Cities and Quality of Life-Should We Monitor Pakistani Cities?

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"*Since the sources of the new economic growth are so various and finally perhaps so fickle, the possibilities are endless. It is no accidents that, as never before,* ranking of cites dominate the media." *(Hall 1995, emphasis added).*

"*…you cannot properly measure what you don't understand; and you cannot improve what you don't measure." (Peter Newton, 2001)*

Introduction

Zurich is the world's best city to live in, reports Mercer Consulting in its April 2006 *World-wide Quality of Living Survey* (Mercer Consulting 2006). London, New York, Oslo, Tokyo, and Zurich are the most expensive cities in which to live, while Swiss cities house the highest earners in the world (UBS 2006). Vancouver tops the "livability ranking" in the Economist Intelligence Unit (EIU)'s survey of 127 cities (EIU 2005), while London and Paris are the best cities in which to locate businesses (Cushman and Wakefield 2005).

City rankings are very much in vogue. Each year, cities are ranked according to the quality of life (QoL) they offer, cost of living, business climate/opportunities, and other criteria. These rankings are done by popular magazines, business consulting firms, international agencies, and academic institutions, and attract a great deal of media and public attention. In particular, QoL comparisons among areas interest residents, business persons, politicians, and policymakers as evidence compiles in favor of a link between area amenities and the location decisions of households and firms (Blomquist, et al 1988).

Initially developed to measure QoL differences across metropolitan areas and to assess their link with the location decisions of firms and individuals, these rankings have assumed more dimensions over time. They are used as a promotional tool for city marketing ("to put the area on the map") to attract businesses and residents, and are often used as a political tool as well. The European Union, for example, considers "the improvement of QoL" as a principal objective in its general framework of sustainable development. The Committee of the Regions (1999) recommended setting up a "system of local and regional indicators of quality

[1] This paper is the brainchild of Dr Nadeem Ul Haq. The author wishes to thank him for his encouragement and help in writing this paper. The usual disclaimer applies.

of life to inform policy makers," to monitor the economic and social progress of member countries[2] (Biagi, et al 2006). The reduction of complexity of urban living to a single number is appealing to politicians and media alike. For the media, it becomes an interesting headline; for politicians, a political motive—if their constituency ranks low on the QoL index, it can be used to demand higher development expenditure from the state on the pretext of initiating new programs that will "enhance local quality of life"(Rogerson 1999).

The idea of rating places is not new. Ham, et al (2004) write that the earliest effort to rank areas goes as far back to 17th century America when places with plentiful game, heavier livestock supply, and low probability of death from Indian attacks were considered more "livable." In recent years, the *Places Rated Almanac* (Bayer and Savageau 1981) is considered the first popular attempt at city ratings, which ranked 354 metropolitan areas on the basis of various QoL factors—cost of living, job outlook, transportation, education, healthcare, crime, art, recreation, and climate—that characterized the livability of a place[3] (Ham, et al 2004).

This paper discusses city rankings as follows. It introduces the concept, discusses the context in which these rankings are done, and then reviews measurement issues in indicators. The paper also outlines a number of major initiatives in ranking cities and discusses current efforts to measure Pakistani cities. Finally, it puts forward suggestions for moving forward.

The Context

Cities are considered desirable places in which to live. From being "isolated seats of power from where to govern rural holdings," cities have become the ultimate abode of humanity, and human beings have now become a predominantly city dwelling species. Cities are the "super markets for employment, incubator of technology, suppliers of social services and shelter, portals to the rest of the world, processors of agriculture produce, adders of manufactured value, places to make money through trade, industry, finance, real state" (United Nations Center for Human Settlement 2001: 7). They are the nexus of commerce and gateways to the world (ibid).

Cities are also the engines of growth—most wealth creation takes place within their bounds. They also offer higher income levels than the national average. Per capita income in African cities is 65% higher than the national average (Overman and Venables 2005). Productivity is also far higher cities: Lima houses less than 30% of Peru's population but adds 40% to the national GDP (*State of the World's Cities* 2001). Cities offer many amenities and agglomeration

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[2] See also Fahey, Nolan, and Whelan (2003).

[3] Smith (1973) and Liu (1976) were earlier attempts at measuring QoL across United States SMSAs. Although more rigorous, these studies failed to catch public attention (Rogerson 1999).

economies[4] that motivate firms and industries to locate there, with the result that most jobs are created in cities.

The onset of globalization has changed the context within which development takes place. It has altered considerably the geography of capital (both physical and human). The ability of transnational corporations to relocate their operations across the globe has placed cities in a new set of relations with capital, where capital is highly mobile and the relative position of cities much weaker (Rogerson 1999). The increased "fluidity of capital" has enhanced the relevance of city rankings as cities try to create a niche for themselves in this competitive environment by offering a "new set of local place attributes"—the QoL being one such factor. "Cities tend to market themselves rather like competing consumer goods… city administrations find themselves impelled to establish some unique quality for their city, some magic ingredient that no other city can precisely match" (Hall 1995: 13). It is in this context of vigorous efforts by urban mangers to "place their area on the map" and make it look more competitive that the roots of recent (popular) city rankings are located.

Recent research also suggests that places attract human capital and talent by offering a range of lifestyle amenities. Individuals with high levels of human capital are economically more mobile and have more options in their location decisions. Cities offering more lifestyle opportunities—termed "entertainment machines" by Lloyd (2001)—draw such talent to themselves (Florida 2002). Glaeser, Kolko, and Saiz (2001) write that high human capital workers increase the productivity of a region; at the same time, high human capital areas are pleasant places to live in. Cities must attract workers on the basis of QoL if they are to remain strong. Urban amenities are a crucial factor that determine urban viability and growth. Shapiro (2006) contends that improvement in QoL accounts for 40% of employment growth for college graduates in US metropolitan areas. City rankings are used to attract human capital and "consumer power"—consumers with money—into the region (Rogerson 1999).

City Ranking Indicators: Measurement Issues

Measurement issues are at the heart of any effort toward city rankings. Undoubtedly, the most important factor in ranking cities is to decide which attribute to measure and what kind

[4] Agglomeration economies are positive externalities arising out of a concentration of population and economic activity in one region: provision of pure public and club goods, e.g., roads, medical facilities, health clubs, recreational facilities (cinemas and parks); a wider variety of the aforementioned services; a more complete occupational structure (which gives greater flexibility with respect to the skill and time requirement of a job); chances of upward mobility; and greater personal freedom, etc.

of indicator to use. Cities are ranked according to many attributes; QoL, cost of living, business competitiveness, and composite indicators measuring city performance (e.g., city development index of habitat). The QoL index is the most commonly used index, and is the weighted average of indices measuring attributes such as health, literacy, economic well-being, environmental quality, safety, and political stability. Table 1 lists factors generally included in QoL studies.

Table 1: QoL Factors Used to Assess Key City Rankings

QoL Factor	Smith	Liu	Boyer and Savageau		Rogerson, et al	Burnley	Hart, et al	PCC
	1973	1976	1981		1988	1988	1989	1990
Environment/pollution		X	X		X	X		X
Atmosphere/peace and quiet						X	X	X
Climate			X		X	X		
Lifestyle opportunities						X		
Employment					X	X		
Retirement						X		
Housing costs and access	X	X	X		X		X	X
Healthcare/public health	X	X	X		X		X	X
Crime/public safety	X		X		X			X
Transport/traffic flow	X				X		X	X
Education provision/levels	X		X		X		X	X
Recreation			X		X			
Economy/business climate	X	X					X	
Arts/cultural diversity	X		X		X		X	
State taxes/development aid							X	
Commercial space							X	
Proximity to suppliers/market							X	
Food costs/cost of living			X		X			
Political environment	X	X						
Wages					X		X	

Source: Rogerson (1999).

Objective QoL indicators are based on attributes that can be measured, for example, by per capita income, literacy rate, infant mortality rate, and pollution level. The best known indicator is the human development index (HDI) developed by the United Nations Development Programme (UNDP). QoL indicators can also be subjective, i.e., based on

people's perceptions of their happiness and satisfaction with living conditions. Examples are the New Zealand QoL reporting system and Australian unity well being index. Veenhoven (2004) considers a third type of indicator, which is a mix of quantitative and qualitative data—an approach adopted by Rogerson (1997) in measuring QoL in British counties.

QoL indicators used in city marketing represent a shift in conceptualization because they measure the "reality" of living—the shared environment in which people live—against earlier work on this issue, which focused on people's happiness and satisfaction with life (Rogerson 1999). In livability comparisons, the emphasis has moved from *satisfaction* with life to *conditions* of life. Further, Luger (1996) contends that one limitation of "livability comparisons" is that they are ad hoc. They make no effort to link inputs (e.g., education expenditure) with output (literacy rate).

Since the QoL index is a weighted index, another issue that needs to be confronted is the weighing scheme. Early efforts to rank cities, e.g., by the *Places Rated Almanac*, assigned equal weights to all categories. However, people do not accord equal importance to different factors affecting their lives. Table 2 ranks those factors that people consider important to their lives. Rogerson (1997) used the survey method to assign relative weights in which respondents were asked to rank components of QoL index according to their priorities. The principal component and hedonic methods can also be used to derive weighing scheme (Slottje 1991).

Table 2: Items Considered Most Important in People's Lives

Priority	Item
1	Relationship with family/relatives
2	Own health
3	Health of close friend/family member
4	Finances/housing/standard of living
5	Relationships with other people
6	Availability of work/ability to work
7	Other (crime, politics, happiness/well being)
8	Social life/leisure activities
9	Conditions at work/job satisfaction
10	Education
11	Religion/spiritual lore
12	Environment (pollution, rubbish, noise, safety, and cleanliness)

Source: Bowling (1995).

Major City Ranking Initiatives

This section discusses in detail the major city ranking initiatives. The list is not exhaustive; rather, the purpose is to shed light on what is being measured and how. These initiatives include:

- UN-HABITAT Habitat Global Urban Indicators Program (GUIP)
- Asian Development Bank (ADB) City Data Book (CDB) Database
- New Zealand QoL Reporting System
- Canadian QoL Reporting System
- Australian Unity Well Being Index

UN-HABITAT GUIP

The GUIP is an initiative under the United Nations Human Settlement Program. The first Global Urban Indicator Database (GUID1) was launched in 1996,[5] and data from 237 cities was collected using 1993 as the reference year. A city development index was derived to rank cities according to their level of development. The Istanbul+5 conference (2001) reviewed the indicators program and another round of surveys was conducted in 1998. The second Global Urban Indicators Database (GUID2) collected data from 232 cities in 113 countries. Data on a number of indicators (Table 3) were collected from secondary sources based on the latest available information, and converted to US dollars using guidelines provided by the International Monetary Fund (IMF)'s *International Statistics Yearbook 1998*.

[5] Established in 1988 as the Housing Indicator Program, its scope was later broadened in 1993 to measure sustainable urban development prior to the HABITAT II Conference in 1996.

Table 3: UN-HABITAT GUIP List of Indicators

Tenure	Tenure types, evictions, house price and rent-to-income ratios, land price to income ratios
Infrastructure	Water, sewerage, electricity, telephone
Health and education	Under-five mortality, life expectancy at birth, literacy rate, combined enrollment
Water	Water consumption, water prices
Waste management	Wastewater treated, formal solid waste disposal, formally recycled
Population	Total population (metropolitan area, urban agglomeration, national urban, national), population growth rates
Economic and workforce issues	GDP per capita, city product, household income, informal employment, unemployment rate
Transport	Travel time, transport modes to work
Safety	Reported crime rates
Local government	Local government revenue and expenditures

In addition, it reports qualitative data on the following indicators:

- housing rights,
- decentralization,
- urban violence,
- citizens' participation,
- disaster prevention and mitigation,
- transparency and accountability,
- local environmental plans,
- international cooperation, and
- public-private partnerships.

The CDI is the average of five subindices. These include city product, infrastructure, waste, health, and education. Each subindex comprises several indicators that are normalized so that their values range between 0 and 1. Table 4 indicates the formulae used to calculate the CDI. The weighing scheme is derived using principal components analysis.

Table 4: Calculation of CDI by UN-HABITAT GUIP

Index	Formula
Infrastructure	25 x water connections + 25 x sewerage + 25 x electricity + 25 x telephone

Waste	Wastewater treated x 50 + formal solid waste disposal x 50
Health	(Life expectancy – 25) x 50/60 + (32 – child mortality) x 50/31.92
Education	Literacy x 25 + combined enrolment x 25
Product	(log city product – 4.61) x 100/5.99
CDI	(Infrastructure index + waste index + education index + health index + city product index) /5

Source: UN-HABITAT GUID2.

ADB CDB Database

This ADB initiative was launched in 1999 under regional technical assistance for the development of a CDB for the Asian and Pacific Region, to cater to the need for improved data, indicators, and benchmarking in managing fast-growing cities in this region. The objective of this exercise was to "establish a policy oriented urban indicators database for research, policy formulation, monitoring of the development impact of the interventions in the urban sector, comparison of performance between cities, and improving the efficiency of urban service delivery" (ADB 2001: x). Data on 140 indicators was collected from 16 cities.[6] These indicators were grouped into 13 main divisions:

- population, migration, and urbanization;
- municipal services;
- income disparity, unemployment, and poverty;
- urban environment;
- health and education;
- urban transport;
- urban productivity and competitiveness;
- cultural factors;
- technology and connectivity;
- local government finance;

[6] The participating cities include: Bangalore (India), Bishkek (Kyrgyz Republic), Cebu, Mandaluyong, Naga (Philippines), Colombo (Sri Lanka), Dhaka (Bangladesh), Hanoi (Viet Nam), Hohhot, Honk Kong (China), Kathmandu (Nepal), Lahore (Pakistan), Medan (Indonesia), Melbourne (Australia), Phnom Penh (Cambodia), Seoul (Republic of Korea), Suva (Fiji Island), and Ulan Bator (Mongolia).

- housing;
- urban governance and management; and
- urban land.

This database is used to construct three indexes: (i) the CDI, (ii) the congestion index, and (iii) the connectivity index.

The CDI is a city-level version of the HDI. It combines the city product subindex with the health, education, infrastructure, and waste management subindices. These subindices are constructed by normalizing their component variables, which assigns them values between 0 and 1, and then taking a weighted average. The weights are derived using principal component analysis. The congestion index is composed of travel time, residential density, and city population, and provides a measure of crowding. Finally, the connectivity index measures a city's connectedness with the outside world, and is calculated based on information on internet connections, corporations, tourism, and flights.

Table 5 gives the formulae for the three indices. The weighing scheme is derived using principal component analysis.

Table 5: Calculation of CDI by ADB CDB

Index	Formula
Infrastructure	25 x water connections + 25 x sewerage + 25 x electricity + 25 x telephone
Waste	Wastewater treated x 50 + formal solid waste disposal x 50
Health	(Life expectancy – 25) x 50/60 + (32 – child mortality) x 50/31.92
Education	Literacy x 25 + primary enrollment x 25 + secondary enrollment x 25 + graduates/350 x 25
Product	(log city product – log 400) x 30/2.71 + (log of residential density – 1.98) x 30/4.86 + 40 x (log population – 2.78)/6.7
City development	(Infrastructure index + waste index + education index + health index + city product index)/5
Congestion	(log travel time – 2.08) x 30/2.71 + (log of residential density – 1.98) x 30/4.86 + 40 x (log population-2.78)/6.7
Connectivity	(log Internet + 0.71/6.34) + log corporations/6.7 + (log tourism – 3.42)/5.75 + (log flights – 4.33)/5.27 – 0.07/3.3

New Zealand QoL Reporting System

The New Zealand QoL Reporting System was established in 1999. Its aim was to measure the QoL in large urban areas of New Zealand through perception-based surveys. The 2004 round covers 12 cities, providing information on indicators (below) that are used to measure residents' perceptions of different aspects of living and working in large cities:

- health,
- education,
- urban/built environment,
- employment and economy,
- sense of belonging/community cohesion,
- democracy/participation in community affairs,
- community safety,
- demographics, and
- housing.

About 7,800 respondents were interviewed via telephone (500 from each city/district, and 1,500 from outside the sample cities/districts).

Canadian QoL Reporting System

The Canadian QoL Reporting System was developed in 1999 by the Federation of Canadian Municipalities. It provides a QoL index for 20 urban municipalities[7] from indicators that are grouped into six factors:

- local economy,
- fairness and equity,
- natural and built environment,
- basic needs,
- personal goals and aspirations, and
- social inclusion.

The data for this exercise was derived from a larger reporting system (Federation of Canadian Municipalities' QoL Reporting System) that contained hundreds of variables measuring changes in social, economic, and environmental factors. These variables were grouped into 75 indicators.

Australian Unity Wellbeing Index

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[7] The system started with 16 municipalities in 1999. It was expanded to include four more municipalities by 2004 and covers 40% of population.

The Australian Unity Wellbeing Index measures and monitors the subjective wellbeing of Australian population. It is based on the perception that QoL is both subjective (how people feel about life) as well as objective (the material conditions in which they live).

The information used to construct this index comes from telephone interview with 2,000 respondents. The sample is representative of the national geographical distribution of the country's population. The index incorporates both personal and national perspectives, and assesses people's perception of the following factors:

- life as a whole,
- standard of living,
- health,
- achievements in life,
- personal relationships,
- personal safety,
- community connectedness, and
- future security.

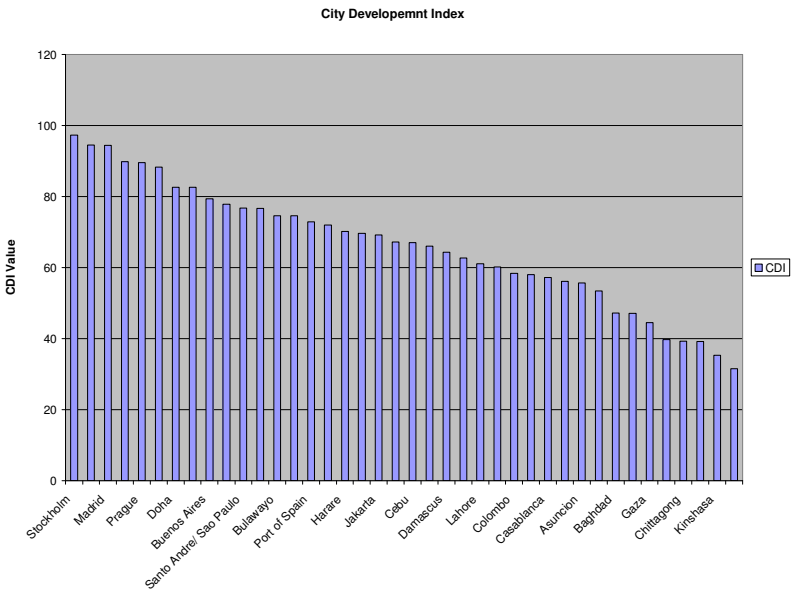
The National Wellbeing Index measures how satisfied people are with life in Australia. It evaluates people's perception of the following four factors:

- life in Australia,
- economic situation,
- state of the environment, and
- social conditions.

Pakistani Cities in International Perspective

Before we propose a system for measuring and ranking Pakistani cities, we explore efforts that have already been carried out in this regard. At present, Karachi and Lahore are included in UN–HABITAT's GUIP, which has calculated a CDI for a sample of 162 countries according to which Lahore scores a value of 61.1—a below-average score. The mean value for the CDI for this sample is 64.3 and the median is 68.1. Figure 1 shows the relative position of Lahore vis-à-vis other cities.

Figure 1



Lahore is also a participating city in ADB's CDB for the Asia and Pacific Region, according to which it falls in the "low-developed city" category,[8] which ranks low on the connectivity index (24) and high on the congestion index (73.1).

[8] The ADB CDI is similar to the UN-HABITAT's CDI. We therefore do not discuss Lahore's position on this index.

Figure 2

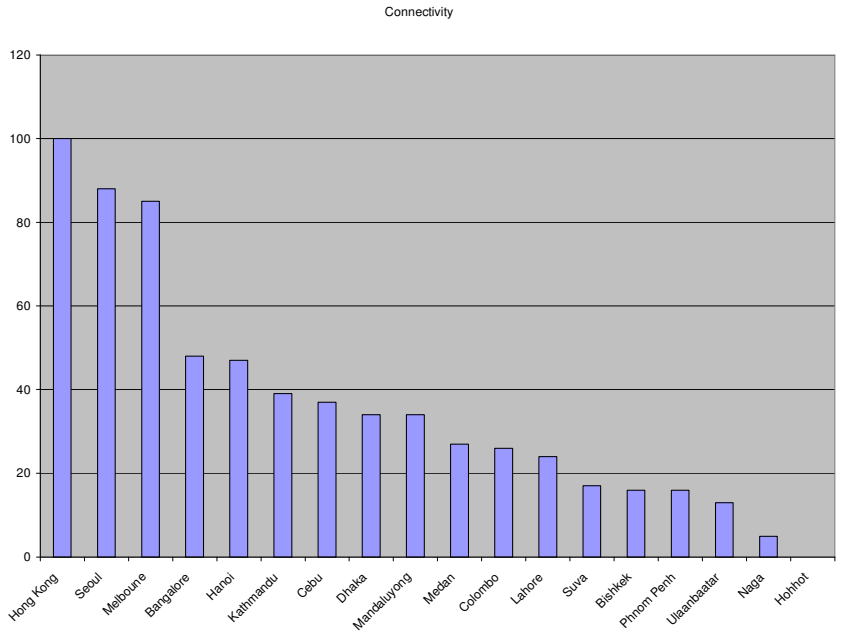
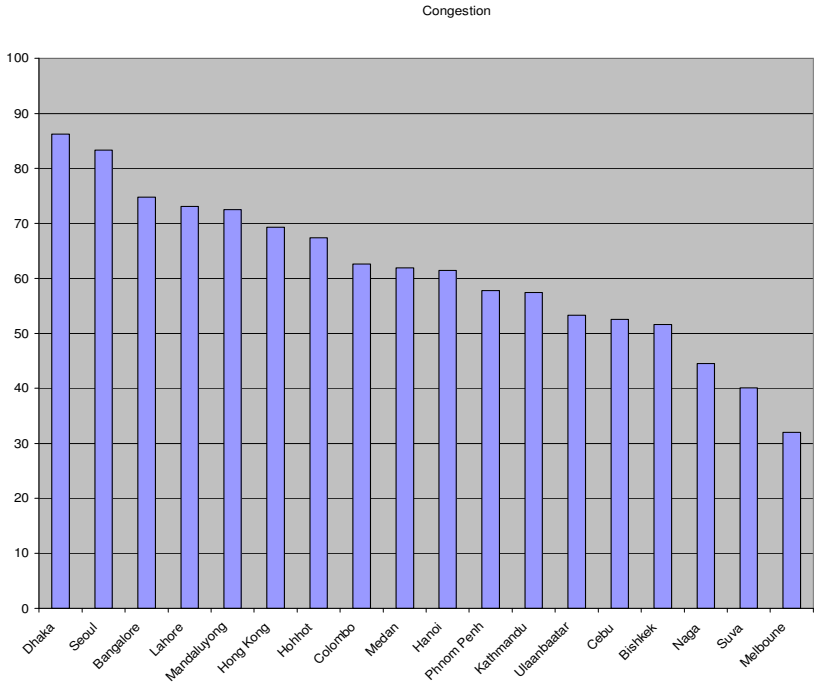


Figure 3



According to Mercer's yearly cost-of-living index (Table 8), Karachi was ranked at 140 in 2006, with a cost-of-living index of 56.1, having dropped many places from its 2005 rank. It compares well with many other South Asian cities, however, (Dhaka 62.5 and Bangalore 56.4) except for Mumbai, which stands at 68 (cost-of-living index = 79.9).

Table 6: Mercer Cost-of-Living Index

Rankings				Cost-of-Living Index	
March 2006	March 2005	City	Country	March 2006	March 2005
68	105	Mumbai	India	79.9	70.8
131	127	Dhaka	Bangladesh	62.5	62.5
139	141	Bangalore	India	56.4	51.7
140	136	Karachi	Pakistan	56.1	56.1

Source: Mercer Human Resource Consulting, Cost-of-Living Survey, Worldwide Rankings 2006.

The EIU's QoL index for 2005 rates life in Karachi as extremely hard, with an index value of 60% (0% means no hardship and 100% means extreme hardship, a score above 50% means that life is severely restricted due to terrorism, etc.).

Conclusion and Recommendations

At present, there is no countrywide QoL reporting system in Pakistan. The only efforts to measure Pakistani cities—UN-HABITAT's GUIP and ADB's CDB—have limited scope: (i) they are restricted to a maximum of two cities, (ii) their survey exercises are not carried out on a yearly basis, and (iii) they are limited by their own agenda. The GUIP was developed to monitor progress on UN-HABITAT's agenda while ADB's Urban Indicators for Managing Cities scrutinizes the development of its urban strategy.

There are many concerns that have to be resolved when developing a QoL system for Pakistani cities. The first concern is the choice of indicator, i.e., whether to opt for an objective or subjective indicator. Objective indicators (infant mortality, literacy rate, infrastructure, etc.) have many advantages: (i) they are easily defined and measured more precisely; (ii) objectivity can also mean there is general consensus about the value of what is being measured, e.g., everyone believes that infant mortality is bad and literacy is good and does not rely on individual perception. They can "assess societal qualities that do not rest solely on their influence on subjective well-being, but which are based on widely shared values" (Diener and Suh 1997: 194). Their weakness lies in the fact that they are chosen in an ad hoc manner, depending on the subjective opinion of the researcher selecting them. Diener (1995) has proposed a value-based index of QoL that uses variables that reflect a society's common values. The greatest limitation of objective indicators is that they might not reflect people's experience of well being (ibid).

Subjective indicators, on the other hand, measure individual perceptions of well being based on a respondent's judgment rather than that of policymakers or researchers. However, they suffer from the weakness that similar life circumstances might be viewed differently by different respondents, making it difficult to take individual responses as valid and accurate. Such indicators might not reflect the objective quality of community life as much as temperaments and personal relationship (Diener and Suh 1997).

Which factor should be given more importance is also controversial. How should weights be assigned to different factors? In the initial years of city rankings (the late 1970s and early 1980s), the practice was to weigh each factor equally. This practice was discontinued since people are apt to differentiate between the importance of different factors. Currently, statistical procedures like principal component method and the hedonic approach are used to assign weight. Rogerson (1997) has worked around this problem by using a survey method in which respondents were asked to order different attributes according to the priority they attached to each (cited from Rogerson 1999).

To estimate QoL in Pakistani cities, this paper recommends that objective indicators be supplemented by subjective ones, since both capture different dimensions of well being. Objective indicators measure "facts" (such as housing and infrastructure) while subjective indicators focus on "softer" issues such as the perceived adequacy of dwelling (Veenhoven 2004). The first type measure attributes at the city level and the latter at a personal level. This is in line with Rogerson (1999) and endorsed by Diener and Suh (1997) and Veenhoven (2004). "What is good for the people cannot be determined without taking their views into account" (Diener and Suh 1997: 207). An objective indicator should include attributes around which consensus has emerged. These include measures of economic well being, housing, health and education, work opportunities, infrastructure (public services), transport, land, environment, public safety, recreation, cultural activities, and urban governance. This should be supplemented by a residents' perception survey. However, more work needs to be done to chalk out a detailed framework for measuring QoL in Pakistani cities.

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