CHAPTER 4

RESEARCH METHODOLOGY

This is an empirical study based on past actual purchase decisions made by the spouses. This study measured the spousal influence and conflict on actual purchase decisions.

A brief account of methodology for the present research and justification of the approach is summarised. However, due care was taken at every stage to overcome all limitations in the methodology adopted for, of earlier studies in family purchase decision making.

SELECTION OF THE AREA FOR THE STUDY

The geographical area for this study was limited to Coimbatore City, Tamilnadu. Only couples living in the city of Coimbatore City were considered for this study, the main reason being that the investigator was located here and was familiar with the place. Further cost and time constraints were the other considerations in restricting the study to Coimbatore city. Also Coimbatore City has the dubious distinction of being an active commercial centre with a large and heterogeneous group of people, who have come from various parts of the country to settle down in their business. Coimbatore with a population of around 15 Lakhs, has a huge proportion of middle and upper middle income group, who offer a large potential market for such durables.
SELECTION OF RESPONDENTS

The major problems which researchers have encountered earlier in the study of family purchase decision making behaviour is the choice of the respondents. Questions have been raised as to whether it matters who is to be interviewed when investigating "influence" and "conflict" in family purchase decision making. Should it be the wife, or husband or both? Should it be only the children or just one of them? Or should it be both children and parents?

Although many researchers have used 'only wives' as respondents for their research (Cunningham and Green, 1975; Szybillo, 1977; Green et al., 1983; Imperia et al., 1985), this practice has not been appreciated by most of the consumer researchers as they contend that it (wives response) will only reflect the individual perception and not that of the family (Weber and Hansen, 1975; Davis 1976; Qualls, 1987 Robert Boutilier, 1993; Samsinar MD. Sidin, 1994). These researchers have also pointed out the problem of over estimation of oneself compared to the other spouse as inherently present in such studies and have suggested that the best approach is to obtain responses from both the spouses.

The possibility of including children as respondents in the present study was also considered but certain issues like (1) children of which age group (adolescent, teenage) are to be included. (2) the probability of families sampled having children in this age group. (3) children's ability to express their influence properly were to be addressed. To overcome these issues, this study included
only families in which the age of the eldest child was below 10 years. The children in this age group do not play a major role in purchase of such durables. Hence only both the spouses were chosen as respondents for this study. Further in a joint family the results would be dissipated by the influence of other family members. Hence all the spouses who constituted the sample for this study were from nuclear families.

**CHOICE OF THE PRODUCTS FOR THE STUDY**

Although the list of consumer durables is exhaustive, a careful consideration was given in choosing the durables for this study. The durable products examined in the present study involved a diverse set of three products found in a household viz., television, refrigerator and washing machine. The selection can be justified because these purchases represent important family decisions. Also they usually involve substantial outlay, extended period of ownership, social importance and jointly used by several members of the family. In terms of other consumer research, all these would undoubtedly be classified as "policy or major economic" decisions. Many studies have found that husband and wife are the major participants in these purchases. Further a recent survey by Indica Research Group (Business Line) on an all-India basis with 1212 respondents, found that these three durables were gaining an entry into every middle income household segment and have become a necessity to modern living (Dinesh Kapoor, July 1997). Thus unlike in the past studies, due care and attention were exercised in the selection of the products for this study.
SAMPLING PLAN

Snowball sampling method was adopted in the first stage to identify the eligible spouses in Coimbatore city for this study. The researcher contacted his friends, relatives, peers and colleagues and asked them to identify families in which the age of the eldest child was not over 10 years and that they owned the three durables in this study. Each of these contacts so identified, were asked to name the families in which the age of the eldest child was below 10 years and owned atleast two of the three durables. The investigator used every source of contact he came across, in the process of identifying the spouses fulfilling the above criteria. This chain process was carried out and a list of around 3100 families was generated. Considering this as the universe, a sample of 1000 spouses were drawn using a simple random sampling method. This plan was found to be more convenient in identifying the spouses for this study.

SELECTION OF THE TOOL FOR THE STUDY

Several possible methods of collecting data for this study like observation and questioning of the respondents at the point of purchase, interviewing the couples using an interview schedule in their home, or through self administered questionnaire were considered. However, the questionnaire method was found to be more convenient and hence adopted. Practical problems of interviewing both the spouses together was one difficulty; the cost and time involved in using the other two methods discouraged their use.
PREPARATION OF THE QUESTIONNAIRE

The investigator as part of the pilot study interviewed about 20 couples on their consumer durables purchase decisions. They were asked to narrate the process they underwent in purchasing the durables like television, refrigerator, washing machine etc... The responses were carefully recorded. Various questions were posed to them on the sub-decisions in the purchase process. Also the investigator made an extensive survey of related literature to comprehend the various sub-decisions involved in the purchase process. The most interesting aspect that attracted the attention of the investigator was the extent of 'influence' of both spouses in these sub-decisions and the degree of disagreement between the spouses on these sub-decisions and how these disagreements were resolved. Hence a questionnaire was prepared to measure the aspects of spousal influence and disagreements on these sub-decisions. The investigator sought the guidance and advice of several experts and academicians in the process of construction of the questionnaire. Understanding of spousal influence and conflict in decision process will help marketers identify the spouse who will have major influence on various sub-decisions and thus develop effective marketing plans. Such understanding will also help scholars develop new marketing theories.

QUESTIONNAIRE DESCRIPTION

The questionnaire contained a covering letter explaining the purpose of the study seeking the co-operation of the respondents. The respondents were given an assurance that all data collected would be kept strictly confidential and used only for research purpose. The respondents were not asked to disclose their
identity in any part of the questionnaire. All this would encourage the
respondents to give a free and frank response.

Part one of the questionnaire tried to measure the relative influence of
both the spouses on various sub-decisions relating to purchase of the durables
viz., television, refrigerator and washing machine. The researcher took great care
in explaining to the respondents the meaning of 'relative influence' and clear
instructions were given as to how the respondents should fill in their responses.

The influence of the spouses on 13 sub-decisions towards the purchase of
the durables were measured using a five point scale "1=Husband exclusively",
"2=Husband more than wife", "3=Husband and wife both equally", "4= Wife
more than husband", "5=wife exclusively". The various sub-decisions like
initiation of purchase, brand choice, choice of model, information gathering and
processing, financing the purchase, mode of payment etc., were included in this
part.

Part two of the questionnaire tried to measure the extent of disagreement
between the spouse on the various sub-decisions in part 1. The meaning of
disagreement was carefully explained giving an illustration as to how the
respondents should fill in their responses. The degree of disagreement was
measured using a three point scale "1=considerable disagreement", "2=no
disagreement", '3=mild disagreement". In whose favour the disagreements if any
were resolved was also analysed, for each product category. Direct questioning
of this sort assumes, according to Kenkel (1961), that the individuals (1) know
the relative influence and disagreements they have; (2) are willing to admit it to themselves; and (3) are able to recall with accuracy how much influence and disagreement were distributed in the past decisions making situations. Although these assumptions are undoubtedly questionable, it was felt that direct questions about the specific decisions would be the best approach for measuring spousal influence and conflict in family purchase decision making. Part three of the questionnaire contained questions on family details like age of the spouse, educational qualification, number of children in the family, whether wife is employed, details of family income, family status, years married, etc... The questionnaire also included questions on the order of purchase of these three durables, how many brands were considered in each product category, total time spent in considering the purchase, all of which will help in better understanding these purchase decisions. The investigator contacted several experts and incorporated their suggestions before finalising the layout and content of the questionnaire.

PRETESTING THE QUESTIONNAIRE (TOOL)

The reliability of the questionnaire was assessed before it was administered to the entire sample selected. The test-retest reliability method was used in measuring the reliability of the instrument. Thirty respondents were administered the same questionnaire twice, with 15 days time interval between the two administrations. The names of the respondents were marked on the questionnaires and the two responses were carefully paired together for analysis. The reliability coefficient 'r' was calculated as r=0.5832 and its significance was tested using t-test. The computed value of $t_o = 3.341$ and the value of $t_e = 2.069$. 
Thus $t_0$ is greater than $t_e$ which implies that the reliability coefficient was significant. This has given the researcher the confidence to utilise the questionnaire for data collection and analysis.

**ADMINISTRATION OF THE QUESTIONNAIRE**

The investigator personally called on the 1000 spouses at a convenient time in their home to administer the questionnaire. Envelope containing the questionnaire was handed over to the spouses after explaining the purpose of the study. The couples were requested to fill in their joint responses to the questions in the questionnaire in consultation with each other. The investigator told them that he would come back after a week to collect them back.

**DATA COLLECTION PROCEDURE**

The data were collected by the researcher himself in person by approaching each couple in their houses. The investigator took a lot of efforts, in establishing a good rapport with these families. The purpose of the study was explained to the spouses and their earnest co-operation was sought. The researcher also had to instil confidence in the respondents that data would be kept strictly confidential and used only for research purpose. Questionnaires were handed over to the couples in their homes in person by the researcher and the completed questionnaires were collected back by him after a week. The help of the researcher was also sought by few couples in filling up their responses. This process thus enhanced the reliability of the method of data collection. This process took nearly one year of time to complete.
CONSOLIDATION AND TABULATION OF DATA

The questionnaires collected were scrutinised in all aspects. 862 questionnaires were duly completed and returned. Some respondents did not complete part 2 of the questionnaire on disagreement and some of them were incomplete with respect to family details. After elimination of such responses a total of 663 responses constituted the final sample size for analysis. The data from these questionnaires were consolidated, checked for their consistency and tabulated for analysis.

STATISTICAL TECHNIQUES USED

Paired T Test

Paired t test is considered as appropriate test for judging the significance of the mean of difference between two related samples. The relevant test statistic $t$, is calculated from the sample data and then compared with its probable value based on $t$ distribution (read from the table that gives probable values of $t$ for different levels of significance for different degrees of freedom) at a specified level of significance for concerning degrees of freedom for accepting or rejecting the null hypothesis. In this study t test was used to compare the mean influence scores of any household between two products. It is applied to find out whether there was significant difference in the mean of difference between the influence scores between any two products. Also t test was applied to find out whether there was significant difference in the mean of difference between the influence scores across various sub-decisions between the products.
ANOVA (Analysis of Variance)

ANOVA is a statistical technique commonly used in marketing research for studying the differences among or between groups (independent variables) on a single dependent variable. In this study one way ANOVA has been used to test whether the independent variables such as age of youngest child, number of children and length of years married are significant in explaining variations in the overall mean influence scores in the purchase of the three durable products.

Factor Analysis

Factor analysis is a method of identifying groups of variables which constitute independent response sets. Factor analysis seeks to resolve a large set of measured variables in terms of relatively few categories, known as factors. A Principal component analysis (Varimax rotated) is applied in the present study to husband-wife responses regarding spousal influence across all the 15 sub-decision elements for each durable product. These 15 sub-decision elements (variables) are grouped into factors (based on correlation between variables) and their value derived by summing the values of the original variables which have been grouped into the factors.

Friedman Two Way ANOVA

Friedman two way ANOVA is a non parametric test which was applied to test whether priority of purchases for the three durables, namely, television, refrigerator and washing machine were random or specific.
Chi-Square Test

Chi-Square test is a technique of judging the significance of association or relationship between two attributes. Chi-square test is used in this study in judging the significance of association or relationship between wife's employment status and number of disagreements resolved in her favour in the sub-decisions relating to purchase of the three durables.

SELECTION OF VARIABLES

Four major variables were considered in this study. The impact of these variables on the purchase decision process was analysed. The variables were spousal influence, relative resource contribution, working wives participation, and conflict in decision process. These variables were selected because of their consistent identification in the family research literature. The inclusion of these variables in analysis would enable one to better understand the family purchase decision making behaviour and help build marketing theories. The rationale and theoretical support for selecting each of these variables have already been discussed extensively in chapter three of this thesis.

Measurement of Influence

For measuring the spousal influence on a particular sub-decision element, the scores on each sub-decision were averaged for all the families in the sample. Mean influence scores were later standardised before attributing each sub-decision to one of the three categories (husband decided, joint and wife decided). The procedure adopted along with the calculations are discussed in chapter 5.
Measurement of Relative Resource Contribution

Relative resource contribution index is shown in the following table. It was formulated by way of measuring the differences between the two spouses (husband's and wife's) respective educational attainment, income contribution and age. Family units were assigned a score of 1 or 2 on each of these variables depending on whether the husband is more than the wife on any of these variables (1), or wife is equivalent to or greater than the husband on any one of these variables (2).

<table>
<thead>
<tr>
<th>COUPLES RRC INDEX</th>
<th>RRC index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1)</strong> Educational Attainment:</td>
<td></td>
</tr>
<tr>
<td>Husband more than wife</td>
<td>(1)</td>
</tr>
<tr>
<td>Wife more than or equivalent to husband</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>(2)</strong> Income contribution (Per Month):</td>
<td></td>
</tr>
<tr>
<td>Husbands income is Rs 500 more than the wife's</td>
<td>(1)</td>
</tr>
<tr>
<td>Wife's income is equivalent to or more than husband's</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>(3)</strong> Age:</td>
<td></td>
</tr>
<tr>
<td>Husband is elder by three years or more</td>
<td>(1)</td>
</tr>
<tr>
<td>Husband is elder by less than 3 years or wife is elder than husband</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td><strong>Category:</strong></td>
</tr>
<tr>
<td>4 or less</td>
<td>RRC of husband is &gt; wife</td>
</tr>
<tr>
<td>5 or more</td>
<td>RRC of wife is &gt;= husband</td>
</tr>
</tbody>
</table>
Measurement of WWP

A dummy code of 1 and 0 respectively used to represent families in which the wife was employed outside the house and families in which the wife was not employed respectively. These two groups were analysed with respect to purchase decisions to see if there were any significant differences between these groups.

Conflict in Decision Making

For measuring the conflict (degree of disagreement) on a particular sub-decision element, the scores on each sub-decision were averaged for all the families in the sample. Mean disagreement scores were standardised before attributing each sub-decision to one of the three categories (no disagreement, mild disagreement and considerable disagreement). The procedure adopted along with the calculations are discussed in chapter 6.

PROFILE OF THE SAMPLE

A total sample of 663 couples belonging to nuclear families constituted the final sample for this study. The mean age of the husbands was 39 (38.81) years with a standard deviation of 5 (4.9) years. The mean age of wives was 33 (32.76) years with a standard deviation of 5 (4.62) years. In 58 per cent of the families both the spouses had an educational status of graduation and above. Mean number of children in the family was 2 (1.88) with a standard deviation of 1 (0.70). Sixty four per cent of the families had 2 children, 26 per cent of the families had 1 child and 10 per cent of the families had no children. The mean age of the eldest child was 9.7 years with a standard deviation of 5 and that of the
youngest child was 5.9 years with a standard deviation of 3.4. The average size
of the family was 4. Average number of years married was 10 years with a
standard deviation of 4 years. The mean monthly income of husband was
Rs.7670 with a standard deviation of Rs.4770 and that of the wife was Rs.4580
with a standard deviation of Rs.4000. Mean number of years of work experience
for husband was 15 years, while that of wife was 9 years in the families where
wife was employed. In 25 per cent of the 663 families wife was employed. The
sample is skewed towards middle and upper middle income class with 56 per
cent of the families coming under the income group of Rs.3000 - Rs.7500 per
month. In 27 per cent of the families monthly income was Rs.10,000 and above.
This is reflected in the reported occupation of the husband: 21 per cent
professionals, 32 per cent white collared jobs and 42 per cent business. It is very
interesting to note that 42 per cent of the families had their own business, as
Coimbatore city is well known for the opportunities it offers the young
entrepreneurs. Fifty one per cent of the families lived in their own houses while
49 per cent of them were living in rented house. The mean rent per month was
Rs.1615 with a standard deviation of Rs.1019. Sixty nine per cent of the
husbands had two wheelers for commuting, while 23 per cent of them had a four
wheeler for commuting. Fifty three per cent of the families had reported that
domestic help (servant) was available. This may have significant impact on the
demand for such durables like refrigerator and washing machine. 98 per cent of
the sampled families owned television sets, 93 per cent of families had
refrigerators and 83 per cent of them had washing machines. All the sampled
families taken for this study owned at least any two of the three durables.
LIMITATIONS OF THE STUDY

1. The impact of only selected variables were analysed in the present study although it has been found that many other factors like personality traits, satisfaction of marital life, cultural variables, situational variables and other socio-demographic factors not covered in this study may also have an effect on spousal influence and conflict in decision making.

2. The respondents in the present study had to recall past purchase experiences that might have occurred months or years ago. It would be possible that such data based on recall would be affected by forgetfulness and/or conscious or unconscious distortion of past experiences. This is taken care of duly by including families where purchases were made recently.

3. It is also possible that data may contain perceptual bias when the individual tends to give socially desirable response (Belch, Belch and Sciglimpaglia 1979).

4. The sample was limited to respondents of urban segment belonging to a single geographical area. Therefore caution needs to be exercised in extending these results as ascribed to other areas.

5. The respondents for this study have responded to the questionnaire in their houses. Thus there was no control over the response situation. Evidence indicates that the control of an interviewer is necessary for effective completion of the questionnaire by couples (Nuckols and Meyrn, 1970).

6. Another obvious limitation is the product choice; the results may not hold good for other consumer durable purchase decisions.