

SHODH-MARKET RESEARCH FOR ECONOMY HOUSING

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CASE DESCRIPTION

Market Research is the main topic on which case is written. The sub-topics covered in the case are Concept testing, demand estimation, conjoint analysis, product offering, Segmenting and targeting end consumers for better positioning

CASE SYNOPSIS

The client OBL wanted to launch an economy housing project in 10 cities across South India took help of market research company Shodh. OBL had completed several mid-range housing projects involving apartments in the price class INR 2.5 million to INR 7.5 million. The client appointed Shodh to understand about the market potential and consumer preferences in the economy segment. The company therefore decided to obtain a deeper understanding of the market in a large, metropolitan city like Bengaluru in India. It took services of market research company Shodh to assess the market size, consumer requirements and consumer preferences in the economy segment in Bengaluru, India. To address OBL's information needs, Shodh conducted market and consumer research studies during March-May 2015 using secondary data analysis, focus groups, expert interviews, field surveys and conjoint analysis. Since OBL wanted a presentation on the project by early-July, Vaseem had to analyse the data, prepare the demand forecasts, define the consumer segment profiles and describe the consumer preferences based on conjoint analysis and draw out the implications for the client's marketing strategy.

On a rainy day in June 2015, Vaseem, MD of Shodh, started working on case B of economy housing after validating results of case a on economy housing for Oriental builders Ltd. (OBL). Shodh is a Bengaluru, India, based market research agency which began analysing data for second part of a market research project that he carried out for a client named - Oriental Builders Ltd (OBL).

BACKGROUND

In the years, 2007-2008 the world saw financial calamity due to the collapse of real estate markets in Western countries. Despite this world phenomenon, India was not affected by Global financial meltdown and in contrast, India provided opportunities for builders in a growing housing market. In India, the demand for residential units had grown significantly since 2001, which was a result of increasing urbanization, rising consumer expectations and easier availability of housing finance. The growth had been particularly sharp in cities like Bengaluru, India, which emerged as centre of information technology and business process outsourcing. During this boom period, developers focused on building spacious, large apartments with premium amenities priced from INR 2.5 million to INR 10 million and above. The 2008 - worldwide economic crisis had not affected India as badly as it had affected some other countries in the region, nevertheless, tight liquidity and depressed sentiments, impacted housing purchases

in India and the housing market in the major Indian cities had witnessed a downturn from 2009 (Gujarati & Dawn, 2010). In the year 2011, 44000 housing units were available in Bengaluru, India, against a demand of 20,600 units. This resulted in severe oversupply and created a huge marketing problem for the housing industry (Lilien, Philip & Moorthy, 2003).

In response to the downturn in the sales of premium and mid-range apartments, developers took some steps to make apartments more affordable. Instead of developing downtown and city centre areas where land was very expensive, developers started focusing on suburban areas with good connectivity to the city centre. In Bengaluru, India, such suburbs included areas like Bannerghatta Road, Whitefield, Electronic City, Doddaballapur, Hoskote, Kanakapura Road, Sarjapura Road and Yelahanka. Developers started designing apartments of smaller sizes, with basic amenities rather than premium features in order to bring down the prices. Developers also started examining opportunities in economy segment with apartments in the price class of below INR 2.5 million. Leading developers such as Prestige Group, Brigade Enterprises announced economy housing projects in Bengaluru, India and other cities. Medium sized developers such as Patel, Woodsville, Confident and OBL were also planning to enter the economy housing segment. Forecasting demand for an economy housing project was the main challenge faced by them and for which secondary data was also not available. As a result, a primary research (including concept testing and conjoint analysis) was proposed and conducted to assess the demand for economy housing in Bangalore and elicited consumer preferences in this respect.

Oriental Builders Ltd. (OBL), a medium sized real estate developer, decided to make an aggressive entry into economy housing project in Bangalore, India. Shodh, a market research firm was approached to do market research study of the economy housing segment potential in Bangalore, India. In response, Shodh compiled a comprehensive research proposal involving secondary data analysis, expert interviews, focus group discussions, psychographic segmentation, primary data collection through surveys and conjoint analysis to assess market attractiveness and market potential (Green & Srinivasan 1978). Shodh proposed to examine the profiles of prospective consumers, identify their motivators and deterrents, determine price perceptions and feature preferences, develop product profiles, recommend positioning and marketing strategy for OBL's economy housing project. Shodh's research proposal got approved by the OBL board in early February 2016 (Kotler & Gary 2006).

SHODH'S EXPLORATORY RESEARCH

The Shodh team started the research project by having discussions with decision makers within OBL, in order to understand OBL's management decision problem and information needs. Based on the discussions, they defined research objectives as "whether to launch an economy housing project in Bengaluru or not" and "where in Bengaluru to launch the same?" During interactions with OBL, Shodh found out that the client was particularly keen on examining the potential for economy housing in the Bannerghatta Road area where OBL already owned a large parcel of land. Shodh was also aware that OBL wanted suggestions for marketing strategy in terms of target segments, positioning strategies, product features, pricing structures and promotional avenues (Green, Donald & Gerald 1996). On the basis of the client's information needs, Shodh defined several objectives for the market research. The objectives included demand estimation for economy housing in Bengaluru; segmentation of the economy market and estimation of segment sizes; identification of target market segments, assessment of the level of consumer interest in buying an economy house and consequent demand projections by different segments; profiling of target segments of consumers; investigating consumer

preferences for different features of apartments and understanding the trade-offs that consumers made while choosing amongst available options. Shodh proposed both qualitative and quantitative research designs for the project. In the qualitative research phase, Shodh examined secondary data, conducted interviews with experts and focus group discussions with consumers. The secondary data analysis was carried out in the second half of February 2015. Shodh studied press reports, examined websites of consulting firms dealing with real estate industry and analysed documents published by CREDAI-the real estate developers' association. The secondary data analysis provided several insights about the various micro-markets within Bengaluru. Shodh understood the characteristics of each micro-market in terms of government's infrastructure improvement activities and plans; details of existing and newly launched apartment projects in each micro-market; and the supply of apartments versus demand situations at the micro-market level.

Shodh conducted qualitative analysis by conducting "expert interviews" with executives of various developers to understand the developers' perceptions about selected micro-markets in Bengaluru. Shodh took estimates from developers on the potential size of the economy segment within Bengaluru city and enquired about the characteristics of each location, infrastructure availability and the infrastructure outlook for each location. The demand estimates from developers were triangulated by comparing them with gut feel forecasts and assessments based on Delphi Techniques made by real estate agencies like Knight Frank, Jones Lang Lasalle and Vestian. Post the expert interviews, Shodh carried out two focus group discussions, with two different consumer groups-males aged between 30 and 55 years and females aged between 25 and 50 years belonging to socio-economic categories B1, B2 and C (these consumers had Rs. 15000 to 50000 rupees monthly income), with the aim of generating information about apartment purchase that might be useful in developing the survey questionnaire. The focus groups yielded, useful insights on criteria used by consumers for judging locations of apartments and apartment size preferences. Shodh discovered that consumers used five criteria for choosing among apartment options-the distance of the apartment to their workplace; distance of the apartment to schools; availability of social and commercial infrastructure; quality of public transport; and presence of greenery. Shodh also found out that consumers used additional criteria such as price, size of the apartments, number of bedrooms, brand image of the developers and aesthetics while evaluating apartments for purchase. Lastly, focus group findings were used to develop psychographic statements used for segmentation of customers. The consumers' responses were taken on a 5 point scale and then from the data gathered from the survey, it was cluster analysed to find the different psychographic segments.

QUESTIONNAIRE DESIGN

Shodh developed a profiling questionnaire shown in Exhibit 1 which was to be administered to a stratified sample of 800 respondents. The purpose of the profiling questionnaire was to test the concept of economy apartment's purchase amongst the home buyers and find the proportion of families who expressed interests in buying such an economy apartment after being exposed to the concept. Vaseem wanted to know the proportion of families living in rented houses and the proportion of opportunistic buyers who already owned houses but were interested in buying an economy apartment for investment purposes. Vaseem wanted to use the results of the concept test to estimate the demand and the potential for the economy apartments in various micro-markets of Bengaluru. The profiling questionnaire was designed to obtain the respondent's geographic locations (suburb currently residing in, place of work); demographic profiles (gender, age, monthly household income, family life cycle stage, social

class, languages spoken); psychographic profiles (personality, activities, interests, opinions); lifestyles (durables owned) and behaviour (mode of commuting for work, media habits) and details of current housing status, (apartment vs. independent house; rented vs. own). For evaluating the acceptance of the economy apartment concept, Shodh planned that the research investigator would read out the concept details as mentioned in Exhibit 2 and follow up with questions on purchase intention (likelihood of purchase), likely budget allocated for the purchase, purpose of purchase (self-occupation, renting, investment) and expected appreciation of the property value (percentage increase in value of apartments per year). Shodh used nominal scaling for most of the questions in the profiling questionnaire except those relating to purchase intention and psychographic profiling which was interval scaled. The profiling questionnaire was designed for administration by an investigator rather than for filling up by the respondent, so a series of full profile cards with different options for each question were created. The investigator was required to show these cards to the respondents; obtain the relevant responses and record it in the questionnaire. In order to ensure proper communication with respondents, who did not know English, multi-lingual investigators who were fluent in at least two of the local languages (Kannada and Tamil or Telugu) were selected. The investigators were required to translate the questionnaire into the target language, if they were interviewing respondents unfamiliar with English. The respondents were selected on the basis of stratified sampling in the target suburbs of Kanakapura Road, Jayanagar, JP Nagar, BTM Layout, Basavanagudi, Banashankari, Bannerghatta Road and Herohalli. The sample size from each suburb was chosen in proportion to the population of the suburb. The respondents were asked about their willingness to take part in the main survey, following this profiling questionnaire.

In line with the two step questionnaire process, Shodh designed a “main” questionnaire which is shown in Exhibit 3 that was planned for administration to 250 respondents from the profiling/listing phase, from respondents who indicated a high degree of interest in purchasing an economy housing apartment. The purpose of the main questionnaire was to investigate consumer perceptions, preferences and trade-offs with respect to purchase of economy housing apartments. The questionnaire had sections relating to consumer profiles; perceptions about the developers; opinions about the different (like Bannerghatta Road) locations; details of purchase intention; trade-offs in consumer preferences using a conjoint analysis questionnaire; perceptions about the concept; consumer’s decision making process; and the type of amenities desired in an economy housing project. Shodh made extensive use of interval and nominal scales in the questionnaire development except for conjoint analysis, where choice based categorical scales were used. The questionnaire utilized interval scales in the sections relating to perceptions about the concept, decision making process and desired amenities. As in the profiling/listing questionnaire, Shodh planned to involve the investigators extensively in the recording of answers to the questions in the questionnaire.

The concept evaluation section (section 4) was an important part of the main questionnaire. The purpose of this section was to obtain end user feedbacks, that would help the builder select the architectural features to be included in the final design of the housing project. The concept section of the questionnaire included several bipolar, semantic differential scales related to apartment design features. Consumers were requested to indicate their preferences for each feature using the semantic differential scales. Shodh wanted to make suggestions on product features based on the consumer feedback using the categorical conjoint analysis.

The conjoint section (section 5) was another important part of Shodh’s main questionnaire. The method involved asking respondents to rank or rate concept cards or “chosed profiles” in which each “profile” was a specific combination of certain “levels” of selected

features. The respondents' rankings or ratings of "profiles" were analysed using a mathematical procedure to arrive at the value of utility that respondents attached to the each level of the attribute and thus enable the calculation of the importance attached to each feature. Vaseem wanted to use conjoint analysis to provide suggestions on the kinds of apartments that OBL should design for various customer groups. He believed, that it was possible to obtain consumer input for conjoint analysis as long as the ranking or rating or choice process task was kept simple. Therefore he decided to use a limited number of features and levels for creating conjoint profiles for the economy apartment study.

SAMPLING AND FIELD WORK

Based on the voters lists and selected wards, Shodh conducted random selection of 800 respondents. The sample of 800 was constructed in two ways – first, by picking people who lived in specified areas; and second, by picking people who worked in certain areas. A random sample of people living in Jayanagar, J.P. Nagar, BTM Layout, Kanakapura Road, Bannerghatta Road and Herohalli, satisfying a monthly household income criterion of INR15, 000-50,000 was chosen. The quota fixed for this sample was 600 respondents. Another random sample of people working in Electronic City, Sarjapura Road and Hosur Road, satisfying the income criteria was also chosen. The quota fixed for this second group was 200. Hence the final sample for the profiling survey was fixed at 800. Shodh planned to carry out the main survey with the respondents in the profiling survey who expressed an intention to buy an economy apartment, in the specified areas within the next two years. Shodh expected that based on a concept acceptance rate of 30%; there would be about 240 respondents available for the main survey from which they could select 200.

DATA ANALYSIS

Vaseem commenced his investigation with univariate analysis. He began by examining frequencies and proportions for responses to all the nominal scaled variables in the profiling questionnaire. He worked out the proportion of the sample which stayed in each of the suburbs of Bengaluru; the distribution of gender, age, income, type of respondents; and proportions for other sample characteristics such as number of members in household; type of household; socio economic category; amount spent on rent, home loan monthly repayment fees and transportation charges; whether living in an owned or rented accommodation; mode of commuting to work; and durables owned by the households (Profiling questionnaire-question numbers 1 to 11).

Next, Vaseem focused on the data required for demand estimation. He examined various aspects related to concept acceptance such as strength of the intentions to buy; budget allocated for apartment purchases; interest in buying an apartment near the place of work; interest in buying an apartment in Bannerghatta Road or similar suburbs; purpose of apartment purchase; period willing to wait for apartment completion; expected value appreciation for the property bought and media habits (Profiling questionnaire-question numbers 13-20). Vaseem then analysed the concept acceptance figures for the different geographic areas in Bengaluru. The percentage of respondents in different areas who agreed that they were "very likely" or "likely" to buy economy apartments is shown in Exhibit 4. Vaseem collected population data for the different suburbs of Bengaluru from the 2001 census. The population data is shown in Exhibit 5. Vaseem planned to estimate the 2015 population in each suburb by multiplying the 2001 census data by an annual growth rate multiple (got from 2010 census), using the overall growth of Bangalore's population between 2010 and 2015. The recent population data was obtained by

extrapolating the data from 2010 census by two years. He planned to forecast the demand for economy apartments by multiplying the estimated 2015 population in each suburb by the concept acceptance rate in the particular suburb. He expected to dive deep down into demand from various income groups and socio-economic groups by applying appropriate proportions obtained from the univariate analysis. Simulations were done with categorical conjoint analysis to size the number of final consumers who will buy the property.

Shodh collected responses to several psychographic questions in the profiling questionnaire. Vaseem applied cluster analysis methodology to segment the profiling sample based on psychographic criteria (Wedel & Kamakura, 2000). Cluster analysis is a statistical method for organizing objects into groups or clusters such that the within group variance is minimized and the between group variance is maximized. After the clustering, objects in a particular cluster would be relatively similar and those in different clusters would be relatively dissimilar. The allocation of objects to a particular cluster is based on its distance from other objects in the cluster. Vaseem applied hierarchical clustering procedure especially with Ward's method using squared Euclidean distances as the distance measure. He selected 3 clusters on an a priori basis and obtained the cluster means for each statement in the psychographics section of the profiling questionnaire. The cluster means for the statements for each of the three clusters are shown in Exhibit 6 and the percentages of respondents ticking the top two boxes (strongly agree and somewhat agree) for each statement in each cluster are also shown in Exhibit 7 (this is the sum of frequency percentages belonging to top two box scores). Vaseem used the data from Exhibits 6 and 7 to understand the psychographic profiles of each segment of apartment buyers. After finding the psychographic segments, they were profiled in terms of demographic and geographic variables for precise targeting by the client.

The main questionnaire in the Shodh's research was designed to obtain information from the respondents from the profiling study, who expressed strong interest in buying an economy apartment after an exposure to the concept. One of the key sections in the questionnaire was the conjoint section, which was designed to understand the trade-offs that consumers make while choosing among different alternatives (apartments) with different features. In conjoint analysis, the consumer is not directly asked about the importance attached to each feature, rather the consumer is asked to indicate the relative preferences for a concept which contains a bundle of chosen features, with each feature being at a certain level. Based on the overall preference for the full profile concept, conjoint analysis methodology derives the utilities and assigns their importance weights to a specific level of a particular attribute. In the economy apartment research, Vaseem selected three apartment attributes -built up area of the apartment; price and the apartment's room/space configuration. For each of these attributes, four to five levels were specified, for example the price attribute had five levels (INR 500,000-800,000; INR 800,000-1,000,000; INR 1,000,000-1,200,000; INR 1,200,000-1,600,000 and INR 1,600,000-2,000,000). Vaseem also planned to examine the influence of consumers' monthly household income, age and socio-economic category on the feature preferences. Vaseem created a number of concept cards, with each card describing a given apartment concept in terms of a certain built-up area, price and room structure. Each level of every feature used in the concept cards was coded with a unique concept card number. The coding for the attribute levels and covariates are shown in Exhibit 8. In all, twenty five concepts were used in the study. The respondents were asked to choose the concepts according to their preferences by giving a yes or no answer. The data on final choice emerging after pooling the choices of the 200 respondents is shown in Exhibit 9. Vaseem learnt that the five most popular concepts were concept card numbers 6, 3, 1, 4 and 7. The configuration of built-up area, price and configuration of rooms for each of these concepts

are shown in Exhibit 10. Vaseem then analysed the preference based choice data using the multinomial logistic regression option in the SAS software. The resulting utilities for the levels are shown in Exhibit 11.

It was 16th June 2015 and Vaseem had finished the data processing of the OBL economy apartment study and began to examine the data. He remembered that he was due to meet the OBL board on July 3rd and wondered what conclusions he could derive from the univariate and multivariate analysis. He knew that the OBL board was keen to know about the extent of demand for economy apartments in the various suburbs of Bengaluru, especially in Bannerghatta Road and its nearby places. Vaseem also knew that the OBL board would be looking for some recommendations on marketing strategy, in case they decided to proceed with the economy apartment initiative. He and his team were busy working on deducing marketing strategy for OBL using following research techniques:

- Concept testing and demand estimation
- Conjoint analysis and product offering
- Product line variety and pricing decisions
- Segmenting and targeting end consumers for better positioning
- Concept testing of architectural features to be offered to the buyers

EXHIBIT 1

PROFILING QUESTIONNAIRE

Respondent Details

1. Respondent working in:

Kanakapura <input type="checkbox"/>	JP Nagar <input type="checkbox"/>	BTM Layout <input type="checkbox"/>
Basavanagudi <input type="checkbox"/>	Banashankari <input type="checkbox"/>	BannerghattaRoad <input type="checkbox"/>

2. Gender: Male Female

3. Age of the respondent :

Less than 20 years <input type="checkbox"/>	20 to 30 years <input type="checkbox"/>	30 to 40 years <input type="checkbox"/>
40 to 50 years <input type="checkbox"/>	50 to 60 years <input type="checkbox"/>	Above 60 years <input type="checkbox"/>

4. Monthly household income (MHI)

Less than INR 15,000 <input type="checkbox"/>	INR 15,001 to 20000 <input type="checkbox"/>	INR 20,001 to 30,000 <input type="checkbox"/>
INR 30,001 to 40,000 <input type="checkbox"/>	INR 40,001 to 50,000 <input type="checkbox"/>	Greater than INR 50,000 <input type="checkbox"/>

5. Respondent Code

CWE Spouse Young adult Other

6. Respondent category

Lives in rented place

- Lives in own independent house
- Lives in owned apartment/flat

7.1 Please tell us about the total number of people living in your house?

- Husband
- Wife
- Children
- Parents
- Other members (relatives)

7.2 Type of household

- Married couple, no children
- Married couple with small children
- Married couple with older children
- Empty nest (only adults)
- Widow / widower
- Single

8. Social Class membership - Please indicate your social status by ticking one of the numbers?

- Factory worker/blue collar worker
- White collar junior executives/clerks
- White collar senior executives/managers
- Other professions – teachers, salesmen etc.
- Retail shop owners/businessmen
- Others specify

9. Expenditure pattern per month: tick one statement:

- Money spent on rent per month if applicable for tenants
- Money spent on repaying home loan per month for owners
- Money spent on transportation to reach office per month

10. Mode of commuting to work:

- Use company bus to reach place of work
- Use 2 wheelers to reach place of work
- Take public transport – buses to place of work
- Travel by train when possible
- Use shared taxi/auto rickshaw to place of work
- Other modes of transport – walking, cycling

11. Key durables owned at home: Please tick statements

- CTVs

- Audio system
- Cycle
- Two wheelers
- Wall Clock
- Pressure cooker
- Gas stove
- Water purifier
- Refrigerator
- Washing machine
- Micro wave oven
- Internet connection
- Air conditioners
-

12. Languages spoken at home; please tick statements applicable to you-

- Kannada
- Telugu
- Tamil
- Malayalam
- Hindi
- English
- Other

CONCEPT TESTING

13. Give a detailed description of the concept- use separate page describing the concept.
Investigator – please Give the concept to the respondent to study carefully

Describe concept to the respondent- tick response below:

If an apartment or flat is available in a place near by your working place, will you purchase the same?

- Most probably buy
- Somewhat likely to buy
- Undecided
- Somewhat unlikely to buy
- Most definitely not buy

14. For the purchase of the above apartment, what is the budget you have in mind to buy the same?

- Less than INR 500,000
- INR 500,000 to 800,000
- INR 800,000 to 1,000,000
- INR 1,000,000 to 1,200,000
- INR 1,200,000 to 1,600,000
- Greater than INR 1,600,000

15. Are you interested to buy an apartment/flat in a place nearby your places of work for investment purpose?

- Yes
- No

16. If you want to buy an apartment, will you buy in Bannerghatta Road?

- Yes
- No

17. If you are willing to buy an apartment/flat in Bannerghatta Road will you stay in it or rent it?

- Yes, stay in the flat
- Rent it
- Keep it locked

18. From the date of payment of advance for the apartment/flat in how many months you want the project to be completed and house ready for occupation?

19. If you are buying an apartment/flat for investment purpose, please tell us by how much you want the property to appreciate in value in 5 years? (In percentage terms).....

20. Media habits of the respondent and their families

- How many hours your family watches a TV in a day?
- TV channels seen regularly
- TV channels seen yesterday
- TV serials seen regularly
- TV/radio news seen or heard
- AM/FM radio listened regularly
- Newspaper read regularly.....
- English newspapers read.....
- Vernacular new papers read
- Magazines read regularly.....
- Visited exhibitions, house fairs, event promotions

PSYCHOGRAPHIC PROFILING

Given below are statements which apply to your life, living ways, expectations, beliefs, goals, values, etc. There are a number of statements for which you can express your opinions on an agreement – disagreement scale

- Strongly agree (SA)
- Somewhat agree (SWA)
- Neutral (N)
- Somewhat disagree (SWD)
- Strongly disagree (SD)

Exhibit 1						
PROFILING QUESTIONNAIRE						
S. No	Statements	SA	SWA	N	SWD	SD
1	We prefer to live in independent houses because we don't want to live in a congested apartments where there are interferences from other tenants	SA	SWA	N	SWD	SD
2	We believe in community living and we don't mind living in apartments where we can socialize with other families	SA	SWA	N	SWD	SD
3	For a long time we have lived in independent houses and because of inertia we can't adjust to small apartments	SA	SWA	N	SWD	SD
4.	Apartments do not provide adequate privacy and we want to live in independent houses only	SA	SWA	N	SWD	SD
5.	Apartments are compact and provide adequate security for us to live in a community	SA	SWA	N	SWD	SD
6.	Apartment complexes do not have high appreciation values unlike independent houses	SA	SWA	N	SWD	SD
7.	We believe in buying new apartments for investment purposes	SA	SWA	N	SWD	SD
8.	Because of apartment complexes we get other facilities like children's play area, security guards, parking spaces, adequate water and power supply.	SA	SWA	N	SWD	SD
9	Security and safety of independent houses are questionable	SA	SWA	N	SWD	SD
10	Apartment ownership is easy unlike independent houses where we have to get laborious time consuming government approvals	SA	SWA	N	SWD	SD
11.	We are a contended and happy family	SA	SWA	N	SWD	SD
12	Apartment complexes are costly and require high monthly maintenance charges	SA	SWA	N	SWD	SD
13	We watch movies in regional languages in TVS, theaters and DVD players	SA	SWA	N	SWD	SD
14	We are materialistic and we buy relevant durables, clothes and our own house or flat	SA	SWA	N	SWD	SD
15	We are a very traditional and conservative family and we buy only essential goods for living	SA	SWA	N	SWD	SD
16	We are modern and we want to live a luxurious, prosperous, purposeful and healthy life	SA	SWA	N	SWD	SD
17	We are very bold and confident and based on our gut feel we buy durables, houses / flats and vehicles	SA	SWA	N	SWD	SD
18	We are serious hard working type personalities and we work hard to achieve status in life	SA	SWA	N	SWD	SD
19	On holidays and spare time, we socialize with our friends, relatives and family members	SA	SWA	N	SWD	SD
20	We undertake and play outdoor and indoor games with family members and children	SA	SWA	N	SWD	SD
21	We go on vacations, picnics and excursions with family members	SA	SWA	N	SWD	SD
22	We believe in saving for the future and every month we save a portion of the income we earn	SA	SWA	N	SWD	SD
23	We don't buy goods on credit, we pay cash for purchases and we don't use credit cards to buy goods and durables	SA	SWA	N	SWD	SD
24	We spend quite evenings with family members, reading books, watching TV shows, go to movies and listen to music	SA	SWA	N	SWD	SD
25	We believe in spending now for good living than save for the old age and future	SA	SWA	N	SWD	SD

26	We believe that our children should be well educated doing degrees, diplomas and professional courses	SA	SWA	N	SWD	SD
27	We believe in buying houses, vehicles and durables on hire purchase/instalment schemes	SA	SWA	N	SWD	SD
28	We believe instead of paying rents every month , we can use that money to pay instalments for our own house	SA	SWA	N	SWD	SD
29	My decision in our family is binding on all members with regard to buying houses, durables and vehicles	SA	SWA	N	SWD	SD
30	I believe in keeping my house and surroundings neat and clean	SA	SWA	N	SWD	SD
31	We don't hire servants, we do all our house work and chores	SA	SWA	N	SWD	SD
32	I am friendly and sociable and we mingle well with strangers	SA	SWA	N	SWD	SD
33	I endorse changes in cultural values that is happening now in India with the youth	SA	SWA	N	SWD	SD
34	Our children surf on the internet, visit cyber cafes and use digital products	SA	SWA	N	SWD	SD
35	I always like to try new products and services that come in to the market	SA	SWA	N	SWD	SD

Source: A creation of the author using data from an original document

EXHIBIT 2 CONCEPT DESCRIPTION

Middle Class Homes

Tagline: A Home of your Own

Description:

An apartment that is within your budget, well connected to the City and set within a quiet, clean, green and safe neighbourhood. With round the clock security and assured power and water supply, this complex features an interconnected neighbourhood with ample green play areas, landscaped gardens, spaces for social interaction at multiple levels, climatically designed homes, renewable energy supply, covered parking lots, a crèche, club house and convenience shopping.

Benefits:

1. Low initial investment
2. Low recurring costs - power, water and maintenance
3. Delivered in a short period of time
4. A safe, interconnected complex fostering a sense of community
5. Differentiated individual homes unlike standardized apartments
6. Designed to harness natural elements to light and ventilate homes

2.1 Will you be interested in buying an apartment of the type described just now in the concept read out to you?

- Very likely to buy
- Likely to buy
- Undecided
- Unlikely to buy
- Very unlikely to buy

- 2.2 If you are very likely or likely to buy an apartment of the type described, what is the budget you have in mind?
- 2.3 What type of a buyer are you for this middle income houses or apartments?
- First time buyer of an apartment/flat
- Repeat buyer of an of an apartment/flat
- Up-grading from independent house to flats/apartments
- Up-grading from apartments to apartments/flats
- 2.4 If you already own a house or apartment and if so, are you buying a new apartment/flat for investment purposes?
- Yes No
- 2.5 If you answered yes to the previous question, what kind of annual appreciation in apartment value are you expecting?.....

Source: A creation of the author using data from an original document

EXHIBIT 3 MAIN QUESTIONNAIRE

Section 1

1. Respondent working in:
- Kanakapura JP Nagar BTM Layout
- Basavanagudi Banashankari BannerghattaRoad
- Herohalli Other
- 1.1 Are you staying in a rented place/company leased house?
- Yes No
- Do you own a house/flat/apartment in anyone of the above following places?
- Yes No
- 1.2 Do you intend to buy a new flat or apartment in Bannerghatta Road, Kanakapura, JP Nagar, BTM Layout, Basavanagudi, Banashankari or Herohalli in the next two years?
- Yes No

Continue interview if respondent is willing to buy a flat/apartment in any one of the locations mentioned above, otherwise Thank and Terminate interview

1.3 Tick the locality where you intend to buy a flat/apartment:

- | | | | | | |
|--------------|--------------------------|--------------|--------------------------|------------------|--------------------------|
| Kanakapura | <input type="checkbox"/> | JP Nagar | <input type="checkbox"/> | BTM Layout | <input type="checkbox"/> |
| Basavanagudi | <input type="checkbox"/> | Banashankari | <input type="checkbox"/> | BannerghattaRoad | <input type="checkbox"/> |
| Herohalli | <input type="checkbox"/> | Other | <input type="checkbox"/> | | |

1.4 How many years you have been staying in the current location?

1.5 What is the budget you have in mind to buy a flat/apartment/house in Bannerghatta Road and its surroundings?

- | | |
|----------------------------|--------------------------|
| Less than INR 500,000 | <input type="checkbox"/> |
| INR 500,000 to 800,000 | <input type="checkbox"/> |
| INR 800,000 to 1,000,000 | <input type="checkbox"/> |
| INR 1,000,000 to 1,200,000 | <input type="checkbox"/> |
| INR 1,200,000 to 1,600,000 | <input type="checkbox"/> |
| INR 1,600,000 to 2,000,000 | <input type="checkbox"/> |

1.6 Demographics (Enter details from profiling questionnaire)

Please look at the show card demographics and confirm the following

- Age of the Respondent:
- Education of the Respondent:
- Occupation of the Respondent:
- Total monthly household income from all sources (Please tick)

- | | |
|----------------------|--------------------------|
| Less than INR 15,000 | <input type="checkbox"/> |
| INR 15,000 to 20000 | <input type="checkbox"/> |
| INR 20,000 to 30,000 | <input type="checkbox"/> |
| INR 30000 to 40000 | <input type="checkbox"/> |
| INR 40000 to 50000 | <input type="checkbox"/> |
| >INR 50000 | <input type="checkbox"/> |

Do not interview respondents with salaries >INR 50,000 or <INR. 15,000 per month

- e. Marital Status: Single Married

Section 2

Knowledge of Developers

2.1 When we say housing for middle class families in and around Bannerghatta Road and Bangalore outskirts which Developers' names come to your mind?

2.2 Please mention the names of housing projects undertaken by the above Developers suitable to your housing needs?

2.3 Please tell us the sources of awareness of Developers through which you came to know about the middle class housing projects in Bannerghatta Road and its surrounding places, Please circle the appropriate number on each one of the media entered below.

- TV Advertising
- Magazines/newspapers
- Word of mouth
- Salesman visit
- Hoardings/Billboards
- Exhibitions/Fair/ Events/Road shows
- AM/FM Radio Channel
- Real Estate agent visit
- Website/e-mail
- Other sources of information

2.4 If you are buying an apartment/flat in Bannerghatta Road, are you willing to relocate to Bannerghatta Road, immediately?

- Yes No Undecided

3. Opinions on Bannerghatta Road

3.1 What is your opinion about Bannerghatta Road area as a suitable place for middle class housing construction?

Use Agree/Disagree scale to answer the statements listed below:

- Strongly agree (SA) 5
- Some -what agree (SWA) 4
- Neutral (N) 3
- Some-what disagree (SWD) 2
- Strongly Disagree (SD) 1

Exhibit 3 PERCEPTIONS ON BANNERGHATTA ROAD						
S. No.	Statement	SD	SW-D	N	SW-A	SA
1	Bannerghatta Road is well connected to major cities like Bangalore/Chennai by road and rail	1	2	3	4	5
2	Bannerghatta Road offers new jobs and employment opportunities from industries around its area.	1	2	3	4	5
3	For people working in Sarjapura, Hosur Road, JP Nagar, Electronic City, Jigani, Koramangala, etc., Bannerghatta Road is easily accessible with short commuting times and distances	1	2	3	4	5
4	We are willing to relocate to Bannerghatta Road because it offers serene and calm environment which is liked by us	1	2	3	4	5
5	Bannerghatta Road is less costlier than Bangalore outskirts and rents are low in Bannerghatta Road compared to Bangalore out skirts	1	2	3	4	5

Source: A creation of the author using data from an original document

Exhibit 4	
CONCEPT ACCEPTANCE RESULTS	
Name of suburb	Concept acceptance
Kanakapura	25%
Jayanagar	24%
JP Nagar	25%
BTM Layout	30%
Basavanagudi	24%
Banashankari	20%
Bannerghatta	35%
Herohalli	20%

Source: A creation of the author using data from an original document

Exhibit 5	
POPULATION DATA BASED ON 2001 CENSUS	
Name of suburb	Population in 2001
Kanakapura	47060
Jayanagar	269612
JP Nagar	56504
BTM Layout	254051
Basavanagudi	256286
Banashankari	56313
Bannerghatta	56645
Herohalli	18069

Source: A creation of the author using data from an original document

(Similarly, population data for the same centres available from census 2010 – A growth rate was calculated from the 2 census and projections were made).

Exhibit 6					
CLUSTER MEANS					
	Psychographic statement	Cluster 1 Mean	Cluster 2 Mean	Cluster 3 Mean	Total Mean
1	Independent house	3.00	3.00	3.35	3.28
2	Community living	3.33	2.05	2.47	2.44
3	Inertia to move to apartment	3.10	2.84	1.78	2.43
4	No privacy	3.37	1.75	1.85	2.07
5	Compact apartments and security	2.67	1.93	1.90	2.04
6	No appreciation in value	2.32	1.08	1.72	1.56
7	Purchasing for investment	3.26	1.97	1.72	2.08
8	Common amenities	2.92	2.75	1.78	2.37
9	No security in independent house	3.32	1.55	1.95	2.02
10	Time consuming government approvals	2.38	1.95	1.65	1.90
11	Contented and happy family	3.01	2.35	1.74	2.20
12	Costly maintenance	3.12	1.96	1.90	2.13
13	Watch regional movies	3.05	1.92	1.91	2.11
14	Materialistic	2.73	2.12	1.82	2.10
15	Traditional and conservative	2.62	1.98	1.91	2.06
16	Modern life and prosperity	2.74	2.09	1.95	2.14
17	Gut feel purchase of durables	3.22	2.06	1.78	2.14
18	Serious, hard-working people	3.20	1.87	1.73	2.04
19	Socialize with friends on holidays	3.17	2.12	1.71	2.12
20	Play outdoor games	2.34	2.10	1.76	2.00
21	Go on vacations, picnics	2.93	1.93	1.77	2.03

22	Save for the future	2.88	1.94	1.78	2.03
23	Pay cash for purchases	3.20	2.10	1.88	2.19
24	Spend quiet evenings with family	2.87	2.24	1.85	2.18
25	Spend now for good life	2.38	1.12	1.78	1.62
26	Educate children well	2.94	1.98	1.70	2.03
27	Buy on instalment schemes	2.54	2.78	1.82	2.33
28	Use rent for EMI payment	2.65	1.21	1.80	1.70
29	Decision made by Chief wage earner in family	3.02	1.98	1.95	2.14
30	House is neat and clean	2.95	2.72	1.89	2.41
31	We do household chores ourselves	3.02	1.65	1.86	1.97
32	Friendly and sociable	2.79	2.00	2.00	2.14
33	Endorse cultural changes	2.69	2.28	1.78	2.14
34	Children use computers	3.21	2.07	1.95	2.21
35	Try new products	2.66	1.94	1.84	2.02

Source: A creation of the author using data from an original document

Exhibit 7					
PSYCHOGRAPHIC STATEMENTS – FREQUENCY PERCENTAGE SCORES					
	Psychographic statement	Cluster 1	Cluster 2	Cluster 3	Total
		Top 2 boxes %	Top 2 boxes %	Top 2 boxes %	Top 2 boxes %
1	Independent house	8.83	40.5	35.33	84.67
2	Community living	7.00	39.67	36.17	82.83
3	Inertia to move to apartment	6.50	5.17	30.50	42.17
4	No privacy	6.00	36.33	33.17	75.50
5	Compact apartments and security	8.33	29.17	33.00	70.50
6	No appreciation in value	9.50	39.50	34.33	83.33
7	Purchasing for investment	0.05	0.39	0.37	0.81
8	Common amenities	8.50	7.33	32.67	48.50
9	No security in independent house	0.06	0.39	0.34	0.79
10	Time consuming government approvals	10.00	31.50	35.67	77.17
11	Contented and happy family	3.83	20.17	33.33	57.33
12	Costly maintenance	5.67	27.00	33.00	65.67
13	Watch regional movies	8.17	33.17	31.50	72.83
14	Materialistic	9.17	24.33	33.33	66.83
15	Traditional and conservative	9.50	29.33	34.83	73.67
16	Modern life and prosperity	7.67	27.50	28.83	64.00
17	Gut feel purchase of durables	5.00	26.83	35.83	67.67
18	Serious, hardworking people	6.67	31.50	34.67	72.83
19	Socialize with friends on holidays	6.83	26.17	35.00	68.00
20	Play outdoor games	10.33	26.50	33.67	70.50
21	Go on vacations, picnics	7.33	28.50	35.67	72.50
22	Save for the future	7.00	31.00	33.00	71.00
23	Pay cash for purchases	6.00	26.67	33.33	66.00
24	Spend quiet evenings with family	8.00	24.33	34.83	66.172
25	Spend now for good life	9.83	39.50	32.00	81.33
26	Educate children well	5.17	38.33	36.17	79.67
27	Buy on instalment schemes	10.83	6.00	34.00	50.83
28	Use rent for EMI payment	9.33	39.67	36.83	85.83
29	Decision made by Chief wage earner in family	7.00	36.67	28.67	72.33
30	House is neat and clean	6.83	8.67	29.67	45.17
31	We do household chores ourselves	7.33	35.83	35.00	78.17
32	Friendly and sociable	7.00	30.33	29.00	66.33

33	Endorse cultural changes	7.83	22.00	34.17	64.00
34	Children use computers	6.17	26.17	32.33	64.67
35	Try new products	8.50	28.33	33.17	70.00

Source: A creation of the author using data from an original document

Exhibit 8 CONJOINT PROFILE-PLAN		
Attribute	Levels	Codes
Built up area of apartment	550 to 650 sq. ft.	1
	651 to 750 sq. ft.	2
	751 to 850 sq. ft.	3
	851 to 1000 sq. ft.	4
Price	INR 500,000 to 800,000	1
	INR 800,000 to 1,000,000	2
	INR 1,000,000 to 1,200,000	3
	INR 1,200,000 to 1,600,000	4
	INR 1,600,000 to 2,000,000	5
Configuration	Hall+kitchen	1
	Hall+1 bedroom+kitchen	2
	Hall+2 bedrooms+kitchen	3
	Hall+2 bedrooms+Study+kitchen	4

Source: A creation of the author using data from an original document

Exhibit 10 PREFERRED HOUSING PROFILES					
Variable	Card 6	Card3	Card 1	Card 4	Card 7
Built up area	650 to 750 sq. ft.	750 to 850 sq. ft.	750 to 850 sq. ft.	500 to 650 sq. ft.	650 to 750 sq. ft.
Configuration	Hall+2 bedrooms+kitchen	Hall+kitchen	Hall+1 bedroom+kitchen	Hall+kitchen	Hall+2 bedrooms+study+kitchen
Price	INR 1,200,000 to 1,600,000	INR 1,600,000 to 2,000,000	Rs. 1,000,000 to 1,200,000	Rs. 1,000,000 to 1,200,000	INR 800,000 to 1,000,000

Source: A creation of the author using data from an original document

Exhibit 11 CONJOINT ANALYSIS RESULTS-UTILITIES TABLE							
	Overall utility	MHI 1	MHI 2	MHI 3	Cluster 1	Cluster 2	Cluster 3
Built up area							
550 to 650 sq. ft.	0.363	0.189	0.412	0.208	0.406	0.360	0.330
650 to 750 sq. ft.	-0.365	-0.548	-0.319	-0.49	-0.537	-0.212	-0.493
750 to 850 sq. ft.	-1.035	-0.95	-1.04	-1.913	-0.857	-1.163	-1.11
850 to 1000 sq. ft.	0	0	0	0	0	0	0
Configuration							
Hall+kitchen	-1.052	-0.459	-1.151	-2.34	-0.125	-1.639	-0.849
Hall+1 bedroom+kitchen	0.033	0.069	0.031	-0.135	0.304	-0.080	0.041
Hall+2 bedrooms+kitchen	-0.652	-0.438	-0.679	-1.456	-0.062	-0.97	-0.623
Hall+2 bedrooms+study+kitchen	0	0	0	0	0	0	0
Price							
INR 500,000 to 800,000	0.139	0.135	0.115	0.775	-0.428	0.581	-0.093
INR 800,000 to 1,000,000	-2.017	-1.469	-2.111	-3.588	-1.364	-2.455	-1.921
INR 1,000,000 to 1,200,000	-1.088	-0.93	-1.108	-1.755	-1.144	-1.089	-1.118

INR 1,200,000 1,600,000	to	-1.399	-1.313	-1.396	-2.507	-1.042	-1.613	-1.339
INR 1,600,000 2,000,000	to	0	0	0	0	0	0	0

Source: A creation of the author using data from an original document

Exhibit 12							
SIMULATED MARKET SHARES							
Card number	MS All	MHI <20 K	MHI 20 to 40 K	MHI 40 to 50 K	Segment 1	Segment 2	Segment 3
6	0.56	0.6	0.56	0.53	0.5	0.57	0.58
3	0.48	0.38	0.5	0.53	0.35	0.57	0.46
1	0.48	0.48	0.49	0.43	0.51	0.45	0.52
4	0.41	0.33	0.42	0.45	0.32	0.46	0.38
7	0.56	0.53	0.56	0.49	0.56	0.54	0.57

Source: A creation of the author using data from an original document

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