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ESTIMATING URBANIZATION



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from our earlier work', and, use the latest available census pertaining to 1998. However, before we proceed with the estimates, we need to discuss the matter of definition. This is important because the use of varying definitions may not capture the degree of population agglomeration

In our article, 'How Urban is Pakistan' published in 1999 iii, we analyzed the preliminary results of the 1998 census, particularly regarding urban population. We noted that city populations were higher than what official data was prepared to reflect, pointing to the issue of definition, specially the change introduced in the 1981 census and the use of administrative boundaries that contributed to the underestimation' of the urban population in the census (Box 1). In a later version published as 'Underestimating Urbanization'iv, after the final results of the census had been released, we noted that leading Pakistani demographers and social scientists had commented and raised questions on the apparently low urban population reported in the 1998 census, considering it inconsistent with trends and evidence-based research. They argued that the urban population as a percentage of total population could not be less than 40 percent and could be up to 50 per cent. (See Box 2 on the implications of the changed census definition of 'urban'). Here, we take-up the subject again.

Why is it important to look at the urbanization process? As we had argued earlier, in transitional societies, urbanization and its key characteristics are major determinants of the political process. Urbanization has an impact on the realization of political rights and participation in political processes, on the relationship of and responsibilities between the citizen and the state and the related institutional structures, on the nature of the breakdown of existing societal structures and the forging of new and complex ones, and on the composition of revenue base and the criteria for resource allocations. There is a critical need to recognize and understand the urbanization process: here, we look at the process to present estimates of urbanization and rural population. In preparing estimates of urbanization and rurality, we draw

and, changes in definition complicate comparisons over timevi. Similarly, global population and urbanization databases, such as that maintained by the United Nations since 1950 (and other agencies) are derived from national data based on country-specific definitions used by various countries (Box 3 and 4), international comparisons are made more difficult. This should not be interpreted to mean that the national definitions are flawed, but that they distort cross-country comparisons and, in many places, the implied urban/rural dichotomy is inadequate to reflect the degree of agglomeration. What then is urban and what is rural? Census offices usually define what is 'urban' or metropolitan for census purposes and assume the 'residual' to be rural (See Box 1 for Pakistan definitions).

Governments use different definitions for policy - such as 'urban and 'rural' in Sindh for job quotas to bring equity in government employment; and, in the United Kingdom, 30 different definitions of 'rural' are used by government departments. On the one hand, 'rural' and 'urban' seem clear terms with contrasting images: isolated farms, tiny hamlets, cultivated fields and villages, versus, the thriving city, skyscrapers and slums. This may have been a simple but adequate way of defining 'urbanvii' and 'ruralviii' some centuries or even decades ago, and while this dichotomy may be comfortable, it is imprecise and over-simplified. Life changes in a variety of dimensions along this route: from fields and intensive cultivation, villages and small market towns, to larger towns, small cities and the cosmopolitan city and is not a single homogenous activity - it is multi-functional and diverse. Categorizations are largely becoming irrelevant as people live their lives in different ways rendering conventional definitions obsolete and many social, cultural, economic and environmental issues are

inadequately addressed by current approaches separating 'rural' and 'urban' agendas. The key features of the urban context have been defined as proximity, density, diversity, dynamics and complexity. Population density, an urban core and proximity to city can be considered the key indicators that define the conceptual framework of agglomeration economies and rent. These critical factors have been used to create an agglomeration index as an alternative measure to adequately capture human settlement concentration rather than rely on ad-hoc and non-comparable definitions that, because of their implied urban/rural dichotomy, may not adequately reflect the degree of urbanization (Box 5).

(a) Population density

Population density is an important criterion for economic behaviour – to have a thick market, there must be a certain mass of people. Density is a proxy for market thickness. Dense proximity of a diverse pool of skills provides agglomeration benefits: drives agglomeration economies that are a defining feature of cities - transport, infrastructure, amenities - also bear on these economies. Density also affects unit cost of investment - fixed facility costs or higher mean travel cost to facility. Low-density areas may be too small to support competition in product and service markets, leading to capture by local monopolies.

(b) Urban Core and Proximity – distance to city

The existence of an urban core and its proximity (or distance) captures important determinants of economic opportunities and constraints – a proxy for market access and lower transport costs. Areas with ease of access or within commuting radius of a city may not be considered rural even if they are agricultural farms, and, towns outside the radius may be considered rural. Economic activities change systematically with distance to city: proximity and remoteness. Lack of an urban core and low overall population density impacts ability to diversify economic base compared to cities. The most extensively researched source of evidence for the claim that proximity is good for productivity is from studies of areas of dense economic activity: doubling of size increases productivity from 3-8 per cent - from a town of 50,000 to one of 5 million means a 50 per cent productivity increase. Further, this effect is larger in higher technology sector^{ix}.

What does Pakistan look like in terms of the critical factors that determine the urban and rural:

population density, and urban core and proximity. Figure 1 presents the population density recorded in the censuses 1951 to 1998 with estimates for 2013. Overall population density in Pakistan has increased from 42.4 persons/skm in 1951 to an estimated 231.6 persons/skm in 2013 with the highest density in the Punjab (488 persons/skm, 2013 estimate) and the lowest in Balochistan (27.4 persons/skm, 2013 estimate). The largest increase is in Balochistan (from 3 to 27 persons/skm), there are also significant increases in KPakhtunkwa 61 to 313 persons/skm) and Sindh (43 to 313 persons/skm). The 1998 census population living in the various density bands in the four provinces is shown

in Figure 2. Balochistan, Pakistan's largest province in terms of area (43.6%), stands in sharp contrast to the other provinces: 70% of Balochistan's population lives at densities below 50 persons/skm compared to 1% in the Punjab and 3% in Sindh and K-Pakhtunkwa; there is no population living at densities above 500 persons/skm compared to 51% in Punjab, 41% in Sindh and 38% in K-Pakhtunkwa. Figure 3 shows population in relation to proximity (expressed as travel time, primarily a function of distance) to city (i.e. urban core, assuming the core to be a single Pakistan census defined urban place of 100,000 or more). Other than Balochistan, the majority of the population live within one-hour from a city (83%, 80% and 68% in Punjab, Sindh and K-Pakhtunkwa) and a small proportion living more than two-hours away (the respective figures being 1%, 7%, and 9%); Balochistan presents a different picture with only 20% of the population living less than one-hour and 20% living more than 6 hours-away from a city.

In the framework of the critical factors and using criteria and thresholds that we establish, we can proceed to estimate the urban and rural in Pakistanx (Box 6). As mentioned earlier, the census defines only the urban and assumes the rest to be rural; we however establish criteria for both the rural and the urban. The base case criteria were adopted after considering and preparing estimates on several criteria. In the base case criteria, we consider (a) all areas with scattered populations (i.e. low population density), all areas that do not contain a town (i.e. urban core), and all other areas beyond a given travel time (i.e. proximity to city) to be rural: the base case criteria are: 250 persons/skm; absence of a town of 50,000 within the area; and a travel distance of more than 75-minutes to a city; (b) a city core (100,000 or more in a single Pakistan census urban place) and its linked built-up and surrounding areas as 'urban' area provided they have a minimum density of 500 persons/skm (overall). Of course, this leaves a gap between what we are considering rural areas and urban areas. As mentioned earlier, the categorization of rural and urban appears inadequate and imprecise and there does not appear to be a natural dividing line or break point between the two: the urban/rural divide appears as a gradient, rather than a dichotomy. Behaviour and conditions change drastically along the gradient, and there seems no compelling reason to segment them into just these two categories. We therefore introduce the concept of an 'urbanizingxi' area to classify areas which clearly are not rural since they have both an urban core and an overall density higher than the criteria we are using to classify the rural although they have not achieved our criteria for urban areas but could be considered in transition. We categorize all areas that have (i) a population density more than 250 persons/skm (overall) and 400 persons/skm in the urban core, (ii) a town (i.e. urban core) of 50,000 or more, and (iii) lie within a 75-minute distance of a city (100,000 or more) as 'urbanizing' areas. The base case criteria we use for an urban area is significantly higher than what is considered 'urban' in most of Europe, Oceania, the Americas, Africa and Asia. The base case criteria for urbanizing area is

considered 'urban in most countries, with few notable exceptions. Similarly the criteria are much higher than that used to calculate the agglomeration index (a comparison is given in Table B, Box 6). The estimates of the population in the rural, urban and 'urbanizing' areas for the four provinces, based on base case criteria, are given in Figure 4, and Table 1 provides a comparison of these estimates with the 1998 census.

Table 1 – Census 1998 and Our Estimates 1998

	URBAN		URBANIZING AREA <i>Our Estimate</i>	RURAL	
	Our Estimate Urban Area	Census 1998 Urban		Our Estimate Rural Area	Census 1998 Rural
Punjab	39.65	31.3	33.20	27.14	68.7
Sindh	39.86	48.8	19.40	40.74	51.2
Khyber Pakhtunkwa	17.35	16.9	27.71	54.94	83.1
Balochistan	0 0.00	23.9	11.57	88.43	76.1

In looking at the comparisons, it should be borne in mind that while the census has only two categories - that defined as 'urban' - with all the 'residual' non-urban areas treated as rural - we classify all areas in one of our three categories using defined criteria for each. It will be seen that our 'urban area' estimates in the case of Punjab and K-Pakhtunkwa are higher than the census urban population by 27% and 3% respectively; our higher estimates are partly due to the use of administrative boundaries of the city by the census resulting in the exclusion of suburban development (see Box 2) that forms an integral part of the city is excluded from consideration in the census but gets included in our estimates. On the other hand, our estimates for the urban area in Sindh are lower by 18% compared to the census due to the exclusion of small rural towns from our estimates for their lack of urban core (i.e. below our threshold size: town of 50,000 population) and lower density but are included in the census due to their administrative status, while in Balochistan we do not find any area which meets our criteria for urban (primarily due to the density criterion).

The main differences are in the case of our rural estimates: since (i) our 'rural area' estimates are derived from defined criteria for the 'rural' while the census urban core (town of 50,000 population) and proximity to city (within 75- minute of a city of 100,000), a very significant assumes all the population outside the city boundaries to be "rural"; and (ii) we introduce the concept of an

'urbanizing area' for the areas that clearly are not rural (they have both an urban core and an overall density higher than the criteria we are using to classify the rural) while they have not achieved the base case criteria for 'urban area'. The introduction of 'urbanizing area' brings into play the various elements of our criteria: in Punjab and K-Pakhtunkwa, due to higher densities, presence of population classified as rural by the census falls in our urbanizing area (the census classifies all areas outside

city boundary as rural - the 'residual' approach); in Sindh, certain areas classified as urban by the census do not meet our criteria for an urban area but qualify as urbanizing areas; and in Balochistan, the Quetta area containing the only city of the province, is considered as an urbanizing area due to lower overall population density. There is a significant part of the population living in areas that are no longer rural but at different stages of urbanization.

To sum up in the Pakistan context: the urban-rural definition of the census measures attributes of administrative areas and does not adequately reflect the process of urbanization and agglomeration. We use density, urban core and distance to city to measure the urbanization process and show that the census definition 'underestimates' the magnitude of the population in areas undergoing urbanization ('urbanizing areas').

The definition, and the consequent flawed understanding of the urbanization process, has led to serious policy distortions. It is both the nature and the magnitude of the urbanization process that is significant with important implications for the understanding of politics, poverty, empowerment, gender, governance, culture, inequality, informality and marginality. Based on an understanding of this process, many concepts have to change and policy interventions repositioned.

Box 1: Definition matters

As the 1961 census noted, "The distinction between an Urban and Rural population is based on the definition of what is an urban population" and "The essential difference between a rural and urban population was that the former was mainly engaged in agriculture and the latter in commerce, manufactures and other occupations. Thus a place having a population of 5,000 or more would be considered a village if it did not possess urban characteristics" (Census 1931). Since census taking began in British India in 1861, "urban population meant the de facto population of cities and towns". Cities and towns included: "(1) every municipality; (2) all Civil Lines not included in municipal limits; (3) every Cantonment; (4) very other continuous collection of houses inhabited by not less than 5,000 persons, which the Provincial Superintendent may decide to treat as town for census purposes; ". The 1981 census changed this definition of 'urban' to an administrative criterion - that of the administrative status of municipal governance - thus only the population living within the boundaries of municipalities and cantonments was designated as 'urban'.

Table A – Census definitions of ‘Urban’

Census 1901-41	1951 Census	1961 Census	Census 1981 and 1998
<p>Urban Area is a “Town includes</p> <p>(a) Every municipality of whatever size;</p> <p>(b) All civil lines not included within municipal limits;</p> <p>(c) Every other continuous collection of houses, permanently inhabited by not less than 5,000 persons, which the Provincial Superintendent may decide to treat as a town for census purposes.”</p> <p><i>Census of India 1901, Vol. I, p.21.</i></p>	<p>“Urban Areas include</p> <p>(a) Municipalities, cantonments and notified areas irrespective of population size;</p> <p>(b) Any other continuous collection of houses inhabited by not less than 5,000 persons and having urban characteristics.”</p>	<p>“Urban Areas include:</p> <p>(a) Municipalities as well as civil lines and cantonments not included within municipal limits;</p> <p>(b) Any other continuous collection of houses inhabited by not less than 5,000 persons and having urban characteristics which the Provincial Director of Census decided to treat as urban for census purposes;” and in certain cases</p> <p>(c) “areas which had urban characteristics but less than 5,000 population.”</p> <p><i>Census of Pakistan 1961.</i></p>	<p>“Urban areas – All localities which are either metropolitan corporation, municipal corporation, municipal committee or cantonment at the time of the census were treated as urban.”</p> <p><i>Census of Pakistan 1981 and 1998.</i></p>

Box 2: Definition matters – Pakistan

The definition adopted in the 1981 census, and subsequently for the 1998 census, was based on an administrative criterion. This implied that places which would earlier have qualified as urban, would be ignored: in 1951 census, of a total of 235 urban places, 121 or 51.5 per cent did not have administrative status; in 1961 census, of 336 urban places, 219 or 65.2 per cent did not have administrative status – and according to the 1981 definition would not have been classified urban.

By using administrative status as the criterion for the 1981 census, 72 urban places in the 1972 census with a population of 1.356 million was declared rural in 1981, thus shifting 5.7 per cent of the urban population to the rural; similarly 1,462 places with a population of 5,000 or more were classified as rural some of which would have been classified as ‘urban’ had the definition not been changed.

In the 1998 census, 3,691 places of 5,000 and above, with a population of 31 million were classified as rural; once again, many of these would have been classified as ‘urban’ had the changed definition not been applied. An estimate shows that that 361 places with a population of 5,000 or more that were considered rural in the 1998 census actually had urban characteristics better than many places considered urban in the census; if their population is considered urban, this would add another 6.5 per cent to the 1998 urban population of Pakistan (Arif, 2003).

Leading from the use of an administration criterion is the use of administrative boundaries under the changed definition introduced in the 1981 census: this meant that people living outside the administrative boundaries were not counted as urban. City populations have extended outside these administrative boundaries through suburban and peri-urban development, a phenomenon that has gained in significance.

For instance, in Lahore, public sector suburban development (Johar Town, Sabazaar, others) most private sector suburbs, and the Defense Housing Authority area, are not included in the count for urban Lahore. Similarly, settlements peripheral to the city, capitalizing upon their proximity, transport links employment opportunities and access to services have grown substantially and even acquired “urban characteristics”.

Not surprisingly, the census results show that municipality population grew at 3.14% p.a. while the surrounding “rural” areas at 4.14% p.a. Reestimating the urban agglomeration would result in an increase of well over 20% to the 1998 census urban population of Lahore.

References:

Arif, G.M. 2003, “Urbanization in Pakistan: trends, growth and evaluation of the 1998 census” in Kemal, Irfan and Mahmud (eds), Population of Pakistan, an analysis of the 1998 population and housing census, Islamabad, PIDE, 2003.

Box 3: Definition matters – how countries define urban**(a) Administrative status and boundary of the administrative area**

o Poland	= miasta	= status of town
o Bangladesh		= administrative status
o Sri Lanka		= administrative status
o Nepal		= administrative status
o Pakistan		= administrative status

(b) Administrative status, and, other criteria

- India - all places with administrative status, and, all other places with (i) minimum population, (ii) male working population nonagricultural, and(iii) minimum overall density
- Russia - cities, towns and, urban-type settlements Work-settlements with minimum population of 3,000 – 85% being workers, professionals and families Resort settlements with minimum population of 2,000 – 50% being non-permanent residents Sub-urban settlements ('dacha') with no more than 25% employed in agriculture
- China - urban district, city or town with density higher than 1500p/sq km; in urban districts with lesser density, only streets, town sites and adjacent villages considered urban

(c) Independent of administrative status or boundary

• Sweden	= <i>tatorter</i>	= statistically defined
• Australia	= <i>urban centres</i>	= population cluster and density
• Canada		= population and density
• France	= <i>unite urbaine</i>	= statistically defined
• Japan		= continuity and density
• New Zealand		=population size
• United States		=population size and density
• United Kingdom		=extent of irreversible urban development.

Box 4: Definitions matter – internationally

The definitions used by various countries vary widely (Box 2) and in making comparisons across counties and regions, reliance is placed on the data compiled by the United Nations but there is “general under-appreciation of the fact that the UN is forced to rely on member countries’ definitions of what constitutes urban and rural. Not only do these definitions vary widely by country, in many places the traditional urban/rural dichotomy is becoming increasingly inadequate” (Cohen, 2004).

This leads to distortions, “misunderstandings and misreporting”. For example, the share of India’s population that resided in urban areas in 1991 would be 39% instead of the official figure of 26% if 113 million inhabitants of 13,376 villages with population of 5,000 or more were classified as urban. The share would be even higher if the Swedish definition of urban (settlements with more than 200 inhabitants) were applied. The notion that South Asia is densely populated but that a relatively small proportion of the population lives in urban areas may not be as paradoxical as it sounds. In Mexico, the urban population in 2000 was 74.4% when settlements of 2,500 or more were defined as urban. If that threshold were changed to 15,000 or more (Nigeria and Syria, for example, have cut-offs of 20,000), the urban share of the population would drop to 67%. A country’s definition also can change over time, adding yet another layer of confusion. In China, for example, the urban share in 1999 could have 24%, 31%, or 73% depending on the official definition of urban population used (Satterthwaite, 2007).

References:

Cohen, B. 2004. “Urban growth in developing countries: a review of current trends and a caution regarding forecasts”, *World Development*, 32(1), 24-25. Satterthwaite D, 2007. *The transition to a predominantly urban world and its underpinnings*, London, International Institute for Environment and Development.

Box 5: Agglomeration Index

In order to adequately capture human settlement concentration rather than rely on ad-hoc and non-comparable definitions that, because of their implied urban/rural dichotomy, may not adequately reflect the degree of urbanization, an alternative measure of urban concentration was proposed by Uchida and Nelson (2008) based on earlier work by Chomitz, Buys and Thomas (2005). The agglomeration index is based on a uniform definition of what constitutes an “urban” or agglomerated area that can be used in cross-country analyses. “It is based on three factors: population density, the size of the population in a “large” urban center, and travel time to that urban center.” “The index does not define what is urban per se – it does not incorporate urban characteristics such as political status and the presence of particular services or activities.”

The World Development Report 2009 adopted and used the index. The set of thresholds used were the same as in Chomitz et.al (2005): population density of 150 persons/skm; 50,000 for minimum population size, and 60 minutes for travel time to nearest large city. The density threshold is the one used is by the Organization of Economic Cooperation and Development and the threshold of 50,000 for a sizeable settlement was “considered reasonable for developed and developing countries” (WDR 2009).

Based on country-specific definitions of the ‘urban’, the worldwide share of urban population was 47%; using the criteria this ratio is 52%. A comparison of the country-specific and uniformly defined shares of the urban population is given in Table A below.

Table A – Comparison of urban population: UN data with agglomeration index

Region Country	Country-Specific Definition Urban as %age of total population (UN Data)	Uniform Definition Agglomeration Index (WDR 2009)
Europe		
Albania	41.8	52.7
Austria	65.8	67.9
Bulgaria	68.9	64.9
Denmark	85.1	48.8
France	75.8	72.5
United Kingdom	89.4	84.4
North America		
United States	79.1	71.9
Canada	79.4	70.5
Latin America and Caribbean		
Argentina	89.2	72.1
Barbados	49.9	91.3
Brazil	81.2	63.6
Chile	86.0	74.8
Ecuador	60.3	49.2
Africa		
Angola	50.0	26.8
Botswana	53.3	27.9
Djibouti	83.4	40.6
Oceania		
Australia	87.2	75.9
South Asia		
Bangladesh	23.2	48.0
India	28.7	52.4
Pakistan	33.2	53.6
Sri Lanka	15.7	38.2
East Asia		
Japan	65.2	90.9
Cambodia	16.9	23.8
Indonesia	42.0	55.2
Malaysia	61.8	68.0

References:

Chomitz, K., P. Buys and T.S. Thomas. 2005. Quantifying the rural-urban gradient in Latin America and the Caribbean, World Bank Policy Research Working Paper 3634, Washington D.C. World Bank.

Uchida, H. and A. Nelson. 2008. Agglomeration Index: Towards a new measure of urban concentration, Draft as of February 15, 2008. World Bank. 2009. World Development Report 2009, Washington D.C. World Bank.

Box 6: Estimating Urbanization - Definition and Criteria

Rural Area: All areas with scattered populations (i.e. low density), and, all other areas, regardless of density, which do not contain a sizeable town (i.e. urban core), and, within a specified travel distance from a city.

Urban Area: A city core, its suburbs, linked built-up and surrounding areas are urban areas provided they meet the overall density criteria.

Urbanizing Area: Areas with an urban core, an overall density higher than that for the rural, and within 75-minutes of a city, but below the criteria for urban areas. On this basis, several criteria were used to prepare a series of estimates and base case criteria were adopted. The criteria are given in Table A below.

Table A – Estimation Criteria

Factor	Rural Area	Urban Area	Urbanizing Area
Density	All areas with a density of up to 250 persons/skm	500 persons/ skm or more overall	250 persons/skm or higher overall and 400 persons/skm in urban core
Urban Core and Proximity	All areas without a town of at least 50,000 population in a single Pakistan census defined urban place; and All areas beyond 75 minutes to city (100,000 or more)	100,000 or more in a single Pakistan census defined urban place	50,000 or more in single Pakistan census defined urban place within 75 minutes of a city (100,000 or more)

The base case criteria used for an urban area is significantly higher than what is considered 'urban' in most of Europe, Oceania, the Americas, Africa and Asia. The criteria used for urbanizing area is considered 'urban' in most countries, with few notable exceptions. Similarly the criteria is much higher than that used to calculate the agglomeration index (discussed in Box 5). A comparison of the criteria used with the country criteria for the United States used by the US Bureau of Census and that used for the agglomeration index in the WDR 2009 is given in Table B below.

Table B – Comparison of Estimation Criteria with US Census and Agglomeration Index

Factor	Criteria For Estimates	Us Census	Agglomeration Index (WDR 2009)
Density	<i>Urban Area</i> 500 persons/skm or more overall	<i>Urban Area</i> 386 persons/skm in city (core census blocks) and 193 persons/skm in surrounding areas	150 persons/skm
Population	<i>Urban Area</i> 100,000 or more in <u>one</u> Pakistan census defined urban place	<i>Urban Area</i> Urban core of 50,000 in <u>one or more</u> cities	50,000 or more
Proximity			Within a 60 minute travel time to city
Density	<i>Urbanizing Area</i> 400 persons/skm in urban place and 250 persons/skm or more overall	<i>Urban Cluster</i> 386 persons/skm in city (core census blocks) and 193 persons/skm in surrounding area	
Population	<i>Urbanizing Area</i> 50,000 or more in <u>one</u> Pakistan census defined urban place	<i>Urban Cluster</i> Urban nucleus of at least 2,500 but less than 50,000 in <u>one or more</u> cities	
Proximity	<i>Urbanizing Area</i> Within 75 minutes to a city (100,000 or more)		

Figure 1 – Pakistan: Population Density 1951-2013

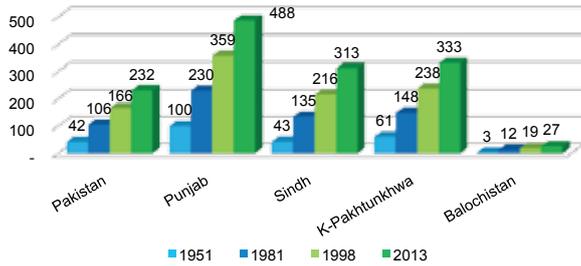


Figure 2 – Population Density 1998

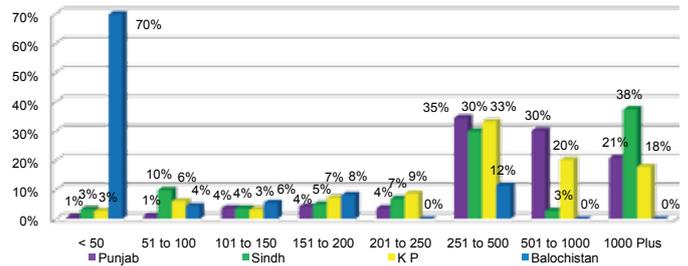


Figure 3 – Urban Core and Proximity 1998

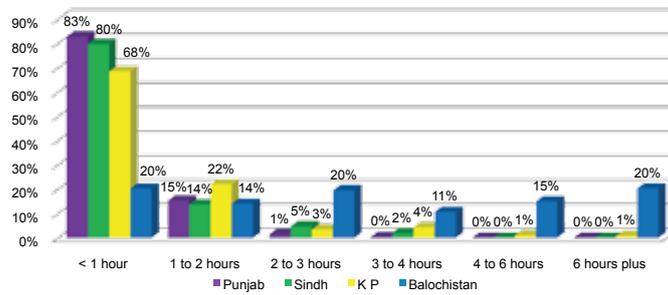
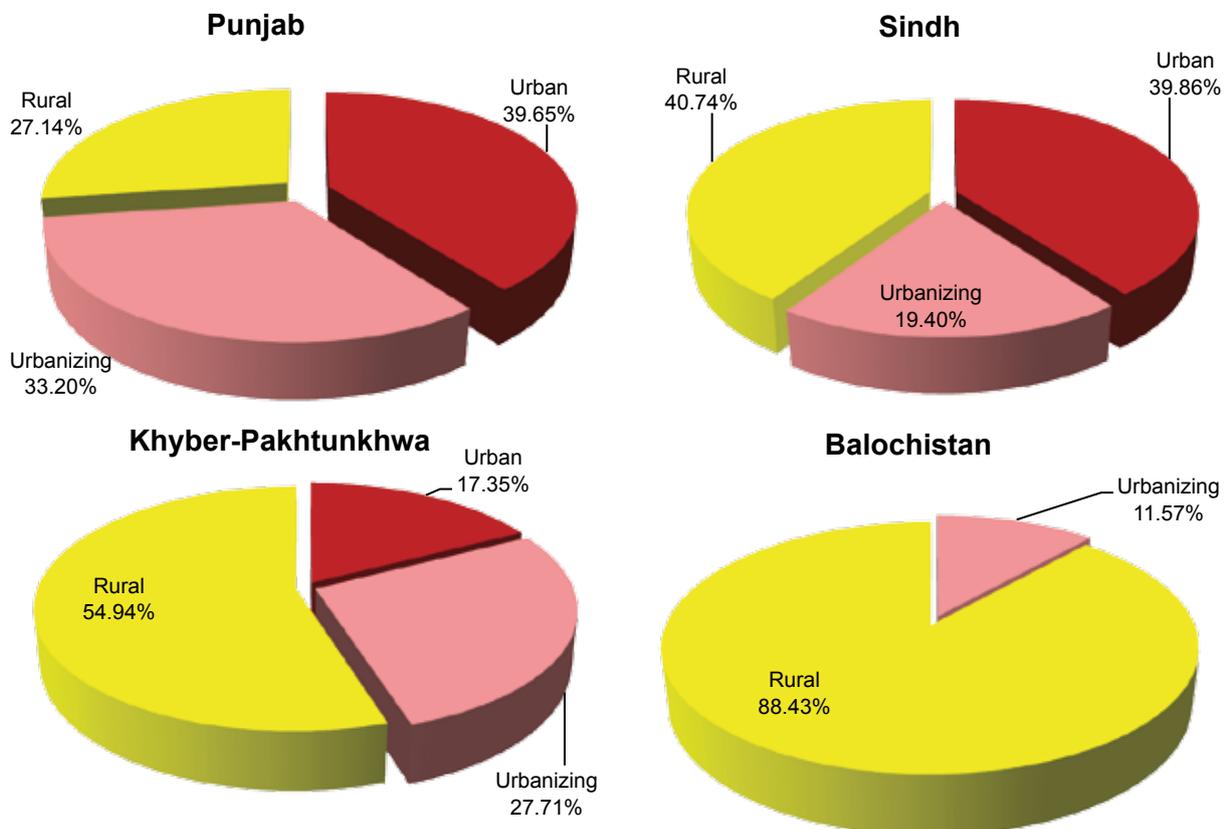
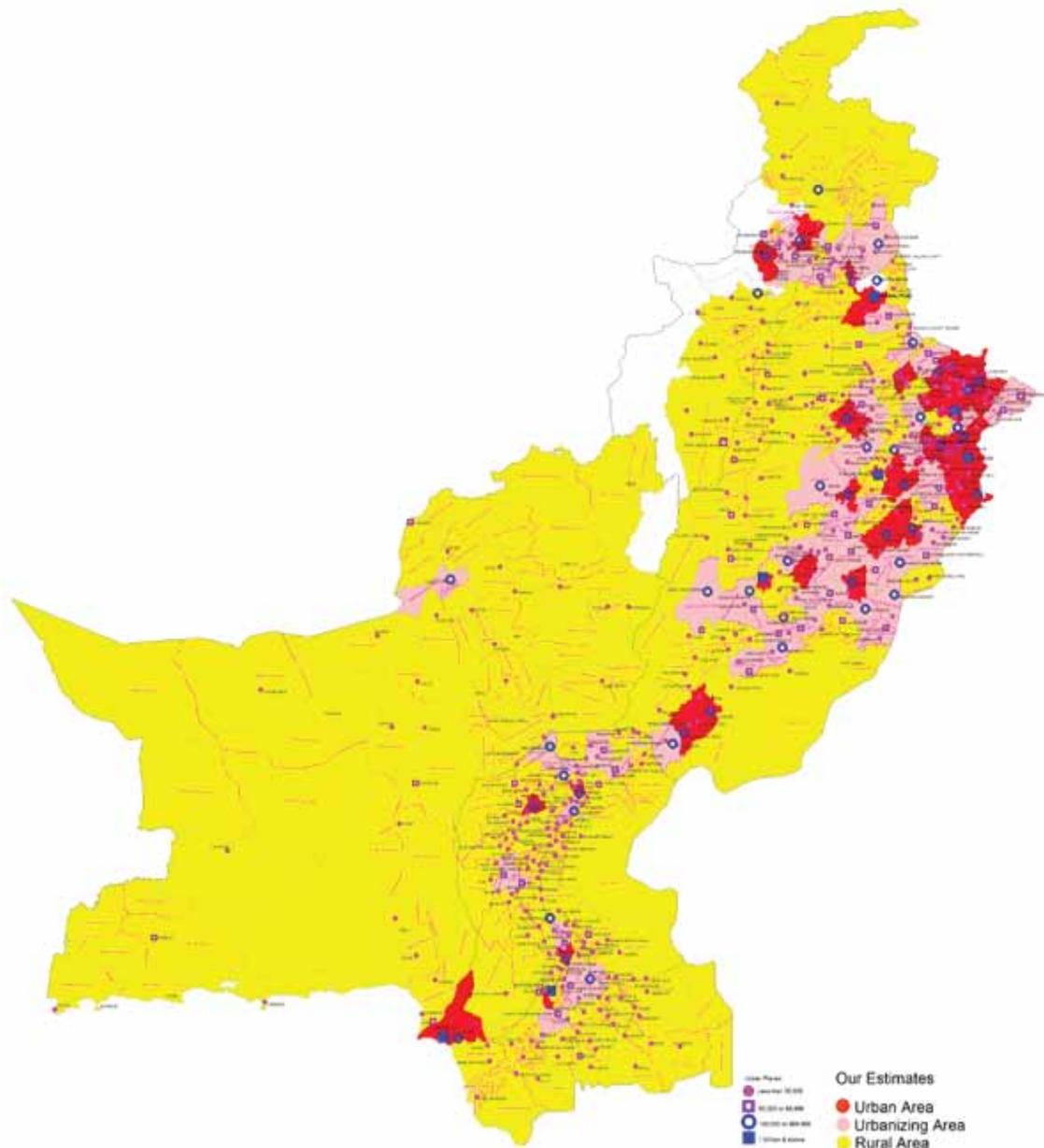


Figure 4 – Our Estimates 1998





Notes

ii) The presentation by the Urbanization Research Program (URP) and Assisting Local Institutions (ALI) “Pakistan – the emerging spatial geography” (May 2013) included the work here. An article based on the presentation reported on the work presented here - S. Akbar Zaidi, Dawn, August 5, 2013. We are grateful to comments on an earlier draft received from Messers Ali Cheema, Babar Mumtaz, S. Tanvir Hussain Naqvi, Pervez Tahir and S. Akbar Zaidi; the usual disclaimers apply.

iii) Published in Dawn, The News, Independent (Dhaka); translated and published in Urdu, Sindhi, Pushto and Balochi languages; and reproduced in Hasan, Arif, The Scale and Causes of Urban Change in Pakistan, Karachi, Ushba Publishing International, 2006.

iv) Ali, Reza, ‘Underestimating Urbanisation’ in Economic and Political Weekly, Vol.XXXVII, Nos.44-45, Nov. 2-9, 2002; ‘Underestimating Urbanisation’ in Zaidi, S Akbar (ed.), Continuity and Change: Socio-Political and

Institutional Dynamics in Pakistan, City Press, Karachi, 2003; reproduced in Zaidi, S. Akbar, Issues in Pakistan’s Economy, Second Edition (Karachi, Oxford University Press, 2006), and Bajwa, Khalid (ed.) Urban Pakistan - Imagining and Reading Urbanism, (Karachi, Oxford University Press, 2013).

v) This work includes: findings from study of urban census data over the last 100 years; an analysis of migration at Independence; ‘Pakistan – Urban Places’ map and data sheet; study on rurality in Pakistan (2010), identifying and mapping rural areas, estimating the 1998 population of the rural areas, and the presentation ‘Pakistan the Rural’ (2011); and presentation, ‘Pakistan: the emerging spatial geography’ (2013).

vi) Henderson discusses several issues with regard to systematic and consistent definitions of a city or metropolitan area across countries and over time. Henderson, J.V. 2005. ‘Urbanization and urban growth’, in Aghion, P and S. Durlauf (eds.), Handbook of Economic Growth, Vol. 1, Amsterdam, North Holland.

vii) Urban: adjective, (1) pertaining to, located in, or constituting a city (American Heritage); (2) of, pertaining to, or comprising a city or town (New Century); (3) characteristic of the city or city life (American Heritage); (4) relating to, belonging to, characteristic of, constituting, forming part of a town or city i.e. applied to any settlement in which most of the inhabitants are engaged in non-agricultural occupations (Penguin Dictionary of Geography); (5) pertaining to or characteristic of, situated or occurring in a city or town, constituting, forming or including a city, town or burgh, 1841 (Shorter Oxford). References: (a) The American Heritage Dictionary of the English Language, New York, 1970. (b) The New Century Dictionary, The Century Company, 1929. (c) The New Penguin Dictionary of Geography, London, Penguin Books, 1993; (d) Shorter Oxford English Dictionary on Historical Principles, London, OUP, 1993.

viii) Rural: 15th century, adjective, “that relating to the country”; “applies to sparsely settled or agricultural country”; (1) of or pertaining to the country as opposed to the city (American Heritage, op. cit.); (2) of or pertaining to farming, agricultural (American Heritage, op. cit.); (3) of, belonging to, relating to, characteristic of the country or country life, in contrast to the town or urban life, (Penguin

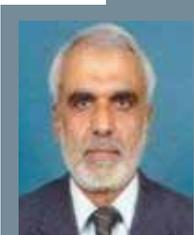
Dictionary of Geography, op. cit.); (4) of, pertaining to, characteristic of the country or country life as opposed to town, 1590 (Shorter Oxford); (5) pertaining to villages (Kitabistan 21st Century Practical Dictionary, Lahore, 2003).

ix) For a survey of literature on the subject see Rosenthal, S.S. and W.C. Strange (2004), ‘Evidence on the Nature and Sources of Agglomeration Economies’, in V. Henderson and J. Thisse, (eds.), Handbook of Urban and Regional Economics, Vol. 4, Amsterdam, North Holland.

x) We will proceed to estimate the population living in these areas using detailed data from the latest (1998) census. Within the rural areas, there are town populations; similarly, within the non-rural areas, there may be substantial village populations.

xi) *Urbanizing*: verb, (1) the continuous process of transformation from being of rural to being of urban character (Penguin Dictionary of Geography, op. cit.); (2) rendering urban – as urbanization of a district or its people (New Century, op. cit.); (3) making urban in nature or character (American Heritage, op. cit.); (4) change to urban character, changing the rural character (Kitabistan op. cit.).

Defining “Urban” in Pakistan ‘Ground Realities’



Dr. G.M. Arif is Joint Director at Pakistan Institute of Development Economics Islamabad, heading a Research Division named Population, Poverty and Labour Dynamics - responsible to carry out research on issues related to the social sector including population dynamics, employment, health, education, poverty, safety nets, income distribution and MDGs. He has done Ph.D in Demography from Australian National University, Canberra. Dr. Arif has a vast experience in research, published articles in refereed journals and presented research papers at various national and international platforms. His areas of interest includes, employment, poverty, safety nets, income distribution, child labour, urbanization, internal and international migration, health and education.

Although no consensus has yet emerged about the degree of urbanization in Pakistan, there is a growing agreement among social scientists that the use of administrative criterion to define the term ‘urban’ has led to an underestimation of urbanization. The recent article of Mr. Raza Ali on ‘Estimating Urbanization’ has reinforced it. In the administrative based definition, ‘rural’ is always a residual category after defining ‘urban’. Mr. Ali has not only redefined the term ‘urban’ based on density and proximity but also has defined ‘rural’, with an identification of a new category of ‘urbanizing areas’. One can differ with him on definitions used for all three terms - ‘rural’, ‘urban’ and ‘urbanizing’, but, his thinking is very close to the ground realities.

In 2003, I used both the micro-data files of the 1998 Population Census and the published reports of the earlier censuses to evaluate the use of administrative

criterion for defining ‘urban’. The first conclusion was that the strict use of size-specific criterion, giving all rural localities having 5,000 or more persons the status of urban, as claimed in first three population censuses (1951, 1961 and 1972), has never been applied. In fact, in the 1951 to 1972 censuses only small number of localities outside the notified urban localities was declared ‘urban’. If the populations of these small numbers of localities are excluded from the total urban population of the country it makes no real difference on the level of urbanization, which, after adjustment, declined only marginally. So practically in all five population censuses the administrative criterion has been used to define ‘urban’.

The use size of size-specific criterion in the 1998 Population Census, giving all rural localities having 5,000 or more persons the status of urban, would almost

double the urban population. But, it can be argued that in terms of other characteristics, these localities are predominantly rural. I tested this argument by comparing the characteristics of the 210 declared 'urban' localities which inhabited 20,000 or fewer people with those rural localities that were inhabited by 5,000 or more persons and were not given urban status in the 1998 census. The analysis found that 361 rural localities were better than many declared 'urban' localities in terms of the urban-related characteristics. A close look at these rural localities shows that some of them were adjacent to a large urban center. The treatment of these localities as rural cannot be justified; it leads to underestimation of the overall level of urbanization in the country, as well as the actual population of the large cities. Some other large rural localities having 20,000 or more persons are in fact trade and industrial centers situated at the Grand Trunk (GT) Road; in all aspects these are towns. Some rural localities, not located even on GT Road, are quite large towns having more than 50,000 persons.

The analysis further found that the 361 rural localities inhabited by 5,000 or more persons having urban-related characteristics are concentrated in four districts of central Punjab – Lahore, Faisalabad, Sheikhupura and Gujranwala. Few localities are also found in Rawalpindi and Attock districts in northern Punjab. In KP the concentration was found in Peshawar, Mardan, Charsadda, Nowshera, and Malakand districts. In Sindh and Balochistan the districts of concentration were Hyderabad and Quetta respectively. Overall, the rural localities that have urban characteristics are located in

relatively more developed districts of the country. It appears that Mr. Raza Ali has incorporated this geographical concentration of urban-type rural communities in his concept of 'urbanizing areas'. What would have been the level of urbanization if those 361 rural localities that were better than many small urban centers in terms of urban-related characteristics were treated as urban in the 1998 Population Census? The overall share of urban population would have increased from the recorded level of 32.5 percent, based on the administrative criterion, to 36.2 percent. I further estimated that, if the excluded rural communities having urban characteristics were treated as urban, and rural localities adjacent to large urban centres were considered as part of these centres, the total urban population in 1998 would be around 51 million. The share of urban population in the total population would approximately be 39 percent in 1998, with largest increase in KP and lowest in Sindh. If this figure of 39 percent is considered as base for the degree of urbanization in 1998 and urban growth rate, which is presently much higher than the rural growth rate, is applied to project urban population, the degree of urbanization in Pakistan today would be much higher than the level projected in official or UN documents.

What Mr. Raza Ali has proposed in his article for defining the terms 'rural', 'urban' or 'urbanizing areas' may not be a perfect solution for estimating urbanization in Pakistan, because its application alters markedly the province level estimates. However, he has given some practical suggestions for the estimation of the degree of urbanization.

Arif, G. M. (2003); Urbanization in Pakistan: Trends, growth and evaluation of the 1998 census, in population of Pakistan, eds. A. R. Kemal, M. Irfan and N. Mahmood, PIDE, Islamabad.

CITIES CAN SAVE US



Dr. Nadeem Ul Haque (Ph.D. (Economics) from University of Chicago) was former Deputy Chairman, Planning Commission and Chancellor of PIDE and has had a long career with the International Monetary Fund and other international agencies. As a leading development thinker of Pakistan he has pioneered urban reform thinking in Pakistan.

Recent research shows many reasons why city development is at the heart of progress, growth and development. All major scientific, social, political, economic and technological innovations have taken place in human agglomerations known as cities. Great civilisations and empires have been developed around cities. It is no accident that the dominant empire of any time had the most important, creative and productive city of the time.

Cities such as London, Edinburgh, Paris, Los Angeles and New York have been the birthplace of invention, creativity and, most important of all, enlightenment and reformation. Historically these cities have been for

commerce and merchants and have evolved as mixed-use commercial cities. Markets are based in cities and in bigger denser cities these markets can be highly specialised clusters of information exchange. Innovation and entrepreneurship are often incubated in such cities. Economic activity, innovation and entrepreneurship tend to cluster and feed off each other favouring density.

The difference between poor and rich countries often lies in the productivity of their cities. Cities allow space for everyone and all activities. All classes live in cities. Often the poor and the middle classes live in cities while the rich estates move to open suburban environments. Cities

offer community and networking infrastructure – libraries, community centres, sporting and conference facilities and theatres – to all, especially the poor and the middle classes.

In the post-industrial information age, creativity creates value. Creative cities are multi-ethnic, open to immigration, culturally rich, dense, full of learning and innovation, allow for eccentricity, and offer many diverse learning experiences. In well-organised societies, productivity increases and energies converge to produce innovation and fresh ideas.

Increasingly, cities are using congestion taxes for cars and putting more emphasis on public transport to make cities more people-friendly. The young, the poor and the middle classes, along with their creative activities, co-exist and interact with businesses in busy 24-hour downtowns. These city centres are the heart of a city and define a city. All development around a city is then relative to this city centre. City centres are a magnet for ideas and migration. In fact globalisation is really the network of ideas generated in city centres.

Sprawls that put cars first are less productive, more energy intensive and wasteful. Cities are dense human settlements and it is no wonder that they accentuate all conflicts. Successful countries and city administrations develop institutions for managing these conflicts bearing in mind the needs of development and growth. Where conflicts are not properly managed, decline sets in.

Building regulations must allow for creative destruction and renewal must be allowed. One important tension that needs to be managed is that between preservation of legacies and histories and accommodating the new and the modern.

Preservation is costly but necessary. However, without creative destruction, city development may be arrested. Preservation must be cleverly executed, preserving the spirit of the past and not seeking to keep obsolescent culture and functions alive.

Incumbents have the first mover advantage in any city occupying the best land and the use of the main amenities of cities like clubs and parks. Unless city management is looking toward development, these incumbents will use the preservation argument to preserve more than is necessary; most of the preservation will be self-serving.

Real-estate prices go up where height restrictions are excessive and the building process discourages construction. Re-zoning helps development and increase of supply to keep prices in check. Mayor Koch of New York talked of the NIMBY (“not in my backyard”) mentality.

Most of us would like a nice spacious mansion set in the middle of nice green meadows with all urban amenities within easy reach. Yet no one wants a busy highway or a shopping mall close to their backyard. But as a city

grows, space has to be made for urban conveniences such as highways, hotels, offices and shopping malls. Often estates and even palaces have to give way to the development of the city.

City management must be able to deal with the NIMBY mantra. Palaces, estates, hunting grounds, and leisure parks of the rich have given ground to the needs of the city. There are examples of the supremely entitled, namely kings and dukes and barons, who have seen the importance of yielding such private spaces to the development of more productive cities.

While this is the emerging global consensus on city development being at the heart of the growth process, Pakistani policy and research remain largely oblivious to it given the highly donor-dependent policy process which eschews domestic thought and debate. The result is that Pakistani cities are the opposite of what conventional policy advice would be. Their key characteristics are:

- Sprawl is actively encouraged by policy. All Pakistani cities appear to have no downtowns or city centres – dense areas of mixed use concentrating residential, office, commercial and entertainment within an almost walk-able district. Many cities are becoming urban sprawls at the expense of valuable agricultural land for which, at various times, expensive irrigation has been put in place.
- Sprawl development favours roads and housing estates for the rich over other activities. There is an excess demand for most forms of city activities – education, entertainment, office, retail, warehousing and even low income and middle-class housing. All these activities lack purpose-oriented space and are forced to be conducted in the only kind of city space that planners have been allowing for the last few years – single family homes.
- High rises even for flats are severely discouraged and penalised. The result is that housing for low-income groups, young families, and the middle class is in extreme short supply. In addition there is no cohesive, mindful construction activity in any of the cities even though this sector could sharply expand employment and growth.
- City zoning has been very unfriendly to commercial construction, public spaces, and commercial and community activity. Zoning, heavily manipulated by influential groups with vested interests, favours single-family housing leaving little space for other activities. Commercialisation – anything other than single family homes – is arbitrary, cumbersome, ill-planned and expensive. As a result, zoning and real-estate development appears to be a rent-seeking game.
- Government rather than commerce dominates city functioning. There is a large presence of government, especially the army, in all cities. Most prime land is government-owned, making the availability of prime land for commercial and mixed use development very difficult.

For example, the Mall Road in Lahore, the main thoroughfare, is completely owned by the government almost all the way from the provincial assembly chambers to the airport.

Why are our cities in such poor shape? The answer lies in the architecture of their governance. Cities have become a major vehicle of rent-seeking and privilege preservation. Zoning and the arbitrary use of public land have become major vehicles for rent distribution. Laws and institutions – based on open transparent processes and clear property rights – have not been created to deal with this problem.

In Pakistan centralised administration, opaque processes and inadequate city administrations have heightened rent-seeking activity, stifling city economic growth while accelerating speculation. Some of these are:

City management is an almost part-time activity of the centralised civil service. Professional and autonomous city management cannot be structured and implemented without a civil service reform. The current structure does not allow community participation and catastrophically places cities in the hands of junior civil servants who are temporarily in position, transitioning to a higher position in a monolithic federal bureaucracy.

Spurred by donors, city management is viewed as providing physical infrastructure. Social, cultural and learning activities are an important part of a city. Pakistani cities offer little in the way of entertainment, community or leisure space. There are practically no libraries, community centres, theatres or sporting facilities (except for the élite).

Most cities are not administratively cohesive. Cantonments, federal and provincial governments, and other administrative structures operate often to undermine city functions and even take over city space to the detriment of city development. Federal and provincial governments own vast amounts of inner city land which is arbitrarily developed without consultation with the city. Examples of this abound – arbitrary offices, leisure clubs, and training academies that the Punjab government and various federal agencies have built in Lahore without consultation.

The public service pay-and-pension system, which relies on perks based on urban land, seriously impedes city development. City centres are dominated by housing for civil servants, judges and army officials. Land that should be available for mixed use, high-rise development is blocked because of this.

Reforms that would monetise this perk and make this land available for mixed-use, high-rise construction have an investment potential of 50 percent of GDP over 10 years (Planning Commission/ CDA estimate). This suggests that the opportunity cost of the perks system is huge. Unlike other countries, because of the perk system

real-estate development has become a public sector enterprise business and not a commercial activity. Officials are rewarded for government service by gifts of land and hence like to keep land development a public sector activity.

The unintended consequence of this form of city development is the serious lack of public, community, entertainment and commercial spaces. This lack accentuates exclusion, especially of the youth and the poor, not only from the city but also from globalisation and modernity. The only form of public space that zoning has favoured or has been unable to curtail is that devoted to religion.

Following earlier research done at the Pakistan Institute of Development Economics, Planning Commission Framework for Economic Growth (FEG) highlighted urban reforms as central to any strategy for sustainable reform. Cities become engines of growth and development when they are allowed to function as decentralised, coherent units for the advancement of commerce.

To achieve this policy, research and thinking needs to move away from a space-less approach to development by integrating the role of cities as engines of growth. Fiscal federalism needs to be urgently adopted for city growth and to allow cities adequate ownership of their land and resources.

This must mean an adequate definition of city limits with exclusive city ownership of its resources. Federal and provincial governments and the defence agencies should not affect city administration.

The zoning paradigm needs to move away from its current emphasis on upper-class housing to one that recognises the diversity of the functions of a city. It must favour density, high-rise mixed use and walkability – especially in downtown areas.

In addition it must favour public and community space while allowing for commerce, culture and education and other needed city activities. Zoning needs to be based on clear transparent processes based on open citizen consultations.

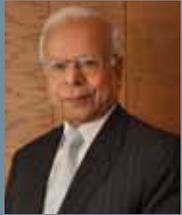
Building regulations must be loosened to allow complex high-rise construction. City centres need to be developed for dense mixed use. Government ownership of city-centre land needs to be reduced if it is retarding downtown development. Commerce is to be given priority in city centres. City management should be consultative and accountable. Cities must be able to hire out of their budgets without federal hiring restrictions such as the unified/national pay scales and mandatory positions for the federal civil service. Decision-making must be based on open consultative processes.

Central to this reform process will be a much needed civil service reform without which cities cannot attain the

autonomy, professionalism and control over their land that they need to be able to develop. Unless the system of perks and civil service control of cities and their land development is shaken, serious commercial and construction activity will not start. And without this there will be no serious effort to start unravelling the current system of exclusion of the poor.

In turn enlightened space and culture to counter the prevailing fundamentalist narrative will not emerge. FEG and its predecessors at PIDE have initiated the thinking on a simple reform agenda which will reduce the current high level of rent-seeking in Pakistan's cities and lay the basis of commerce and creativity which will fuel sustainable growth. Is anyone listening?

JOBS AND URBANIZATION



Dr. Ishrat Husain is Dean and Director Institute of Business Administration (IBA) Karachi. He was appointed as the Governor of Pakistan's Central Bank in December 1999. In recognition to his meritorious services he was conferred the prestigious award of "Hilal-e-Imtiaz" in 2003. He is currently a member of Middle East Advisory Group of the IMF and the Regional Advisory Group of the UNDP. Dr. Husain has maintained an active scholarly interest in development issues. He has authored 12 books and monographs and contributed more than two dozen articles in refereed journals and 15 chapters in books. His book "Pakistan: The Economy of the Elitist State" is widely read in Pakistan and outside.

A recent World Bank study has surprised us by showing that Pakistan was among the World's largest job creators in the 2000s. The quality of jobs was, however, poor i.e. low skilled low productivity. Of the 15 million jobs created over 2000-2009, more than a third was in agriculture, and the remaining in services and manufacturing. The share of agriculture in total employment was 45 percent, services 35 percent and 20 percent in manufacturing. Only 21 percent of women compared with 82 percent of men participate in the labor force.

The above results are not reassuring for the future on several counts. Demographic changes have produced a bulge in youth seeking employment. Most of the youth would have acquired some formal education spurring demand for better quality jobs. They are, however, ill-equipped to meet the requirements of the economy. The other disturbing news is that the country's female population is not participating in the national income generation activities after having acquired professional degrees.

Although the numbers coming out of our educational institutions has certainly gone up there is a failure to allocate and utilize them properly. It is not rare to see Master's degree holders stuck in low paid and low productivity jobs because they do not have connections, influence, or ability to bribe. The children coming from the elite and influential family, on the other hand, may not be suitably qualified but are able to capture high placed jobs.

Studies have shown that the largest single factor that contributes to poverty reduction is the growth in non-farm incomes, migration from farm to non-farm sectors and from unpaid family workers to salaried workers. This implies that most of the jobs have to be created in the urban areas where Services and Manufacturing should be able to absorb the surplus labor from the rural areas. This reallocation of labor from

low productivity to high productivity activities forms the crux of economic growth. If Job creation in the urban areas is the main driver of growth, urban management, planning and provision of services including housing, education, health care, and transport assume greater importance. Devolution of powers under the Local Government ordinance of 2001 had made considerable difference in the availability and access of public services in Karachi, Lahore Rawalpindi, Peshawar and other big cities. Accountability by the vocal and growing middle class kept the elected Mayors and town Nazims constantly on their toes. Growth in infrastructure facilities, better management of public services and improved access were beginning to sink in.

A natural experiment has taken place since the abolition of the City Governments in 2008. Lahore has been exception because a dynamic Chief Minister personally steered the development of Lahore and oversaw its management. But other cities particularly Karachi, Peshawar and Quetta have suffered because of the absence of local governments. The popular notion of zero sum game between the urban and rural areas is highly flawed. Had the City Governments been allowed to function with adequate powers, and authority they would have mobilized additional resources from their areas. People are willing to pay taxes and user fees if the benefits are visible to them. This effort would have relieved the Provincial Governments of the pressures from urban populations and allowed them to concentrate on the uplift of the rural districts. Public Investment in greater education opportunities, better health care facilities, potable drinking water supply and rural infrastructure would have upgraded the quality of life and living standards of our rural population... Surplus farm labour would have been absorbed either in non-farm activities or migrated to cities to work in high productivity sectors. What are the institutions that can enable this transformation and reallocation?

In the urban areas, City Governments have to be given

legislative, administrative and financial powers to run the affairs in an autonomous manner with full accountability for results and auditing of accounts. Institutions such as KDA, LDA, RDA, PDA, have to be strengthened with adequate powers and authority to prepare and implement Masterplans, acquire land, plan and develop new housing facilities for the growing urban population.

Multiple independent jurisdictions within the City boundaries such as the Cantonment Boards, DHAs, Cooperative Housing societies, Industrial Estates etc. have to be brought under the planning and regulatory control of the elected City Governments with subsidiary authority delegated to manage and provide services within their respective jurisdictions. An independent review should take place about the continued justification of Cantonment Boards existing in the areas that have largely become populated and inhabited by the civilians. The remaining military installations should be provided alternate land and moved to more secure places.

The density, zoning and land use conversion restrictions in each city should be reviewed and aligned keeping the future population projections in mind. Water supply, sewerage and sanitation should be contracted out to private companies under transparent concession agreements with adequate monitoring and strong enforcement with heavy penalties for violations.

Public transport systems connecting the residential areas where income population low lives with the main employment centres have to be developed and subsidized by the City Governments. The present system of obtaining multiple clearances and no-objection certificates for obtaining building permits

for commercial and industrial projects is adding costs for doing and expanding business. Land titles, registration and transfer procedures should be simplified and automated. Industrial estates with all the facilities and utilities should be developed. Parks, playgrounds and other public amenities should no longer be restricted to posh areas but made available to all segments of the population.

These institutional reforms hardly appear on the radar screen of any government - past or present. The reasons are obvious. The greater is the opacity and hoarding of information the larger is the scope for rent extraction by the officials.

A more automated and transparent system of governance with disclosure of information and availability of records in public domain reduces the incomes of these individuals substantially and hence resistance to reforms. As a result, ad hoc and unplanned development has given rise to the ascendancy of land, water, transport and, extortion mafias with the backing of some political elements. This urban sprawl instead of creating high productivity jobs and positive externalities has created incentives for informalization of urban economy with all its attendant setbacks and disadvantages.

This correlation between the rise in acts of violence and poor governance in urban areas is quite high as proved by the recent events in Karachi.

High productivity Job creation will take place only if a system of responsive City Governments, transparent land and water markets and amenities and facilities for manufacturing, industrial and services sector growth are put in place.

Disclaimer:

The views expressed in these articles are those of the authors. The findings, interpretations, and conclusions expressed herein do not necessarily reflect the views of the Urban Unit, or the Govt. of Punjab.

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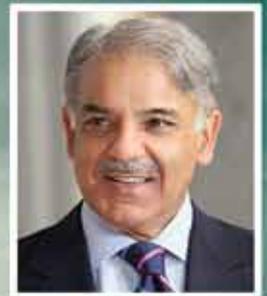
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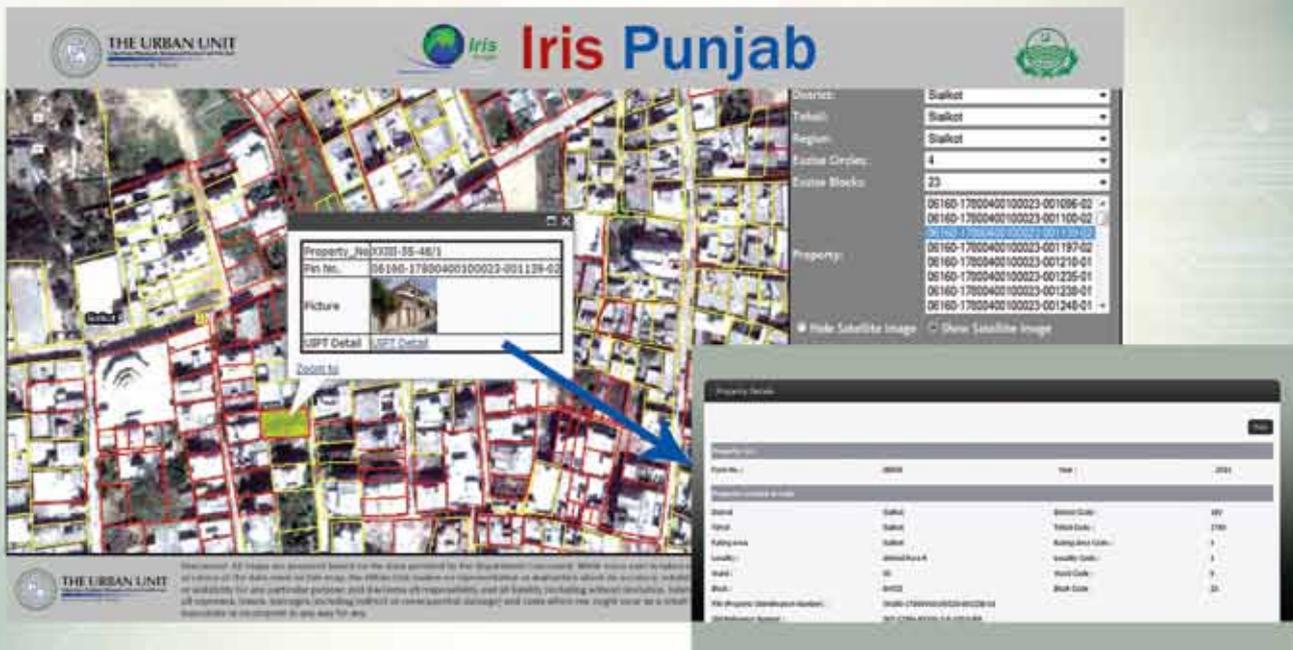
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