

Insights

# MasterCard Worldwide Centers of Commerce™: Emerging Markets Index



October 2008

## Introduction

Understanding emerging markets has become increasingly important for companies seeking global business growth. Yet the question of how to navigate these markets or even how to define them is far from settled.

Over the last several years, what are often referred to as the “BRIC” nations – Brazil, Russia, India and China – have become the central storyline in discussions about new global markets. However, other emerging nations and the markets they comprise are quickly becoming critical to the interconnected economic landscape.

The 2008 MasterCard Worldwide Centers of Commerce™: Emerging Markets Index seeks to define these new markets through the 65 key cities that drive their growth. It also offers insights into the specific factors that make these cities important for corporations and others to consider. Part of the MasterCard Worldwide Centers of Commerce™ program, a larger, ongoing effort to understand the role of cities in the global economy, the Emerging Markets Index explores the economic trends that distinguish these cities from others around the world.

This report provides detailed insights into these cities and how they compare to one another in critical economic and business functions. However, it is helpful to begin with a brief overview of two compelling trends that have shaped the global economy in profound ways over the last several decades and are critical to the development of emerging markets.

One is the increasing concentration of global commerce in major urban centers. This reality is both demographic and economic. Since 2006, the majority of the world’s population live in urban not rural areas. Further, because of the many ways urban areas combine, commingle and generate financial, intellectual and human capital, cities, not nations, have become the engines of global economic growth. Today, healthy, growing cities have become vital to the success and longevity of nation states and their ability to attract outside investment.

The importance of cities in connecting global markets highlights the second trend shaping the economic landscape: globalization. Capital, talent, information, technology and even intellectual property now move seamlessly across borders and continents. Advances in communication allow global corporations to divide tasks among virtual project teams spread across multiple countries. On a smaller scale, the Internet allows even startups to compete on a global stage, marketing to and servicing clients in a manner unconstrained by geography. Emerging market cities, which often offer lower costs and unsaturated market sectors, are made more attractive by this economic openness and are playing larger and more critical roles in the global economy.

Together, the forces of urbanization and globalization have made the current economy more complex and dynamic than at any time in history. They also have raised the stakes for companies, policymakers and others. MasterCard Worldwide developed the Emerging Markets Index (EMI) to address the need for fresh, actionable insights into the cities driving growth on the frontiers of this economy.

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# Methodology: Building the Emerging Markets Index

The Worldwide Centers of Commerce: Emerging Markets Index identifies and ranks the 65 most important cities in emerging market countries. These centers of commerce are critical to the evolution of the emerging economies in which they are located and to the future of commerce globally.

The universe of cities examined in this report was chosen by a distinguished research panel comprised of independent experts in economics, sociology and urban studies and chaired by Dr. Michael Goldberg. The panel members were selected for their expertise in the global economy, their geographic diversity and their deep understanding of global opportunities for future development.

Inputs from the research panel determined that the Emerging Markets Index should be built on eight analytic dimensions consisting of nearly 100 indicators and sub-indicators that measure

and give meaning to these dimensions.<sup>1</sup> The dimensions and indicators were selected based on their importance in emerging markets and their ability to reflect the realities of those markets. The weights represent the panel’s estimate of the importance of each dimension, indicator and sub-indicator as measures of commercial power and reach.

Table 1 outlines the eight overarching dimensions that define the Emerging Markets Index, along with the associated weights for each dimension.

Dimension 3, “business environment,” was deemed by the research panel to be the most critical dimension defining the commercial importance of a city within an emerging market, and was accorded a weight of 16.60 percent or one-sixth of a city’s total Index score.

TABLE 1: DIMENSIONS AND WEIGHTS

Dimension	Dimension Name	Dimension Weights
1	Economic and Commercial Environment	12.80%
2	Economic Growth and Development	13.80%
3	Business Environment	16.60%
4	Financial Services Environment	10.60%
5	Commercial Connectivity	13.00%
6	Education and IT Connectivity	12.00%
7	Quality of Urban Life	10.60%
8	Risk and Security	10.60%
Total		100.00%

<sup>1</sup> These eight dimensions and the nearly 100 underlying indicators and sub-indicators differ significantly from those used for the MasterCard Worldwide Centers of Commerce Index. The Emerging Markets Index is built on eight analytic dimensions of relevance to centers of commerce in emerging nations, whereas the Worldwide Centers of Commerce Index employs seven quite different dimensions.



Some indicators of the economic strength and reach of a commercial center derive from the country within which it is located, while others originate from the city's own attributes. Thus, the Emerging Markets Index consists of both country-level and city-level data.

This dimension alone consists of eight indicators and 26 sub-indicators covering such areas as “ease of starting a business,” “ease of employing workers,” “ease of getting credit,” “ease of entering/leaving the country,” “ease of closing a business,” “corporate tax burden,” and “contract enforcement.” Together, these provide a measure of the business environment facing firms that seek to enter these markets.

On a more granular level, when looking at the span of individual indicators across all eight dimensions, three are particularly important, with individual indicator weights exceeding 3.0 percent. These are: indicator 8e, “political and social environment” (with a weight of 3.98 percent); indicator 4e, “financial services network” (with a weight of 3.23 percent); and indicator 1e “corruption perceptions index” (with a weight of 3.20 percent). All other indicators are below 3.0 percent, with most clustered around 1.0 percent.

Some indicators of the economic strength and reach of a commercial center derive from the country within which it is located, while others originate from the city's own attributes. Thus, the Emerging Markets Index consists of both country-level and city-level data. In some cases, country-level indicators negatively impacted the score of relevant cities, while in others, they boosted city scores.<sup>2</sup>

City-specific indicators include those that comprise dimension 4, “financial services environment,” and dimension 5, “commercial connectivity.” In addition, there are indicators that would have been highly valued at the city level but were only available at the country level (e.g., many of those comprising dimension 6, “education and IT connectivity”).<sup>3</sup>

### Performance Versus Potential

It is important to note that the rankings are a measure of actual and current impact and reach, not of potential. The cities at the top of the ranking were found to be the strongest globally, regionally and nationally and have the greatest economic reach and impact at these three geographic levels based on the criteria assessed.

Future potential can be roughly inferred from some of the indicators relating to economic and demographic growth. Potential in this sense measures capacity for future development and importance nationally, regionally and globally.

2 A complementary document available from MasterCard, “Comparing the Role of City- and Country-Level Indicators in the 2008 Emerging Markets Index,” examines this phenomenon in detail.

3 In developing this Index, it was essential to have comprehensive and consistent data for each of the 65 cities. Because these cities are located in countries designated as Upper Middle Income and below by the World Bank, data was more difficult to gather than for the Worldwide Centers of Commerce Index released in June 2008. Much of the data had to be gathered by hand, as was the case, for example, concerning airports and airline passengers in dimension 5, “commercial connectivity”.

## Ranking The Top 65 Cities

2008 Emerging Markets Index Rank	City	Country	Index Value
1	Shanghai	China	66.01
2	Beijing	China	62.35
3	Budapest	Hungary	58.82
4	Kuala Lumpur	Malaysia	58.63
5	Santiago	Chile	57.76
6	Guangzhou	China	56.98
7	Mexico City	Mexico	56.85
8	Warsaw	Poland	56.77
9	Bangkok	Thailand	56.74
10	Shenzhen	China	55.47
11	Johannesburg	South Africa	55.42
12	São Paulo	Brazil	54.78
13	Buenos Aires	Argentina	54.75
14	Moscow	Russia	54.25
15	Istanbul	Turkey	53.83
16	Xiamen	China	53.43
17	Chengdu	China	53.18
18	Dalian	China	53.10
19	Mumbai	India	52.70
20	Tianjin	China	52.60
20	Nanjing	China	52.60
22	Hangzhou	China	52.28
23	Wuhan	China	52.24
24	Chongqing	China	52.04
25	Qingdao	China	51.94
26	Xian	China	50.96
27	Harbin	China	49.81
28	New Delhi	India	49.73
28	Monterrey	Mexico	49.73
30	Sofia	Bulgaria	49.14
31	Montevideo	Uruguay	49.10
32	Bucharest	Romania	49.08
33	Cape Town	South Africa	48.99

2008 Emerging Markets Index Rank	City	Country	Index Value
34	Lima	Peru	48.94
35	Bogota	Colombia	48.35
36	Rio de Janeiro	Brazil	47.98
37	Durban	South Africa	47.27
38	Bangalore	India	47.17
39	Chennai	India	47.00
40	Tunis	Tunisia	46.50
41	St. Petersburg	Russia	46.39
42	Brasilia	Brazil	46.26
42	Jakarta	Indonesia	46.26
44	Cairo	Egypt	46.24
45	Manila	Philippines	45.48
46	Hyderabad	India	45.29
47	Recife	Brazil	44.69
48	Kolkata	India	44.65
49	Curitiba	Brazil	44.44
50	Ankara	Turkey	44.38
51	Santo Domingo	Dominican Republic	43.69
52	Pune	India	43.68
53	Casablanca	Morocco	43.55
54	Coimbatore	India	43.25
55	Quito	Ecuador	42.91
56	Ho Chi Minh City	Vietnam	42.89
57	Kiev	Ukraine	42.00
58	Medellin	Colombia	41.61
59	Yekaterinburg	Russia	41.08
60	Beirut	Lebanon	41.04
61	Caracas	Venezuela	40.28
62	Novosibirsk	Russia	40.01
63	Nairobi	Kenya	39.12
64	Karachi	Pakistan	38.68
65	Dakar	Senegal	37.86

## A Lens for Understanding the Emerging Markets Index Ranking

A review of the 65 cities in the Emerging Markets Index might seem to pose as many questions as it answers. It certainly can be a challenge to compare cities as different as Moscow, Santo Domingo and Shanghai in a way that is meaningful and relevant.

One approach is to organize the ranked cities by geography. Later in the report, there are discussions of each region and how cities within a single region compare to each other.

A more strategic route is to classify the cities into four categories that take into account their Index measures and their historical, political and business context.

The first class of cities would be the top-tier cities that are already established commercial centers on the world stage, yet serve as important entry points to what are widely considered to be emerging markets. In most cases, these cities have been commercial centers for centuries and, in some cases, for millennia.

For example, Shanghai, the most important Asian city in the first part of the 20th century, is resuming its central role in global commerce and accordingly is ranked #1 in the Index. Other cities in this category would include Moscow, São Paulo and Mumbai, collectively with Shanghai the commercial capitals of the BRIC countries. We would also place Bangkok, Kuala Lumpur, Buenos Aires, Mexico City and Santiago in this category, along with Beijing, Guangzhou and Shenzhen, given their existing stature and national and regional roles.

These cities are optimal candidates for national and regional headquarters operations, particularly for international financial institutions and providers of producer services (e.g., accounting, business consulting, IT and engineering services, etc.). An analysis of these cities' scores in the different measurement dimensions of the Index would be valuable to other cities looking to increase their stature and understand what factors drive economic development.

A second category of cities includes those that are well known as drivers of commerce in their regions, yet are one step behind places like Shanghai and São Paulo. These cities are rapidly emerging onto the world stage, but their economic and regional functions (and, often, those of their home country) are more limited than those of the cities cited above.

Here we would see India's outsourcing strongholds of Bangalore, Chennai and Hyderabad; Manila in the Philippines; Chengdu, Nanjing and Xiamen in China; Istanbul, Sofia, Warsaw and Budapest in southern and eastern Europe; Johannesburg and Cape Town in South Africa, and Monterrey, Rio de Janeiro and Lima in Latin America.

These cities could function as local and national headquarters cities with some regional and global reach. They likely offer high-growth trajectories in the medium-term future but also some obstacles along the way. For example, power outages in India and China increasingly challenge the smooth operations of international firms, as do India's infrastructure problems. Manila faces issues with government instabilities and corruption.

**Top-tier cities that are already established commercial centers are optimal candidates for national and regional headquarters operations, particularly for international financial institutions and providers of producer services.**





The third tier of emerging cities in our classification is perhaps the most interesting and exciting from a corporate perspective: cities in markets that are on the rise and have strong growth factors, but have not yet emerged as significant regional or global centers.

These are the “sweet spot” cities: high-risk/high-reward locations for companies seeking cutting-edge location options. While the risks of situating in these areas may be political, economic or social, they seem manageable given the high possible returns to early movers.

This category might include such centers as Bucharest, Romania; Recife and Curitiba, Brazil; Santo Domingo, Dominican Republic; Tunis, Tunisia; Dalian, Harbin and Qingdao, China; Kolkata and Pune, India; Ho Chi Minh City, Vietnam; Jakarta, Indonesia; Ankara, Turkey; and St. Petersburg, Russia.

A final classification of cities from the Index includes those that are hampered by cultural, political or economic factors that create barriers to further growth. Put another way, these cities are generally too undeveloped and too risky politically, economically or socially to be serious location candidates for businesses at the present time.

We might see the following cities falling into this category: Beirut, Lebanon; Karachi, Pakistan; and Medellin, Colombia.

**While the risks of situating in “sweet spot” cities may be political, economic or social, they seem manageable given the high possible returns to early movers.**



## Leaders of the Pack: BRIC Cities in the Emerging Markets Index

Much of the public dialogue about emerging markets is focused on the BRIC nations: Brazil, Russia, India and China. Large countries with enormous populations and fast-growing economies, the BRIC nations offer a tremendous upside for companies that can profitably operate there.

Not surprisingly, these countries represent the largest concentration of cities in the Emerging Markets Index (China alone has 15 of the 65 cities). Although the Index goes well beyond the BRIC nations, because of their size and stature in the global marketplace, a separate analysis of these markets is provided below.

### China

With 15 cities ranked in the top 30, China outshone all of the 32 countries covered by the Emerging Markets Index. Key placements for China include #1 Shanghai, #2 Beijing, #6 Guangzhou, #10 Shenzhen and #16 Xiamen. The first four are quite well known. Xiamen (previously known as Amoy), along China's booming south-east coast, has a key strategic position and is a city to watch as China's relations with Taiwan strengthen.

### India

The second most represented country is India with eight Emerging Markets Index cities. India's cities are led by the financial and commercial capital of Mumbai (#19 overall) followed by political capital #28 New Delhi and the high-tech centers of #38 Bangalore, #39 Chennai and #46 Hyderabad. The ranking of these cities reflects the global clout of India's leading commercial and outsourcing centers.

### Brazil

Remarkably rich in natural resources, Brazil is the largest country in Latin America in terms of size, population and economic might. Brazil has five cities in the Index, led by sprawling financial and commercial capital São Paulo (#12 overall). Following São Paulo are #36 Rio de Janeiro, #42 Brasília, #47 Recife and #49 Curitiba. As with India, all of Brazil's Index centers place in the top 50 of the Emerging Markets Index rankings.

### South Africa: A New BRIC in the Making?

With three cities in the Emerging Markets Index, South Africa had better representation on the list than any other non-BRIC nation.

Furthermore, its urban centers – led by #11 overall Johannesburg, followed by #33 Cape Town and #37 Durban – exhibited some unexpected strengths among their counterparts.

It's probably too early to declare South Africa a new member of the BRICs, especially given the turbulent political climate in much of Africa. However, with nearly 50 million people, a third of whom are under 14 years of age and 60 percent of whom are urbanized, South Africa is clearly on the move and worth watching. South African cities serve as important gateways to other African markets and will grow in value as Africa becomes more open to Western companies and products.

### Russia

Despite Russia's vast geographic scale as the world's largest country, aside from #14 Moscow its cities fall in the second half of the Emerging Markets Index. This includes #41 ranked St. Petersburg, #59 ranked Yekaterinburg and #62 ranked Novosibirsk. However, given Russia's vast natural resource base, it is expected that these four Russian cities will be important as the country develops physically toward its northern and eastern regions.

## Detailed Findings



**The dramatic differences in the dimension scores for the top three cities highlight the fact that there is no one approach to being a highly ranked center of commerce.**

This section presents the Emerging Markets Index cities with respect to the overall rankings, by region, against each of the eight dimensions, and by selected individual indicators. Please note that a listing of all 65 Emerging Markets Index cities and their Index scores can be found on page 5, while a more complete ranking that includes scores for all eight dimensions can be found in Appendix A.

### Top 20 Emerging Markets Index Cities

Shanghai, Beijing and Budapest ranked first, second and third in the 2008 Emerging Markets Index (Table 2, next page). A quick look behind each of the eight dimensions for these cities reveals strengths in one or more dimensions.

For example, Shanghai, ranked #1 overall, also ranked first in both dimension 2, “economic growth and development” and dimension 5, “commercial connectivity.” It ranked second in dimension 6, “education and IT connectivity.”

Shanghai and #2 Beijing both benefited from the economy and infrastructure in China, as reflected in China’s high connectivity measures and the strength of its economic growth and development scores.

Budapest, on the other hand, ranked first in both dimension 7, “quality of urban life” and dimension 8, “risk and security,” two dimensions where Shanghai and Beijing did not score as high.

The dramatic differences in the dimension scores for these three cities highlight the fact that there is no one approach to being a highly ranked center of commerce. Diverse and divergent strengths and weaknesses can go into making any given center an important commercial city.

Diversity is also evident in the cities occupying the top 20 spots (which actually consists of 21 cities because of tie scores). The top ten Emerging Markets Index cities, led by Shanghai and Beijing, come from seven different countries spanning Asia, eastern Europe and Latin America. The top 20 cities span 13 countries.

Not surprisingly, Chinese cities play a dominant role in the ranking, comprising four of the top ten, nine of the top 20 (including Tianjin and

#### Going Backstage:

##### Political Leadership as a Factor in City Rankings

A critical and unaccounted for factor in the success of many cities is leadership, both municipal and national. Shanghai and Chennai provide two quite different illustrations of how leadership matters.

Shanghai, for example, owes much of its stature to visionary, high-quality city leadership. Their investment in transportation and infrastructure has allowed Shanghai to accommodate an enormous array of economic activities, while support for education and other public services has encouraged foreign direct investment in factories, offices, research, housing, and economic and social capital.

In Chennai, city and state leadership worked together to advance the city’s standing. Realizing the importance of diverse economic activities, they provided the infrastructure and needed business environment for Chennai to translate economic activity into broad-based prosperity.

Chennai today is emerging as one of the world’s leading auto production hubs. Its film industry is larger than Hollywood’s, and it is a leader in terms of business activities not readily measured: the number of business headquarters located there, the number of business transactions processed, and the like.

Nanjing tied at #20), and 15 of the top 30. However, four of the top 20 cities are from eastern Europe, including third-ranked Budapest. Latin America is also strongly represented, with four of the top 20 cities and with Santiago, Chile, ranked fifth overall.

Looking at the rankings of the top ten centers by a key dimension, “financial services environment” (dimension 4), provides further insight into the range of cities in the Index.

Each of the top ten cities in this dimension comes from different countries. The regions of the world are broadly represented here with four of the top ten from Asia, including #1 Mumbai, three from Latin America, one from Africa, and two from eastern Europe (counting Istanbul as eastern Europe).

Overall, the diversity of the Emerging Markets Index cities drives home the importance of looking beyond one or two major cities in large developing economies (e.g., China, India, Brazil) when considering investments in these markets.

**TABLE 2: TOP 20 CITY RANKING BY OVERALL INDEX VALUE**

Rank	City	Country	Index Value
1	Shanghai	China	66.01
2	Beijing	China	62.35
3	Budapest	Hungary	58.82
4	Kuala Lumpur	Malaysia	58.63
5	Santiago	Chile	57.76
6	Guangzhou	China	56.98
7	Mexico City	Mexico	56.85
8	Warsaw	Poland	56.77
9	Bangkok	Thailand	56.74
10	Shenzhen	China	55.47
11	Johannesburg	South Africa	55.42
12	São Paulo	Brazil	54.78
13	Buenos Aires	Argentina	54.75
14	Moscow	Russia	54.25
15	Istanbul	Turkey	53.83
16	Xiamen	China	53.43
17	Chengdu	China	53.18
18	Dalian	China	53.10
19	Mumbai	India	52.70
20	Tianjin, Nanjing	China	52.60

4 The Emerging Markets Index relies heavily on third party sources that are released at different times during the year. For instance, the William Mercer Co. releases its city-level data annually each fall, meaning the 2008 Index uses their data from September-October 2007. While this may suggest that the Index does not reflect the most current trends, over time the Index will reflect changing conditions in emerging market cities. Recent news about crime and political stress in Malaysia may lead to concerns about the high ranking of Kuala Lumpur (#4 overall) in the 2008 Index. However, the 2009 Emerging Markets Index will pick up these trends and changing conditions.

## Asia Pacific, Middle East and Africa



**The strong showing of African cities in general, and South African cities in particular, indicates this area's growing global prominence.**

This region was by far the best represented in the Index, containing 38 of the study's 65 cities. A primary reason for this was the dominance of China in the rankings. Of the top 30 cities in the Index, 15 are Chinese. China also claims seven of the region's top ten Emerging Markets Index cities, led by #1 and #2 overall Shanghai and Beijing.

The strength of Shanghai and Beijing is in part explained by their location in China with its phenomenal growth and global reach. However, it is also in part a function of city characteristics, particularly the exceptional connectivity among all of the Chinese cities and between them and leading centers in Asia, North America and Europe.

More surprising is Johannesburg, ranking #7 regionally, which reflects the growing economic strength of South Africa and its strong financial and commercial institutions.

The strong showing of African cities in general, and South African cities in particular, indicates this area's growing global prominence. Tunis (#40 overall) and Cairo (#44 overall) also scored well, suggesting that Africa's era of being overlooked may well be coming to an end.

India's cities placed quite well, although they did not benefit from country-level measurements to the extent of Chinese cities. Within this region, Mumbai ranked #11, New Delhi, India's financial and business capital, ranked #20, Bangalore #23, Chennai #24, Hyderabad #29 and Kolkata #30.

Beyond the three markets above, it is worth noting that Kuala Lumpur and Bangkok both placed highly in the region and among the top ten globally due to their strong regional transportation roles and solid growth.

**TABLE 3: APMEA RANKINGS**

Rank	City	Country	Index Value
1	Shanghai	China	66.01
2	Beijing	China	62.35
3	Kuala Lumpur	Malaysia	58.63
4	Guangzhou	China	56.98
5	Bangkok	Thailand	56.74
6	Shenzhen	China	55.47
7	Johannesburg	South Africa	55.42
8	Xiamen	China	53.43
9	Chengdu	China	53.18
10	Dalian	China	53.10

# Latin America and the Caribbean

The LAC region is second in numbers in the Emerging Markets Index, with 16 cities overall. The region is led by #5 overall Santiago and #7 overall Mexico City, followed closely by #12 and #13 overall São Paulo and Buenos Aires. Indeed, 12 LAC cities were in the top 50 (Santo Domingo, Quito, Medellin and Caracas being the exceptions).

Santo Domingo, the only Caribbean island city in the Index, ranked #51, suggesting it is

definitely worth exploring as a business locale for the Caribbean, Central America and the northern reaches of South America.

Brazil is the powerhouse in LAC with four cities in the Index, while Mexico has two cities in the LAC top ten, reflecting its size and strong growth. Lima, Peru and Montevideo, Uruguay also placed strongly.



TABLE 4: LAC RANKINGS

Rank	City	Country	Index Value
1	Santiago	Chile	57.76
2	Mexico City	Mexico	56.85
3	São Paulo	Brazil	54.78
4	Buenos Aires	Argentina	54.75
5	Monterrey	Mexico	49.73
6	Montevideo	Uruguay	49.10
7	Lima	Peru	48.94
8	Bogota	Colombia	48.35
9	Rio de Janeiro	Brazil	47.98
10	Brasilia	Brazil	46.26

Santo Domingo is the only Caribbean island city in the Index, suggesting it is definitely worth exploring as a business locale for the Caribbean, Central America and the northern reaches of South America.



**Emerging energy giant Russia is the best represented European nation overall with three cities in the region's top ten and a total of four cities in the overall Index.**

## Europe

Eastern and southern Europe, with 11 cities in the Index, presented a host of interesting findings.

The region ranked well with two of the top ten cities—Budapest ranking #3 and Warsaw ranking #8—and also with Moscow ranking #14 and, surprisingly, Istanbul ranking #15. Sofia, Bulgaria (#30), Bucharest, Romania (#32), St. Petersburg, Russia (#41), and Ankara, Turkey (#50) rounded out the eastern and southern European cities in the top 50.

Considering Budapest's strong ranking, it's worth noting its heritage as the second capital of the former Austro-Hungarian Empire. Budapest was also the first centrally planned eastern European city to engage in marketization and open its trade frontiers to western Europe. So it should not be surprising to find

that Budapest leads the European regional rankings.

Emerging energy giant Russia is the best represented European nation overall, with three cities in the region's top ten and a total of four cities in the overall Index. Bolstered by strong city-level measurements, Moscow ranked at #14 overall, while St. Petersburg was ranked at #41, followed by #59 Yekaterinburg and #62 Novosibirsk.

Turkey, with two Emerging Markets Index cities, is the only other European country with more than one city in the Index. The strong showing of Istanbul, just behind Moscow, suggests that Istanbul is a formidable center of commerce deserving of attention. As with Russia, Turkey possesses a large population and has grown rapidly in recent times.

**TABLE 5: EUROPE RANKINGS**

Rank	City	Country	Index Value
1	Budapest	Hungary	58.82
2	Warsaw	Poland	56.77
3	Moscow	Russia	54.25
4	Istanbul	Turkey	53.83
5	Sofia	Bulgaria	49.14
6	Bucharest	Romania	49.08
7	St. Petersburg	Russia	46.39
8	Ankara	Turkey	44.38
9	Kiev	Ukraine	42.00
10	Yekaterinburg	Russia	41.08

## Exploring the Rankings by Dimension

Another valuable way of looking at the Index is to delve into each of the eight dimensions and present the top ten cities in each one. This allows for an analysis of where cities have their strengths and weaknesses. To begin, Table 6 shows the #1 ranked city in each dimension.

It also provides an indication as to why Shanghai, Beijing and Budapest all ranked highly: Each of these cities achieved a first-place ranking in one or more of the eight dimensions.

**TABLE 6: #1 RANKING CITIES FOR EACH DIMENSION**

Dimension	Dimension Name	Dimension Weight	City	Score
1	Economic and Commercial Environment	12.80%	Santiago	10.34
2	Economic Growth and Development	13.80%	Shanghai	9.83
3	Business Environment	16.60%	Johannesburg, Cape Town, Durban	11.95
4	Financial Services Environment	10.60%	Mumbai	8.46
5	Commercial Connectivity	13.00%	Shanghai	9.57
6	Education and IT Connectivity	12.00%	Beijing	7.71
7	Quality of Urban Life	10.60%	Budapest	8.37
8	Risk and Security	10.60%	Budapest	9.11

## Dimension 1: Economic and Commercial Environment

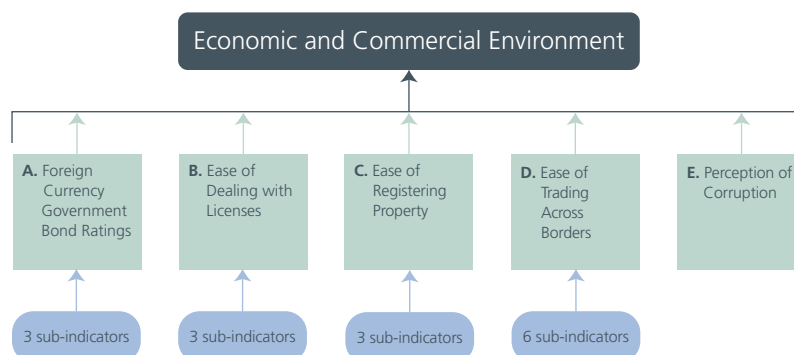


Table 7 displays the top ten cities for dimension 1, a country-level dimension comprised of five country-level indicators. This means that all cities within a particular country will share the same score in this dimension. The indicators relate to the economic and commercial environment, which

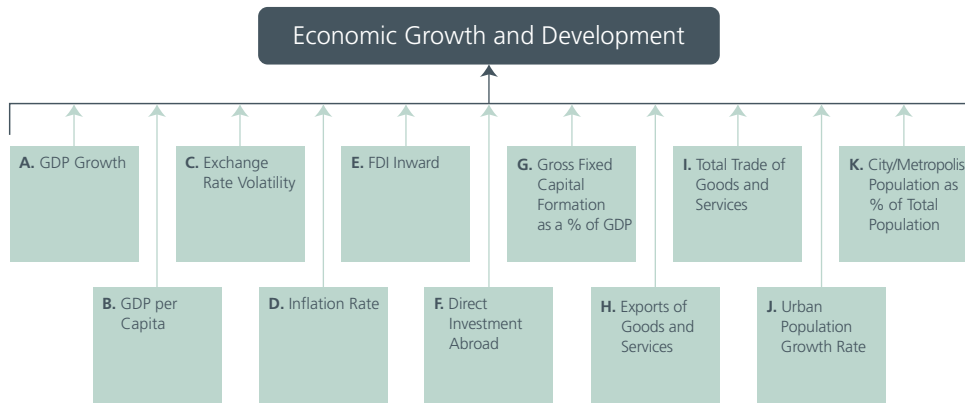
includes measures of the time and costs involved in building a standard warehouse, registering a property, and exporting and importing cargo. It also includes measures of corruption and foreign bond ratings.

**TABLE 7: TOP 10 RANKINGS BY DIMENSION 1**

Rank	City	Dimension Score
1	Santiago	10.34
2	Kuala Lumpur	9.04
3	Budapest	8.94
4	Bangkok	8.58
5	Johannesburg, Capetown, Durban	8.53
6	Tunis	8.50
7	Warsaw	8.40
8	Beijing, Chengdu, Chongqing, Dalian, Guangzhou, Hangzhou, Harbin, Nanjing, Qingdao, Shanghai, Shenzhen, Tianjin, Wuhan, Xiamen, Xian	8.29
9	Mexico City, Monterrey	8.24
10	Montevideo	8.22



# Dimension 2: Economic Growth and Development



Measuring the broad economic health and growth of the national economy, dimension 2 covers GDP, inward foreign direct investment, international trade, and urban population growth.

It is built on ten country-level indicators and one city-level indicator (“city/metropolis population as percent of total population.”) Given China’s meteoric growth, it is not surprising

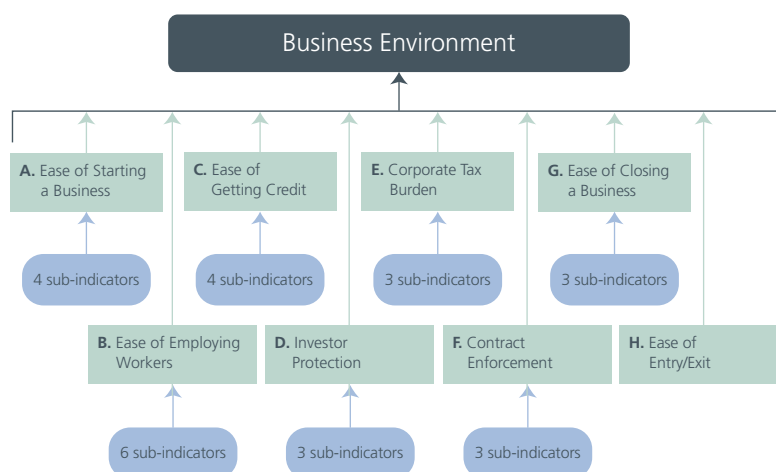
that Chinese cities top the list by a significant margin over the first non-Chinese city, Santiago.

Because this dimension is largely made up of national measures, the top ten ranking shown below in Table 8 actually comprises 20 cities: 15 in China, two from Russia, and one each from Chile, Malaysia and Mexico.

**TABLE 8: TOP 10 RANKINGS BY DIMENSION 2**

Rank	City	Dimension Score
1	Shanghai	9.83
2	Beijing	9.82
3	Shenzhen, Chongqing	9.81
4	Chengdu, Dalian, Guangzhou, Hangzhou, Harbin, Nanjing, Qingdao, Tianjin, Wuhan, Xian	9.80
5	Xiamen	9.79
6	Santiago	6.04
7	Kuala Lumpur	5.99
8	Moscow	5.93
9	Mexico City	5.73
10	St. Petersburg	5.72

## Dimension 3: Business Environment



Dimension 3 is also largely a country-level dimension. It is built on one city-level indicator (indicator 3h “ease of entry/exit”), and several country-level indicators including measures “corporate tax burden,” “contract enforcement,” and “ease of closing a business.” Together, they reflect the quality of the business environment.

Table 9 presents the top ten rankings for dimension 3. Because this dimension is based

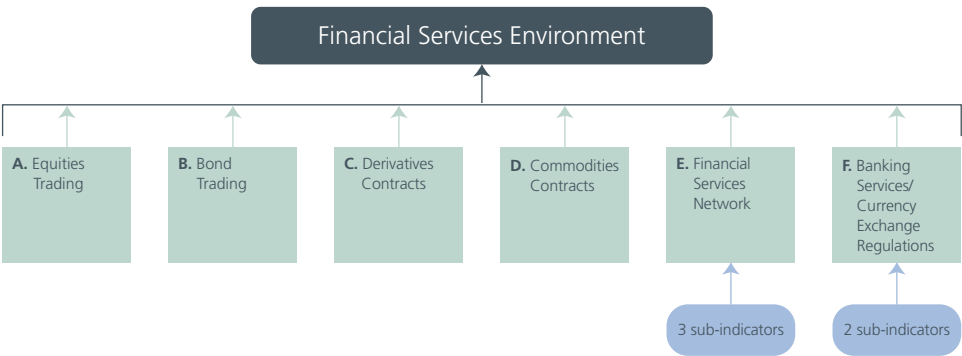
largely on national measures, the top ten actually consist of 13 cities and the countries in which they are located.

The ranking is led by the three South African cities: Cape Town, Durban and Johannesburg. Interestingly, the only Asian cities on the list are Kuala Lumpur and Bangkok. Noticeably absent are all Chinese and Indian cities, resulting from less than ideal contract enforcement laws and regulatory hurdles that businesses can sometimes face in both countries.

**TABLE 9: TOP 10 RANKINGS BY DIMENSION 3**

Rank	City (Country)	Dimension Score
1	Cape Town, Durban, Johannesburg	11.95
2	Kuala Lumpur	11.87
3	Montevideo	11.59
4	Santiago	11.51
5	Sofia	11.09
6	Budapest	11.02
7	Mexico City, Monterrey	11.01
8	Bangkok	10.99
9	Bucharest	10.92
10	Lima	10.90

# Dimension 4: Financial Services Environment



The first dimension to consist solely of city-level data, dimension 4 has six indicators, including “total value of equities trading,” “total value of bond trading,” “total number of derivatives contracts,” “total number of commodities contracts,” “financial services network” (as measured by the presence of leading international banks, insurance companies and securities dealers) and measures of “banking services and currency exchange regulations.”

Table 10 presents the top ten rankings for dimension 4. Mumbai comfortably tops the

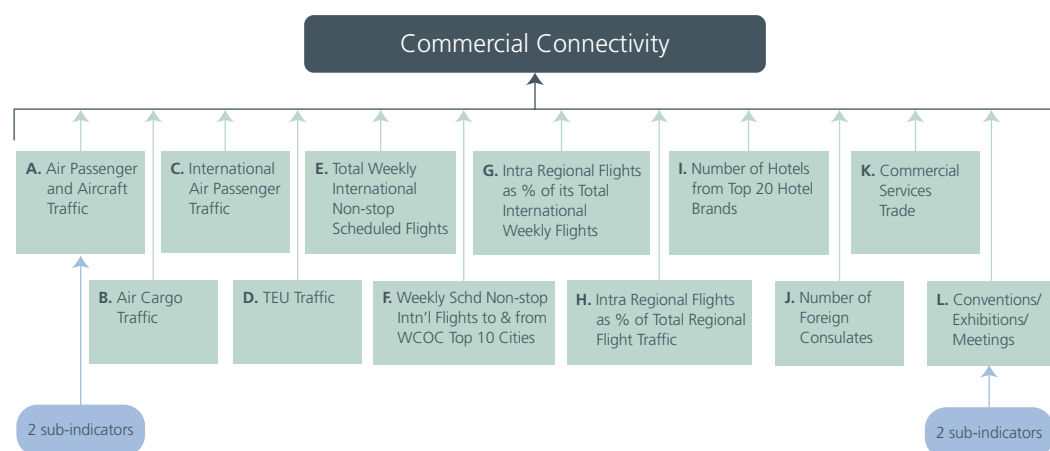
list, sharing the top score in indicator 4f, “banking services and currency exchange,” with four other cities. It also ranked highly in the other indicators of dimension 4, ranking second in 4c “total number of derivatives contracts,” third in 4e “financial services network,” and fourth in 4d “total number of commodities futures and options contracts traded.”

The other cities in the top ten are all financial capitals of their respective countries and important links in the global financial marketplace.

**TABLE 10: TOP 10 CITIES BY DIMENSION 4**

Rank	City	Dimension Score
1	Mumbai	8.46
2	Shanghai	7.67
3	Johannesburg	7.18
4	São Paulo	7.17
5	Moscow	7.04
6	Mexico City	6.34
7	Bangkok	6.11
8	Kuala Lumpur	6.10
9	Istanbul	6.06
10	Buenos Aires	5.64

## Dimension 5: Commercial Connectivity



Dimension 5 relies overwhelmingly on city-level data. It is constructed upon ten city-level indicators, one country-level indicator and one indicator that required original research. These indicators measure connectivity of the city to other world and regional commercial centers by air, airline passenger volumes, the presence of foreign consulates/embassies and international hotels, convention and meeting facilities, and international trade (a country-level indicator).

Table 11 presents the top ten rankings. Shanghai tops the list, as would be expected

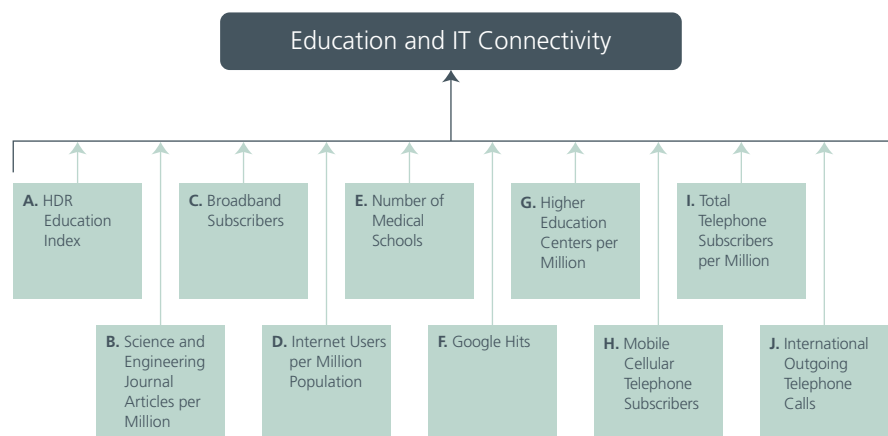
with its massive port and airport and its role as China's commercial hub. Second is Bangkok, the air and commercial hub of the emerging Mekong Region. As Thailand's capital, Bangkok also offers substantial international government links along with an exceptionally robust hotel sector.

Indeed, with the exception of Shanghai and São Paulo, all of the cities here are national capitals, benefiting from the dense network of international government and airline connections that national capital status confers.

**TABLE 11: TOP 10 CITIES BY DIMENSION 5**

Rank	City	Dimension Score
1	Shanghai	9.57
2	Bangkok	8.81
3	Beijing	8.49
4	Moscow	7.52
5	São Paulo	6.71
6	New Delhi	6.58
7	Mexico City	6.57
8	Istanbul	6.48
9	Buenos Aires	6.42
10	Manila	6.18

# Dimension 6: Education and IT Connectivity



A robust mix of seven country-level indicators and three city-level indicators, dimension 6 measures the intensity of education activities in each city, as well as national levels of Internet and telecommunications connectivity.

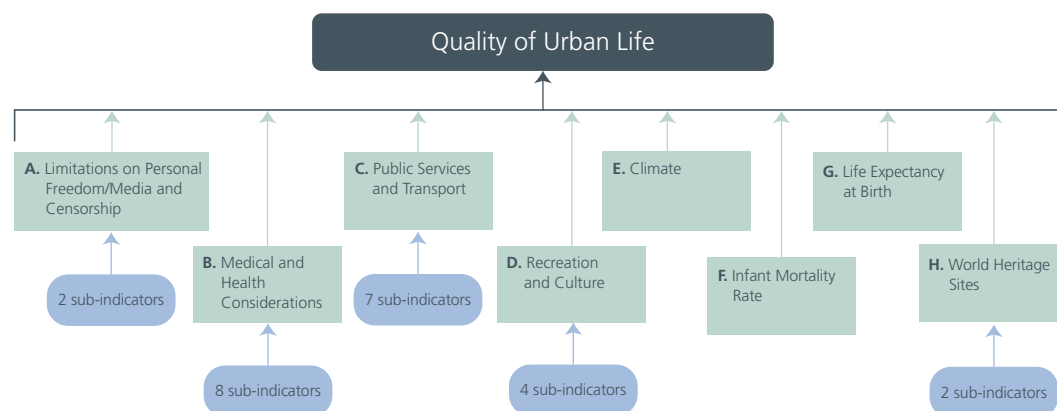
Table 12 presents the top ten rankings. Chinese cities occupy all of the ten positions, topped by

Beijing, Shanghai and Wuhan, mainly because of their very high scores on indicators 6c “broadband subscribers,” 6h “mobile cellular telephone subscribers” and 6j “international outgoing telephone calls (million minutes),” all country-level indicators.

**TABLE 12: TOP 10 CITIES BY DIMENSION 6**

Rank	City	Dimension Score
1	Beijing	7.71
2	Shanghai	7.31
3	Wuhan	7.01
4	Guangzhou	6.63
5	Dalian	6.62
6	Nanjing	6.56
7	Xiamen	6.52
8	Chengdu	6.39
9	Hangzhou	6.26
10	Harbin	6.24

## Dimension 7: Quality of Urban Life



To gauge quality of life in the 65 cities in the Index, dimension 7 is constructed using five city-level indicators, two country-level indicators and one indicator that is a mix of both city- and country-level sub-indicators.

Indicators include “limitations on personal freedom/media and censorship” (indicator 7a), “medical and health considerations” (indicator 7b with eight sub-indicators), “public services and transport” (indicator 7c with seven sub-indicators), “recreation and culture” (indicator 7d with four sub-indicators), as well as several measures of climate, mortality and the presence of world heritage sites (indicators 7e, 7f and 7g, respectively). More than 20 sub-indicators,

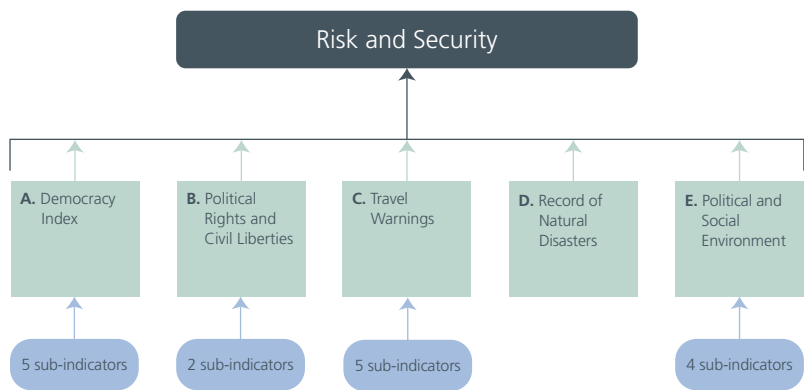
mostly city-level, help further define this dimension.

Table 13 presents the top ten rankings for this dimension. Latin American cities dominate with six of the top 11 cities (due to tie scores), while Africa and eastern Europe have two and three cities, respectively. Budapest tops the list because of its openness (indicator 7a “limitations on personal freedom/media and censorship”) and health conditions (indicator 7f “infant mortality rate” and 7g “life expectancy at birth”). Interestingly, there are no Asian cities among the top ten ranking for this dimension.

**TABLE 13: TOP 10 RANKINGS BY DIMENSION 7**

Rank	City	Dimension Score
1	Budapest	8.37
2	Warsaw	8.20
3	Buenos Aires	8.05
4	Mexico City, Montevideo	7.87
5	Santiago	7.77
6	Brasilia	7.70
7	Istanbul	7.68
8	Tunis	7.58
9	Cape Town	7.55
10	Quito	7.53

# Dimension 8: Risk and Security



Dimension 8 is built upon five indicators – two at the country level and three at the city level. These, in turn, are rooted in 16 sub-indicators. These indicators measure diverse aspects of personal freedom (indicators 8a and 8b from the Economist Intelligence Unit and Freedom House, respectively), personal physical safety (indicator 8c, consisting of five measures of travel warnings, and 8d, which covers natural disasters) and measures of the political and social environment (indicator 8e and its four sub-indicators).

Table 14 presents the top ten rankings for dimension 8. As in dimension 7, Budapest and Warsaw top the list, which includes 15 cities due to tie scores. Again, Latin America is strongly represented with six cities, as are South Africa and India with three cities each. Both Budapest and Warsaw were strong across the board at the country and city levels, as were the Latin American centers occupying third, fourth, sixth and seventh positions in this dimension. Chinese cities are surprisingly absent.

**TABLE 14: TOP 10 RANKINGS BY DIMENSION 8**

Rank	City	Dimension Score
1	Budapest	9.11
2	Warsaw	8.76
3	Montevideo	8.71
4	Curitiba	8.55
5	Cape Town, Durban	8.49
6	Brasilia, Recife, Monterrey	8.35
7	Buenos Aires	8.30
8	Johannesburg	8.29
9	Sofia, Bangalore, Hyderabad	8.11
10	Coimbatore	8.07

## A Look Ahead

The unleashing of growth potential in medium and large developing economies is ongoing. This trend will ultimately benefit a broad range of cities and open up enormous opportunities for companies able to move quickly and decisively. These opportunities will include real estate, retailing and supermarkets, and the potential to provide sophisticated financial and business services.

With this in mind, the Emerging Markets Index brought to light several cities worth watching.

For example, all of the South African cities, as well as Tunis and Santo Domingo, fared better than initially expected and deserve careful consideration in the future. Also warranting attention are India's outsourcing powers, Bangalore, Chennai and Hyderabad, and its outsourcing competitor, Manila.

China's diverse and lesser publicized cities merit a closer look, particularly Chengdu, Nanjing and Xiamen. The southern European cities of Istanbul, Sofia, and Bucharest deserve watching too. Finally, Latin American cities such as Monterrey, Montevideo and Rio de Janeiro are clearly up and coming centers of commerce with growing global reach.

There are also certain Emerging Markets Index cities that are likely to break into or grow their presence on the MasterCard Worldwide Centers of Commerce Index, a sister report that ranks the world's 75 leading global cities and their role in driving commerce.

At the top of this grouping of cities is Shanghai, the #1 Emerging Markets Index city and a city already ranked among the top 25 in the 2008 Worldwide Centers of Commerce Index.

Others likely to become stronger within the Worldwide Centers of Commerce ranking include Bangkok, Beijing, New Delhi, Kuala Lumpur, Mumbai, and Shenzhen in Asia; Buenos Aires, Mexico City, Santiago and São Paulo in LAC; and Budapest, Moscow and Warsaw in eastern Europe.

Looking at the Index more broadly, it provides a window into the larger global economic climate. Emerging Markets Index cities, situated as they are in emerging economies, are expected to play an increasingly important role in helping the global economy weather changing tides. However, given significant commercial changes in the past decade and significant turmoil currently and in the recent past, how will the set of Emerging Markets Index cities fare in the face of global economic vicissitudes?

A powerful built-in premise of the Emerging Markets and Worldwide Centers of Commerce Indices is that cities lead their national economies. Because of their role as leading indicators, they provide useful insights even when businesses are primarily interested in the country-level developments.

For example, it could be inferred that cities and countries with currently strong economic and urban population growth are likely to have considerable momentum and capacity to withstand current and potential economic shocks. Further, cities that possess strong educational institutions and infrastructure are likely better positioned to navigate rough economic waters.



Urban areas with solid public services and infrastructure and high quality of life are also likely to continue to attract and retain their most precious resource, highly qualified people. Additionally, those cities with varied and dense networks of airline connections will likely maintain or even expand their share of economic activity, which is increasingly people-driven and needs the continuous fostering of personal connections.

Accordingly, while it is difficult to pick “winners” and “losers” in the short, medium or long term, it seems there are traits that successful shock-absorbing cities are likely to possess. The 2008 Emerging Markets Index provides a valuable tool for businesses and governments seeking meaningful insights into what makes cities robust and resilient in both turbulent and stable economic times.

## Appendix A

### DETAILS OF THE RANKINGS OF THE 65 EMERGING MARKETS INDEX CITIES

2008 RANK	CITY	COUNTRY	INDEX VALUE	DIMENSION							
				1	2	3	4	5	6	7	8
1	SHANGHAI	CHINA	66.01	8.29	9.83	10.04	7.67	9.57	7.31	7.39	5.91
2	BEIJING	CHINA	62.35	8.29	9.82	10.04	5.49	8.49	7.71	6.76	5.75
3	BUDAPEST	HUNGARY	58.82	8.94	5.05	11.02	5.21	5.41	5.71	8.37	9.11
4	KUALA LUMPUR	MALAYSIA	58.63	9.04	5.99	11.87	6.01	6.05	4.37	7.38	7.83
5	SANTIAGO	CHILE	57.76	10.34	6.04	11.51	4.91	4.12	5.05	7.77	8.02
6	GUANGZHOU	CHINA	56.98	8.29	9.80	10.04	3.70	5.88	6.63	6.65	5.98
7	MEXICO CITY	MEXICO	56.85	8.24	5.73	11.01	6.34	6.57	4.87	7.87	6.22
8	WARSAW	POLAND	56.77	8.40	4.56	10.81	5.12	5.50	5.43	8.20	8.76
9	BANGKOK	THAILAND	56.74	8.58	4.95	10.99	6.11	8.81	4.26	6.96	6.09
10	SHENZHEN	CHINA	55.47	8.29	9.81	10.04	4.31	4.96	5.95	6.40	5.71
11	JOHANNESBURG	SOUTH AFRICA	55.42	8.53	4.01	11.95	7.18	5.29	2.85	7.33	8.29
12	SÃO PAULO	BRAZIL	54.78	7.17	5.28	8.82	7.17	6.71	4.53	7.23	7.86
13	BUENOS AIRES	ARGENTINA	54.75	6.45	4.69	10.32	5.64	6.42	4.88	8.05	8.30
14	MOSCOW	RUSSIA	54.25	5.10	5.93	10.18	7.04	7.52	5.81	6.76	5.89
15	ISTANBUL	TURKEY	53.83	7.88	4.70	10.37	6.06	6.48	4.92	7.68	5.73
16	XIAMEN	CHINA	53.43	8.29	9.79	10.04	2.16	4.38	6.52	6.27	5.98
17	CHENGDU	CHINA	53.18	8.29	9.80	10.04	2.78	3.61	6.39	6.50	5.76
18	DALIAN	CHINA	53.10	8.29	9.80	10.04	3.38	3.06	6.62	6.10	5.81
19	MUMBAI	INDIA	52.70	7.63	5.40	8.90	8.46	6.08	3.34	5.94	6.96
20	TIANJIN	CHINA	52.60	8.29	9.80	10.04	2.78	3.42	6.20	6.25	5.81
20	NANJING	CHINA	52.60	8.29	9.80	10.04	1.97	3.49	6.56	6.47	5.98
22	HANGZHOU	CHINA	52.28	8.29	9.80	10.04	2.16	3.21	6.26	6.53	5.98
23	WUHAN	CHINA	52.24	8.29	9.80	10.04	2.30	2.49	7.01	6.33	5.98
24	CHONGQING	CHINA	52.04	8.29	9.81	10.04	2.11	2.95	6.19	6.50	6.15
25	QINGDAO	CHINA	51.94	8.29	9.80	10.04	2.11	3.70	6.23	6.13	5.64
26	XIAN	CHINA	50.96	8.29	9.80	10.04	2.11	2.56	6.20	6.65	5.30
27	HARBIN	CHINA	49.81	8.29	9.80	10.04	2.01	1.69	6.24	5.93	5.81
28	NEW DELHI	INDIA	49.73	7.63	5.37	8.90	4.60	6.58	2.92	5.73	8.01
28	MONTERREY	MEXICO	49.73	8.24	5.21	11.01	2.78	2.66	4.15	7.33	8.35
30	SOFIA	BULGARIA	49.14	8.15	4.23	11.09	2.94	2.77	5.06	6.78	8.11
31	MONTEVIDEO	URUGUAY	49.01	8.22	4.51	11.59	3.04	1.83	3.33	7.87	8.71
32	BUCHAREST	ROMANIA	49.08	8.01	4.20	10.92	4.05	3.49	4.02	6.55	7.85
33	CAPE TOWN	SOUTH AFRICA	48.99	8.53	3.82	11.95	2.98	2.76	2.93	7.55	8.49
34	LIMA	PERU	48.94	7.81	4.70	10.90	3.64	4.76	3.51	6.57	7.05
35	BOGOTA	COLOMBIA	48.35	7.68	4.21	10.06	4.56	5.07	4.36	6.78	5.63
36	RIO DE JANEIRO	BRAZIL	47.98	7.17	5.16	8.82	3.36	3.55	4.67	7.19	8.05

2008 RANK	CITY	COUNTRY	INDEX VALUE	DIMENSION							
				1	2	3	4	5	6	7	8
37	DURBAN	SOUTH AFRICA	47.27	8.53	3.72	11.95	2.49	1.74	2.86	7.49	8.49
38	BANGALORE	INDIA	47.17	7.63	5.36	8.90	4.00	3.54	3.84	5.80	8.11
39	CHENNAI	INDIA	47.00	7.63	5.36	8.90	3.80	4.97	2.97	5.44	7.92
40	TUNIS	TUNISIA	46.50	8.50	4.44	10.35	2.46	3.23	2.72	7.58	7.22
41	ST. PETERSBURG	RUSSIA	46.39	5.10	5.72	10.18	3.11	4.19	5.56	6.44	6.08
42	BRASILIA	BRAZIL	46.26	7.17	5.01	8.82	2.35	2.84	4.02	7.70	8.35
42	JAKARTA	INDONESIA	46.26	6.97	4.64	8.67	5.31	6.01	2.99	6.24	5.33
44	CAIRO	EGYPT	46.24	7.24	4.02	9.12	4.39	5.48	2.55	7.03	6.42
45	MANILA	PHILIPPINES	45.48	7.04	4.20	8.70	4.64	6.18	2.63	6.95	5.13
46	HYDERABAD	INDIA	45.29	7.63	5.36	8.90	3.75	3.12	2.65	5.77	8.11
47	RECIFE	BRAZIL	44.69	7.17	5.03	8.82	2.11	2.24	3.90	7.06	8.35
48	KOLKATA	INDIA	44.65	7.63	5.38	8.90	3.51	3.14	2.87	5.83	7.38
49	CURITIBA	BRAZIL	44.44	7.17	5.02	8.82	2.59	1.12	4.04	7.12	8.55
50	ANKARA	TURKEY	44.38	7.88	4.31	10.37	2.73	1.72	4.38	6.79	6.19
51	SANTO DOMINGO	DOMINICAN REPUBLIC	43.69	7.22	3.39	9.81	2.79	2.74	3.92	6.22	7.60
52	PUNE	INDIA	43.68	7.63	5.36	8.90	3.66	1.88	2.91	6.05	7.31
53	CASABLANCA	MOROCCO	43.55	7.69	4.74	9.34	2.71	3.56	2.18	6.47	6.86
54	COIMBATORE	INDIA	43.25	7.63	5.35	8.90	2.60	1.42	3.88	5.41	8.07
55	QUITO	ECUADOR	42.91	6.02	4.37	9.72	3.15	2.43	3.00	7.53	6.70
56	HO CHI MINH CITY	VIETNAM	42.89	7.63	4.50	9.14	3.55	4.11	2.47	5.58	5.92
57	KIEV	UKRAINE	42.00	6.07	3.86	7.65	3.90	3.25	4.18	5.80	7.30
58	MEDELLIN	COLOMBIA	41.61	7.68	3.89	10.06	2.16	1.67	3.30	6.85	6.01
59	YEKATERINBURG	RUSSIA	41.08	5.10	5.65	10.18	1.29	2.07	4.77	5.66	6.35
60	BEIRUT	LEBANON	41.04	6.71	5.20	8.66	3.59	3.53	3.12	5.76	4.48
61	CARACAS	VENEZUELA	40.28	5.49	4.43	7.62	3.64	3.41	3.51	6.44	5.74
62	NOVOSIBIRSK	RUSSIA	40.01	5.10	5.65	10.18	1.34	1.44	4.66	5.37	6.25
63	NAIROBI	KENYA	39.12	6.21	3.80	9.88	2.55	3.85	1.69	5.55	5.59
64	KARACHI	PAKISTAN	38.68	6.69	4.11	9.80	3.09	3.91	2.39	4.80	3.89
65	DAKAR	SENEGAL	37.86	6.56	4.46	8.28	2.30	1.80	1.31	5.82	7.34

## Appendix B

### THE RESEARCH PANEL

#### **Professor Michael Goldberg, Chair**

Professor Emeritus, Sauder School of Business  
University of British Columbia, Canada

Dr. Michael Goldberg has consulted to businesses and governments in Canada, the US and Asia, and lectured at 50 research institutes in 16 different countries. He was the chief academic officer at Universitas 21Global in Singapore and, prior to this, the associate vice president international at the University of British Columbia (UBC).

In addition to serving as professor and dean at the UBC Sauder School of Business, he has sat on international panels and the editorial boards of scholarly journals, reviewing articles for more than a dozen international academic journals. Dr. Goldberg has authored or co-authored nine books and more than 200 academic and professional articles.

Dr. Goldberg earned his MA and Ph.D. in Economics at the University of California at Berkeley

#### **Dr. Yuwa Hedrick-Wong**

Economic Advisor, MasterCard Worldwide  
Asia/Pacific Region, Singapore

Dr. Yuwa Hedrick-Wong has served as strategy advisor for over 25 years and to over 30 leading multinational companies in the Asia/Pacific region and today is the economic advisor to MasterCard Worldwide in Asia/Pacific.

In his present position, Dr. Hedrick-Wong has monitored and forecasted economic growth and emerging business development trends in this region. He chairs the global MasterIntelligence Knowledge Panel, speaks regularly at international conferences including the Royal Institute of International Affairs and the ASEAN Business & Investment summits, and is a frequent commentator and columnist for magazines, including *Forbes Asia*. He is adjunct professor at the School of Management, Fudan University, Shanghai.

Dr. Hedrick-Wong studied at Trent University and pursued post-graduate training at the University of British Columbia and Simon Fraser University in Canada, where he received his Ph.D.

**Mr. Manu Bhaskaran**

Partner/Head, Economic Research  
Centennial Group, Singapore

Mr. Manu Bhaskaran is a partner at Centennial Group based in Singapore, heading the group economic research practice for institutions with interests in Asia. He supervised Société Générale's Asian investment banking division and was an Executive Committee member, in charge of Asian equity research.

He is also a member of the Competition Appeals Board, Singapore; a member of the Board of Advisors, Centre for Analytical Finance, Indian School of Business, Hyderabad, India; and Senior Adjunct Fellow, Institute of Policy Studies, Singapore. He is an executive committee member of several boards, including Singapore Institute of International Affairs, and is vice president of the Economics Society of Singapore.

Mr. Bhaskaran has earned several degrees from Magdalene College, Cambridge University and Harvard University.

**Professor Fan Gang**

Director  
National Economic Research Institute  
Beijing, China

Professor Fan Gang, one of China's leading economists, is director of the National Economic Research Institute, as well as the China Reform Foundation in Beijing. Professor Fan has also served as advisor to the Board of Monetary Policy of the People's Bank of China, the Board of Foreign Exchange Administration, and the Monetary Administration of the Hong Kong SAR.

He was elected as one of the "Global Leaders for Tomorrow" at the World Economic Forum in Davos in 1995, and in 2005 as one of the world's "top 100 public intellectuals" by *Foreign Policy* (USA) and *Prospectus* (UK) magazines.

Professor Fan was educated at Beijing University and received his Ph.D. in economics from the Graduate School of the Chinese Academy of Social Sciences.

**Professor William Lever**

Emeritus Professor of Urban Studies  
University of Glasgow, Scotland

Professor William Lever focuses his research on urban competitiveness, globalization, comparative urban policy and population migration. He has consulted for the European Union, OECD, the British and Scottish governments, and several development agencies on social and economic dynamics. An author of six books on urban policy and the former editor of the journal *Urban Studies*, he is currently advisor to the Glasgow Urban Laboratory and a member of the World Urban Competitiveness Network. He has held visiting professorships at the Universities of Utrecht, Warsaw, Pittsburgh and Michigan State.

Professor Lever was educated at Oxford University.

**Professor Maurice Levi**

Bank of Montreal Professor of International Finance  
Sauder School of Business  
University of British Columbia, Canada

Professor Maurice Levi, the Bank of Montreal Professor Chair, is widely acknowledged as one of the world's leading experts on global commerce and international finance.

He has taught at the Hebrew University in Jerusalem, UC Berkeley, MIT, London Business School, and the University of New South Wales. He is the author of 21 books and 75 papers in academic journals. As a consultant and lecturer, Professor Levi has been engaged by various international organizations, including the Chinese Ministry of International Trade, the United Nations Conference on Technology and Development, the LG, Korean Telecom and Shanghai Telecom corporations, and the Canadian Federal Budget Task Force.

Professor Levi was educated at the University of Manchester and the University of Chicago, where he received his Ph.D. in economics, with the late Nobel Laureate Milton Friedman, arguably the most influential economist in the 20th century, as his thesis supervisor.

**Dr. Anthony Pellegrini**

Partner/Director of the Urban and Infrastructure Policy and Finance Practice  
Centennial Group, Washington, D.C.

Dr. Pellegrini is Director of the Urban and Infrastructure Policy and Finance Practice of the Centennial Group, an international financial advisory firm. He co-founded the International Association of Municipal Development Funds and, from 1996 to 2000, was Director of the Transportation, Water & Urban Development Department at the World Bank. Dr. Pellegrini has chaired the Urban Development and Water and Sanitation Sector Boards, which assembled sector managers responsible for urban issues.

Dr. Pellegrini helped establish the Cities Alliance, which seeks to improve cities of the developing world. He has chaired the international Advisory Board of ParanaCidade, a development fund that lends to local governments in Parana State, Brazil.

Dr. Pellegrini earned his Ph.D. from Stanford University.

**Professor Peter J. Taylor**

Co-Director, Globalization and World Cities  
Research Group and Network, Loughborough University, UK.

Peter Taylor is Professor of Geography at Loughborough University and Director of the Globalization and World Cities Research Network. He is a Fellow of the British Academy and has been awarded Honorary Doctorates from the Universities of Oulu and Ghent. He has been published more than 300 times, including over 20 books in over 20 different languages. His recent focus on the commercial role of cities in contemporary globalization has spawned two recent works: *World City Network; a Global Urban Analysis* (2004, Routledge) and *Cities in Globalization* (2006 Routledge). This research considers political and urban analysis in regard to city/state relations.

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