

## 31. Socioeconomics Impacts of Land Valuation and Infrastructural Development in Hyderabad, Sindh, Pakistan

Moula Bux Peerzado<sup>a\*</sup>, Habibullah Magsi<sup>a</sup>, Tehmina Mangan<sup>a</sup>, and Muhammad Javed Sheikh<sup>b</sup>

<sup>a</sup> Department of Agricultural Economics, Sindh Agriculture University Tandojam, Pakistan

<sup>b</sup> Department of Rural Sociology, Sindh Agriculture University Tandojam, Pakistan

Email Address: pizrado01@yahoo.com

---

### Abstract

Growing population and fast urbanization mostly demands cities grow towards agricultural land and its periphery has extended the land delivery system in Hyderabad, Sindh, Pakistan at contravention point. Agricultural lands are main source of livelihood not only in Pakistan but around world. Pakistan is agricultural country its contribution in GDP is 20.9%, source of livelihood of 43.5% of rural population, employ 70% people directly and indirectly and about 45% of exports are agro based have impacted by this process. For this study it was aimed to determine the consequences between urbanization and agricultural land conversion in Hyderabad Sindh Pakistan depiction of empirical facts from study area. Therefore both qualitative and quantitative (primary and secondary) methods including expert opinions and questionnaires to gather and examine data from urban centers and HDA (Hyderabad Development Authority), Economic survey of Pakistan and Bureau of statistics and Economic Division of Ministry of Finance. Unlike to the common view that the key reason behind increase in population and urbanization in the study area is a consequence of more educational, health and commercial activities and the central location. The process has ignited the thinking where best agricultural land has been converted to other land uses. The stress of rapid urbanization has harmful implication mostly on poor peasant communities in region. Therefore such policies are required that the protection of prime agricultural land can be saved from the said process to serve as a key source of livelihood. Growing urban centers are important but not to compromise the fact that agriculture is life for rural as well as for urban people.

© 2016 Moula Bux Peerzado, Habibullah Magsi, Tehmina Mangan, and Muhammad Javed Sheikh Selection and/or peer-review under responsibility of Energy and Environmental Engineering Research Group (EEERG), Mehran University of Engineering and Technology, Jamshoro, Pakistan.

**Keywords:** *Population, Agriculture, Land, and Hyderabad*

---

### 1. Introduction

Fast growing population has caused chaos on agricultural land and land management in world and also in Hyderabad, Sindh, Pakistan. A major problem of rapid urban growth is changing land use patterns. The general characteristics of rapid urbanization experienced by south Asian countries, such as Pakistan, India, Bangladesh, and China are uncontrolled changes in land and building uses like 1. Land supply does not go equally with urban population growth. 2. Growing population is increasing while land supply is fix which does not increase. The increasing population and growing urbanization has deprived the other sector of needed land. Due to process of urbanization mostly agriculture lands are affected (Naab, et al., 2013; Bertaud, 2010). Urbanization is one of the most important and serious global problem (Yansui lui *et al.*, 2013; GOP, 2014; and Bertaud, 2010). Urbanization, development and economic process demand urban areas to increase towards cultivatable land and its periphery (Yansui lui et al, 2013; Bertaud, 2010). The way industrial and services sectors expand, extensive movement from farming areas to urban areas takes place. Due to this process, the growth rate of urban centers and populace is raising day by day. So it is a very big challenge for economist, policymakers, politicians, scientists and every individual who lives in this society (Yansui lui et al 2013; GOP 2013; Bertaud 2010). It seriously impacts on development attempts taken by many city planners and governments. Land use patterns are changing from

agriculture farming towards residential accommodation and commercial purposes. It is going to limit agricultural lands. It is due to attraction of basic health facilitation, economic, social, educational, economic development, economic wellbeing and social development (GOP, 2014; UN 2015; Bruce, 2007).

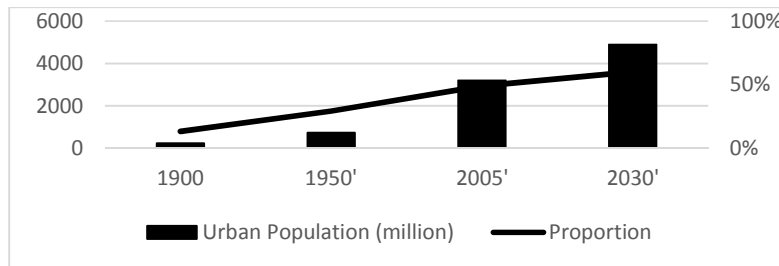


Fig. 1. Population rate from 1900-2013

Table 1. Population of regions from 1900-2030

Year	More developed regions		Less developed region	
	Population (billion)	%	Population (billion)	%
1900	0.15		0.07	14
2005	0.90	74	2.3	43
2030	1.00	81	3.9	56

World urban population in 1900 was 220 million and 732 million in 1950. While it reached at 3.2 billion people in 2005 and the world half population becomes urbanized in mid-2009 was alarming situation. The urban population in 2014 accounted for 54% of the total populace and continue to grow and expected to grow approximately 1.84% ‘‘between’’ (2015-20), 1.63 ‘‘between’’ (2020-25) and 1.44 ‘‘between’’ (2025-30) per year. Further it is estimated 60% of the world population was to be urbanized in 2030 (see Fig. 1 and table 1), shows differences in population rates in more developed and less developed regions from 1900 to expected in 2030 was 0.15 billion to 1.0 billion and 0.07 to 3.9 billion people were to live in more developed and less developed regions. Fig.1. Global proportion and Differences of the urban population increase

(Source: UN Population Division)

The below Fig. 2 tells situation of the population in major cities of Pakistan. The Karachi city is leading in urbanization in Pakistan, followed by Lahore, Faisalabad, Hyderabad, and Rawalpindi-Islamabad.

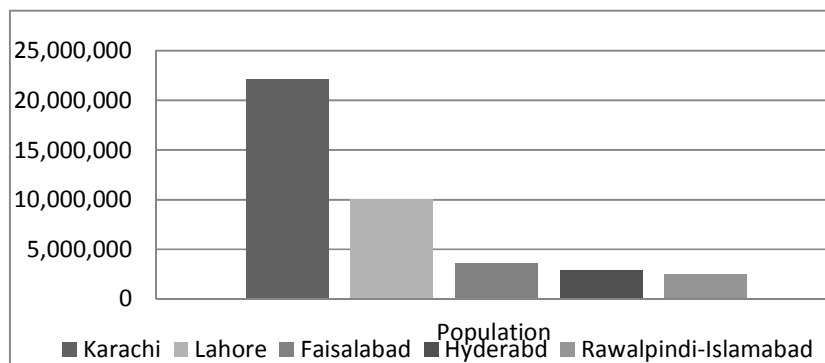


Fig. 2. Population of Leading Cities

Historically Hyderabad had a glorious past. It was known as Paris of India and Asia; serve as a transit hub between rural and urban Sindh and home of oldest university in the region. It is also a very unique city in the world; city of wind catchers; had a 4.5 km longest bazaar of gold of Asia and world leading bangle producer. It is also famous in the world due to cakes and ‘‘Pallo’’ fish only found in Indus river (Akhtar, 2015; and Wendell, 2015). Therefore this study found out issues related land uses (land valuation, land conversion and infrastructure development) and their

resolutions in Hyderabad district. In particular, would like to determine that what factors were affecting agricultural land and its development? In order to reach up to the concrete answer, following specific objectives had been formulated. To find Population, Density per Square kilometer and land valuation in the study area and suggest policy prospects for sustainable urban infrastructure development in the country. This study would be a pioneer step towards the agricultural land development (Magsi, 2013). The present study should help in understanding the land valuation patterns in Sindh. The study may help the decision makers in the field of urban development and agricultural land development. The ultimate aim of the study is to create awareness about proper need for sustainable agricultural land development and its valuation in the province particularly in Hyderabad.

## 2. Research Methodology

In this section we described the proposed methodology for this research. The research was accomplished through descriptive, quantitative and analytical approaches. Primary and secondary data was used in this research; so for primary data different comprehensive questioner were designed and constructed. Multistage cluster sampling technique was applied, due to nature of data and population. Three zones (Talukas) of Hyderabad district were selected, i.e., Hyderabad City, Qasimabad and Latifabad, Therefore 15 respondents (residents/dwellers) and 5 expert opinions were selected from each zone for interviews. The interviews were carried out through pretested and well-structured questionnaire. Two types of questionnaires were developed for this study. First questioner for residents: For resident comprehensive and both types of questionnaires (open ended questionnaire and close ended questioner) were developed to know insight and compulsory information from the resident in their opinion. What they suggest, for that open ended questionnaire was be formulated. While, what we desire and expect from them a close ended questionnaire was be develop in which dichotomous and scale type questions was asked from respondents. Second questioner for experts: A broad open-ended questioner was developed for expert opinion, to identify insight and compulsory data from the experts in their opinion related questions was asked from experts so that proposed objectives was accomplished.

Secondary data was collected from, Hyderabad development authority, Press and official records, books, official websites magazines, economic survey of Pakistan, UN population division and world data sheet. Therefore both types of data sets were analyzed by some mathematical, statistical and econometric tolls. Our research formulas are following.

1. Floor Area Ratio or floor space index (FSI) method.

FAR or FSI = Total covered area of all floors / plot area

FAR= (A= L\*W)/ (CS), where A is total area of overall site, which is length (L) \* Width (W) and divided construction site (CS).

Source <http://www.magicbricks.com>

2. RPR= Rent Price Ratio was calculated by following method.

The price to rent ratio is the proportion of residential home price to yearly rent that can be earned from the residential place. P/R= Home Price ÷ Monthly Rent×12

Source <http://thismatter.com/money/real-estate/price-to-rent-ratio.htm>

Procedure of Data Analysis Collected data was analyzed by Microsoft Office Excel.

## 3. Results

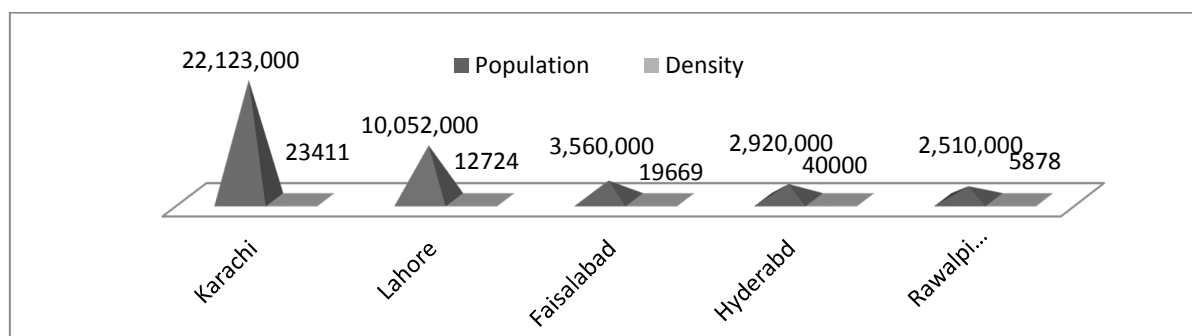
Findings of this study are comprised over tow fold, fist we have given the results of Hyderabad. The situation of urbanization in Hyderabad throughout 47 year of history is impressive. It is 2<sup>nd</sup> largest urban city of Sindh and 6<sup>th</sup> of Pakistan, with population of 2.0 million people with area of 993 sq. Km (see table 2). Area of urban centers was 247 sq. km and population 1167 thousands in 1998 and changes 30 sq. km “30 km<sup>2</sup> = 7413 acres and 7030.584ft<sup>2</sup>” become 277 sq. km and 1626 thousands in 2010. Urbanization is increasing day by day very speedy in Hyderabad. Second surprisingly last 34 years give a picture of boom urbanization in urban centers of Hyderabad where only agricultural land exists.

**Table 2. Area and population of Hyderabad district throughout all censuses**

Administrative Area	Area/Sq. KM		Population					Years Average 1951-1998
	1951	2010	1951	1961	1972	1981	1998	
Hyderabad District	5387	5387	625848	936199	1625864	2022305	2834451	321786.68
Hyderabad City Taluka	43	21	242651	436171	630624	394853	525299	89183.92
Qasimabad Taluka	0	9	3370	5225	9448	32043	115374	6618.4
Rural			3370	5225	9448	14720	12127	1795.6
Urban			0	0	0	17323	103247	4822.8
Latifabad Taluka	204	247	3780	7968	14517	366799	563761	38273
Rural			3780	7968	14517	22468	17717	2658
Urban			0	0	0	344331	546044	35615
Other	5140	5110	306616	399199	811804	1016845	1339585	154961.96

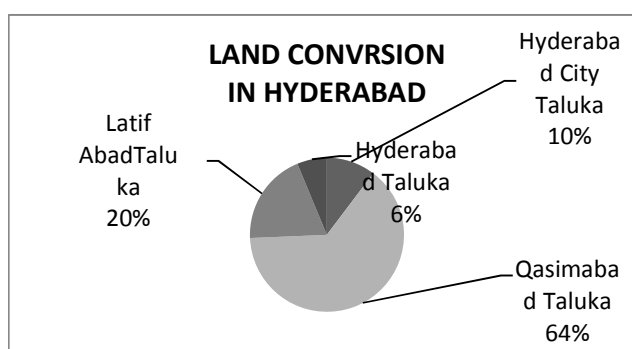
(GOP, 2014).

Karachi is leading followed by Lahore, Faisalabad, Hyderabad and Rawalpindi – Islamabad in population, while Hyderabad is leading followed by Karachi, Faisalabad, Lahore and Rawalpindi – Islamabad in density per km<sup>2</sup>.



**Figure 3. Population & Density of Major cities**

(U.N 2015, and GOP, 2014).



**Fig. 4. Land Conversion in Hyderabad**

According to Hyderabad Development Authority (HDA) and through official records now adays Hyderabad district is spread over on 245376 acres (993km<sup>2</sup>) in which hyderabad city taluka is spread over 5189 acres (21 km<sup>2</sup>), Qasimabad taluka is 4447 acres (18 km<sup>2</sup>), Latifabad taluka is 62518 acres (253 km<sup>2</sup>) and Hyderabad rural on 173221 acres (701 km<sup>2</sup>). Before 1998 the total urban centers of study area was swelling over 5189 acres (21 km<sup>2</sup>), now a days urban centers spread over 21992 acres (89 km<sup>2</sup>). So after 1998 in 18 years of history 16803 acres of pure agricultural land are converted in urbanization. In which share of each taluka is 64% of Qasimabad, 10% of Hyderabad city, 20% of latifabad and 6% of Hyderabad rural areas. The situation is clear from Fig. 4

On expert opinions we conclude that on average 86.6% urban areas are covered in study area which is agricultural land, in which share of each zone is 95%, 85% and 80% respectively. The floor area ratio on average is 1.20%, (on average 3576 sq ft is permissible for FAR in study area.) and rent on average per sq feet of flats (banglow) is 30.5 (46) respectively in study area. Whereas floor area ratio is 1.15%, 1.58%, and 0.86% in each zone and rent per sq feet of flats (banglow) is 26 (46), 16 (22.5) and 48(72) respectively in study area.

**Table 3. Hyderabad land valuation, an empirical evidences from expert opinion**

Description	Zone 1 (Hyderabad City)			Zone 2 (Qasimabad)			Zone 3 (Latifabad)			Avgas
	Avgas	Max	Min	Avgas	Max	Min	Avgas	Max	Min	
Rent per (flats) according experts	30000	50000	10000	20000	35000	5000	17000	30000	4000	22333
Rent per banglow according experts	55000	100000	10000	52500	100000	5000	52000	100000	4000	53167

**Table 4. Hyderabad land valuation per month, an empirical evidences according to resident opinion**

Description	Zone 1 (Hyderabad City)	Zone 2 (Qasimabad)	Zone 3 (Latifabad)	Avgas
Area covered (percent of total area)	95	85	80	86.66
Area floor ratio	1.15	1.58	0.86	1.20
Rent per square feet (flats)	26	16	48	30.5
Rent per square feet (banglow)	43	22.5	72	46
Rate per square feet ( today)	21342.5	8000	20611	16685
Rate per square feet (15 years back on avg)	8898	1364	10018	6760

Similarly nowadays on average rent of flats (bunglow) is 16685 and on average 15 year ago rent of flats (bunglow) was 6760 (see table 4).

Hyderabad Pakistan after Dhaka Bangladesh is leading in density per km<sup>2</sup> in the world with 40300 people, while remained top in the country in density per km<sup>2</sup>. Hyderabad is 156<sup>th</sup> populace city around the world and 6<sup>th</sup> in the country, while according to world geography survey Hyderabad is leading in in density per km<sup>2</sup> and 4<sup>th</sup> in population in the country. On average income of a Pakistani is 4.20 dollars per day in 2015, which is equal to rent of bunglow. 21992 acres of agricultural land has been converted in city centers in study area.

#### 4. Conclusion

It is concluded that urbanization is dilemma because it has impacted on agricultural land. About 21992 acres of agricultural land has been converted in study area. There is need of government interventions, not to make only rules and regulation implementation of those rules and regulation is need of today to safeguard the rights of every individual in the country.

#### References

- [1] Appleyard, B. 2007. Smart Cities: Solutions for China's Rapid Urbanization Design p. 91.
- [2] Akhtar, J. 2015. Historic Hyderabad, the Paris of the past. Available at Apna Hyderabad (<http://www.apnahyderabad.com/hyderabad/profile.asp>) accessed on September 1, 2015.
- [3] Available at (<http://www.stat.wmich.edu/s216/book/node122.html>) assessed on September 30, 2015.
- [4] Bertaud, A. 2010. Land Markets, Government Interventions, and Housing Affordability. Wolfensohn center for development at Brookings. Assessed from (<http://www.brookings.edu.pk/research/2010/05/urban-development-bertaud>) on October 2, 2015.
- [5] Cheshire, P. 2008. Land Markets and their Regulation: The Welfare Economics of Planning. Assessed from (<http://www.lse.ac.uk/geographyAndEnvironment/whosWho/profiles/cheshire/pdfs/Land%20markets.pdf>) on October 2, 2015.

4<sup>th</sup> International Conference on  
Energy, Environment and Sustainable Development 2016 (EESD 2016)



- [6] Cho, S. Kim, T. Larson, E. and Arms worth, P. 2014. Economies of Scale in Costs of Land Acquisition for Nature Conservation. Invited paper prepared for presentation at the Agricultural & Applied Economics Association's 2014 Annual Meeting, Minneapolis, MN, and July 27-29, 2014. Assessed from ([http://ageconsearch.umn.edu/bitstream/177182/2/Kim, %20Taeyoung.pdf](http://ageconsearch.umn.edu/bitstream/177182/2/Kim,%20Taeyoung.pdf)) on October 2, 2015.
- [7] Ding, C. 2009. Policy and Planning Challenges to Promote Efficient Urban Spatial Development during the Emerging Rapid Transformation in China, 384-408.
- [8] Ding, C. and Lichtenberg, E. 2011. Land and Urban economic growth in China. *Journal of Regional Science*, 51(2), 299-317.
- [9] Ding, C. and Zhao, X. 2010. Assessment of Urban Spatial-Growth Patterns in China. *During Rapid Urbanization. Chinese Economy*, 44(1), 46-71.
- [10] Ding, C. and Zhao, X. 2014. Land market, land development and urban spatial structure in Beijing. *Land Use Policy*, 40, 83-90.
- [11] Dowall, D. E. Clark. 1996. A framework for reforming urban land policies in developing countries. Urban management programme policy paper series; UMPP no. 7. Washington, D.C 1-66. Available at the World Bank. (<http://documents.worldbank.org/curated/en/1996/08/1645907/framework-reforming-urban-land-policies-developing-countries>) on October 2, 2015.
- [12] Dowall, D. E. and Monkkonen, P. 2008. Urban Development and Land Markets in Chennai, India. *International Real Estate Review*, 11(2), 142-15.
- [13] GoP, 2014. Economic Survey of Pakistan 2013-14, Population, Labor Force and Employment, Economic Advisor's Wing, Islamabad, Pakistan, Ch. 12. 1-15.
- [14] GoP, 2014. Population census, Pakistan bureau of statistic, Islamabad.
- [15] GoS, 2011. Development Statistics of Sindh. Planning and development department government of Sindh Karachi. Table 2.09, Page 48.
- [16] Liv, O, Inge, T and Gitlesen, J. P. 2007. Housing Price Gradients in a Region with One Dominating center. *Journal of real estate research*, vol 29, No.3.
- [17] Magsi, H. and Torre, A. 2013. Approaches to understand land use conflicts in developing countries. *The Macrotheme Review*, 2(1), 119-136.
- [18] Kau, J. B. and Sirmans, C. F. 1979. Urban land value functions and the price elasticity of demand for housing. *Journal of Urban Economics*, 6, 112-121. Land Administration for Sustainable Development Land Administration for Sustainable Development. (2011, June).
- [19] Koroso, N. H. 2011. Assessment of Urban Land Market from Good Governance Perspectives Market from Good Governance Perspectives, (March)
- [20] Mazhar, F. and Jamal, T. 2011. Temporal Population Growth of Faisalabad City, 63(1), 245-247.
- [21] Langbein, J. H. 1996. Historical foundations of the law of evidence: A view from the rider sources. *Columbia Law Review*, 96(1992), 1168.
- [22] Lichtenberg, E. and Ding, C. 2009. Local officials as land developers: Urban spatial expansion in China. *Journal of Urban Economics*, 66(1), 57-64.
- [23] Mahoney, R. Dale, P. F. and McLaren, R. 2007. Land Markets - Why are they required and how was they develop? *International Federation of Surveyors*, (July 2007), 1-11.
- [24] Memon, A. W. 2015. Prevalence of Rural Poverty in Sindh, Pakistan : Case of TandoAllahyar District, II (10), 13296-13307.
- [25] Paez, A and Darren M. S. 2004. Spatial statistics for urban analysis: A review of techniques with examples. *Geo Journal*, 61, 53.
- [26] Starts, H. Region, T. B. Single, M. and Home, F. 2003. Smart Growth, Housing Markets, and development trends in the Baltimore-Washington corridor markets, and development tender in the Baltimore - the national center for, (November).
- [27] Peters, P. E. 2015. Analyzing Land Law Reform. *Development and Change*, 46(1), 167-193.
- [28] Qineti, A. Rajcaniova, M. Braha, K. Ciaian, P. and Demaj, J. 2014. Land market imperfections and reform rigidities : a case study from rural Albania Land market imperfections and reform rigidities : A case study from rural Albania.
- [29] Sartori, J. Moore, T. and Knaap, G. 2011. Indicators of Smart Growth in Maryland, (January). *Sustainable Development Policy*, I. (2008). Land Rights for Muslim Women: Review of Law and Policy, (November).
- [30] Swinnen, J. 2007. Study on the Functioning of Land Markets in the EU Member States under the Influence of Measures Applied under the Common Agricultural Policy Final Report.
- [31] Torre, A. Melot, R. Magsi, H. Bossuet, L. Cadoret, A. Caron, A. Kolokouris, O. 2014. Identifying and measuring land-use and proximity conflicts: methods and identification. *Springer Plus*, 3, 85.
- [32] United Nations 2015. Department of Economic and Social Affairs, Population Division. *World Population Prospects: The 2015 Revision*. New York: United Nations.
- [33] Wendell, C. 2015. Pakistan where the population bomb is exploding. Available at new geography. (<http://www.newgeography.com/content/002940>) accessed on September 8, 2015.