

CHAPTER 4:

# THE CDB DATABASE

## URBAN INDICATORS

**T**he following presents the CDB indicators in detail. Each indicator shows the indicator definition, warning trend, and significance. Charts and tables are shown for each indicator and scattergrams have been plotted as relevant. Sources of data, methods of calculation, and time period of the indicator data are detailed in the Notes and Sources of each city indicator in Chapter 7.

## Definitions and Significance

### Indexes

#### CITY DEVELOPMENT INDEX

The City Development Index ranks cities in the development spectrum and combines city product with infrastructure, waste management, health and education indicators. The CDI can be calculated using the following formula:

Formula =  $(\text{Infrastructure index} + \text{waste index} + \text{health index} + \text{education index} + \text{product index}) / 5$

Infrastructure 25\* water connections + 25\* sewerage + 25\* electricity + 25\* telephone

Waste Wastewater treated\* 50 + garbage collection\* 50

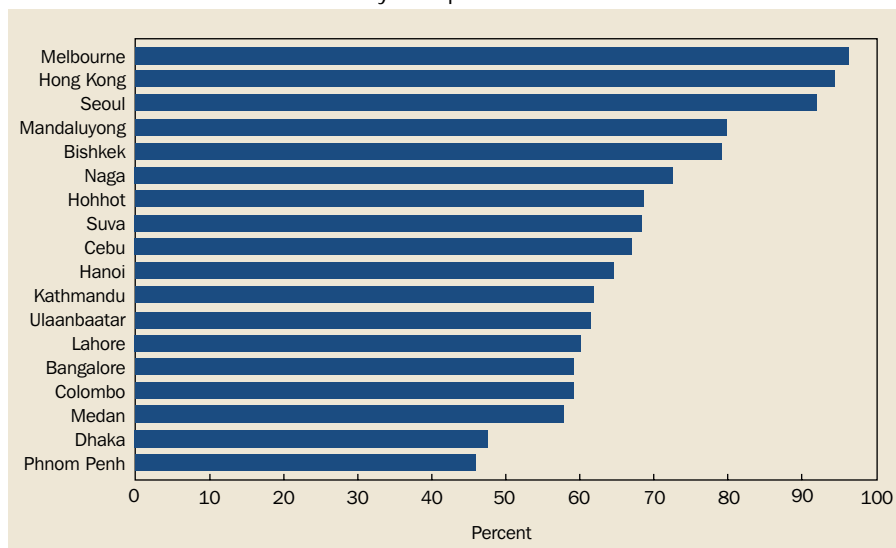
Health  $(\text{life expectancy}-25) * 50/60 + (32-\text{child mortality}) * 50/31.92$

Education Literacy\* 25 + primary enrollment\* 25 + secondary enrollment\* 25 + graduates /350

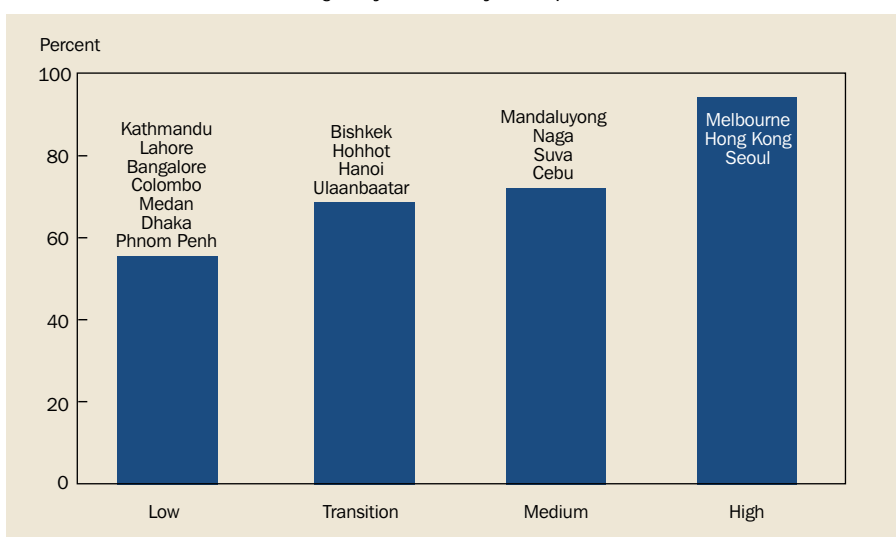
Product  $(\ln \text{city product} - 4.61) * 100/5.99$

## City Development Index

City Development Index



Clustering Analysis of the City Development Index



## Definitions and Significance

### CONNECTIVITY INDEX

It includes: flights, international phone calls, tourism, headquarters of large corporations, and internet hosts per 1,000 population. The index measures the extent to which the city is connected to the rest of the world.

**Formula** =  $(\log \text{internet} + .71)/6.34 + \log \text{corporations}/6.7 + (\log \text{tourists} - 3.42)/5.75 + (\log \text{flights} - 4.33)/5.27 - 0.07/3.3$

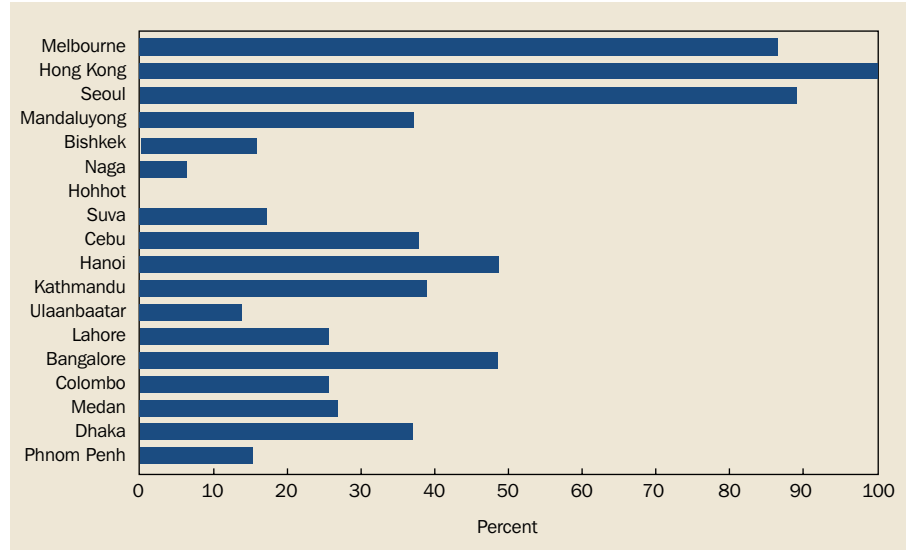
### CONGESTION INDEX

The congestion index measures crowding. It is uncorrelated with the CDI, favoring smaller, more dispersed cities with good transport networks.

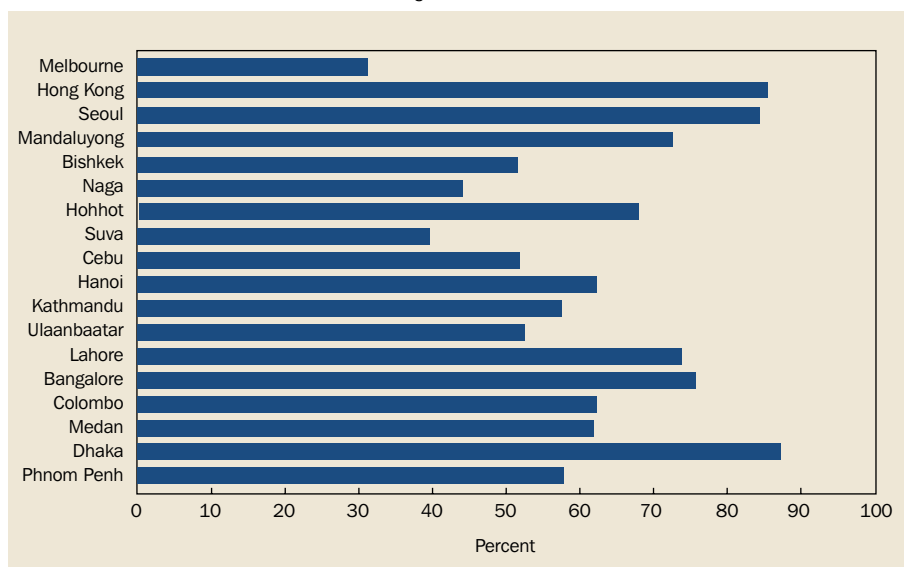
**Formula** =  $(\log \text{travel time} - 2.08) * 30/2.71 + 0.3 * (\log \text{residential density} - 1.98) * 30/4.89 + 40 * (\log \text{population} - 2.78)/6.7$

## City Development Index

Connectivity Index



Congestion Index



Indicators

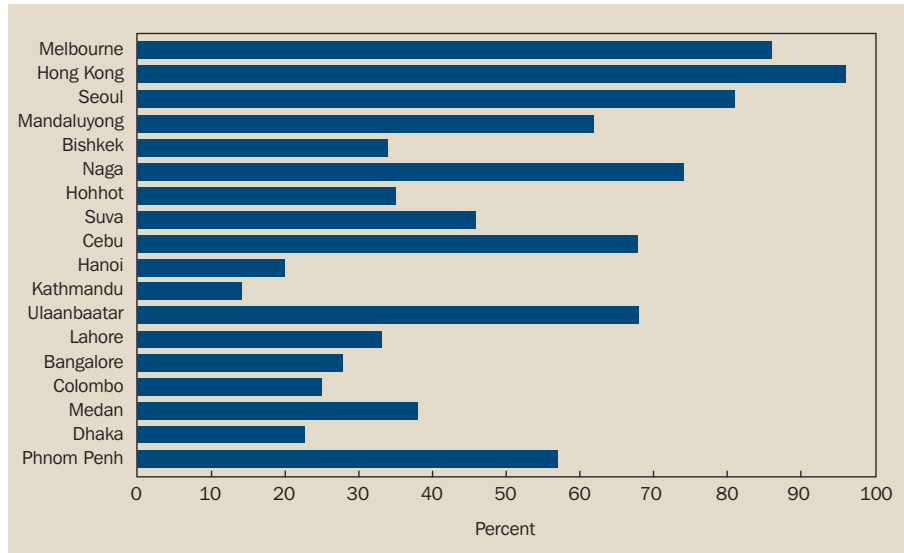
POPULATION

**Urbanization.** This covers the percentage of national population in urban areas. Urban areas are defined as settlements over 1,000 people. *Warning trend:* Overly rapid urbanization will lead to pressure on infrastructure and resources. Negative urbanization generally corresponds to a fall in national income. *Significance:* Rapid urbanization has been the major phenomenon of the 20th century, which will continue into the 21st. Urbanization is the background against which other changes to most cities in developing countries are taking place.

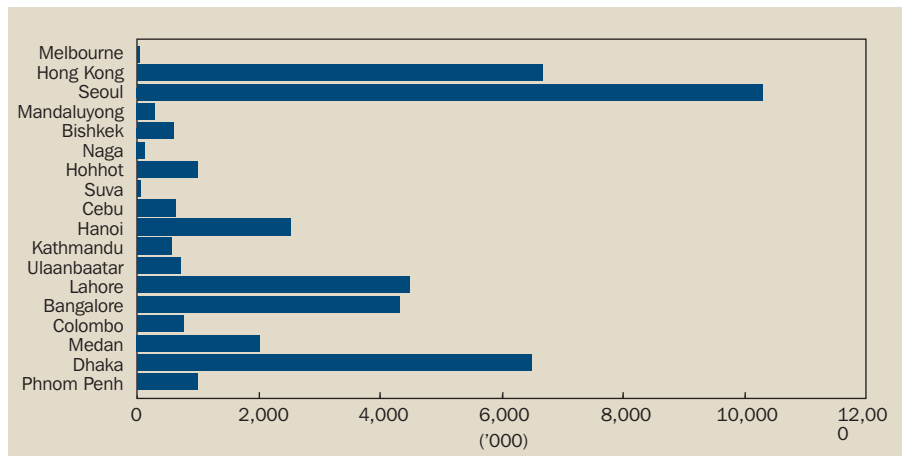
**City Population.** This includes (a) the resident population of the municipal area; (b) the population during daytime working hours, if substantially different; and (c) the annual rate population increase. *Significance:* Population is the denominator for many indicators, and is a measure of demand for services. Daytime populations of city centers can be much higher than resident populations, because of the presence of the workforce. This will affect demand for services.

1. Population

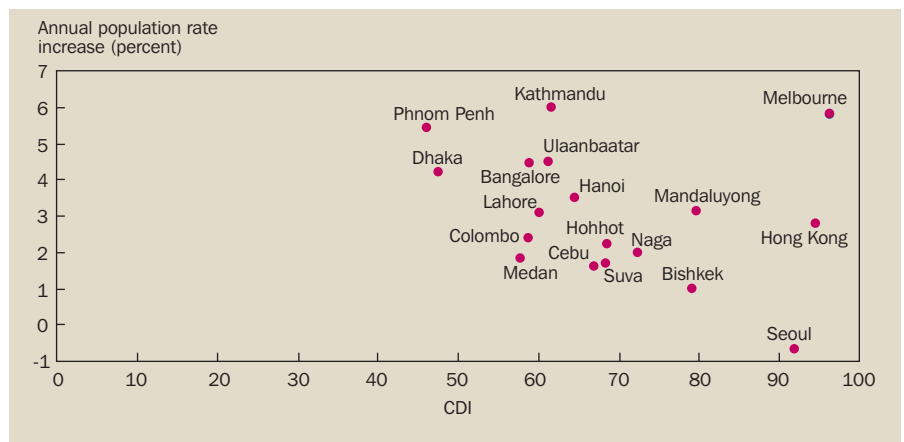
Urbanization



City Population



CDI vs. Annual Population Rate Increase



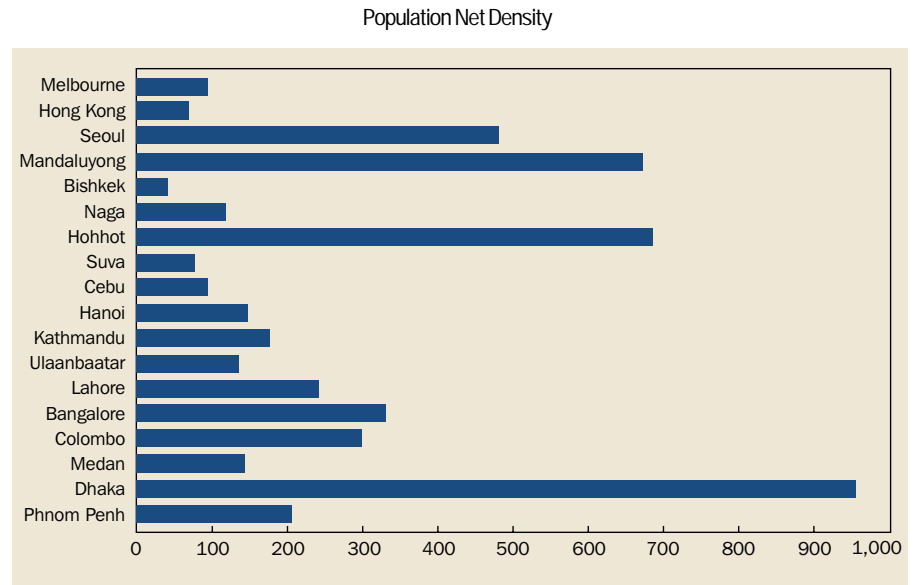
NOTES

- There is a need to distinguish population increase due to internal migration and natural increase.
- Women - headed households are defined in some cities.

## Definitions and Significance

**Population Net Density, Persons per Hectare.** City Population divided by Net Residential Land in hectares. Net Residential Land includes all built-up land zoned as residential, including open space and roads. A proportion of mixed-use land has been added, according to an estimate of the relative floor space usage by business and residential. In estimating population net density, the land for the informal settlements can be added to the residential land, and a proportion of the mixed-use land based on floor space for residential and other uses. *Warning trend:* Too high – crowding can lead to health risks, and pressure on transport and services. Too low – becomes expensive to provide services, and mass transit is not viable. *Significance:* Urban density is a measure both of crowding and the viability of services.

## 1. Population

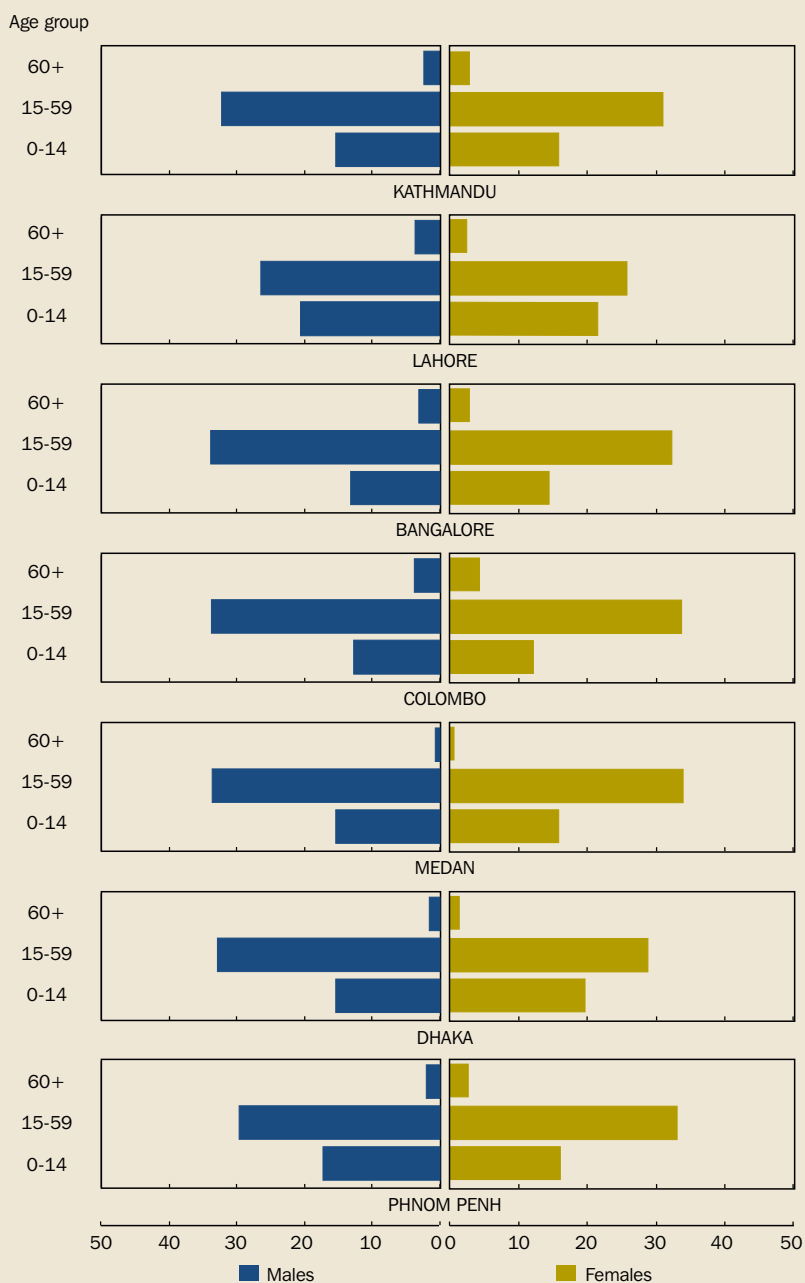


### NOTE

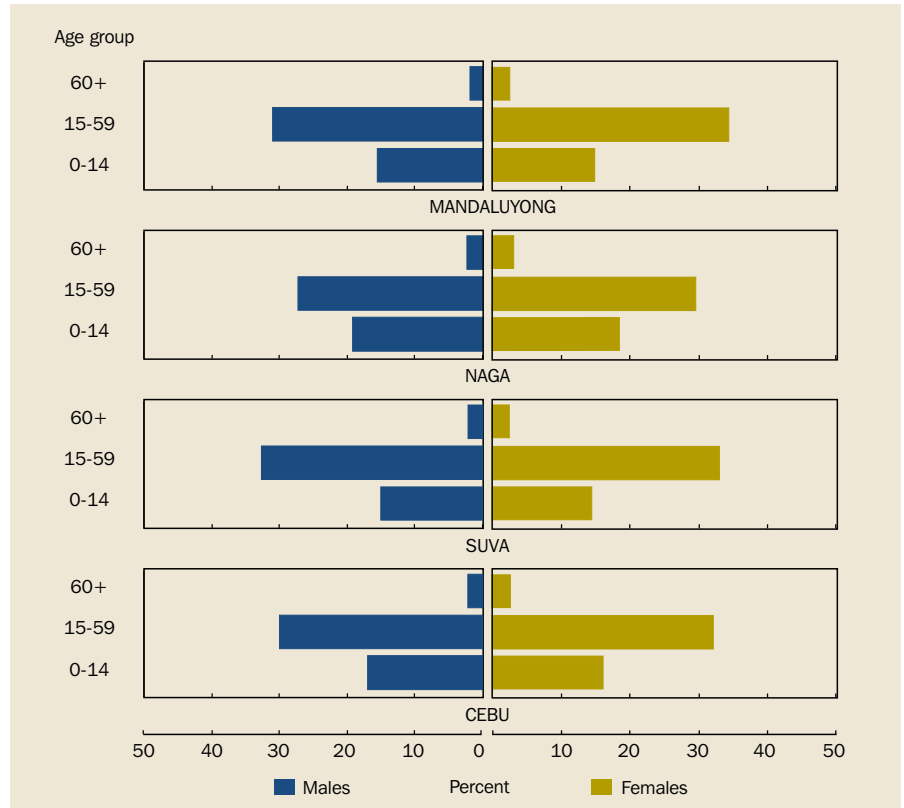
- Data on net population density depends on what has been netted from residential land, i.e., whether informal settlements are included and how mixed land use is handled.

**Age Pyramid.** This covers the number (thousands) of males and females in age categories: (a) Persons 0-14, (b) Persons 15-59, and (c) Persons over 60. The total matches with city population. The age distribution is known as a pyramid because if, say, numbers are expressed as a two-way bar chart for 5-year age groups, with the youngest at the bottom, it usually shows a pyramid structure when the population is growing. *Warning trend:* High proportions of aged and children will put pressure on various services and on the workforce, to support them. *Significance:* Children and old people require special services.

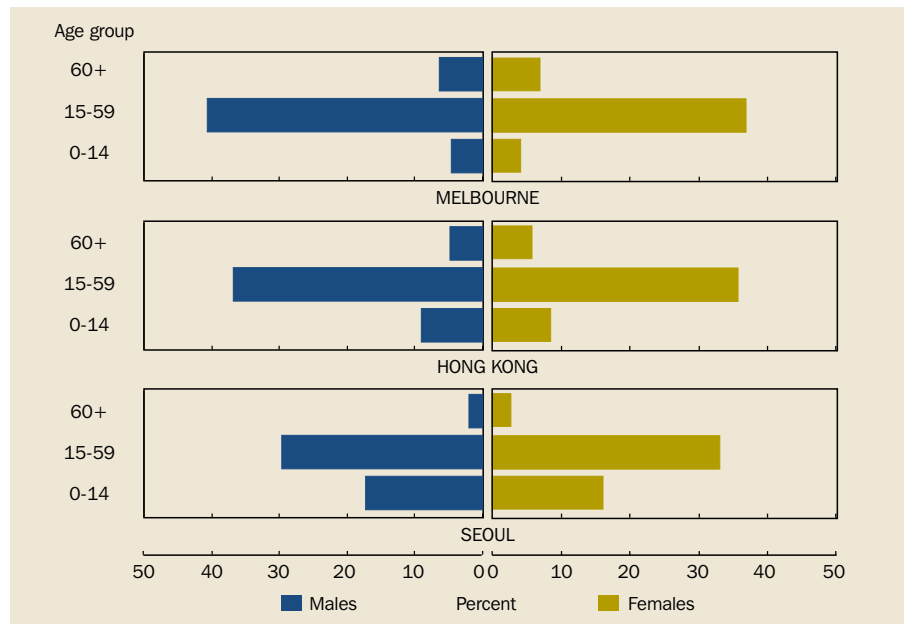
Average Population by Age Bracket, Low-Developed Cities



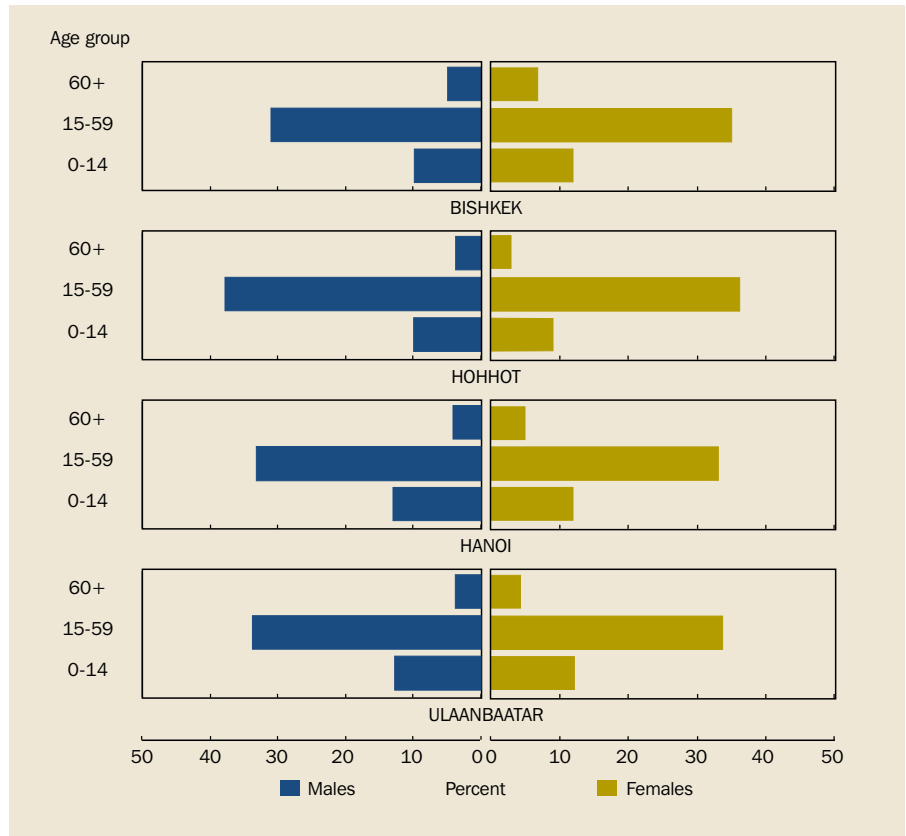
Average Population by Age Bracket, Medium-Developed Cities



Average Population by Age Bracket, High-Developed Cities



Average Population by Age Bracket, Transition Cities





## Definitions and Significance

**Average Household Size.** The city population is divided by the total number of households. If a full census of households is not available, the number of households and number of occupied dwellings can be taken as the same (presuming there are not too many multi-household dwellings). Alternatively, a survey is used to estimate average household size between censuses. *Significance:* Attitudes to large households are culturally determined; large households may be extended families, large numbers of children, or overcrowding, depending on circumstances. Small households may be a sign of prosperity, but may indicate a future problem of declining population.

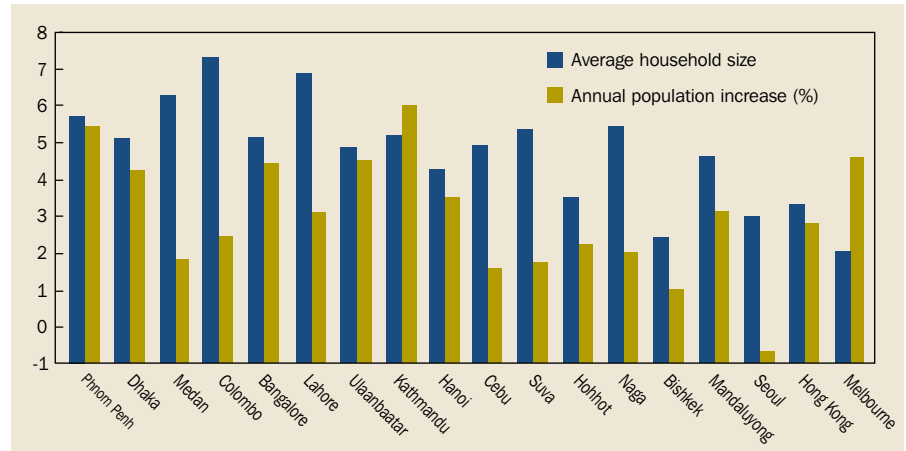
**Household Formation Rate.** This is the annual rate of increase in number of households. *Warning trend:* If less than the population growth rate, an increase in household size is implied, which may imply crowding, a lack of housing, and probably worsening economic conditions. *Significance:* It represents the implied demand for housing. If as is normal, it is increasing faster than the population, this represents the division of existing households to form new ones.

### NOTE

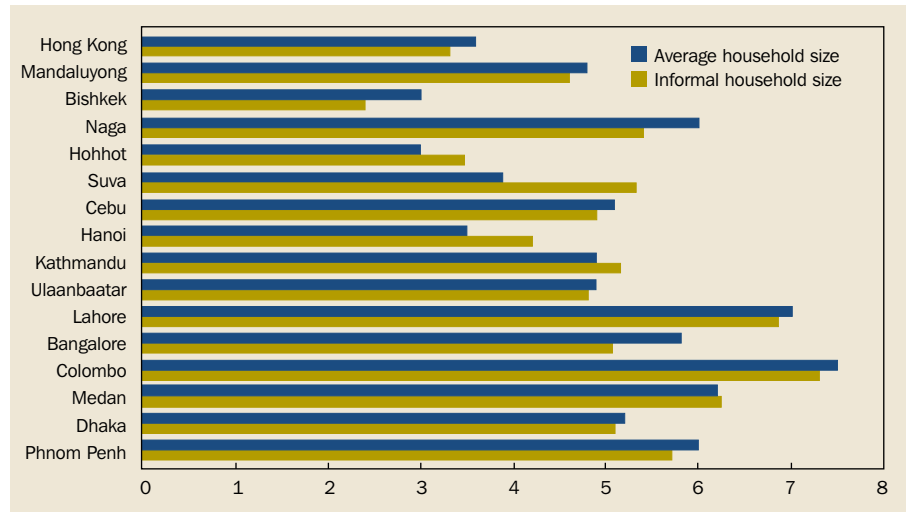
- Long intercensal periods used to calculate household formation rate may not reflect the current situation.

## 1. Population

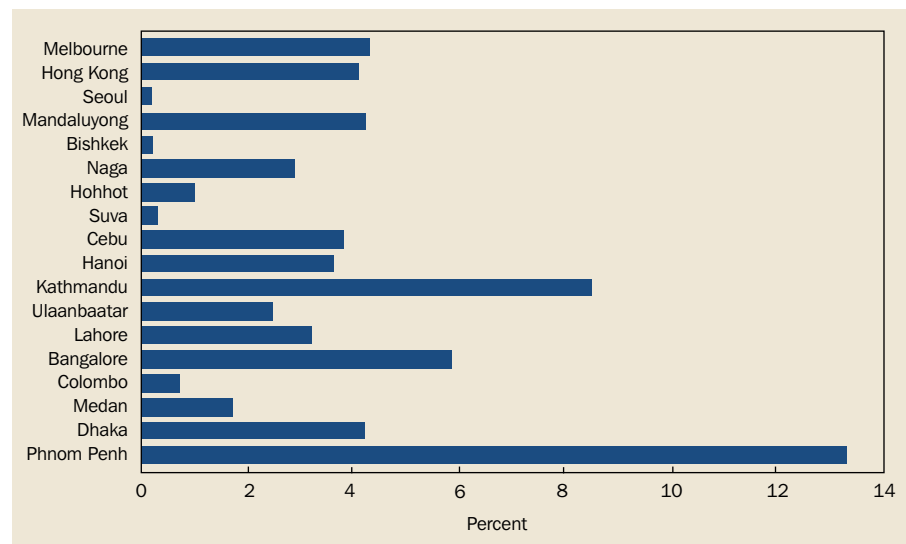
Average Household Size vs. Annual Population Increase



Average Household Size vs. Informal Household Size



Household Formation Rate



## Definitions and Significance

**Women-Headed Households.** This is the percent of households headed by women. *Warning trend:* High proportions of women-headed households are indicative of social breakdown or an absent male population. *Significance:* Women-headed households have special problems: in many parts of the world they are significantly poorer, and if they are sole parent households, are more likely to have difficulty with rearing children.

**Household Types.** Types of household include (a) single person; (b) adults only; (c) single parent family, and; (d) adults and children. *Significance:* The prevalence of different family types describes much of the social structure of a community.

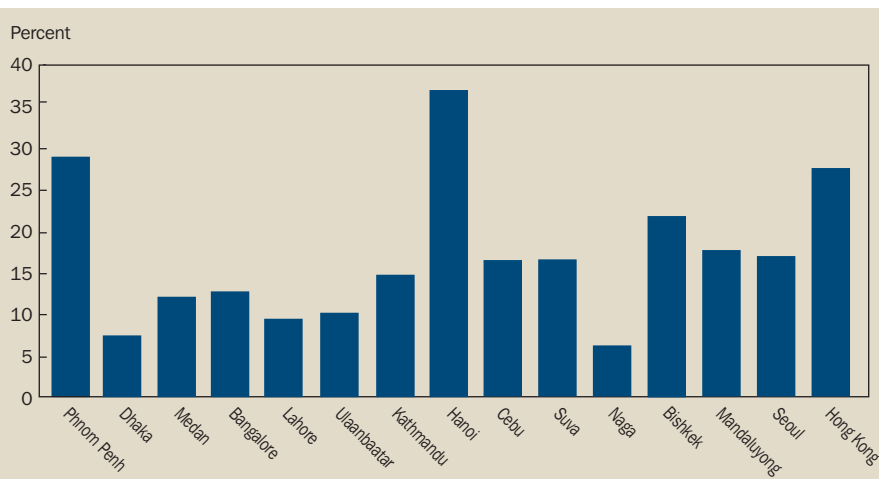
**Informal Settlements.** For informal settlements (a) population, (b) households, and (c) land occupied have been used to calculate persons per household and population density. *Warning trend:* A large proportion of the population living in informal settlements may imply that much of the population is living illegally and in crowded, unhealthy conditions. *Significance:* Informal settlements are a prime symptom of rural-urban migration that is too rapid and cannot be dealt with by urban management. Once established, they can last for a very long time if ignored by the establishment. Population densities and persons per household are generally much higher in informal settlements. This often corresponds to substandard living conditions. There will be future pressure for regularization, upgrading or resettlement. On the other hand, informal settlements provide genuinely affordable housing to poorer residents, particularly recent immigrants to the city, and have formed much of the core of older European cities in the past.

### NOTE

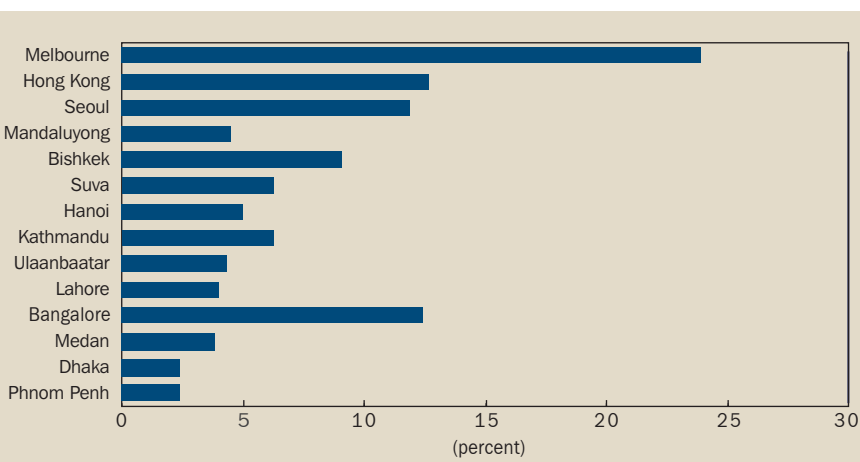
- Definition and boundaries of informal settlements are not clear.

## 1. Population

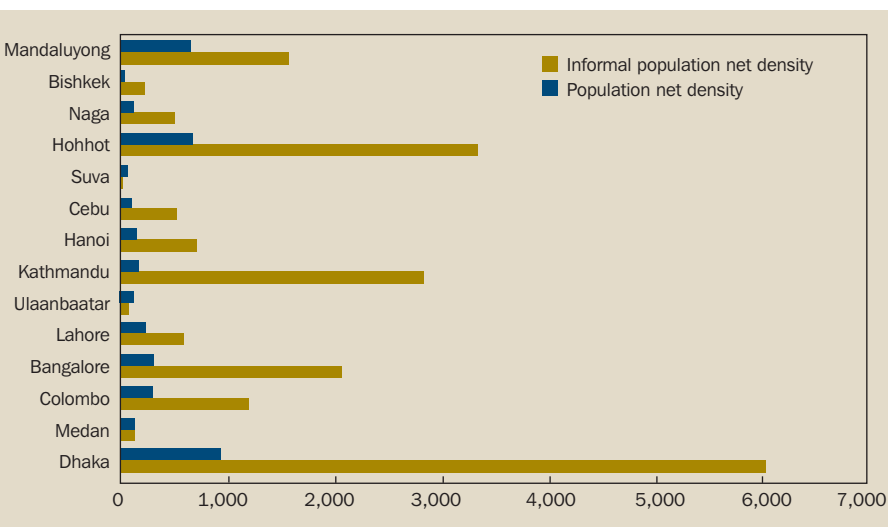
Women-Headed Households



Single-Person Households



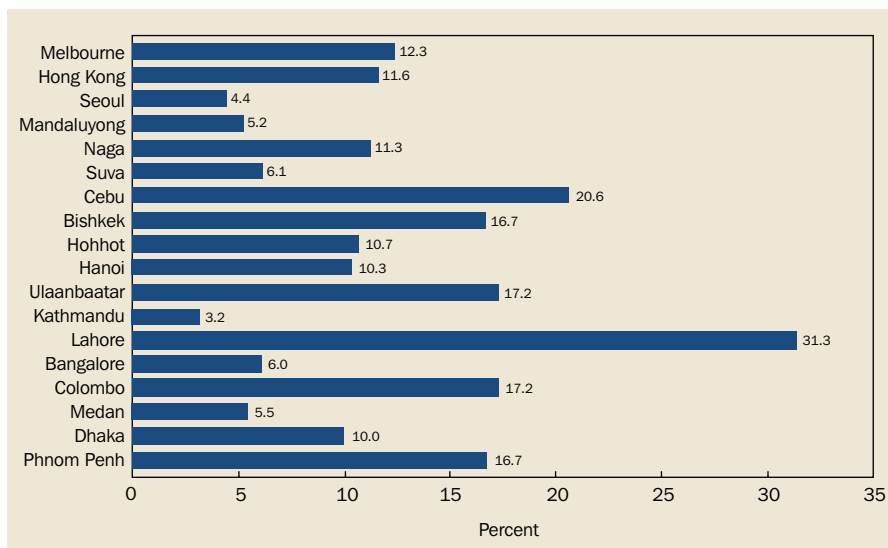
Informal Population Net Density vs. Population Net Density



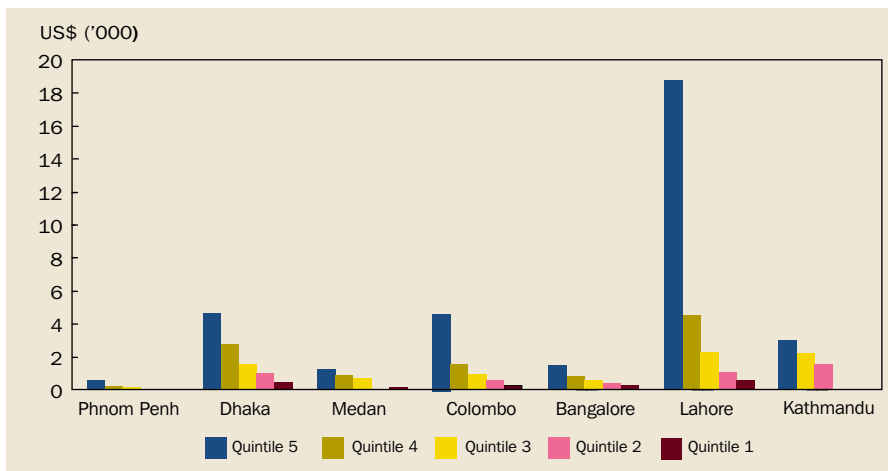
EQUITY

**Income Distribution.** This shows annual household income by quintile: income range (maximum and minimum) and average income in the quintile, in US\$. (a) Q5. Top 20%; (b) Q4. Next 20%; (c) Q3. Middle 20%; (d) Q2. Next bottom 20%, and; (e) Q1. Bottom 20%. Quintiles are obtained by dividing households into 5 equal groups ordered by income. It is particularly important to know the average income of the top 20%. *Warning trend:* Increasing inequality indicates that part of the community is not participating in social wealth. Inequality is often associated with social unrest and increases in crime. *Significance:* This information can be used to calculate several different measures of income dispersion—the Gini Index, and the Income Inequality Ratio, which take the ratio of the income of the top 20% to the bottom 20%. Note that the median household income can be taken as the average income in the third quintile—which is useful for other indicators.

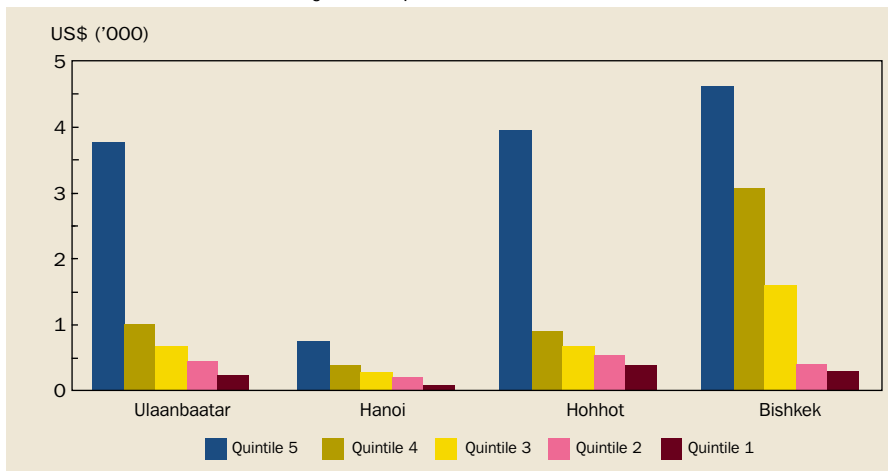
Income Inequality Ratio



Average Income per Quintile: Low-Developed Cities

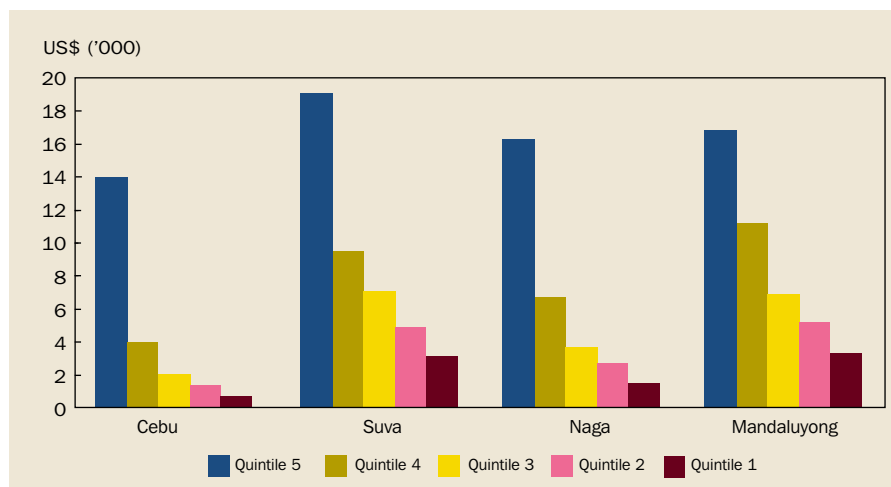


Average Income per Quintile: Transition Cities

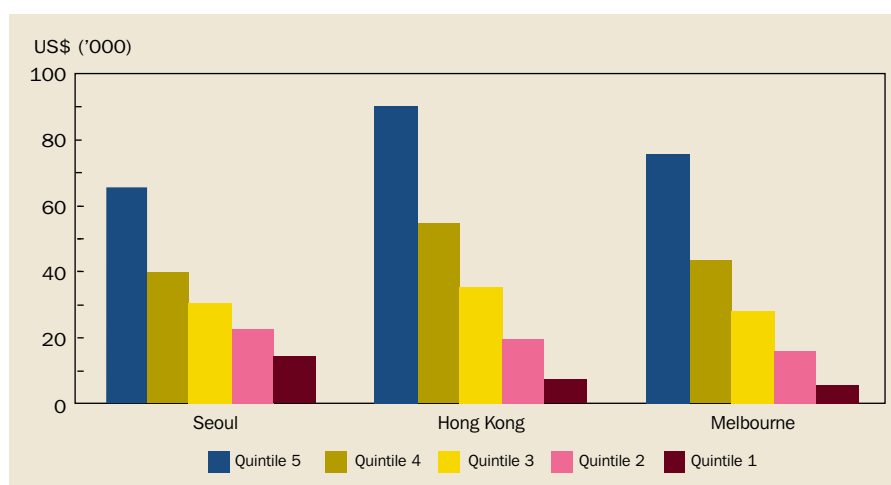


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Average Income per Quintile: Medium-Developed Cities



Average Income per Quintile: High-Developed Cities



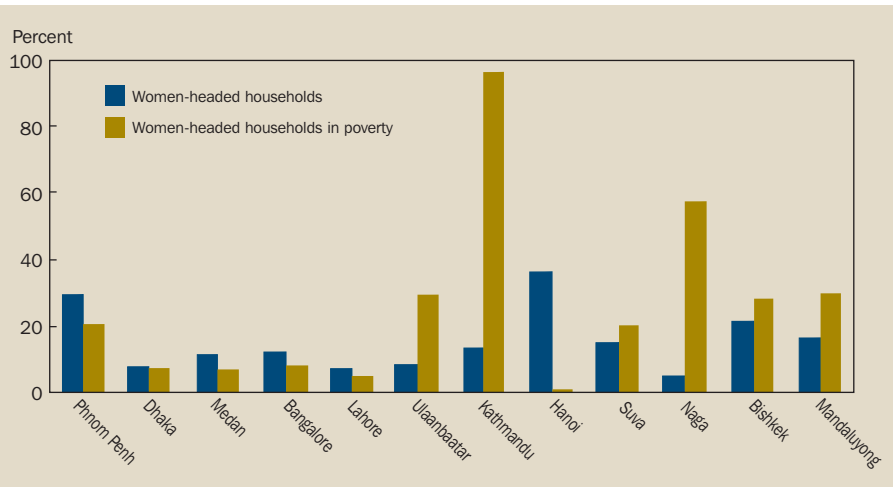
## Definitions and Significance

### HOUSEHOLDS BELOW POVERTY LINE

**Women-Headed Households in Poverty.** This refers to the proportion of households below the poverty line. Households with income of US\$ 1 a day. *Warning trend:* Rising poverty means either greater income inequality or lower national incomes, and an increase in all the major pathologies associated with poverty. *Significance:* Poverty alleviation is a major objective of all governments and the major objective of development aid agencies. Poverty is associated with malnutrition, illiteracy, social and economic exclusion, and in some cases, crime and social breakdown. Women-headed households are considered to be more vulnerable to poverty than other households in many places.

## 2. Equity

Women-Headed Households in Poverty vs. Women-Headed Households



#### NOTES

- Poverty lines can vary from one city to another. It is important to clarify the basis for the poverty line.

## Definitions and Significance

**Child Labor.** This refers to the number of employed or economically active persons under 15 years of age. Children should be considered as employed if they are working largely in producing goods or services for sale, even where they are nominally in a “school” or similar. *Warning trend:* Ideally, child labor should be nonexistent under international treaties. *Significance:* Child labor is used because it is cheap, in occupations where children may be effective in producing goods and services. However, this particularly vulnerable group is liable to exploitation, and may not receive proper education.

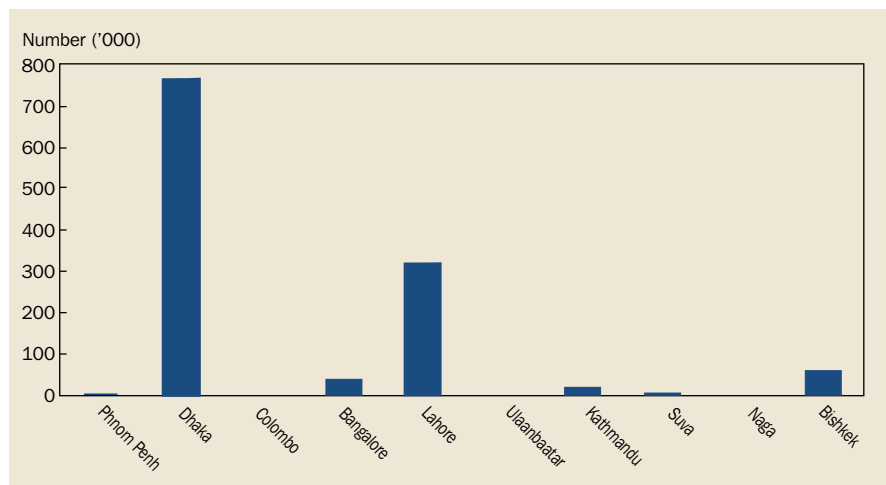
**Unemployment.** This is defined as those above 15 “without work, currently available for work and seeking work,” as a percentage of the full time workforce (employed + unemployed). *Warning trend:* High unemployment is a primary indicator of weakness in the formal economy. *Significance:* In industrialized countries, unemployment rates are probably the most familiar indicators of all expressing the health of the economy and the success of government economic policy. Unemployment is usually regarded as structural (due to changes in the structure of economy, firms closing, etc.), frictional (due to migration of people, firms, etc.), and temporary (due to the short-term nature of some kinds of employment).

### NOTE

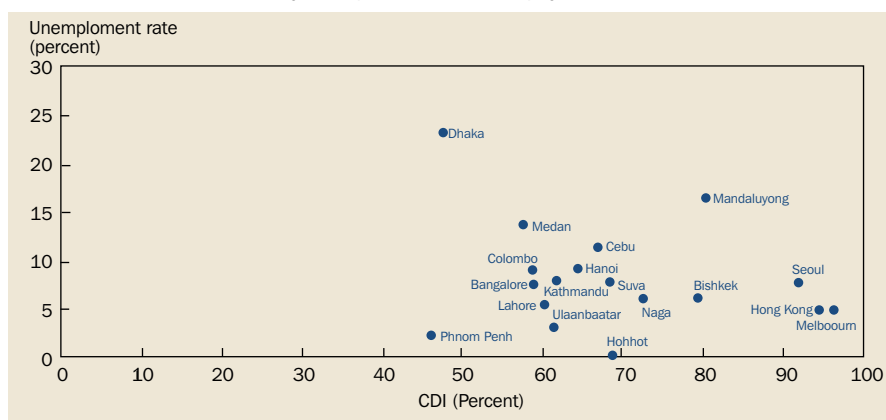
- Employable age groups and /or labor force participation rates may also vary and it is necessary to understand local definitions which some cities tend to adopt.

## 2. Equity

Child Labor



City Development Index vs. Unemployment Rate



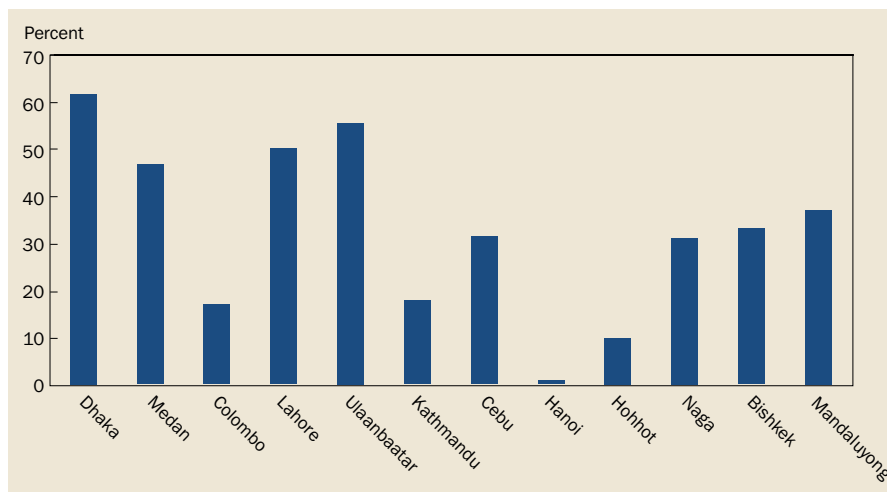
## Definitions and Significance

**Informal Employment.** This shows percentage of the total workforce whose major income earning activity is part of the informal sector. The informal sector “consists of persons engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organization, with little or no division between labor and capital as factors of production and on a small scale. The informal sector includes (a) all unregistered commercial enterprises, and (b) all non-commercial enterprises that have no formal structure in terms of organization and operation.” Essentially, it consists of unregistered enterprises, and enterprises with no formal structure. *Warning trend:* A large informal sector is a sign of an undeveloped economy. *Significance:* The informal sector has played an increasing role in the expansion of production in rapidly growing cities in developing countries. The informal sector has great freedom of action, being by definition free of government interference, and will tend to deliver labor resources to productive areas of the economy. Nevertheless it is typically under-capitalized, with no access to business finance, little access to the formal parts of the economy, and lacking resources for export development or for expansion. Workers in the informal economy have no legally defined rights, no access to government welfare in the event of illness or old age, may work under unsafe conditions, and are usually dependent on their wits for survival.

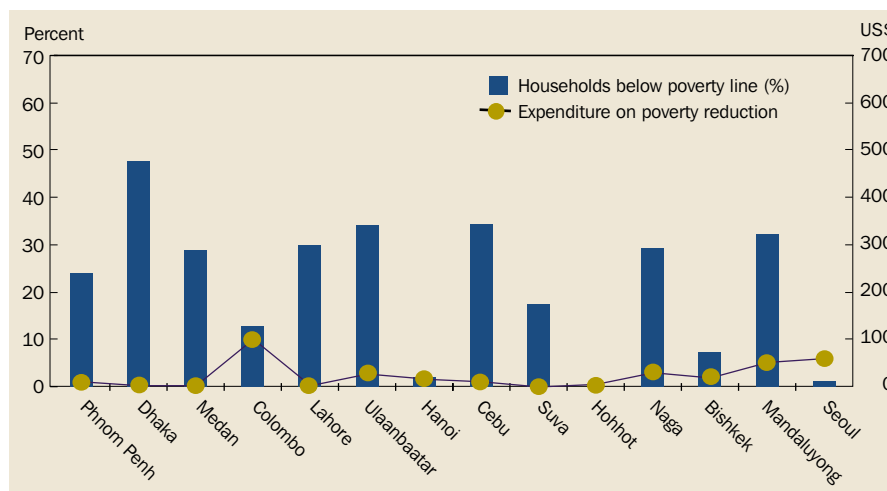
**Expenditure on Poverty Reduction.** This covers capital and recurrent expenditure on poverty reduction programs in 1998, all sources including government and NGOs, per poor person. Capital expenditure includes building of housing, shelters, slum relocation, service upgrading, etc. Recurrent expenditure includes food, income, rent and medical assistance, operating expenses of shelters, etc. Only direct subsidies are included. More general expenditures such as basic education, primary health care, safe drinking water, adequate sanitation, family planning, etc. applying to the whole community should be included only if they are delivered primarily to the poor. *Warning trend:* Low expenditure per person ensures that poverty will continue; with other associated undesirable effects such as illiteracy, diseases, malnutrition, etc. *Significance:* This expenditure is the primary response to poverty.

## 2. Equity

Informal Employment Rate



Households below Poverty Line vs. Expenditure on Poverty Reduction



## Definitions and Significance

### HEALTH AND EDUCATION

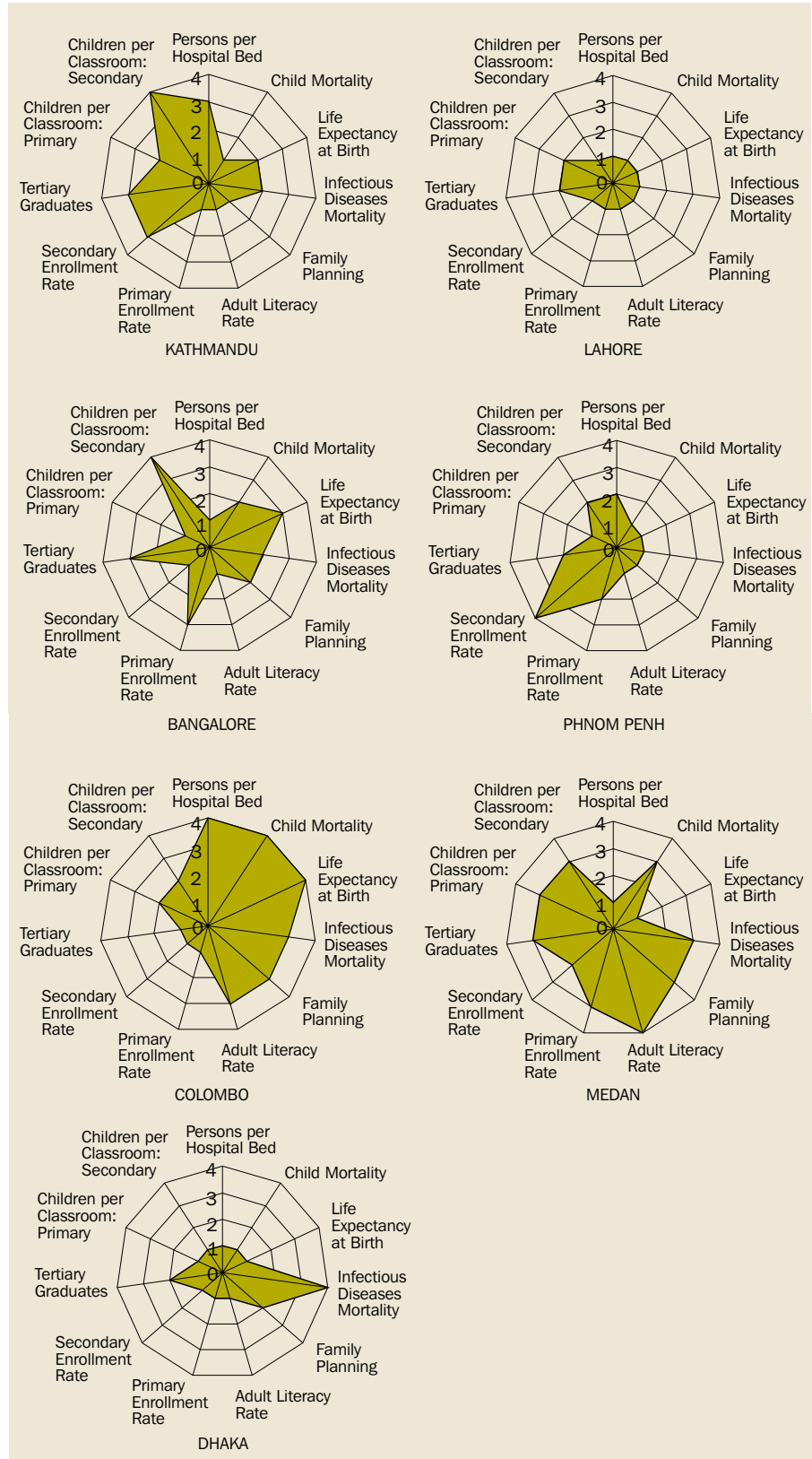
**Persons per Hospital Bed.** This is the city population divided by total number of hospital beds in the city. Includes both public and private hospitals. *Warning trend:* High ratios imply crowded hospitals and poor health service. *Significance:* Primary measure of adequacy of health infrastructure.

**Child Mortality.** This refers to the probability that a child will die before its fifth birthday, as a percentage. *Significance:* Child mortality is a primary outcome of inadequate health care and sanitation.

**Infectious Diseases Mortality per Thousand Population.** This can be computed as (Deaths from infectious diseases x 1,000) divided by City Population. Infectious diseases include all those that can be passed down from person to person. *Warning trend:* Rising death rates imply that medical care is failing, sanitation is worse, or that an epidemic is under way. *Significance:* Infectious diseases are passed on mostly through water, food or insect vectors, and reflect the quality of water and food, the control of insect pests, and the standard of medical care.

## 3. Health and Education

### Health and Education, Low-Developed Cities



#### NOTES

- It is important to consider past population as well as current data.
- Re "Infectious Disease Mortality," note that not all patients are necessarily residents of the city.



## Definitions and Significance

**Family Planning.** This is the percentage of married couples with females in the fertile age group that practices family planning in some form. *Warning trend:* Lack of family planning corresponds to high birth rates, large families and older mothers with children who have higher rates of congenital deformity. It may also correspond to the spread of venereal diseases including AIDS. *Significance:* Family planning is strongly encouraged in countries where the population is increasing faster than economic capacity. Prevalence depends on family planning programs, religious practices and the education level of women.

**Adult Literacy Rate.** This refers to the percentage of adult population who are literate. Literacy is defined as being "able to read and understand a simple paragraph in their first written language." *Warning trend:* High or increasing. *Significance:* Illiterate people are unlikely to be able to improve their economic or social situation. A high illiteracy rate will mean that few people are available for modern economic activity or administration.

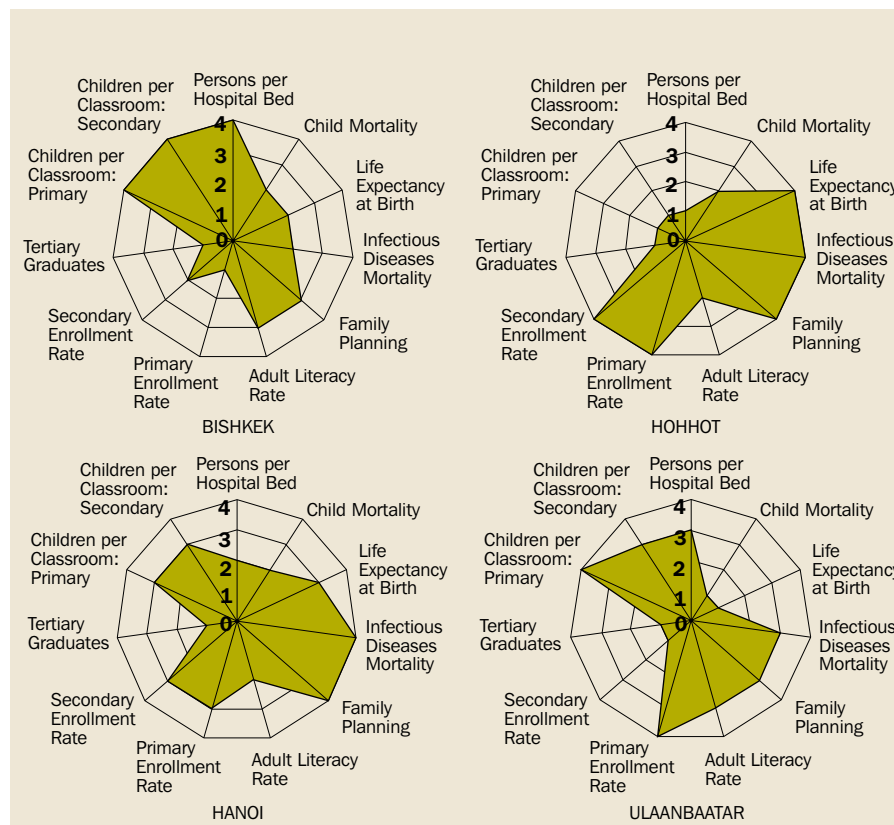
**School Enrollment Rates.** This covers percentage of children of eligible age, by sex who are enrolled in: (a) primary school, and (b) secondary school. The ages at which enrollment for primary and secondary education is expected to differ between countries, but are generally 6-12 years and 12-17 years of age, respectively. *Warning trend:* Low school enrollment rates correspond to a lack of literacy and numeracy in the population. *Significance:* The success in retaining children in school is a major measure of social development and the ability of society to sustain human resource investment. Many countries have different enrollment rates for boys and girls, particularly in secondary school, which reflects cultural attitudes and differential access to educational opportunities.

### NOTES

- It may also be important to analyze type of graduates being produced (e.g., new technology-based) by local universities aside from determining the number of tertiary graduates.
- Some cities employ shift arrangements, in which case apparent classroom overcrowding may not be so.

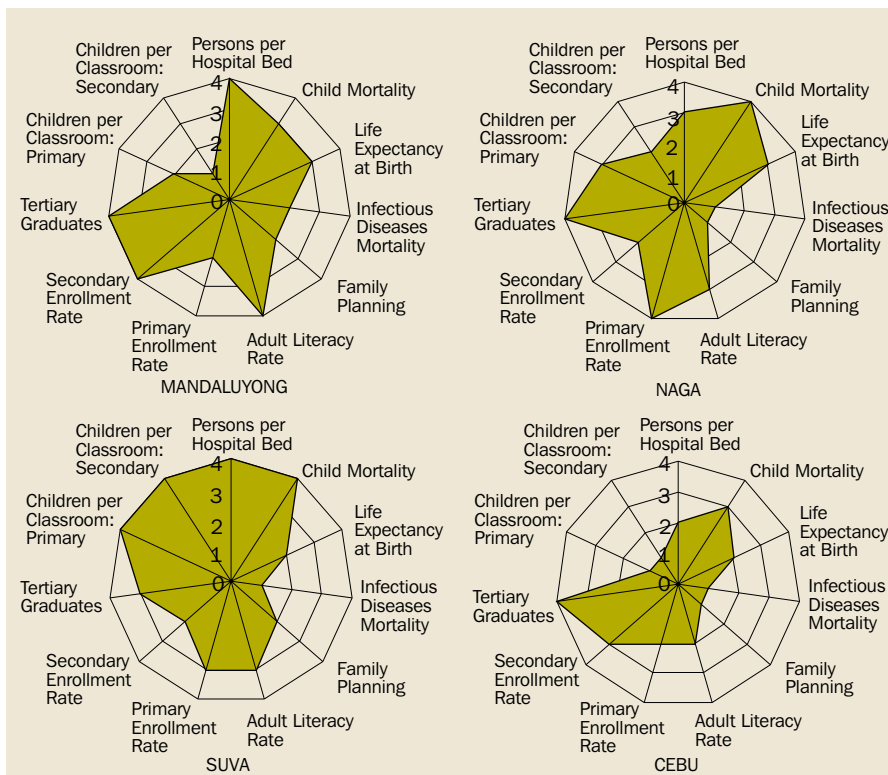
## 3. Health and Education

### Health and Education, Transition Cities

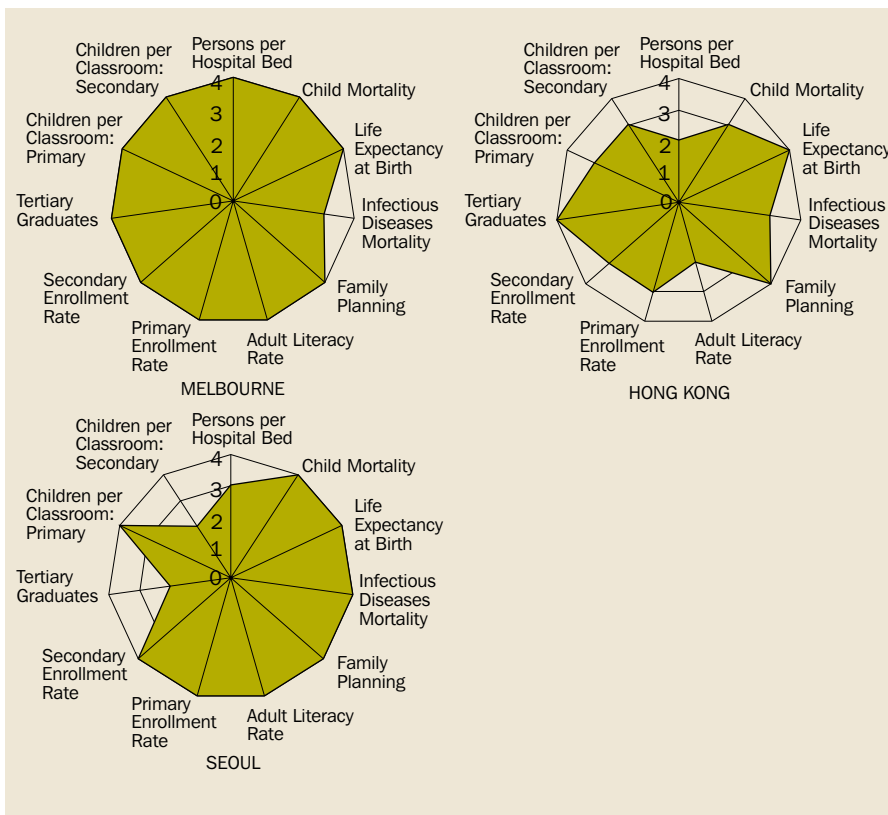


**School Children per Classroom.** This covers the total number of school children divided by total classrooms: (a) primary, and (b) secondary for all kinds of school. *Warning trend:* Large class sizes indicate crowding and lack of capital funding for educational facilities. *Significance:* It is difficult for children to receive a proper education when classroom sizes are very large.

Health and Education, Medium-Developed Cities



Health and Education, High-Developed Cities



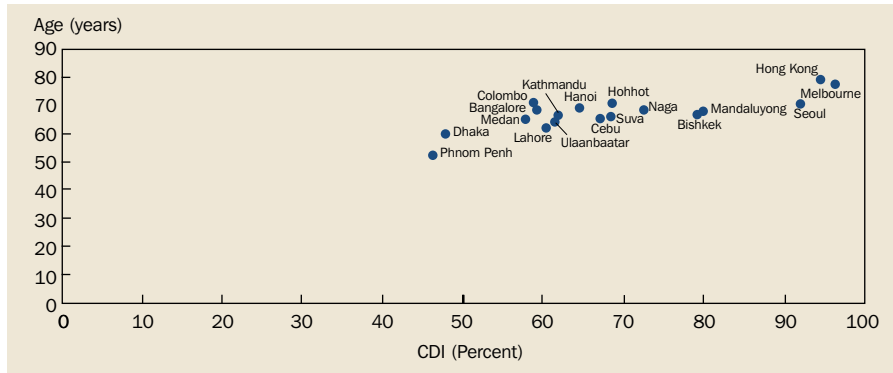
## Definitions and Significance

**Life Expectancy at Birth.** This refers to the expected age that a newborn child expects to reach. *Warning trend:* Low life expectancies are symptomatic of low quality of life. Increasing life expectancies will cause the population to increase, if the birth rate stays high. *Significance:* Life expectancy is considered to be the best single indicator of human development, reflecting levels of medical care, sanitation and nutrition.

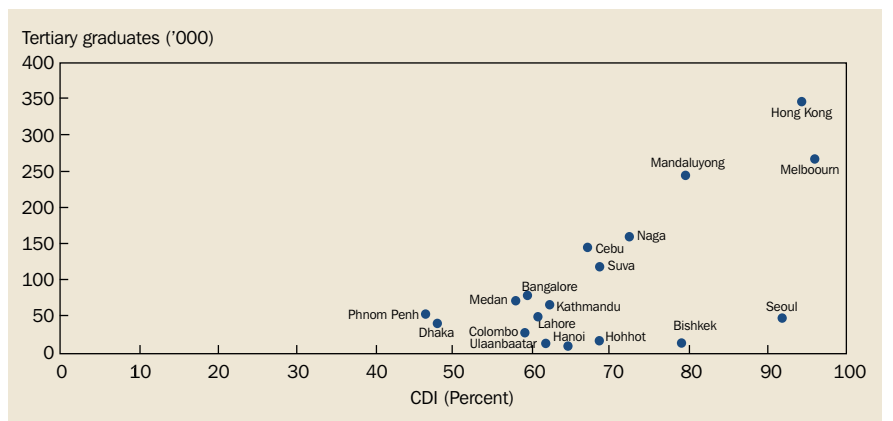
**Tertiary Graduates.** This refers to the proportion of tertiary graduates in the adult population, male and female. Defined as the proportion of male graduates to all adult males, and female graduates to all adult females. Tertiary graduates include graduates and diplomats from universities and all other accredited tertiary level institutions. It does not normally include graduates from vocational private colleges unless they are fully accredited. *Warning trend:* Low numbers of graduates will provide only a small pool of people for management, training, the professions, and for new technology. *Significance:* The indicator measures higher level education achievement and human capital development.

## 3. Health and Education

City Development Index vs. Life Expectancy



City Development Index vs. Tertiary Graduates



## Definitions and Significance

### URBAN PRODUCTIVITY

**City Product per Capita.** It is defined as total city product per year divided by population. This figure is not usually directly available, despite its importance. It can be approximated from national figures by several fairly straightforward procedures. The city income person is usually substantially above national GDP per person figures. If it is not, then an estimation error has probably been made. *Warning trend:* Falling city product per person. *Significance:* This indicator is the most important single indicator of urban productivity, being essentially the GNP of the city. It will fall if economic growth fails to keep pace with population growth.

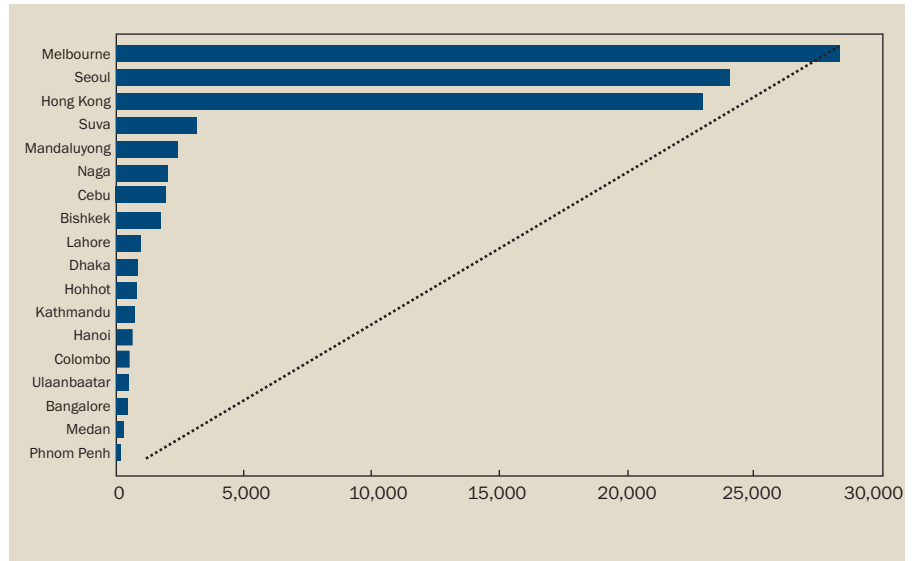
**Employment by Industry.** This includes total employment, for each category: (a) Secondary and infrastructure – Manufacturing, Construction, Utilities; (b) Consumer services – Wholesale and retail, transport, personal services; (c) Producer services – Finance and business services; (d) Social services – Education, health government, and (e) Others – Agriculture, mining and defense. This is a version of Singleman’s classification, which is generally regarded as the best way of organizing the services sector. *Significance:* The services sector is the major growth area in the world economy, and low levels of participation, particularly in the key business services sector, will not encourage growth.

#### NOTE

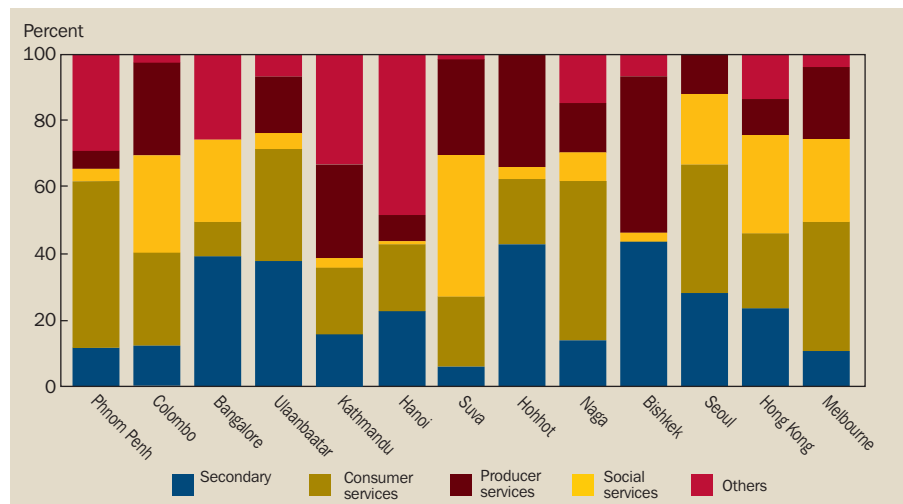
■ Data on household expenditures are usually at the national or regional level. City surveys done by business or private groups covered limited samples and were not regularly done.

## 4. Urban Productivity

City Product per Capita



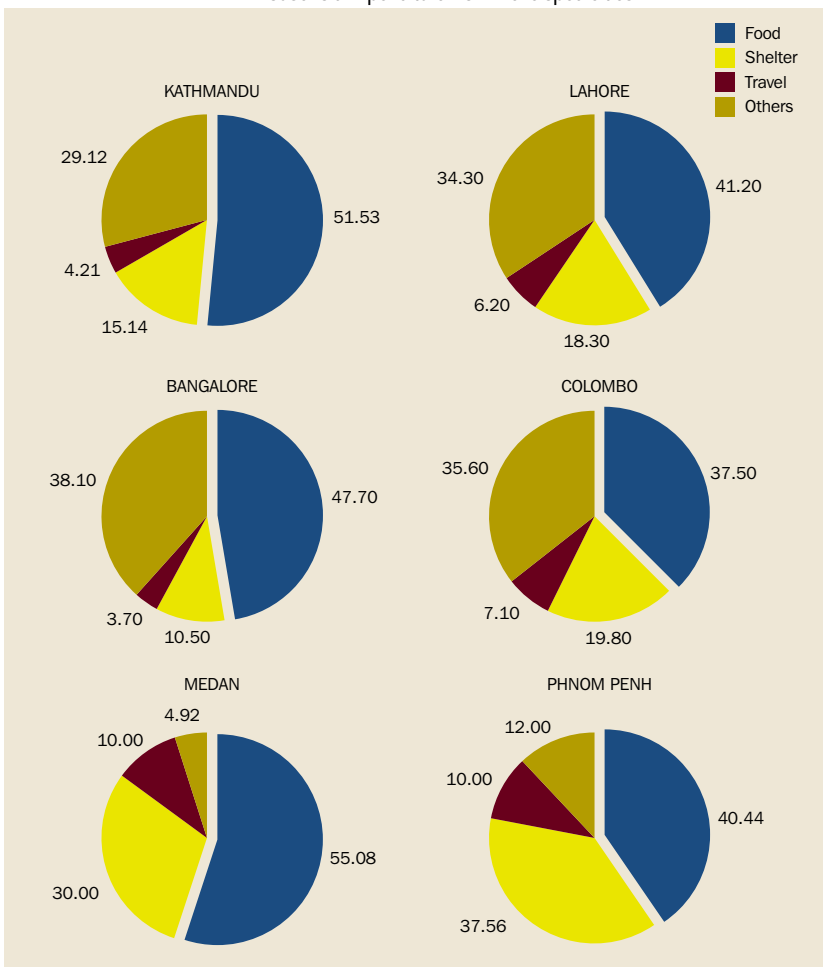
Employment by Industry



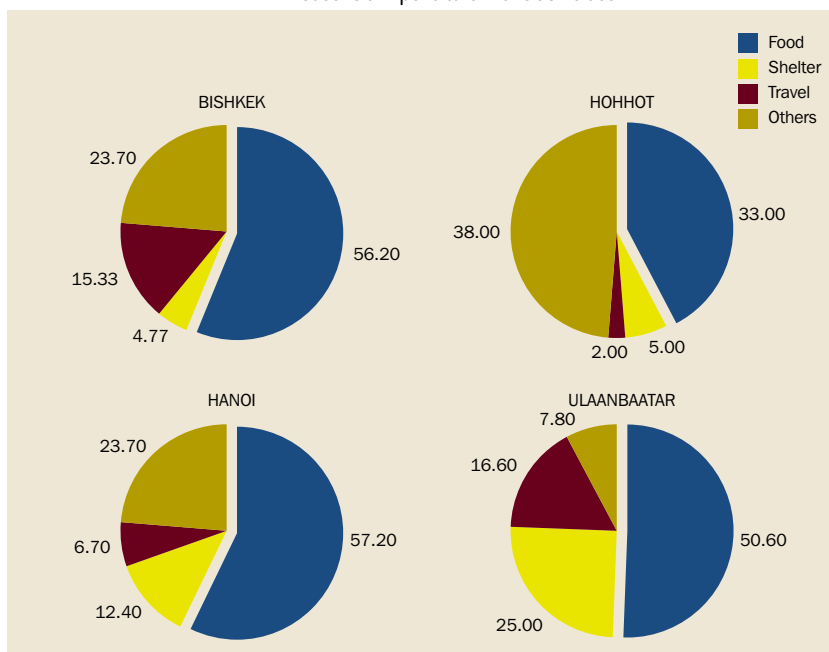
**Household Expenditure.** This refers to the proportion of average household income spent on (a) food, (b) shelter, (c) travel, and (d) others. The breakdown must be obtained from a recent household expenditure survey, usually for some higher jurisdiction. *Warning trend:* Increasing expenditure in any of the first three categories indicates declining affordability. *Significance:* Household expenditure on a range of commodities is a major determinant of demand. For lower income households, the necessary costs of major items in the budget may place the household below the poverty line.

4. Urban Productivity

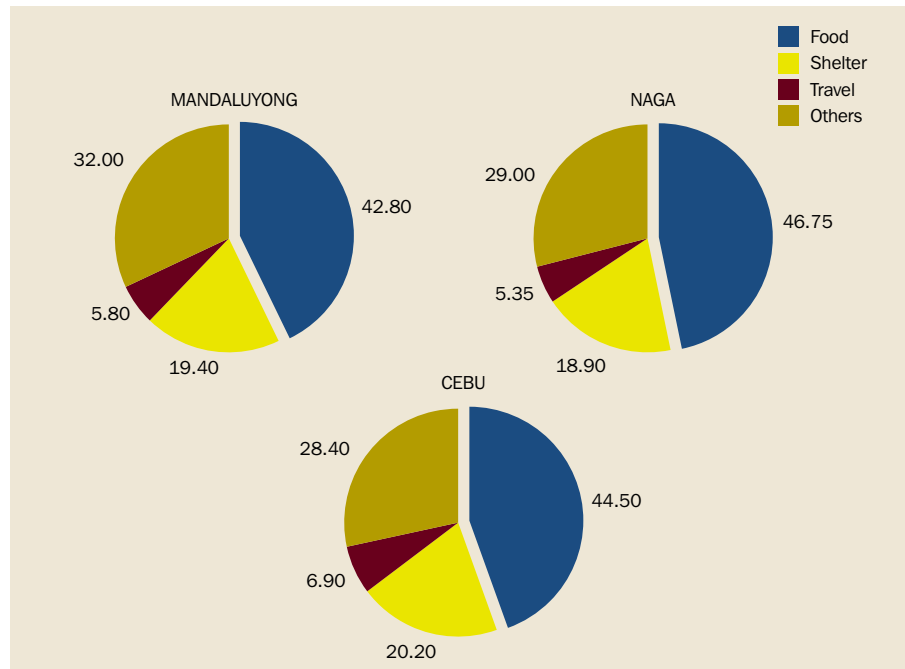
Household Expenditure: Low-Developed Cities



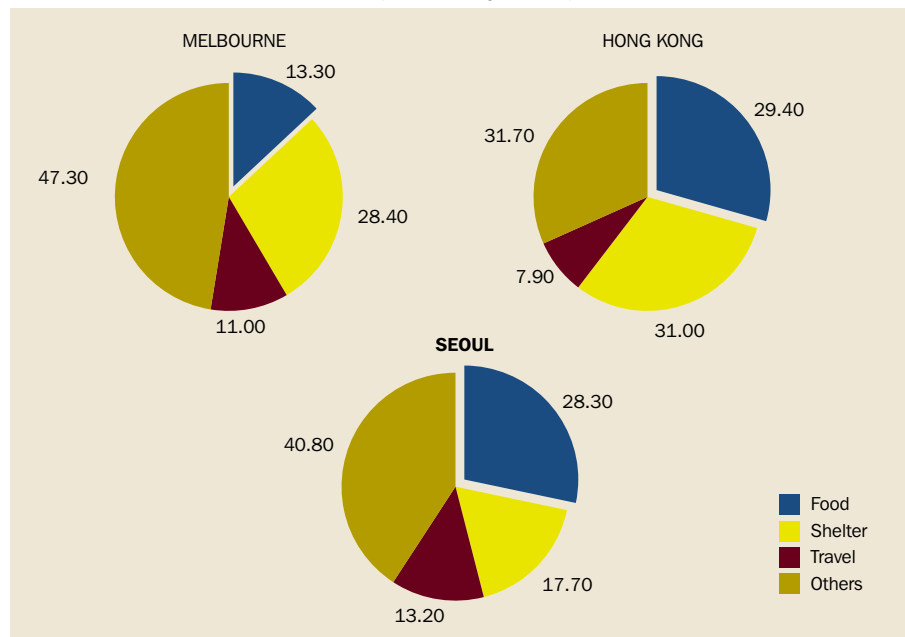
Household Expenditure: Transition Cities



Household Expenditure: Medium-Developed Cities



Household Expenditure: High-Developed Cities



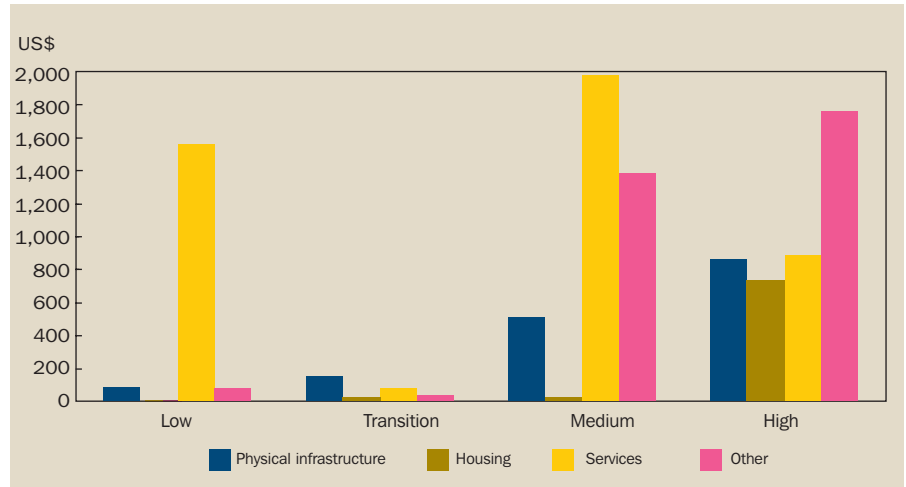
## Definitions and Significance

**Investment by Sector.** These are funds invested per person by economic sector, US\$ per annum, on (a) physical infrastructure, (b) housing; (c) manufacturing, (d) services, and (e) others. *Warning trend:* Falling investment indicates a lack of confidence in the local economy, or a general lack of funds. *Significance:* Investment is vitally necessary for economic growth.

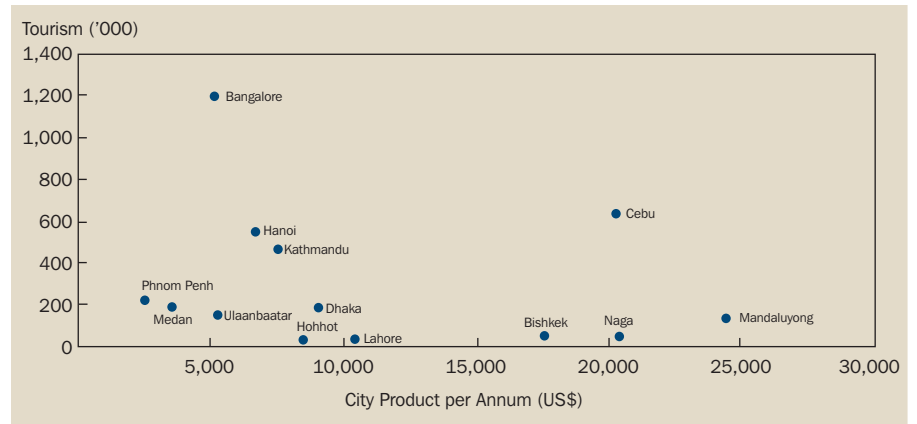
**Tourism.** This includes (a) persons (thousands) and (b) expenditure (US\$ millions) of tourists visiting the city, both international and national. *Significance:* Tourism is a major growth industry and generator of foreign exchange.

## 4. Urban Productivity

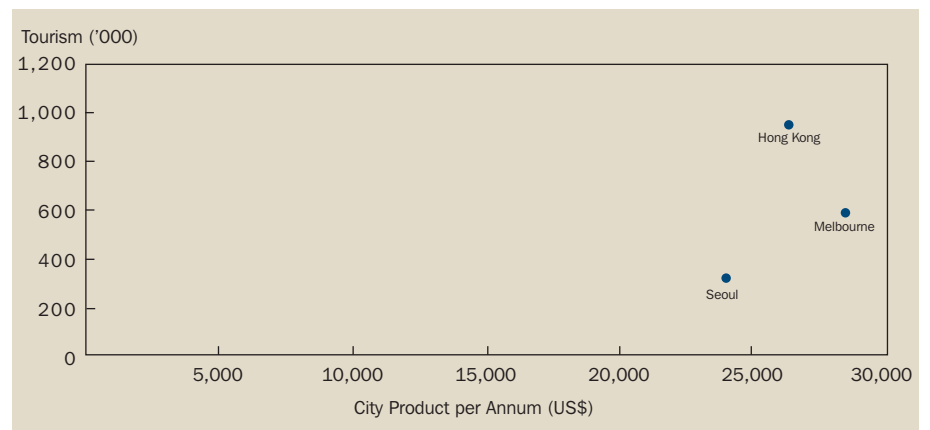
Investment by Sector per Capita per Annum



Tourism Arrivals vs. City Product: Medium, Transitional and Low-Developed Cities

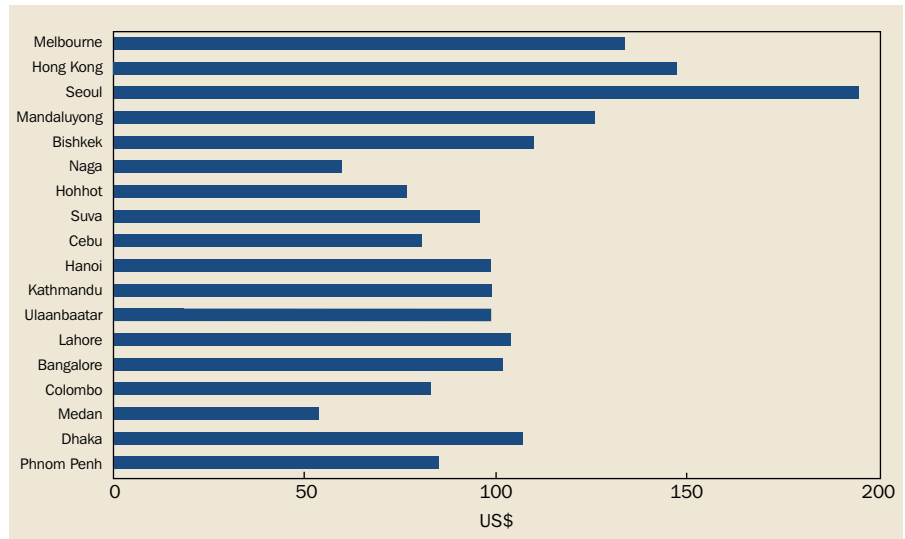


Tourism Arrivals vs. City Product: High-Developed Cities



**Cost of Stay.** This includes the expected cost per stay per day of executives visiting the city, including normal hotel and living expenses. *Significance:* Many cities are quoting affordable costs as a means of attracting investors and expatriates away from the most expensive cities. *Source:* CDB has provided this indicator from ADB and UN sources.

Cost of Stay





## Definitions and Significance

### NEW TECHNOLOGY

**Tourism.** This refers to persons (thousands) and expenditures (\$ millions) of tourists visiting the city, both international and national. *Significance:* Tourism is a major growth industry and generator of foreign exchange.

**Corporate Headquarters.** This covers the number of major national and regional corporate headquarters of businesses with an annual turnover of US\$100 million or over. *Warning trend:* Declining number of

headquarters indicates the city is being replaced as a corporate center. *Significance:* A measure of the extent to which the city is a business center.

**Telephone Traffic.** This refers to the number of telephone calls per annum per person: (a) local, (b) international, and (c) mobile or cellular phone. Includes both private and business calls. *Significance:* Major indicator of technological connectivity.

**Commercial Flights.** This refers to the number of flights leaving per month, for national and international destinations.

**Internet Hosts per 1,000.** This refers to the number of internet hosts per 1,000 population. *Significance:* The Internet is commonly regarded as the way business will be done in the future.

## 5. New Technology

### Connectedness

City	Tourism	Tourist Expenditure (\$)	Large Corporations	Telephone Traffic			Households connected to phone (%)	Commercial Flights			Internet hosts per 1,000	Connectivity (%)	Congestion (%)
				Local calls per person	International calls per person	Mobile phone calls per person		Nat'l Flights	Int'l Flights	Total Flights			
Bangalore	1,200.00	300.0	25.00	130.0	2.00	1.40	66	690	52	742	8.00	48	74.8
Bishkek	59.36	2.4	NAV	270.0	3.20	0.04	73	386	269	655	4.30	16	51.6
Cebu	634.74	158.7	NAV	28.0	0.12	10.40	15	2,900	19	2,919	6.00	37	52.5
Colombo	381.00	45.7	NAV	64.0	1.20	5.00	53	150	250	400	9.63	26	62.6
Dhaka	182.00	56.0	5.00	17.0	0.40	0.50	9	NAV	NAV	NAV	9.23	34	86.2
Hanoi	500.00	85.3	13.00	88.0	1.20	1.00	37	2,645	245	2,890	6.30	47	61.4
Hohhot	39.60	126.0	NAV	55.0	0.19	7.00	9	155	8	163	0.85	NAV	67.4
Hong Kong	9,574.71	6,853.0	819.00	420.0	71.00	132.00	99	0	6,800	6,800	278.00	100	69.3
Kathmandu	463.68	152.5	NAV	100.0	0.40	0.60	52	1,905	395	23,00	15.40	39	57.4
Lahore	42.00	3.0	1.00	78.0	1.90	1.20	62	977	244	1221	16.60	24	73.1
Mandaluyong	140.00	48.0	2.00	210.0	3.30	4.40	87	332	1,170	1502	18.00	34	72.5
Medan	191.39	21.6	NAV	60.0	2.10	7.00	41	567	187	754	10.00	27	61.9
Melbourne	5,917.40	1,150.0	38.00	594.0	11.00	80.00	99	10,064	1,449	11,513	131.90	85	32.0
Naga	50.41	13.1	NAV	90.0	0.44	38.02	54	76	0	76	4.73	05	44.5
Phnom Penh	218.84	43.7	3.00	3.5	0.10	1.10	2	300	150	450	0.49	16	57.8
Seoul	3,188.00	1,912.8	120.00	340.0	11.60	84.00	95	6,450	8,310	14,760	150.00	88	83.3
Suva	30.60	15.3	NAV	76.0	2.10	2.80	40	240	28	268	26.64	17	40.1
Ulaanbaatar	150.70	27.8	NAV	63.0	0.80	1.00	34	121	42	163	4.14	13	53.3

### NOTES

■ There should be a clear basis for definition of telephone traffic, e.g., does connectivity only relate to calls outside the city, or all calls?

■ An alternative indicator for connectivity, i.e., the cost to the household of getting connected (phone/internet), may be considered.

## Definitions and Significance

### URBAN LAND

**Urban Land.** This covers land in hectares zoned as (a) residential, (b) business, (c) services, (d) transport, (e) mixed use, (f) others, and (g) total area.

**Prime Commercial Land Price.** This refers to the cost of a square meter of land in a prime commercial location, in US\$. The most expensive was used. *Warning trend:* High and rising prices indicate a very active pressure for commercial space; however, it may also be a sign of excessive planning controls or lack of land. *Significance:* The price is the measure of demand vs. supply in commercial areas.

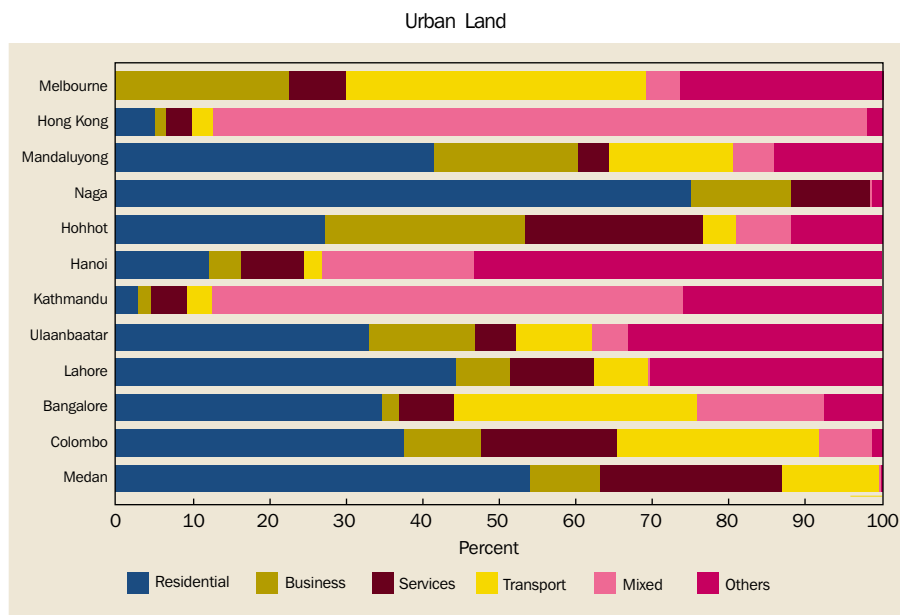
**Prime Rental and Occupancy Cost.** This refers to the average costs of occupying prime commercial space, per square meter, in constant US\$. (a) prime rental per month, (b) operating costs per month, and (c) statutory charges per month. *Warning trend:* Rising prices indicate a shortage of office space. Falling prices (particularly rentals) imply a glut and overbuilding. *Significance:* The cost of occupying office space is a major concern of businesses wishing to locate in the city.

**Land Development Multiplier.** This gives the ratio between the median price of land in a developed plot at the urban fringe in a typical subdivision and the median price of raw, undeveloped land in an area currently being developed (i.e., with planning permission). The comparison should be raw and serviced land in typical urban fringe areas where residential development is allowed (i.e., where planning permission is given and zoning regulations for residential development is in effect). Prices refer to typical 50-200 unit subdivisions on the urban fringe. This indicator does not apply to local government areas that do not contain part of the urban fringe. *Warning trend:* High and rising ratios. *Significance:* The mark up on serviced land can be very much greater than the cost of the services provided—300% is typical—and reflects the slow pipeline for development and restrictions in the planning process.

#### NOTES

- There is a need to assess urban land figures from survey results, not from plans.
- On "Prime Commercial Land Price," data to be obtained should be from a representative sample of locations.
- On "Prime Rental and Occupancy Cost," the definition of operating costs should be laid down clearly.

## 6. Urban Land



Prime Commercial Land Price; Prime Rental and Occupancy per Month; Land Development Multiplier

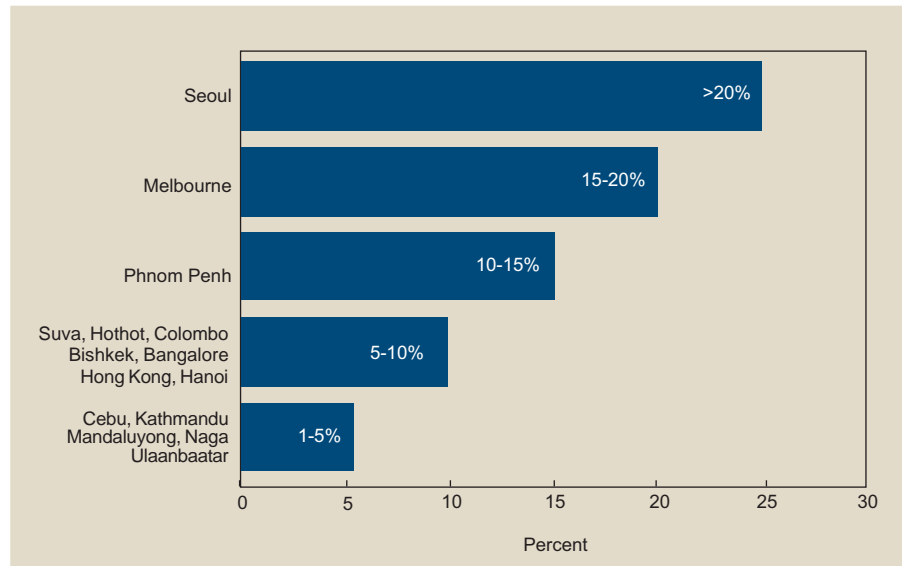
City	Prime Commercial Land Price (US\$ per m <sup>2</sup> )	Prime Rental Cost per Month (US\$ per m <sup>2</sup> )	Land Development Multiplier
Phnom Penh	400.0	NAV	13
Dhaka	1,225.0	5.0	6
Medan	199.7	15.0	3
Colombo	875.0	11.6	2
Bangalore	780.0	5.2	15
Lahore	532.0	45.0	1
Ulaanbaatar	9.4	8.0	1
Kathmandu	714.0	7.3	3
Hanoi	2,256.0	35.0	NAP
Cebu	367.0	245.0	2
Suva	553.7	32.7	3
Hohhot	108.0	0.3	3
Naga	1,222.7	10.3	5
Bishkek	10.5	12.0	4
Mandaluyong	1589.5	11.2	4
Seoul	23,253.0	NAV	NV
Hong Kong	27,539.0	74.1	NAP
Melbourne	2,588.0	100.0	5

## Definitions and Significance

**Public Open Space.** This refers to the proportion of public open space in the built-up area (sometimes known as “green space”). Should include public parks, gardens, reserves, recreation areas, beaches (but not private golf clubs and similar). *Warning trend:* Low proportion of public open space. *Significance:* A minimum level of public open space is regarded as necessary both for the quality of life and for environmental regeneration.

## 6. Urban Land

Public Open Space (Percent to Total Land Area)



### NOTE

- In calculating government landholdings, it may be more useful to investigate all levels of government.

## Definitions and Significance

### HOUSING

**Dwelling Type.** This covers the percentage of (a) single family houses, (b) medium density, (c) apartments, (d) temporary dwellings, and (e) others (institutions, hostels, etc.). See the Glossary for a definition.

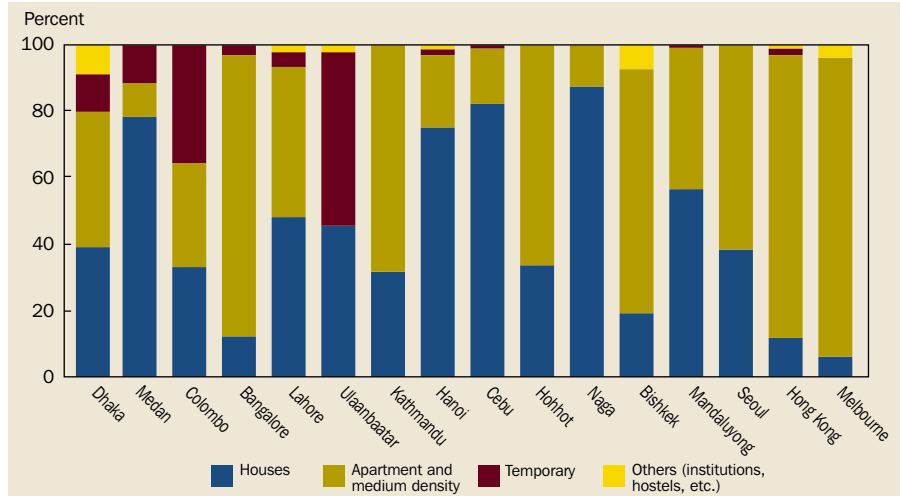
**Tenure Type.** This covers the percentage of households in housing tenures (a) owned or purchased. These are households with a clear title or ownership (formal housing) of the house and land they occupy, possibly through a company structure or as condominiums or strata title or long leasehold of land, and possibly encumbered by a mortgage (purchasing). It also covers (b) private rental. These are households in formal housing for which rents are paid to a private landlord who is the legal owner. They include backyard shacks, if the main property is owned. (c) Social housing covers all housing in public, parastatal, or NGO owned or operated housing, including government employee housing and housing owned or operated by cooperatives or housing associations. (d) Sub-tenant households are those renting from another household who is renting the premises. (e) rent-free. Households occupying housing formally owned by someone else and who do not pay rent. (f) Squatter – no rent households are in squatter housing, or housing that has no title to the land on which it stands, and who do not pay rent. (g) Squatter – paying rent are households in squatter housing who pay rent. (h) Others includes nomads, persons in institutions, boarding houses or hotels, and other tenures. *Significance:* The tenure structure represents the legal relationship between households and their dwellings.

#### NOTE

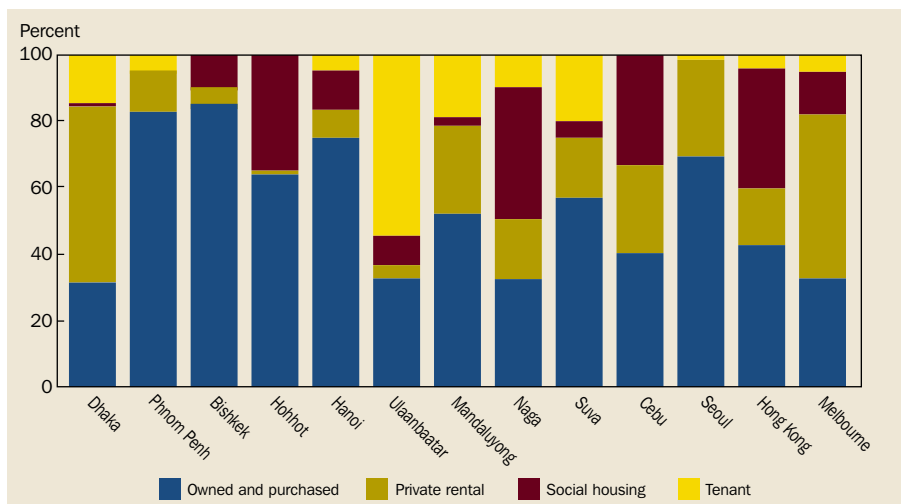
- Cities differ in their form and function and enough flexibility should be given to capture these distinctions, e.g. develop their own classification by form, density or tenure.

## 7. Housing

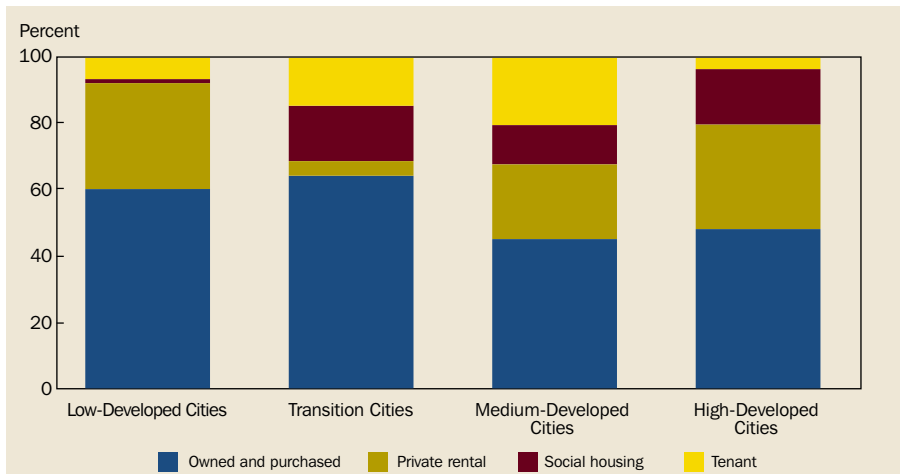
Dwelling Type



Tenure Type



Tenure Type



## Definitions and Significance

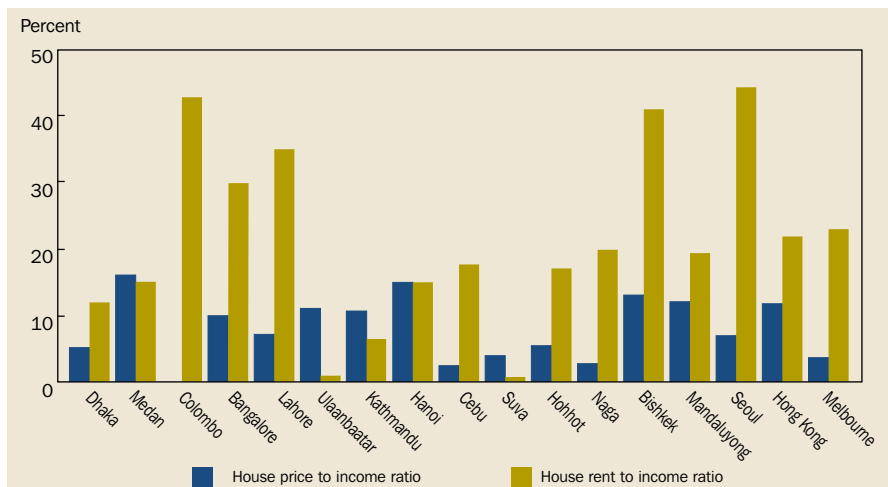
**House Price to Income Ratio.** This refers to the median house price divided by median household income. It is the ratio of the median free-market price of a dwelling unit to the median annual household income. *Warning trend:* Very high or rising ratios imply either that there is no effective housing market (as in the formerly socialist countries) or that land is extremely scarce, generally due to regulatory inefficiencies or restrictions. *Significance:* This is generally regarded as the single indicator that gives the greatest amount of information about housing markets.

**House Rent to Income Ratio.** This is the median annual rent divided by median annual renter household income. Expressed as percentage. Incomes are median gross incomes of private and public renter households. Rents are contract rents, or the amount paid for the property alone and not for utilities such as electricity, heating, etc. *Warning trend:* High values imply that supply is not keeping up with demand and affordability is poor. Low values usually imply controlled tenancies or a high proportion of public housing. *Significance:* It is a key measure of housing affordability.

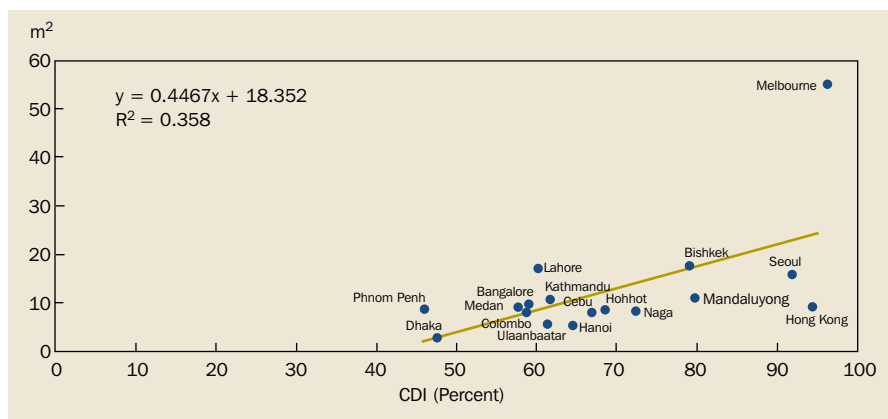
**Floor Area per Person.** This is the median floor area per person in m<sup>2</sup>. The floor area should include all living space, along with bathrooms, internal corridors, and closets. Covered semiprivate spaces such as inner courtyards or verandahs should be included if used by the household for cooking, cleaning, etc. *Warning trend:* Very low levels imply overcrowding, while falling levels imply that not enough new housing is being produced. *Significance:* It measures the adequacy of living space in dwellings, and is a primary measure of consumption.

## 7. Housing

House Price to Income Ratio vs. House Rent to Income Ratio



City Development Index vs. Floor Area per Person



## Definitions and Significance

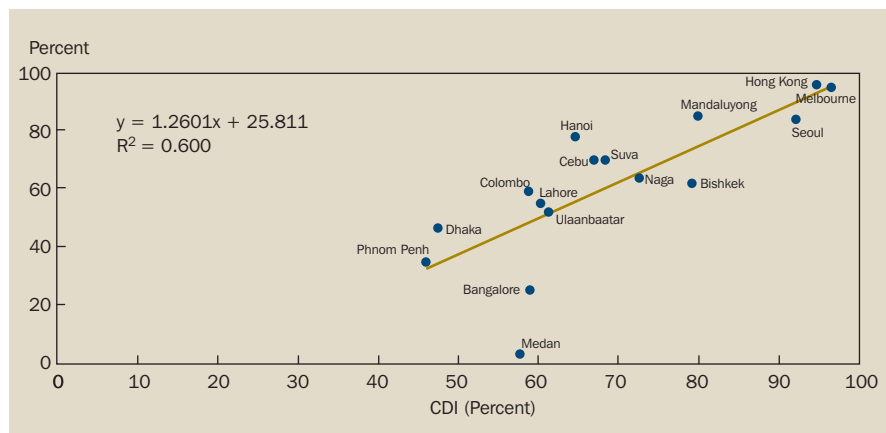
**Housing in Compliance.** This is the percentage of housing stock in compliance with local codes. Only housing which has both a clear title to the land on which it stands, and which is constructed with all required building, land use, or land subdivision permits, should be regarded as being in compliance. *Warning trend:* Low or falling values may mean that development is proceeding without proper government controls, and that government is either tolerant of housing that does not comply with its regulations or is unable to prevent trespasses. In some cases, it may imply that codes are excessively restrictive or inappropriate. *Significance:* It measures the extent to which the urban population is legally housed.

**Net Housing Outlays by Government.** This includes the total net housing expenditures by all levels of government on dwelling construction, rent support, etc., per person. *Significance:* It is the total response by the government to housing problems.

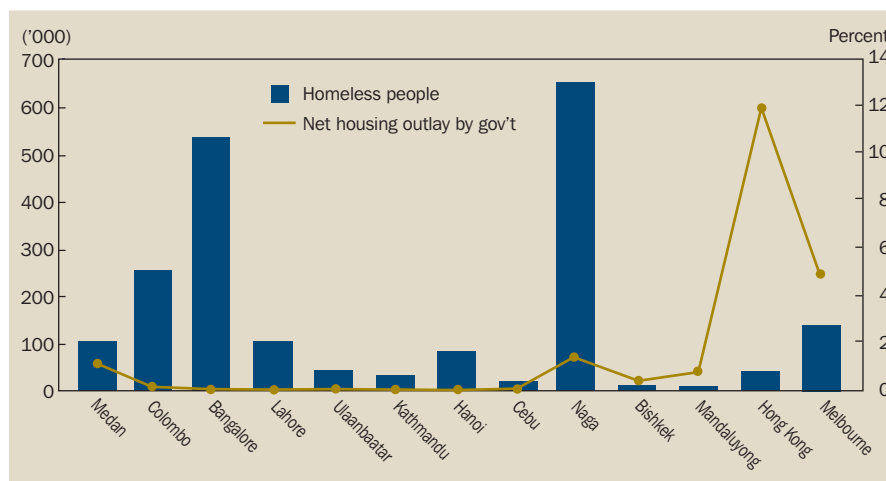
**Homeless People.** This is the number of homeless or street people, on an average night. It is defined as the number of people who sleep outside dwelling units (e.g., on streets, in parks, railroad stations, and under bridges) or in temporary shelter in charitable institutions. Includes people without shelter, without any recognized address, living temporarily in hostels or shelters, and "street children". *Annual trend:* High or rising. *Significance:* The homeless are the most poorly housed and vulnerable group in cities, and the ones to whom many social programs are addressed. They may indulge in socially undesirable practices such as begging or crime in order to survive.

## 7. Housing

City Development Index vs. Housing in Compliance

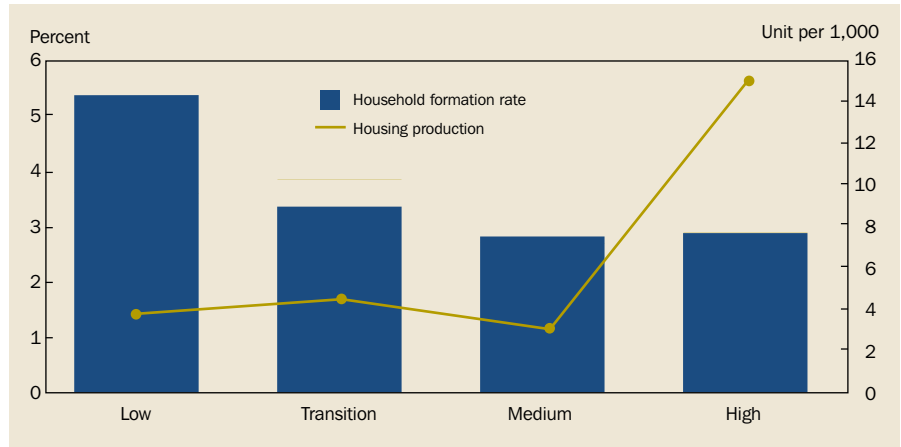


Homeless People vs. Net Housing Outlay by Government per Person



**Housing Production.** This concerns the number of dwellings produced annually, both formal and informal, per 1,000 population (a) on new vacant land, and (b) as net conversions or infill from other uses (can be negative). The latter consists of new units completed on land which was not formerly vacant, plus subdivisions of existing units, less any units destroyed or converted. *Warning trend:* Low rate of production while the population is rising implies a looming housing problem. Even if population is not rising, low construction will limit the possibility of new households forming and will put pressure on rents. *Significance:* This is the traditional measure of the ability of the housing supply system to increase and replenish the housing stock.

Household Formation Rate vs. Housing Production



NOTES

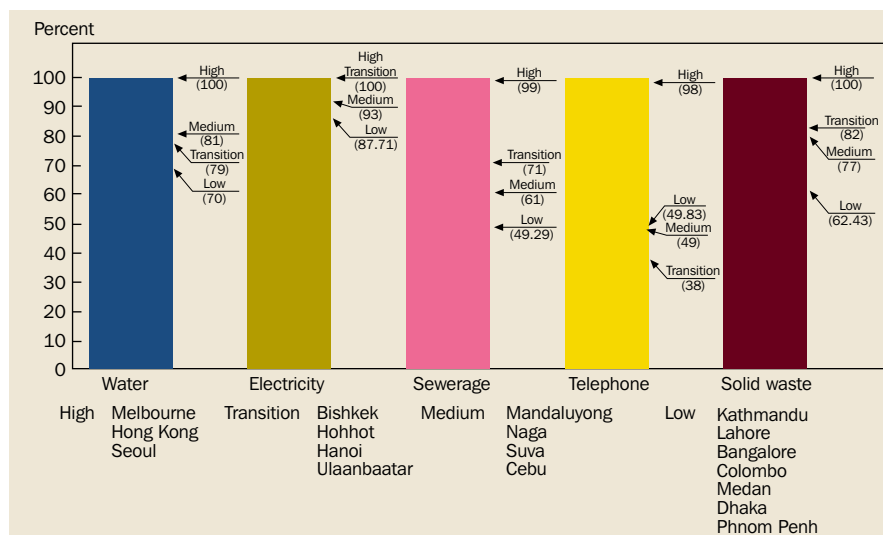
- On "Housing Production" it is important to emphasize all production, such as owner-builder's informal areas which may form a majority of production.

MUNICIPAL SERVICES

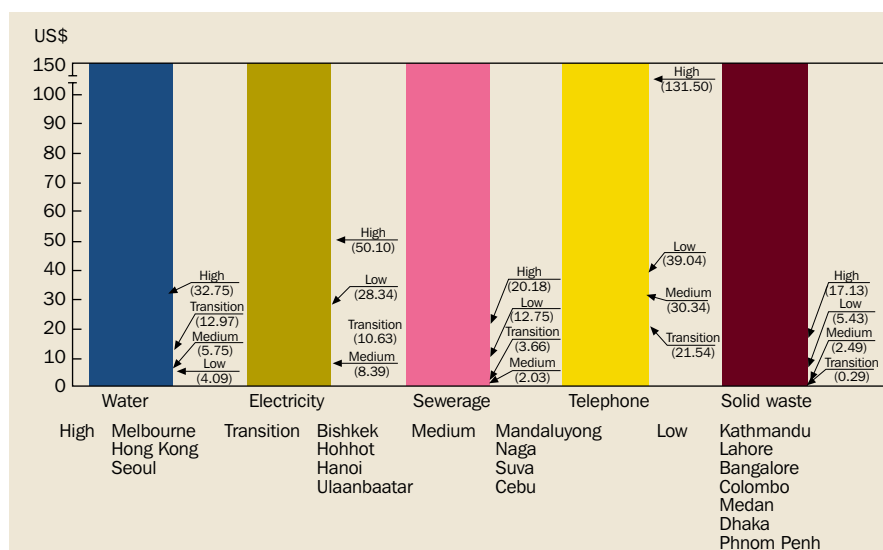
**Household Connections.** This refers to the percentage of households connected to water, electricity, sewerage/wastewater, telephone, and solid waste collection or percentage of households receiving regular garbage collection. *Warning trend:* Low or static level of connections. *Significance:* Low or static level of connections to basic services indicates poor access to critically-needed basic services by urban residents, and an insufficient system of service provision.

**Investment per Capita in each service.** This covers the annual capital expenditure on water, electricity, sewerage/wastewater, telephone, and solid waste collection per person in US\$. *Warning trend:* Low capital expenditure implies depreciation of the network, obsolete technology, and possibly a very limited service.

Connections to Municipal Services



Investment per Capita



NOTES

- Connections or level of connections are checked against consumption per capita to determine the efficiency of delivery of that service.
- Emphasize need to calculate households with / without phone and show clearly the percentage of cellphones.



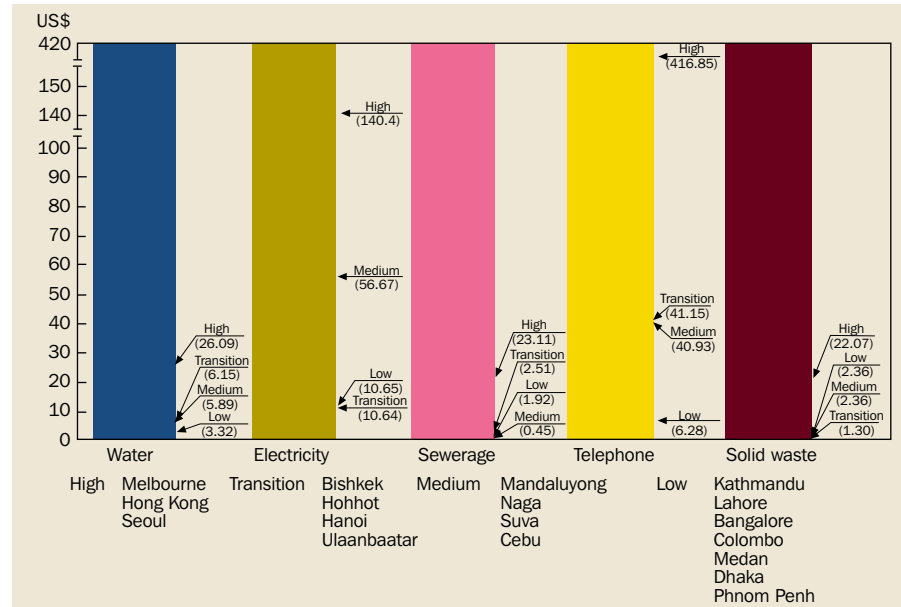
## Definitions and Significance

**Operations and Maintenance Expenditure on each service.** This covers the annual total operations and maintenance expenditure on water, electricity, sewerage/wastewater, telephone and solid waste collection, per person in US\$. *Warning trend:* Low O&M expenditure may correspond to a very low level of service, while high expenditure may suggest inefficiencies. *Significance:* Expenditures is necessary to maintain infrastructure and services. The level and efficiency of this will vary a great deal between countries and authorities.

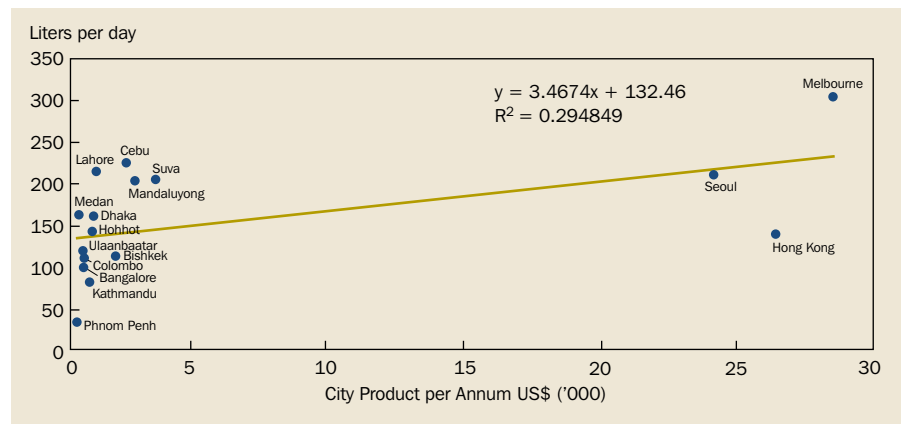
**Consumption of Water per Capita.** This pertains to domestic water supplied or used, in liters per person per day. *Significance:* Consumption of water depends on the availability and price of water, the climate, and the uses to which water is customarily put by individuals (drinking, bathing washing, gardening). Consumption of water corresponds well with city income, and can be very high in places where the price is effectively zero.

## 8. Municipal Services

Operations and Maintenance Expenditure



City Product per Capita vs. Water Consumption per Day



### NOTES

- Data on operations and maintenance costs of certain services may be difficult to collect particularly when these are covered by private utility companies which may be reluctant to release such data.

## Definitions and Significance

### URBAN ENVIRONMENT

**Household Sewage Disposal.** This is the percentage of households using different disposal methods: (a) sewage pipe, (b) septic tank (treated), (c) underground pit (untreated), (d) underground communal, (e) pan collection, (f) open ground or trench, and (g) others. *Warning trend:* High levels of untreated disposal are a health risk. *Significance:* The type of latrine facilities which households use reflects strongly on hygiene, health the quality of life, and the environment.

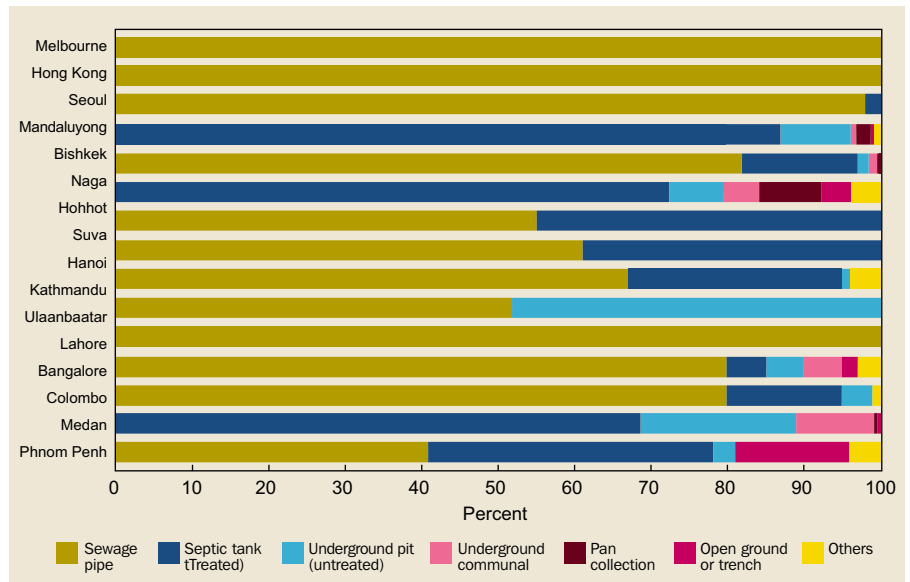
**Methods of Solid Waste Disposal.** These cover the total solid waste generated (and disposed of both formally and informally) including: (a) percent disposed to sanitary landfill; (b) percent incinerated (formally); (c) percent dumped or burned in the open (and other informal disposal); (d) percent recycled (formal or informal); and (e) others (any other formal means of disposal).

#### NOTES

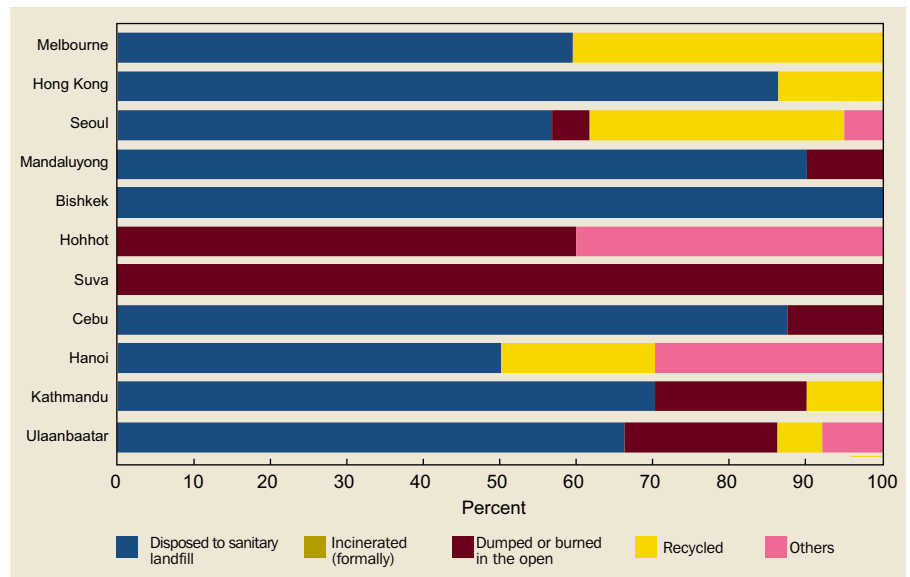
- On sewage disposal. Confusion may arise in places where wastewater is collected into pipes and dumped untreated. Where septic tanks are in widespread use the level of treatment is not known.
- On informal methods. Little knowledge of informal practices on solid waste collection and sewage disposal is common.

## 9. Urban Environment

Household Sewage Disposal



Methods of Solid Waste Disposal



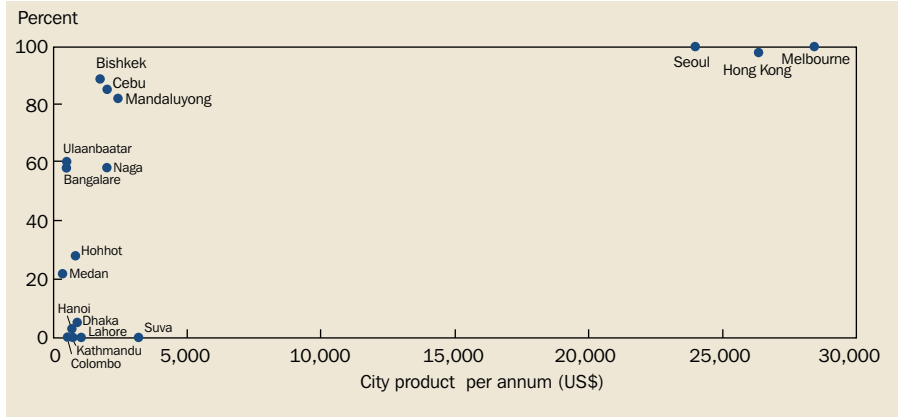
## Definitions and Significance

**Wastewater Treated.** This is the percentage of wastewater undergoing some form of treatment.  
*Warning trend:* Low percentage of treatment. *Significance:* Much wastewater in developing countries and even in some industrialized cities such as Venice, is not treated. This gives rise to significant health risk and pollution and odor problem, which may well be the most obvious sign of poor local conditions to visitors.

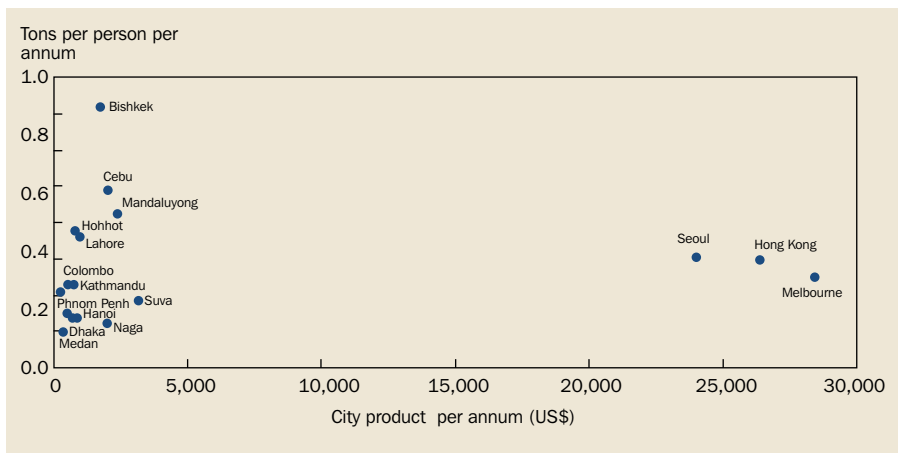
**Solid Waste Generated.** This includes solid waste generated per person in tons per annum. It does not just include the waste that is collected, but all solid wastes produced by households. *Significance:* It is the major measure of the pressure on the environment due to solid waste.

## 9. Urban Environment

City Product per Capita vs. Wastewater Treated



City Product per Capita vs. Solid Waste Generated



## Definitions and Significance

### URBAN TRANSPORT

**Mode of Travel.** This covers percentage of trips to work by (a) private automobile; (b) train, tram or light rail; (c) bus or minibus; (d) motorcycle (two- or three-wheel motorized vehicle); (e) bicycle, including pedicab (pedal-powered vehicle); (f) walking; and (g) others (including boat, taxi, animal or rickshaw). Where several modes of transport are used for a given trip, the hierarchy: train, tram bus, car, not motorized is employed to determine the principal mode. *Significance:* The type of transport used by commuters for trips to work is a key indicator of transport policy at all levels. Whether people use car, bus, train, or non-motorized transport is a major concern for traffic and public transport planning and for energy use. The average time taken on work trips is another key indicator both of urban congestion and of location of the workforce relative to jobs.

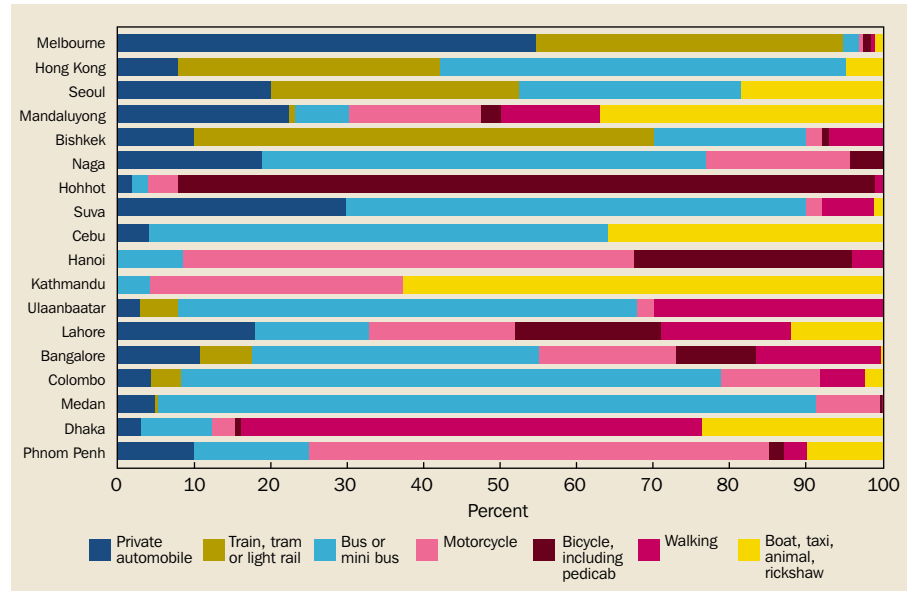
**Median Travel Time.** This indicates the average time in minutes for a work trip, over all modes. Train and bus times should include average walking and waiting times, and car times should include parking and walking to the workplace. *Warning trend:* Increasing travel times indicate (a) the city is expanding and people are moving outward faster than jobs or facilities; (b) car ownership is increasing; or (c) the road infrastructure is inadequate for the task. *Significance:* Long travel times are a major frictional cost to both for individuals and the economy. Increasing times indicate that road capacity is not enough.

#### NOTE

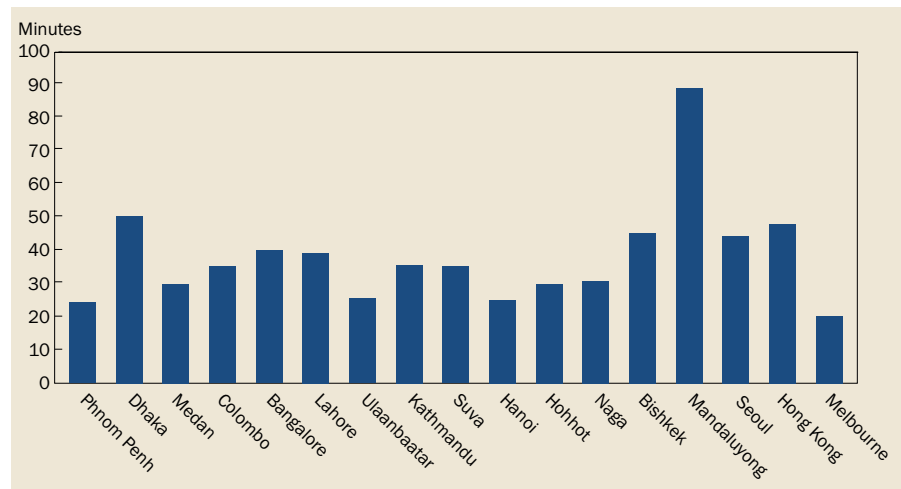
- Base data on transport tend to be traffic counts.
- Nonmotorized roads for walking are estimated.

## 10. Urban Transport

Mode of Travel



Median Travel Time



## Definitions and Significance

**Expenditure on Road Infrastructure.** This covers the per capita expenditure on roads (3-year average). Expenditure should include capital and maintenance expenditure on all roads in the urban area, averaged in constant value terms over three years. *Warning trend:* Low expenditure will imply that roads are in poor repair and are not meeting increasing loads. Congestion will increase, vehicle damage will be more prevalent, and road safety will suffer. *Significance:* A necessary expenditure must be made to maintain and upgrade roads in the face of increasing traffic demand.

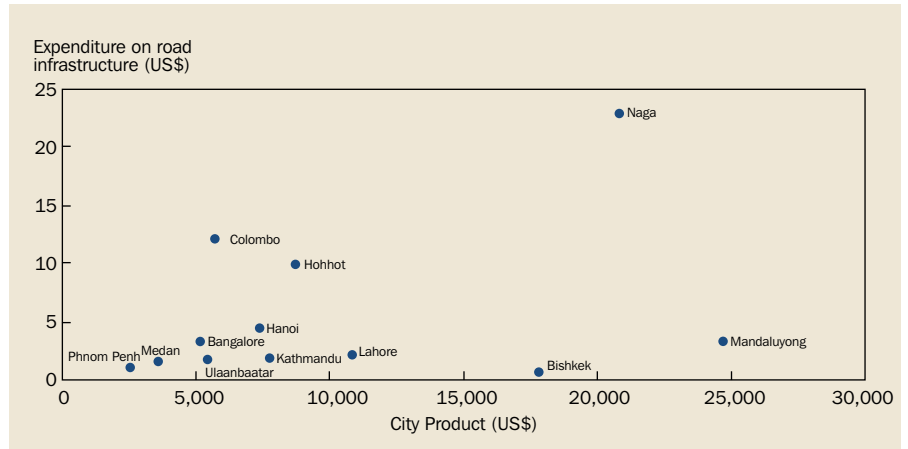
**Automobile Ownership.** It is defined as the ratio of automobiles to people of driving age. Automobiles in this case are taken to include all vehicles used for personal transport (including sedans used for business). Minimum driving age varies from 16 to 18 in different countries. *Warning trend:* Rising ownership will need to be accompanied by upgrading of the road infrastructure. *Significance:* Car ownership is a major consumption measure and indicator of road usage and gasoline consumption.

### NOTES

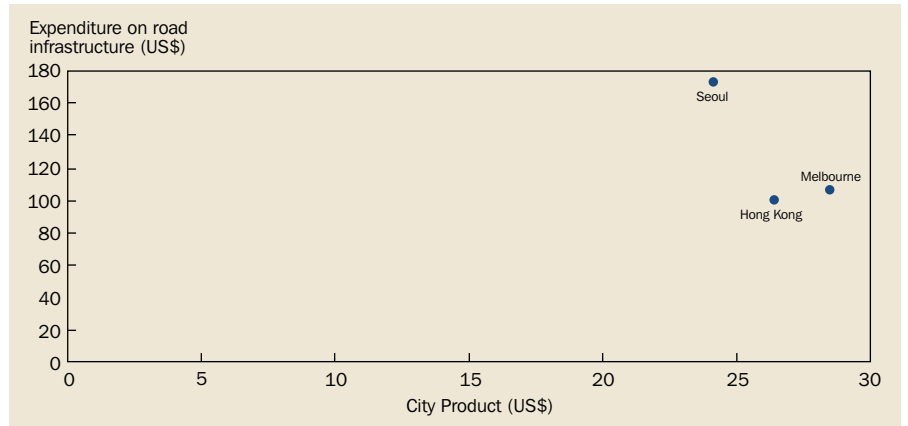
- Check all sources of road investment in city, not just local government's.
- Data on car ownership should take into account the vehicles registered in city but which are not using city roads, and vice versa.

## 10. Urban Transport

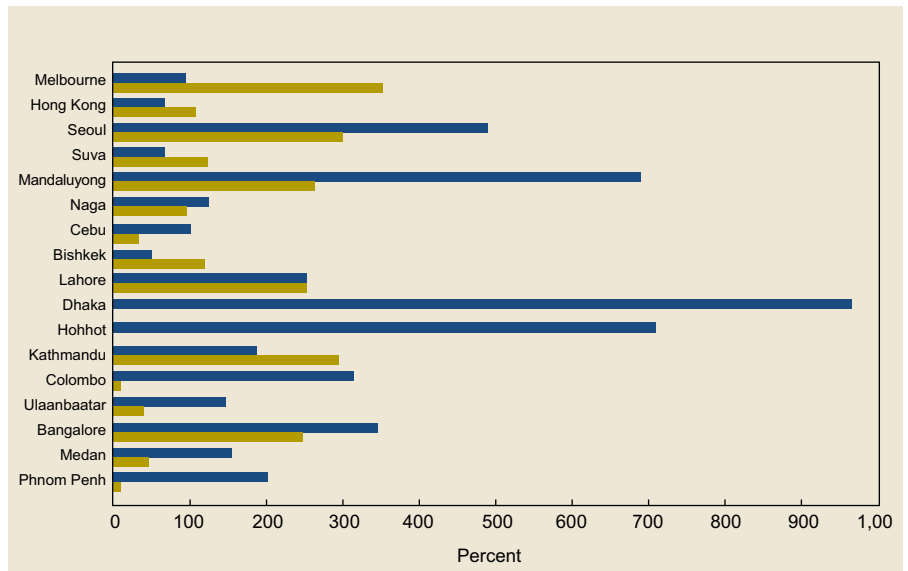
City Product per Capita vs. Expenditure on Road Infrastructure: Medium, Transition and Low-Developed Cities



City Product per Capita vs. Expenditure on Road Infrastructure: High-Developed Cities



Automobile Ownership per 1,000 Population vs. Population Net Density Sorted by City Product per Capita



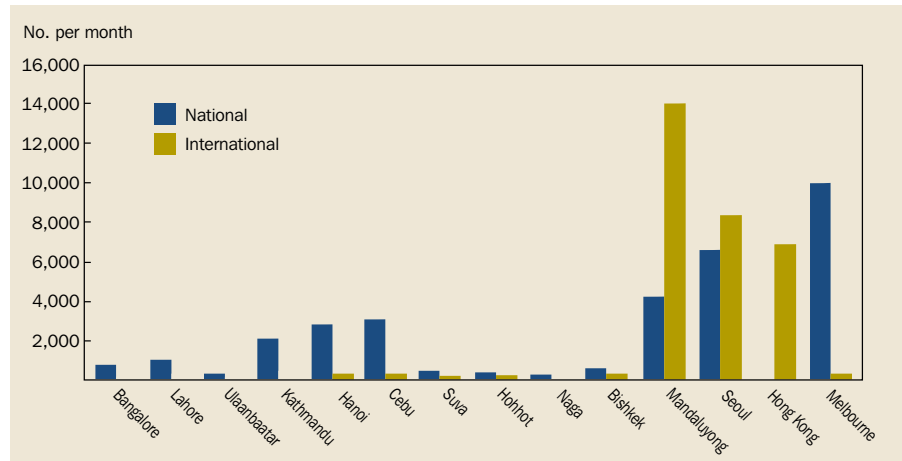
## Definitions and Significance

**Port/Air Activity.** Where the city has either a port or airport this shows the (a) number of commercial ships leaving port (freight and passenger); and (b) number of commercial flights leaving per month, for national or international destinations. *Significance:* Cities with an international airport or port enjoy a major advantage in terms of trade and inter-connect-edness with the world.

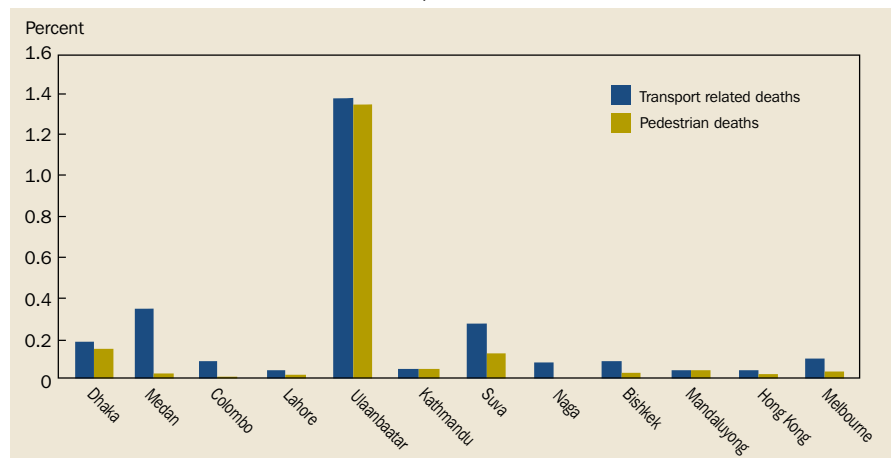
**Transport Fatalities.** This refers to (a) all transport-related deaths per 1,000 population, annually; (b) pedestrian deaths per 1,000 population, annually. *Warning trend:* Increasing fatalities. *Significance:* Traffic accidents are a major cause of fatalities in younger age groups, and the mortality rate for transport accidents of all kinds is a key indicator for the success of traffic control and of the safety of vehicles. Pedestrians are a particularly vulnerable group. A high proportion of pedestrian deaths may indicate either a dangerous situation for pedestrians.

## 10. Urban Transport

Commercial Flights Leaving, National vs. International



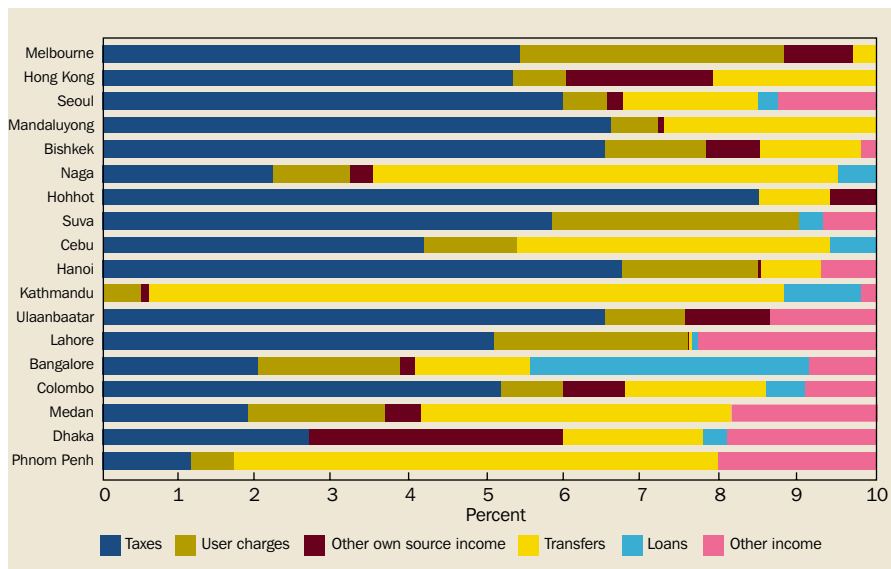
Transport Fatalities



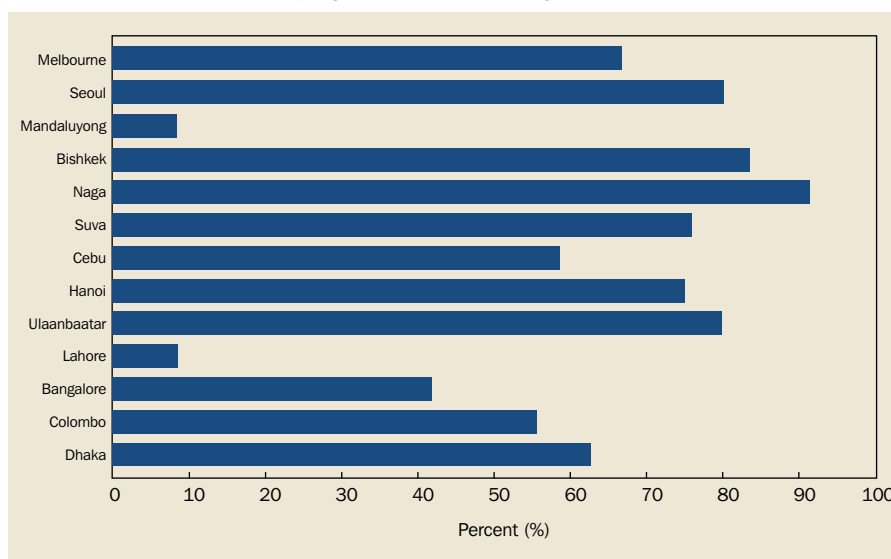
LOCAL GOVERNMENT

**Sources of Revenue.** These cover the percentage revenue in each category in 1998 including (a) taxes like municipal rates and levies, any local taxes on the transfer of property, and any other taxes such as entertainment or hotel taxes, motor vehicles taxes, and taxes on business, which do not reflect the direct provision of services; (b) user charges including any local government charges for services provided, such as water, refuse collection, building permits. Betterment levies should also be included; (c) other own source income including interest and principal received, sales of capital items, but not donations, voluntary contributions or aid; (d) transfers including formula driven payments (such as repatriation of income tax) or other grant donations from national or state governments; (e) loans including borrowing from all sources, including bonds; and (f) other income including any other income such as donations or aid. *Warning trend:* This includes (a) changing structure; (b) overdependence on one or two major sources; and (c) decreasing revenues from any source. *Significance:* It provides local governments with an overview of the diversity and relative importance of revenue sources, and indicates collection trend (growth/decline) or individual source. Overdependence on intergovernmental revenues in particular can be harmful. Local governments become vulnerable to changes in policies or financial conditions of other levels of government, particularly national government.

Sources of Revenue



Property Taxes: Liabilities Actually Collected



NOTES

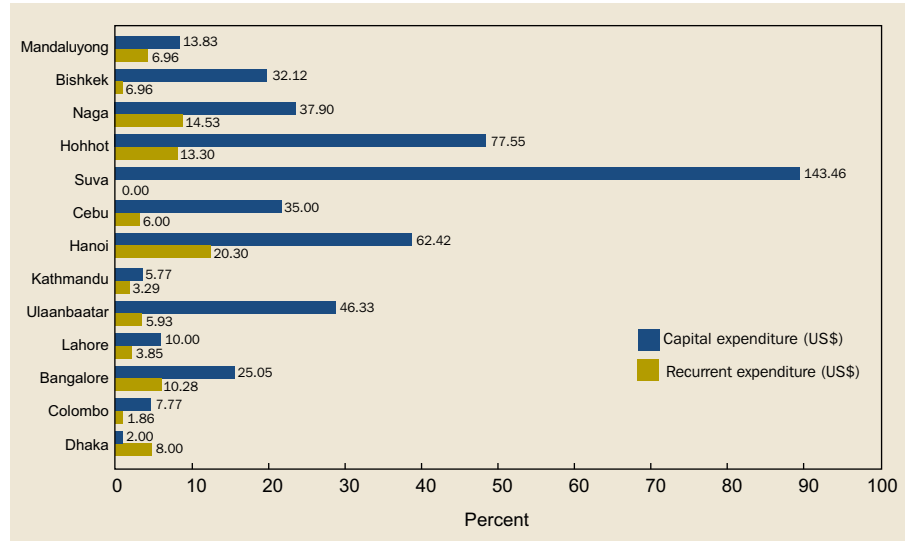
- Clarify where local government is collecting on behalf of central government but not keeping the money or have revenue-sharing arrangements.

## Definitions and Significance

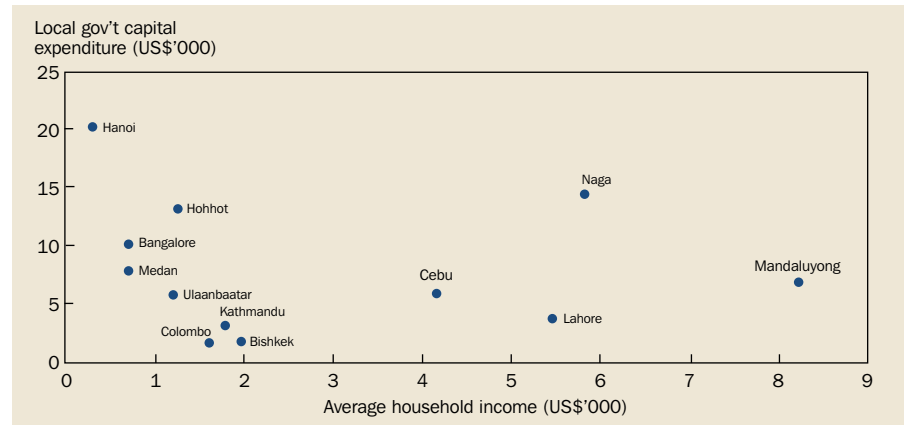
**Capital and Recurrent Expenditure per Person.** This includes the capital and recurrent expenditure in US dollars per person, averaged over the last three years covering (a) expenditure on both fixed capital and plant as per the capital account; and (b) all recurrent expenditure, including interest charges and depreciation. *Warning trend:* This includes declining capital outlays and rising recurrent outlays in the absence of better service. *Significance:* This indicator measures the degree of responsiveness of local government to the needs of business and residents. The amount of expenditure is largely determined by income, including loans and grants.

## 12. Local Government

Capital and Recurrent Expenditure per Person



Average Household Income vs. Local Government Capital Expenditure  
Low, Transition, and Medium-Developed Cities



Average Household Income vs. Local Government Capital Expenditure  
High-Developed Cities



### NOTES

- Expenditure per person may be analyzed based on residents within the city proper and from the wider metropolitan area.



## Definitions and Significance

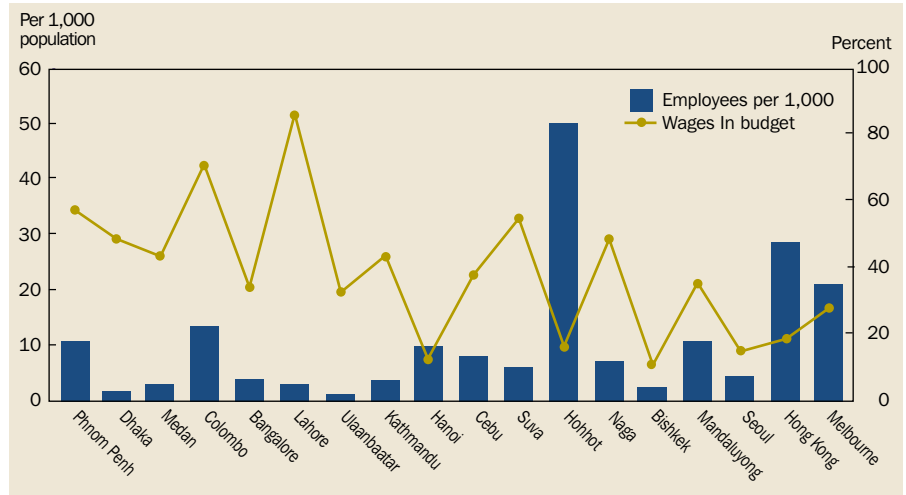
**Employees.** This covers the total local government employees per 1,000 population. *Warning trend:* This is an increasing ratio. *Significance:* It measures the number of employees required to deliver local services to the population, and is a crude measure both of productivity, and of the responsibilities of the local government. It will differ according to the number of services provided by local government, to the labor intensity of production, and to the level of contracting out of services.

**Wages in Budget.** This is the proportion of recurrent expenditure spent on wage costs. *Warning trend:* This is a rising value. *Significance:* A high value for this indicator implies that the city has very few funds left for operations, and there may be excessive employment.

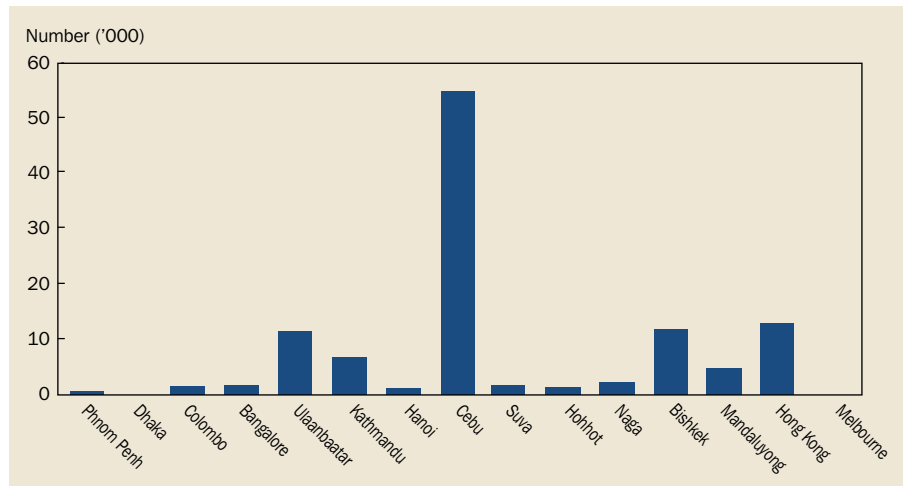
**Business Permits.** This recognizes the number of business permits issued in the past five years. *Warning trend:* This is mainly a decreasing number permits issued. *Significance:* It indicates change in prevailing local economic conditions, or impact of taxes, conditions of infrastructure and utilities, etc.

## 12. Local Government

Employees per thousand vs. Wages in Budget



Employees per thousand vs. Wages in Budget



## Definitions and Significance

### URBAN GOVERNANCE

**Functions of Local Government.** Checklist of functions of local government.

## 13. Urban Governance

	Water	Sewerage	Refuse Collection	Electricity	Telephone	Public/Mass Transport	Emergency	Road Maintenance	Education	Health Care	Public Housing	Recreational/Sport facilities	Police	Drainage/Flood Control	Livelihood Assistance
Banglore									partial	partial		partial			
Bishkek															
Cebu	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV
Colombo															
Dhaka										partial					
Hanoi															
Hohhot															
Hong Kong				NAV	NAV										
Katmandu															
Lahore				NAV	NAV	NAV	NAV				NAV		NAV		NAV
Mandaluyong															
Medan															
Melbourne								partly yes							
Naga	partly yes	NAV							partly yes				partly yes		
Phnom Penh															
Seoul	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV
Suva															
Ulaanbaatar															

Yes
  No

## Definitions and Significance

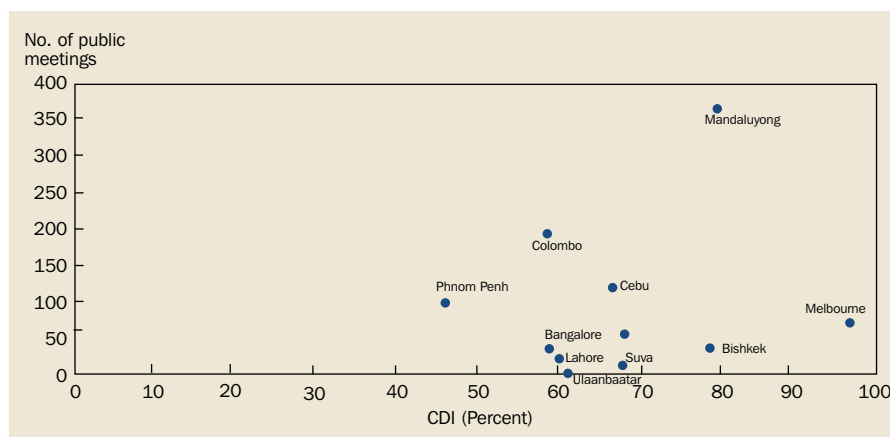
**Reported Crimes.** Number of crimes per 1,000 population reported: (a) murders, (b) drug related crimes, (c) thefts. *Warning trend:* Rising crime rates. *Significance:* Personal safety and absence of threat to property is a major prerequisite for economic activity as well as the quality of life.

**Contact with the Public.** Annual number of public local government meetings and total attendance. *Significance:* Local governments are operating in very different ways. Some have many public or ward meetings, others few or none. Some mayors or CEOs/town clerks deal extensively with the public on a daily basis, others do not see the public at all. This indicator attempts to provide a measure of the contact of the senior members of the local government with the constituency.

## 13. Urban Governance

City	Reported Crimes (per '000 population)			
	Total No.	Murders	Drug Related Crimes	Thefts
Phnom Penh	NAV	NAV	NAV	NAV
Dhaka	2.40	0.06	0.09	4.65
Medan	NAV	0.03	0.23	0.55
Colombo	NAV	0.08	22.60	0.62
Bangalore	3.20	0.04	0.00	0.70
Lahore	NAV	0.10	0.69	1.31
Ulaanbaatar	15.70	0.10	0.00	7.10
Kathmandu	0.32	0.02	1.52	0.94
Hanoi	3.20	0.01	0.42	3.40
Cebu	3.00	0.10	0.30	0.20
Suva	71.00	0.04	1.18	15.86
Hohhot	4.80	0.06	0.08	4.65
Naga	NAV	0.04	0.15	0.36
Bishkek	15.50	0.17	1.88	7.34
Mandaluyong	2.48	0.02	1.52	0.94
Seoul	NAV	NAV	NAV	NAV
Hong Kong	10.76	0.10	0.42	3.40
Melbourne	449.00	0.08	23.50	274.00

City Development Index vs. Number of Public Meetings



## 1. POPULATION

**Migration.** This refers to annual net migration in thousands from (a) other parts of the city—if the local government is part of a larger metropolitan area, there may be some net movement to or from the local government. If the city boundaries changed in the period under study, include any; (b) other parts of the country also include any residents temporarily absent and returning (e.g., military, service, prison, etc.; arrival-departure); (c) international migration; (d) total net migration. Net migration refers to (immigrants-emigrants) = other parts of the city + other parts of the country + international migration. *Warning trend:* Rapid in-migration, or out-migration. *Significance:* Rapid in-migration may put pressure on services. New immigrants swell the ranks of “street people” and tend to occupy informal settlements and the poorer parts of town. Out-migration is a sign that economic activity is moving elsewhere, and may result in “ghost town” effects of underused services, closures of business, etc.

**Minority Groups.** These are recognized special groups with population more than 10% of total, together with percentages: e.g., ethnic Chinese, minority Christians, refugees from neighboring country. *Warning trend:* Large or powerful minorities may lead to social frictions. *Significance:* Minorities provide cultural diversity, but may require special representation or facilities.

## 3. HEALTH AND EDUCATION

**Median Years of Education.** It is defined as the average number of years spent in full-time education or equivalent by adults, for males and females. *Significance:* This is a standard indicator, which measures the success of past education policies, for males and females.

## 4. URBAN PRODUCTIVITY

**List of Major Projects.** This covers the list of ten major construction or engineering projects conducted in or affecting the city, together with the total budget of each. *Significance:* Major projects often set the standard for economic activity and investment, and are used as the yardstick for urban success.

## 5. NEW TECHNOLOGY

**R&D Expenditure.** This refers to the annual expenditure per person on research and development. *Warning trend:* Low expenditure implies few innovations and little research culture. *Significance:* It represents the involvement in new and growing areas of economic activity and knowledge.

## 6. URBAN LAND

**Developer Contributions.** This refers to the percentage of infrastructure costs which must be met by developers. Infrastructure costs refers to the provision of the typical services in Land Development Multiplier. *Significance:* When developers do not meet the costs of infrastructure, they have to be met from the common rating base, which is usually not adequate. This will slow down the provision of infrastructure and may limit the release of land, causing supply shortages and speculative profits. However, if the occupants ultimately have to meet the full costs of infrastructure, it may not be affordable for them.

**Median Time for Planning Permission.** This refers to the time taken to obtain planning permission for a typical subdivision. *Warning trend:* Long approval times create artificial bottlenecks and lead to much higher prices. *Significance:* Depending on the complexity of the approval process, approvals can take anywhere between three months and five years. This can be rapidly improved by streamlining the process.

**Vacant Land with Planning Permission.** This refers to the amount of vacant land that has planning permission, in hectares. *Warning trend:* Long approval times create artificial bottlenecks and lead to much higher prices. *Significance:* Depending on the complexity of the approval process, approvals can take anywhere between three months and five years. This can be rapidly improved by streamlining the process.

**Vacant Government Land.** This covers the (a) amount of land in hectares owned by government, parastatals or enterprises (all levels of government) within the built-up area, and; (b) proportion of this land which is vacant. *Warning trend:* High levels of vacant land. *Significance:* Vacant land within the built-up area contributes to speculative pressures and signifies

that the land is probably not being put to the best use, which might well be affordable housing.

**Expenditure on Development.** This refers to the total expenditure on development per annum, per person (three-year average). Development should include land development, civil engineering and building projects) which is within or directly affects the LGA. *Warning trend:* Low development implies economic stagnation or lack of funds, and may impact on future economic activity. *Significance:* It indicates the level of investment activity in fixed capital.

## 7. HOUSING

**Mortgage to Credit Ratio.** This refers to total mortgage credit divided by all outstanding credits in commercial and government financial institutions. *Warning trend:* If mortgages only form a small part of total credit, it is likely that housing finance institutions are poorly developed or face legal and institutional constraints making it difficult for them to offer housing finance. *Significance:* The ratio measures the relative size of the housing finance sector and its ability to provide funds to housing purchasers.

**Houses with Mortgages.** This refers to the proportion of dwellings that have mortgages. *Warning trend:* Low or falling (particularly, zero) implies that no effective system of housing finance is in place. *Significance:* The presence of an effective mortgage finance system is a major means of ensuring that people are adequately housed, given that few people have the resources to pay for a formal house outright. For a mortgage system to be widespread, there must be (i) effective title to the land; (ii) a system of assessing the creditworthiness of the general populace; (iii) a source of long term funds. Low incomes are not necessarily an impediment as long as they are steady.

**Mortgage Loans for Women.** Proportion of mortgage loans held by women. *Warning trend:* Low or falling proportions will mean that women are not gaining access to the financial system. *Significance:* The presence of an effective mortgage finance system is a major means of ensuring that people are adequately housed, given that few people have the resources to pay for a formal house outright. For a mortgage system to be widespread, there must be (i) effective title to the land; (ii) a system of assess-

ing the creditworthiness of the general populace; (iii) a source of long-term funds. Low incomes are not necessarily an impediment as long as they are steady.

**Squatter Regularization or Resettlement.** This refers to households regularized or resettled annually divided by total squatter households. Regularized means that title is provided to the residents. Resettled means that they are transferred to formal housing. *Significance:* It represents the government's response to squatter housing.

## 8. MUNICIPAL SERVICES

**Cost Recovery in each service.** This covers the total revenues divided by total current expenditure for water, electricity, sewerage/wastewater, telephone and solid waste collection. Revenues refer to all direct and indirect recurrent charges to users that do not come from the general tax base. These include user-pays charges, excess water, and connection charges but not levies on developers or on residents for headworks. Costs refer to all operating outlays including depreciation and interest but not capital outlays for the water reticulation system. *Warning trend:* Low cost recovery. *Significance:* Low cost recovery indicates a high level of subsidy and a lack of sustainability for the service. Service providers with an adequate revenue base involving user-pays charges are better equipped to respond to demand. As well, in a user-pays system consumers have a stake in the development of the local system and are likely to demand service in accordance with resources and needs.

**Output per Staff Member in each service.** This refers to liters of water per day supplied per employee and megawatt hours of electricity supplied per employee per year. *Warning trend:* Low productivity. *Significance:* Low output figures correspond to low productivity, and possibly old technology.

**List of Providers.** This gives a list of major providers by type of organization, together with percent supplied. Local, regional or national government, parastatal (independent part government owned authority), private sector, or other. *Significance:* Privatization in particular has been a major concern in recent years.

**Nonrevenue water and electricity.** This refers to the percentage of unaccounted for water. Unac-

counted for water (%) equals [total annual production ( $m^3$ ) minus total annual consumption ( $m^3$ )] times 100 divided by total annual production ( $m^3$ ). It refers to percentage of line loss for electricity for nonrevenue electricity. *Significance:* High percentage line loss indicates a faulty, overloaded or obsolescent network.

**Interruptions and Line Loss – Water and Electricity.** This gives the number of hours per month that service is not available or interrupted in water or in electricity. *Significance:* Areas with poor service have frequent interruptions and may disconnect service for part of the day.

**Median Price of Water.** This refers to median price of water (in dollars per cubic meters) in scarce season. Very high water price will consume most of the household budget. Very low price will result in over-use of water. *Significance:* This measures the cost of water at times when it is most scarce. The price of water may rise to very high levels in some areas at some times, and can take a significant proportion of the household budget.

## 9. URBAN ENVIRONMENT

**Percent BOD removed from wastewater.** This is defined as the average fraction of BOD removed in major wastewater receiving bodies. BOD (biological oxygen demand) is the amount of dissolved oxygen required to oxidize or neutralize biodegradable matter in water. *Warning trend:* Low or falling ratios imply poor efficiency of treatment. *Significance:* High BOD levels represent high amounts of contaminant matter, and the reduction of BOD is a common measure for determining the efficacy of water treatment.

**Air Pollution Concentrations.** It is defined as the number of days per annum that WHO standards are exceeded for (a)  $SO_2$ , (b)  $NO_x$ , (c) CO, (d)  $O_3$ , (e) suspended particulates; and (f) lead. *Warning trend:* Increasing pollution levels. *Significance:* Suspended particulates and lead are generally considered as the most harmful to human health.

**Energy usage per person.** This is the total energy usage per annum per person in metric tons of coal equivalent. This should be aggregated across all forms of energy usage using standard conversion rates. *Significance:* Increasing levels of energy usage are virtually synonymous with industrial activity and

resource usage.  $CO_2$  emissions also correlate highly with energy use.

**Noise Complaints.** This refers to the number of complaints on domestic, industrial or traffic noise received by local governments or other authorities during the year. *Warning trend:* This would be a rising number of complaints. *Significance:* Noise is one of the major urban nuisances. If excessive, as in industrial plants, it may damage hearing.

## 10. URBAN TRANSPORT

**Road Congestion.** This refers to the proportion of roads with volume divided by capacity divided by 0.8 during peak hour. Proportions should be calculated using length if possible. *Significance:* Roads typically have a registered carrying capacity, and a commonly used measure of excessive congestion is when the volume of traffic carried exceeds 0.8 times this capacity.

**Cost Recovery from Fares.** This covers revenue divided by recurrent costs, for all publicly owned or subsidized mass transport organizations operating in the city. *Warning trend:* Poor or falling recovery. *Significance:* Despite the problem of congested roads, mass transport has been decreasingly patronized, so that particularly in industrial nations, transit modes have required heavy subsidies to remain in operation. However, subsidies hamper efficiency and may limit the expansion of the service in response to need. This subsidy usually benefits peak-hour commuters at the expense of off-peak commuters who may have lower incomes. It is difficult to raise fares however, as patronage is very cost-sensitive.

**Goods Carried.** This covers millions of revenue tons of goods per annum carried by commercial carriers leaving the city, by (a) road, (b) rail, (c) air, and (d) sea. *Significance:* This is a major indicator of trade.

## 11. CULTURAL

**Attendance at Public Events.** These are major public events during year, attendance at five largest. Events may include: concerts, festivals, sporting events, conventions, celebrity visits, or political rallies and protests. *Significance:* The spirit of a city is to some extent determined by the events, which will bring the populace out into the public arena. The CDB seeks to capture part of that spirit.

**Attendance at Galleries and Museums.** This is the list of major museum and galleries, with annual attendance. *Significance:* The arts and cultural environments are key components of modern city infrastructure and contribute to a city's livability and image. A culturally vibrant city has an edge in attracting investment.

**Participation in Sport.** This refers to the percentage of population participating in organized sport. Sport can include non-physical activities like organized chess and bridge. Individual recreation activities, including gambling and video arcades, are not included. *Warning trend:* Falling participation. *Significance:* Sporting activity is a form of cultural participation that is universally approved and can improve fitness, health and concentration.

## 12. LOCAL GOVERNMENT

**Collection Efficiency, Property Taxes.** These include the (a) percentage of liabilities actually collected; and (b) costs of collecting property tax as a percentage of receipts passing to the local government. *Warning trend:* This includes (a) low or falling percentage collected; and (b) high or rising costs. *Significance:* It measures the efficiency of property tax collection.

**Debt Service Charge.** This shows the total principal and interest repaid, including bond maturations, as a fraction of total expenditure in 1998. *Warning trend:* This is a high or rising ratio. *Significance:* It represents the debt of the community. If excessively high, it will lower the credit rating of the government.

**Contracted Recurrent Expenditure Ratio.** This covers the proportion of recurrent expenditure spent on contracted activities. *Warning trend:* This is a falling value. *Significance:* This provides a measure of the involvement of the private sector in local government activities. It will not, however, indicate activities that have been completely privatized.

**Enterprise Revenues.** This includes enterprise profits or losses, listed for any major enterprises. *Warning trend:* Recurring enterprise losses. *Significance:* Recurring losses could indicate need to adjust the level of fees charged, re-examine the costs in providing/producing the goods/service, and evaluate/maximize the level of capacity utilization.

**Computerization of Functions.** This indicates whether or not various functions have been automated—(a) land registration, (b) rates collection, (c) salaries, (d) general finances, and (e) business permits.

## 13. URBAN GOVERNANCE

**Delivery of Annual Plan.** Percent of budgeted expenditure on annual plan delivered. In practice most government bodies deliver close to 100% of plan in the audited accounts, whether or not the budget has actually been expended as planned. *Significance:* Delivery of plan is key measure of effectiveness.

**Voter Participation by Sex.** Proportion of voters who voted in last municipal elections: (a) proportion of adult males; (b) proportion of adult females. *Significance:* Gives an indication of the interest and involvement of the public in local government.

**Independence from Higher Government.** Definition of in what circumstances local governments can make their own decisions or are subject to higher government in (a) closing down the council or removing councilors from office; (b) setting local tax levels; (c) setting user charges for services; (d) borrowing funds; and (e) choosing contractors for projects. Also, the percentage of grant funds from higher government known in advance of local budget setting. *Significance:* These questions attempt to determine the independence of action of local governments. The definition should be used in writing up the city report.

**Elected and Nominated Councilors.** Number of elected and nominated councilors: (a) female; (b) male. *Significance:* The number of representatives provides some idea of the level of local political representation, and the involvement of women in the local political process.

**Representation of Minorities.** Definition of mechanisms for representation of any substantial minorities. *Significance:* Representation of or by minorities is a fundamental expression of human rights. Minorities who feel they are not adequately represented may seek direct means of representation of their interests, which are less harmonious.

**Planning Applications Refused.** Proportion of planning applications refused, by local or higher government. *Warning trend:* Excessively high levels may be hampering worthwhile development or excluding

disadvantaged groups, while excessively low levels may represent a lack of responsible monitoring of planning. *Significance:* Represents the enforcement and the strength of planning legislation.

**Consumer Satisfaction.** Consultants are required to provide a description of whatever mechanisms are in place to measure consumer business and citizen satisfaction of local government services, as part of a general review that will be undertaken by the Cities Data Book. *Warning trend:* Satisfaction levels of less than 70% are generally regarded as inadequate. *Significance:* Measures of consumer and business satisfaction were nominated as very important by the Consultative Workshop for the Cities Data Book. Consumer satisfaction measures effective delivery to the public, while business satisfaction may have business location implications.

**Perception as a Place to Live.** Details of any survey or study that has done a comparative survey on perception of quality of life in the city, either for residents, business people, or expatriates, should be provided. *Significance:* The perception of the city as a place to live is a major subjective factor in both investment and relocation decisions of firms. As well, the urban quality of life is ultimately what urban indicators are seeking to measure.

**Access to Information.** Boxes should be checked for (a) annual report, (b) city strategy/vision, (c) economic strategy, and (d) social strategy. Any other significant publications for the year should be listed in *Notes*, as well as other methods of public communication such as web sites. *Significance:* Providing information to the constituency and stakeholders is a prime function of local government.

**Decentralized District Units.** (a) The number of local government areas within the larger metropolis, and (b) the number of decentralized or smaller district units within the local government. The functions of these smaller areas should be explained in *Notes*.

## SUMMARY TABLES

## Population, Migration, and Urbanization

City	1.1 Urbanization (%)	1.2 City Population			1.3 Annual Net Migration				1.4 Pop. Net Density (persons/ha)
		1.2.1 Resident Pop. of Municipal Area ('000)	1.2.2 Pop. During Daytime Working Hours ('000)	1.2.3 Annual Rate of Pop. Increase (%)	1.3.1 Other Parts of the City Net ('000)	1.3.2 Other Parts of the Country Net ('000)	1.3.3 Int'l Migration Net ('000)	1.3.4 Total Net Migration ('000)	
Bangalore	28.3	4,328.0	4,398.0	4.4	42.0	33.0	1.0	76.0	330.0
Bishkek	34.0	614.0	700.0	1.0	53,790.0	3.3	-2.0	1.2	41.6
Cebu	68.0	655.0	886.0	1.6	0.0	33.0	1.0	34.0	92.6
Colombo	25.0	800.0	1,200.0	2.4	NAV	NAV	861.0	NAV	298.0
Dhaka	23.0	6,500.0	NAV	4.2	NAV	800.0	NAV	NAV	953.0
Hanoi	19.7	2,553.0	NAV	3.5	60.2	20.5	1.0	NAV	146.0
Hohhot	34.9	1,017.7	NAV	2.2	9.9	6.8	0.0	16.7	684.0
Hong Kong	95.7	6,687.2	NAV	2.8	0.0	56.0	-19.3	36.7	67.0
Kathmandu	14.0	575.7	625.7	6.0	27.3	20.9	83.5	NAV	175.7
Lahore	32.5	4,502.0	4,802.0	3.1	NAV	NAV	NAV	NAV	240.6
Mandaluyong	61.7	314.0	970.0	3.1	0.6	3.2	0.1	3.9	670.0
Medan	37.8	2,035.2	2,197.5	1.8	340.0	159.0	3.0	-2.1	142.0
Melbourne	86.0	44.5	400.0	5.8	10.4	NAV	2.6	2.5	93.0
Naga	73.7	137.5	158.2	2.0	3.9	2.3	0.0	6.1	115.6
Phnom Penh	57.0	999.8	NAV	5.4	NAV	NAV	NAV	NAV	203.0
Seoul	81.3	10,321.0	NAV	-0.7	-134.0	NAV	NAV	NAV	480.7
Suva	42.5	77.4	137.4	1.7	NAV	4.3	NAV	4.3	74.7
Ulaanbaatar	67.9	725.3	NAV	4.5	NAV	15.2	0.0	14.4	133.0

**Legend:**

NAV – not available



## Population, Migration, and Urbanization

City	1.5 Age Pyramid						1.6 Average HH Size (persons/hh)	1.7 HH Formation Rate (%)	1.8 Women-headed HH (%)	1.9 Minority Group See Notes & Sources for each city	1.10 Household Type				1.11 Informal Settlement		
	1.5.1 Persons 0-14		1.5.2 Persons 15-59		1.5.3 Persons over 60						1.10.1 Single Person (%)	1.10.2 Adults Only (%)	1.10.3 Single Parent Family (%)	1.10.4 Adults and Children (%)	1.11.1 Population ('000)	1.11.2 Households ('000)	1.11.3 Land Occupied (ha)
	Male	Female	Male	Female	Male	Female											
Bangalore	570,430	640,977	1,464,959	1,394,482	128,758	128,542	5.1	5.9	12.5		12.4	9.5	0.4	77.6	592.0	102.0	286.0
Bishkek	61,400	73,680	190,340	214,900	30,700	42,980	2.4	0.2	21.6		9.0	42.0	12.0	66.0	53.8	17.7	229.5
Cebu	110,891	105,717	196,041	210,517	14,476	17,358	4.9	3.8	16.2		NAV	NAV	NAV	55.0	230.0	45.0	444.0
Colombo	100,800	96,800	268,800	268,400	30,000	35,200	7.3	0.7	NAV		NAV	NAV	NAV	40.0	492.0	66.0	410.0
Dhaka	1,001,000	1,277,250	2,138,500	1,875,250	110,500	97,500	5.1	4.2	7.2		2.4	NAV	NAV	58.0	1,950.0	375.0	324.0
Hanoi	332,784	303,807	841,469	841,469	102,248	1,31,097	4.2	3.6	36.9		5.0	27.9	11.2	70.9	43.4	12.4	61.1
Hohhot	99,635	93,020	384,088	368,008	39,996	32,974	3.5	1.0	NAV		0.0	1.1	6.8	92.2	165.9	55.0	49.8
Hong Kong	601,848	561,724	2,440,828	2,380,643	320,986	381,170	3.3	4.1	27.2		12.7	47.3	1.9	38.1	249.0	69.2	NAV
Kathmandu	88,938	92,392	185,360	178,740	13,528	16,694	5.2	8.5	14.4		6.3	NAV	NAV	53.0	7.9	1.6	2.8
Lahore	926,962	968,155	1,175,022	1,164,892	149,016	117,952	6.9	3.2	9.0		4.0	19.0	7.0	70.0	1,800.0	257.0	3,000.0
Mandaluyong	49,408	46,979	96,968	107,347	5,822	7,952	4.6	4.2	17.4		4.5	36.0	9.6	50.0	58.0	12.0	37.0
Medan	314,031	319,119	683,420	688,508	12,008	18,114	6.2	1.7	11.9		3.7	36.8	4.5	55.0	122.5	19.8	860.7
Melbourne	2,089	2,003	18,362	16,737	2,861	3,201	2.0	4.3	NAV		24.0	36.4	8.1	31.7	0.0	0.0	0.0
Naga	26,571	25,512	37,458	40,523	3,196	4,287	5.4	2.9	5.9		NAV	30.0	3.2	63.0	15.3	2.5	30.5
Phnom Penh	169,600	160,600	293,700	328,700	18,600	27,600	5.7	13.3	28.7		2.3	28.0	15.0	55.0	150.0	25.0	NAV
Seoul	1,042,421	940,243	3,786,775	3,722,785	341,625	487,151	3.0	0.2	16.7		11.9	48.0	8.1	32.0	NAV	56.0	NAV
Suva	11,682	11,295	25,221	25,376	1,625	2,166	5.3	0.3	16.3		6.3	33.5	10.2	50.0	4.3	1.1	234.0
Ulaanbaatar	110,753	110,101	222,595	245,514	16,102	20,236	4.8	2.5	9.8		4.4	NAV	NAV	50.0	348.9	71.1	4046.0

Legend:

NAV – not available

## Income Disparities, Unemployment, and Poverty

City	2.1 Income Distribution										2.2 HH Below Poverty Line (%)	HH Below Poverty Line—\$1 a day
	2.1 Q5 Top 20%		2.1.2 Q4 Next 20%		2.1.3 Q3 Middle 20%		2.1.4 Q2 Next Bottom 20%		2.1.5 Q1 Bottom 20%			
	Range (\$)	Ave. Income on Range (\$)	Range (\$)	Ave. Income on Range (\$)	Range (\$)	Ave. Income on Range (\$)	Range (\$)	Ave. Income on Range (\$)	Range (\$)	Ave. Income on Range (\$)		
Bangalore	960	1,440	720	840	480	600	300	420	0	240	32.5	377
Bishkek	3,754	4,596	2,308	3,031	979	1,584	325	374	0	276	7.2	189
Cebu	6,114	13,204	2,445	3,791	1,467	1,948	978	1,217	245	642	34.2	451
Colombo	1,860	4,752	1,260	1560	774	960	432	588	84	276	12.9	774
Dhaka	3,461	4,601	2,184	2,822	1,273	1,545	730	1,000	0	460	47.7	494
Hanoi	430	723	285	357	205	253	134	168	0	70	1.8	267
Hohhot	886	3914	664	879	514	661	367	513	48	365	NAV	266
Hong Kong	61,956	90,000	46,488	54,222	23,256	34,872	15,492	19,374	0	7,746	NAV	1,192
Kathmandu	2,517	2,996	1,887	2,202	1,426	1,572	1,105	1,279	0	930	35.6	319
Lahore	5,999	*18,750	2,999	4,499	1,500	2,249	750	1,124	0	600	29.9	543
Mandaluyong	15,517	16,012	8,621	10,525	5,173	6,516	3,448	4,927	345	3,088	32.1	535
Medan	1,079	1,258	719	899	575	647	431	503	0	229	29.0	583
Melbourne	53,014	75,533	3,412	43,081	21,314	27,502	11,583	15,953	0	6,162	NAV	704
Naga	5,898	15,400	2,934	6,351	2,201	3,472	1,647	2,537	0	1,361	29.0	482
Phnom Penh	228	640	175	201	116	148	52	85	0	38	24.0	385
Seoul	44,499	65,630	201	39,707	26,628	30,123	18,964	23,132	0	14,796	1.2	787
Suva	10,159	18,164	7,851	9,005	5,234	6,651	3,926	4,638	0	2,956	17.5	651
Ulaanbaatar	1,208	3,752	803	1,003	521	656	334	426	40	218	34.1	312

Legend:

NAV – not available

\* – unconfirmed

## Income Disparities, Unemployment, and Poverty

City	2.3 Women-Headed Households in Poverty (%)	2.4 Child Labor ('000)	2.5 Informal Employment (%)	2.6 Unemployment (%)	2.7 Expenditure on Poverty Reduction (per poor person) (\$)
Bangalore	9.8	36.3	54.0	7.5	NAV
Bishkek	28.7	58.9	34.4	6.0	20.16
Cebu	NAV	0.0	NAV	11.2	11.51
Colombo	40.0	0.1	19.3	9.1	101.00
Dhaka	7.2	752.9	63.0	23.0	3.20
Hanoi	NAV	NAV	NAV	9.1	15.00
Hohhot	NAV	0.0	8.2	0.1	5.00
Hong Kong	NAV	0.0	NAV	4.7	3,020.00
Kathmandu	97.0	13.8	33.0	7.8	NAV
Lahore	6.3	321.8	60.0	5.4	2.96
Mandaluyong	31.8	0.1	40.0	15.8	52.23
Medan	6.9	0.0	46.6	13.7	3.20
Melbourne	NAV	0.0	NAV	4.6	NAV
Naga	53.2	1.0	32.1	5.8	30.64
Phnom Penh	20.7	2.3	NAV	2.1	9.80
Seoul	NAV	NAV	NAV	4.9	60.55
Suva	22.0	3.1	63.0	7.7	0.04
Ulaanbaatar	28.7	0.3	20.5	2.9	28.00

Legend:

NAV – not available

## Health and Education

City	3.1 Persons per Hospital Bed	3.2 Child Mortality (%)	3.3 Life Expectancy at Birth (years)	3.4 Infectious Diseases Mortality (per '000 pop)	3.5 Family Planning (%)	3.6 Adult Literacy Rate (%)	3.7 School Enrollment Rates		3.8 Tertiary Graduates (per '000 pop.)	3.9 Median Years of Education (years)	3.10 School Children per Classroom	
							3.7.1 Primary Schools (%)	3.7.2 Secondary Schools (%)			3.10.1 Primary	3.10.2 Second- ary
Bangalore	370.8	6.70	69.3	1.14	56.0	73.1	94.7	24.5	75.0	NAV	54.0	25.0
Bishkek	53.2	4.80	67.9	0.33	74.3	98.0	76.5	75.9	15.0	11.0	32.0	32.0
Cebu	306.0	4.10	66.0	10.50	46.0	93.0	93.7	86.7	145.0	14.0	58.0	50.0
Colombo	100.0	1.90	71.8	0.16	66.0	94.5	52.8	33.8	23.0	NAV	40.0	45.0
Dhaka	924.0	9.30	60.5	NAV	49.8	60.3	83.0	39.0	43.0	NAV	56.6	75.8
Hanoi	289.0	4.30	69.7	NAV	77.6	85.0	97.7	90.3	10.2	12.5	36.2	41.0
Hohhot	375.0	4.70	71.5	NAV	99.7	82.9	99.4	91.6	15.0	15.0	56.0	50.0
Hong Kong	204.0	3.20	79.9	0.04	85.9	91.1	96.0	80.1	350.0	NAV	37.0	38.2
Kathmandu	197.0	9.00	67.0	0.40	30.0	78.2	86.4	86.8	62.0	10.0	40.0	23.0
Lahore	369.0	10.80	63.0	2.50	36.1	66.0	61.6	26.5	48.7	8.0	46.0	60.0
Mandaluyong	63.0	2.50	69.0	0.20	51.0	99.4	94.0	94.0	245.0	14-15	45.1	56.1
Medan	443.2	3.00	65.5	0.06	57.9	98.1	97.2	75.7	69.0	12.0	37.0	38.0
Melbourne	12.8	0.60	78.4	0.01	76.0	100.0	99.9	99.9	268.0	9.0	25.7	20.7
Naga	145.9	1.70	69.5	1.16	48.0	98.0	117.0	77.0	160.8	15.0	39.0	48.4
Phnom Penh	227.0	16.70	52.9	16.00	13.0	80.2	91.1	90.7	52.8	NAV	51.0	48.0
Seoul	193.0	0.60	72.4	0.00	79.0	100.0	98.0	102.7	44.8	10.5	24.9	42.1
Suva	91.0	2.40	66.6	NAV	52.3	96.9	97.7	74.1	116.0	8.3	31.0	29.0
Ulaanbaatar	105.0	6.90	64.8	0.17	59.0	97.1	103.8	66.4	10.9	14.0	35.7	34.2

Legend:  
NAV – not available

## Urban Productivity and Competitiveness

City	4.1 City Product per Capita (\$)	City Product PPP Adjusted (\$)	4.2 Employment by Industry					4.3 Household Expenditure			
			4.2.1 Secondary & Infrastructure ('000)	4.2.2 Consumer Services ('000)	4.2.3 Product Services ('000)	4.2.4 Social Services ('000)	4.2.5 Others ('000)	4.3.1 Food (%)	4.3.2 Shelter (%)	4.3.3 Travel (%)	4.3.4 Others (%)
Bangalore	504	2,133	429.7	110.9	264.2	NAV	282.9	47.7	10.5	3.7	38.1
Bishkek	1,750	7,219	58.9	38.2	4.1	65.8	*9.2	56.2	4.8	15.3	23.7
Cebu	2,021	6,699	NAP	NAP	NAP	NAP	NAP	44.5	20.2	6.9	28.4
Colombo	550	1,660	87.0	195.0	205.0	193.0	18.0	37.5	19.8	7.1	35.6
Dhaka	900	2,801	NAV	NAV	NAV	NAV	NAV	46.3	17.3	NAV	NAV
Hanoi	709	3,560	231.0	195.0	5.0	82.0	489.0	57.2	12.4	6.7	23.7
Hohhot	845	3,648	165.7	75.5	15.1	128.9	2.6	33.0	5.0	2.0	38.0
Hong Kong	26,369	24,350	711.4	670.6	921.6	317.7	423.0	29.4	31.0	7.9	31.7
Kathmandu	750	3,720	29.6	40.3	4.5	55.3	64.0	51.5	15.1	4.2	29.1
Lahore	1,039	3,783	NAV	NAV	NAV	NAV	NAV	41.2	18.3	6.2	34.3
Mandaluyong	2,434	6,473	31.0	43.0	23.0	12.0	1.0	42.8	19.4	5.8	32.0
Medan	350	1,156	NAV	NAV	NAV	NAV	60.9	55.1	30.0	10.0	4.9
Melbourne	28,456	28,456	2.1	8.2	5.3	4.5	0.8	13.3	28.4	11.0	47.3
Naga	2,033	6,738	6.8	22.9	4.3	7.1	7.3	46.8	18.9	5.4	29.0
Phnom Penh	246	1,111	28.4	120.2	8.6	13.2	69.5	40.4	37.6	10.0	12.0
Seoul	24,000	30,000	NAP	NAP	NAP	NAP	NAP	28.3	17.7	NAV	40.8
Suva	3,205	8,155	5.3	10.0	7.0	2.5	0.4	NAV	NAV	NAV	NAV
Ulaanbaatar	525	2,500	79.3	71.1	8.8	37.2	13.4	50.6	25.0	16.6	7.8

**Legend:**

NAP - not applicable  
 NAV - not available  
 \* - unconfirmed

## Urban Productivity and Competitiveness

City	4.4 Investment by Sector				4.5 Tourism		4.6 Major Projects (List)	4.7 Cost of Stay (\$/day)	4.8 Corporate Headquarters
	4.4.1 Physical Infrastructure (\$p.a.)	4.4.2 Housing (\$p.a.)	4.4.3 Services (\$p.a.)	4.4.4 Others (\$p.a.)	4.5.1 Persons (‘000)	4.5.2 Expenditure (\$ million)			
Bangalore	NAV	NAV	NAV	NAV	1,200.0	NAV	Flyover from Sirsi Circle to Narasimharaja Rd. over Mysore Rd. \$21.21m; Flyover from KH Rd. to Richmond Circle \$0.94m; Underpass on Nat'l Highway7 at Mekhri Circle \$5.10m; Cable Stayed Bridge on NH4 over KR Puram Railway Station, Outer Ring Rd. Cauvery Stage IV, Phase I Water Supply, Shivajinagar Bus Stand Modernization, Impv't to Arterial and Sub-arterial Roads \$35.79m; Underpass Near Sangam Cinema \$0.69m; Underpass Near Shivajinagar \$3.83m	106	25
Bishkek	17.80	7.94	132.48	NAV	59.4	2.4	Reconstruction of Urban Rd. \$13.5m; Improving of Work of the Urban Pub. Transport \$ 0.95m; Reconstruction of the Sys. of the Urban St. Lighting \$2.5m; Const'n of Factory on Processing Garbage with Italian firm "Ati-Wid" \$90 m; Creation of the Enterprise of the Pub. Urban Transport Realizing Carriage of the Passengers by Microbuses \$8,535,172; Intro of Helio-Installations (converters of a solar energy) for Deriving Hot Water in Res. of City Bishkek \$1,371,440; Intro of Energy Saving Tech in a Sys of Lighting St. of Bishkek with Use of Lamps of Low Power and Increased Light \$0.5m; Creation of Comm'l Network by Prod. of the 1st Necessity & Goods of Daily Demand in Bishkek on a Sys (wholesale warehouse-shop) \$6m; Creation of the Enterprise on Assembly, Installation & Service of Counters of Cold Water in Apartment Houses of Bishkek \$119,496; Creation of Autonomous Sys of Heating with Use of Energy Saving Means of a Type (Trasonic) for Establishments of Bishkek, Financed from the Loc. Budget \$3m	117	0
Cebu	NAV	NAV	NAV	NAV	634.7	NAV	Second Mandaue-Mactan Bridge; Cebu City Reclamation Project; Metro Cebu Dev't Project I,II,III	80	0
Colombo	43.37	NAV	34.00	6.50	381.0	NAV	Base Line Rd Rehab. Proj.\$23.69m; Sri Lanka-Japan Friendship Bridge; Duplication Road Ext. Proj. \$0.805m; Sustainable Township Prog.; Clean Settlement Prog. \$1.006m; Colombo Flood Protection Proj.; 8 Ft High Stacking Empty Container Yard \$9.47m; North Pier Dev't Proj. Phase I \$12.82m; Phase II \$23.95m; Queen Elisabeth Quay \$256.37m; Base Line Rd Rehab. Proj. \$23.69m; Sri Lanka-Japan Friendship Bridge; Duplication Road Ext. Proj. \$0.805m; Sustainable Township Prog.; Clean Settlement Prog. \$1.006m; Colombo Flood Protection Proj.; 8 Ft High Stacking Empty Container Yard \$9.47m; North Pier Dev't Proj. Phase1\$12.82m; Phase11\$23.95m; Queen Elisabeth Quay \$256.37.	84	0
Dhaka	NAV	NAV	NAV	NAV	182.0	56.0	Dhaka Urban Transport Proj \$234m; 4th Dhaka Water Supply Proj. \$148m; Air Quality Proj. \$155m; 9th & 10th Power Proj. \$314m/330m; Urban Primary Health Care \$60m; Dhaka Power Sys. Upgrade \$251m; Dhaka Integrated Flood Protection Proj. \$120m; Flood	109	100

## Urban Productivity and Competitiveness

City	4.4 Investment by Sector				4.5 Tourism		4.6 Major Projects (List)	4.7 Cost of Stay (\$/day)	4.8 Corporate Headquarters
	4.4.1 Physical Infrastructure (\$p.a.)	4.4.2 Housing (\$p.a.)	4.4.3 Services (\$p.a.)	4.4.4 Other (\$p.a.)	4.5.1 Persons ('000)	4.5.2 Expenditure (\$ million)			
							Damage Rehab Proj. \$130m; Southwest Rd. Network Dev't \$134m; Urban Basic Service Delivery \$20.4m		
Hanoi	188.00	11.28	15.43	3.75	500.0	85.3	NAV	99	13
Hohhot	397.00	5.53	127.00	19.04	39.6	126.0	Water Supply Proj by Div Water fr. Yellow River \$214.639m; Second Phase Proj of Wastewater Treatment \$90.565m; 2nd Phase of Dist. Heating \$69.871m; Reconstruction of Main & Sub-main Rds \$43.097m; Overpass at Gulou \$42.276m; Storm Collection Network Reconstruction \$34.545m; Reconstruction of Water Supply Network \$33.663m; Expanding of Jinhai Rd \$16.327m; Reconstruction of East 1st Ring Rd. \$15.019m; Waste Treatment Plant East of Hohhot \$10.871m	72	NAV
Hong Kong	1,486.00	1206.00	1673.00	3111.00	9574.7	6853.0	HK Int'l Airport & The Airport Core Proj. \$9.076b ; Priority Rail Proj. \$15.247b; The Strategic Sewage Disposal Scheme Phase I \$1.033b; Science Park at Pak Shek Kok \$308.57m; Container Terminal No. 9 \$348.60m	154	819
Kathmandu	4.06	4.00	8.97	27.17	463.7	152.5	Kathmandu Urban Dev't Proj. \$8m; Electricity 2nd Rd Impvt Proj. \$0.3m; Strengthening Proj., \$0.2m; Inst'l Strengthening Proj. for Environmental Monitoring \$0.58m; Bagmati Area Sewerage Dev't Proj. \$3.8m; Land Pooling Proj. \$8.98m	100	0
Lahore	35.29	0.98	NAV	192.44	42.0	3.0	Lahore Walled City Circular Rd. Sewerage & Drainage Impvt \$4.44m; Const'n of Secondary & Tertiary Drains of Chotta Ravi & Siddiquepura Zone \$1.71m; New Terminal Complex at Lahore Int'l Airport \$200m; Const'n of Jail Rd. & Widening of Sherpao Bridge \$1.33m; Const'n of Bhaati Chowk Underpass Garhi Shahu & Calvary Flyover & New Campus Underpass \$18.936m; Lahore Rd. Rehab. \$66.294m; MCL Small Proj. Scheme \$7.332m; Purchase of New Machinery for SWM \$3.6m	108	NAV
Mandaluyong	971.84	4.55	3925.95	2743.09	140.0	48.0	Drainage & St. Impvt \$870,822.86; Building Construction \$223,363; Water Supply \$120,637.29	125	2
Medan	NAV	NAV	NAV	NAV	191.4	21.6	NAV	58	NAV
Melbourne	227.77	244.49	92.11	400.49	5,917.4	1,150.0	Crown Entertainment Precinct \$1,380m; City Link Tollway \$1,173m; New Residential Apartments, Southbank \$414m; Southgate & Yarra Promenade Redevelopment, \$345m; Dockland Stadium \$276m; Redevelopment of Flinder St. Railway Station \$90m; Redevelopment of Nat'l Gallery of Victoria \$90m; Melbourne Exhibition Ctr \$90m; Federation Square \$90m; Jolimont Railyards Redevelopment \$90m	142	38
Naga	50.95	11.94	22.16	23.92	50.4	64.6	Rehab of Maharlika H-way, \$8.6078m; 64 Various Community Infrastructure Dev't Proj. \$1.1016; Impvt of Naga Airport Facilities \$0.8803m; Magsaysay Bridge Rehab \$0.7336m; Malabsay Falls Dev't	0	

## Urban Productivity and Competitiveness

City	4.4 Investment by Sector				4.5 Tourism		4.6 Major Projects (List)	4.7 Cost of Stay (\$/day)	4.8 Corporate Headquarters
	4.4.1 Physical Infrastructure (\$p.a.)	4.4.2 Housing (\$p.a.)	4.4.3 Services (\$p.a.)	4.4.4 Other (\$p.a.)	4.5.1 Persons (‘000)	4.5.2 Expenditure (\$ million)			
							\$0.7336m; City Sch. Bldg. Prog. \$0.5869m; Dev’t of Access Rd. to Central Bus Terminal \$0.1834m; Naga River FloodCtl Proj. \$0.1712m; City Water Sys. Impvt \$0.0978m; Rural Rd. Dev’t Proj. \$0.0489m		
Phnom Penh	NAV	NAV	NAV	48.80	218.8	NAV	Phnom Penh Water Supply & Drainage (Part B) \$13.947m; Phnom Penh Water Supply & Drainage (Part A) \$15.360m; Cambodian Urban Water Supply Proj. Phnom Penh Component \$25.961m; Impvt of Water Supply Facilities in Phnom Penh 17.147m; Const’n of Landfill Site of MPP \$12.3m; Study of Drainage Impvt and Flood Control in MPP \$2.8687m; Impvt of the Flood Control of MPP \$41.6m	105	3
Seoul	NAV	NAV	NAV	NAV	3188.0	NAV	2nd Subway Construction \$649.4m; Construction of Radial Principal Rd. \$68m; Const’n of Inner Rd. \$61.4m; Collectively Supplied Energy \$57.3m; Maintenance & Repair Proj. of Underground Shopping Ctr. \$56.8m; 3rd Subway Const’n & Design \$43.9m; Const’n Recovery Facilities of Waste Materials \$34.7m; Const’n of Water Purification Plants \$33.3m; Proj. to Improve Residential \$56.8m; \$31.5m; Ext. Proj. of Ji-Bong St. \$20.9m	193	0
Suva	NAV	NAV	NAV	NAV	30.6	NAV	NAV	94	0
Ulaanbaatar	11.72	29.23	24.54	101.75	150.7	27.8	Buyant-Ukhaa Int’l Airport \$39m; Ulaanbaatar Services Impvt Proj. \$26.7m; Modernization of Power Plant 3 \$37m; Energy Conservation Proj. \$1.1m; Chingges Khaan Hotel \$20m; City Rd. Impvt Proj \$1.2m; Extension of Ard-Ayush Ave. \$2.3m; New Cental Market Dev’t \$4.8m; Rehab. Proj. of Ulaanbaatar-Darkhan-Altanbulag (Northern Border w/ Russia) \$25.25m; Continental Hotel \$2.5m	98	0

Legend:  
NAV – not available



## Technology and Connectivity

City	5.1 R&D Expenditure (\$)	5.2 Telephone Traffic (calls per person per year)			5.3 Internet Hosts (per '000 pop.)	Connectivity Index	Congestion Index
		5.2.1 Local	5.2.2 International	5.2.3 Mobile or Cellphone			
Bangalore	NAV	130.0	2.0	1.4	8.00	48	74.8
Bishkek	0.07	*270.0	*3.2	0.0	4.30	16	51.6
Cebu	NAV	28.0	0.1	10.4	6.00	37	52.5
Colombo	1.88	64.0	1.2	5.0	9.63	26	62.6
Dhaka	NAV	17.0	0.4	0.5	9.23	34	86.2
Hanoi	37.60	88.0	1.2	1.0	6.30	47	61.4
Hohhot	1.19	55.0	0.2	7.0	0.85	0	67.4
Hong Kong	28.00	420.0	71.0	132.0	278.00	100	69.3
Kathmandu	NAV	100.0	0.4	0.6	15.40	30	57.4
Lahore	0.44	78.0	1.9	1.2	16.60	24	73.1
Mandaluyong	2.28	210.0	3.3	4.4	18.00	34	72.5
Medan	0.01	60.0	2.1	7.0	10.00	27	61.9
Melbourne	408.00	594.0	11.0	80.0	131.90	85	32.0
Naga	0.28	90.0	0.4	38.0	4.73	5	44.5
Phnom Penh	NAV	3.5	0.1	1.1	0.49	16	57.8
Seoul	59.96	340.0	11.6	84.0	150.00	88	83.3
Suva	0.00	76.0	2.1	2.8	26.64	17	40.1
Ulaanbaatar	2.24	63.0	0.8	1.0	4.14	13	53.3

Legend:

NAV – not available

\* – unconfirmed

## Urban Land

City	6.1 Urban Land							6.2 Land Developer Multiplier	6.3 Developer Contribution (%)
	6.1.1 Residential (ha)	6.1.2 Business (ha)	6.1.3 Services (ha)	6.1.4 Transport (ha)	6.1.5 Mixed Use (ha)	6.1.6 Others (ha)	6.1.7 Total Area (ha)		
Bangalore	9,877	675	2,038	8,946	4,747	2,144	28,400	15.4	0
Bishkek	*14,736	*	*8	*1,128	*	*4,703	*15,597	4.0	10
Cebu	*5,394	*669	*55	*	*1,888	*959	*	1.9	99
Colombo	1,402	374	660	983	262	48	3,729	2.2	NAV
Dhaka	*6,840	*3,204	*	*4,320	*	*	*36,000	5.7	10
Hanoi	2,380	840	1,570	470	3,870	10,339	19,469	NAP	0
Hohhot	2,360	2,250	2,000	370	630	1,020	8,630	3.0	NAV
Hong Kong	5,900	1,300	3,700	3,100	93,400	2,300	109,700	NAP	NAP
Kathmandu	158	83	239	166	3,116	1,314	5,076	2.5	29
Lahore	11,125	1,725	2,725	1,750	125	7,550	25,000	1.2	100
Mandaluyong	469	211	46	180	60	160	1,126	4.4	20
Medan	14,311	2,403	*6,343	3,353	51	49	26,510	2.5	18
Melbourne	367.08	701	223	1,201	142	813	3,447	4.8	100
Naga	1,099	191	150	4	0	20	1,464	5.0	100
Phnom Penh	4,136	603	NAV	287	793	13,752	19,571	13.3	NAV
Seoul	NAP	NAP	NAP	NAP	NAP	NAP	60,595	NAV	NAV
Suva	1,035	725	160	NAV	NAV	246	NAV	3.0	100
Ulaanbaatar	4,764	1,978	760	1,435	687	4,739	14,363	1.1	60

Legend:

NAP – not applicable

NAV – not available

\* – unconfirmed

## Urban Land

City	6.4 Median Time for Planning Permission (month)	6.5 Vacant Land with Planning Permission (ha)	6.6 Public Open Space (%)	6.7 Vacant Government Land		6.8 Prime Commercial Land Price (\$/m <sup>2</sup> )	6.9 Prime Rental and Occupancy Costs		
				6.7.1 Amount of Land Owned by Gov't, Parastatals or Enterprises (ha)	6.7.2 Proportion of this land which is vacant (%)		6.9.1 Prime Rental per Month (\$ per m <sup>2</sup> )	6.9.2 Operating Costs per Month (\$)	6.9.3 Statutory Charges per Month (\$)
Bangalore	15.0	NAV	9.1	NAV	NAV	780	5.20	0.26	1.46
Bishkek	3.0	187	7.4	15,597	1.2	11	12.00	14.00	0.32
Cebu	6.0	NAV	3.0	678	NAV	367	NAV	61.00	NAP
Colombo	2.0	NAV	8.5	NAV	NAV	875	11.60	4.60	0.50
Dhaka	1.0	NAV	NAV	7,361	10.0	*1,225	5.00	NAV	NAV
Hanoi	3.0	16	1.0	30,400	34.1	*2,256	35.00	3.50	0.00
Hohhot	1.0	NAV	5.7	3,460	0.4	108	0.27	0.06	0.30
Hong Kong	2.0	NAV	9.5	NAV	NAV	27,539	74.10	NAV	NAV
Kathmandu	NAV	NAV	4.5	214	NAV	714	7.33	1.40	1.10
Lahore	2.0	4,537	5.0	16,667	30.0	532	45.00	11.00	4.44
Mandaluyong	0.5	50	1.5	144	34.6	1,590	11.24	499.66	76.77
Medan	15.0	20	10.0	58	18.5	200	15.00	36.46	42.65
Melbourne	2.0	50	16.0	NAV	NAV	2,588	100.00	47.00	12.00
Naga	2.2	147	1.3	133	33.3	*1,223	10.27	3.08	1.03
Phnom Penh	NAV	627	13.1	>209	1.0	400	NAV	NAV	NAV
Seoul	NAV	NAV	26.7	NAV	NAV	23,253	NAV	NAV	NAV
Suva	1.0	NAV	5.0	NAV	NAV	554	32.72	NAV	NAV
Ulaanbaatar	8.0	260	1.0	14,363	30.0	9	8.00	0.65	1.50

Legend:

NAV – not available  
 \* – unconfirmed

## Housing

City	7.1 Dwelling Type					7.2 Tenure Type							
	7.1.1 House (Single Family) (%)	7.1.2 Medium Density (%)	7.1.3 Apartment (%)	7.1.4 Temporary Dwelling (%)	7.1.5 Others (Institutions, hostels, etc.) (%)	7.2.1 Owned & Purchased (%)	7.2.2 Private Rental (%)	7.2.3 Social Housing (%)	7.2.4 Sub-Tenant (%)	7.2.5 Rent Free (%)	7.2.6 Squatter No Rent (%)	7.2.7 Squatter Paying Rent (%)	7.2.8 Others (%)
Bangalore	12.4	72.3	12.3	2.9	0.1	42.5	55.1	NAV	NAV	NAV	NAV	NAV	2.4
Bishkek	19.4	2.2	70.2	NAV	8.2	85.0	5.0	10.0	NAV	NAV	NAV	NAV	0.0
Cebu	82.0	6.0	11.0	NAV	1.0	41.0	26.0	0.0	NAV	NAV	33.0	NAV	0.0
Colombo	33.4	12.0	19.3	34.8	0.3	60.7	24.0	NAV	NAV	7.1	2.0	0.0	6.0
Dhaka	39.0	30.6	10.0	11.1	9.3	31.8	53.5	1.2	NAV	6.5	NAV	NAV	6.8
Hanoi	74.7	3.9	18.0	1.9	1.5	75.2	7.8	12.5	1.0	0.2	1.3	0.0	1.9
Hohhot	34.0	0.0	66.0	0.0	0.0	65.0	1.0	34.0	NAV	NAV	NAV	NAV	0.0
Hong Kong	12.2	0.0	84.2	2.7	0.8	42.8	16.7	36.3	NAV	NAV	3.4	0.0	0.8
Kathmandu	31.8	51.2	18.0	0.0	0.0	65.8	28.7	0.0	NAV	3.4	NAV	NAV	2.3
Lahore	48.0	43.0	3.0	5.0	1.0	82.0	15.0	0.0	0.0	3.0	0.0	0.0	0.0
Mandaluyong	56.2	35.2	7.6	0.6	0.5	52.2	27.0	2.0	2.5	3.5	8.0	4.0	0.8
Medan	78.5	9.2	0.0	12.2	0.1	56.3	38.3	0.1	1.1	3.1	0.2	0.8	0.1
Melbourne	6.6	26.5	62.5	NAV	4.4	32.4	50.0	12.3	NAV	NAV	0.0	0.0	5.3
Naga	87.4	3.8	8.1	0.0	0.6	33.0	17.8	39.3	NAV	9.7	0.2	0.0	0.0
Phnom Penh	NAV	NAV	NAV	NAV	NAV	84.0	11.5	0.0	NAV	3.8	NAV	NAV	0.7
Seoul	38.4	18.7	42.8	NAP	NAP	69.6	29.6	NAV	NAV	0.8	NAV	NAV	0.0
Suva	NAV	NAV	NAV	NAV	NAV	57.0	18.0	5.0	NAV	NAV	3.0	3.0	13.0
Ulaanbaatar	0.2	0.1	45.4	51.9	2.4	33.0	3.6	9.0	NAV	NAV	51.9	0.0	2.5

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 NAP – not applicable  
 NAV – not available

## Housing

City	7.3 House Price to Income Ratio (%)	7.4 House Rent to Income Ratio (%)	7.5 Floor Area per Person (m <sup>2</sup> )	7.6 Housing in Compliance (%)	7.7 Mortgage to Credit Ratio (%)	7.8 Houses with Mortgages (%)	7.9 Mortgage Loans for Women (%)	7.10 Housing Production		7.11 Squatter Resettlement or Normalization (%)	7.12 Net Housing Outlays by Gov't per Person	7.13 Homeless People ('000)
								7.10.1 On New (Vacant) Land (unit/'000)	7.10.2 Conversions for Infill from other Uses (unit/'000)			
Bangalore	10.0	0.0	9.5	25	NAV	NAV	NAV	2.70	0.38	NAV	0.27	10.65
Bishkek	13.0	41.0	17.5	62	NAV	NAV	NAV	2.60	0.97	NAV	15.75	0.17
Cebu	2.2	17.6	8.0	70	NAP	11.0	NAV	4.20	NAP	16	2.87	0.30
Colombo	NAV	43.0	8.0	59	NAV	NAV	NAV	NAV	NAV	60	4.20	5.00
Dhaka	5.0	12.0	2.7	47	0.1	NAV	NAV	NAV	NAV	NAV	NAV	70.00
Hanoi	15.0	15.0	5.2	78	NAV	NAV	NAV	*8.33	*0.54	0	0.89	1.59
Hohhot	5.4	17.0	8.5	NAV	NAV	NAV	NAV	NAV	NAV	0	5.34	NAV
Hong Kong	11.7	21.8	9.0	96	30.1	NAV	NAV	8.80	NAP	1	593.60	0.78
Kathmandu	10.6	6.4	10.7	NAV	50.0	NAV	NAV	2.90	NAV	0	0.00	0.60
Lahore	7.2	35.0	17.0	55	0.6	27.8	15.0	*1.33	0.00	24	3.33	2.00
Mandaluyong	12.0	19.2	10.9	85	1.1	9.0	33.8	0.29	0.81	36	36.09	0.14
Medan	16.0	15.0	9.0	*3.27	11.6	2.3	40.0	3.30	NAV	3	56.74	2.00
Melbourne	3.6	22.8	55.0	95	NAV	12.0	NAV	*17.5	*8.4	0	243.60	2.77
Naga	2.5	19.7	8.2	63	8.0	8.2	53.0	*4.61	*0.51	81	67.24	13.00
Phnom Penh	NAV	NAV	8.8	35	NAV	NAV	NAV	0.54	NAV	1	NAV	NAV
Seoul	6.8	44.4	15.8	*84	NAV	NAV	NAV	3.10	0.96	2	NAV	2.60
Suva	3.7	0.5	NAV	70	NAV	NAV	NAV	NAV	NAV	0	NAV	0.40
Ulaanbaatar	11.0	0.8	5.7	52	0	0	0	1.00	0.00	0	0.33	0.80

Legend:

NAP – not applicable

NAV – not available

\* – unconfirmed

## Municipal Services

City	8.1 Water									
	8.1.1 Household Connections (%)	8.1.2 Investment per Capita (\$)	8.1.3 Operations and Maintenance Expenditure (\$)	8.1.4 Cost Recovery (%)	8.1.5 Output per Staff: Water Supplied per Employee (m <sup>3</sup> )	8.1.6 List of Water Providers	8.1.7 Nonrevenue		8.1.8 Consumption of Water per Capita (liters per day)	8.1.9 Median Price of Water, Scarce Season (\$/m <sup>3</sup> )
							8.1.7.a Unaccounted for Water (%)	8.1.7.b Interruptions in Water Service (hours/month)		
Bangalore	85	2.55	10.94	79.0	190.0	Bangalore Water Supply and Sewerage Board	35	630	100	0.28
Bishkek	99	0.70	5.50	60.0	919.0	Urban Water Supply Enterprise "Bishkekvodokanal"	45	24	112	0.02
Cebu	68	3.26	6.00	63.0	202.0	Metropolitan Cebu Water Districts (68%)	38	36	225	0.48
Colombo	52	1.50	0.37	0.9	66.0	Nat'l Water Supply & Drainage Board	45	occasional	108	0.42
Dhaka	42	NAV	0.44	97.4	257.0	Dhaka Water Supply & Sewerage Authority	41	NAV	160	0.50
Hanoi	73	2.33	3.85	111.1	218.0	Hanoi Water Supply Co./ Thanh Xuan Co.	63	NAV	80	0.11
Hohhot	91	21.23	*10.08	1.0	*31,995.9	Hohhot Water Supply Company	NAV	0	140	0.01
Hong Kong	100	70.10	24.00	105.0	431.0	Water Supplies Department	34	1,314	137	NAV
Kathmandu	81	5.14	3.77	76.2	51.0	Nepal Water Sewerage Corporation	40	659	80	0.15
Lahore	84	*7.22	3.66	82.0	*603.0	Water and Sanitation Agency; Private Household Hand Pump	40	*21	213	*0.61
Mandaluyong	83	4.90	4.45	15.0	67.0	Manila Water Company	41	56	202	0.06
Medan	63	5.60	2.75	NAV	286.0	NAV	27	NAV	160	0.80
Melbourne	100	9.75	32.20	149.0	616.8	City West Water	15	0	302	0.44
Naga	74	14.38	9.93	127.5	NAV	Metro Naga Water District, parastatal	57	0	NAV	*0.81
Phnom Penh	83	2.50	1.33	45.0	222.0	Phnom Penh Water Supply Authority	61	540	32	0.39
Seoul	100	18.40	24.50	125.2	*1,144.0	Office of Waterworks	*66	NAV	209	0.21
Suva	98	0.41	3.16	70.0	105.0	Public Works Department	51	7	*203	0.03
Ulaanbaatar	51	*27.60	5.10	34.0	75.0	Water Sanitation Corporation	38	3	117	0.30

Legend:  
 NAV – not available  
 \* – unconfirmed

## Municipal Services

City	8.2 Electricity					8.2.6 List of Providers
	8.2.1 Household Connections (%)	8.2.2 Investment per Capita (\$)	8.2.3 Operations and Maintenance Expenditure (\$)	8.2.4 Cost Recovery (%)	8.2.5 Output per Staff: Electricity Supplied per Employee (MWh)	
Bangalore	100	5.38	4.87	NAV	105.9	Karnataka Power Transmission Corp. Ltd.
Bishkek	100	1.19	1.08	0	9,253.0	Urban Enterprise of Electrical Network
Cebu	86	9.00	148.00	12	1,849.0	Nat'l Power Corp. (50%); Cebu Private Power Corp; East Asia Utilities (11%)
Colombo	90	NAV	1.75	NAV	NAV	Ceylon Electricity Board
Dhaka	90	NAV	NAV	NAV	NAV	Dhaka Electricity Supply Authority
Hanoi	100	8.24	10.80	114	NAV	Hanoi Electricity Company
Hohhot	100	32.85	0.38	5	998,927.2	Electric Hohhot Company
Hong Kong	100	60.70	44.50	213	1.2	CLP Power Hong Kong Ltd./ Hong Kong Electric Co. Ltd.
Kathmandu	99	NAV	10.70	100	126.9	Nepal Electricity Corp.
Lahore	128	38.00	6.78	75	2,255.5	Water and Power Development Authority
Mandaluyong	95	10.90	95.00	1	2,816.0	Manila Electric Company
Medan	91	14.98	2.80	0	10,000.0	NAV
Melbourne	100	39.50	236.40	128	11,600.0	Citipower
Naga	94	5.27	18.33	109	330.7	Camarines Sur Electric Cooperative, parastatal
Phnom Penh	16	95.00	37.00	1	309.7	NAV
Seoul	100	NAV	NAV	NAV	NAV	Korea Electric Power Corporation
Suva	98	NAV	NAV	100	NAV	Fiji Electricity Authority
Ulaanbaatar	100	0.25	30.30	96	802.8	Ulaanbaatar Electric Distribution Corp.

Legend:

NAV – not available

## Municipal Services

City	8.2.7 Nonrevenue Electricity		8.3 Sewerage/WasteWater					
	8.2.7.a Line Loss for Electricity (%)	8.2.7.b. Interruptions in Power Supply (hours/month)	8.3.1 HH Connections (%)	8.3.2 Investment per Capita (\$)	8.3.3 O&M Expenditure (\$)	8.3.4 Cost Recovery (%)	8.3.5 Output per Staff: Wastewater Discharged or Treated per Employee (m <sup>3</sup> )	8.3.6 List of Providers
Bangalore	18	30	80	0.34	0.29	NAV	58522 (discharged)/ 33750 (treated)	Bangalore Water Supply & Sewerage Board
Bishkek	25	160	82	0.69	5.56	0	90.0	Urban Water Supply Enterprise "Bishkekvodonakal"
Cebu	13	5	0	0.00	0.00	0	0.0	NAP
Colombo	NAV	occasional	80	26.00	2.63	NAV	NAV	Colombo Municipal Council
Dhaka	38	NAV	22	NAV	NAV	NAV	NAV	Dhaka Water And Sewerage Authority
Hanoi	19	0	78	10.37	0.65	0	NAP	Hanoi Drainage Company
Hohhot	NAV	0	72	1.57	1.32	1	300.0	Drainage Bureau of Hohhot
Hong Kong	NAV	NAV	98	38.60	21.20	67	369,764.0	Drainage Services Dept.
Kathmandu	16	10	42	2.73	2.55	112	*4,745	Nepal Water Sewerage Corporation
Lahore	20	120	61	19.44	2.65	113	908.4	Water and Sanitation Agency; Metropolitan Corp. of Lahore
Mandaluyong	11	1	0	0.00	0.00	0	0.0	NAP
Medan	3	6	19	19.97	1.50	0	50.0	NAV
Melbourne	NAV	0	100	11.82	39.03	149	338.4	City West Water
Naga	20	1	0	0.00	0.00	0	0.0	NAP
Phnom Penh	34	NAV	41	8.00	NAV	0	NAV	NAV
Seoul	5	NAV	99	10.11	9.10	126	792,261.0	Office of Waterworks
Suva	NAV	NAV	61	2.03	0.45	30	NAV	Public Works Dept.
Ulaanbaatar	30	NAV	51	2.00	NAV	NAV	122.7	Water and Sanitation Corp.

Legend:  
 NAP – not applicable  
 NAV – not available



## Municipal Services

City	8.4 Telephone					8.4.6 List of Providers
	8.4.1 Household Connections (%)	8.4.2 Investment per Capita (\$)	8.4.3 Operations & Maintenance Expenditure (\$)	8.4.4 Cost Recovery (%)	8.4.5 Output per Staff: Calls per Year ('000)	
Bangalore	66	11.14	6.55	100	635.00	Telecom Dept., Govt. of India
Bishkek	73	19.05	52.52	60	1.12	Bishkek Urban Tel. Station; Mobile Katel & Bitel
Cebu	15	NAV	NAV	NAV	NAV	Philippine Long Distance / Telephone Co.; ISLACOM
Colombo	53	NAV	NAV	NAV	NAV	Sri Lanka Telecom; Suntel; Mobitel; Dialog GSM; Lanka Bell
Dhaka	9	NAV	NAV	NAV	NAV	Bangladesh Telephone & Telegraph Board
Hanoi	37	2.34	28.23	136	161.90	Hanoi Postal Service Telecommunication, Mobilephone Co.
Hohhot	9	63.76	56.85	100	238.26	Hohhot branch of China Telecom and China Unicom
Hong Kong	99	111.50	*420.70	161	NAV	Cable & Wireless HKT Tel. Ltd.; Hutchinson Communications Ltd.; New T&T HK Ltd. New World Tel. Ltd.; Smartone Mobile Communications Ltd.; HK Cable TV LTD; China Digital satNet Ltd.
Kathmandu	68	144.00	7.50	211	1,671.61	Nepal Telecommunication Corp.
Lahore	62	10.11	5.38	150	185.00	Pakistan Telecommunications Corp.
Mandaluyong	87	NAV	99.00	NAV	NAV	Philippine Long Distance Co./Globe
Medan	41	19.97	4.19	NAV	2,028.00	NAV
Melbourne	99	151.50	411.90	125	NAV	Telstra Corp; Optus; AAPT; Vodaphone
Naga	54	49.85	20.79	116	NAV	Bayantel; Digitel; Globe; Smart; Pilipino Tel. Corp.
Phnom Penh	NAV	10.00	7.80	280	48.96	Alcatel; Fetex; Camtel; Casacom; Camshin; Camintel; CAM GSM; Tricelcam
Seoul	95	NAV	NAV	NAV	NAV	Korea Telecom; Dacom; Onse Telecom
Suva	40	10.82	61.06	125	3.10(Nat'l fig.)	Telecom/Vodafone(Mobile)/Fintel (Int'l)
Ulaanbaatar	34	1.00	27.00	157	33.00 Telecom	Mongolian Telecom/Railway

Legend:

NAV – not available

## Municipal Services

City	8.5 Solid Waste Collection					
	8.5.1 Household Connections (%)	8.5.2 Investment per Capita (\$)	8.5.3 Operations and Maintenance Expenditures (\$)	8.5.4 Cost Recovery (%)	8.5.5 Output per Staff: Collected per Employee (m <sup>3</sup> )	8.5.6 List of Providers
Bangalore	5	NAV	2.88	0	133.00	Health Dept. of Bangalore Mahanagara-Palike and City Municipal Councils
Bishkek	98	NAV	0.06	-2	2.83	Urban Solid Waste Collection Enterprise
Cebu	47	1.08	1.64	85	2.10	Cebu City Dept. of Public Service
Colombo	90	16.00	1.05	NAV	7.80	Municipal Council/private sectors
Dhaka	50	NAV	NAV	NAV	NAV	Dhaka City Corporation
Hanoi	80	0.00	2.23	5	184.50	Hanoi Urban Environment Co.
Hohhot	100	0.43	1.72	64	281.00	NAV
Hong Kong	100	NAV	24.70	0	328.50	Food and Environmental Hygiene Dept.
Kathmandu	75	2.40	2.14	5	0.36	LT Environment Service; Our Cleaning Service
Lahore	100	2.42	5.25	0	10.00	Metropolitan Corporation Lahore
Mandaluyong	100	5.94	3.07	8	3.15	City Gov't of Manda.
Medan	63	0.90	0.50	0	146.00	NAV
Melbourne	100	NAV	NAV	NAV	NAV	City Wide Services
Naga	86	0.46	0.22	34	201.60	City Environment & Natural Resources Office
Phnom Penh	54	NAV	NAV	NAV	310.00	NAV
Seoul	100	17.13	19.43	28	NAV	NAV
Suva	75	0.00	10.02	0	598.00	Suva City Council
Ulaanbaatar	50	0.14	1.37	97	960.00	Public solid waste co. in each district; Nuuts Co. responsible for dumpsite

Legend:  
NAV – not available

## Urban Environment

City	9.1 Solid Waste Generated (tons per person p.a.)	9.2 Household Sewage Disposal						
		9.2.1 Sewage Pipe (%)	9.2.2 Septic Tank (Treated) (%)	9.2.3 Underground Pit (Untreated) (%)	9.2.4 Underground Communal (%)	9.2.5 Pan Collection (%)	9.2.6 Open Ground Trench (%)	9.2.7 Others (%)
Bangalore	0.19	80	5	5	5	0	2	3
Bishkek	0.90	82	15	2	1	0	0	0
Cebu	0.61	NAV	NAV	NAV	NAV	0	NAV	NAV
Colombo	0.28	80	15	4	0	0	0	1
Dhaka	0.17	NAV	NAV	NAV	NAV	NAV	NAV	NAV
Hanoi	0.17	NAV	NAV	NAV	NAV	NAV	NAV	NAV
Hohhot	0.47	55	45	0	0	0	0	0
Hong Kong	0.37	100	0	0	0	0	0	0
Kathmandu	0.28	67	28	1	0	0	0	4
Lahore	0.45	100	0	0	0	0	0	0
Mandaluyong	0.53	0	87	9	1	2	0	1
Medan	*0.12	0	69	20	10	0	0	0
Melbourne	0.31	100	0	0	0	0	0	0
Naga	0.15	0	72	7	5	8	4	4
Phnom Penh	0.26	41	37	3	0	0	15	4
Seoul	0.38	98	0	0	NAV	2	0	0
Suva	0.23	61	39	0	0	0	0	0
Ulaanbaatar	0.60	52	0	48	0	0	0	0

Legend:  
NAV – not available

## Urban Environment

City	9.3 Wastewater Treated (%)	9.4 Percent BOD Removed from Wastewater (%)	9.5 Air Pollution Concentrations (standard exceeded days p.a.)					
			9.5.1 SO <sub>2</sub>	9.5.2 NO <sub>x</sub>	9.5.3 CO	9.5.4 O <sub>3</sub>	9.5.5 Suspended Particulates	9.5.6 Lead
Bangalore	58	95	32	28	NAV	NAV	258	NAV
Bishkek	89	97	150	130	160	25	150	161
Cebu	85	0	NAV	NAV	NAV	NAV	NAV	NAV
Colombo	NAP	0	NAV	NAV	NAV	NAV	NAV	NAV
Dhaka	5	0	NAV	NAV	NAV	NAV	NAV	NAV
Hanoi	3	0	NAP	NAP	NAP	NAP	NAP	NAP
Hohhot	28	40	0.06	0.04	NAV	NAV	0.46	NAV
Hong Kong	98	0	0	3	NAV	13	NAV	NAV
Kathmandu	0	0	NAV	NAV	NAV	NAV	NAV	NAV
Lahore	0	0	79	79	79	79	79	79
Mandaluyong	82	76	NAV	NAV	NAV	NAV	NAV	NAV
Medan	22	27	NAV	NAV	NAV	NAV	NAV	NAV
Melbourne	100	96	0	0	0	0	0	0
Naga	58	0	NAV	NAV	NAV	NAV	3	NAV
Phnom Penh	0	0	NAV	NAV	NAV	NAV	NAV	NAV
Seoul	100	82	56.8	5.1	NAV	38.2	NAV	NAV
Suva	NAV	0	NAP	NAP	NAP	NAP	NAP	NAP
Ulaanbaatar	60	90	0	0	0	0	75	NAV

Legend:

NAV – not available  
NAP – not applicable

## Urban Environment

City	9.6 Energy Usage per Person (mt p.a.)	9.7 Noise Complaints	9.8 Disasters In the last 10 Years (list with estimated damage)	9.9 Methods of Solid Waste Disposal				
				9.9.1 Disposed to Sanitary Landfill (%)	9.9.2 Incinerated (formally) (%)	9.9.3 Dumped or Burned in the Open (%)	9.9.4 Recycled (%)	9.9.5 Others (%)
Bangalore	0.21	0	NAV	0	0	80	15	5
Bishkek	0.38	26	6 Large fires: Kok-Jar; Chempharmindustry; Bulgaary, Cada, Hotel Eldorado	100	0	0	0	0
Cebu	1.00	9	NAV	88	0	13	0	0
Colombo	NAV	100	1992 Flood 35 dead, over 100 dwellings destroyed; 1993 Bomb Blast-Armour St. 35 dead, 4 dwellings destroyed; 1994 Bomb Blast-Thotalaga 24 dead, 2 dwellings destroyed; 1995 Kolonnawa-Oil Tank 8 dead; 1996 Bomb Blast-Central Bank bldg. over 100 dead, over 100 dwellings 1destroyed; 997 Bomb Blast-Galadari Hotel 28 dead, 10 dwellings destroyed; 1997 Bomb Blast-Maradana Junction 15 dead	0	0	98	2	0
Dhaka	NAV	NAV	1998 Flood 67% of city area was under water for 90 days; fire hazards 734 in '98 & 858 in '99	NAV	NAV	50	30	20
Hanoi	NAP	NAP	NAP	50	0	0	20	25
Hohhot	6.61	12	NAP	0	NAV	60	0	40
Hong Kong	2.34	9,666	NAV	86	0	0	14	0
Kathmandu	0.50	NAV	NAP	70	0	20	10	0
Lahore	0.30	NAV	Leakage of chlorine gas in Baja line; Flood in '96	0	NAV	100	75	NAV
Mandaluyong	0.49	6	15 typhoons caused flooding; Fire incidence damage to property: \$10,077,062	90	0	10	0	0
Medan	NAV	NAV	NAV	0	0	77	9	15
Melbourne	1.30	317	NAP	59	0	0	40	0
Naga	0.55	1	1998 Typhoon Loleng, 1,391 total, 7,242 partial dwellings damaged, 10 dead 14 injured; 1995 Typhoon Rosing, 2,339 total, 7,743 partial dwellings damaged 11 dead; Typhoon Monang, 591 total, 6,433 partial dwellings damaged, 7 dead, 27 injured, 7 missing	NAV	NAV	NAV	NAV	NAV
Phnom Penh	NAV	NAV	NAP	55	0	36	7	2
Seoul	5.06	NAV	Apartment Model Housing Fire (20 Dec. 1999), 3 dead and 1 wounded; Partial collapse of stone embarkment over Han Jin apartment housing (14 May 1997), 1 dead and 6 wounded; Collapse of mold technomart construction site (22 Oct. 1996), 1 dead and 2 wounded; Rolling Stones Rock Cafe (26 Sept. 1996), 11 dead and 3 wounded, Collapse of Sam Poong Dept. Store (29 June 1995), 502 dead and 940 wounded; Wangsip-ri Market fire (5 Nov. 1995), 1 dead and 1 wounded, 183 households lost home; Gas explosion at Ahhyun-dong (7 Dec.1994), 12 dead and 101 wounded; Collapse of Sungou Bridge (21 Sept. 1994), 32 dead and 17 wounded, 6 cars fell into river	57	5	0	38	0
Suva	NAV	NAV	Cyclone Kina	0	0	100	0	0
Ulaanbaatar	4.70	50	Methane explosion in the Nalaikh coal mine, (Dec.1990), 20 dead; Flood caused by downpour, (Aug 1995) US\$71,400; Flood cause by downpour 1994, 4 dead; Flood caused by hail downpour 1996, 2 dead, 80 livestock dead, 5 gers damaged; Flood caused by downpour '96, 3 dead, 224 gers damaged and flood protection dam destroyed in three places; Tempest 1993, 1 dead, 11 household plot fences damaged; Tempest 1997 10 power pylons damaged in Ulaanbaatar suburb; Tempest 1998, 7 gers damaged, 20 households plot fences and 2 power pylons damaged, estimated losses US\$1,200	66	NAV	20	6	8

## Urban Transport

City	10.1 Mode of Travel (percent of work trips)						
	10.1.1 Private Automobile (%)	10.1.2 Train, Tram or Light Rail (%)	10.1.3 Bus or Mini Bus (%)	10.1.4 Motorcycle (2 or 3 wheel motorized vehicle) (%)	10.1.5 Bicycle, Including Pedicab (pedal powered vehicle) (%)	10.1.6 Walking (%)	10.1.7 Others, Including Boat, Taxi, Animal, Rickshaw (%)
Bangalore	11	7	38	18	11	16	0
Bishkek	10	60	20	2	1	7	0
Cebu	4	0	60	0	0	0	36
Colombo	4	4	71	13	0	6	2
Dhaka	3	0	9	3	1	60	24
Hanoi	NW	NW	9	59	29	4	0
Hohhot	2	0	2	4	91	1	0
Hong Kong	8	34	53	0	0	0	5
Kathmandu	NW	NW	4	33	0	0	63
Lahore	13	NW	15	19	19	17	12
Mandaluyong	22	1	7	17	3	13	37
Medan	5	NW	86	8	0	0	0
Melbourne	55	40	2	1	1	1	1
Naga	19	0	58	19	4	0	0
Phnom Penh	10	0	15	60	2	3	10
Seoul	20	32	29	NAV	NAV	NAV	19
Suva	30	0	60	2	0	7	1
Ulaanbaatar	3	5	60	2	0	30	0

Legend:  
NAV – not available

## Urban Transport

City	10.2 Median Travel Time (mins)	10.3 Expenditure On Road Infrastructure (\$)	10.4 Road Congestion (%)	10.5 Automobile Ownership (per '000 pop)	10.6 Cost of Recovery from Fees (\$)	10.7 Port/Air Activity		
						10.7.1 Commercial Ships Leaving Port (Freight & Passenger) (per month)	10.7.2 Commercial Flights Leaving (per month)	
							Nat'l	Int'l
Bangalore	40	3.17	100	231	102	0	690	52
Bishkek	45	0.94	70	109	1	0	386	269
Cebu	NAV	NAV	NAV	25	NAV	68,823	2,900	19
Colombo	35	11.88	NAV	7	NAV	NAV	NAV	NAV
Dhaka	50	NAV	NAV	2	NAV	NAV	NAV	NAV
Hanoi	25	4.42	NAV	NAV	57	0	2,645	245
Hohhot	30	9.80	NAV	1	NAV	0	155	8
Hong Kong	47	99.00	47	106	107	19,278	0	6,800
Kathmandu	35	1.93	NAV	279	60	0	1,905	395
Lahore	40	2.22	3	240	100	0	977	244
Mandaluyong	90	3.49	1	248	NAV	2,495	1,170	4,110
Medan	30	1.38	15-25	48	7	4,487	567	87
Melbourne	20	106.00	0	341	NAV	3,050	10,064	1,449
Naga	30	23.65	NAV	87	NAV	0	76	NAP
Phnom Penh	25	0.83	NAV	8	NAV	2,265	NAV	NAV
Seoul	44	171.22	NAV	290	NAV	NAP	6,452	8,311
Suva	35	NAV	NAV	115	NAV	42	240	28
Ulaanbaatar	25	1.69	0	33	79	0	121	42

Legend:

NAV – not available

## Urban Transport

City	10.8 Goods Carried (millions of revenue tons p.a.)				10.9 Transport Fatalities	
	10.8.1 Road	10.8.2 Rail	10.8.3 Air	10.8.4 Sea	10.9.1 Transport Related Deaths (per '000 pop.)	10.9.2 Pedestrian Deaths (per '000 pop.)
Bangalore	4.35	0.60	0.01	NAP	0.16	NAV
Bishkek	4.80	1.40	0.01	NAV	0.08	0.04
Cebu	NAV	0.00	44.00	12.00	NAV	NAV
Colombo	NAV	a 102	b 27,743	b 26,847,000	0.08	0.01
Dhaka	NAV	NAV	758.00	NAP	0.17	0.14
Hanoi	8.87	5.16	0.04	1.42	0.11	NAV
Hohhot	31.00	0.69	0.00	0.01	0.00	NAV
Hong Kong	36.15	0.46	1.63	127.48	0.03	0.02
Kathmandu	NAV	NAP	NAP	NAP	0.04	0.04
Lahore	700.00	0.57	547.00	NAV	0.02	0.01
Mandaluyong	0.19	NAP	NAP	NAP	0.04	0.04
Medan	58.65	8.02	17.33	3.20	0.32	0.06
Melbourne	NAV	NAV	0.26	42.11	0.10	0.02
Naga	0.46	0.51	0.41	NAP	0.08	0.01
Phnom Penh	NAV	NAV	NAV	NAV	0.10	NAV
Seoul	54.80	0.15	0.88	0.00	0.05	NAV
Suva	NAV	NAV	NAV	NAV	0.26	0.12
Ulaanbaatar	0.60	7.60	0.00	0.00	1.37	1.34

**Legend:**

NAV – not available  
 NAP – not applicable  
 a million metric tons  
 b metric tons



## Cultural

City	11.1 Attendance at Public Events	11.2 Attendance at Galleries and Museums
Bangalore	Republic Day (20,000); Flower Show at Lalbagh Gardens (100,000); Independence Day (20,000); Rajyothsava Day (20,000); Visit of Prime Minister (25,000); Visit of Opposition Leader (15,000)	Government Museum; Chitrakala Parishat; Venkatappa Art Gallery; Vishweshwaraiah; Technological Museum; Nehru Planetarium; Musical Fountain
Bishkek	Independence Day, Day of City; People's Holiday "Nooruz"; Urban Olympic Games of Students; Festival of Nat'l Creativity Kurban Ait Total attendance: 320,000	NAV
Cebu	NAV	NAV
Colombo	Independence Day (300,000); Wesak Celebrations (500,000); May Day Rallies (1.5m); Cricket Matches (800,000); Other sports activities (200,000); Newam Perahera for Buddhist (300,000); Deepavali festival for Tamil Festival (100,000); Rasaman festival for Muslim (15,000); Christmas festival for Christians (9,200,000); Political Meeting (200,000)	Colombo Museum (182,691 local, 8171 foreign); Art Gallery (675,000); ( Lionel Wendt Theatre (54,600); J.R. Jayawardene Cultural Center (25,000); Elphinstone Theatre (80,000); Lumbini Theatre (56,000); John de Silva Theatre (62,000); Sugasthadasa Indoor Stadium (150,000); BMICH (40,000)
Dhaka	Int'l Trade Fair; Art Exhibition; Computer Fair, Independence Day; Language Day; Victory Day, Pahela Baishak	National Museums, Art Gallery
Hanoi	Tiger Cup (240,000)	Military Museums (31,000); History Museums (65,000); Revolution Museum (176,000); Ho Chi Minh Museum (3,030,000)
Hohhot	Festival of Lanterns; Tree plant day; Labour Day; Party day; Third China Art Festival	Inner Mongolian Museum, Hohhot Museum; Inner Mongolian Exhibition Hall, Hohhot Exhibition Hall; Inner Mongolian Art Gallery (389,000)
Hong Kong	Lunar New Year Fireworks Display (577,000); The HK Flower Show (400,000); Nat'l Day Fireworks of Arts (541,014); Display; (380,000) Egyptian Treasure from the British Museum (310,022nd HK Int'l Film Fest (188,000)	HK Science Museum (56,289); HK Museum of Arts (541,014); HK Railway Museum (425,000); Sam Tung UK Museum Sam Tungeum (399,523); HK Space Museum (334,839)
Kathmandu	Dasai; Tihar; Indra Jatra; Democracy Day; Martyr's Day	Natural History Museum, Chauni (14,087); Trivhuwan & Mahendra Museum, Hanuman Dhoka (120,968); National Museum, Chauni (53,936)
Lahore	Urs Hazrat Ali Hajveri (10,000,000); Urs Mahdu Lal Hussein (7,000,000); Jashan-e-Baharan, Basant Mela (6,000,000); Horse & Cattle Show (2,500,000); Exhibition at Fortress (5,000,000); Cricket One Day Int'l (40,000); Cricket Test Matches (18,000); Hockey Matches (15,000)	Alhambra Art Gallery (6,000); Co-opera Art Gallery (25,000); Shakir Ali Art Gallery (2,000); Permanent Art Gallery (15,000); Lahore Art Gallery (15,000); Lahore Fort Museums (1,200,000); Lahore Museum (60,000); Shakir Ali Museum (30,000); Science Museum (2,000); iqbal Museum (12,000); Chungtai Museums (20,000)
Mandaluyong	Liberation Day Festivities (10,000); Alay Lakad (8,000); Christmas Gift Giving (20,000); Turnover Mayoralty Post (5,000); Cinemania Festival (5,000)	Galleria Duemila 2000 (36,000); West Gallery (36,000); Gallery Y (21,000); Nemiranda Art Homes (11,040); Museum Shop (11,040)
Medan	NAV	NAV
Melbourne	Comedy Festival (400,000); Melbourne Festival (500,000); Australian Formula 1 (345,300); Australian Tennis Open (201,251); Museums (Midsumma) Festival (213,000); Lygon St. Fiesta (approx. 100,000); Antipodean (100,000); Moomba (approx. 213,000); Chinese New Year Festival (approx. 100,000); AFL GrandFinal (94,431); Spring Racing Carnival-including Melbourne Cup (432,533)	Nat'l Gallery of Victoria (765,327); Scienceworks (284,000); Immigration Museum (58,013); Hellenic Antiquities Museum (11,347)
Naga	Religious Procession in Honor of Virgin of Peñafrañcia (750,000), Candidates Forum Series, '98 Local Elections (60,000); Palarong Bicol Reg'l Sports Meet (20,000); City Charter Celebration Parades (10,000); School Torch Parades for Local Achievers (5,000); Civic and Military parades (250,000)	Bicol Science & Tech. Centrum (38,469); Museo Conciliar Seminario, Holy Rosary Minor Seminary (6,300); University of Nueva Caceres Museum (3,378)
Phnom Penh	NAV	NAV
Seoul	NAV	NAV
Suva	Hibiscus Festival; Fiji Rugby 7's; Nat'l Church Choir Competition; Coca-Cola School Athletic Competition; Fiji Youth Day Celebration	Fiji Museum
Ulaanbaatar	Nat'l Festival July 99 (50,000); Smoky Group Concert June 99 (7,000); Series of Sports Cultural Festival (40,000); Celebration of the 360th Anniversary of the City of Ulaanbaatar, Oct. 99 (10,000); Traditional Wrestling (4,500)	Nat'l History Museum (24,000); Natural History Museum (48,000); Bogdo-Khan Palace-Museum (11,000); Choijin Lama Temple Museum (5,200); Art Gallery (3,800)

### Legend:

NAV – not available

## Cultural

City	11.3 Participation In Sports (%)
Bangalore	Cricket, Hockey, Football (Total: 1.62)
Bishkek	Football, Light Athletics, Struggle Boxing, Horse Sport, Lawn Tennis, Tourism, Mountain Climbing, Ski Sports (Total: 20.50)
Cebu	79.00
Colombo	Cricket (2.50); Athletics (1.00); Rugged (0.75); Soccer (1.00); Volleyball (0.50); Basketball (0.25); Netball (0.02); Martial Arts (0.25); Bicycle Race (0.25)
Dhaka	NAV
Hanoi	15.00
Hohhot	Chess, Badminton, Ping-Pong, Wrestling, Wushu (Total: 5.46)
Hong Kong	40.50
Kathmandu	Taekwondo, Judo, Karate, Boxing, Football (Total: 0.30)
Lahore	Cricket, Hockey, Squash, Football, Snooker, Bridge, Chess, Table Tennis, Volleyball, Badminton, Kite Flying, Marshal Arts, Boxing, Wrestling, Kabadi (Total: 26.00)
Mandaluyong	20.00
Medan	1.83
Melbourne	Aerobics (4.50); Tennis (3.60); Golf (2.40); Basketball (2.40); Net-ball (2.40); Australian Rules Football (2.10); Swimming (2.00); Cricket (1.60); Cycling (1.00)
Naga	Basketball, Swimming, Chess (Total: 70.00)
Phnom Penh	NAV
Seoul	NAV
Suva	NAV
Ulaanbaatar	Wrestling, Horse Racing, Archery, Basketball, Football (Total: 34.50)

Legend:  
NAV – not available

## Local Government Finance

City	12.1 Sources of Revenue					
	12.1 Taxes (%)	12.1.2 User Charges	12.1.3 Other Own Source Income (%)	12.1.4 Transfers (%)	12.1.5 Loans (%)	12.1.6 Other Income (%)
Bangalore	22.5	17.9	0.6	17.3	41.0	0.7
Bishkek	65.3	12.7	7.1	12.7	0.0	2.2
Cebu	41.3	12.0	0.0	40.5	6.0	0.0
Colombo	51.4	8.2	7.9	18.2	5.1	9.2
Dhaka	26.7	0.0	32.8	18.1	3.1	19.3
Hanoi	67.2	17.6	0.4	7.7	0.0	7.1
Hohhot	85.6	9.0	6.2	0.0	0.0	0.3
Hong Kong	53.0	7.0	19.0	21.0	0.0	0.0
Kathmandu	0.0	5.0	1.0	82.0	10.0	2.0
Lahore	50.7	24.9	0.3	0.3	0.8	22.9
Mandaluyong	65.8	5.9	0.9	27.5	0.0	0.0
Medan	18.9	17.8	4.6	40.0	0.0	18.8
Melbourne	54.0	34.0	9.0	3.0	0.0	0.0
Naga	21.8	9.9	2.9	59.2	4.9	0.0
Phnom Penh	11.5	*5.8	0.0	*62.5	0.0	20.6
Seoul	59.7	5.5	2.2	17.3	2.6	12.7
Suva	58.0	32.0	0.0	0.0	3.0	7.0
Ulaanbaatar	64.9	10.3	11.1	0.0	0.0	13.7

Legend:

\* – unconfirmed

## Local Government Finance

City	12.2 Capital & Recurrent Expenditure per Person		12.3 Collection Efficiency, Property Taxes (%)		12.4 Debt Service Charge (%)	12.5 Employees (per '000 pop.)	12.6 Wages in Budget (%)
	12.2.1 Capital Expenditure (\$)	12.2.2 Recurrent Expenditure (\$)	12.3.1 Percentage of Liabilities Actually Collected	12.3.2 Costs of Collecting Property Tax as Percentage of Receipts Passed to Local Gov't			
Bangalore	10.28	25.05	50.2	8	7.43	4.1	34
Bishkek	1.99	32.12	100.0	NAV	0.00	*2.6	11
Cebu	6.00	35.00	70.0	NAV	0.40	8.0	38
Colombo	1.86	7.77	66.5	NAV	NAV	13.6	71
Dhaka	NAV	NAV	75.0	NAV	3.00	*1.6	49
Hanoi	20.30	62.42	90.0	1	0.00	10.1	13
Hohhot	13.30	77.55	NAV	NAV	0.00	50.3	16
Hong Kong	1,053.00	3,171.00	NAV	NAV	0.00	29.0	18
Kathmandu	3.29	5.77	0.0	0	0.23	3.8	44
Lahore	3.85	10.00	10.0	NAV	0.00	3.3	86
Mandaluyong	6.96	13.83	10.0	15	10.00	11.0	35
Medan	8.00	2.00	NAV	NAV	10.00	3.1	44
Melbourne	1,200.00	6,680.00	80.0	3	0.00	21.0	28
Naga	14.53	37.90	109.4	21	5.37	7.5	49
Phnom Penh	NAV	NAV	NAV	NAV	0.00	11.0	58
Seoul	216.48	152.55	96.1	NAV	15.90	4.7	15
Suva	0.00	143.46	91.0	NAP	NAV	6.3	55
Ulaanbaatar	5.93	46.33	95.8	2	0.00	1.1	33

Legend:  
 NAV – not available  
 NAP – not applicable

## Local Government Finance

City	12.7 Contracted Recurrent Expenditure Ratio (%)	12.8 Business Permits	12.9 Enterprise Revenue	12.10 Computerization of Functions				
				12.10.1 Land Registration	12.10.2 Rates Collection	12.10.3 Salaries	12.10.4 General Finances	12.10.5 Business Permits
Bangalore	NAV	36,331	644,735	no	no	no	no	no
Bishkek	5	27,284	NAV	yes	yes	yes	yes	yes
Cebu	45	128,023	1,907	NAV	NAV	NAV	NAV	NAV
Colombo	12	3,500	NAV	no	yes	yes	no	no
Dhaka	NAV	165	NAV	no	no	no	no	no
Hanoi	0	2,800	4,114	yes	yes	yes	yes	yes
Hohhot	NAV	2,910	NAV	NAV	NAV	NAV	NAV	NAV
Hong Kong	NAV	29,947	NAV	yes	yes	yes	yes	yes
Kathmandu	9	15,413	NAV	no	yes	yes	yes	no
Lahore	15	NAV	206,287	partial	yes	yes	yes	no
Mandaluyong	9	11,415	5,060,006	yes	no	yes	no	yes
Medan	0	NAV	NAV	NAV	yes	yes	yes	NAV
Melbourne	17	0	3,000,000	yes	yes	yes	yes	NAP
Naga	23	4,818	11	no	yes	yes	yes	yes
Phnom Penh	NAP	938	NAP	NAV	NAV	NAV	NAV	NAV
Seoul	NAV	NAV	NAV	yes	partial	yes	yes	yes
Suva	11	3,792	NAV	no	yes	yes	yes	yes
Ulaanbaatar	6	26,500	NAV	no	yes	yes	yes	no

Legend:

- NAV – not available
- NAP – not applicable
- \* – unconfirmed

## Urban Governance

### 13.1 Functions of Local Government

City	13.1.1 Water	13.1.2 Sewerage	13.1.3 Refuse Collection	13.1.4 Electricity	13.1.5 Telephone	13.1.6 Public or Mass Transport	13.1.7 Emergency	13.1.8 Road Main- tenance	13.1.9 Education	13.1.10 Health Care	13.1.11 Public Housing	13.1.12 Recreation/ Sports Facilities	13.1.13 Police	13.1.14 Drainage/ Flood Control	13.1.15 Liveli- hood Assistance
Bangalore	no	no	yes	no	no	no	no	yes	partial	partial	no	partial	no	yes	no
Bishkek	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Cebu	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV
Colombo	yes	yes	yes	yes	no	no	no	yes	no	yes	no	yes	no	yes	yes
Dhaka	no	no	yes	no	no	no	no	yes	no	partial	no	yes	no	yes	no
Hanoi	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	no	no	yes	yes	yes
Hohhot	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Hong Kong	yes	yes	yes	NAV	NAV	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Kathmandu	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes
Lahore	yes	yes	yes	NAV	NAV	NAV	NAV	yes	yes	yes	NAV	yes	NAV	yes	NAV
Mandaluyong	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Medan	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Melbourne	no	no	yes	no	no	no	no	partly yes	no	no	no	yes	no	no	no
Naga	partly yes	NAV	yes	no	no	no	yes	yes	partly yes	yes	yes	yes	partly yes	yes	yes
Phnom Penh	yes	yes	yes	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Seoul	yes	yes	yes	no	no	partial	yes	yes	yes	yes	yes	yes	no	yes	yes
Suva	no	no	yes	no	no	no	no	yes	no	yes	no	yes	no	yes	no
Ulaanbaatar	yes	yes	yes	no	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Legend:

NAV – not available

## Urban Governance

City	13.1.16 Others (List)
Bangalore	Conducting elections to the Council, State Assembly and National Parliament once in five years or as often as necessary for the Election Commission; Conducting consensus once in ten years for the Consensus Commission; Welfare activities for the citizen, especially downtrodden, weaker sections; Beautification of the city
Bishkek	Protection of the environment and preservation and development of the best historical cultural traditions of the population; All services are provided for by the municipal government of Bishkek.
Cebu	NAP
Colombo	Customer oriented training to municipal staff; Strengthening of public complaints handling and producing a service directory.
Dhaka	NAP
Hanoi	NAV
Hohhot	NAV
Hong Kong	Public enquiry service; rural planning and improvement strategy; and licensing and building management
Kathmandu	Prepare inventory; maintain and repair cultural places and monuments; to promote cultural languages and objects; to arrange for the burial of unclaimed and deceased; make arrangements for orphans; carry out programs for the welfare of women and children; control pet animals and slaughterhouses; protect barren and unregistered land; determine and manage crematoriums; promote the natural, cultural and tourist heritage
Lahore	Other than Islamic jurisprudence, the laws of Islamic origin currently in force are those pertaining to social welfare/poverty reduction, and are known as "Zakat and Ushr".
Mandaluyong	Promote technical education training thru Manpower Youth Development Center; create linkages with various industries for securing employment/jobs for graduates; motivate graduates to become entrepreneurial to enhance social and economic growth of local economy
Medan	NAP
Melbourne	NAP
Naga	NAP
Phnom Penh	NAP
Seoul	NAV
Suva	NAP
Ulaanbaatar	NAP

Legend:

- NAP – not applicable
- NAV – not available

## Urban Governance

City	13.2 Delivery of Annual Plan (%)	13.3 Voter Participation Rate by Sex		13.4 Independence from Higher Government					13.5 Elected and Nominated Councilors			
		13.3.1 Proportion of Adult Males (%)	13.3.2 Proportion of Adult Females (%)	13.4.1 Closing Down Council or Removing Councilors from Office	13.4.2 Setting Local Taxes Level	13.4.3 Setting User Charges for Local Services	13.4.4 Borrowing Funds	13.4.5 Choosing Contractors for Projects	13.5.1 Female		13.5.2 Male	
		Elected	Nominated	Elected	Nominated							
Bangalore	NAV	NAV	NAV	no	no	no	no	yes	36	NAV	69	NAV
Bishkek	NAV	42	58	NAV	NAV	NAV	NAV	NAV	6	41	30	135
Cebu	96	83	85	NAV	NAV	NAV	NAV	NAV	2	NAV	16	NAV
Colombo	NAV	NAV	NAV	no	yes	yes	yes	yes	1	NAV	52	NAV
Dhaka	NAV	NAV	NAV	no	no	no	no	yes	18	NAV	90	NAV
Hanoi	70	100	100	no	no	yes	yes	no	0	NAV	11	NAV
Hohhot	86	100	100	NAV	yes	yes	yes	yes	27	NAV	73	NAV
Hong Kong	96	53	54	no	yes	yes	yes	yes	4	6	16	34
Kathmandu	34	NAV	NAV	yes	yes	yes	yes	yes	6	37	18	160
Lahore	80	14	12	NAV	NAV	NAV	NAV	NAV	26	NAV	275	NAV
Mandaluyong	82	82	82	NAV	NAV	NAV	NAV	NAV	0	1	12	1
Medan	NAV	48	52	NAV	NAV	NAV	NAV	NAV	3	NAV	42	NAV
Melbourne	100	100	100	NAV	NAV	NAV	NAV	NAV	14	2	29	7
Naga	100	48	52	NAV	NAV	NAV	NAV	NAV	3	NAV	9	NAV
Phnom Penh	55	NAP	NAP	no	no	no	no	no	0	0	0	0
Seoul	97	NAV	NAV	no	partial	yes	yes	yes	11	NAV	93	NAV
Suva	78	70	NAV	no	yes with constraints	yes with min. approval	no	yes but very limited	2	NAV	18	NAV
Ulaanbaatar	95	62	62	no	no	yes	NAV	yes	2	NAV	38	NAV

Legend:  
 NAP – not applicable  
 NAV – not available



## Urban Governance

City	13.6 Representation of Minorities (List)	13.7 Planning Applications Refused (%)	13.8 Business Satisfaction (Description)	13.9 Consumer Satisfaction (Description)	13.10 Perception As Place to Live (Description)	13.11 Reported Crimes			
						Per '000 Pop.	13.11.1 Murder	13.11.2 Drug Related Crime	13.11.3 Theft
Bangalore	0.00	NAV				3.20	0.04	0.00	0.70
Bishkek	NAV	8				15.50	0.17	1.88	7.34
Cebu	NAV	NAV				3.00	0.10	0.30	0.20
Colombo	23.00	33				NAV	0.08	22.60	0.62
Dhaka	0.00	0				2.40	0.06	0.09	4.65
Hanoi	0.00	0				3.20	0.01	0.42	3.40
Hohhot	NAV	0				4.80	0.06	0.08	4.65
Hong Kong	NAV	17				10.76	0.10	0.42	3.40
Kathmandu	0.00	0				0.32	0.02	1.52	0.94
Lahore	11.00	10				NAV	0.10	0.69	1.31
Mandaluyong	0.00	1				2.48	0.02	1.52	0.94
Medan	NAV	NAV				NAV	0.03	0.23	0.55
Melbourne	0.00	3				449.00	0.08	23.50	274.00
Naga	0.00	3				NAV	0.04	0.15	0.36
Phnom Penh	NAV	18				NAP	NAP	NAP	NAP
Seoul	NAV	NAV				NAV	NAV	NAV	NAV
Suva	0.00	21				71.00	0.04	1.18	15.86
Ulaanbaatar	0.00	47				15.70	0.10	0.00	7.10

Legend:

NAP – not applicable

NAV – not available

## Urban Governance

City	13.12 Access to Information				13.13 Contact with the Public						13.14 Decentralized District Units	
	13.12.1 Annual Report/ Budget	13.12.2 City Strategy/ Vision	13.12.3 Economic Strategy	13.12.4 Social Strategy	13.13.1 Annual No. of Public Local Gov't Meetings		13.13.2 Breakdown of Meetings Held by Mayor or CEO with Business, Public, Officials (ave. per week)				13.14.1 No. of Local Gov't Units Within Metropolis	13.14.2 No. of Decen- tralized Units in Local Gov't
					Number	Attendance	Public	Business	Officials & Councilors	Others Area		
Bangalore	yes	no	no	no	38	1	NAV	NAV	NAV	NAV	8	3
Bishkek	NAV	yes	yes	yes	37	40,000	1	1	4	2	4	20
Cebu	NAV	NAV	NAV	NAV	120	20,000	2	2	7	14	10	80
Colombo	yes	yes	yes	yes	192	NAV	1	1	1	2	47	6
Dhaka	Difficult	NAP	Difficult	Difficult	NAV	NAV	NAV	NAV	NAV	NAV	8	90
Hanoi	yes	yes	yes	yes	NAV	NAV	0	0	0	0	12	212
Hohhot	yes	yes	yes	yes	57	NAP	17	15	8	17	NAP	2
Hong Kong	yes	yes	yes	yes	NAV	NAV	NAV	NAV	NAV	NAV	1	18
Kathmandu	yes	NAV	NAV	NAV	NAV	NAV	2	1	2	1	1	35
Lahore	yes	NAV	yes	yes	24	20,000	1000	50	60	NAV	8	8
Mandaluyong	yes	yes	yes	yes	365	840,000	200	50	42	50	0	27
Medan	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV	NAV
Melbourne	yes	yes	NAP	NAP	72	NAP	9	5	4	2	38	0
Naga	yes	yes	yes	yes	NAV	32,448	10	5	2	8	16	NAP
Phnom Penh	NAV	NAV	NAV	NAV	100	more than 6,000	1-2	1-2	1-2	1-2	NAV	7 districts/ 76 communes
Seoul	yes	yes	yes	yes	NAV	14	NAV	NAV	NAV	NAV	NAV	25
Suva	yes	yes	NAV	no	12	20	NAV	NAV	NAV	NAV	1	4 wards
Ulaanbaatar	no	no	no	no	2	500	2	2	2	4	9	0

Legend:  
 NAP – not applicable  
 NAV – not available