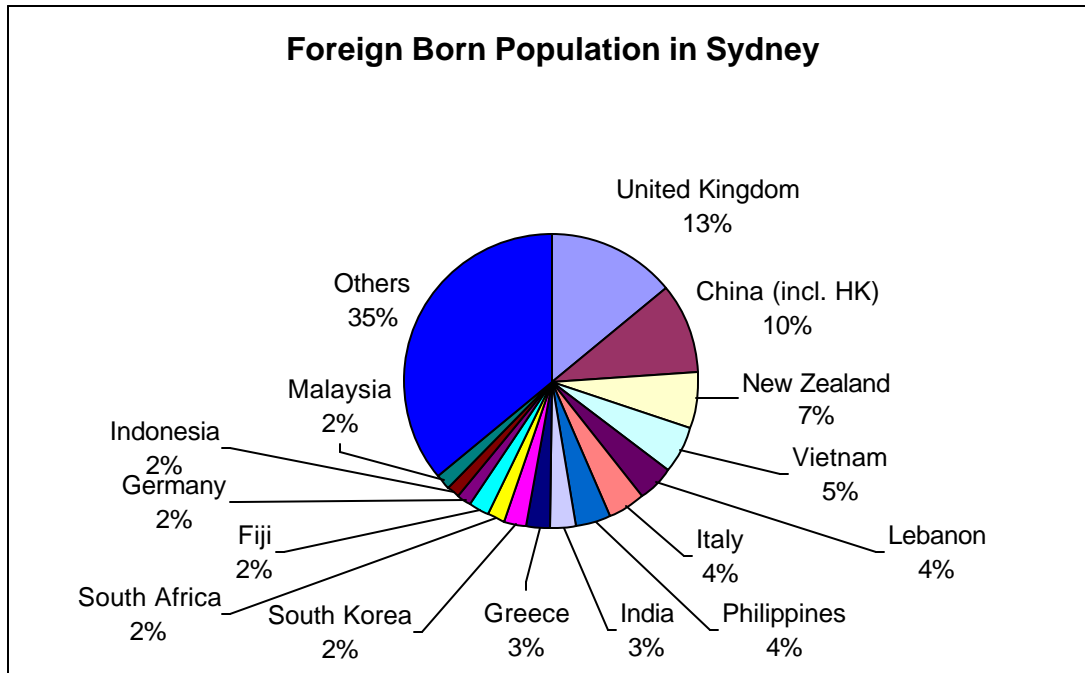
Figure 16: Central Bureau of Statistics, Israel, 2002

Foreign Born Population in Tel Aviv-Yafo

Africa
12%

Others
0%

rest of Asia
18%

Europe,
Americas, & Fmr.
USSR
70%
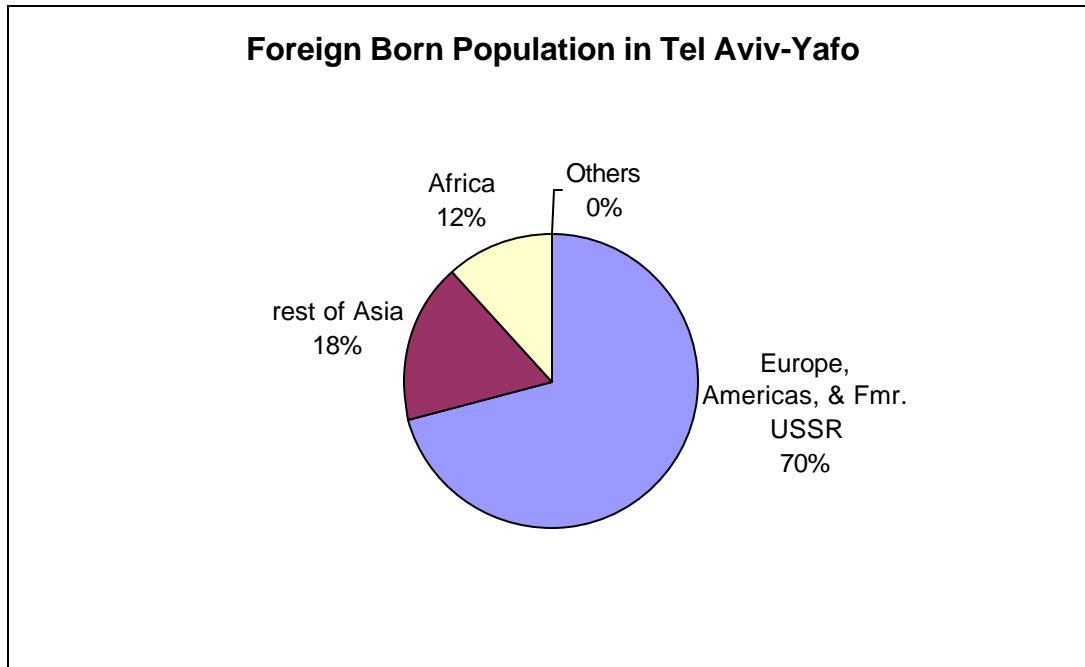
Appendix 4: Complete Immigrant Index

Alpha Cities	z-score
New York	2.10591455
Toronto	1.91944484
Dubai	1.88909577
Los Angeles	1.78707508
London	1.28168427
Amsterdam	1.1255297
Vancouver	1.08238759
Sydney	1.06193964
Miami	1.03400856
Melbourne	0.86313123

Beta Cit ies	z-score
The Hague	0.7290351
San Francisco	0.6959527
Riyadh	0.62554232
Geneva	0.60830203
Paris	0.60336193
Tel Aviv-Yafo	0.59732852
Montreal	0.48511433
Washington, DC	0.48196104
Frankfurt	0.44691337
Kiev	0.40034129

Gamma Cities	z-score
Perth	0.35961538
Munich	0.31521171
Calgary	0.29925202
Jerusalem	0.29038785
Boston	0.26044584
Chicago	0.25112729
Ottawa	0.20508248
Edmonton	0.19378085
Brussels	0.1342216
Winnipeg	0.12700653
Hamburg	0.12477447
Dusseldorf	0.11984481
Stockholm	0.06057937
Seattle	0.0551163
Rotterdam	0.03367973
Houston	-0.0014852
Philadelphia	-0.049461
Brisbane	-0.0608151
Madrid	-0.0719776
San Diego	-0.0876243
Cologne	-0.1077127
Copenhagen	-0.111092
Bonn	-0.1117871
Detroit	-0.113399
Milan	-0.1143256
Zurich	-0.1267184
Lyon	-0.1397221
Berlin	-0.1427143
Rome	-0.1489847
Vienna	-0.1605059

	z-score
Portland	-0.1873875
Minneapolis -St. Paul	-0.194289
Singapore	-0.2159153
Dallas-Ft. Worth	-0.2399513
Tbilisi	-0.2401909
Barcelona	-0.2835235
Quebec City	-0.3219172
Taipei	-0.3245358
Gaza City	-0.3345875
Buenos Aires	-0.3377925
Oslo	-0.35315
Genoa	-0.3627847
Atlanta	-0.3759255
Prague	-0.3770975
Caracas	-0.3994642
Honolulu	-0.4017551
Naples	-0.4241125
Hong Kong	-0.4271004
Helsinki	-0.448196
Marseille	-0.4554795
Lisbon	-0.523926
Manchester	-0.5527267
Moscow	-0.6099475
Port Louis (Mauritius)	-0.6355057
Bangkok	-0.6759458
Kaohsiung	-0.6882697
Athens	-0.6926048
San Jose (Costa Rica)	-0.7055678
St. Petersburg	-0.7319146

Bottom 10 cities	z-score
Belgrade	-0.7396795
Jakarta	-0.7635504
Tokyo	-0.783375
Taegu	-0.7922029
Budapest	-0.8296051
Pusan	-0.8341021
Bratislava	-0.8966909
Osaka	-0.920629
Seoul	-0.9770443
Inch'on	-1.1399164