CHAPTER 3

THE METHODOLOGY

3.1 The Problem

In India, gradual changes are taking place in the cultural and sociological ethos, which have triggered changes in the purchase process and consumption patterns of Indians (Gupta & Chundavat, 2002). Rise in consumerism, emergence of nuclear families in the urban context, rise of middle class, increasing financial independence of women, more convenience oriented lifestyles, fewer children per household, increased media exposure and many more factors have led to a paradigm shift in the roles played by family members in buying decision making.

Similar changes to a lesser extent have taken place in the rural setup due to a shift from agriculture to non-agriculture activities (Bijapurkar, 2002) and emergence of ‘individualised joint families’ (Kashyap, 2005), increased literacy and media exposure. Earlier women and children as such had no role to play in the decision making process, however, now due to the aforementioned reasons their level of participation has gone up (Pareek, 1999; Krishnamurthy & Lokhande, 2000; Khairoowala, 2001; Lokhande, 2004; Nagaraja, 2004).

Another aspect that deserves attention is that the family member-influence is not static and is likely to shift, depending upon the specific product or service (Converse et al., 1958; Wolff, 1958; Beckman and Davidson, 1962, Ferber and Lee, 1974; Wilkes, 1975; Davis, 1976; Woodside & Motes, 1979 and Belch et al., 1985); Woodside and Motes, (1979) and the specific stage in the decision making process(Davis and Rigaux, 1974; Park & Lutz, 1982 and Belch et al., 1985). Thirdly, it also depends on the specific purchase factors (Bonfield, 1978 and Belch et al., 1985).
Most of the studies on family purchase behaviour and decision making process are US centric and only a few studies have been conducted in Indian context and that too mostly in the urban setup. The rural setup has not drawn the attention it rightly deserves. As the influence of the family members in all types of decisions including product purchase decisions will vary across cultures and regions, the results of US centric studies as well as those related to urban context in India cannot help us in understanding the shifts in the rural context in India without verification. Through this study an attempt has been made to explore the dynamics of family purchase behaviour for selected products

3.2 Research Objectives

The study broadly attempts to empirically investigate the patterns of family purchase behaviour for selected products in the rural context. Keeping the same in mind, the following objectives were set:

1. To investigate the relative involvement of husband, wife, children and grandparents in the purchase of specific products (i.e. product specific influences).

2. To investigate the effect of individual's position in the family on the involvement during the purchase decision stages, i.e. the relationship between the independent variable—individual's position in the family (i.e. husband, wife, son, daughter, grand father, grand mother) and the dependent variables—stages in the decision process (i.e. idea initiation, information collection and final decision).

3. To investigate the effect of individual's position in the family on the involvement in the product related sub decisions, i.e. the relationship between the independent variable—individual's position in the family (i.e. husband, wife, son, daughter, grand father, grand mother) and the dependent variables—the various product related sub decisions (i.e. amount to be spent, when to purchase, what brand, type, size, colour and quantity to purchase and from which dealer) for four consumer durables—two-wheeler,
television, radio, VCD*, one service (i.e. insurance) and three FMCGs—
edible oil, tooth paste and washing powder.

4. To investigate the effect of type of family i.e. nuclear family and joint family
(independent variable) and member’s involvement during the purchase
decision stages (dependent variable).

5. To investigate the effect of type of family i.e. nuclear family and joint family
(independent variable) and member’s involvement in product related sub
decisions (dependent variable).

6. To investigate the effect of individual’s life stage (i.e. - pre-teens, teenage,
early adulthood, middle adulthood, late adulthood and old age) and his
involvement during the stages of purchase decision process (dependent
variable).

7. To investigate the effect of individual’s life stage (i.e. - pre-teens, teenage,
early adulthood, middle adulthood, late adulthood and old age) and his
involvement in the product related sub decisions (dependent variable).

8. To investigate the effect of individual’s education, occupation, income and
gender (independent variable) and his involvement during the stages of
purchase process (dependent variable).

9. To investigate the effect of individual’s education, occupation, income and
gender (independent variable) and his involvement in the product related sub
decisions (dependent variable).

3.3 Rationale for Product Selection

The products that were selected for the present study were two-wheeler, television,
radio, VCD, insurance, edible oil, tooth paste, washing powder. The rationale behind
the selection of the aforementioned products was:

  > These products represent buying situations ranging from complex
  buying decisions (as in the case of two-wheeler, television, VCD,
  insurance) to relatively less complex ones (as in the case of tooth

* The low cost version of VCD Player (Local make) and Television (Black & White) are available at a price as
  low as Rs. 900 ($ 20) and Rs. 2500 ($ 55) respectively.
paste, washing powder) and also the number and type of role played by the various family members is expected to vary in each case (Davis, 1970; Ferber and Lee, 1974; Munsinger et al., 1975; Shuptrine and Samelson, 1976; Yavas, Babakus & Delener, 1994, Nathan, 1997; and Martinez and Polo, 1999 Sayulu, & Reddy, 1998; Ramaswamy & Namakumari, 2002; Kapoor, 2003; Nagaraja, 2004).

- As the products were of use to all members of the family, their participation in decision making for the same was assumed. In addition, some disagreement between the husband, wife, grandparents as well as children with regard to the actual purchase was required. This disagreement might have occurred at any stage in the decision process — idea initiation, information collection or the final decision — or during any of the sub-decisions — whether or not to make the purchase, how much to spend, brand, style, and so on.

- These products were recording high growth rates as well as higher penetration in the rural areas as compared to the urban markets (Census of India 2001; Market Demographic Report by NCAER, 2004).

It is important to highlight at this stage that the original list of selected products did not include VCD as it was thought to be an up-market product purchased by consumers in the urban areas only, but during the pilot study, the researcher was surprised to find that it was quite popular even with the villagers. The researcher, therefore, thought it necessary to include VCD in the list of the products selected for the present study.

### 3.4 Hypotheses

*For the purpose of achieving the objectives of the study hypotheses were presumed. These were formed on the basis of specific product categories, the stages of the decision process, and the sub decisions involved in the purchase of each product.*

The study is primarily based on the premise that the type of family — *independent variable* — and stages and sub-decisions in the purchase of specific products — *dependent variable* — are independent of each other as far as the relative involvement of different family members are concerned. The hypotheses in the following are reflective of this premise. These hypotheses have been tested in the next chapter i.e. Analysis and Interpretation of Data.
Hypotheses for Position in the Family

\( H_{01} \): There is no relationship between the individual's position in the family and involvement during the idea initiation stage during the purchase of

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Tooth paste
- h) Washing Powder

\( H_{02} \): There is no relationship between the individual's position in the family and involvement during the information collection stage during the purchase of

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Tooth paste
- h) Washing Powder

\( H_{03} \): There is no relationship between the individual's position in the family and involvement during the final decision stage during the purchase of

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Tooth paste
- h) Washing Powder

\( H_{04} \): There is no relationship between the individual’s position in the family and involvement in the sub decision ‘amount to be spent’ for

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Tooth paste
- h) Washing Powder
$H_{05}$: There is no relationship between the individual’s position in the family and involvement in the sub decision ‘timing of the purchase’ of
   a) Two Wheeler
   b) Television
   c) Radio
   d) VCD
   e) Insurance
   f) Edible oil
   g) Tooth paste
   h) Washing Powder

$H_{06}$: There is no relationship between the individual’s position in the family and involvement in the sub decision ‘brand’ of
   a) Two Wheeler
   b) Television
   c) Radio
   d) VCD
   e) Insurance
   f) Edible oil
   g) Tooth paste
   h) Washing Powder

$H_{07}$: There is no relationship between the individual’s position in the family and involvement in the sub decision ‘type’ (i.e. scooter or motor-cycle in case of two-wheeler; black & white or color in case of TV etc.) for
   a) Two Wheeler
   b) Television
   c) Radio
   d) VCD
   e) Insurance
   f) Edible oil
   g) Washing Powder

$H_{08}$: There is no relationship between the individual’s position in the family and involvement in the sub decision ‘colour’ of Two-wheeler to be purchased.

$H_{09}$: There is no relationship between the individual’s position in the family and involvement in the sub decision ‘quantity’ for
   a) Edible oil
   b) Tooth paste
   c) Washing Powder

$H_{10}$: There is no relationship between the individual’s position in the family and involvement in the sub decision ‘dealer’ of
   a) Two Wheeler
   b) Television
   c) Radio
   d) VCD
Hypotheses for Life Stages

$H_{011}$: There is no relationship between the life stage of the family members and involvement during the idea initiation stage during the purchase of

a) Two Wheeler  
b) Television  
c) Radio  
d) VCD  
e) Insurance  
f) Edible oil  
g) Tooth paste  
h) Washing Powder

$H_{012}$: There is no relationship between the life stage of family members and involvement during the information collection stage during the purchase of

a) Two Wheeler  
b) Television  
c) Radio  
d) VCD  
e) Insurance  
f) Edible oil  
g) Tooth paste  
h) Washing Powder

$H_{013}$: There is no relationship between the life stage of family members and involvement during the final decision stage during the purchase of

a) Two Wheeler  
b) Television  
c) Radio  
d) VCD  
e) Insurance  
f) Edible oil  
g) Tooth paste  
h) Washing Powder

$H_{014}$: There is no relationship between the life stage of family members and involvement in the sub decision --'amount to be spent for' --

a) Two Wheeler  
b) Television  
c) Radio  
d) VCD  
e) Insurance
f) Edible oil

g) Tooth paste

h) Washing Powder

$H_{015}$: There is no relationship between the life stage of family members and involvement in the sub decision ‘time of the purchase’ of

a) Two Wheeler

b) Television

c) Radio

d) VCD

e) Insurance

f) Edible oil

g) Tooth paste

h) Washing Powder

$H_{016}$: There is no relationship between the life stage of family members and involvement in the sub decision ‘brand’ of

a) Two Wheeler

b) Television

c) Radio

d) VCD

e) Insurance

f) Edible oil

g) Tooth paste

h) Washing Powder

$H_{017}$: There is no relationship between the life stage of family members and involvement in the sub decision ‘type’ of

a) Two Wheeler

b) Television

c) Radio

d) VCD

e) Insurance

f) Edible oil

g) Tooth paste

h) Washing Powder

$H_{018}$: There is no relationship between the life stage of family members and involvement in the sub decision ‘colour’ of Two-wheeler to be purchased.

$H_{019}$: There is no relationship between the life stage of family members and involvement in the sub decision ‘quantity’ for

d) Edible oil

e) Tooth paste

f) Washing Powder

$H_{020}$: There is no relationship between the life stage of family members and involvement in the sub decision ‘dealer’ for

a) Two Wheeler
Hypotheses for the Type of Family

$H_{021}$: There is no relationship between the type of family and individual’s involvement during the idea initiation stage during the purchase of

a) Two Wheeler
b) Television
c) Radio
d) VCD
e) Insurance
f) Edible oil
g) Tooth paste
h) Washing Powder

$H_{022}$: There is no relationship between the type of family and individual’s involvement during the information collection stage during the purchase of

a) Two Wheeler
b) Television
c) Radio
d) VCD
e) Insurance
f) Edible oil
g) Tooth paste
h) Washing Powder

$H_{023}$: There is no relationship between the type of family and individual’s involvement during the final decision stage during the purchase of

a) Two Wheeler
b) Television
c) Radio
d) VCD
e) Insurance
f) Edible oil
g) Tooth paste
h) Washing Powder

$H_{024}$: There is no relationship between the type of family and individual’s involvement in the sub decision ‘amount to be spent’ for

a) Two Wheeler
b) Television
c) Radio
There is no relationship between the type of family and individual's involvement in the sub decision 'time of the purchase' of

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Tooth paste
- h) Washing Powder

There is no relationship between type of family and individual's involvement in the sub decision 'brand' of

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Tooth paste
- h) Washing Powder

There is no relationship between the type of family and individual's involvement in the sub decision 'type' of

- a) Two Wheeler
- b) Television
- c) Radio
- d) VCD
- e) Insurance
- f) Edible oil
- g) Washing Powder

There is no relationship between the type of family and individual's involvement in the sub decision 'colour' of Two-wheeler to be purchased.

There is no relationship between the type of family and individual's involvement in the sub decision 'quantity' for

- a) Edible oil
- b) Tooth paste
- c) Washing Powder
There is no relationship between the type of family and individual’s involvement in the sub decision ‘dealer’ for
a) Two Wheeler
b) Television
c) Radio
d) VCD
e) Insurance
f) Edible oil
g) Tooth paste
h) Washing Powder

3.5 The Research Design

One problem constantly faced by the researchers in this area relates to the reliability, validity and inherent bias in the data collected from family members. The present study tried to reduce this discrepancy in reporting of influence by the family members, through the following steps:

Firstly, a more neutral term ‘involvement’ has been used, instead of the loaded term ‘influence’.

Secondly, the information has been obtained about the relative involvement from husband, wife, children and grand parents.

Thirdly, members of the family were asked to fill up the questionnaire independently without consulting/helping each other.

Fourthly, in order to get a representative heterogeneous sample of respondents it was decided to collect the data from eight villages from four blocks.

Finally, the respondents were asked to provide the information regarding their involvement only when at least two of the products had been purchased during the last two years. This has been done to minimize the forgetting effect (Khan, 2000).

These steps hopefully may have reduced the respondent bias, if any, to a great extent.

As to the number of stages that we should consider in the decision making process, we followed the line suggested by Davis and Rigaux (1974) i.e. problem recognition, search for information and final decision. We can also find this classification or one very similar to it, in a number of other studies too (Webster, 1994; and Ford et al., 1995).
The use of a three-stage decision process (that is, idea initiation, information search, and final decision) differs somewhat from the classic conceptualization which includes a phase of alternative evaluation. We have chosen to eliminate this phase (i.e. alternative evaluation) because it is so intimately related to the search process. Moreover, several researchers have suggested that consumers actually evaluate information simultaneously with search (Davis, 1976; and Katona and Mueller, 1954). Farley (1964) tested Stigler’s hypothesis (1961) that the amount of search is a function of the expected gain relative to the cost of obtaining information, and findings of Maynes (1973) further support this notion. A similar model was proposed by Granbois (1963) who maintained that search terminates with a final decision when uncertainty is reduced to satisfactory level. Eliminating the stage of alternative evaluation was also motivated by the practical difficulty of asking respondents with a rural background to break down their decision making into many different stages. Further, we should also not overlook the fact that children, possessing varied cognitive levels, too were included in the present study for investigating their involvement in the purchase process. Even with the three stages we have chosen, subjects may view the distinction among these stages as somewhat artificial for the following reasons:

- The consumer need not be, and indeed, probably is not aware that he passes through these phases;
- This like any other process conceptualization, has some time dimensions; and
- All phases do not always occur (Engel, Kollat & Blackwell, 1973).

Nevertheless, as emphasized by Brim et al. (1962), “it is this type of formal analysis of the basic phases of the process which permits one to see the similar nature of all decision problems”.

Further, in this study it has also been assumed that consumption decisions are made on the basis of a single budget constraint containing the pooled income for the entire household i.e. the household income is put in a common “pot” and the household members bargain over its allocation (Doss, 1994).
3.6 The Research Instrument

The research instrument (Appendices I & II) consisted of structured questionnaire and the respondents were required to indicate their level of involvement with the help of a three-point rating scale viz. HI (highly involved), MI (moderately involved) and NI (not involved). This scale was preferred in comparison to other scales as the chances of bias here are negligible and also a more neutral term 'involvement' has been used instead of 'influence' which appears to be loaded. The simple three-point scale was employed keeping in mind the rural respondents in general and children in particular. It was expected that they would not face problem in understanding the scale and thus provide clear unambiguous responses.

The research instrument consisted of three categories of questions:

The first set of questions was identical to that incorporated by Davis and Rigaux (1974) in instrument used by them. Specifically, three questions representing stages of the decision process (i.e. problem recognition, search for information on alternatives, and final purchase decision) were included for each product under study.

Further, as in the study by Davis (1970) this study also explored the following sub-decisions (with minor modifications owing to differences in type of products) pertaining to the durables under study.

1. When to buy?
2. Where to buy?
3. How much to spent?
4. What make/type/brand to buy?
5. What model to buy?
6. What colour to buy?

The second set of questions in the research instrument dealt with these sub-decisions pertaining to the individual products. For example, for the two wheeler purchased, husband, wife, children and grandparents (in case of joint family) were asked to report their level of involvement vis-à-vis (1) amount to be spent; (2) When to purchase; (3) What brand to purchase; (4) What size to purchase; (4) Which colour; and finally (5) Which outlet; with the help of three point scale viz. HI (highly involved), MI (moderately involved) and NI (not involved).

The third set of questions was related to demographics and was necessary to generate the profile of the sample.
The data presented in this study differs in several ways from previous studies. The data can be analyzed both across and within product purchase decisions because of the use of similar questions for each of the product and the same measure of involvement for the various stages and the sub-decisions pertaining to the products. Since separate questionnaires were administered on husband, wife, children and grandparents, there were independent responses to the same questions from the family members permitting comparison of responses between the various family members.

One other aspect of the methodology used in this study deserves comment. Similar to many other studies of family members' roles in decision making, we have made use of direct questions about the relative involvement of each spouse, children as well as grandparents. Direct questions of this sort assume, according to Kenkel (1961), that individuals (1) know the relative amount of influence they have; (2) are willing to admit it to themselves and others; and (3) are able to recall with accuracy how influence was distributed in some past decision making session. While these assumptions are undoubtedly questionable, we feel, as do others, that direct questions about specific decisions represent the best "interim approach" for identifying roles (Engel et al., 1973; and Davis and Rigaus, 1974). This solution seems even more appropriate in this study since independent data from husbands, wives, children and grandparents within the same families allows one to assess the validity of these scales measuring relative influence (Davis, 1971).

3.6.1 Pilot Testing of the Research Instrument

Pilot testing of the measurement instrument was necessary to validate the items and the whole scale. This is because some of the measurement items were modified for the purpose of this research. The pilot testing was conducted in a series of steps. A preliminary questionnaire developed with relevant inputs from previous studies (Davis, 1970; Davis and Rigaux 1974; Khan, 2000) and tested to validate the scale items.

The English version of the preliminary survey questionnaire was given independently to three professors from the subject area to obtain feedback regarding
the content, layout, wording and ease of understanding the measurement items. They were also asked to offer suggestions for improving the proposed scale and to edit the items if necessary to enhance clarity, readability and content adequacy. In general, the comments were positive with some suggestions which were taken into account while revising the questionnaire.

The English version of the research instrument was later translated into Hindi which is commonly spoken in villages of Western Uttar Pradesh (where Aligarh district is situated). As an additional precaution, the Hindi version was first pre-tested on a representative sample of 10 villagers; and further tested for originality by "back-translation" method (Green and White, 1976), whereby the English original is translated into the foreign language and then back translated into English to check for questionnaire dissimilarities. No difficulties were detected with the understanding of the semantic meaning of each item or with the use of the three-point scale.

During the next stage, the questionnaire (Hindi version) was again administered on a group consisting of 20 rural respondents during one of the programme organized by CCADE. The inputs from this interaction were further used in refinement of the questionnaire. Such interaction also proved to be of great help in finally deciding on the products to be included in the study. For example, VCD which was not in the original list of items was added based on the feedback from the pilot survey.

3.7 Scale Refinement and Validation

A crucial aspect in the evolution of a fundamental body of knowledge in any management theory is the development of genuine measures to obtain valid and reliable estimates of the organization level and their relationships to another. Unless reliability and validity are established, it is hard to standardize the measurement scales, without which it is difficult to know whether the scales actually measure what they are, suppose to measure. In present research, data was collected through a field survey. Then the instrument was subjected to tests of reliability and validity, thereby ensuring operationalization and standardization.
3.7.1 Reliability

Several measures of reliability can be evaluated in order to establish the reliability of a measuring instrument. Reliability is operationalized as internal consistency, which is degree of inter correlations among the items that constitute the scale (Nunnally, 1988). Among other measures, internal consistency can be estimated using reliability coefficient Cronbach’s alpha (Cronbach, 1951). Internal consistency refers to the ability of a scale item to correlate with other items in the scale that are intended to measure the same construct. Items measuring the same construct are expected to be positively correlated with each other. If the reliability is not acceptably high, the scale can be revised by altering or deleting items that have scores lower than a pre-determined cut-off point. If a scale used to measure a construct has an alpha value greater than 0.70, the scale is considered reliable in measuring the construct (Hair, Anderson, Tatham, & Black, 1998; Nunnally, 1978; Leedy, 1997). According to Schuessler (1971), a scale is considered to have good reliability if it has an alpha value greater than 0.60. Hair et al. (1998) suggest that reliability estimates between 0.6 and 0.7 represent the lower limit of acceptability for reliability estimates. The decision was made to use an alpha value greater than 0.7 for the reliability estimates in this research.

Table 3.1(a): Reliability Statistics: Stages in Decision Making

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.870</td>
<td>24</td>
</tr>
</tbody>
</table>

Table 3.1(b): Reliability Statistics: Sub-decisions in Decision Making

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.939</td>
<td>43</td>
</tr>
</tbody>
</table>

All the values well exceed the obligatory requirement, thereby testifying that the scales were internally consistent and were suitable for use in the study.
3.7.2 Validity

The validity of a measurement instrument refers to how well it captures what it is designed to measure (Rosental & Rosnow, 1984). Validity is important in descriptive studies: if the validity of the main variables is poor, you may need thousands rather than hundreds of subjects.

The validity of a scale may be defined as the extent to which differences in observed scale scores reflect true differences among objects on the characteristic being measured rather than systematic or random error.

In this research, the content validity of the measurement instrument was assessed by asking three professors from the subject area to examine it and provide feedback. As already discussed, after they had reviewed the questionnaire, changes were made in line with the suggestions.

3.8 The Sampling Plan

The ‘population’ of interest for the present study comprised all the villagers of India i.e. 700,000,000 individuals residing in 6,27,000 villages. The entire country consists of 25 states in which about 1,073,000,000 individuals reside and it exhibits great diversity in terms of language*, culture and climate (Census of India, 2001).

As it was not feasible to cover all these states due to huge geographic spread, inaccessible terrain, diversity of spoken languages, cultural differences, as well as time and monetary constraints, it was decided to focus on the northern state of Uttar Pradesh (UP) which is the most populous state in the entire country, with a population of 166,197,921 individuals. According to last Census of India carried out in 2001, the total rural population of UP stands at 131,658,339 individuals.

UP exhibits a rich diversity in terms of composition of its rural population vis-à-vis income, education, age, gender and occupation. Further, its inhabitants speak a

* The Constitution of India recognises 22 “national languages”, spoken throughout the country, namely Assamese, Bengali, Bodo, Dogri, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Māthili, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Santhali, Sindhi, Tamil, Telugu and Urdu. Hindi, apart from being an official language of the Union of India, is the official language of the states Uttar Pradesh, Bihar, Jharkhand, Uttarakhand, Madhya Pradesh, Rajasthan, Chattisgarh, Himachal Pradesh, Haryana and the National Capital Territory of Delhi.
language (Hindi) which was not alien to the researcher and she was familiar with the cultural nuances which otherwise would have seriously hindered research. It should be kept in mind that these not so literate villagers are very traditional in their outlook and quite secretive about ‘inside’ information pertaining to their family. Interestingly, the literature review also revealed paucity of research focusing on UP, especially, in the context of family decision making.

The state of UP is divided into 70 districts and 300 sub-districts or blocks, which are basically administrative divisions consisting of 97,942 villages. It was decided to select Aligarh district consisting of 12 blocks comprising 334,714 rural households and a total rural population of 2,127,592 individuals (Census of India, 2001). Out of these, 4 blocks viz. Gangiri, Lodha, Jawan and Dhanipur were randomly selected. The population of Gangiri was 4,661 individuals (674 households with average family size of 6.9 individuals), Lodha was 3,386 individuals (543 households with average family size of 6.2 individuals), Jawan was 8422 individuals (1356 households with average family size of 6.0 individuals) and Dhanipur was 11,000 (1859 households with average family size of 5.9 individuals). Two lists of villages for each Block were prepared such that one contained names of those that were in proximity to Aligarh and the other having villages that were at a considerable distance (not less than 20 km). From each of these lists, one village was randomly picked up using Random Number Generator feature of SPSS software. The objective behind this exercise was to have a representative sample as also minimize bias owing to proximity to the urban centre (Aligarh).

The reasons for selecting Aligarh district for the present study were manifold. The Aligarh Muslim University, i.e. the institution where the researcher was enrolled for the PhD program, has a Centre for Continuing Adult Education and Extension (CCACE) which is primarily involved in conducting outreach activities in the rural areas of Aligarh district. It has a team of dedicated field workers who are in regular contact with the villagers and are also aware of the local topography. Another issue was that of identifying the villages that consisted of households of interest to the researcher. The field workers’ good rapport with the villagers and one-to-one relationship with them, proved to be of immense help in identifying the same.
Further, it was thought that it would be wise to enlist the help of these field workers of CCACE in the conduct of this study as otherwise the villagers would not have agreed to share sensitive information pertaining to involvement of family members in the decision making process.

As it is difficult to ‘break in’ and get the desired information by directly approaching the villagers, the researcher made it a point to be present in all the events organized by the CCAEE in the selected blocks beginning from the month of June 2004 and the end of December 2004 (while the period during which the final data was collected ranged from January 2005 to December 2005). The fact that researcher herself was a female, proved to be of immense help in gaining the confidence of the rural womenfolk, who otherwise are wary of strangers, especially males.

As there was no database to rely on, the researcher after interacting with the villagers as also feedback from field workers of CCAEE, prepared an exhaustive list of households, village-wise, that fulfilled the broad criteria for inclusion in the study. The criterion at this stage being possession of at least 2 of the durable products out of a total of 8 products that included two-wheeler, TV, radio, VCD, insurance, edible oil, toothpaste and washing powder. Consequently, a tentative list of 1205 households was drawn up from the four blocks randomly selected for the study. The list consisted of 175 households from village Charrah and 110 from Naushabarla (Gangiri Block), 105 households from Rorawar and 125 from Talashpur (Lodha Block), 190 households from Barotha and 155 from Kamalpur (Dhanipur Block), 180 households from Satha and 165 from Jarothi (Jawan Block). In order to obtain a representative sample, 20% of households were randomly selected using Random Number Generator feature of SPSS software from the list of households for each village. This resulted in a random sample of 241 households (from the 4 Blocks i.e. 8 villages).

During the second stage, after the researcher had been successful in gaining the confidence of the village folk, an attempt was made to identify those households that had purchased at least two of the durables during the last two years to minimize forgetting effect (Khan, 2000), or had not received the same as dowry during
marriage in the household or as gifts from a relative living in a city. This resulted in a sample of 176 households.

Thus, the researcher administered the questionnaire on 176 households. For each product category, the respondent was asked to think of events, conversations, and thoughts leading to the relevant purchases made by the family and to indicate their involvement in the purchase decision. While administering the questionnaire the respondents were instructed not to consult one another and the researcher was present so as to respond to doubts and queries regarding the questions in the research instrument. The researcher made it a point to personally fill up the questionnaire in case of the illiterate respondents and children after explaining to them the contents of the questionnaire. It should be kept in mind that the data collection instrument was the same for all the respondents. This was necessary for avoiding bias of any type and it also facilitated comparative study of the sample.

After collecting the data from 176 households, at the editing stage, it was found that questionnaires from 152 families (499 individuals) were suitable for further analysis. The rest of the questionnaires had to be discarded as they were incomplete in various respects such as missing information pertaining to critical questions etc.
Fig 3(a): Schematic Diagram Representing Broad Sampling Plan for the Study

Aligarh District (12 Blocks)

Random Sampling of Blocks (4 Blocks)

Gangiri Block

- Charrah (Village)
  - 19 Households
    - 125 Individuals

- Naushabarla (Village)
  - 15 Households

Lodha Block

- Rorawar (Village)
  - 14 Households
    - 83 Individuals

- Talashpur (Village)
  - 16 Households

Dhanipur Block

- Barotha (Village)
  - 22 Households
    - 143 Individuals

- Kamalpur (Village)
  - 21 Households

Jawan Block

- Satha (Village)
  - 24 Households

- Jarothei (Village)
  - 21 Households

19 Households
15 Households
14 Households
16 Households
22 Households
21 Households
24 Households
21 Households
Fig 3(b): Schematic Diagram of Sampling Plan for Blocks (For ex. Gangiri)

Gangiri Block

Charrah Village
175 households
35 Households
19 Households
72 Individuals

Naushabarla Village
110 households
22 Households
15 Households
53 Individuals

Households that tentatively qualified for the study
Random selection of 20% of tentative households.
Households that finally qualified for the study
Total number of individuals from the two villages

125 Individuals from Gangiri Block
Before proceeding further, it is necessary to describe the sample in terms of demographics, the profile of which is given in Tables 3.2 (a, b, c, d, e and f)

Table 3.2(a) Gender Profile of the Sample

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>265</td>
<td>53.1</td>
<td>53.1</td>
<td>53.1</td>
</tr>
<tr>
<td>female</td>
<td>234</td>
<td>46.9</td>
<td>46.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>499</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Of the 499 respondents 53% were male while 47% were females.

Table 3.2(b): The Life Stage Breakup of the Sample

<table>
<thead>
<tr>
<th>Life Stages</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre - Teen</td>
<td>20</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Teen age</td>
<td>103</td>
<td>20.6</td>
<td>20.6</td>
<td>24.6</td>
</tr>
<tr>
<td>Early Adulthood</td>
<td>93</td>
<td>18.6</td>
<td>18.6</td>
<td>43.3</td>
</tr>
<tr>
<td>Middle Adulthood</td>
<td>145</td>
<td>29.1</td>
<td>29.1</td>
<td>72.3</td>
</tr>
<tr>
<td>Late Adulthood</td>
<td>120</td>
<td>24.0</td>
<td>24.0</td>
<td>96.4</td>
</tr>
<tr>
<td>Old Age</td>
<td>17</td>
<td>3.4</td>
<td>3.4</td>
<td>99.8</td>
</tr>
<tr>
<td>Very Old</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>499</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

About 71% of the respondents belonged to various stages of adulthood. Major proportion belonging to the middle adulthood stage (usually the productive and earning section of the population), next significant proportion (21%) belonged to the teenage segment (this segment nowadays is considered to be an important segment as far as buying process is concerned).
Figure 3(c): Gender Profile of the Sample

- Male: 47%
- Female: 53%

Figure 3(d): The Life Stage Breakup of the Sample

- Pre-teen: 24%
- Teenage: 28%
- Early Adulthood: 4%
- Middle Adulthood: 4%
- Late Adulthood: 4%
- Old Age: 21%
- Late Old Age: 19%
Table 3.2(c): Educational Profile of the Sample

<table>
<thead>
<tr>
<th>education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid illiterate</td>
<td>51</td>
<td>10.2</td>
<td>10.2</td>
<td>10.2</td>
</tr>
<tr>
<td>middle school</td>
<td>154</td>
<td>30.9</td>
<td>30.9</td>
<td>41.1</td>
</tr>
<tr>
<td>high school</td>
<td>104</td>
<td>20.8</td>
<td>20.8</td>
<td>61.9</td>
</tr>
<tr>
<td>under graduate</td>
<td>89</td>
<td>17.8</td>
<td>17.8</td>
<td>79.8</td>
</tr>
<tr>
<td>graduate</td>
<td>73</td>
<td>14.6</td>
<td>14.6</td>
<td>94.4</td>
</tr>
<tr>
<td>post graduate</td>
<td>28</td>
<td>5.6</td>
<td>5.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>499</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

This is an encouraging finding which shows that only 10% of the sample was illiterate; a major chunk (52%) consisted of middle and high school students as well as dropouts. Another important finding is that about 20% were either graduates or postgraduates. The high literacy level can be attributed to proximity of these villages to major education centre i.e. Aligarh. The literacy rate of UP, as per the Census of India 2001, stands at 56.3% with male literacy rate of 69%.

Table 3.2(d): The Occupational Profile of the Sample

<table>
<thead>
<tr>
<th>occupation</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid agriculture</td>
<td>39</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
</tr>
<tr>
<td>government service</td>
<td>46</td>
<td>9.2</td>
<td>9.2</td>
<td>17.0</td>
</tr>
<tr>
<td>business</td>
<td>86</td>
<td>17.2</td>
<td>17.2</td>
<td>34.3</td>
</tr>
<tr>
<td>teaching</td>
<td>24</td>
<td>4.8</td>
<td>4.8</td>
<td>39.1</td>
</tr>
<tr>
<td>housewife</td>
<td>164</td>
<td>32.9</td>
<td>32.9</td>
<td>71.9</td>
</tr>
<tr>
<td>student</td>
<td>140</td>
<td>28.1</td>
<td>28.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>499</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Contrary to the expected response it was found that only 8% of the sample was involved purely in agriculture, this finding supports the observations of researchers like Bijapurkar (2002) who noted significant increase in non-farm based activities of villagers. In the present study, about 32% of the respondents were engaged in business and teaching or were in government service.
Figure 3(e): Educational Profile of the Sample

- Literate: 14.60%
- Middle School: 5.60%
- High School: 10.20%
- Under Graduate: 17.80%
- Graduate: 30.90%
- Post Graduate: 20.80%

Figure 3(f): The Occupational Profile of the Sample

- Agriculture: 28%
- Govt. Service: 8%
- Business: 9%
- Teaching: 33%
- Housewife: 5%
- Student: 17%
Table 3.2(e) Income Profile of the Sample

<table>
<thead>
<tr>
<th>Income Groups</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid No income</td>
<td>303</td>
<td>60.7</td>
<td>60.7</td>
<td>60.7</td>
</tr>
<tr>
<td>Rs. 1000 to Rs. 4999</td>
<td>74</td>
<td>14.8</td>
<td>14.8</td>
<td>75.6</td>
</tr>
<tr>
<td>Rs. 5000 to Rs. 9999</td>
<td>94</td>
<td>18.8</td>
<td>18.8</td>
<td>94.4</td>
</tr>
<tr>
<td>Rs. 10000 to Rs. 14999</td>
<td>19</td>
<td>3.8</td>
<td>3.8</td>
<td>98.2</td>
</tr>
<tr>
<td>Rs. 15000 to Rs. 20000</td>
<td>9</td>
<td>1.8</td>
<td>1.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>499</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

A significant proportion belonged to the no income segment but this segment consisted of not only unemployed youths but also students and a large proportion of housewives as the women, even if literate, did not go out to work. The second largest segment was that of middle-income group (this segment usually constitutes the consuming class).

Table 3.2(f): Profile of Families: Nuclear & Joint

<table>
<thead>
<tr>
<th>type of family</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>351</td>
<td>70.3</td>
<td>70.3</td>
<td>70.3</td>
</tr>
<tr>
<td>nuclear family</td>
<td>148</td>
<td>29.7</td>
<td>29.7</td>
<td>100.0</td>
</tr>
<tr>
<td>joint family</td>
<td>499</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

As is clear from the table, out of 499 respondents, majority (70%) belonged to nuclear family set up while only about 30% approx. belonged to joint family set up which is contrary to the popular belief of prevalence of joint families in the rural areas.
Figure 3(g): Income Profile of the Sample

- No Income: 15%
- Rs. 1000 - Rs 4999: 19%
- Rs. 5000 - Rs 9999: 4%
- Rs. 10000 - Rs 14999: 2%
- Rs. 15000 - Rs 20000: 60%

Figure 3(h): Profile of Families: Nuclear & Joint

- Nuclear Family: 70%
- Joint Family: 30%
3.9 Method of Analysis

So as to maintain data integrity, at the outset, the database was maintained using **SPSS 13 Software Package**. This was essential because for each family member about 75 data entries (7 for the demographic section of the questionnaire and 68 for the decision stages and the sub-decisions for the eight products under study) had to be performed. The maintenance of such a huge database (consisting of about 37,425 data cells) was not possible using any other available software.

The nature of the data necessitated the use of non-parametric tests viz. Kruskal-Wallis-H Test* and Mann-Whitney-U Test*(Malhotra, 2004; Aczel & Sounderpandian, 2006). The use of cross-tabulations has also been made at appropriate places.

For the purpose of ascertaining whether there were significant differences in the responses vis-à-vis respondent’s position in the family, life stages, education, and occupation for the various decision stages and the related sub-decisions for each product, the Kruskal-Wallis-H test was employed on the respective frequencies.

For ascertaining variations in the responses from nuclear and joint families in case of each of the decision stages and also with respect to the sub-decisions for each of the product Mann-Whitney-U Test was employed.

---

* The **Kruskal Wallis H Test** is the non-parametric alternative to the Analysis of Variance – Between Subjects. It uses the rank value of each case, not merely its location to the median. The Kruskal Wallis H test, is used when scores on a continuous variable have to be compared by the levels of a categorical variable with 3 levels or more. The formula being:

\[ H = \frac{12}{n (n + 1)} \left( \sum_{i=1}^{k} \frac{R_i^2}{n_i} \right) - 3 (n + 1) \]

* The **Mann-Whitney-U Test** is the non-parametric alternative to the Independent-samples t-test. The independent-sample t-test is used to examine for significant differences in means scores of two levels of an independent (categorical) variable. The Mann-Whitney U Test is used to examine for significant differences on non-parametric continuous data between two levels of a categorical variable. The formula being:

\[ U = n_1n_2 + \frac{n_1(n_1+1)}{2} - R_i \]

Note: For detailed description please see Appendix IV
Figure 3 (i): Flow Chart Depicting Schema of Analysis

Development of Survey Instrument

- Views of Subject Experts
- Literature Review
- Interactions with Representative Sample

Data from Four Blocks (8 villages) Randomly Selected

- Reliability Analysis Using Cronbach's alpha
- Validity Checked through Subject Experts

Kruskal-Wallis-H Test used to analyze difference in involvement in different stages and sub decisions vis-à-vis member's position in the family and life stages.

Mann-Whitney-U Test used to analyze differences in involvement in different stages and sub decisions vis-à-vis family type.

Findings vis-à-vis Involvement of Family Members during Stages as well as Sub-Decisions in Purchase Decision Making Process
3.10 Limitations

Though, a number of precautions have been taken to increase the reliability of the present study, yet the researcher feels that there are certain limitations which may be given due consideration:

- Limitations of time, funds and willingness of the respondents dictated that the sample could not be larger than the present one. Although this fact limits the generalizability of results, the researcher believes that it represents a necessary and economical first step in identifying useful concepts and relationships that can later be tested in larger, more representative samples in the Indian rural context.

- Since the results pertain to only a special group of respondents and specific decision process, they strongly indicate the need for additional work to examine a number of methodological and practical questions. These include:

  - the extent to which measures of influence attributed to husband, wife, children and grandparents affected by the size of the decision making unit.
  
  - the nature of the influence structure in households having compositions different from those in this study.
  
  - the manner in which household decision making involving different types of decision making units is affected by the product/service category being purchased.

- India being a multilingual, multi-religious and multi-regional country, the sample drawn may not be representative of the entire Indian population and therefore, generalisation has to be done with caution.

- The findings cannot be generalized to the country as a whole owing to socio-economic and cultural diversity.

- There is a possibility of respondent’s bias vis-à-vis conservative social norms prevalent in rural India. Being an issue concerning “inside” information of their family, the respondents may have given answers desirable from social point of view.
There is a possibility of respondent’s bias from another angle. They may have given replies that were desirable from their point of view.

The relative influence of relatives and friends has largely been ignored. Ideally, the study should have included the influence of relatives and friends. But practical difficulties imposed by the retrospective nature of responses (a product may have been purchased a year back and it is practically impossible for any researcher to account for role played by “outside” elements like relatives and friends, in such a scenario.

Though, effect of type of family (i.e. nuclear and joint) on family purchase decisions has been studied, yet, some other moderating variables may also have been responsible for shift in influence of family members such as duration of marriage. Thus, there is a need for detailed study of the same.