



Report on Sustainable

Competitiveness of Cities Worldwide

(2016-2017)

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Table of contents

Introduction	4
1. Distribution of sustainable competitiveness of cities worldwide	5
1.1 Sustainable competitiveness of the Top 20 cities of the world	
1.2 Sustainable competitiveness of European cities is stable and on the rise	
1.3 Sustainable competitiveness of cities worldwide is relatively low and unevenly distributed	
1.4 High-income population density is the key factor in sustainable competitiveness	
1.5 Cities in G20 countries have high sustainable competitiveness	
2. European, American and Asian cities play basically equal roles in the world pattern of sustainable competitiveness	10
2.1 American cities are overwhelmingly ahead of peers in North America	
2.2 Cities in six European countries have strong sustainable competitiveness	
2.3 Cities in emerging Asian economies show high sustainable competitiveness	
2.4 Some of the Top 10 cities in South America moved up the global rankings of sustainable competitiveness, while other moved down, with the rise overrunning the decline on the whole	
2.5 Sustainable competitiveness of African cities is low and declining	
3. China, the United States and Germany lead the new world pattern city sustainable competitiveness	15
3.1 Sustainable competitiveness of Indian cities is generally low but on the rise	
3.2 Sustainable competitiveness of Chinese cities improved steadily, causing changes in the global pattern of sustainable competitiveness	
3.3 Sustainable competitiveness of the Top 10 cities of Nigeria is generally low and shows a downward trend	
3.4 Brazilian cities are in the middle range of the world and show a downward trend	
3.5 U.S. cities lead the world by sustainable competitiveness	
3.6 German cities show clear leading edge in high-income population density	
4. Conclusions	21
Appendix	22



Introduction of GUCR

The Global Urban Competitiveness Report (GUCR) is a cooperative research conducted by the Chinese Academy of Social Sciences (CASS) and UN-Habitat focusing on sustainable urban competitiveness, urban land and urban finance. Led by Prof. Ni Pengfei and Mr. Marco Kamiya, the project is participated by experts from CASS, UN-Habitat and well-known scholars in relevant fields. Through theoretical research and empirical investigation, the report establishes an indicator system to measure the economic competitiveness and sustainable competitiveness of more

than 1,000 cities in the world. Meanwhile, it selects important issues of global urban development as the themes for in-depth studies, aiming to promote the implementation of the UN 2030 agenda through the assessment of urban competitiveness. Currently, five annual reports have been published successively, among which GUCR (2018-2019) was launched at the UN headquarters in New York City during the 74th session of the UN General Assembly, and the GUCR (2019-2020) was released in Abu Dhabi during the 10th World Urban Forum.

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Introduction

In the past two years, the global economy has been growing slowly at a rate between 2% and 3%. In 2014, the economic growth rate was about 2.841%, 0.189 percentage point higher than the previous year. With the development of emerging economies, the overall growth rate of middle-income countries and lower-middle-income countries was robust at 4–6%, higher than the global rate; while the growth of high-income countries was about 2%, lower than the global average. In 2014, global commodity trade grew by 2.8%, lower

than 3% for the third consecutive year, showing slow recovery in global trade. Urbanization advanced in all countries of the world. More than half of the world population now lives in cities, and urbanization continues. In 2014, the global urbanization rate reached 53.457%, 0.452 percentage point higher than the previous year. European and American countries are the most urbanized with urbanization rates exceeding 70%. The urbanization rate of Asia and Africa are still below 50% but progress has been steady.



1 Distribution of sustainable competitiveness of cities worldwide

1.1 Sustainable competitiveness of the Top 20 cities of the world

For 2016–2017, the Top 5 cities of the world by sustainable competitiveness are Tokyo, Singapore, New York, London and Hong Kong. Hong Kong has moved on place up the rankings while the other four cities maintained their positions of the previous year. As for the Top 20, six cities are in Asia, nine in Europe and five in North America, involving the 10 countries of Japan, Singapore, the United States, the United Kingdom, China, France, Spain, Germany, Russia and Sweden. Among these cities, two Asian, two European, and two North American cities moved down the list;

two Asian, four European and one North American cities moved up, and the remaining seven cities maintained their positions of the previous year. As for Tier-2 indicators, Hong Kong, Shenzhen and Singapore of Asia rank higher by high-income population density than by high-income population increment, while the opposite is true for Tokyo, Seoul and Osaka of Asia. European cities generally rank higher by high-income population density than by high-income population increment, while the opposite tends to be true for North American cities.

Table1 Top 20 cities by sustainable competitiveness and changes in their world rankings, 2016–2017

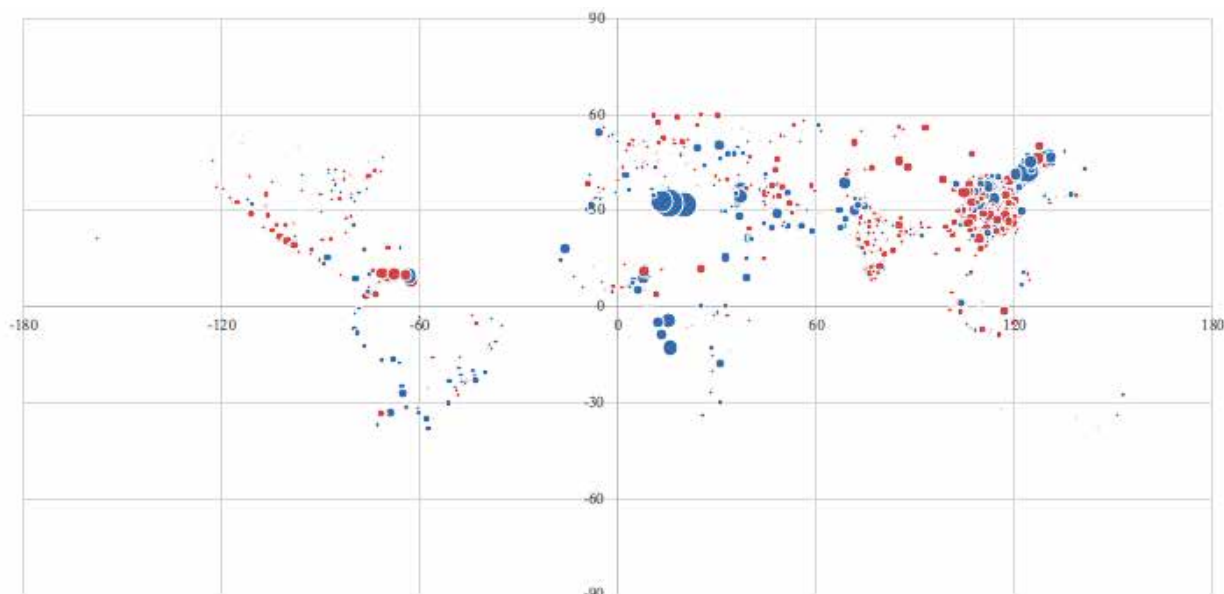
City	Country	Continent	Sustainable competitiveness		High-income population density		High-income population increment	
			Ranking	Change	Ranking	Change	Ranking	Change
Tokyo	Japan	Asia	1	0	2	-1	10	-1
Singapore	Singapore	Asia	2	0	11	1	1	0
New York-Newark	U.S.A.	N. America	3	0	1	1	41	2
London	U.K.	Europe	4	0	6	0	23	0
Hong Kong	China	Asia	5	1	22	1	3	0
Paris	France	Europe	6	-1	3	0	39	1
San Francisco-Oakland	U.S.A.	N. America	7	1	9	1	36	2
Barcelona	Spain	Europe	8	1	25	2	11	-1
Osaka	Japan	Asia	9	-2	5	-1	84	-1
Munich	Germany	Europe	10	0	51	1	2	0
Stuttgart	Germany	Europe	11	1	43	1	4	0
Chicago	U.S.A.	N. America	12	-1	7	0	88	1
Moscow	Russia	Europe	13	0	26	0	20	0
Boston	U.S.A.	N. America	14	0	13	0	63	-1
Madrid	Spain	Europe	15	2	17	2	45	-1
Frankfurt am Main	Germany	Europe	16	-1	50	-1	7	0
Stockholm	Sweden	Europe	17	1	28	4	21	0
Philadelphia	U.S.A.	N. America	18	-2	14	0	68	1
Shenzhen	China	Asia	19	4	44	6	12	1
Seoul	Republic of Korea	Asia	20	-1	16	-1	71	1

1.2 Sustainable competitiveness of European cities is stable and on the rise

According to the distribution of the Top 200 cities by continent, Asia, Europe and North America respectively have 59, 57 and 64 in the range, each accounting for 28.5% or higher of the total. Compared with the previous year. The average changes in the rankings these cities are as follows: European cities

are up 0.6667 place with a coefficient of variation of 4.5562, Asian cities are up 1.5593 places with a coefficient of variation of 5.4977, and North American cities are up 0.3906 place with a coefficient of variation of 8.4552. Changes are milder and gaps narrower for European cities.

Figure 1. Changes in global rankings by sustainable competitiveness, 2016–2017



Note: Red indicates positive change in ranking while blue indicates negative change, and the bigger the dot the greater the change of ranking

Table 2 Number of cities in the global Top 200 by sustainable competitiveness by continent, 2016–2017

Continent	Number of cities in the Top 200 by sustainable competitiveness 2016–2017	Number of cities in the Top 200 by sustainable competitiveness 2015–2016	Statistics of changes in the rankings of the Top 200 by sustainable competitiveness, 2016–2017		
			Mean	Standard deviation	Coefficient of variation
Asia	59	60	-1.5593	8.5728	-5.4977
N. America	64	64	-0.3906	3.3028	-8.4552
S. America	12	10	11.0000	23.8633	2.1694
Oceania	7	7	-1.7143	2.8115	-1.6401
Europe	57	58	0.6667	3.0375	4.5562



1.3 Sustainable competitiveness of cities worldwide is relatively low and unevenly distributed

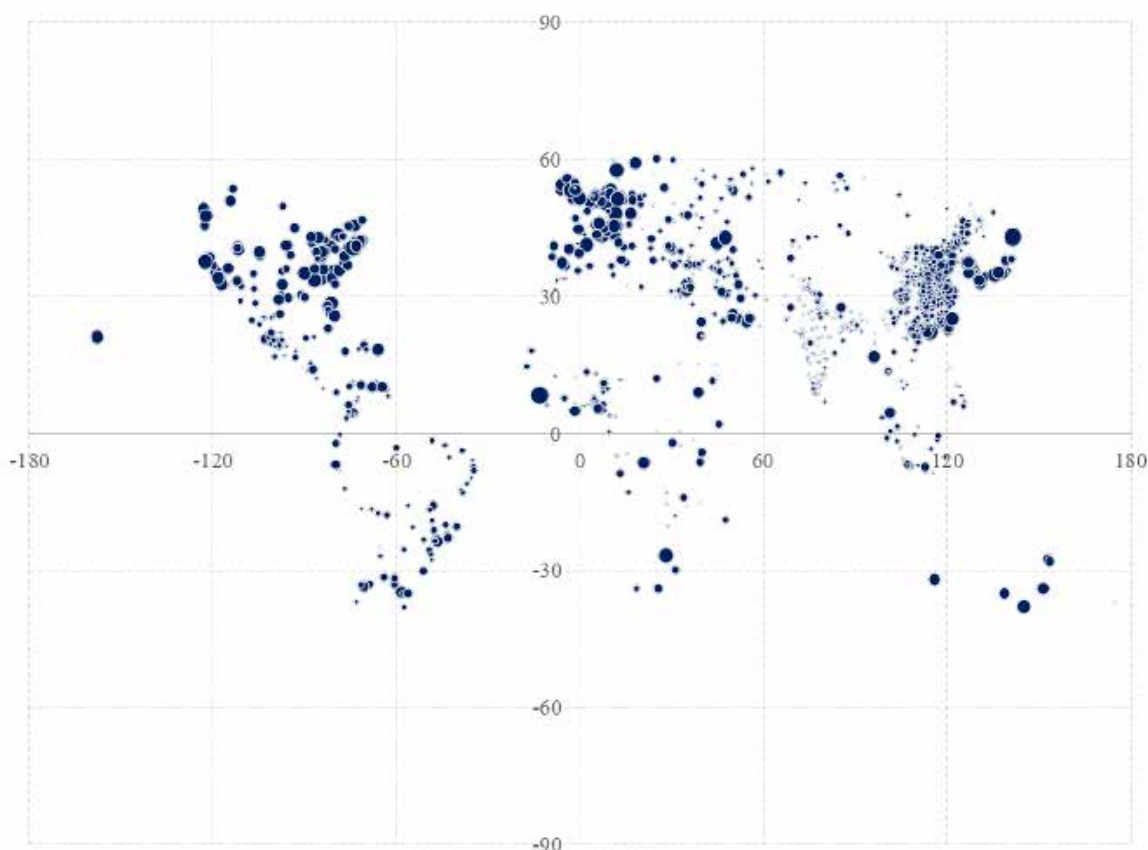
For 2016–2017, the average sustainable competitiveness score of cities worldwide is 0.3677, the coefficient of variation is 0.4915, the skewness is 0.6665, and the kurtosis is 2.9164. The overall pattern is a right-skewed distribution. The average sustainable competitiveness score as well as the average scores for the two Tier-2 indicators are

slightly better than those in the previous year, and the dispersion is basically the same. The average score for high-income population density has been higher than that for high-income population increment for two consecutive years, so the former of the two plays a more important role in sustainable competitiveness.

Table 3 Statistics of sustainable competitiveness of cities worldwide, 2016–2017

	Indicator	Sample size	Mean	Standard deviation	Coefficient of variation	Skewness	Kurtosis
Sustainable competitiveness 2016–2017	Sustainable competitiveness	1,006	0.3677	0.1807	0.4915	0.6665	2.9164
	High-income population increment	1,006	0.2924	0.1710	0.5847	0.8815	3.8808
	High-income population density	1,006	0.3871	0.1805	0.4664	0.6097	2.8566
Sustainable competitiveness 2015–2016	Sustainable competitiveness	1,006	0.3641	0.1789	0.4913	0.6704	2.9319
	High-income population increment	1,006	0.2879	0.1689	0.5868	0.9134	4.0038
	High-income population density	1,006	0.3871	0.1804	0.4660	0.6074	2.8514

Figure 2. Sustainable competitiveness of cities worldwide



1.4 High-income population density is the key factor in sustainable competitiveness

From the statistics of the sustainable competitiveness of cities worldwide by continent, we can see that the scores for high-income population density are generally higher than that for high-income population increment. Oceanian cities delivered the best and most balanced results because their average scores and coefficients of variation for high-income population increment and high-income population density are generally better

than those of the other five continents. Europe and North America form the upper middle range in terms of both sustainable competitiveness and its Tier-2 indicators. Asia and Africa lag behind with relatively low average scores and high coefficients of variation, leaving much room for improvement in terms of both high-income population increment and high-income population density.

Table 4 Statistics of sustainable competitiveness of cities worldwide by continent, 2016-2017

Continent	sustainable competitiveness		High-income population density		High-income population increment	
	Mean	Coefficient of variation	Mean	Coefficient of variation	Mean	Coefficient of variation
Asia	0.3195	0.4788	0.2467	0.5894	0.3439	0.4415
N. America	0.5233	0.3084	0.4612	0.3706	0.5060	0.3149
S. America	0.3993	0.2837	0.3273	0.3238	0.4107	0.3082
Oceania	0.6559	0.1094	0.5981	0.2001	0.6141	0.0928
Europe	0.5060	0.3594	0.3988	0.3656	0.5365	0.3984
Africa	0.2205	0.5254	0.1507	0.6442	0.2569	0.5042

1.5 Cities in G20 countries have high sustainable competitiveness

Table 5 Statistics of sustainable competitiveness of cities in G20 countries, 2016-2017

	Indicator	Sample size	Mean	Standard deviation	Coefficient of variation
G20	Sustainable competitiveness	739	0.3981	0.1773	0.4453
	High-income population increment	739	0.3214	0.1681	0.5230
	High-income population density	739	0.4143	0.1777	0.4288
Non-G20	Sustainable competitiveness	267	0.2836	0.1629	0.5743
	High-income population increment	267	0.2122	0.1525	0.7188
	High-income population density	267	0.3119	0.1669	0.5352



2 European, American and Asian cities play basically equal roles in the world pattern of sustainable competitiveness

2.1 American cities are overwhelmingly ahead of peers in North America

As we can see from the Top 10 cities of North America by sustainable competitiveness, U.S. cities have an overwhelming leading edge, with nine of them in the

Top 10 while the remaining one place is taken by a Canadian city and none of the other 11 countries in North America having any position in the list.

Table 6 Top 10 North American cities by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Country	sustainable competitiveness		high-income population density		high-income population increment	
			Global ranking	Change	Global ranking	Change	Global ranking	Change
1	New York-Newark	U.S.A.	3	0	1	1	41	2
2	San Francisco-Oakland	U.S.A.	7	1	9	1	36	2
3	Chicago	U.S.A.	12	-1	7	0	88	1
4	Boston	U.S.A.	14	0	13	0	63	-1
5	Philadelphia	U.S.A.	18	-2	14	0	68	1
6	Toronto	Canada	21	-1	21	0	59	-3
7	Houston	U.S.A.	24	-3	8	1	129	-2
8	Cleveland	U.S.A.	25	3	68	4	13	-1
9	Miami	U.S.A.	26	3	24	1	65	2
10	Los Angeles-Long Beach-Santa Ana	U.S.A.	27	0	4	1	214	4

2.2 Cities in six European countries have strong sustainable competitiveness

In Europe, the Top 10 cities by sustainable competitiveness are distributed in six countries. Specifically, the Top 10 are London of the U.K., Paris of France, Munich, Stuttgart, Frankfurt and Berlin of Germany, Moscow of Russia, Stockholm of Sweden,

and Barcelona and Madrid of Spain. Among them, London, Paris, Barcelona and Munich are in the Top 10 of the world, while Stuttgart, Moscow, Madrid, Frankfurt and Stockholm are also among the global top 20.

Table 7 Top 10 European cities by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Country	sustainable competitiveness		high-income population density		high-income population increment	
			Global ranking	Change	Global ranking	Change	Global ranking	Change
1	London	U.K.	4	0	6	0	23	0
2	Paris	France	6	-1	3	0	39	1
3	Barcelona	Spain	8	1	25	2	11	-1
4	Munich	Germany	10	0	51	1	2	0
5	Stuttgart	Germany	11	1	43	1	4	0
6	Moscow	Russia	13	0	26	0	20	0
7	Madrid	Spain	15	2	17	2	45	-1
8	Frankfurt am Main	Germany	16	-1	50	-1	7	0
9	Stockholm	Sweden	17	1	28	4	21	0
10	Berlin	Germany	22	0	48	-1	15	0



2.3 Cities in emerging Asian economies show high sustainable competitiveness

The Top 10 of Asia include cities in the four countries of China, Japan, Republic of Korea, Singapore, and Specifically, the Top 5 cities are Tokyo, Singapore, Hong Kong, Osaka and Shenzhen. All of the Top 10 cities of Asia rank among the Top 50 of the world by sustainable competitiveness. Singapore, Hong

Kong, Shenzhen, Taipei, Hiroshima and Nagoya rank much higher in the world by high-income population density than by high-income population increment, while the opposite is true for Doha, Osaka and Seoul. Thus, for these cities, the driving forces behind their high sustainable competitiveness are different.

Table 8 Top 10 Asian cities by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Country	sustainable competitiveness		high-income population density		high-income population increment	
			Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Tokyo	Japan	1	0	2	-1	10	-1
2	Singapore	Singapore	2	0	11	1	1	0
3	Hong Kong	China	5	1	22	1	3	0
4	Osaka	Japan	9	-2	5	-1	84	-1
5	Shenzhen	China	19	4	44	6	12	1
6	Seoul	Republic of Korea	20	-1	16	-1	71	1
7	Taipei	China	23	1	41	1	18	0
8	Doha	Qatar	32	-6	10	-2	183	-11
9	Hiroshima	Japan	38	3	84	1	22	0
10	Nagoya	Japan	45	-10	54	-6	44	-8

2.4 Some of the Top 10 cities in South America moved up the global rankings of sustainable competitiveness, while other moved down, with the rise overrunning the decline on the whole

The Top 10 cities of South America by sustainable competitiveness are distributed in the five countries of Argentina, Brazil, Colombia, Peru and Venezuela. In particular, four of the 10 cities are in Venezuela. Seven of the Top 10 cities of South America rank higher by

high-income population increment than by high-income population density. Half of the cities moved up in the global rankings, mostly by 30 to 40 places; while the other half moved down, with the sharpest drop at 15 places.

Table 9 Top 10 South American cities by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Country	sustainable competitiveness		high-income population density		high-income population increment	
			Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Buenos Aires	Argentina	66	-11	40	-1	103	-7
2	Sao Paulo	Brazil	87	-8	46	-5	162	-12
3	Barcelona-Puerto La Cruz	Venezuela	99	32	117	25	93	19
4	Valencia	Venezuela	117	39	141	33	100	29
5	Santiago	Chile	125	-3	78	-3	200	-1
6	Caracas	Venezuela	129	41	102	36	160	43
7	Bogota	Columbia	156	-6	122	-9	198	-3
8	Rio de Janeiro	Brazil	164	-15	109	-6	211	2
9	Maracaibo	Venezuela	170	37	178	45	146	50
10	Lima	Peru	175	-12	134	-13	207	0





2.5 Sustainable competitiveness of African cities is low and declining

The Top 10 cities in Africa by sustainable competitiveness are Pretoria, Johannesburg, Luanda, Cape Town, Oran, Algiers, Lagos, Durban, Tripoli and Ikorodu. None of them is in the Top 100 of the world, as the highest-ranking city of them, Pretoria, ranks

141th, and all the other cities rank below 200th. In particular, Tripoli's sustainable competitiveness ranking declined by 122 places from where it was the previous year, and all of the 10 cities have moved down in the world rankings.

Table 10 Top 10 African cities by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Country	sustainable competitiveness		high-income population density		high-income population increment	
			Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Pretoria	South Africa	141	-3	173	-3	109	-4
2	Johannesburg	South Africa	224	-5	231	-9	217	-5
3	Luanda	Angola	257	-30	273	-39	249	-33
4	Cape Town	South Africa	266	-6	266	-6	264	-3
5	Oran	Algeria	271	-2	324	-5	230	-6
6	Algiers	Algeria	311	-8	356	-2	289	-8
7	Lagos	Nigeria	318	-4	337	-4	308	-4
8	Durban	South Africa	346	1	389	-4	330	-2
9	Tripoli	Libya	373	-122	459	-138	331	-133
10	Ikorodu	Nigeria	392	-13	397	-9	387	-11

3

China, the United States and Germany lead the new world pattern city sustainable competitiveness

3.1 Sustainable competitiveness of Indian cities is generally low but on the rise

The Top 3 cities of India are Delhi, Bangalore and Mumbai. As the capital city as well as the political, economic and cultural center of India, Delhi ranks only 326th in the world by sustainable competitiveness, 179th by high-income population density, and 651st in the world with high-income population increment competitiveness. Other cities within the Top 10 of India are generally in the lower middle range in the global rankings by sustainable competitiveness, showing a relatively low competitiveness on the whole. Although in terms of high-income population

density Mumbai's ranking is up by nine places compared with where it was a year before, its ranking by high-income population increment was down by six places, resulting in a drop of four places in the cities global ranking by sustainable competitiveness. In addition, Indian cities generally rank far higher in the world by high-income population density than by high-income population increment, with a strong momentum for further rise on the former list. Thus, the sustainable competitiveness of Indian cities is generally on the rise.

Table 11 Top 10 cities of India by sustainable competitiveness and changes in their world rankings

Ranking	City	Sustainable competitiveness		High-income population increment		High-income population density	
		Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Delhi	326	7	651	4	179	6
2	Bangalore	395	6	685	9	244	10
3	Mumbai	434	-4	704	-6	286	9
4	Chennai	536	8	796	-2	332	9
5	Kochi	557	15	837	4	312	18
6	Pune	574	4	757	-1	431	3
7	Coimbatore	595	3	830	-3	351	8
8	Kozhikode	646	17	853	9	411	26
9	Bhiwandi	660	5	828	5	462	3
10	Dehra Dun	661	3	808	2	487	10

3.2 Sustainable competitiveness of Chinese cities improved steadily, causing changes in the global pattern of sustainable competitiveness

Hong Kong, Shenzhen and Taipei are the Top three cities of China by sustainable competitiveness and they all rank among the Top 30 of the world. Also, most of the top 10 cities of China are in the Top 100 of the world. In addition, the sustainable competitiveness of Chinese cities has been steadily improved, with the largest increase seen in Suzhou

(up seven places), Shanghai, Beijing and Guangzhou (all up six places), However, China's Top 10 cities by sustainable competitiveness has basically remained unchanged, and they all rank high in the world. The rise of Chinese cities is causing major changes in the previous world pattern where cities in developed economies were in the lead.

Table 12 Top 10 cities of China by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Sustainable competitiveness		High-income population increment		High-income population density	
		Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Hong Kong	5	1	22	1	3	0
2	Shenzhen	19	4	44	6	12	1
3	Taipei	23	1	41	1	18	0
4	Shanghai	52	6	53	8	62	4
5	Beijing	77	6	49	2	113	4
6	Guangzhou	80	6	85	2	86	5
7	Suzhou	89	7	74	9	122	1
8	Macao	97	-3	336	-7	16	0
9	Nanjing	120	-2	113	1	119	-3
10	Taichung	126	3	128	-2	120	-2

3.3 Sustainable competitiveness of the Top 10 cities of Nigeria is generally low and shows a downward trend

The Top 3 cities of Nigeria by sustainable competitiveness are Lagos, Ikorodu and Abuja, which all rank between 300th and 400th in the world. Other cities among the Top 10, such as Kano, Benin City, Enugu and Zaria, are lower than the 500th place on

the world list, ranking in the lower middle range. In addition, the high-income population increment and high-income population density of Nigerian cities is also relatively low compared with other cities on the world list, with a generally downward trend.

Table 13 Top 10 of Nigeria by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Sustainable competitiveness		High-income population increment		High-income population density	
		Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Lagos	318	-4	337	-4	308	-4
2	Ikorodu	392	-13	397	-9	387	-11
3	Abuja	398	-34	361	-56	455	-8
4	Port Harcourt	492	0	486	19	515	-4
5	Kano	530	-14	674	-11	446	-15
6	Benin City	593	-12	753	-7	454	-6
7	Enugu	623	-9	775	-4	482	-9
8	Zaria	635	25	774	40	495	-8
9	Akure	641	-7	772	1	501	-3
10	Aba	647	-4	791	-5	499	0



3.4 Brazilian cities are in the middle range of the world and show a downward trend

The Top 3 cities of Brazil by sustainable competitiveness are Sao Paulo, Rio de Janeiro and Brasilia, ranking 87th, 164th and 212th respectively in world. Other cities among the Top 10, such as Porto Alegre, Greater Vitória and Campinas rank between 200th and 350th in the world. The sustainable

competitiveness of Brazilian cities is generally in the middle range of the world and the Top 10 cities are mostly moving down the global list, with drops by 15 places or fewer. By Tier-2 indicators, these cities' rankings in the world generally show a downward trend, moving down by varying degrees.

Table 14 Top 10 cities of Brazil by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Sustainable competitiveness		High-income population increment		High-income population density	
		Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Sao Paulo	87	-8	46	-5	162	-12
2	Rio de Janeiro	164	-15	109	-6	211	2
3	Brasília	212	-7	142	-6	292	2
4	Porto Alegre	222	-9	294	-14	176	-7
5	Greater Vitória	248	-5	225	-11	259	3
6	Campinas	265	-7	233	-16	294	-5
7	Ribeirao Preto	290	-6	376	7	218	-3
8	Sao Jose dos Campos	293	-4	360	-1	243	-6
9	Jundiai	319	0	472	4	222	-2
10	Belo Horizonte	320	-10	232	-23	421	-16

3.5 U.S. cities lead the world by sustainable competitiveness

New York, San Francisco, Chicago, Boston and Philadelphia are the Top 5 cities of the United States by sustainable competitiveness and in the Top 20 of the world. All of the Top 10 except San Jose, which ranks 31st in the world, are all in the Top 30 of the world, showing a clear leading edge. Cleveland, Miami and San Jose all moved by the global rankings by three places. Chicago, Philadelphia and Houston

also moved up slightly. Chicago, Boston and Los Angeles maintained their original positions. Thus, on the whole, U.S. cities are still far ahead of cities of other countries in the global rankings by sustainable competitiveness. In addition, the rankings of the Top 10 cities of the United States by high-income population increment is generally higher than that by high-income population density, and still on the rise.

Table 15 Top 10 cities of the United States by sustainable competitiveness and changes in their world rankings, 2016-2017

Ranking	City	Sustainable competitiveness		High-income population increment		High-income population density	
		Global ranking	Change	Global ranking	Change	Global ranking	Change
1	New York-Newark	3	0	1	1	41	2
2	San Francisco-Oakland	7	1	9	1	36	2
3	Chicago	12	-1	7	0	88	1
4	Boston	14	0	13	0	63	-1
5	Philadelphia	18	-2	14	0	68	1
6	Houston	24	-3	8	1	129	-2
7	Cleveland	25	3	68	4	13	-1
8	Miami	26	3	24	1	65	2
9	Los Angeles-Long Beach-Santa Ana	27	0	4	1	214	4
10	San Jose	31	3	27	2	76	5





3.6 German cities show clear leading edge in high-income population density

Munich, Stuttgart and Frankfurt are the Top three cities of Germany in terms of sustainable competitiveness and they are all in the global Top 20. While Dusseldorf ranks 101st in the world, all other cities within the Top 10 of the country are in the Top 100 of the world, and the general trend in

their global rankings is upward. In addition, all of these cities rank within the Top 35 of the world by high-income population density, far ahead of many other cities in the world, which contributes greatly to the high rankings of these cities by sustainable competitiveness.

Table 16 Top 10 cities of Germany by sustainable competitiveness and changes in their world rankings, 2016–2017

Ranking	City	Sustainable competitiveness		High-income population increment		High-income population density	
		Global ranking	Change	Global ranking	Change	Global ranking	Change
1	Munich	10	0	51	1	2	0
2	Stuttgart	11	1	43	1	4	0
3	Frankfurt am Main	16	-1	50	-1	7	0
4	Berlin	22	0	48	-1	15	0
5	Hamburg	30	1	73	0	19	0
6	Hannover	36	1	135	0	8	0
7	Cologne	61	6	133	1	24	1
8	Dortmund	81	0	284	5	9	2
9	Essen	91	4	334	8	14	0
10	Dusseldorf	101	1	253	11	32	0

4 Conclusions

Through the above comprehensive and comparative analysis, we have come to the following conclusions: First, high-income population density is the key factor in the sustainable competitiveness of cities worldwide. Second, the sustainable competitiveness of cities worldwide is relatively low and uneven, showing a trend of multi-polarization. The sustainable competitiveness of European and North American top cities is relatively high. South American and African top cities are low in the global rankings. Third, the sustainable competitiveness of cities in many countries is improving, forming a steady upward trend. In North America, cities in the United States have an overwhelming leading edge in terms of sustainable competitiveness, while cities in other North American countries lag somewhat behind. Fourth, the sustainable competitiveness of cities in emerging Asian economies is relatively high, and there is a steady upward trend. The momentum is particularly strong for Chinese cities, while peers in Japan, Republic of Korea, India and other Asian countries seem not to have such strong momentum in comparison. Fifthly, the sustainable competitiveness of cities in South America and Africa is relatively low on the whole, and there is a declining trend.



Appendix

Sustainable Competitiveness Rankings of Cities Worldwide, 2016–2017

City	Country	Score	Ranking	City	Country	Score	Ranking
Tokyo	Japan	1.0000	1	Cleveland	U.S.A.	0.7687	25
Singapore	Singapore	0.9772	2	Miami	U.S.A.	0.7677	26
New York-Newark	U.S.A.	0.9416	3	Los Angeles-Long Beach-Santa Ana	U.S.A.	0.7676	27
London	U.K.	0.9062	4	Melbourne	Australia	0.7662	28
Hong Kong	China	0.8907	5	Rome	Italy	0.7578	29
Paris	France	0.8907	6	Hamburg	Germany	0.7493	30
San Francisco-Oakland	U.S.A.	0.8490	7	San Jose	U.S.A.	0.7485	31
Barcelona	Spain	0.8431	8	Doha	Qatar	0.7471	32
Osaka	Japan	0.8418	9	Manchester	U.K.	0.7461	33
Munich	Germany	0.8370	10	Baltimore	U.S.A.	0.7447	34
Stuttgart	Germany	0.8311	11	Seattle	U.S.A.	0.7395	35
Chicago	U.S.A.	0.8296	12	Hannover	Germany	0.7382	36
Moscow	Russia	0.8210	13	Zurich	Switzerland	0.7358	37
Boston	U.S.A.	0.8123	14	Hiroshima	Japan	0.7305	38
Madrid	Spain	0.8103	15	Milan	Italy	0.7288	39
Frankfurt am Main	Germany	0.8102	16	Atlanta	U.S.A.	0.7281	40
Stockholm	Sweden	0.8091	17	Birmingham	U.K.	0.7260	41
Philadelphia	U.S.A.	0.8052	18	Montreal	Canada	0.7247	42
Shenzhen	China	0.7953	19	Vienna	Austria	0.7236	43
Seoul	Republic of Korea	0.7946	20	Amsterdam	Netherlands	0.7214	44
Toronto	Canada	0.7870	21	Nagoya	Japan	0.7203	45
Berlin	Germany	0.7828	22	Dallas-Fort Worth	U.S.A.	0.7183	46
Taipei	China	0.7826	23	Salt Lake City	U.S.A.	0.7176	47
Houston	U.S.A.	0.7798	24	Copenhagen	Denmark	0.7163	48

Denver-Aurora	U.S.A.	0.7141	49	Suzhou	China	0.6415	89
Raleigh	U.S.A.	0.7098	50	Glasgow	U.K.	0.6401	90
Perth	Australia	0.7077	51	Essen	Germany	0.6384	91
Shanghai	China	0.7075	52	Adelaide	Australia	0.6359	92
Geneva	Switzerland	0.7063	53	Istanbul	Turkey	0.6352	93
Sydney	Australia	0.7041	54	Malaga	Spain	0.6322	94
Kitakyushu-Fukuoka	Japan	0.7030	55	Phoenix-Mesa	U.S.A.	0.6321	95
Tel Aviv-Yafo	Israel	0.7021	56	Riyadh	Saudi Arabia	0.6315	96
Bridgeport-Stamford	U.S.A.	0.7020	57	Macao	China	0.6308	97
Vancouver	Canada	0.7013	58	Gwangju	Republic of Korea	0.6293	98
San Diego	U.S.A.	0.6960	59	Barcelona-Puerto La Cruz	Venezuela	0.6280	99
Orlando	U.S.A.	0.6935	60	San Jose	Costa Rica	0.6267	100
Cologne	Germany	0.6920	61	Dusseldorf	Germany	0.6255	101
Hartford	U.S.A.	0.6917	62	New Haven	U.S.A.	0.6242	102
Richmond	U.S.A.	0.6907	63	Dresden	Germany	0.6221	103
Washington, D.C.	U.S.A.	0.6896	64	Las Vegas	U.S.A.	0.6199	104
Brussels	Belgium	0.6884	65	Busan	Republic of Korea	0.6189	105
Buenos Aires	Argentina	0.6869	66	Lille	France	0.6175	106
West Yorkshire	U.K.	0.6868	67	Daegu	Republic of Korea	0.6175	107
Detroit	U.S.A.	0.6856	68	Lyon	France	0.6143	108
Jerusalem	Israel	0.6855	69	Athens	Greece	0.6131	109
Incheon	Republic of Korea	0.6832	70	Worcester	U.S.A.	0.6128	110
Dubai	United Arab Emirates	0.6823	71	Naples	Italy	0.6121	111
Milwaukee	U.S.A.	0.6807	72	Hague	Netherlands	0.6120	112
Helsinki	Finland	0.6760	73	Virginia Beach	U.S.A.	0.6110	113
Valencia	Spain	0.6759	74	Medina	Saudi Arabia	0.6106	114
Ulsan	Republic of Korea	0.6745	75	Hamilton	Canada	0.6106	115
Austin	U.S.A.	0.6695	76	Baton Rouge	U.S.A.	0.6100	116
Beijing	China	0.6691	77	Valencia	Venezuela	0.6097	117
Kuala Lumpur	Malaysia	0.6676	78	Nashville-Davidson	U.S.A.	0.6094	118
Daejeon	Republic of Korea	0.6642	79	Zaragoza	Spain	0.6090	119
Guangzhou	China	0.6628	80	Nanjing	China	0.6083	120
Dortmund	Germany	0.6618	81	Auckland	New Zealand	0.6072	121
Calgary	Canada	0.6615	82	Brisbane	Australia	0.6061	122
Columbus	U.S.A.	0.6608	83	Tampa-St. Petersburg	U.S.A.	0.6059	123
Haifa	Israel	0.6605	84	Leipzig	Germany	0.6039	124
Sapporo	Japan	0.6551	85	Santiago de Chile	Chile	0.6015	125
Louisville	U.S.A.	0.6530	86	Taichung	China	0.6013	126
Sao Paulo	Brazil	0.6504	87	Mexico City	Mexico	0.5992	127
Antwerp	Belgium	0.6461	88	Rotterdam	Netherlands	0.5989	128

Caracas	Venezuela	0.5988	129	Toulouse	France	0.5631	169
Colorado Springs	U.S.A.	0.5967	130	Maracaibo	Venezuela	0.5609	170
Belfast	U.K.	0.5964	131	Hangzhou	China	0.5607	171
Xiamen	China	0.5945	132	Marseille-Aix-en-Provence	France	0.5602	172
Charlotte	U.S.A.	0.5938	133	Kansas City	U.S.A.	0.5589	173
Minneapolis-Saint Paul	U.S.A.	0.5931	134	Oklahoma City	U.S.A.	0.5584	174
Tianjin	China	0.5918	135	Lima	Peru	0.5583	175
Buffalo	U.S.A.	0.5902	136	Wuhan	China	0.5562	176
Jedda	Saudi Arabia	0.5894	137	Bologna	Italy	0.5543	177
Saint Petersburg	Russia	0.5883	138	Maracay	Venezuela	0.5533	178
Sendai	Japan	0.5853	139	Charleston-North Charleston	U.S.A.	0.5533	179
New Orleans	U.S.A.	0.5825	140	Lisbon	Portugal	0.5532	180
Pretoria	South Africa	0.5814	141	Dongguan	China	0.5521	181
Liege	Belgium	0.5799	142	Karaj	Iran	0.5507	182
Qingdao	China	0.5791	143	Zhongshan	China	0.5506	183
Shizuoka-Hamamatsu M.M.A.	Japan	0.5789	144	Changsha	China	0.5496	184
Torino	Italy	0.5777	145	Bristol	U.K.	0.5496	185
Kaohsiung	China	0.5764	146	Ahvaz	Iran	0.5491	186
Pittsburgh	U.S.A.	0.5754	147	Columbia	U.S.A.	0.5490	187
Oslo	Norway	0.5752	148	Memphis	U.S.A.	0.5480	188
Provo-Orem	U.S.A.	0.5752	149	Kuwait City	Kuwait	0.5472	189
Ottawa-Gatineau	Canada	0.5745	150	Tehran	Iran	0.5469	190
San Antonio	U.S.A.	0.5739	151	Florence	Italy	0.5462	191
Providence	U.S.A.	0.5726	152	Montevideo	Uruguay	0.5436	192
Dublin	Ireland	0.5720	153	Ogden	U.S.A.	0.5435	193
Indianapolis	U.S.A.	0.5714	154	Dayton	U.S.A.	0.5429	194
Foshan	China	0.5712	155	Tainan	China	0.5425	195
Bogota	Colombia	0.5690	156	Rochester	U.S.A.	0.5425	196
Abu Dhabi	United Arab Emirates	0.5689	157	Niigata	Japan	0.5416	197
San Juan	Puerto Rico	0.5683	158	Ningbo	China	0.5415	198
Wuxi	China	0.5681	159	Mecca	Saudi Arabia	0.5396	199
Sharjah	United Arab Emirates	0.5674	160	Budapest	Hungary	0.5378	200
Honolulu	U.S.A.	0.5666	161	Dammam	Saudi Arabia	0.5344	201
Leicester	U.K.	0.5666	162	Changzhou	China	0.5318	202
Venice	Italy	0.5655	163	Cincinnati	U.S.A.	0.5311	203
Rio de Janeiro	Brazil	0.5654	164	Liverpool	U.K.	0.5306	204
Astana	Kazakhstan	0.5648	165	Edmonton	Canada	0.5298	205
Verona	Italy	0.5642	166	Hefei	China	0.5257	206
Gold Coast	Australia	0.5640	167	Porto	Portugal	0.5215	207
Chengdu	China	0.5634	168	Knoxville	U.S.A.	0.5214	208

Birmingham	U.S.A.	0.5196	209	Winnipeg	Canada	0.4917	249
Minsk	Belarus	0.5191	210	Zibo	China	0.4905	250
Prague	Czech Republic	0.5184	211	Santo Domingo	Dominican Republic	0.4889	251
Brasilia	Brazil	0.5180	212	Samut Prakan	Thailand	0.4881	252
Kumamoto	Japan	0.5169	213	Ankara	Turkey	0.4867	253
Changwon	Republic of Korea	0.5158	214	Nanchang	China	0.4818	254
Akron	U.S.A.	0.5157	215	Toulon	France	0.4812	255
Catania	Italy	0.5153	216	Changchun	China	0.4809	256
Sofia	Bulgaria	0.5140	217	Luanda	Angola	0.4806	257
Nottingham	U.K.	0.5126	218	Mendoza	Argentina	0.4803	258
Jinan	China	0.5122	219	Bucuresti	Romania	0.4798	259
Riverside-San Bernardino	U.S.A.	0.5109	220	Seville	Spain	0.4793	260
Zhengzhou	China	0.5101	221	Poznan	Poland	0.4793	261
Porto Alegre	Brazil	0.5093	222	Izmir	Turkey	0.4781	262
Quebec	Canada	0.5082	223	Xuzhou	China	0.4781	263
Johannesburg	South Africa	0.5076	224	Bursa	Turkey	0.4780	264
Johor Bahru	Malaysia	0.5075	225	Campinas	Brazil	0.4773	265
Bangkok	Thailand	0.5074	226	Cape Town	South Africa	0.4760	266
Zhuhai	China	0.5072	227	Nantong	China	0.4732	267
Bordeaux	France	0.5072	228	Fuzhou (FJ)	China	0.4725	268
Cape Coral	U.S.A.	0.5071	229	Hsinchu	China	0.4722	269
Yantai	China	0.5062	230	Shaoxing	China	0.4706	270
Rosario	Argentina	0.5062	231	Oran	Algeria	0.4702	271
Leon	Mexico	0.5061	232	Baku	Azerbaijan	0.4698	272
Dalian	China	0.5050	233	Omaha	U.S.A.	0.4673	273
Nantes	France	0.5038	234	Padova	Italy	0.4670	274
Portland	U.S.A.	0.5029	235	Cordoba	Argentina	0.4662	275
Newcastle upon Tyne	U.K.	0.5014	236	Tyumen	Russia	0.4655	276
Sheffield	U.K.	0.5010	237	Monterrey	Mexico	0.4655	277
Allentown	U.S.A.	0.5002	238	Tangshan	China	0.4636	278
Zhenjiang	China	0.4994	239	Jakarta	Indonesia	0.4634	279
Gothenburg	Sweden	0.4990	240	Bakersfield	U.S.A.	0.4634	280
Shenyang	China	0.4981	241	Yangzhou	China	0.4630	281
Muscat	Oman	0.4975	242	Medellin	Colombia	0.4621	282
Amman	Jordan	0.4962	243	Quanzhou	China	0.4602	283
Genoa	Italy	0.4950	244	El Paso	U.S.A.	0.4591	284
Xi' an	China	0.4934	245	Thessaloniki	Greece	0.4589	285
Bari	Italy	0.4929	246	Havana	Cuba	0.4586	286
Grand Rapids	U.S.A.	0.4926	247	Nice	France	0.4584	287
Greater Vitória	Brazil	0.4921	248	Palermo	Italy	0.4584	288

Sacramento	U.S.A.	0.4582	289	Kunming	China	0.4242	329
Ribeirao Preto	Brazil	0.4578	290	Xiangtan	China	0.4221	330
Panama City	Panama	0.4572	291	Zagreb	Croatia	0.4217	331
Daqing	China	0.4566	292	Surabaya	Indonesia	0.4216	332
Sao Jose dos Campos	Brazil	0.4560	293	Asuncion	Paraguay	0.4214	333
Jiaxing	China	0.4560	294	Samara	Russia	0.4208	334
Tijuana	Mexico	0.4548	295	Bremen	Germany	0.4206	335
Gebze	Turkey	0.4543	296	Jining	China	0.4184	336
Dongying	China	0.4542	297	Lodz	Poland	0.4184	337
Tulsa	U.S.A.	0.4519	298	Valparaiso	Chile	0.4174	338
Weihai	China	0.4516	299	Fresno	U.S.A.	0.4162	339
Ufa	Russia	0.4504	300	Zhuzhou	China	0.4156	340
Be'er Sheva	Israel	0.4492	301	Merida	Mexico	0.4155	341
Huizhou	China	0.4489	302	Batam	Indonesia	0.4143	342
Taiyuan	China	0.4454	303	Albuquerque	U.S.A.	0.4140	343
Santiago de Los Caballeros	Dominican Republic	0.4427	304	Curitiba	Brazil	0.4133	344
Taizhou (JS)	China	0.4425	305	Villahermosa	Mexico	0.4114	345
Warsaw	Poland	0.4415	306	Durban	South Africa	0.4112	346
Shijiazhuang	China	0.4415	307	Manaus	Brazil	0.4091	347
Quito	Ecuador	0.4414	308	Guiyang	China	0.4084	348
Ipoh	Malaysia	0.4402	309	Recife	Brazil	0.4084	349
Chongqing	China	0.4396	310	Rizhao	China	0.4082	350
Algiers	Algeria	0.4392	311	Almaty	Kazakhstan	0.4077	351
Taizhou (ZJ)	China	0.4388	312	Perm	Russia	0.4064	352
Krakow	Poland	0.4385	313	Albany	U.S.A.	0.4062	353
Guadalajara	Mexico	0.4383	314	Haikou	China	0.4056	354
Adana	Turkey	0.4361	315	Santa Cruz	Bolivia	0.4054	355
Tucson	U.S.A.	0.4361	316	McAllen	U.S.A.	0.4054	356
Santa Fe	Argentina	0.4359	317	Erbil	Iraq	0.4052	357
Lagos	Nigeria	0.4353	318	Hohhot	China	0.4050	358
Jundiai	Brazil	0.4346	319	Zhoushan	China	0.4047	359
Belo Horizonte	Brazil	0.4338	320	Sorocaba	Brazil	0.4037	360
Baghdad	Iraq	0.4314	321	Shiraz	Iran	0.4032	361
Juarez	Mexico	0.4307	322	Wuhu	China	0.4024	362
Nanning	China	0.4298	323	Torreon	Mexico	0.4023	363
Weifang	China	0.4279	324	Kiev	Ukraine	0.4012	364
Harbin	China	0.4273	325	Luoyang	China	0.4001	365
Delhi	India	0.4265	326	Belgrade	Serbia	0.3997	366
Sarasota-Bradenton	U.S.A.	0.4260	327	Kaifeng	China	0.3989	367
San Luis Potosi	Mexico	0.4252	328	Queretaro	Mexico	0.3979	368

Yancheng	China	0.3976	369	Cali	Colombia	0.3741	409
Mar Del Plata	Argentina	0.3973	370	Shantou	China	0.3740	410
Kazan	Russia	0.3972	371	Maanshan	China	0.3740	411
Panjin	China	0.3948	372	Zaozhuang	China	0.3739	412
Tripoli	Libya	0.3943	373	Tabriz	Iran	0.3735	413
Lanzhou	China	0.3942	374	Lianyungang	China	0.3731	414
Buraydah	Saudi Arabia	0.3938	375	Salvador	Brazil	0.3729	415
Urumqi	China	0.3937	376	Xuchang	China	0.3718	416
Jinhua	China	0.3934	377	Xiangyang	China	0.3710	417
Zhangzhou	China	0.3934	378	Puyang	China	0.3709	418
Liuzhou	China	0.3931	379	Riga	Latvia	0.3709	419
Wenzhou	China	0.3930	380	Belem	Brazil	0.3706	420
Anshan	China	0.3924	381	Toluca	Mexico	0.3706	421
Samarinda	Indonesia	0.3922	382	Putian	China	0.3705	422
Dezhou	China	0.3921	383	Anyang	China	0.3703	423
Handan	China	0.3919	384	Mashhad	Iran	0.3703	424
Cartagena	Colombia	0.3913	385	Huangshi	China	0.3702	425
Pekanbaru	Indonesia	0.3895	386	Guayaquil	Ecuador	0.3699	426
Jilin	China	0.3891	387	Jinzhou	China	0.3699	427
Huzhou	China	0.3888	388	Jieyang	China	0.3695	428
Baoding	China	0.3883	389	Uberlandia	Brazil	0.3692	429
Fortaleza	Brazil	0.3882	390	Deyang	China	0.3680	430
Baotou	China	0.3878	391	Zhaoqing	China	0.3672	431
Ikorodu	Nigeria	0.3873	392	Yinchuan	China	0.3671	432
Antalya	Turkey	0.3868	393	Huaian	China	0.3662	433
Qinhuangdao	China	0.3867	394	Mumbai	India	0.3659	434
Bangalore	India	0.3865	395	Jiaozuo	China	0.3655	435
Yichang	China	0.3860	396	Ashgabat	Turkmenistan	0.3654	436
Jiangmen	China	0.3853	397	Maturín	Venezuela	0.3652	437
Abuja	Nigeria	0.3839	398	Xining	China	0.3646	438
Joinville	Brazil	0.3824	399	Binzhou	China	0.3644	439
Aguascalientes	Mexico	0.3824	400	Saltillo	Mexico	0.3644	440
Guatemala City	Guatemala	0.3823	401	Kuching	Malaysia	0.3638	441
Saratov	Russia	0.3819	402	Nanyang	China	0.3634	442
Taian	China	0.3815	403	Yaroslavl	Russia	0.3629	443
Beirut	Lebanon	0.3801	404	Langfang	China	0.3623	444
Beihai	China	0.3779	405	Bengbu	China	0.3619	445
Matamoros	Mexico	0.3776	406	Yuxi	China	0.3608	446
Puebla	Mexico	0.3771	407	San Salvador	El Salvador	0.3593	447
Goiania	Brazil	0.3765	408	Maoming	China	0.3592	448

Londrina	Brazil	0.3586	449	Juiz De Fora	Brazil	0.3380	489
Ezhou	China	0.3584	450	Hengshui	China	0.3375	490
Tomsk	Russia	0.3583	451	Ordos	China	0.3372	491
Manila	Philippines	0.3580	452	Port Harcourt	Nigeria	0.3368	492
Arequipa	Peru	0.3575	453	Yueyang	China	0.3359	493
Jingdezhen	China	0.3557	454	Chaozhou	China	0.3359	494
Gaziantep	Turkey	0.3557	455	Cangzhou	China	0.3356	495
Chenzhou	China	0.3534	456	Pereira	Colombia	0.3354	496
Xinyu	China	0.3522	457	Hebi	China	0.3353	497
Huaipei	China	0.3517	458	La Plata	Argentina	0.3351	498
Wuzhou	China	0.3512	459	Tunis	Tunisia	0.3348	499
Hermosillo	Mexico	0.3511	460	Songyuan	China	0.3347	500
Culiacan	Mexico	0.3506	461	Guilin	China	0.3340	501
Barquisimeto	Venezuela	0.3503	462	Jingmen	China	0.3336	502
Pingdingshan	China	0.3498	463	Tolyatti	Russia	0.3330	503
Pingxiang	China	0.3491	464	Longyan	China	0.3327	504
Barnaul	Russia	0.3489	465	Joao Pessoa	Brazil	0.3320	505
Grande Sao Luis	Brazil	0.3484	466	Sanya	China	0.3318	506
Mianyang	China	0.3476	467	Yingkou	China	0.3307	507
Nairobi	Kenya	0.3472	468	Ganzhou	China	0.3300	508
Port Elizabeth	South Africa	0.3467	469	Accra	Ghana	0.3281	509
Zigong	China	0.3454	470	Shangrao	China	0.3274	510
Cochabamba	Bolivia	0.3454	471	Pachuca de Soto	Mexico	0.3272	511
Luohe	China	0.3444	472	Yibin	China	0.3269	512
Liaoyang	China	0.3438	473	Irkutsk	Russia	0.3266	513
Liaocheng	China	0.3432	474	San Miguel de Tucuman	Argentina	0.3265	514
Reynosa	Mexico	0.3429	475	Liupanshui	China	0.3259	515
Balikpapan	Indonesia	0.3427	476	Krasnodar	Russia	0.3258	516
Bandung	Indonesia	0.3420	477	Tongling	China	0.3257	517
Novosibirsk	Russia	0.3417	478	Yangjiang	China	0.3255	518
Baoji	China	0.3417	479	Jingzhou	China	0.3252	519
Samsun	Turkey	0.3409	480	Linyi	China	0.3249	520
Luzhou	China	0.3402	481	Ryazan	Russia	0.3248	521
Yingtian	China	0.3396	482	Panzhuhua	China	0.3242	522
Cancun	Mexico	0.3395	483	Sanming	China	0.3235	523
Heze	China	0.3395	484	Campo Grande	Brazil	0.3235	524
Wroclaw	Poland	0.3385	485	Fushun	China	0.3227	525
Suqian	China	0.3384	486	Teresina	Brazil	0.3224	526
Wuhai	China	0.3383	487	Tonghua	China	0.3222	527
Trujillo	Peru	0.3380	488	Shuozhou	China	0.3220	528

Barranquilla	Colombia	0.3218	529	Qingyuan	China	0.3044	569
Kano	Nigeria	0.3217	530	Yulin (GX)	China	0.3039	570
Malang	Indonesia	0.3215	531	Xinyang	China	0.3037	571
Astrakhan	Russia	0.3214	532	Semarang	Indonesia	0.3036	572
Tbilisi	Georgia	0.3212	533	Meishan	China	0.3034	573
Ziyang	China	0.3207	534	Pune	India	0.3032	574
Xinxiang	China	0.3203	535	Jincheng	China	0.3028	575
Chennai	India	0.3198	536	Fangchenggang	China	0.3025	576
Kemerovo	Russia	0.3197	537	Kirkuk	Iraq	0.3021	577
Xianyang	China	0.3193	538	Zhoukou	China	0.3013	578
Shiyan	China	0.3192	539	Mexicali	Mexico	0.3010	579
Chihuahua	Mexico	0.3187	540	Esfahan	Iran	0.3008	580
Palembang	Indonesia	0.3182	541	Shaoguan	China	0.3006	581
Yulin (SX)	China	0.3169	542	Huaihua	China	0.3006	582
Huambo	Angola	0.3168	543	Kingston	Jamaica	0.3001	583
Karamay	China	0.3153	544	Padang	Indonesia	0.3000	584
Changde	China	0.3150	545	Weinan	China	0.2998	585
Feira De Santana	Brazil	0.3147	546	Mersin	Turkey	0.2998	586
Dhaka	Bangladesh	0.3137	547	Siping	China	0.2997	587
Datong	China	0.3137	548	Lishui	China	0.2996	588
Ningde	China	0.3133	549	Xianning	China	0.2996	589
Ta' if	Saudi Arabia	0.3131	550	Huainan	China	0.2995	590
Quzhou	China	0.3128	551	Sanmenxia	China	0.2995	591
Changzhi	China	0.3126	552	Yangquan	China	0.2985	592
Qinzhou	China	0.3123	553	Benin City	Nigeria	0.2979	593
Zhanjiang	China	0.3123	554	Makassar	Indonesia	0.2979	594
Xingtai	China	0.3115	555	Coimbatore	India	0.2978	595
Liaoyuan	China	0.3104	556	Hufuf-Mubarraz	Saudi Arabia	0.2973	596
Kochi	India	0.3099	557	Casablanca	Morocco	0.2957	597
Yiyang	China	0.3098	558	Yunfu	China	0.2953	598
Cairo	Egypt	0.3098	559	La Paz	Bolivia	0.2950	599
Hamadan	Iran	0.3092	560	Chelyabinsk	Russia	0.2940	600
Tegucigalpa	Honduras	0.3086	561	Rostov-on-Don	Russia	0.2939	601
Hengyang	China	0.3081	562	Alexandria	Egypt	0.2933	602
Benxi	China	0.3080	563	Orumiyeh	Iran	0.2924	603
Orenburg	Russia	0.3078	564	Medan	Indonesia	0.2912	604
Cuiaba	Brazil	0.3073	565	Ulan Bator	Mongolia	0.2897	605
Leshan	China	0.3067	566	Nanchong	China	0.2896	606
Sulaymaniyah	Iraq	0.3065	567	Ciudad Guayana	Venezuela	0.2891	607
Zhumadian	China	0.3047	568	Voronezh	Russia	0.2891	608

Yuncheng	China	0.2889	609	Jiamusi	China	0.2728	649
Tieling	China	0.2883	610	San Pedro Sula	Honduras	0.2726	650
Nanping	China	0.2879	611	Dazhou	China	0.2722	651
Misratah	Libya	0.2877	612	Hanzhong	China	0.2718	652
Kayseri	Turkey	0.2874	613	Chifeng	China	0.2715	653
Cuernavaca	Mexico	0.2873	614	Guang' an	China	0.2713	654
Bogor	Indonesia	0.2872	615	Chengde	China	0.2712	655
Tongliao	China	0.2871	616	Maceio	Brazil	0.2712	656
Ji' an	China	0.2870	617	Anqing	China	0.2708	657
Jiujiang	China	0.2864	618	Ibadan	Nigeria	0.2704	658
Morelia	Mexico	0.2859	619	Jinzhong	China	0.2704	659
Huludao	China	0.2859	620	Bhiwandi	India	0.2701	660
Krasnoyarsk	Russia	0.2848	621	Dehra Dun	India	0.2700	661
Xiaogan	China	0.2848	622	Chaoyang	China	0.2699	662
Enugu	Nigeria	0.2839	623	Shangqiu	China	0.2695	663
Tampico	Mexico	0.2836	624	Sanliurfa	Turkey	0.2684	664
Omsk	Russia	0.2833	625	Krivoi Rog	Ukraine	0.2681	665
Zhangjiakou	China	0.2831	626	Marrakech	Morocco	0.2677	666
Shizuishan	China	0.2830	627	Florianopolis	Brazil	0.2676	667
Concepcion	Chile	0.2829	628	Kannur	India	0.2666	668
Benghazi	Libya	0.2829	629	Jos	Nigeria	0.2663	669
Rasht	Iran	0.2819	630	Chittagong	Bangladesh	0.2661	670
Veracruz	Mexico	0.2817	631	Hyderabad	India	0.2659	671
Novokuznetsk	Russia	0.2807	632	Acapulco	Mexico	0.2656	672
Fuxin	China	0.2807	633	Yekaterinburg	Russia	0.2656	673
Shymkent	Kazakhstan	0.2805	634	Aracaju	Brazil	0.2655	674
Zaria	Nigeria	0.2801	635	Suining	China	0.2652	675
Ibague	Colombia	0.2794	636	Khabarovsk	Russia	0.2648	676
Celaya	Mexico	0.2782	637	Fuyang	China	0.2640	677
Libreville	Gabon	0.2780	638	Nizhny Novgorod	Russia	0.2640	678
Natal	Brazil	0.2777	639	Fuzhou (JX)	China	0.2636	679
Vereeniging	South Africa	0.2776	640	Kolkata	India	0.2632	680
Akure	Nigeria	0.2776	641	Bucaramanga	Colombia	0.2631	681
Eskisehir	Turkey	0.2769	642	Izhevsk	Russia	0.2631	682
Huangshan	China	0.2756	643	Gaza	State of Palestine	0.2629	683
Loudi	China	0.2750	644	Yan' an	China	0.2624	684
Jiayuguan	China	0.2748	645	Cebu	Philippines	0.2620	685
Kozhikode	India	0.2733	646	Neijiang	China	0.2608	686
Aba	Nigeria	0.2731	647	Dandong	China	0.2606	687
Phnom Penh	Cambodia	0.2730	648	Linfen	China	0.2605	688

Zunyi	China	0.2603	689	Meknes	Morocco	0.2431	729
Denizli	Turkey	0.2595	690	Chongzuo	China	0.2423	730
Rajshahi	Bangladesh	0.2584	691	Huanggang	China	0.2423	731
Chuzhou	China	0.2579	692	Kollam	India	0.2418	732
Kampala	Uganda	0.2575	693	Ahmedabad	India	0.2409	733
Oaxaca	Mexico	0.2571	694	Yongzhou	China	0.2399	734
Colombo	Sri Lanka	0.2568	695	Safaqis	Tunisia	0.2395	735
Yichun (JX)	China	0.2567	696	Kota	India	0.2393	736
Managua	Nicaragua	0.2565	697	Guwahati	India	0.2378	737
Guigang	China	0.2555	698	Oshogbo	Nigeria	0.2377	738
Chiclayo	Peru	0.2554	699	Port Said	Egypt	0.2373	739
Douala	Cameroon	0.2554	700	Volgograd	Russia	0.2373	740
Warri	Nigeria	0.2553	701	Thiruvananthapuram	India	0.2371	741
Tuxtla Gutierrez	Mexico	0.2541	702	Mangalore	India	0.2369	742
Suihua	China	0.2536	703	Suzhou (AH)	China	0.2367	743
Khartoum	Sudan	0.2536	704	Kermanshah	Iran	0.2362	744
Shanwei	China	0.2535	705	Can Tho	Vietnam	0.2358	745
Basra	Iraq	0.2532	706	Puducherry	India	0.2355	746
Chizhou	China	0.2531	707	Tlaxcala	Mexico	0.2352	747
Abidjan	Cote d' Ivoire	0.2528	708	Heyuan	China	0.2352	748
Qingyang	China	0.2525	709	Jinchang	China	0.2349	749
Port-au-Prince	Haiti	0.2519	710	Karbala	Iraq	0.2341	750
Qujing	China	0.2519	711	Bozhou	China	0.2341	751
Lahore	Pakistan	0.2511	712	Chisinau	Republic of Moldova	0.2339	752
Diyarbakir	Turkey	0.2501	713	Rabat	Morocco	0.2334	753
Owerri	Nigeria	0.2497	714	Suizhou	China	0.2323	754
Baishan	China	0.2487	715	Davao	Philippines	0.2322	755
Poza Rica	Mexico	0.2485	716	Anshun	China	0.2316	756
Cucuta	Colombia	0.2485	717	Haiphong	Vietnam	0.2314	757
Uyo	Nigeria	0.2484	718	Kitwe	Zambia	0.2311	758
Mudanjiang	China	0.2479	719	Santa Marta	Colombia	0.2311	759
Harare	Zimbabwe	0.2478	720	Kumasi	Ghana	0.2304	760
Durg-Bhilai Nagar	India	0.2474	721	Baicheng	China	0.2299	761
Karachi	Pakistan	0.2473	722	Vladivostok	Russia	0.2292	762
Kerman	Iran	0.2472	723	Guangyuan	China	0.2286	763
Tasikmalaya	Indonesia	0.2472	724	Salem	India	0.2285	764
Qom	Iran	0.2471	725	Makhachkala	Russia	0.2282	765
Malappuram	India	0.2457	726	Ludhiana	India	0.2281	766
Xalapa	Mexico	0.2453	727	Da Nang	Vietnam	0.2277	767
Xuancheng	China	0.2442	728	Lvliang	China	0.2263	768

Ulanqab	China	0.2251	769	Jodhpur	India	0.2079	809
Laibin	China	0.2229	770	Surat	India	0.2067	810
Ilorin	Nigeria	0.2226	771	Shangluo	China	0.2066	811
Onitsha	Nigeria	0.2223	772	Visakhapatnam	India	0.2063	812
Tangier	Morocco	0.2215	773	Lincang	China	0.2061	813
Meizhou	China	0.2215	774	Yerevan	Armenia	0.2041	814
Hulunbuir	China	0.2213	775	Thrissur	India	0.2040	815
Yaan	China	0.2205	776	Bhubaneswar	India	0.2040	816
Hanoi	Vietnam	0.2199	777	Islamabad	Pakistan	0.2037	817
Ho Chi Minh City	Vietnam	0.2198	778	Jalandhar	India	0.2037	818
Nasiriyah	Iraq	0.2197	779	Ulyanovsk	Russia	0.2035	819
Denpasar	Indonesia	0.2196	780	Pointe-Noire	Republic of the Congo	0.2031	820
Tabuk	Saudi Arabia	0.2196	781	Kinshasa	Democratic Republic of the Congo	0.2028	821
Cagayan de Oro	Philippines	0.2196	782	Amritsar	India	0.2027	822
Lusaka	Zambia	0.2190	783	Kathmandu	Nepal	0.2012	823
Ardabil	Iran	0.2186	784	Asansol	India	0.2012	824
Lu' an	China	0.2184	785	Bandar Lampung	Indonesia	0.2010	825
Baoshan	China	0.2182	786	Mosul	Iraq	0.2000	826
Lome	Togo	0.2180	787	Aurangabad	India	0.1986	827
Hezhou	China	0.2176	788	Sylhet	Bangladesh	0.1985	828
Konya	Turkey	0.2173	789	Shuangyashan	China	0.1969	829
Kharkov	Ukraine	0.2173	790	Durango	Mexico	0.1968	830
Qiqihar	China	0.2171	791	Erode	India	0.1961	831
Nagpur	India	0.2157	792	Nouakchott	Mauritania	0.1958	832
Wuzhong	China	0.2157	793	Qitaihe	China	0.1949	833
Pingliang	China	0.2155	794	Tirupati	India	0.1944	834
Xinzhou	China	0.2142	795	Patna	India	0.1930	835
Ankang	China	0.2141	796	Sialkot	Pakistan	0.1928	836
Tongchuan	China	0.2137	797	Zaporizhzhya	Ukraine	0.1927	837
Mombasa	Kenya	0.2131	798	Mysore	India	0.1925	838
Bahawalpur	Pakistan	0.2129	799	Donetsk	Ukraine	0.1921	839
Zhongwei	China	0.2122	800	Kolhapur	India	0.1915	840
Baise	China	0.2119	801	Sokoto	Nigeria	0.1914	841
Fes	Morocco	0.2107	802	Vellore	India	0.1910	842
Yazd	Iran	0.2104	803	Wuwei	China	0.1910	843
Hyderabad	Pakistan	0.2097	804	Tashkent	Uzbekistan	0.1904	844
Shaoyang	China	0.2091	805	Yaounde	Cameroon	0.1902	845
General Santos City	Philippines	0.2085	806	Khulna	Bangladesh	0.1898	846
Villavicencio	Colombia	0.2085	807	Jambi	Indonesia	0.1896	847
Bayannur	China	0.2083	808	Asmara	Eritrea	0.1891	848

Dakar	Senegal	0.1885	849	Zamboanga	Philippines	0.1700	889
Kaduna	Nigeria	0.1883	850	Salta	Argentina	0.1693	890
Dar es Salaam	Tanzania	0.1880	851	Bokaro Steel City	India	0.1685	891
Tianshui	China	0.1879	852	Cherthala	India	0.1685	892
Odessa	Ukraine	0.1873	853	Srinagar	India	0.1676	893
Jaipur	India	0.1873	854	Longnan	China	0.1666	894
Tiruchirappalli	India	0.1872	855	Guntur	India	0.1643	895
Zahedan	Iran	0.1868	856	Sekondi	Ghana	0.1640	896
Faisalabad	Pakistan	0.1864	857	Damascus	Syria	0.1639	897
Brazzaville	Republic of the Congo	0.1856	858	Lubumbashi	Democratic Republic of the Congo	0.1636	898
Baiyin	China	0.1854	859	Gwalior	India	0.1629	899
Bazhong	China	0.1854	860	Cuttack	India	0.1625	900
Pontianak	Indonesia	0.1846	861	Vijayawada	India	0.1615	901
Lucknow	India	0.1846	862	Zhangjiajie	China	0.1606	902
Dnipropetrovsk	Ukraine	0.1838	863	Lijiang	China	0.1606	903
Dingxi	China	0.1830	864	Raurkela	India	0.1603	904
Tiruppur	India	0.1823	865	Hegang	China	0.1603	905
Madurai	India	0.1822	866	Puer	China	0.1603	906
Jamshedpur	India	0.1821	867	Heihe	China	0.1602	907
Banjarmasin	Indonesia	0.1803	868	Vadodara	India	0.1600	908
Jixi	China	0.1789	869	Sukkur	Pakistan	0.1588	909
Bacolod	Philippines	0.1776	870	Hubli-Dharwad	India	0.1585	910
Kurnool	India	0.1775	871	Sangali	India	0.1583	911
Najaf	Iraq	0.1764	872	Indore	India	0.1582	912
Meerut	India	0.1758	873	Chandigarh	India	0.1577	913
Jammu	India	0.1757	874	Aligarh	India	0.1568	914
Ranchi	India	0.1756	875	Saharanpur	India	0.1560	915
Lvov	Ukraine	0.1754	876	Muzaffarnagar	India	0.1546	916
Kabul	Afghanistan	0.1738	877	Vientiane	Laos	0.1542	917
Rawalpindi	Pakistan	0.1735	878	Agadir	Morocco	0.1540	918
Zhangye	China	0.1728	879	Bien Hoa	Vietnam	0.1536	919
Guyuan	China	0.1724	880	Allahabad	India	0.1535	920
Varanasi	India	0.1723	881	Jiuquan	China	0.1530	921
Rajkot	India	0.1717	882	Bhopal	India	0.1522	922
Nashik	India	0.1708	883	Dhanbad	India	0.1516	923
Hechi	China	0.1707	884	Peshawar	Pakistan	0.1510	924
Namangan	Uzbekistan	0.1706	885	Gujranwala	Pakistan	0.1494	925
Zhaotong	China	0.1704	886	Suez	Egypt	0.1478	926
Jamnagar	India	0.1702	887	Kanpur	India	0.1461	927
Siliguri	India	0.1701	888	Yichun (HLJ)	China	0.1455	928

Bareilly	India	0.1455	929	Djibouti	Djibouti	0.1187	968
Zanzibar	Tanzania	0.1451	930	Firozabad	India	0.1185	969
Rangoon	Myanmar	0.1441	931	Malegaon	India	0.1175	970
Nyala	Sudan	0.1434	932	Bikaner	India	0.1144	971
Belgaum	India	0.1421	933	Gorakhpur	India	0.1115	972
Kigali	Rwanda	0.1410	934	Bishkek	Kyrgyzstan	0.1112	973
Bogra	Bangladesh	0.1407	935	Quetta	Pakistan	0.1101	974
Bulawayo	Zimbabwe	0.1404	936	Aleppo	Syria	0.1085	975
Agra	India	0.1401	937	Sargodha	Pakistan	0.1078	976
Bhavnagar	India	0.1387	938	Nay Pyi Taw	Myanmar	0.1047	977
Freetown	Sierra Leone	0.1387	939	Bamako	Mali	0.1040	978
Amravati	India	0.1384	940	Raipur	India	0.1018	979
Cotonou	Benin	0.1379	941	Al-Raqqqa	Syria	0.1009	980
Moradabad	India	0.1374	942	Blantyre-Limbe	Malawi	0.1001	981
Solapur	India	0.1370	943	Bouake	Cote d' Ivoire	0.0996	982
Gulbarga	India	0.1369	944	Ouagadougou	Burkina Faso	0.0991	983
Ajmer	India	0.1363	945	Aden	Yemen	0.0975	984
Durgapur	India	0.1358	946	Matola	Mozambique	0.0943	985
Imphal	India	0.1338	947	Tshikapa	Democratic Republic of the Congo	0.0882	986
Jabalpur	India	0.1311	948	Homs	Syria	0.0872	987
Monrovia	Liberia	0.1298	949	Conakry	Guinea	0.0867	988
Niamey	Niger	0.1293	950	Mandalay	Myanmar	0.0846	989
Multan	Pakistan	0.1289	951	Maputo	Mozambique	0.0832	990
Maiduguri	Nigeria	0.1288	952	Antananarivo	Madagascar	0.0767	991
Tirunelveli	India	0.1282	953	Mbuji-Mayi	Democratic Republic of the Congo	0.0766	992
Hamah	Syria	0.1281	954	Bujumbura	Burundi	0.0765	993
Nanded Waghala	India	0.1271	955	Bobo Dioulasso	Burkina Faso	0.0765	994
Latakia	Syria	0.1266	956	Dushanbe	Tajikistan	0.0693	995
Kayamkulam	India	0.1261	957	Lilongwe	Malawi	0.0690	996
Mathura	India	0.1258	958	Kananga	Democratic Republic of the Congo	0.0659	997
Ujjain	India	0.1242	959	Bukavu	Democratic Republic of the Congo	0.0639	998
Mwanza	Tanzania	0.1242	960	Hargeysa	Somalia	0.0622	999
Jhansi	India	0.1221	961	Mogadishu	Somalia	0.0560	1000
Nellore	India	0.1218	962	Nampula	Mozambique	0.0519	1001
Abomey-Calavi	Benin	0.1212	963	Hodeidah	Yemen	0.0519	1002
Sana' a'	Yemen	0.1206	964	N' Djamena	Chad	0.0302	1003
Addis Ababa	Ethiopia	0.1205	965	Taiz	Yemen	0.0234	1004
Warangal	India	0.1197	966	Bangui	Central African Republic	0.0189	1005
Nnewi	Nigeria	0.1194	967	Kisangani	Democratic Republic of the Congo	-0.000	1006

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