

Appraisal of Customer Satisfaction in Apartments - A case study of Delhi

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ABSTRACT

The study plans to decide the measurements of consumer loyalty in apartments in Delhi. For this reason, the analyst has chosen the stratified sampling method. Sample size of 450 respondents was considered. Equal no. of respondents was chosen from nine zones of Delhi. Exploratory factor analysis has been applied using SPSS to investigate the variables influencing customer satisfaction of respondents. The outcomes demonstrate that location and approach turns out to be most vital factor in influencing residential satisfaction followed by recreational facilities, environmental attributes, physical layout and location attractiveness of the house respectively.

1. Introduction

Human being is a unique creation of this world. As humans, people need to have certain essential things for survival. Apart from food and clothing, shelter is one of the basic necessities of life. For shelter, people need a house. Since the land is limited in urban areas, the best use of land for shelter is building of apartments. This way minimum land can be utilized for the shelter to maximum people. Nowadays a house is no longer a basic shelter. It is now considered as a status symbol and becomes an asset to the owner since it provides safety, security, privacy, neighbourhood & social relations, community facilities and services, access to job and control over the environment. These additional features have changed housing consumers' expectations. Apartment living necessarily involves a high degree of inter-dependence between unit owners, who own and share the common spaces and external structure of the apartment. Buying a house is an important event in a person's life. While purchasing a house, a person usually makes all the efforts in order to have the best possible value for money. He has many expectations, dreams and hopes with the new house and he expects to convert all the dreams into reality. He evaluates his decision on various parameters. If his thoughts/perceptions match or exceeds with reality, he is satisfied and enjoys every moment with pride and satisfaction. However, if the actual delivery lags behind the perceptions/expectations he is dissatisfied and will analyse the reasons for the same. He makes all the efforts to minimise his discomfort but even then if his dissatisfaction persists, he tries to change his decision and go for another purchase taking into consideration his present experience.

Living in satisfactory housing conditions is one of the most important aspects of people's life. Customers always desire to get maximum satisfaction from the product or services that they buy. The consumers perceived difference between expectations and performance of the apartment or services are assessed after its consumption. Residents' happiness is a sign of residential satisfaction. Hence residential satisfaction is considered as an over-all post purchase evaluation factor by the consumer. Housing satisfaction is influenced not only by the quality of home itself, but also by the surrounding

environment, social interaction, satisfaction with service management etc. Customer satisfaction in the housing sector may have social implications far beyond standard consumer product experience. Satisfaction in the housing sector is an important component of overall life satisfaction.

The residential environment is known to be an important determinant of quality of life and well being. Housing not only contributes to the development of men physically and mentally, but also contributes to the growth of culture and human morals. In a broader sense housing profoundly affects a wider aspect of family and community life and well being. Housing is an issue that not only touches on the life of an individual, but also has the potential to contribute to national development. Housing quality, cost and availability are crucial to an individual's quality of life. In essence, housing is a perfect reflection of the social system that creates it, manifesting its level of development, content and degree of civilization, attainment and human development. However, studies have shown that housing is more than shelter and that the habitability of a house depends not only on the physical characteristics of the dwelling, but also on the social, cultural and behavioural characteristics of users.

2. Literature review

Rathod Piyush, Dr Bhatt Rajiv, Dr. Pitroda Jayesh (2016) distinguished the variables influencing customer service satisfaction in construction industry. They additionally prescribed Relative Important Index (RII) to do positioning of the distinguished components. It was discovered that flat owners in the selected urban areas are unsatisfied with the facilities like garden area, play area for children, plumbing facility in toilets and fire safety and protection to the whole building from robberies. Respondents revealed their satisfaction concerning factors like location of building, common lighting in building and room size and arrangements. Future building structures in the Central Gujarat district of India can have enhanced level of consumer loyalty, if factors having lower ranks are addressed by construction industry.

Lepkova Natalija, Butkiene Egle and Belej Miroslaw (2016) presented the concept of customer satisfaction in construction, evaluated the criteria that define the quality of dwellings along with the merits and demerits of the assessment of customer satisfaction. The customer satisfaction index (CSI) and degree of loyalty were calculated, and then a customer satisfaction matrix was built up. It was found that customer satisfaction with dwellings is subjective and depends on number of factors like social background, expectations, needs, habits etc. Economic motives, as well as the functional and technical properties of dwellings were most important while choosing a dwelling. CSI showed that customer satisfaction with dwellings in new apartment buildings is average in technical and functional quality. Builders try to evade their liability and responsibility and customers were slow to defend their rights as it is not so easy to change the dwellings due to financial circumstances.

Manoranjitham G and Dr. Singaravelu K (May 2016) presented the perception of purchasers towards the service quality gave by the promoters in Coimbatore city. They considered the satisfaction level of the purchasers towards the service quality of the residential flat promoters. Survey method was used. Descriptive analysis, central tendency and ANOVA were applied to measure the satisfaction level of the purchasers and found that purchasers were happier with the quality services provided by the promoters.

Dr. Bhatt Rajiv, Khasiya Chandrapalsinh, Kotiya Tushar, Naik Shreya and Patel Yesha (2015) analysed the satisfaction factors of customers of residential flats in selected cities of central Gujarat region with the use of frequency index and concluded that flat owners in these cities were dissatisfied with some facilities namely garden area, playground facility for children, plumbing facility in toilets, fire safety and protection of building from thefts though satisfaction was reported in other factors namely location of building, natural lighting facility in building, bedroom size.

D Streimikiene (February 2015) Forwarded the concept of assessment of housing dimension in the quality of life index and the main indicators for assessment of housing impact on quality of life. The researcher opined that housing quality depend not only the quality of dwelling itself, but also on the wider residential area. Quality of housing, housing environment and housing cost were the indicators that, reflects the quality of life. Paper concluded that an ideal set of indicators to measure housing conditions must provide information about the physical characteristics of the dwelling and the broader environmental characteristics of the areas where the dwellings were located. Over-crowding, living in insecure areas, noise pollution reduces the housing comfort. Proximity of public services, reasonable cost of living, and access to green space were other important indicators of quality of life related with housing.

Dr Mostafa Kamal and Pramanik Shah Alam Kabir (2015) Applied the theory of planned behaviour to explain buying intention in real estate especially apartment. They investigated six factors namely project facilities, environmental issues, location and communication, physical quality, promotion and prices by applying Exploratory Factor Analysis.

Later Confirmatory Factor Analysis was carried out to confirm the factors. Both the proposed model and hypothesized model were tested by using Structural Equation Modeling and it was found that except environmental issues and promotion the rest factors have huge impact on customer's buying attitude.

Sean Saw Lip and Hong Tan Teck (2014) connected factor analysis along with multiple linear regression models and concluded locational factors as the most vital factor impacting residential property investment choices followed by financial and structural factors. However, neighbourhood factors had no significant effects on investment decisions.

Waziri, A.G.,Yusof, N., Salleh, A.G. (December, 2013) analyzed and measured the four major components. They were: satisfaction with structural components, satisfaction with dwelling unit features, satisfaction with neighbourhood facilities and environment and satisfaction with management services as provided by the developers. The customers are mostly dissatisfied with various components

3. Statement of the problem

The research problem has been identified as "Appraisal of customer satisfaction in apartments – A contextual investigation of Delhi".

The present study has been designed to identify the factors that influence the customer satisfaction in residential real estate sector in Delhi.

4. Objectives of the study

1. To explore the key determinants influencing the customer satisfaction in apartments in Delhi.

5. Research methodology

The purpose of the study was to identify the key components influencing the customer satisfaction in apartments in Delhi. Henceforth, descriptive and analytical research design has been utilized. The population for this study comprises of flat owners residing in Delhi. In this study, data was collected through a survey conducted in Delhi state using structured self-administered questionnaire. The questionnaire addressed several housing related issues that have an impact on the satisfaction of the occupants.

Delhi as a whole has been chosen as study area for the present research work. The state is comprised of 9 zones.

The 7 point likert scale was utilized to evaluate the factors (running from 1- very satisfied to 7 very dissatisfied). Systematic stratified sampling has been used in selecting the sample of 450 respondents. Delhi is further divided in 9 zones and 50 respondents each has been selected from each zone.

Table 1: Strata of the sample

S. No.	Area /Zone	No. of Respondents
1.	North Delhi	50
2.	East Delhi	50
3.	West Delhi	50

4.	South Delhi	50
5.	Central Delhi	50
6.	North West Delhi	50
7.	South East Delhi	50
8.	South West Delhi	50
9.	North East Delhi	50
	Total Respondents	450

Factor analysis and reliability were used to test the goodness of the measures. In this study SPSS version 21.0 was applied to analyse the data. The collected data was analysed with the help of SPSS 21.0. Exploratory factor analysis (EFA) was used to identify the various factors from the list of variables.

6. Data analysis

The objective of the study was to identify the factors affecting the customer satisfaction in flats in residential real estate sector. Therefore, respondents were requested to indicate their satisfaction level regarding different parameters derived from review of literature on 7 point likert scale. Factor analysis was conducted to club the 22 variables into 5 meaningful factors. The calculated KMO value was 0.790 and Bartlett's test of Sphericity was found significant ($p < 0.5$).

Table 2: KMO and Bartlett's test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.790
Bartlett's Test of Sphericity	Approx. Chi-Square	5686.477
	Df	231
	Sig.	.000

The KMO index ranges from 0 to 1, with 0.50 considered suitable for factor analysis. The Bartlett's test of Sphericity should be significant ($p < 0.5$) for factor analysis to be suitable. Thus, the present data set satisfied these two conditions to apply factor analysis. Factors were extracted by using Principal Component Analysis (PCA). Five factors having eigen values more than 1 were extracted which explained the 70.829 percent variance (Table 3). Rotation of factors was done by using 'Varimax with Kaiser Normalisation' rotation method. Based on the computations as represented in the Rotated Component Matrix (Table 3), five factors were identified as Location and approach (5 variables), recreational facilities (4 variables), environmental attributes (5 variables), physical layout (4 variables) and location attractiveness of the house (4 variables). Each variable was retained a factor having loading more than 0.5.

Table 3: Factors affecting Customer Satisfaction in flats/apartments

Factor	Factors name	Variables	Eigen values	Total variance (%)	Factor loadings
1.	Location and approach	Quality and width of roads leading to apartment	3.525	16.024%	.876
		Nearness to educational institutes			.875
		Nearness to market for daily needs			.841
		Nearness to work place			.792
		Connectivity and approach from main road			.786
2.	Recreational facilities	Playground of the children	3.327	15.122%	.924
		Availability of gym, swimming pool & sports area			.918
		Greenery/parks in the campus			.898
		Indoor game facilities			.888
3.	Environmental attributes	Density of population	3.313	15.058%	.840
		Location of land fill/waste dumpyard to house			.833
		Environmental pollution level			.813
		Noise level of the adjoining areas			.796
		Traffic flow			.766
4.	Physical layout	Layout and interior design	2.838	12.901%	.869
		Earthquake resistant building structure			.856
		Floor area of the house			.836
		Size and number of balcony			.758
5.	Location attractiveness of the house	Facing direction (North, South, East, West)	2.579	11.724%	.881
		Sun facing and illumination with natural light			.843
		Air flow and ventilations			.762
		Visual attractiveness of the house			.689

Total variance explained: 70.829 %

Table: 3 shows that five variables were loaded on Factor 1. All these five variables are related with location and approach. The five variables loaded on 1st Factor were: quality and width of roads leading to apartment (.876), nearness to educational institutes (.875), nearness to market for daily

needs (.841), nearness to workplace (.792) and connectivity and approach from main road (.786). This Factor was labelled as location and approach. Four variable were loaded on the 2nd Factor which included playground of the children (.924), availability of gym, swimming pool and sports area (.918),

greenery/ parks in the campus (.898) and indoor game facilities (.888). This Factor was named as Recreational facilities. Five variables were loaded on '3rd Factor namely density of population (.840), location of landfill/ waste dumpyard to house (.833), environmental pollution level (.813), noise level of adjoining areas (.796) and traffic flow (.766) . Third factor was labelled as environmental attributes. Four variables loaded on '4th Factor' were layout and interior design (.869), earthquake resistant building structure (.856), floor area of the house (.836) and size and number of balcony (.758). Four variables loaded on 5th Factor namely facing direction (north, south, east, west) (.881), sun facing and illumination with natural light (.843), airflow and ventilations (.762) and visual attractiveness of the house (.689). It clearly shows that these variables are related with location attractiveness of the house. Hence, this factor was named as location attractiveness of the house.

7. Conclusion

The present study was led to investigate the satisfaction of flat owners in Delhi. The factor identified as location and approach has been recognized as the most essential factor, which impacts the satisfaction of Delhi inhabitants. It plainly demonstrates that the main thing which a resident expects in his residence and its surroundings is location and approach. Recreational facilities and environmental attributes is the other essential factor that affects residential satisfaction. Factors like physical layout and location attractiveness appear to be optional factors. The examination has noteworthy implications for the real estate marketers too. These factors seek proper attention from the builder & the government and they should also take active participation in making these factors present in any locality so as to enhance the residential satisfaction as well as the physical well being and the mental health of its citizens.

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