



## The Assessment of the Affordability of Dwelling Societies in Hyderabad based on Households Perception

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**Abstract:** Shelter is one of the basic needs of humans, having direct impact of socioeconomic development of a nation. The residents' dissatisfaction with the housing is a major problem, as it promotes the informal development in the city. The bottleneck of this dissatisfaction is the inefficiency of public housing delivery that raises the issues of high plot costs, heavy mortgage, high interest rates, and so on. Therefore, satisfying this need in an affordable manner is intended to be one of the objectives of urban plans. This study identified the key factors influencing the household's perception regarding affordability of urban dwelling societies and assesses the household's satisfaction on affordability of urban dwelling societies. Two housing schemes, Bhitai Town and Rehman Town were randomly selected for the study. The data were collected using structured questionnaire, prepared in Urdu language with a 5-point Likert-scale. A total of 65 questionnaires were filled-up from systematically selected migrants with an interval of 10. The factors like, mortgage repayment, house price, water and electricity fees, and down payment requirements, were found to be the key factors influencing household's affordability. The results also showed overall dissatisfaction with the urban dwelling societies, which means that urban dwelling societies are not affordable, validating the absence of affordability factor. Based on the results, recommendations like, incentive programs, monitoring of development control authority on prices, and increasing public involvement in decision making, were suggested. The inclusion of recommendations would possibly assist in resolving the aforementioned problems in Hyderabad and other urban areas having similar housing scenario.

**Keywords:** Higher Housing Cost, Unaffordable Housing, Questionnaire Survey, Likert-scale, Descriptive Statistics

### 1. INTRODUCTION

The housing forms one of the basic needs of human after food and clothing, and a foremost basic need of the human whose availability and quality has a significant impact on people's lives (Maslow, 1942; Assaf et al., 2010). Apart from various definitions of affordability of dwelling units, Pivo (2013) best defined it as, "for a dwelling unit to be affordable, the family should pay nothing more than 30% of its total income on rent and utilities, where they own their own house, not more than 30% of their mortgage payment, insurance, taxes, and utilities." Stone (2006) further added that dwelling poverty, which linked to a deficiency of affordability is related to household's ineffectiveness to meet non-housing needs after paying for dwelling unit payment such as food, clothing, medical care, transportation, and so on. This was observed in the study of Harrell (2013), where the expenditure of 30% or more on dwelling costs was considered as a cost burden.

In the recent years, the rapid urbanization pace had accelerated the activities of dwelling unit construction in Pakistan; but still, this sector is in its early stages when compared with other developed and third world countries (Abrams). The increase in the economic development of Pakistan would result in the demand

side for facilities like dwelling units, industrial, commercial, and utilities (Jiang, Chen, and Isaac, 1998). Nevertheless, critical matters remain in the dwelling sector that require consideration, as the sector's growth is impeded by very high land costs, high and rising real interest rates and costs of construction materials (Bardouille et al., 2005). Yuen and Choi (2012) mentioned unaffordable dwelling units as a big problem in Pakistan, that is most noticeable in large cities, like Hyderabad, Sindh, that could be seen as a prime example of the problem. Despite its criticality in the world, the issue remains ignored in Pakistan, especially in Hyderabad, Sindh, where households are still caught in the struggle to own a suitable living place for themselves and mostly ended up as a victim of real estate developers (Bardouille et al., 2005; National Housing Policy, 2001).

According to Osmani and Company (2008) report of Hyderabad master plan, the city is facing the problem of housing shortage with a magnitude of about 153167 units. The bottleneck of the rising issue is unaffordability. To resolve this issue, Ram and Needham (2016) suggested urban dwelling societies as the best solution, developed by the real estate developers. But in the case of Hyderabad, the high costs

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of dwellings by real estate developers forced people to pay a massive amount for a single lot, which almost consumes their savings and often left them indebted. Indeed, the developers are getting land, labor, etc. at a high cost but still, they reserve a sound profit margin for themselves (Ram and Needham, 2016). In the countries like UK and USA, governments carry out systematic assessment programs to evaluate characteristics of dwelling unit quality (including affordability), to ensure that households are satisfied with the provision of housing and services (Varady and Carrozza, 2017). But no such practice has been observed in Hyderabad. Therefore, this study was aimed to identify the key factors influencing the household's perception regarding the affordability of urban dwelling societies based on predefined factors, and to assess the household's satisfaction on the affordability of urban dwelling societies; for depicting a clear picture of this scenario.

## 2. MATERIALS AND METHODS

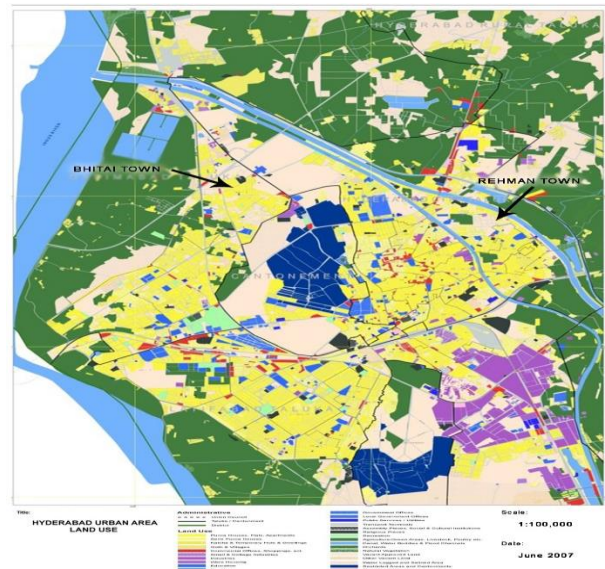
Hyderabad was selected for this study, with emphasis on urban dwelling societies. It includes 52 Union Council's (UC) and 4 Talukas in which the prescribed work was carried out (Osmani and Company, 2008). To construct a research design for this study, layout plans of selected private urban dwelling societies were obtained first from Planning and Development Cell (PNDC) office located in Hyderabad for having a clear understanding regarding data collection and sampling. Due to unavailability of data regarding the study, questionnaire-based household survey technique was used as adopted by Holmans, Whitehead, and Scanlon, 2010; Aribigbola, 2008; Cai and Lu, 2015; Alnsour and Hayasat, 2016; and Baker, Mason, and Bentley, 2016. Based on predefined variables of housing affordability by Shaqra'a, Badarulzaman, and Ahmed (2015), the questionnaire was designed accordingly. The questionnaire is divided into two main sections. 'Section-1' had items related to factors influencing the household's perception regarding the affordability of urban dwelling societies (factors include: house price to income ratio, mortgage repayment to household income ratio, down payment requirements, interest rates, maintenance cost, and water and electricity fees). 'Section-2' had a question related to the household's satisfaction on the affordability of urban dwelling societies. A Likert-type scale ranging from '1' for strongly dissatisfied to '5' for strongly satisfied was used to capture the households responses on the affordability of urban dwelling societies with the aforementioned factors.

### 2.1. Sample Size:

To avoid biases in the study and for generalization of results, a sample survey was carried out. Various literature was reviewed to select the best method for data collection and for selecting a good sample. After

the review, random sampling methodology was adopted to select the urban dwelling societies (Shaqra'a, Badarulzaman, and Ahmed, 2015). To ensure randomization, a systematic random sample was used for the questionnaire-based household survey with an interval of 10 (Alnsour and Meaton, 2014; Aribigbola, 2008). For ease of residents, the questionnaire was prepared in Urdu language. As affordability is always an issue for low- and middle-income families, hence the urban dwelling societies with plot sizes of 120 Sq. Yds and 80 Sq. Yds were focused. The first unit of housing block was randomly chosen for systematic sampling in each dwelling society. Then the questionnaires were distributed for every interval of 10 houses as used by Aribigbola (2008). However, if the households were not present at the time of the survey or not willing to participate in; then the survey was continued for the next house leaving that exceptional house.

While emphasizing on low-income urban dwelling societies, two of them, namely; Rehman Town and Bhitai Town were selected randomly as the study area as shown in (Fig 1).



**Fig. 1: Hyderabad Urban Area Land Use Map showing the Study Area (Osmani and Company, 2008)**

From the study area shown in Figure 1, a total sample of 72 households was decided using systematic sampling technique, which was further subdivided into 40 for Rehman Town and 32 for Bhitai Town based on a number of houses as illustrated in (Table 1).

**Table 1: Sample Size Summary**

S.No.	Urban Dwelling Societies	No. of Houses	Sample of Houses Selected (n=10)
1	Rehman Town	397	40
2	Bhitai Town	323	32

## 2.2. Sampling Error

The sampling error in statistical analysis arises from the unrepresentativeness of the retrieved sample. In total, 65 persons were responded out of 72, which necessitated the calculation of sampling error. The sampling error was calculated using the DSS Research Sample Size Calculator (Hudson, 2009; Youssef, 2011). By taking sample size as 72, sample proportion as 10%, and confidence interval at 95%, the sampling error of the study was found to be 6.6%.

## 3. RESULTS AND DISCUSSION

For finding the key factors influencing the household's perception regarding the affordability of urban dwelling societies, descriptive statistical techniques of Mean, and Standard Deviation were applied as used by Said, Majid, and, Nozin, 2016; Alaghbari, Salim, and Dola, 2009; and Ram and Needham, 2016. The results illustrated in Table 2 are discussed henceforth.

**Table 2: Factors Influencing the Household's Perception regarding Affordability of Urban Dwelling Societies**

Factors	Bhitai Town		Rehman Town		Total	
	Mean	SD	Mean	SD	Mean	SD
House price to income ratio	2.66	1.09	3.27	1.56	2.80	0.33
Mortgage repayment to household income ratio	1.76	1.05	1.79	1.10	1.78	0.35
Down payment requirements	2.09	1.20	2.61	1.56	2.35	0.25
Interest rates	2.59	1.24	2.97	1.53	2.78	0.22
Maintenance cost	2.66	1.38	3.39	1.29	3.03	0.06
Water and Electricity fees	2.10	1.13	2.06	1.56	2.08	0.30

(Table 2) illustrates the perception of households regarding satisfaction of dwelling units. In the perception of Bhitai Town households, the factors that are somehow affordable includes, mortgage repayment, house price, and water and electricity fees, with mean scores of 1.76, 2.66, and 2.10 and standard deviations of 1.05, 1.09, and 1.13. Thus, house price, down payment requirements, interest rates, and maintenance costs are affecting their affordability with mean scores of 2.66, 2.09, 2.59, and 2.66, and standard deviations of 1.09, 1.20, 1.24, and 1.38. Whereas, in the perception of Rehman Town households, mortgage repayment and maintenance cost are affordable for them with mean scores of 1.79 and 3.39 and standard deviations of 1.10 and 1.29. Furthermore, the water and electricity fees and interest rates are affordable to them with mean scores of 2.08 and 2.78, and standard deviations of 0.30 and 0.22. The factors that affect their affordability are; house price, and down payment requirements with mean scores of 3.27 and 2.61 and standard deviations of 1.56

and 1.56, respectively. The difference between the perceptions of both urban dwelling societies is due to their income levels, tenure status, and the year of development of housing society.

However, if we consider the housing affordability scenario of urban dwelling societies in Hyderabad, the key factors influencing household's affordability includes; mortgage repayment, house price, water and electricity fees, and down payment requirements with mean scores of 1.78, 2.80, 2.08, and 2.35, and standard deviations of 0.35, 0.33, 0.30, and 0.25, respectively. This showed that these factors are responsible for unaffordability of dwelling units in urban dwelling societies. The real estate developers put excessive interest percentages on installments, which increases the price of the house. Viewing the absence of easy house building loans as a profit earning opportunity, private banks and loan providers provide loans with unaffordable terms and conditions, as they know that people are left only with this option.

To assess the household's affordability in the perception of dwelling societies, the data obtained from the section-2 of the questionnaire was used as shown in Table 3.

**Table 3: Households Satisfaction on Affordability of Urban Dwelling Societies**

Description	Mean	SD
Overall Satisfaction on Urban Dwelling Societies	1.49	0.50

(Table 3) illustrates the overall satisfaction of households in urban dwelling societies. According to the results, the urban dwelling societies are not affordable. The mean score of 1.49 and a standard deviation of 0.50 clearly depicts the absenteeism of the affordability factor and skiving of public opinion in recently developing or developed urban dwelling societies. This emphasizes affordability as a matter of concern and an element which should always be considered and injected in urban housing provision.

## 4. CONCLUSION

The study identifies the key factors influencing the household's perception regarding the affordability of urban dwelling societies. The study also assesses the overall household's satisfaction on the affordability of urban dwelling societies. After analyzing the data, the findings were derived which have several implications. The study, therefore, found that most of the people residing in urban dwelling societies of Hyderabad are facing housing affordability issues, particularly with reference to, mortgage repayment, house price, water and electricity fees, and down payment requirements. Also, the perceived dissatisfaction towards affordability of urban dwelling societies. The causes behind the emergence of these outstanding results can be described

as the absence of the affordability factor and public opinion in recently developing or already developed urban dwelling societies. As implications of Hyderabad Master Plan and National Housing Policy emphasizes on the involvement of joint ventures in the provision of housing to ensure 'adequate housing for all', this can only be achieved through the affordable urban housing. The aforementioned issues could be resolved with the adoption of viable solutions that are provided hereafter.

## 5. RECOMMENDATIONS

To resolve the problems of housing affordability, the following recommendations are offered:

### 5.1. Incentive Programs

Incentives should be provided to the real estate developers so that they can sell the houses at an affordable rate. House building loans with easy installments and minimum markup should be offered by the public banks to the people so that they can purchase the houses easily. Such efforts should be increased and encouraged by the Government to reduce housing backlog. Also, the excessive sales tax should be reduced on land; which consequently reduces the price of the houses. Furthermore, the joint venture low-income housing schemes should be introduced to resolve the affordability issues. In addition to land prices, cost reduction in installation permits of basic amenities (such as Electricity, Water Supply, and Gas, etc.) should be carried out to make the housing affordable for the urbanites of Hyderabad.

### 5.2. Monitoring of Development Control Authority

The practice of monitoring the practices of real estate developers should be carried out. Rules and regulations should be enforced to restrict the liberty of real estate developers in terms of profit, and interest rates. Actions in shape of fines and penalties should be imposed against violations of rules and regulations. The standardized margin for profit and interest should be prescribed by the development control authority. These implications would work in favor of the masses and developers as well.

### 5.3. Public Involvement in Decision Making

Practices for recording public perception should be developed and encouraged. This data would help the concerned authorities to update the pricing policies in favor of the public.

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