3.1 Problem

Consumer markets are evolving on a continuous basis making it imperative for researchers and marketers to track the changes taking place in consumer tastes, preferences and aspirations. Short product lifecycles, changing consumer lifestyles, faster technology adoption, rapid product diffusion, environmental concerns, etc. are further necessitating the need to keep a constant watch on the consumer behavior (Majumdar, 2010). Additionally there are a few specific problem areas identified after the literature survey which are unique to the topic of this study which are have been highlighted in this section.

Significant researches on reference group influence on consumer behavior like those of Park and Lessig (1977), Bearden and Etzel (1982), Rao and Childers (1992) have been conducted after long intervals in time. Bearden and Etzel’s apprehension was not out of place when they had stated that product diffusion may shift products over time from exclusive to common ownership and hence reduce the significance of reference group influence. Over long periods of time, when innovative products have replaced the old ones and the consumer profile has changed in terms of education, family structure, income, occupation, etc., it calls for revisiting the concept of reference group influence both theoretically and empirically. The case is further supported by the fact that not much empirical research has been done in the Indian context in the area of reference group influence on consumer behavior.

Prior studies on reference groups have mainly focused on whether some groups are more susceptible to reference group influence than other groups are e.g. students versus housewives (Park & Lessig, 1977), whether reference group influence is varied from one consumption context to another e.g. public versus private products and luxuries versus necessities (Bearden &
Etzel, 1982) and whether a different referent generates difference in influence on individual consumer behavior e.g. family versus peers (Childers & Rao, 1992). Not many researchers have probed the demographic factors affecting consumer’s susceptibility to reference group influence. Extant research has predominantly focused on very limited aspects of reference group influence on consumer behavior. Keeping the same in mind, present study attempts to investigate reference group influence, relative role of referents and demographic factors on product and brand choice decisions in the Indian context. Thus, it is expected that comprehensiveness of the present study would make it unique.

Further, it is widely accepted that constructs and theories developed in one country or culture (for example, the United States or the West) may be culturally bound (Weinshall, 1977) and their application on another culture without validation may result in “category fallacy” (Kleinman, 1977). Thus, there is a pressing need to replicate research in other countries to empirically test the applicability of constructs and theories in different cultural environments. It may lead to either increased confidence in the research findings or establishing the limits of the theory and suggestions for the modifications in the theory for new contexts. Since very few researches based on reference groups have been conducted in the Asian context, exploring the veracity of reference group theory in a tradition bound, collectivist Indian cultural context appears to be a logical sequel to the past researches done in this area. It is also expected that the present study would add to the extant body of knowledge in the subject area.

3.2 Context of the Study

Researchers agree that products and brands chosen by consumers often serve non utilitarian functions such as symbolic acquisitions and communication of social distinction particularly status (Douglas & Isherwood, 1979). Such concern with status display is even more important in developing countries where interpersonal relationships are of prime importance (Ger et al., 1993) and where, because of economic transition income disparities and status mobility are high (Belk, 1998) (Kottak, 1990). Development economist James (1993) argued that periods of economic development increase the importance of positional values oriented towards conspicuous consumption and status display. These reasons are even more pronounced in India, a developing country, subject of present study. India has always had a very hierarchy and status conscious
society (Kakar, 1981). There has always been a search for signs and markers of status and class, and successful Indians frequently like to display their riches through ostentatious exhibition of goods they possess (Singh, 1982).

With the recent opening up of its market and the changes in women’s roles, India is now undergoing significant changes, including rising incomes and changing expectations and tastes (Venkatesh & Swamy, 1994). In urban India, with the growth of nuclear and dual income families, the role of women has grown substantially and in real terms in major family decisions such as the purchase of house, automobile and durables. In most cases joint decision making is becoming common with a significant influence of children particularly in products like, cell phones, personal computers, music system, etc. Luckmann & Berger (1964) showed remarkable foresight when they pointed out that times of transition and social mobility magnify the tendency to claim differential status through the brand one consumes. India thus seems to be an appropriate locale for exploring reference group influence on consumer product and brand choice decisions.

3.3 Objectives of the Study

The main objective of this study is to measure consumer susceptibility to reference group influence on product and brand choice decisions.

The study has the following specific objectives:

- To present a conceptual framework of reference group influence on product and brand choice decisions.
- To classify selected products into categories such as: Public Luxury, Public Necessity, Private Luxury and Private Necessity.
- To explore the differences between respondents’ susceptibility to reference group influence for product choice decisions vis-a-vis demographic variables.
- To explore the differences between respondents’ susceptibility to reference group influence for brand choice decisions vis-a-vis demographic variables.
To explore the differences between selected product categories with respect to different forms of reference group influences on product choice decisions.

To explore the differences between selected product categories with respect to different forms of reference group influences on brand choice decisions.

To explore the differences between selected product categories with respect to the influence exerted by different referents on product choice decisions.

To explore the differences between selected product categories with respect to the influence exerted by different referents on brand choice decisions.

3.4 Research Instrument

Reference group influence was assessed using 10 of the 12 items developed by Bearden et al. (1989). Following a pilot study of 40 students of MBA programme, some modifications to the items were made to adequately capture the concepts in the Indian context. The normative component of the original scale was bifurcated into utilitarian and value expressive components as it was considered more suitable in the Indian cultural context to use a three factor scale which could preserve both an identity element and a social approval element. Thus, the items were designed to reflect informational, utilitarian and value-expressive reference group influences.

Informational reference group influence occurs when a person actively seeks information from people viewed as knowledgeable or observes the behavior of experts. It is based on the concept of comparative influence suggested by Deutsch & Gerard (1955). Utilitarian reference group influence is reflected in compliance to group norms or standards to gain rewards or avoid punishments that may be forthcoming from the group (Asch, 1952). Value-expressive reference group influence is characterized by a person behaving in a manner that will improve his or her self-image or create the impression of attachment to the group (Kelman, 1961). Based on the literature review, peers were considered as referents for all the three forms of reference group influence. Family was considered for informational and utilitarian influence. Experts were considered for the informational influence only, while celebrities were considered only for value expressive influence.
A five-point bi-polar Likert scale was used to gauge the response of the respondents, where 5 represented strongly agree and 1 represented strongly disagree. Scales were scored in such a way so that higher values represented greater influence perception. The three variations of group influence were represented as a summed composite of four informational, three value expressive and three utilitarian items.

**Reliability and Validity of the Research Instrument**

Measures of variables should have validity and reliability (Cronbach, 1971; Nunally, 1978) in order to draw valid inferences from the research. Reliability deals with how consistently similar measures produce similar results (Rosental & Rosnow, 1984) and it has the two dimensions of repeatability and internal consistency (Zigmund, 1995). Reliability of a scale refers to how consistent or stable the ratings generated by the scale are likely to be (Parasuraman et al., 1991; Malhotra, 2007; Warner, 2008). The most commonly used approach to measure internal consistency of a scale is Cronbach’s alpha (Cronbach, 1951; Warner, 2008). 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. Cronbach’s alpha is the average of all possible split-half coefficients resulting from different ways of splitting the scale items (Malhotra, 2007). Cronbach’s alpha tends to be high if the scale items are highly correlated (Hair, Anderson, Tatham and Black, 1998). An important property of coefficient alpha is that its value tends to increase with an increase in the number of scale items. Therefore, coefficient alpha may be artificially and inappropriately, inflated by including several redundant scale items (Malhotra, 2007).

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. There does not seem to be a consistent opinion on the value of Cronbach’s alpha for scale reliability. An alpha of 0.50 or above is considered by
Bowling (2002) as an indication of good internal consistency, whereas an alpha of 0.70 or above is considered satisfactory by Howitt and Cramer (2003). In this research, informational influence, value expressive influence and utilitarian influence were checked for reliability by determining Cronbach’s alpha and an alpha value of 0.60 or greater was considered acceptable.

Table 3.1 compares the alpha values of the current study with the alpha values of two major studies on reference group influence on product and brand decisions. It may be safely inferred that the alpha values of the current study fulfill the basic requirements of acceptability.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence</td>
<td>Product Decision</td>
<td>Brand Decision</td>
<td>Product Decision</td>
</tr>
<tr>
<td>Informational</td>
<td>0.63</td>
<td>0.70</td>
<td>0.77</td>
</tr>
<tr>
<td>Value expressive</td>
<td>0.88</td>
<td>0.80</td>
<td>0.90</td>
</tr>
<tr>
<td>Utilitarian</td>
<td>0.71</td>
<td>0.77</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Validity of a measurement scale is the extent to which the scale fully captures all aspects of the construct to be measured (Parasuraman et al., 1991; Hayes, 1998; Garson, 2002). In a general sense, a measurement scale is considered to be valid if it measures what it is intended to measure. Three types of instrument validity are generally considered for researches. They are content validity, convergent validity and discriminant validity.

Content validity also known as face validity, is defined as the extent to which the content of a measurement scale appears to tap all relevant facets of the construct it is attempting to measure (Parasuraman et al., 1991; Ding & Hershberger, 2002; Malhotra, 2007; Warner, 2008). It refers to the degree that the construct is represented by the items that cover the domain of meaning for the construct (Garver et al., 1999; Malhotra, 2007). Content validity is a subjective agreement among concerned professionals (Parasuraman et al., 1991).

Convergent validity is a form of construct validity which refers to the degree to which multiple attempts to measure the same concept are in agreement (Garson, 2002; Warner, 2008). It deals with the question “do the items intended to measure a single latent construct statistically converge together” (Garver et al., 1999). Operationally, convergent validity is assessed by the
extent to which the latent construct correlates to items designed to measure that same latent construct.

Discriminant validity is assessed by the extent to which the items representing a latent construct discriminate that construct from other items representing other latent constructs (Garver et al., 1999; Warner, 2008). It is also a form of construct validity but it represents the extent to which measures of different concepts are distinct (Malhotra, 2007). Convergent validity and discriminant validity together form the construct validity.

In this research, the content validity of the measurement instrument was assessed by requesting subject experts to provide feedback. The expert panel of 14 members included faculty members and scholars from the disciplines of Marketing, Consumer behavior and Psychology. After they reviewed the questionnaire, based on their feedback changes were made to clarify and eliminate ambiguous statements. The study employs widely used method of measuring content validity developed by C. H. Lawshe (1975). It is essentially a method for gauging agreement among raters or judges regarding how essential a particular item is. Lawshe (1975) proposed that each of the Subject Matter Expert raters (SMEs) on the judging panel respond to the question for each item: “Is the skill or knowledge measured by this item ‘essential’, ‘useful, but not essential’, or ‘not necessary’ to the performance of the construct?” According to Lawshe (1975), if more than half the panelists indicate that an item is essential, that item has at least some content validity. Greater levels of content validity exist as larger numbers of panelists agree that a particular item is essential. Using these assumptions, Lawshe developed a formula termed the content validity ratio: \( CVR = \frac{n_e - N/2}{N/2}, \) where \( CVR = \) content validity ratio, \( n_e = \) number of SME panelists indicating "essential", \( N = \) total number of SME panelists. This formula yields values which range from +1 to -1; positive values indicate that at least half the SMEs rated the item as essential. The mean CVR across items may be used as an indicator of overall test content validity. The minimum values of the CVR to ensure that agreement is unlikely to be due to chance can be found in the following table:
Table 3.2: Minimum Content Validity Ratio (CVR) Requirements

<table>
<thead>
<tr>
<th>Number of Panelists</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Value</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
</tr>
</tbody>
</table>

(Adapted from: Lawshe, 1975)

Any item, which is perceived to be essential by more than half of the panelists, has some degree of content validity and as more panelists (beyond 50%) perceive the item as essential, the degree of content validity increases. CVR for most items in the present study ranged from 0.57 to 0.71. CVR for item numbers 9 and 11 of the original scale (Bearden et al., 1989) were 0.42 and 0.28 respectively and were therefore dropped from the questionnaire.

It is worth noting that most of the initial studies on reference group influence have used Park and Lessig’s scale (1977). For example, Bearden & Etzel (1982) used 13 of the 14 items while Childers and Rao (1992) used all 14 items of Park and Lessig. Bearden et al. (1989) refined the original Park and Lessig’s scale and reduced the number of items to 12 from 14. In this attempt they also combined the utilitarian and value expressive components into normative influence due to high correlation between them. Subsequently most of the studies on reference group influence have been using Bearden et al. (1989) scale (e.g. Arora and Stoner, 1995; Mehta et al., 2001; Auty and Eliott, 2001; Clark and Goldsmith, 2006; Bravo et al., 2006). Thus, it makes a fairly good case to use the instrument developed by Bearden et al. (1989) for the present study as it minimizes the need for elaborate re-validation of the instrument.

3.5 Survey Design

The research design called for separate reference group influence evaluations of product and brand choice decisions for 16 products, for a total of 32 evaluations. To have a manageable questionnaire and to reduce respondents’ fatigue, it was decided that an individual respondent should be required to deal with a total of 4 evaluations. Thus, 8 different versions of the survey instrument were constructed. Four versions contained product choice decisions and four contained brand choice decisions. One product was selected from each of the four categories-PUL, PUN, PVL and PVN to make up each of the versions. Order of the product categories was
randomized across the eight versions of the questionnaire to avoid order bias. The questionnaire and sample configurations are illustrated in the table below:

<table>
<thead>
<tr>
<th>Decision Type</th>
<th>Group</th>
<th>Product</th>
<th>Luxury</th>
<th>Necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Decisions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1 (n=79)</td>
<td>Public</td>
<td>Digital Camera</td>
<td>Pen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Home Theatre</td>
<td>Toothpaste</td>
<td></td>
</tr>
<tr>
<td>Group 2 (n=74)</td>
<td>Public</td>
<td>Tennis Racquet</td>
<td>Shoes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>AC</td>
<td>Pain Balm</td>
<td></td>
</tr>
<tr>
<td>Group 3 (n=67)</td>
<td>Public</td>
<td>Car</td>
<td>Trousers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Bathtub</td>
<td>Mattress</td>
<td></td>
</tr>
<tr>
<td>Group 4 (n=65)</td>
<td>Public</td>
<td>Sunglasses</td>
<td>Wrist Watch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Microwave</td>
<td>Refrigerator</td>
<td></td>
</tr>
<tr>
<td><strong>Brand Decisions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 5 (n=71)</td>
<td>Public</td>
<td>Digital Camera</td>
<td>Pen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Home Theatre</td>
<td>Toothpaste</td>
<td></td>
</tr>
<tr>
<td>Group 6 (n=68)</td>
<td>Public</td>
<td>Tennis Racquet</td>
<td>Shoes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>AC</td>
<td>Pain Balm</td>
<td></td>
</tr>
<tr>
<td>Group 7 (n=72)</td>
<td>Public</td>
<td>Car</td>
<td>Trousers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Bathtub</td>
<td>Mattress</td>
<td></td>
</tr>
<tr>
<td>Group 8 (n=78)</td>
<td>Public</td>
<td>Sunglasses</td>
<td>Wrist Watch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>Microwave</td>
<td>Refrigerator</td>
<td></td>
</tr>
</tbody>
</table>

### 3.6 Sampling and Data Collection

Sampling is that part of statistical practice concerned with the selection of a subset of individual observations within a population of individuals intended to yield some knowledge about the population of concern, especially for the purposes of making predictions based on statistical inference. Sampling is an important aspect of data collection. Researchers rarely survey the entire population for two reasons (Adèr, Mellenbergh, & Hand, 2008): the cost is too high and the population is dynamic in that the individuals making up the population may change over time. The three main advantages of sampling are that the cost is lower, data collection is faster, and since the data set is smaller it is possible to ensure homogeneity and to improve the accuracy and quality of the data.
3.6.1 Classification of Sampling Techniques

Sampling techniques may be broadly classified as non probability and probability depending upon the method adopted by the researcher for data collection. Non probability sampling is intuitive in nature while, probability sampling is systematic in nature.

**Non Probability Sampling Techniques:** Non probability sampling relies on the personal judgment of the researcher rather than chance to select sample elements. The researcher can arbitrarily or consciously decide what elements to include in the sample. Non probability samples may yield good estimates of the population characteristics. However they do not allow for objective evaluation of precision of sample results. Because there is no way of determining the probability of selecting any particular element for inclusion in the sample, the estimates obtained are not statistically projectable to the population. Commonly used non probability sampling techniques include convenience sampling, judgment sampling, quota sampling and snowball sampling (Malhotra, 2007).

**Convenience Sampling:** Convenience Sampling attempts to obtain a sample of convenient elements. The selection of sampling units is left primarily to the interviewer. Often respondents are selected because they happen to be in the right place at the right time. Convenience sampling is the least expensive and least time consuming of all sampling techniques. The sampling units are accessible, easy to measure and cooperative. In spite of these advantages, this form of sampling has serious limitations. Many potential sources of selection bias are present, including respondent self selection. Convenience sampling is not representative of any definable population. Convenience sampling is not recommended for descriptive or casual research. But they can be used in exploratory research for generating ideas, insights or hypothesis.

**Judgment Sampling:** Judgment sampling is a form of convenience sampling in which population elements are selected based on the judgment of researcher. The researcher, exercising judgment or expertise, chooses the elements to be included in the sample, because he or she believes that they are representative of the population of the interest or otherwise appropriate.
Quota Sampling: A non probability sampling technique that is two stages restricted judgmental sampling. The first stage consists of developing control categories or quotas of population elements. In the second stage, sample elements are selected based on convenience or judgment.

Snowball Sampling: A non probability sampling technique in which an initial group of respondents is selected randomly. Subsequent respondents are selected based on the referrals or information provided by the initial respondents. This process may be carried out in waves by obtaining referrals from referrals.

Probability Sampling Techniques: A probability sampling scheme is one in which every unit in the population has a chance (greater than zero) of being selected in the sample and this probability can be accurately determined. The combination of these traits makes it possible to produce unbiased estimates of population totals, by weighting sampled units according to their probability of selection. Probability sampling includes: Simple Random Sampling, Systematic Sampling, Stratified Sampling, Cluster Sampling, etc.

Simple Random Sampling: In simple random sampling (SRS), each element in the population has known and equal probability of selection. Furthermore, each possible sample of a given size (n) has a known and equal probability of being the sample actually selected. This implies that every sample is selected independently of every other element and sample is drawn by a random procedure from a sampling frame. This method is equivalent to a lottery system in which names are placed in a container, the container is shaken, and the names of the winners are then drawn out in an unbiased manner.

Systematic Sampling: In Systematic sampling, the sample is chosen by selecting a random starting point and then picking every \( i^{th} \) element in succession from the sampling frame. The sampling interval is determined by dividing the population size \( N \) by the sample size \( (n) \) and rounding to the nearest integer.

Stratified Sampling: Stratified sampling is a two-step process in which the population is partitioned into sub populations, or strata. The strata should be mutually exclusive and collectively exhaustive in that every population element should be assigned to one and only one stratum and no population element should be omitted. Next, elements are selected from each
stratum by a random procedure, usually SRS. Technically only SRS should be employed in selecting the elements from each stratum. In practice, sometimes systematic sampling and other probability sampling procedures are employed. Stratified sampling differs from quota sampling in that the sample elements are selected probabilistically rather than based on convenience or judgment. A major objective of stratified sampling is to increase precision without increasing cost.

**Cluster Sampling:** In cluster sampling, initially the target population is divided into mutually exclusive and collectively exhaustive subpopulations called clusters. Then, a random sample of clusters is selected based on a probability sampling technique such as simple random sampling. For each selected cluster, either all the elements are included in the sample or a sample of elements is drawn probabilistically (Malhotra, 2007).

### 3.6.2 Data Collection

The data was collected from a sample comprising students enrolled in professional courses, housewives, teachers and office goers representing middle class background. In the absence of appropriate sampling frame, purposive sampling technique was adopted for the present study.

There is overwhelming evidence from previous researches for using students as respondents. Witt (1969), Cocanougher and Bruce (1971), Childers and Rao (1992), Dahl et al. (2001), Lord et al. (2001), Auyt and Elliott (2001), Ratner and Kahn (2002), Briley and Wyer (2002), Escalas and Bettman (2003, 2005), Wooten and Reed (2004), Clark and Goldsmith (2006), Guzman et al. (2006), White and Dahl (2007), Cours et al. (2008), Martin et al. (2008), among others have used undergraduate students from universities as respondents in their research based on reference group influence. Thus, students were considered suitable for this study as they had a cosmopolitan outlook and came from predominantly middle class background.

Females in general and housewives in particular are also very popular as respondents among the researchers. Stafford (1966), Moschis (1976), Park and Lessig (1977), Calder and Burnkrant (1977), Batra et al. (2000), Mehta et al. (2001), Hsu et al. (2006), etc. have used female respondents in their research on reference group influence. Thus taking cue from them, housewives were considered suitable for the present research. Housewives are representatives of
their family and play a significant role along with their spouse in purchase decisions which further makes them suitable subjects for this study.

The third category of respondents considered for this study was teachers who also represent the middle class. Teachers are often rated as opinion leaders for the society; it thus was considered research worthy to investigate their susceptibility to reference group influence as well.

Office workers were also considered for the study. However, this category showed a high degree of heterogeneity in the occupational profile of the respondents e.g. bank managers, accountants, cashiers, clerks, steno-typists, personal assistants, etc. They all were clubbed under the “Others” category.

For conducting questionnaire survey, a list of central universities\textsuperscript{26} in Northern India was drawn. One of these institutions was chosen to conduct questionnaire survey on the basis of its representativeness of an all India character in terms of region, religion, gender and socio-economic background. Permission was sought from the institution for conducting the study on its students and teaching faculty. After an initial reluctance permission was granted but with a condition of non-disclosure of the name of the institution. Requirements of sampling necessitated that other respondents like housewives and office goers be contacted from the same city where the institution is located. This was done to ensure similarity in the socio-economic background of the respondents. Data was collected during the period between January 2009 and January 2010. The institution is located in a Class B city of Northern India with the following details as per the census of India, 2001\textsuperscript{27}:

1) Total population: 2,992,286 persons with an urban population of 864,694.

2) Literacy rate of 58.48\% with 314,134 matriculates and 101,715 graduates and higher level.

3) Sex ratio (females per 1000 males) is 862.

Though, all possible efforts were made by the researcher to personally administer the questionnaire on the respondents, due to time constraints on the part of respondents, sometimes

\textsuperscript{26} A university created by an Act of the Parliament and governed by the Central Government of India.

\textsuperscript{27} This is the latest data available. Census 2011 is currently being conducted.
the questionnaire was left with the respondents to be collected later. As a rule of thumb, data from at least 300 cases is considered comfortable, 500 is considered as very good and 1000 is considered excellent (Comrey & Lee, 1992 and Tabachnich et al., 2001). Thus, it was decided to target at least 500 respondents. Keeping in mind the nature of the study, response rate of 40-45% was anticipated and thus, it was decided to administer 1500 questionnaires on the respondents in proportion to their representation in the study.

Roughly 500 students were approached for the purpose of administering questionnaires in their respective faculties, hostels and canteen areas; while 400 teachers were contacted in their respective chambers and staff rooms for the same purpose. A total of 400 questionnaires were administered on office workers who were contacted in their respective offices. For contacting housewives, eight neighborhoods with middle class families were identified out of which two were randomly selected. The researcher faced difficulty in administering questionnaire on housewives, as strangers are not well received in the conservative Indian households. Therefore, the only way to contact housewives was through personal contacts and referrals. Housewives were found to be skeptical about the survey and on the pretence of completing the household chores, in quite a few cases opted for responding to the questionnaire in their leisure time. Repeated efforts made by the researcher to collect the distributed questionnaires met with partial success. Of the total 1500 questionnaires administered, only 659 questionnaires were returned by the respondents. Due to incomplete and illegible responses, only 574 were found suitable for analysis purpose which amounts to an effective response rate of 38.2% which was considered satisfactory (Comrey & Lee, 1992 and Tabachnich et al., 2001) keeping in mind the nature of the study. The respondent wise break up of responses is given in the table below:

<table>
<thead>
<tr>
<th>Occupation →</th>
<th>Students</th>
<th>Teachers</th>
<th>Housewives</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Decisions</strong></td>
<td>109 (250)</td>
<td>71 (200)</td>
<td>44 (100)</td>
<td>61 (200)</td>
<td>285 (750)</td>
</tr>
<tr>
<td><strong>Brand Decisions</strong></td>
<td>106 (250)</td>
<td>55 (200)</td>
<td>46 (100)</td>
<td>82 (200)</td>
<td>289 (750)</td>
</tr>
</tbody>
</table>

*The figures in parentheses indicate the number of questionnaires originally administered.

The instructions introducing the questionnaire carefully distinguished between product and brand decisions. This was followed by an example in which a product choice decision was described as the one involving a decision whether or not to choose a particular product. eg: the decision to
choose a car or a motorcycle. While choosing a particular brand from a range of several brands of the product was used to exemplify a brand choice decision e.g. the decision to choose a TV from a range of Samsung, LG, Sony, Panasonic, etc. Further the word ‘Product’ or ‘Brand’ was highlighted in each statement in respective questionnaires to reinforce the type of decision under consideration.

3.7 Hypotheses Based on Forms of Influences Exerted by Reference Groups

By definition, necessities are possessed by virtually everyone, while luxuries have a degree of exclusivity. Second, for reference group influence to affect brand decisions, the item must be “seen or identified by others”. This can be operationalized in terms of where an item is consumed. Publicly consumed products are seen by others, while privately consumed products are not visible to others. That is, those brand decisions involving products which can be noticed and identified are more susceptible to reference group influence (Bearden & Etzel, 1982).

The concepts of public-private consumption and luxury-necessity items, when applied to product and brand decisions, create a total of eight relationships mentioned as under:

Publicly Consumed Luxury (PUL): A product consumed in public view and not commonly owned or used (e.g. golf clubs). In this case, whether or not the product is owned and also what brand is purchased is likely to be influenced by others (Bourne, 1957). Its relationships with reference group influence are:

1) Because it is a luxury, influence for the product should be strong.

2) Because it will be seen by others, influence for the brand of the product should be strong.

Privately Consumed Luxury (PVL): A product consumed out of public view and not commonly owned or used (e.g. trash compactor). In many cases, the brand is not conspicuous or socially important and is a matter of individual choice, but ownership of the product does convey a message about the owner (Bourne, 1957). Its relationships with reference group influence are:

3) Because it is a luxury, influence for the product should be strong.

4) Because it will be not seen by others, influence for the brand of the product should be weak.
Publicly Consumed Necessity (PUN): A product consumed in public view that virtually everyone owns (e.g. wrist watch). This group is made up of products that essentially all people or a high proportion of people use, although differing as to type of brand (Bourne, 1957). Its relationships with reference group influence are:

5) Because it will be seen by others, influence for the brand of the product should be strong.

6) Because it is a necessity, influence for the product should be weak.

Privately Consumed Necessity (PVN): A product consumed out of public view that virtually everyone owns (e.g. mattress). Purchasing behavior is largely governed by product attributes rather than by the influences of others. In this group, neither products nor brands tend to be socially conspicuous and are owned by nearly all consumers (Bourne, 1957). Its relationships to reference group influence are:

7) Because it will not be seen by others, influence for the brand of the product should be weak.

8) Because it is a necessity, influence for the product should be weak.

3.7.1 Hypotheses for Product Choice Decisions

Based on the discussion in Section 3.7 the following hypotheses were framed to explore reference group influence on consumer decisions, where ‘H0’ refers to the null hypothesis; ‘T’ stands for the different types or forms of reference group influence and ‘P’ denotes product choice decision.

1. $H_0TP_1$: All the three forms of reference group influences (informational, value expressive and utilitarian) are higher for publicly consumed luxuries than publicly consumed necessities (PUL>PUN).

2. $H_0TP_2$: There is no difference in all the three forms of reference group influences (informational, value expressive and utilitarian) for publicly consumed luxuries and privately consumed luxuries (PUL=PVL).
3. **H₀TP₃**: All the three forms of reference group influences (informational, value expressive and utilitarian) are higher for publicly consumed luxuries than privately consumed necessities (PUL >PVN).

4. **H₀TP₄**: All the three forms of reference group influences (informational, value expressive and utilitarian) are higher for privately consumed luxuries than publicly consumed necessities (PUN <PVL).

5. **H₀TP₅**: There is no difference in all the three forms of reference group influences (informational, value expressive and utilitarian) for publicly consumed necessities and privately consumed necessities (PUN=PVN).

6. **H₀TP₆**: All the three forms of reference group influences (informational, value expressive and utilitarian) are higher for privately consumed luxuries than privately consumed necessities (PVL >PVN).

### 3.7.2 Hypotheses for Brand Choice Decisions

Based on the discussion in Section 3.7 the following hypotheses were framed to explore reference group influence on consumer decisions, where ‘H₀’ refers to the null hypothesis; ‘T’ stands for the different types or forms of reference group influence and ‘B’ denotes brand choice decision.

1. **H₀TB₁**: There is no difference in all the three forms of reference group influences (informational, value expressive and utilitarian) for publicly consumed luxuries and publicly consumed necessities (PUL=PUN).

2. **H₀TB₂**: All the three forms of reference group influences (informational, value expressive and utilitarian) are higher for publicly consumed luxuries than privately consumed luxuries (PUL>PVL).
3. \( H_0TB_3 \): All three forms of reference group influences (informational, value expressive and utilitarian) are higher for publicly consumed luxuries than privately consumed necessities (PUL > PVN).

4. \( H_0TB_4 \): All three forms of reference group influences (informational, value expressive and utilitarian) are higher for publicly consumed necessities than privately consumed luxuries (PUN > PVL).

5. \( H_0TB_5 \): All the three forms of reference group influences (informational, value expressive and utilitarian) are higher for publicly consumed necessities than privately consumed necessities (PUN > PVN).

6. \( H_0TB_6 \): There is no difference in all the three forms of reference group influences (informational, value expressive and utilitarian) for privately consumed luxuries and privately consumed necessities (PVL = PVN).

In effective terms there is a total of 36 hypotheses, 18 each for product and brand choice decisions (6 product category pairs x 3 forms of reference group influence x 2 types of consumer decisions = 36).

### 3.8 Hypotheses Based on Influence Exerted by Different Referents

This section discusses the rationale behind framing the hypotheses based on the influence exerted by different referents like family, peers, experts and celebrities on consumer product and brand choice decisions.

**Publicly Consumed Luxury (PUL):** Due to the public nature of the product the familial influence on the product as well as brand choice decisions should be weak. Because it is a luxury, Peer influence for the product should be strong. Since it will be seen by others, peer influence for the brand of the product should be even stronger (Childers & Rao, 1992). Consumers would seek the advice of the people having relevant expertise while choosing such products. Therefore expert’s influence should be moderate on product decisions and moderately strong on brand choice decisions. Aspirational figures like celebrities may exert moderate
influence on product decisions; however they are likely to exercise a strong influence on brand choice decisions.

**Publicly Consumed Necessity (PUN):** This group is made up of products that essentially all people or a high proportion of people use, although with different types of brands. Due to the public nature of the product the familial influence on the product as well as brand choice decisions should be weak. Because it is a necessity, Peer influence for the product should be weak. Since it will be seen by others, peer influence for the brand of the product should be strong (Childers & Rao, 1992). For the same reasons, expert’s influence should be moderately weak on product decisions and moderate on brand choice decisions. Since the product is a necessity celebrity influence on product decision would be weak but the public consumption of the product would ensure a strong influence exerted by the celebrities on brand decisions.

**Privately Consumed Luxury (PVL):** Familial influences should predominantly occur for products consumed at home. Therefore, family influence on product decisions is strong and it is even stronger for brand decisions. Because it is a luxury, Peer influence for the product should be strong. Since it will not be seen by others, peer influence for the brand of the product should be weak (Childers & Rao, 1992). For the same reasons, expert’s influence should be strong on product decisions and weak on brand choice decisions. Since the product is a luxury, celebrity influence on product decision would be moderate but the private consumption of the product would ensure a weak brand influence exerted by the celebrities.

**Privately Consumed Necessity (PVN):** Purchasing behavior is largely governed by product attributes rather than by the influences of others. In this group, neither products nor brands tend to be socially conspicuous and are owned by nearly all consumers. Familial influences should predominantly occur for products consumed at home. Therefore, family influence on product and brand decisions is strong. Because it is a necessity, Peer influence for the product should be weak. Since it will not be seen by others, peer influence for the brand of the product should also be weak (Childers & Rao, 1992). For the same reasons, expert’s influence on product and brand choice decisions should be weak. Since the product is a Private necessity, celebrity influence on product and brand choice decisions should be weak.
3.8.1 Product Choice Decisions

Based on the discussion in Section 3.8, the following hypotheses were framed to explore reference group influence on consumer decisions, where ‘H0’ refers to the null hypothesis; ‘R’ stands for the different referents and ‘P’ denotes product choice decision.

1) H0RP1: The influences of family, peers, experts and others are higher for publicly consumed luxuries than publicly consumed necessities (PUL>PUN).

2) H0RP2: Familial influence is higher for privately consumed luxuries than publicly consumed luxuries (PUL<PVL).

3) H0RP3: There is no difference in the influences of peers, experts and celebrity between publicly consumed luxuries and privately consumed luxuries (PUL=PVL).

4) H0RP4: Familial influence is higher for privately consumed necessities than publicly consumed luxuries (PUL<PVN).

5) H0RP5: The influences of peers, experts and celebrity are higher for publicly consumed luxuries than privately consumed necessities (PUL>PVN).

6) H0RP6: The influences of family, peers, experts and celebrity are higher for privately consumed luxuries than publicly consumed necessities (PUN<PVL).

7) H0RP7: Familial influence is higher for privately consumed necessities than publicly consumed necessities (PUN<PVN).

8) H0RP8: There is no difference in the influences of peers, experts and celebrity between publicly consumed necessities and privately consumed necessities (PUN=PVN).

9) H0RP9: There is no difference in the familial influence between privately consumed luxuries and privately consumed necessities (PVL=PVN).

10) H0RP10: The influences of peers, experts and others are higher for privately consumed luxuries than privately consumed necessities (PVL>PVN).

3.8.2 Brand Choice Decisions
Based on the discussion in Section 3.8, the following hypotheses were framed to explore reference group influence on consumer decisions, where $H_0$ refers to the null hypothesis; $R$ stands for the different referents and $B$ denotes brand choice decision.

1) $H_{0RB1}$: There is no difference in the influences of family, peers, and celebrity between publicly consumed luxuries and publicly consumed necessities (PUL=PUN).

2) $H_{0RB2}$: Experts’ influence is higher for publicly consumed luxuries than publicly consumed necessities (PUL>PUN).

3) $H_{0RB3}$: Familial influence is higher for privately consumed luxuries than publicly consumed luxuries (PUL<PVL).

4) $H_{0RB4}$: The influences of peers, experts and celebrity are higher for publicly consumed luxuries than privately consumed luxuries (PUL>PVL).

5) $H_{0RB5}$: Familial influence is higher for privately consumed necessities than publicly consumed luxuries (PUL<PVN).

6) $H_{0RB6}$: The influences of peers, experts and celebrity are higher for publicly consumed luxuries than privately consumed necessities (PUL>PVN).

7) $H_{0RB7}$: Familial influence is higher for privately consumed luxuries than publicly consumed necessities (PUN<PVL).

8) $H_{0RB8}$: The influences of peers, experts and celebrity are higher for publicly consumed luxuries than privately consumed necessities (PUN>PVL).

9) $H_{0RB9}$: Familial influence is higher for privately consumed necessities than publicly consumed necessities (PUN<PVN).

10) $H_{0RB10}$: The influences of peers, experts and celebrity are higher for publicly consumed necessities than privately consumed necessities (PUN>PVN).

11) $H_{0RB11}$: There is no difference in the influences of family, peers, and celebrity between privately consumed luxuries and privately consumed necessities (PVL=PVN).

12) $H_{0RB12}$: Experts’ influence is higher for privately consumed luxuries than privately consumed necessities (PVL>PVN).
In effective terms there is a total of 48 hypotheses, 24 each for product and brand choice decisions (6 product category pairs x 4 types of referents x 2 types of consumer decisions = 48).

3.9 Hypotheses Based on Demographics

Another set of factors relating to consumer susceptibility to reference group influence is the consumer’s demographic attributes. For example, differences in reference group influence may be found between males and females, consumers having different educational qualifications, consumers having different incomes, younger and older people (Park & Lessig, 1977) and between different nationalities (Childers & Rao, 1992).

3.9.1 Hypotheses for Product Choice Decisions

In order to explore differences in reference group influence vis-à-vis consumer demographics, the following hypotheses were framed, where ‘H₀’ refers to the null hypothesis; ‘D’ stands for the consumer demographics and ‘P’ denotes product choice decision.

1)  H₀DP₁: Significant differences do not exist among age groups with respect to their susceptibility to informational, value expressive and utilitarian influence on product choice decisions.

2)  H₀DP₂: Significant differences do not exist among educational groups with respect to their susceptibility to informational, value expressive and utilitarian influence on product choice decisions.

3)  H₀DP₃: Significant differences do not exist between family types with respect to their susceptibility to informational, value expressive and utilitarian influence on product choice decisions.

4)  H₀DP₄: Significant differences do not exist between genders with respect to their susceptibility to informational, value expressive and utilitarian influence on product choice decisions.
5) $H_{0 DP5}$: Significant differences do not exist among income groups with respect to their susceptibility to informational, value expressive and utilitarian influence on product choice decisions.

6) $H_{0 DP6}$: Significant differences do not exist among occupational groups with respect to their susceptibility to informational, value expressive and utilitarian influence on product choice decisions.

### 3.9.2 Hypotheses for Brand Choice Decisions

In order to explore differences in reference group influence vis-à-vis consumer demographics, the following hypotheses were framed, where ‘H$_0$’ refers to the null hypothesis; ‘D’ stands for the consumer demographics and ‘B’ denotes brand choice decision.

1) $H_{0 DB1}$: Significant differences do not exist among age groups with respect to their susceptibility to informational, value expressive and utilitarian influence on brand choice decisions.

2) $H_{0 DB2}$: Significant differences do not exist among educational groups with respect to their susceptibility to informational, value expressive and utilitarian influence on brand choice decisions.

3) $H_{0 DB3}$: Significant differences do not exist between family types with respect to their susceptibility to informational, value expressive and utilitarian influence on brand choice decisions.

4) $H_{0 DB4}$: Significant differences do not exist between genders with respect to their susceptibility to informational, value expressive and utilitarian influence on brand choice decisions.

5) $H_{0 DB5}$: Significant differences do not exist among income groups with respect to their susceptibility to informational, value expressive and utilitarian influence on brand choice decisions.
6) **$H_{0DB6}:** Significant differences do not exist among occupational groups with respect to their susceptibility to informational, value expressive and utilitarian influence on brand choice decisions.

In effective terms there is a total of 36 hypotheses, 18 each for product and brand choice decisions (6 demographic variables $\times$ 3 forms of reference group influence $\times$ 2 types of consumer decisions $= 36$).

*(Note: Only the null hypotheses are mentioned for all the sub-sections on hypothesis formulation).*

### 3.10 Techniques of Analysis

For analyzing the data generated through questionnaire survey, mainly ANOVA procedure is used. However to be sure of the results of ANOVA, paired sample t test is also performed on the data. A brief theoretical outline of these two techniques is given as under:

**ANOVA:** Analysis of variance is a straightforward way to look at differences among more than two groups of responses measured on interval or ratio scale. It is used for examining the differences in the mean values of dependent variable associated with the effect of controlled independent variables. The null hypothesis, typically, is that all means are equal (Malhotra, 2007). In its simplest form, analysis of variance must have a dependent variable (reference group influence) that is metric. There should also be one or more independent variables (product categories: PUL, PUN, PVL and PVN) which are non-metric.

At the heart of ANOVA is the notion of variance. The basic procedure is to derive two different estimates of population variance from data, then calculate a statistic from the ratio of these two estimates. One of these estimates (between-groups variance) is a measure of the effect of independent variable combined with error variance. The other estimate (within groups variance) is of error variance by itself. The F-ratio is the ratio of between groups variance to within groups variance. A significant F-ratio indicates that the population means are probably not equal and the null hypothesis is rejected (Coakes, 2008). A post hoc analysis is also performed on the data, which involves hunting through the data for any significance; that is, doing multiple comparisons. These tests are stricter than planned comparisons, so it is harder to obtain
significance. The Scheffe Post-Hoc Test, used in the research allows every possible comparison to be made but is tough on rejecting the null hypothesis.

**Paired sample T-test:** Dependent samples or paired samples t-test is used when the data is generated only from one group of participants. In other words, an individual obtains two scores under different levels of independent variable. The difference in these cases is examined by paired samples t statistic. When the samples come from the same population, then equality in their means is expected. Although it is possible for their means to differ by chance alone. However, under the null hypothesis similarity of means is assumed. The appropriate formula for computing ‘t’ value is given as:

\[ t = \frac{(D - \mu_D)}{(S_D/\sqrt{N})} \]

The above formula compares the mean difference between samples (D) with the expected difference in population mean (\(\mu_D\)), and then takes into account standard error of the differences (\(S_D/\sqrt{N}\)). When the standard error is small, then most samples are expected to have similar means and the null hypothesis is supported. With large standard error, large differences in sample means are expected to take place by chance alone and the null hypothesis is likely to be rejected (Field, 2005). Some assumptions that were made for the analysis purpose are as under:

1) Data are from normally distributed populations.
2) Variances in these populations are roughly equal.
3) Scores are independent.
4) The data is measured at least at the interval level.

**3.11 Phases of the Study**

The study has been divided into two phases; the *first* phase aims at the selection and classification of products into public-luxury (PUL), public-necessity (PUN), private-luxury (PVL) and private-necessity (PVN). The *second* phase comprises main research, whose findings are discussed in Chapters 4, 5 and 6.

**Phase-I:** A preliminary study was done to select products and categorize them along the two dimensions, i.e., public-private and luxury-necessity, representing the underlying determinants of conspicuousness (Bourne, 1957). *First*, the product must be conspicuous in the sense that it can
be seen and identified. Second, the product must be conspicuous in the sense of exclusivity because it is not owned by everyone (Bourne, 1957). For classifying products into PUL, PUN, PVL and PVN, a preliminary list of 40 products was developed by the researcher which was further reduced to 24 products on the basis of discussions held with the subject experts.

In all, 110 students, teachers, office workers and housewives, were requested to indicate their perceptions about whether the 24 products were, first, luxury or necessity items and then, publicly or privately used, on a 6 point scale. Luxuries were defined as not needed for ordinary day-to-day living. Necessities were described as being necessary for ordinary day-to-day living. Response categories were labeled and scored as follows (Bearden & Etzel, 1982): (1) a luxury for everyone, (2) a luxury for almost all people, (3) a luxury for majority of the people, (4) a necessity for majority of the people, (5) a necessity for almost all people and (6) a necessity for everyone.

The same 24 items were assessed by the respondents as being publicly or privately consumed as per the following definitions: A public product is one which is consumed in public and other people are aware of your possession. A private product is one which is used at home or in private, except for the immediate family other people are not aware of your possession. The 6 item scales were labeled and scored as follows (Bearden & Etzel, 1982): (1) a public product for everyone, (2) a public product for almost all people, (3) a public product for majority of the people, (4) a private product for majority of the people, (5) a private product for almost all people and (6) a private product for everyone.

Out of the total responses, only 63 were considered usable for the purpose of computing the mean scores, while the remaining were summarily rejected for their incompleteness and being filled illegibly. Based on the distribution of resulting means scores, 16 products were selected as shown in Table 3.5. The products were clubbed into 4 groups representing each of the product categories namely PUL, PUN, PVL and PVN.
<table>
<thead>
<tr>
<th>Product Category</th>
<th>Scale Comparison Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Luxury (PUL)</strong></td>
<td>Public(1)-Private(6)</td>
</tr>
<tr>
<td>Digital Camera</td>
<td>3.07</td>
</tr>
<tr>
<td>Tennis Racquet</td>
<td>3.12</td>
</tr>
<tr>
<td>Car</td>
<td>2.42</td>
</tr>
<tr>
<td>Branded Sunglasses</td>
<td>2.49</td>
</tr>
<tr>
<td><strong>Public Necessity (PUN)</strong></td>
<td></td>
</tr>
<tr>
<td>Wrist Watch</td>
<td>2.53</td>
</tr>
<tr>
<td>Pen</td>
<td>2.49</td>
</tr>
<tr>
<td>Shoes</td>
<td>2.58</td>
</tr>
<tr>
<td>Trousers</td>
<td>2.45</td>
</tr>
<tr>
<td><strong>Private Luxury (PVL)</strong></td>
<td></td>
</tr>
<tr>
<td>Microwave Oven</td>
<td>4.00</td>
</tr>
<tr>
<td>Home Theatre System</td>
<td>4.04</td>
</tr>
<tr>
<td>Air Conditioner</td>
<td>3.61</td>
</tr>
<tr>
<td>Bathtub</td>
<td>4.66</td>
</tr>
<tr>
<td><strong>Private Necessity (PVN)</strong></td>
<td></td>
</tr>
<tr>
<td>Refrigerator</td>
<td>3.60</td>
</tr>
<tr>
<td>Toothpaste</td>
<td>4.55</td>
</tr>
<tr>
<td>Pain Balm</td>
<td>3.73</td>
</tr>
<tr>
<td>Mattress</td>
<td>4.19</td>
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</tbody>
</table>