Demographic Variables Affect Branded Product in Retail Market

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This study was designed to investigate the influence of demographic variables and different dimensions of milk brand. From the careful investigation of the literature survey we found out that there is an influence of demography of the sample on the purchase of the branded milk in retail market. We intend to study the influence of demography variables on purchase of branded milk in the retail market in Tamil Nadu. For this study, we prepared a questionnaire and it was distributed to 500 consumers who are all using branded milk. Out of the 500 consumers contacted, 325 questionnaires were returned with required coverage and details. The participants completed the two sets of self-reported questionnaires, including background characteristics and the variables chosen for this study in order to measure the influence of branded milk; Salience, Performance, Imagery, Judgment, Feelings and Resonance. The collected data were computed and analyzed using a one-way analysis of variance. The findings of the study were generalized as follows: statistically insignificant differences were found in the marital status and the different brand dimensions like Salience, Performance, Imagery, Judgment, Feelings and Resonance. Also there was a statistically significant difference in the dimensions of Imagery, Feelings and respondents occupation.

INTRODUCTION

Retailing is a customary form of exchange process practiced in India right from the days of the barter system. It is a process by which the title of the product (or service) is transferred by an individual, group or business to the final customers in the necessary variety structure, in the right quantity, and at the time of necessity, which in turn satisfies consumption needs. The retailers buy the products from the manufactures or wholesalers in bulk, and restructure them to the final customers in small lots (Ramanathan, 2009). Retailing is the world’s largest private industry with total sales of dollar 6.6 tn. In India too; the industry is large, accounting for around 10% of GDP, which is the second largest after agriculture. Annual retail sales in India are anticipated at dollar 340 bn and have been growing at 5% annually. India has one of the highest densities of retail outlets in the entire world. (C.V Krishna, 2009). When we say retail, we mean both organized as well as unorganized retail. Organized retail is limited predominantly to the urban areas and comprises only 5% of the total retail sector, which presently amounts to around dollar 365 bn per annum. India is the fifth largest retail market globally, and has been ranked 2nd after Vietnam as the most attractive emerging market target for investment in the retail sector. Developments in the retail sector have gripped the population in urban areas to such a degree that the
retail players are now bandying about differentiation, branding and customer satisfaction almost continuously (Tripurari Pandey, 2009).

In 1980s branded milk was an indication of high regard. Currently in 2007 large part of households in cities depend upon the mother dairy or Amul for their daily milk supply. (Bhara, 2008). India milk products for the global market using world class technology with the delicensing of the milk industry in the 90s, Global players like Nestle, Britannia, Smithkline Beecham and others plugged into the thriving milk products market, which was thoroughly documented through the operation flood programme has turned into a household name with global position, hundreds of small and medium players also have made a raid into this industry. (Vinod, 2004)

Milk was at first sold door to door by the local milk man. When the dairy cooperatives at first fixed advertising branded milk. It was sold in glass bottles preserved with foil. Over the years several developments in packaging media have taken place. In the early 80’s plastic pouches replaced the bottles. Plastic pouches replaced the bottles. Plastic pouches made carrying and storage very convenient besides reducing costs. Milk packets in plastic pouches/bottles have shelf life of just 1-2 day that too only refrigerated. In 1996, Tetra packs were introduced in India. Tetra packs aseptic lamination packs made of aluminium paper, board and plastic. Milk stored in tetra packs and treated under Ultra-high temperature (UHT) technique can be stored for four months without refrigerator. Most of the dairy consumer – operatives in Andhra Pradesh, Tamil Nadu, Punjab and Rajasthan sell milk in tetra packs.

OBJECTIVES OF THE STUDY

1. To study the influence of Occupation of the respondents on dimensions of Milk branding.
2. To study the influence of marital status of the respondents on dimensions of Milk branding

HYPOTHESIS

Following are the test Hypothesis proposed for the research study. These hypotheses will help us to understand the retail milk brand.

\[ H_1: \text{Respondents Occupation is influenced by the different dimensions of milk brand.} \]
\[ H_2: \text{Respondents Marital Status is influenced by the different dimensions of milk brand.} \]

RESPONDENT SAMPLE

The questionnaires were given to 500 consumers who were all using branded milk. Respondents of the samples where above 18 years using branded milk only. Out of 500 consumers contacted, 325 questionnaires were received with necessary coverage and details.

INSTRUMENT FOR STUDY

The instruments of this study involved two parts: the first section of the instrument consisted of forced-choice questions about demographic characteristics: gender, marital status, age, occupation, monthly income level. The second section variables chosen for this study in order to measure the influence of branded milk in Indian retail markets are taken from branding milk dimension contains of 60 items and characterized into six sub scales: (a) Salience (items 1 to 7), (b) Performance(items 8 to 13), (c) Imagery (items 14 to 18), (d) Judgment (items 19 to 36), (e) Feelings (items 37 to 42), (f) Resonance (items 43 to 60). The milk branding dimension 60 items are evaluated on a five-point Likert scale ranging from 1 to 5 , using the anchors “5=strongly agree, 4=agree, 3=Neutral, 2=Disagree ,1= Strongly disagree”.

Cronbach Alpha is a coefficient (a number between 0 and 1) that is used to rate the internal consistency (homogeneity) or the correlation of items in a test. If the test has a strong internal consistency most measurement experts agree that it should show only moderate correlation among items (0.70 to 0.90). The reliability coefficients for the variables chosen for the study should have to be more than 0.70,
to consider it as an acceptable value (Nunally, 1978). In this study the reliability analysis shows that all the factors have shown an alpha value greater than 0.7, indicating the evidence of reliability and the overall reliability of the instrument is 0.92. So, the items constituting each variable under study have reasonable internal consistency and shows that all the dimensions of branded milk have a positive reliability. The factors and dimensions included for analysis carry a good degree of reliability to support the objectives formulated. All dimensions have got significant relationship to make the real representation of the study. Hence it is concluded that the data collected in this study is highly reliable.

DATA ANALYSIS

The Statistical Package for the Social Science (SPSS) for Microsoft Windows 16.0 was used to complete the analysis of the collected data. Descriptive statistics, including means, standard deviations were implemented in order to investigate the demographic data, and the influence of branded milk-test, one-way analysis of variance (ANOVA) were used to determine whether any significant relationships exist among respondents. In addition, the .05 level of statistical significance was set on all statistical tests in the present study.

1. To Study the Significant difference in Various Dimensions of Branding by the Marital Status of Respondents.

The Group statistics table (see below) provides some very useful statistics including the mean, standard deviation for the dependent variables when two groups (married, unmarried) and the combined (Total). Salience of the product does not reveal statistically significant difference by marital status of respondents. Table-1 shows that consumers who married have more aware of branded milk (mean=3.92) than unmarried consumers the mean score is less (mean=3.86), performance of the product have no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who married (mean=3.60) and unmarried (mean=3.60) have same satisfaction towards performance of branded milk. Imagery of the product has no statistically significant difference by gender of the respondents. Table-1 shows that consumers who married are more attached with branded milk (mean=3.27) than unmarried respondents the mean score is less (mean=3.15), judgment of the product have no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who married are more satisfied with the quality of the product and creditability is high towards the producers, and their opinion about brand of milk is superior than other brand of milk (mean=3.66) than unmarried respondents the mean score is less (mean=3.63), feelings of consumer about their brand of milk have no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who unmarried have high positive feelings towards brand of milk (mean=3.61) than unmarried respondents because the mean score is less (mean=3.57), resonance of product have no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who unmarried are more loyal and commitment towards brand of milk (mean=3.48) than married respondents because the mean score is less (mean=3.46).
Homogeneity of Variances Table & T-Test For Equality of Mean

The table Test of Homogeneity of Variances (see below) shows the result of Levene's Test of Homogeneity of Variance, which tests for similar variances. If the significance value is greater than 0.05 (found in the Sig. column) then we have homogeneity of variances. We can see from this that Levene's $F$ Statistic has a significance value of Salience is 0.867, Performance is 0.145, Imagery is 0.846, Judgment is 0.622, Feelings is 0.857, Resonance is 0.889 and, therefore, the assumption of homogeneity of variance is met.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Married</td>
</tr>
<tr>
<td>Salience</td>
<td>325</td>
<td>3.92</td>
</tr>
<tr>
<td>Performance</td>
<td>325</td>
<td>3.60</td>
</tr>
<tr>
<td>Imagery</td>
<td>325</td>
<td>3.27</td>
</tr>
<tr>
<td>Judgment</td>
<td>325</td>
<td>3.66</td>
</tr>
<tr>
<td>Feelings</td>
<td>325</td>
<td>3.57</td>
</tr>
<tr>
<td>Resonance</td>
<td>325</td>
<td>3.46</td>
</tr>
</tbody>
</table>

Hence homogeneity of variance is met from the T-test for Equality of mean. Equal variance is assumed for sig (2-tailed). As in all statistical tests, the basic criterion for statistical significance is a "2-tailed significance" less than 0.05. significance level of Salience is 0.416 ($P=0.416$), which is above 0.05 and, therefore, there is no statistically significant difference between salience of branding by marital status of respondents, significance level of performance is 0.998 ($P=.998$) which is above 0.05 and, therefore, there is no statistically significant difference between performance of branding by marital status of respondents, significance level of Imagery is 0.182 ($P=.182$) which is above 0.05 and, therefore, there is no statistically significant difference between Imagery of branding by marital status of respondents, significance level of Judgment is 0.667 ($P=.667$) which is above 0.05 and, therefore, there is no statistically significant difference between Judgment of branding by marital status of respondents, significance level of Feelings is 0.567 ($P=.567$) which is above 0.05 and, therefore, there is no statistically significant difference between Feelings of branding by marital status of respondents, Significance level of Resonance is .824 ($P=.824$) which is above 0.05 and, therefore, there is no statistically significant difference between Resonance of branding by marital status of respondents.
difference between resonance of branding by marital status of respondents, so we fail to reject $H_0$. That is, there is insufficient evidence to claim that some of the means may be different from each other.

2. To Study the Significant difference in Various Dimensions of Branding by the Occupation of the Respondents.

The descriptive table (see below) provides some very useful descriptive statistics the mean, standard deviation for the dependent variables for all the groups and when all groups are combined (Total). Salience of the product have no statistically significance difference by occupation of the respondents. Table-2 shows that house wives are more aware of brand of milk (mean = 3.96) and students are less aware of brand of milk (mean = 3.85), performance of the product have no statistically significance difference by occupation of the respondents. Table-2 shows that house wives are more satisfied with brand of milk (mean = 3.67) and students are less satisfied with brand of milk (mean = 3.56), Imagery of the product have statistically significance difference by occupation of the respondents. Table-2 shows that house wives are highly attached with brand of milk (mean = 3.40) and students are less attached with brand of milk (mean = 3.18), judgment of consumer towards their brand milk has no statistically significance difference by occupation of the respondents. Table-2 shows that house wives are more satisfied with quality of brand milk, high creditability towards producers and they consider their brand as more superior than other brand of milk (mean = 3.74) and professional are low satisfaction towards brand of milk (mean = 3.62), feelings of consumer towards their brand milk have no statistically significance difference by occupation of the respondents. Table-2 shows that house wives have more positive feelings towards brand of milk (mean = 3.66) and professional and student have less positive feeling towards brand of milk (mean = 3.51), resonance has no statistically significance difference by occupation of the respondents. Table-2 shows that house wives are more loyal and commitment towards their brand of milk (mean = 3.51) and students, professional are less loyal and commitment towards their brand of milk (mean = 3.45).

**TABLE 2**

**ANALYSIS OF VARIANCE (ANOVA)**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>N</th>
<th>G1</th>
<th>G2</th>
<th>G3</th>
<th>Total</th>
<th>G1</th>
<th>G2</th>
<th>G3</th>
<th>Total</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salience</td>
<td>325</td>
<td>3.85</td>
<td>3.91</td>
<td>3.96</td>
<td>3.91</td>
<td>.627</td>
<td>.543</td>
<td>.584</td>
<td>.570</td>
<td>.629</td>
<td>.534</td>
</tr>
<tr>
<td>Performance</td>
<td>325</td>
<td>3.56</td>
<td>3.58</td>
<td>3.67</td>
<td>3.60</td>
<td>.652</td>
<td>.512</td>
<td>.572</td>
<td>.556</td>
<td>.981</td>
<td>.376</td>
</tr>
<tr>
<td>Imagery</td>
<td>325</td>
<td>3.18</td>
<td>3.18</td>
<td>3.40</td>
<td>3.24</td>
<td>.796</td>
<td>.634</td>
<td>.678</td>
<td>.683</td>
<td>3.29</td>
<td>.038</td>
</tr>
<tr>
<td>Judgment</td>
<td>325</td>
<td>3.65</td>
<td>3.62</td>
<td>3.74</td>
<td>3.66</td>
<td>.551</td>
<td>.487</td>
<td>.514</td>
<td>.508</td>
<td>1.55</td>
<td>.215</td>
</tr>
<tr>
<td>Feelings</td>
<td>325</td>
<td>3.65</td>
<td>3.51</td>
<td>3.66</td>
<td>3.58</td>
<td>.629</td>
<td>.593</td>
<td>.560</td>
<td>.594</td>
<td>2.50</td>
<td>.083</td>
</tr>
<tr>
<td>Resonance</td>
<td>325</td>
<td>3.45</td>
<td>3.45</td>
<td>3.51</td>
<td>3.47</td>
<td>.511</td>
<td>.461</td>
<td>.457</td>
<td>.469</td>
<td>.522</td>
<td>.595</td>
</tr>
</tbody>
</table>

Note: G1-student, G2-Professional, G3-House wife, N –Number of sample size.

From the above table we can see that in this the significance level of salience is 0.534 ($P = 0.534$), which is above 0.05. So we accept null hypothesis and, therefore, there is no statistically significant difference between salience of branding by occupation of respondents, significance level of performance is 0.376 ($P = .376$) which is above 0.05 so we accept H0 and, therefore, there is no statistically significant difference between performance of branding by occupation of respondents, significance level of imagery is 0.038 ($P = .038$) which is below 0.05 so we reject $H_0$ and, therefore, there is statistically significant difference between imagery of branding by occupation of respondents, significance level of Judgment is 0.215 ($P = .215$) which is above 0.05 and, therefore, there is no statistically significant difference between judgment of branding by occupation of respondents, significance level of feelings is 0.083 ($P = 0.083$).
which is above 0.05 so we accept Ho and, therefore, there is no statistically significant difference between feelings of branding by occupation of respondents. Significance level of resonance is 0.594 (P=.594) which is above 0.05 so we accept Ho and, therefore, there is no statistically significant difference between resonance of branding by occupation of respondents.

**Homogeneity of Variances**

The table Test of Homogeneity of Variances (see below) shows the result of Levene's Test of Homogeneity of Variance, which tests for similar variances. If the significance value is greater than 0.05 (found in the Sig. column) then we have homogeneity of variances.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Levene statistic</th>
<th>Df1</th>
<th>Df2</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salience</td>
<td>1.912</td>
<td>2</td>
<td>322</td>
<td>0.149</td>
</tr>
<tr>
<td>Performance</td>
<td>2.808</td>
<td>2</td>
<td>322</td>
<td>0.062</td>
</tr>
<tr>
<td>Imagery</td>
<td>1.797</td>
<td>2</td>
<td>322</td>
<td>0.168</td>
</tr>
<tr>
<td>Judgment</td>
<td>1.114</td>
<td>2</td>
<td>322</td>
<td>0.330</td>
</tr>
<tr>
<td>Feelings</td>
<td>0.918</td>
<td>2</td>
<td>322</td>
<td>0.400</td>
</tr>
<tr>
<td>Resonance</td>
<td>0.889</td>
<td>2</td>
<td>322</td>
<td>0.412</td>
</tr>
</tbody>
</table>

We can see from this that Levene's $F$ Statistic has a significance value of Salience is 0149, Performance is 0.062, Imagery is 0.168, Judgment is 0.330, Feelings is 0.400, Resonance is 0.412 and, therefore, the assumption of homogeneity of variance is met.

**Post Hoc Test**

Since we rejected the null hypothesis in Imagery dimension (we found differences in the means), we should perform a Turkey’s W multiple comparison to determine which means are different. Using the previous output, here is how such an analysis might appear.

<table>
<thead>
<tr>
<th>(I) Occupation of the respondent</th>
<th>(J) Occupation of the respondent</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Student</td>
<td>Professional</td>
<td>-.001</td>
<td>.100</td>
<td>1.000</td>
<td>-.24</td>
</tr>
<tr>
<td></td>
<td>House Wife</td>
<td>-.222</td>
<td>.114</td>
<td>.126</td>
<td>-.49</td>
</tr>
<tr>
<td>Professional</td>
<td>Student</td>
<td>.001</td>
<td>.100</td>
<td>1.000</td>
<td>-.23</td>
</tr>
<tr>
<td></td>
<td>House Wife</td>
<td>-.220*</td>
<td>.090</td>
<td>.039</td>
<td>-.43</td>
</tr>
<tr>
<td>House Wife</td>
<td>Student</td>
<td>.222</td>
<td>.114</td>
<td>.126</td>
<td>-.05</td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>.220*</td>
<td>.090</td>
<td>.039</td>
<td>.01</td>
</tr>
</tbody>
</table>
The above table indicates that significant differences existed among imagery dimension and Occupation of the respondents. According to the results of the Turkey’s W multiple comparison analysis, significant differences existed among the groups of “Professional” and “House wife”. The mean scores reveal that the group house wives are highly attached with brand of milk (mean=3.40) among three different groups.

**FINDINGS AND DISCUSSIONS**

With reference to the objective in this study, the findings and discussions were summarized as follows:

- **Salience of the product** does not reveal statistically significant difference by Marital status of respondents. Table-1 shows that consumers who married have more aware of branded milk (mean=3.92) than unmarried consumers the mean score is less (mean=3.86). Table-1.1 shows that salience of the product met the homogeneity of variance. (i.e.) Variance is similar Table-1.1 shows the t-test for equality of mean in that salience has no statistically significant difference by marital status of the respondents.

- **Performance of the product** have no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who married (mean=3.60) and unmarried (mean=3.60) have same satisfaction towards performance of branded milk. Table-1.1 shows that performance of the product met the homogeneity of variance. (i.e) Variance is similar. Table-1.1 shows the t-test for equality of mean, in that performance has no statistically significant difference by Gender of the respondents.

- **Imagery of the product** has no statistically significant difference by gender of the respondents. Table-1 shows that consumers who married are more attached with branded milk (mean=3.27) than unmarried respondents the mean score is less (mean=3.15). Table-1.1 shows that Imagery of the product met the homogeneity of variance. (i.e.) Variance is similar. Table-1.1 shows the t-test of equality of mean, in that Imagery has no statistically significant difference by Marital status of the respondents.

- **Judgment of the product** has no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who married are more satisfied with the quality of the product and creditability is high towards the producers, and their opinion about brand of milk is superior than other brand of milk (mean=3.66) than unmarried respondents the mean score is less (mean=3.63). Table-1.1 shows that Judgment of the product met the homogeneity of variance. (i.e.) Variance is similar. Table-1.1 shows the t-test of equality of mean, in that Judgment has no statistically significant difference by marital status of the respondents.

- **Feelings of consumer** about their brand of milk have no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who unmarried have high positive feelings towards brand of milk (mean=3.61) than unmarried respondents because the mean score is less (mean=3.57). Table-1.1 shows that feelings of the product met the homogeneity of variance. (i.e.) Variance is similar. Table-1.1 shows the t-test of equality of mean, in that feelings has no statistically significant difference by marital status of the respondents.

- **Resonance of product** has no statistically significant difference by marital status of the respondents. Table-1 shows that consumers who unmarried are more loyal and commitment towards brand of milk (mean=3.48) than married respondents because the mean score is less (mean=3.46). Table-1.1 shows that resonance of the product met the homogeneity of variance. (i.e.) Variance is similar. Table-1.1 shows the t-test of equality of mean, in that resonance has no statistically significant difference by marital status of the respondents. Significant differences existed among imagery dimension and Occupation of the respondents. According to the results of the Turkey’s W multiple comparison analysis, significant differences existed among the groups of
“Professional” and “House wife” The mean scores reveal that the group house wives are highly attached with brand of milk (mean=3.40) among three different groups.

CONCLUSION

From the above analysis and discussions it was found that the marital status is not influencing the preference towards the branded product in the Indian retails industry. Based on the India marriage culture it is evident that most of the time, the house hold wife will make the decision of purchasing milk in the house. The brand which the person is exposed to in her house before marriage will have the influence even after the marriage. But when we conducted post hoc test among the three groups the housewives are influenced by the image of the branded milk. This may have occured because Indian housewives are highly exposed to the serials which are telecasted on the TV. On the television everyday, they are exposed to different branded milks, and there is a chance the image of the product that is close to their thought process will influence them to buy the product. This study proves that branding has a significant influence in the Indian retail industry.

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