

VI. POPULATION GROWTH IN CITIES

Although in almost all countries the urban population has grown faster than the rural population during the second half of the twentieth century, not all cities have grown as rapidly. Consideration of the growth rates experienced by the population of the 524 cities that had at least 750,000 inhabitants in 2000 shows that even as early as 1950-1975, a period characterized by fast population growth in most countries, 41 cities had growth rates lower than 1 per cent per year, six of which had negative growth rates (that is, 8 per cent of all the large cities of today had low growth rates in 1950-1975). By 1975-2000, as overall rates of population growth declined in an increasing number of countries, the number of cities experiencing low rates of population growth rose. Thus, about a quarter of all the cities (122) are estimated to have grown at rates of less than 1 per cent per year and, among them, 21 experienced population declines. Most of those 122 cities are located in the more developed regions or in China. In the future, during 2000-2015, more cities are expected to experience low rates of population growth, with 189 projected to have growth rates lower than 1 per cent per year. While most of those cities are in the more developed regions and in China, several are in Latin America and the Caribbean, in Armenia, Georgia and the Republic of Korea.

Nevertheless, over the past fifty years, the number of cities with slowly growing populations has been counterbalanced by that of cities exhibiting high rates of growth. During 1950-1975, for instance, 130 cities had annual rates of population growth of 5 per cent or more, and 23 had rates above 8 per cent. During the next time period, 1975-2000, the number of cities experiencing rates of growth of at least 5 per cent per year declined to 51, and included just three with annual growth rates above 8 per cent. Between 2000 and 2015, only 6 cities are projected to have growth rates of 5 per cent or more.

The reduction in the number of cities with high rates of population growth is partly the result of considering only cities with a population of at least 750,000 inhabitants in 2000, since as a city's

population increases, its rate of population growth tends to decline. Consequently, most cities experiencing high rates of population growth tend to have small populations. For instance, among the 130 cities with annual growth rates of at least 5 per cent during 1950-1975, just 9 had a population of at least 500,000 inhabitants in 1950, and among the 23 cities with growth rates above 8 per cent per year, the largest had only 173,000 inhabitants and 21 had less than 100,000 inhabitants. Similarly, during 1975-2000, just 13 out of the 51 cities with growth rates of 5 per cent or more had a population of at least half a million in 1975.

The decline of population growth rates as population size increases can be gauged from the scatter plot in figure 16, which shows the 1950-1975 growth rates of cities with less than a million inhabitants in 1950 plotted against the population size of the city in 1950. The cluster of points shows that growth rates tend to decline with initial city population size. Thus, growth rates above 8 per cent are observed only among cities with less than 200,000 inhabitants and growth rates higher than 6 per cent are extremely rare in cities with more than half a million inhabitants. To complete the assessment of the relationship between initial population size and rate of population growth, figure 17 presents a similar plot as figure 16 but for cities with at least a million inhabitants in 1950. Among this group, the relationship between the growth rate and the initial population size is much less clear, mainly because the variation in growth rates for cities with one million to two million inhabitants is wide. However, the general impression is that the growth rate varies over a narrower and lower range as city population increases, especially when figure 17 is viewed as the horizontal extension to the right of figure 16.

Figures 18 and 19 are equivalent to figures 16 and 17 but with growth rates referring to 1975-2000 and the initial population being that for 1975. The scatter plot in figure 18 again shows that the growth rate tends to decline as population increases. Growth rates above 6 per cent per year were rare for cities with more than 300,000 in-

Figure 16. 1950-1975 annual growth rate of cities with fewer than a million inhabitants versus population in 1950

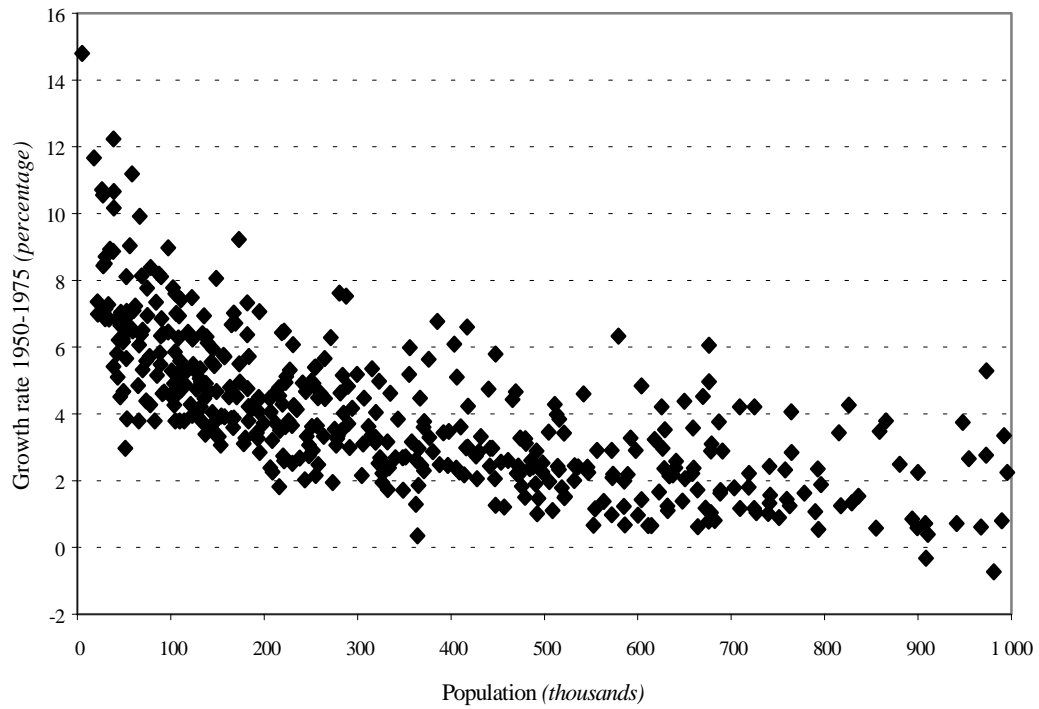


Figure 17. 1950-1975 annual growth rate of cities with more than a million inhabitants versus population in 1950

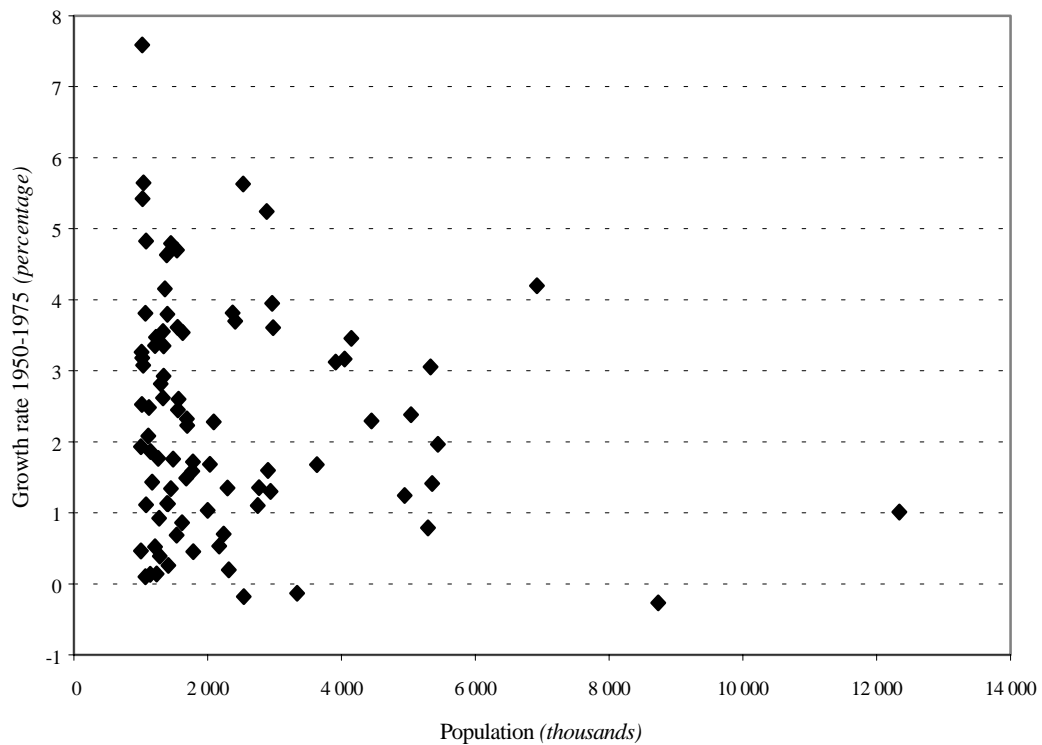


Figure 18. 1975-2000 annual growth rate of cities with fewer than a million inhabitants versus population in 1975

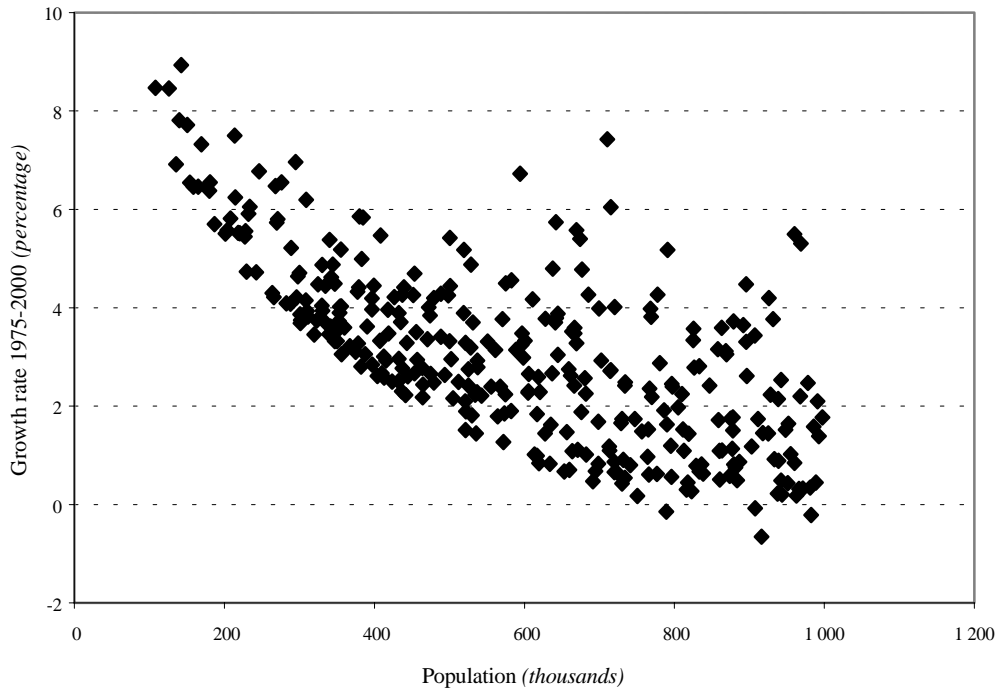
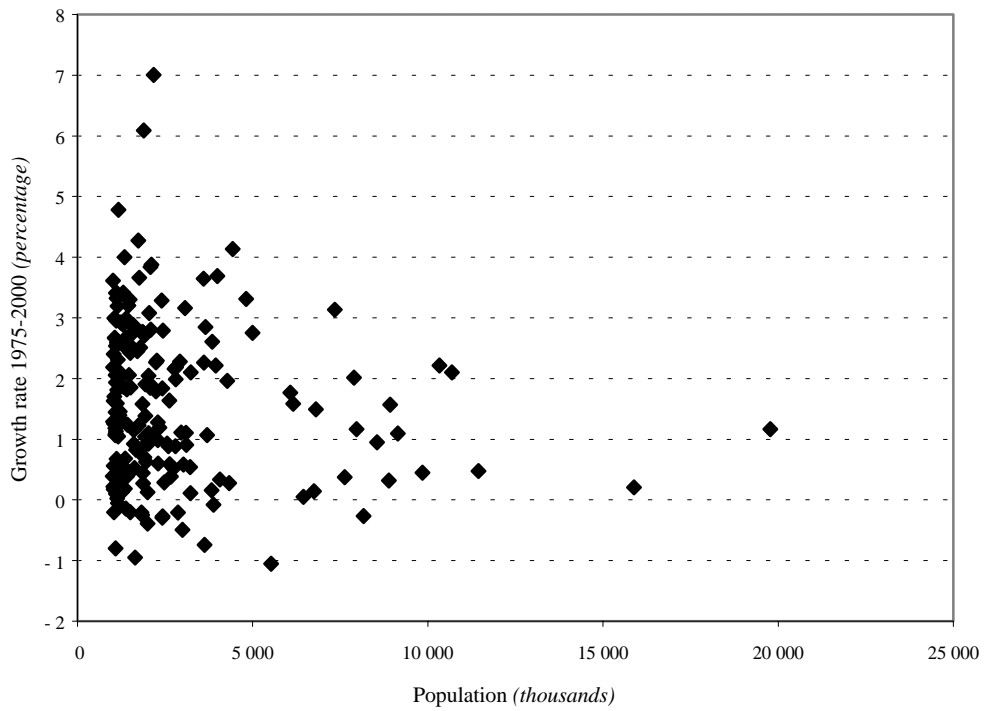


Figure 19. 1975-2000 annual growth rate of cities with more than a million inhabitants versus population in 1975



habitants and those above 4 per cent per year were rare among cities with more than 800,000 inhabitants. However, this plot is affected by the selectivity of cities included: since they all need to reach sizes of at least 750,000 inhabitants by 2000, they cannot have very small populations in 1975. Consequently, figure 18 fails to reflect appropriately the experience of small cities whose population did not reach the 750,000 threshold by 2000. Although such selectivity is also operating in the plot referring to 1950-1975 (figure 16), the extent of selectivity, that is, the number of missing cities, is smaller in figure 16 because of the longer period that cities had to reach 750,000 (50 years instead of 25). In both cases, most cities excluded would have had lower growth rates than those of the cities included.

Figures 16 to 19 also show that, although growth rates for larger cities tend to be lower than those for smaller ones, there are exceptions. Table 55 lists the cities with at least half a million inhabitants at the beginning of each period whose average annual growth rates were 5 per cent or higher during the subsequent period. During 1950-1975, nine cities with more than half a million inhabitants grew at a fast rate, the two largest being Mexico City (with 2.9 million inhabitants in 1950) and São Paulo, Brazil (with 2.5 million). Their populations grew at rates of 5.2 and 5.6 per cent per year, respectively, implying doubling times of 12 to 13 years. Hence, the population of each nearly quadrupled by 1975, surpassing the 10 million mark and converting them into the first two mega-cities of Latin America. In table 55, it is also of interest that Seoul, the capital of the Republic of Korea, had the highest growth rate during 1950-1975, averaging 7.6 per cent per year. At that rate, its population doubled every 9 years, growing from slightly over a million in 1950 to 6.8 million by 1975.

During 1975-2000 there were 13 cities with over 500,000 persons in 1975 that had average annual growth rates above 5 per cent. Among them Dhaka in Bangladesh and Lagos in Nigeria were the only two with more than a million inhabitants initially. They grew at 7 per cent and 6.1 per cent per year, respectively, that is at rates a bit higher than those experienced during the previous quarter century by Mexico City or São Paulo. As a

result the population of Dhaka grew by a factor of six while that of Lagos quadrupled in size. By 2000 Dhaka had passed the 10 million mark and joined the list of mega-cities. The highest rate of growth during 1975-2000 was that of Riyadh, capital of Saudi Arabia, at 7.4 per cent per year. Other cities with high rates of growth were Jidda, also in Saudi Arabia, and Guatemala City, capital of Guatemala, both growing at rates in the range of 6 per cent to 7 per cent per year. As a result of such rapid growth, all three cities saw their populations increase from considerably less than a million in 1975 to more than 3 million by 2000.

Over the shorter period of 2000 to 2015 covered by the projections, another 19 cities with a population of at least 500,000 inhabitants are expected to grow at rates higher than 5 per cent per year (table 55). Four of these cities have current population sizes above 1 million—Kampala in Uganda, Mogadishu in Somalia, Sana'a in Yemen and Surat in India. While the highest growth rate expected among these cities is 5.5 per cent per year, their populations are expected to more than double between 2000 and 2015. In addition, five cities have projected growth rates higher than 7 per cent per year: two in China, two in the Republic of Korea and one in Brazil. They are expected to see their populations triple or quadruple by 2015.

Whereas none of the cities with high rates of population growth appears on both the lists for 1950-1975 and 1975-2000, the city of Surat, India is the only one to appear on both the list for 1975-2000 and that for 2000-2015. Because of the high growth rates it has experienced in the past and the continuation of those rates in the future, Surat's population is expected to grow from 642,000 in 1975 to 5.7 million by 2015, converting it into the ninth largest city in India at that time.

A. THE SIZE AND GROWTH OF LARGE CITIES

The discussion above identified three mega-cities that experienced particularly high rates of population growth over specific periods before 2000, but no large city is expected to grow at a similarly high rate in the next 15 years so as to become a new mega-city. Indeed, most large cities have experienced moderate to low rates of popula-

TABLE 55. URBAN AGGLOMERATIONS WITH MORE THAN HALF A MILLION INHABITANTS EXHIBITING THE HIGHEST RATES OF GROWTH DURING 1950-1975, 1975-2000 AND 2000-2015

Rank	Country	Urban agglomeration	Population	Population	Growth rate
			(thousands)	(thousands)	(percentage)
			1950	1975	1950-1975
1	Republic of Korea	Seoul	1 021	6 808	7.6
2	Iraq	Baghdad	579	2 815	6.3
3	Colombia	Bogotá	676	3 071	6.1
4	Iran (Islamic Republic of)	Teheran	1 042	4 274	5.6
5	Brazil	São Paulo	2 528	10 333	5.6
6	Pakistan	Karachi	1 028	3 990	5.4
7	Peru	Lima	973	3 651	5.3
8	Mexico	Mexico City	2 883	10 691	5.2
9	Venezuela	Caracas	676	2 342	5.0
			1975	2000	1975-2000
1	Saudi Arabia	Riyadh	710	4 549	7.4
2	Bangladesh	Dhaka	2 173	12 519	7.0
3	Saudi Arabia	Jidda	594	3 192	6.7
4	Nigeria	Lagos	1 890	8 665	6.1
5	Guatemala	Guatemala City	715	3 242	6.0
6	India	Surat	642	2 699	5.7
7	Angola	Luanda	669	2 697	5.6
8	Côte d'Ivoire	Abidjan	960	3 790	5.5
9	Portugal	Porto	500	1 940	5.4
10	Afghanistan	Kabul	674	2 602	5.4
11	Bangladesh	Chittagong	969	3 651	5.3
12	Republic of Korea	Inch'on	791	2 884	5.2
13	Venezuela	Valencia	519	1 893	5.2
			2000	2015	2000-2015
1	China	Beihai	729	2 949	9.3
2	Brazil	Aparecida de Goiania	528	2 111	9.2
3	Republic of Korea	Kimhae	583	1 723	7.2
4	China	Weihai	626	1 830	7.2
5	Republic of Korea	Kunp'o	522	1 486	7.0
6	Mexico	Reynosa	548	1 290	5.7
7	Niger	Niamey	775	1 789	5.6
8	China	Dezhou	621	1 431	5.6
9	Yemen	Sana'a	1 327	3 028	5.5
10	Republic of Korea	Ansan	984	2 230	5.5
11	Uganda	Kampala	1 213	2 706	5.3
12	Iran (Islamic Republic of)	Rezaiyeh	743	1 651	5.3
13	China	Shaoguan	590	1 310	5.3
14	Nepal	Kathmandu	713	1 565	5.2
15	India	Ghaziabad	928	2 027	5.2
16	Republic of Korea	Kyongju	503	1 067	5.0
17	India	Surat	2 699	5 715	5.0
18	Somalia	Mogadishu	1 157	2 444	5.0
19	China	Puyang	540	1 139	5.0

tion growth, particularly after their populations passed the 5 million mark. Table 56 lists urban agglomerations with over 5 million inhabitants in 1950, 1975, 2000 and 2015. Those with more than 10 million persons are referred to as mega-cities. The numbers of both large cities and mega-cities have been increasing, rising from 8 in 1950 to 22 in 1975, and to 39 in 2000. Over the next fifteen years a further 19 large urban agglomerations are expected to cross the 5 million population threshold to yield a total of 58 in 2015. Thus the number of large agglomerations almost tripled between 1950 and 1975, nearly doubled from 1975 to 2000, and is expected to grow by about half again in the short period between 2000 and 2015. Not only has the number of large urban agglomerations grown markedly, so has the number of people living in them. In 1950, just 54 million persons lived in such large urban agglomerations. By 2000, that number had risen to 394 million and in 2015 it is expected that 604 million persons will live in urban agglomerations of 5 million inhabitants or more.

Among large urban agglomerations, few are so large as to qualify as mega-cities. In 1950 there was only one, New York, with more than 12 million inhabitants. By 1975 there were five such mega-cities—Tokyo, New York, Shanghai, Mexico City and São Paulo in order of size, and by 2000, 11 more had emerged, making the total 16, of which 12 are in the less developed regions. In 2015 current projections put the number of mega-cities at 21, with all five of the additions located in the less developed regions.

Table 57 shows the evolution of population size for the 21 urban-agglomerations that are mega-cities in 2000 or that are expected to become mega-cities by 2015. It also presents estimates of average annual rates of growth during 1950-1975, 1975-2000 and 2000-2015. Only Dhaka in Bangladesh had a higher rate of growth in 1975-2000 than in 1950-1975. All other mega-cities experienced a decline of their growth rates between the two periods. The growth rates of most mega-cities are expected to continue declining further in 2000-2015 except for a slight increase in the growth rate of New York City. That is, higher rates of growth prevailed in 1950-1975 than the ones expected to prevail in the future, partly be-

cause today's mega-cities had much smaller populations in 1950 than they have in 2000, and hence found it easier to sustain high rates of population growth over lengthy periods.

During 1950-1975, Dhaka, Karachi, Lagos, Mexico City and São Paulo experienced the highest population growth rates among the mega-cities of 2015 (above 5 per cent per year), but only São Paulo and Mexico City had more than 2 million inhabitants in 1950. Lagos, whose rate of growth averaged 7.5 per cent per year had an initial population of just 288,000, and Dhaka, which grew at 6.6 per cent per year, had only 417,000 inhabitants in 1950. During 1975-2000, three of today's mega-cities had growth rates above 4 per cent per year: Dhaka with 7 per cent, Lagos at 6.1 per cent, and Delhi at 4.1 per cent. In addition, Istanbul, Jakarta, Karachi and Mumbai (Bombay) had growth rates above 3 per cent per year. Among those seven urban agglomerations, only Mumbai had a population that surpassed 5 million in 1975. The rest had populations in the range of 1.9 million to 5 million inhabitants. That is, the highest rates of growth in 1975-2000 among future mega-cities were experienced by cities that were still of medium-size at the beginning of the period. The cities which had the highest growth rates in 1975-2000 among the mega-cities of 2015 are all expected to have lower rates of growth during 2000-2015. Thus, these seven cities are anticipated to grow at rates of only 1.6 per cent to 4.1 per cent per year (Lagos being the highest, with Dhaka, Delhi, Karachi and Jakarta also growing at 3 per cent per year or more). Nevertheless those rates are high considering that all except Istanbul and Lagos have already attained mega-city status by 2000, with populations surpassing 10 million inhabitants.

The general reduction of the rates of population growth of mega-cities can also be gauged by considering those exhibiting the lowest rates of growth. In 1950, the only mega-city at the time, New York, also had the lowest rate of growth among all future mega-cities (1 per cent per year during 1950-1975). During 1975-2000, four of the mega-cities or future mega-cities had rates of growth lower or equal to 1 per cent: Beijing, New York, Osaka and Shanghai, all with populations of at least 8.5 million inhabitants. Furthermore, To-

TABLE 56. URBAN AGGLOMERATIONS WITH 5 MILLION INHABITANTS OR MORE, 1950-2015

1950			1975			2000			2015		
Rank	Urban agglomeration	Population (thousands)	Rank	Urban agglomeration	Population (thousands)	Rank	Urban agglomeration	Population (thousands)	Rank	Urban agglomeration	Population (thousands)
1	New York	12 339	1	Tokyo	19 771	1	Tokyo	26 444	1	Tokyo	27 190
2	London	8 733	2	New York	15 880	2	Mexico City	18 066	2	Dhaka	22 766
3	Tokyo	6 920	3	Shanghai	11 443	3	São Paulo	17 962	3	Mumbai (Bombay)	22 577
4	Paris	5 441	4	Mexico City	10 691	4	New York	16 732	4	São Paulo	21 229
5	Moscow	5 356	5	São Paulo	10 333	5	Mumbai (Bombay)	16 086	5	Delhi	20 884
6	Shanghai	5 333	6	Osaka	9 844	6	Los Angeles	13 213	6	Mexico City	20 434
7	Rhein-Ruhr North ^a	5 296	7	Buenos Aires	9 144	7	Calcutta	13 058	7	New York	17 944
8	Buenos Aires	5 042	8	Los Angeles	8 926	8	Shanghai	12 887	8	Jakarta	17 268
	TOTAL	54 459	9	Paris	8 885	9	Dhaka	12 519	9	Calcutta	16 747
			10	Beijing	8 545	10	Delhi	12 441	10	Karachi	16 197
			11	London	8 169	11	Buenos Aires	12 024	11	Lagos	15 966
			12	Rio de Janeiro	7 963	12	Jakarta	11 018	12	Los Angeles	14 494
			13	Calcutta	7 888	13	Osaka	11 013	13	Shanghai	13 598
			14	Moscow	7 623	14	Beijing	10 839	14	Buenos Aires	13 185
			15	Bombay (Mumbai)	7 347	15	Rio de Janeiro	10 652	15	Metro Manila	12 579
			16	Seoul	6 808	16	Karachi	10 032	16	Beijing	11 671
			17	Chicago	6 749	17	Metro Manila	9 950	17	Rio de Janeiro	11 543
			18	Rhein-Ruhr North ^a	6 448	18	Seoul	9 888	18	Cairo	11 531
			19	Tianjin	6 160	19	Paris	9 630	19	Istanbul	11 362
			20	Cairo	6 079	20	Cairo	9 462	20	Osaka	11 013
			21	Milan	5 529	21	Tianjin	9 156	21	Tianjin	10 319
			22	Metro Manila	5 000	22	Istanbul	8 953	22	Seoul	9 918
				TOTAL	195 224	23	Lagos	8 665	23	Kinshasa	9 883
						24	Moscow	8 367	24	Paris	9 858
						25	London	7 640	25	Bangkok	9 816
						26	Lima	7 443	26	Lima	9 388
						27	Bangkok	7 372	27	Bogotá	8 970
						28	Chicago	6 989	28	Lahore	8 721
						29	Teheran	6 979	29	Bangalore	8 391
						30	Hong Kong	6 860	30	Teheran	8 178

TABLE 56 (continued)

1950		1975		2000		2015			
Rank	Urban agglomeration	Population (thousands)	Rank	Urban agglomeration	Population (thousands)	Rank	Urban agglomeration	Population (thousands)	
				31	Bogotá	6 771	31	Moscow	8 141
				32	Rhein-Ruhr North ^a	6 531	32	Madras	8 068
				33	Madras	6 353	33	Hong Kong	8 025
				34	Bangalore	5 567	34	Wuhan	7 833
				35	Santiago	5 467	35	London	7 640
				36	Lahore	5 452	36	Chicago	7 603
				37	Hyderabad	5 445	37	Riyadh	7 536
				38	Wuhan	5 169	38	Hyderabad	7 513
				39	Kinshasa	5 054	39	Chongqing	7 440
					TOTAL	394 152	40	Ahmedabad	6 612
							41	Rhein-Ruhr North ^a	6 554
							42	Baghdad	6 549
							43	Santiago	6 495
							44	Chittagong	6 360
							45	Yangon	6 258
							46	Ho Chi Minh City	6 251
							47	Pune (Poona)	6 112
							48	Abidjan	6 076
							49	Surat	5 715
							50	Toronto	5 679
							51	Shenyang	5 429
							52	Kabul	5 397
							53	Belo Horizonte	5 395
							54	Guatemala City	5 268
							55	Bandung	5 245
							56	Hanoi	5 227
							57	Jidda	5 183
							58	Luanda	5 144
								TOTAL	604 367

^a Rhein-Ruhr North is the urban agglomeration around Essen.

TABLE 57. EVOLUTION OF THE POPULATION OF THE 21 URBAN AGGLOMERATIONS THAT ARE EXPECTED TO BE MEGA-CITIES IN 2015 AND AVERAGE ANNUAL GROWTH RATES

Country	Urban agglomeration	Population (thousands)				Growth rate (percentage)		
		1950	1975	2000	2015	1950-1975	1975-2000	2000-2015
Japan.....	Tokyo	6 920	19 771	26 444	27 190	4.2	1.2	0.2
Bangladesh	Dhaka	417	2 173	12 519	22 766	6.6	7.0	4.0
India	Mumbai (Bombay)	2 981	7 347	16 086	22 577	3.6	3.1	2.3
Brazil.....	São Paulo	2 528	10 333	17 962	21 229	5.6	2.2	1.1
India	Delhi	1 391	4 426	12 441	20 884	4.6	4.1	3.5
Mexico.....	Mexico City	2 883	10 691	18 066	20 434	5.2	2.1	0.8
United States	New York	12 339	15 880	16 732	17 944	1.0	0.2	0.5
Indonesia	Jakarta	1 452	4 814	11 018	17 268	4.8	3.3	3.0
India	Calcutta	4 446	7 888	13 058	16 747	2.3	2.0	1.7
Pakistan	Karachi	1 028	3 990	10 032	16 197	5.4	3.7	3.2
Nigeria.....	Lagos	288	1 890	8 665	15 966	7.5	6.1	4.1
United States	Los Angeles	4 046	8 926	13 213	14 494	3.2	1.6	0.6
China	Shanghai	5 333	11 443	12 887	13 598	3.1	0.5	0.4
Argentina.....	Buenos Aires	5 042	9 144	12 024	13 185	2.4	1.1	0.6
Philippines.....	Metro Manila	1 544	5 000	9 950	12 579	4.7	2.8	1.6
China	Beijing	3 913	8 545	10 839	11 671	3.1	1.0	0.5
Brazil.....	Rio de Janeiro	2 965	7 963	10 652	11 543	4.0	1.2	0.5
Egypt.....	Cairo	2 410	6 079	9 462	11 531	3.7	1.8	1.3
Turkey.....	Istanbul	1 077	3 601	8 953	11 362	4.8	3.6	1.6
Japan.....	Osaka	4 147	9 844	11 013	11 013	3.5	0.4	0.0
China	Tianjin	2 374	6 160	9 156	10 319	3.8	1.6	0.8

NOTE: Urban agglomerations are ordered according to population in 2015.

kyo, the largest urban agglomeration at the time, grew at just 1.2 per cent per year during 1975-2000. Over the period 2000 to 2015, 10 of the 21 mega-cities of 2015 will have growth rates of at most 1 per cent per year.

A similar analysis can be carried out with respect to the pace of growth of urban agglomerations expected to have populations ranging between 5 million and 10 million in 2015. There are 37 urban agglomerations in this category and table 58 shows the evolution of their populations over time together with their growth rates for 1950-1975, 1975-2000 and 2000-2015. As in the case of the mega-cities, most of the large urban agglomerations of 2015 experienced a reduction in growth rates from one period to the next. In comparing 1950-1975 and 1975-2000, the exceptions are Chittagong in Bangladesh; Chongqing in China; Guatemala City in Guatemala; Hyderabad, Pune (Poona) and Surat in India; Kabul in Af-

ghanistan, and Riyadh and Jidda in Saudi Arabia where the growth rate increased. Increases in the growth rate between 1975-2000 and 2000-2015 are expected for Chicago in the United States; Ho Chi Minh City in Viet Nam; Kinshasa in the Democratic Republic of the Congo; London in the United Kingdom (from negative to zero); and Wuhan in China. Note that there is no city which has growth rates that increase steadily over the three periods. In total, therefore, 9 of the 37 large urban agglomerations had increases in growth rates between the first two periods and only 5 of the 37 are expected to experience an increase from 1975-2000 to 2000-2015. For the vast majority of large cities, declining growth rates over time are the norm.

In terms of level, the average annual growth rate during 1950-1975 was 5 per cent or more in 12 of the 37 large urban agglomerations of 2015. Abidjan, capital of Côte d'Ivoire, had the highest

TABLE 58. EVOLUTION OF THE POPULATION OF THE 37 URBAN AGGLOMERATIONS THAT ARE EXPECTED TO HAVE BETWEEN 5 MILLION AND 10 MILLION INHABITANTS IN 2015 AND AVERAGE ANNUAL GROWTH RATES

Country	Urban agglomeration	Population (thousands)				Growth rate (percentage)		
		1950	1975	2000	2015	1950-1975	1975-2000	2000-2015
Republic of Korea	Seoul	1 021	6 808	9 888	9 918	7.59	1.49	0.02
Dem. Rep. of the Congo.....	Kinshasa	173	1 735	5 054	9 883	9.23	4.28	4.47
France.....	Paris	5 441	8 885	9 630	9 858	1.96	0.32	0.16
Thailand.....	Bangkok	1 360	3 842	7 372	9 816	4.15	2.61	1.91
Peru	Lima	973	3 651	7 443	9 388	5.29	2.85	1.55
Colombia	Bogotá	676	3 071	6 771	8 970	6.05	3.16	1.87
Pakistan	Lahore	826	2 399	5 452	8 721	4.27	3.28	3.13
India	Bangalore	764	2 111	5 567	8 391	4.06	3.88	2.74
Iran (Islamic Republic of)	Teheran	1 042	4 274	6 979	8 178	5.65	1.96	1.06
Russian Federation	Moscow	5 356	7 623	8 367	8 141	1.41	0.37	-0.18
India	Madras	1 397	3 609	6 353	8 068	3.80	2.26	1.59
China, Hong Kong SAR.....	Hong Kong	1 629	3 943	6 860	8 025	3.54	2.22	1.05
China	Wuhan	1 228	2 926	5 169	7 833	3.47	2.28	2.77
United Kingdom.....	London	8 733	8 169	7 640	7 640	-0.27	-0.27	0.00
United States of America.....	Chicago	4 945	6 749	6 989	7 603	1.24	0.14	0.56
Saudi Arabia.....	Riyadh	111	710	4 549	7 536	7.42	7.43	3.36
India	Hyderabad	1 122	2 086	5 445	7 513	2.48	3.84	2.15
China	Chongqing	1 680	2 439	4 900	7 440	1.49	2.79	2.78
India	Ahmedabad	859	2 050	4 427	6 612	3.48	3.08	2.67
Germany	Rhein-Ruhr North ^a	5 296	6 448	6 531	6 554	0.79	0.05	0.02
Iraq.....	Baghdad	579	2 815	4 865	6 549	6.32	2.19	1.98
Chile.....	Santiago	1 330	3 234	5 467	6 495	3.55	2.10	1.15
Bangladesh.....	Chittagong	290	969	3 651	6 360	4.83	5.31	3.70
Myanmar	Yangon	687	1 760	4 393	6 258	3.76	3.66	2.36
Viet Nam	Ho Chi Minh City	1 213	2 808	4 619	6 251	3.36	1.99	2.02
India	Pune (Poona)	592	1 345	3 655	6 112	3.28	4.00	3.43
Côte d'Ivoire.....	Abidjan	59	960	3 790	6 076	11.19	5.49	3.15
India	Surat	219	642	2 699	5 715	4.30	5.74	5.00
Canada.....	Toronto	1 068	2 770	4 752	5 679	3.81	2.16	1.19
China	Shenyang	2 091	3 697	4 828	5 429	2.28	1.07	0.78
Afghanistan	Kabul	216	674	2 602	5 397	4.55	5.40	4.86
Brazil.....	Belo Horizonte	385	2 095	4 224	5 395	6.77	2.81	1.63
Guatemala	Guatemala City	428	715	3 242	5 268	2.06	6.05	3.24
Indonesia	Bandung	511	1 493	3 409	5 245	4.29	3.30	2.87
Viet Nam	Hanoi	280	1 884	3 751	5 227	7.62	2.75	2.21
Saudi Arabia.....	Jidda	119	594	3 192	5 183	6.45	6.72	3.23
Angola.....	Luanda	138	669	2 697	5 144	6.30	5.57	4.31

NOTE: Urban agglomerations are ordered according to population in 2015.

^a Rhein-Ruhr North is the urban agglomeration around Essen.

growth rate (11.2 per cent per year), followed by Kinshasa, capital of the Democratic Republic of the Congo, whose population grew at a rate of 9.2 per cent per year. In addition, three of the large agglomerations of 2015 had annual growth rates in the range of 7 per cent to 8 per cent per year: Hanoi in Viet Nam, Riyadh in Saudi Arabia and Seoul in the Republic of Korea. Among the 12 large agglomerations with growth rates above 5 per cent per year, only two had 1950 populations higher than a million (Seoul in the Republic of Korea and Teheran in Iran), and three others (Baghdad in Iraq, Bogotá in Colombia and Lima in Peru) had populations of more than 500,000 inhabitants but fewer than a million. That is, seven of the 12 large agglomerations of 2015 that experienced very high rates of growth during 1950-1975 had fewer than 500,000 inhabitants in 1950.

The generalized decline in growth rates over time among the large urban agglomerations of 2015 also implies that fewer agglomerations exhibited high rates of population growth during 1975-2000 than in 1950-1975. Thus, during 1975-2000 only eight of the 37 large urban agglomerations had annual growth rates of 5 per cent or more: Chittagong (Bangladesh), Abidjan (Ghana), Surat (India), Luanda (Angola), Guatemala City (Guatemala), Kabul (Afghanistan), and Jidda and Riyadh (Saudi Arabia). Among them, the highest growth rates were in the two cities of Saudi Arabia at 7.4 per cent per year for Riyadh and 6.7 per cent per year for Jidda. All of these eight agglomerations had fewer than a million inhabitants in 1975.

During 2000-2015 none of the 37 large agglomerations of 2015 is expected to grow at a rate higher than 5 per cent. The highest growth rates projected are in the range of 4 per cent to 5 per cent, the highest being that of Surat (India), followed by in descending order by Kabul (Afghanistan), Kinshasa (Democratic Republic of the Congo) and Luanda (Angola). With the exception of Kinshasa, whose population was estimated at more than 5 million for 2000, the other three had fewer than 3 million inhabitants each.

At the other end of the spectrum, during 1950-1975 there was one large city, London in the

United Kingdom, whose growth rate was negative at -0.3 per cent per year. Another large urban agglomeration, Rhein-Ruhr North, the agglomeration around Essen in Germany, had a growth rate of 0.8 per cent per year, and four other cities had growth rates under 2 per cent per year: Chicago, Chongqing, Moscow and Paris. All except Chicago and Chongqing had more than 5 million inhabitants in 1950, meaning that they were among the largest urban agglomerations in the world at the time. In fact, aside from New York whose population had already surpassed 10 million in 1950, there were then just seven cities with more than 5 million inhabitants—Buenos Aires, Rhein-Ruhr North (Essen), London, Moscow, Paris, Shanghai and Tokyo—followed by Chicago whose population was 4.9 million. All the other large cities of 2015 had less than 2.1 million inhabitants in 1950. Among the eight with populations ranging from 4.9 million to 8.7 million, the highest growth rate was that of Paris (at nearly 2 per cent per year). That is, large urban agglomerations of the 1950s tended to experience fairly low rates of population growth.

During 1975-2000 the number of large urban agglomerations experiencing rates of growth below 1 per cent per year increased to five and an additional four had growth rates below 2 per cent per year. Among these nine, only three (Teheran in Iran, Ho Chi Minh City in Viet Nam and Shenyang in China) had under 5 million inhabitants in 1975. In 2000-2015, the five agglomerations with the lowest growth rates since 1975 plus Seoul are expected to experience even lower population growth with growth rates that are virtually zero. The exception is Chicago, whose growth rate is projected to be 0.6 per cent per year.

In sum, among most urban agglomerations expected to have more than 5 million inhabitants by 2015, population growth rates have tended to be moderate or low, especially once a population of more than 2 million has been reached. The most populous urban agglomerations of the developed world have exhibited low population growth rates since 1950 and are projected to grow very slowly if at all during 2000-2015. Among the future large urban agglomerations, the highest rates of population growth have occurred in those located in developing countries, during periods when their

population was still relatively small. Yet, even among the large urban agglomerations of the developing world, rates of population growth above 5 per cent per year sustained over lengthy periods have been exceptional.

B. CITY PRIMACY

In some countries, the urban population is highly concentrated in a single city or urban agglomeration. The most populous city of each country accounts for the highest proportion of the urban population in that country. In this report, that city will be considered to be the primate city and its degree of primacy will be measured by the proportion of the urban population living in that city. Capital cities are very often the primate cities of countries but primate cities are not always capital cities. In small countries or areas, it is easy for virtually all the urban population to be concentrated in a single city. In those cases, the primate city may account for close to 100 per cent of the urban population. Even in larger countries, primate cities sometimes account for more than half of the total urban population.

Table 59 displays a list of all countries in which primate cities accounted for at least 40 per cent of the urban population in 1975. Among the 38 cities listed, only 13 had more than a million inhabitants and, with the exceptions of Buenos Aires and Seoul, all had less than 4 million inhabitants. Buenos Aires, with 9.1 million inhabitants, accounted for 44 per cent of the urban population of Argentina, while Seoul with 6.8 million had 40 per cent of the urban population of the Republic of Korea. Two urban agglomerations, Hong Kong, Special Administrative Area of China, and Singapore, were the only ones that accounted for 100 per cent of the urban populations of their countries or areas. Other primate cities accounting for large proportions of the urban population in their country tended to belong to small but highly urbanized countries such as Armenia, Israel, Kuwait, Latvia, Lebanon or Uruguay, or to small or medium-sized countries with low levels of urbanization such as Angola, Burkina Faso, Cambodia, the Congo or Mozambique. The most populous country with a high level of primacy was Thailand, whose population in 1975 was over 41 million.

In 2000, there were 34 countries whose primate cities accounted for at least 40 per cent of the urban population. In contrast with those identified for 1975, 27 of those 34 cities had at least a million inhabitants in 2000 (table 60). However, just 13 had more than 2 million inhabitants, indicating that cities with a high degree of primacy have tended to be located in countries with small urban populations. As in 1975, the cities of Hong Kong, Special Administrative Region of China, and Singapore constituted the whole of the urbanized area in their respective countries or areas and they were both among the largest cities in the group. The other populous cities with a high degree of primacy were Bangkok in Thailand with over 7 million inhabitants, Santiago in Chile with close to 5.5 million, and Abidjan in Côte d'Ivoire, Athens in Greece, Guatemala City in Guatemala and Lisbon in Portugal, each with a population in the range of 3 million to 4 million inhabitants. Among these relatively large cities, the degree of primacy was very high for Guatemala City, which accounted for 72 per cent of the urban population of Guatemala. Lisbon in Portugal and Bangkok in Thailand also had a high degree of primacy, accounting each for close to 60 per cent of the urban population in its respective country. According to table 60, in 2000 there were another five countries with degrees of primacy of 60 per cent or higher, namely, Beirut in Lebanon, Brazzaville in the Congo, Luanda in Angola, Panama City in Panama and Port-au-Prince in Haiti, but all those cities had populations well below 3 million in 2000.

Trends in the degree of primacy varied considerably among the cities accounting for large proportions of the urban population in 2000. For 16 of the 34 cities considered, the degree of primacy had increased between 1975 and 2000 and in eight of those cases the increases recorded amounted to 8 percentage points or more. A particularly large increase in the degree of primacy had been experienced by Guatemala City in Guatemala (from 32 per cent in 1975 to 72 per cent in 2000), followed by Kabul in Afghanistan (from 36 per cent to 55 per cent), Lusaka in Zambia (22 per cent to 40 per cent) and Mogadishu in Somalia (31 per cent to 48 per cent). In some of those countries the higher concentration of the urban population in the capital city resulted from civil strife and

TABLE 59. POPULATION OF CITIES WITH THE HIGHEST DEGREE OF PRIMACY IN 1975

<i>Rank</i>	<i>Country</i>	<i>City</i>	<i>Population in 1975 (thousands)</i>	<i>Proportion of the urban population in the city in 1975</i>
1	China, Hong Kong SAR	Hong Kong	3 943	100.0
2	Singapore	Singapore	2 263	100.0
3	Guinea	Conakry	561	84.4
4	Kuwait	Kuwait City	682	80.8
5	Congo	Brazzaville	340	67.1
6	Costa Rica	San José	526	62.9
7	Panama	Panama City	528	62.5
8	Thailand	Bangkok	3 842	62.0
9	Angola	Luanda	669	60.8
10	Lebanon	Beirut	1 062	57.3
11	Greece	Athens	2 738	54.7
12	United Arab Emirates	Dubai	180	54.5
13	Cambodia	Phnom Penh	397	54.3
14	Haiti	Port-au-Prince	575	53.9
15	Paraguay	Asunción	551	53.2
16	Puerto Rico	San Juan	948	51.4
17	Armenia	Yerevan	911	51.2
18	Mozambique	Maputo	456	50.6
19	Mongolia	Ulan Bator	356	50.6
20	Uruguay	Montevideo	1 178	50.1
21	Latvia	Riga	789	49.1
22	Ireland	Dublin	833	48.9
23	Azerbaijan	Baku	1 429	48.8
24	Dominican Republic	Santo Domingo	1 094	47.8
25	Senegal	Dakar	768	46.8
26	Portugal	Lisbon	1 168	46.4
27	Sierra Leone	Freetown	288	45.9
28	Jordan	Amman	500	44.6
29	Uganda	Kampala	399	44.4
30	Zimbabwe	Harare	529	44.3
31	Côte d'Ivoire	Abidjan	960	44.3
32	Argentina	Buenos Aires	9 144	43.5
33	Burkina Faso	Ouagadougou	165	42.1
34	Iraq	Baghdad	2 815	41.6
35	Israel	Tel Aviv-Jaffa	1 206	41.4
36	Libyan Arab Jamahiriya	Tripoli	611	41.0
37	Georgia	Tbilisi	993	40.8
38	Republic of Korea	Seoul	6 808	40.2

TABLE 60. POPULATION OF THE CITIES WITH THE HIGHEST DEGREE OF PRIMACY IN 2000
AND CHANGES IN THEIR DEGREE OF PRIMACY BETWEEN 1975 AND 2000

Rank	Country	City	Population in 2000	Proportion of the urban population in the city		Difference between 2000 and 1975
				1975	2000	
1	China, Hong Kong SAR	Hong Kong	6 860	100.0	100.0	0.0
2	Singapore	Singapore	4 018	100.0	100.0	0.0
3	Panama	Panama City	1 173	62.5	73.0	10.5
4	Guatemala	Guatemala City	3 242	32.4	71.8	39.4
5	Congo	Brazzaville	1 306	67.1	66.2	-0.9
6	Lebanon	Beirut	2 070	57.3	66.0	8.7
7	Haiti	Port-au-Prince	1 769	53.9	60.9	6.9
8	Angola	Luanda	2 697	60.8	60.0	-0.8
9	Portugal	Lisbon	3 861	46.4	59.8	13.4
10	Thailand	Bangkok	7 372	62.0	59.2	-2.8
11	Armenia	Yerevan	1 407	51.2	55.3	4.1
12	Guinea	Conakry	1 232	84.4	55.0	-29.5
13	Afghanistan	Kabul	2 602	35.5	54.6	19.1
14	Côte d'Ivoire	Abidjan	3 790	44.3	54.3	10.0
15	Mongolia	Ulan Bator	764	50.6	53.3	2.7
16	Latvia	Riga	761	49.1	52.0	2.9
17	Sierra Leone	Freetown	800	45.9	49.6	3.6
18	Greece	Athens	3 116	54.7	48.9	-5.9
19	Cambodia	Phnom Penh	1 070	54.3	48.3	-6.0
20	Somalia	Mogadishu	1 157	30.8	47.9	17.1
21	Kuwait	Kuwait City	879	80.8	47.8	-33.0
22	Georgia	Tbilisi	1 406	40.8	47.5	6.6
23	Puerto Rico	San Juan	1 388	51.4	47.1	-4.3
24	Dominican Republic	Santo Domingo	2 563	47.8	46.8	-1.0
25	Azerbaijan	Baku	1 948	48.8	46.7	-2.1
26	Senegal	Dakar	2 078	46.8	46.5	-0.3
27	Ireland	Dublin	985	48.9	43.9	-5.0
28	Burkina Faso	Ouagadougou	831	42.1	43.6	1.5
29	Uruguay	Montevideo	1 324	50.1	43.2	-7.0
30	Chile	Santiago	5 467	39.9	41.9	2.0
31	Paraguay	Asunción	1 262	53.2	41.0	-12.2
32	Costa Rica	San José	961	62.9	40.5	-22.4
33	Zimbabwe	Harare	1 791	44.3	40.2	-4.2
34	Zambia	Lusaka	1 653	22.1	40.0	18.0

NOTE : Urban agglomerations are ordered according to the degree of primacy in 2000.

rising migration from the countryside to the capital city because there was no other equally important attraction pole.

Among the 18 cities where the degree of primacy had either remained constant or declined

between 1975 and 2000, especially large reductions were recorded by Kuwait City in Kuwait (from 81 per cent to 48 per cent), Conakry in Guinea (from 84 per cent to 55 per cent), San José in Costa Rica (from 63 per cent to 41 per cent), and Asunción in Paraguay (from 53 per cent to

41 per cent). Significant, though smaller, reductions occurred in Cambodia, Greece, Ireland, Puerto Rico, Uruguay and Zimbabwe. However, by 2000 the degree of primacy in all those countries still remained high.

A different trend is expected during 2000-2015, when most cities accounting for a high proportion of the urban population in their country are expected to experience a reduction in the degree of

primacy. According to table 61, a smaller number of countries or areas—31 compared to 34 in 2000 and 38 in 1975—expect their largest urban agglomeration to account for at least 40 per cent of their urban population. Among the 28 where the degree of primacy changes between 2000 and 2015, 20 will experience a decline in urban primacy and eight an increase. All of the changes will be small in magnitude, with the largest reductions ranging from 4 to 5.5 percentage points. The

TABLE 61. POPULATION OF THE CITIES WITH THE HIGHEST DEGREE OF PRIMACY IN 2015 AND CHANGES IN THEIR DEGREE OF PRIMACY BETWEEN 2000 AND 2015

Rank	Country	City	Population in 2015	Proportion of the urban population in the city		Difference between 2015 and 2000
				2000	2015	
1	China, Hong Kong SAR	Hong Kong	8 025	100.0	100.0	0.0
2	Singapore	Singapore	4 756	100.0	100.0	0.0
3	Panama	Panama City	1 543	73.0	72.4	-0.6
4	Guatemala	Guatemala City	5 268	71.8	69.9	-1.9
5	Congo	Brazzaville	2 259	66.2	65.8	-0.3
6	Lebanon	Beirut	2 500	66.0	64.0	-2.0
7	Haiti	Port-au-Prince	2 864	60.9	61.5	0.7
8	Portugal	Lisbon	4 544	59.8	58.5	-1.4
9	Latvia	Riga	761	52.0	56.6	4.6
10	Angola	Luanda	5 144	60.0	56.1	-4.0
11	Armenia	Yerevan	1 490	55.3	56.1	0.8
12	Thailand	Bangkok	9 816	59.2	55.9	-3.3
13	Côte d'Ivoire	Abidjan	6 076	54.3	55.5	1.2
14	Mongolia	Ulan Bator	993	53.3	54.1	0.8
15	Guinea	Conakry	2 073	55.0	51.7	-3.2
16	Afghanistan	Kabul	5 397	54.6	50.4	-4.2
17	Georgia	Tbilisi	1 406	47.5	48.0	0.5
18	Greece	Athens	3 138	48.9	46.0	-2.8
19	Dominican Republic	Santo Domingo	3 397	46.8	45.9	-0.9
20	Azerbaijan	Baku	2 137	46.7	45.4	-1.2
21	Sierra Leone	Freetown	1 506	49.6	45.3	-4.2
22	Puerto Rico	San Juan	1 584	47.1	45.1	-2.0
23	Senegal	Dakar	3 481	46.5	44.9	-1.6
24	Somalia	Mogadishu	2 444	47.9	44.2	-3.7
25	Kuwait	Kuwait City	1 136	47.8	42.4	-5.5
26	United Arab Emirates	Dubai	1 229	39.2	41.6	2.3
27	Zambia	Lusaka	2 733	40.0	40.9	0.8
28	Uruguay	Montevideo	1 411	43.2	40.7	-2.4
29	Chile	Santiago	6 495	41.9	40.7	-1.2
30	Ireland	Dublin	1 149	43.9	40.7	-3.2
31	Zimbabwe	Harare	3 013	40.2	40.1	0.0

NOTE: Urban agglomerations are ordered according to the degree of primacy in 2015.

largest reductions are expected in the cases of Freetown in Sierra Leone, Kabul in Afghanistan, Kuwait City in Kuwait and Luanda in Angola. By 2015, no mega-city will have a high degree of primacy, though Bangkok and Santiago will each have over 6 million inhabitants and primacy levels of 56 per cent and 41 per cent respectively. Other urban agglomerations with populations surpassing 5 million and expected to maintain a high degree of primacy are Abidjan in Côte d'Ivoire, Hong Kong Special Administrative Region of China, Guatemala City in Guatemala, Kabul in Afghanistan, and Luanda in Angola.

The data in tables 59 to 61 suggest that high levels of primacy tend to occur in countries with small urban populations, and therefore primate cities accounting for over 40 per cent of a country's population tend not to have very large populations. This conclusion is supported by consideration of the degree of primacy of all primate cities with at least 750,000 inhabitants in 2000. Figure 20 shows a plot of the degree of primacy of each city in relation to its population size in 2000. Clearly, cities accounting for at least 40 per cent of the urban population of their

of the urban population of their respective countries tend to cluster at the lower end of the scale representing population size, whereas cities with larger populations tend to account for smaller percentages of the total urban population in each country and must therefore be in more populous countries.

It is also of interest to explore changes in the degree of primacy over time with respect to all primate cities that had at least 750,000 inhabitants in 2000. It has been shown that between 1975 and 2000 about half the cities with high degrees of primacy in 2000 experienced an increase of their degree of primacy and about half experienced a decline. Yet, most of the changes in primacy levels expected during 2000-2015 are small in magnitude and imply a reduction of the degree of primacy. However, when all primate cities are considered and not just those with levels of primacy above 40 per cent, the trends observed are somewhat different. Between 1975 and 2000, more primate cities experience a decline in the level of primacy than the reverse (figure 21). Specifically, out the 114 primate cities with a popula-

Figure 20. Percentage of urban population in primate city (degree of city primacy) in relation to city population in 2000

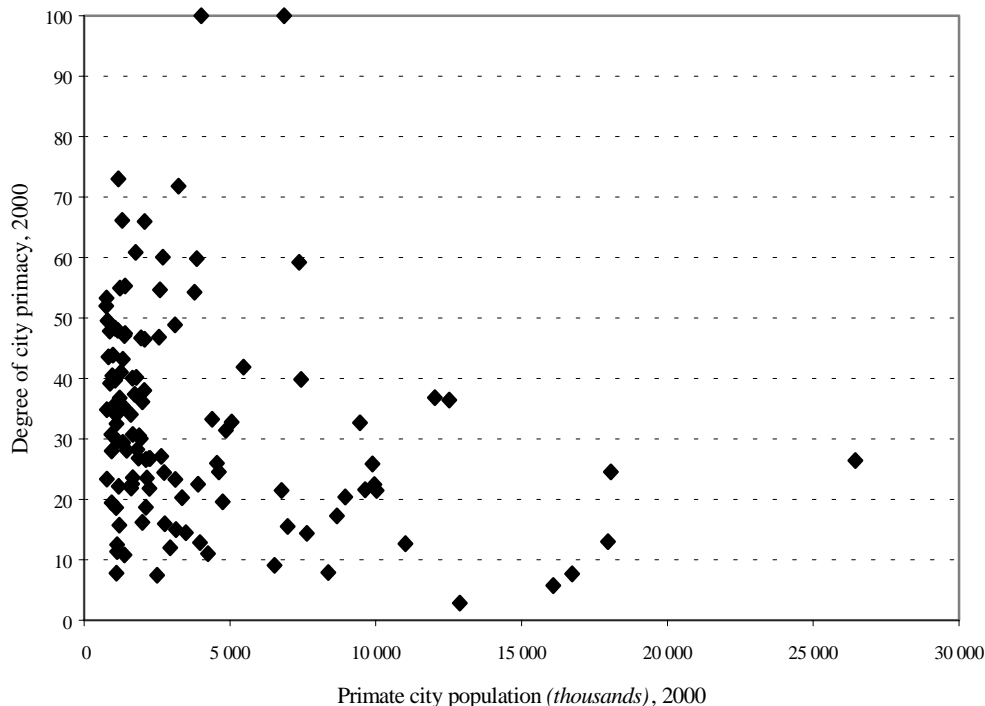
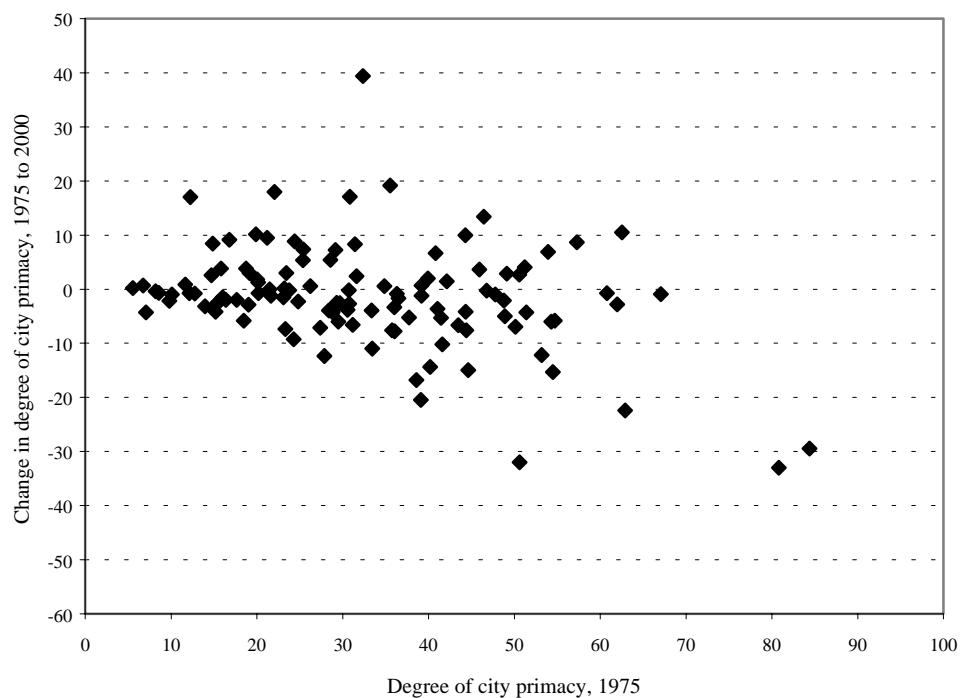


Figure 21. Change in degree of city primacy between 1975 and 2000 in relation to degree of city primacy in 1975



tion of at least 750,000 inhabitants in 2000, slightly over half or 61 experienced a reduction of the degree of primacy between 1975 and 2000. Declines were especially prevalent among primate cities with high levels of primacy in 1975.

During 2000-2015, declines in primacy are expected to become more general, with most primate cities expected to see their degree of primacy reduced (101 out of 114), although the reductions will be small, rarely surpassing 4 percentage points (figure 22). That is, in comparison with the

more substantial changes in primacy experienced by numerous primate cities over the course of the second half of the twentieth century, the changes expected during the next fifteen years are minor. However, the declining level of primacy of most primate cities with populations of at least 750,000 inhabitants indicates that, as the overall levels of urbanization of countries increase, there is a greater diversification of the urban system and the largest cities tend to see their preponderance eroded by the growth of medium-sized and smaller urban centres.

Figure 22. Change in degree of city primacy between 2000 and 2015 in relation to degree of city primacy in 2000

