Customer Value Based Management Framework-An Analysis Of Value, Satisfaction, Loyalty and Switching Behaviour

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ABSTRACT

Designing value based management through measurement of customer behaviour leads to future profitability, lower costs, higher levels of custom retention and loyalty etc. The paper examines value delivering strategies of 103 SSIs based on 200 customer responses reflecting satisfaction, loyalty and brand switching behaviour in Kathua district of J&K State. The construct after purification through factor analysis was subject to Friedman’s analysis of variance tests, Kendall’s W test, multiple regression analysis and conjoint model for analyzing consumer responses. The paper identified intrinsic value and product configuration as vital predictor of consumer value. Switching behaviour is influenced by complaint handling and previous experience followed by brand recognition and least by product cues.

Keywords: Value based management, customer satisfaction, loyalty, switching behaviour and Small Scale Industries (SSIs)

INTRODUCTION

Organisations world-wide are recognizing the approach of value based management to achieve business excellence through simultaneous measurement of customers (Ruekert 1992, Kohli & Jaworski 1990, Deshpande et. al 1993 and Narver and Slater 1990), employee satisfaction (Berry 1994) and profitability (Slater and Narver 1995). An organization value reflects what it stands for and what it believes in. The shared value act as guideposts for managerial decisions and actions (Hayes 1990), shaping employee behaviour and communicating what the organization expects of its members (Donaldson & Preston 1995), influences marketing efforts and are a way to build team spirit in organization (Harrison and John 1992). A customer based value management has been found to lead to higher future profitability (Anderson, Fornell and Lehmann 1994), lower costs related to defective goods and services (Anderson, Fornell and Rust 1997), increased buyer willingness to pay price premiums, provide referrals, use more of the product (Reichheld 1996, Anderson and Mittal 2000), and higher levels of customer retention & loyalty (Fornell 1992, Anderson and Sullivan 1993, Bolton 1998). Customer satisfaction, as measured by the American Customer Satisfaction Index (ACSI), has two antecedents: customer complaints and, ultimately, customer loyalty. Empirical studies have found evidence that redress of customer complaints, in fact, improved customer relation due to reduction in defective goods, product re-work, etc. (Fornell 1992; Anderson, Fornell, and Rust 1997). Increasing loyalty, in turn, has been found to lead to increased future revenue (Anderson, Fornell and Lehmann 1994) and reductions in the cost of future transactions (Reichheld 1996; Srivastava, Shervani, and Fahey 1998).
Research into switching behavior attributed satisfaction to be a significant determinant of loyalty to a brand or product (Bitner 1990, Keaveney 1995) and found that past satisfaction with a firm or brand influences future satisfaction with a purchase and attitudinal loyalty to the same brand (Cadotte, Woodruff and Jenkins 1987; Gardial et al.1994; Halstead, Hartman, and Schmidt 1994; Tse and Wilton 1988; Woodruff, Cadotte and Jenkins 1983). Empirical researches have suggested that consumers are more likely to switch if they perceive their current service provider’s prices to be high and discrepancy exist with regard to various aspects of product quality, price inventory availability, range of product choice, etc. Business performance is contingent on the satisfaction of the internal counterpart (Berry 1994) supported by Lichtenthal and Wilson (1992), which is one who is supplied with products or services by others in an organization and includes healthy workable employer-employee relationship, employee commitment, esprit de corps (Jaworski and Kohli 1993), job satisfaction and human resource policies (Diamantopoulos and Hart 1993). Corporate responsiveness to ‘greening’ is based on sufficient profit generation and simultaneously preserving their competitive edge (Harrison & John 1996).
Data and Empirical Methods

The research evidence on customer value management strategies and related dimensions were tested empirically on 200 customers (2.5% of 8066 households (Census 2001) i.e., 203 were selected using systematic random sampling technique, of which 200 were retained on the basis of quality of information obtained) exhibiting responses for the products of small businesses through self developed schedules. It consisted of 16 items falling within the domain of customer value based management of which 12 items were considered for analysis after the scale purification. The first set of items touched with overall customer value, followed by questions about the customer satisfaction and loyalty and then the respective brand switching behavioural items such as brand recognition, product cues and brand switching factors. Dimension-wise responses obtained from customers on a five point Likert scale (5<---->1) ranged from -2 to +2 ‘strongly agree’ to ‘strongly disagree’ after scale purification were analyzed using Friedman’s ANOVA test, Kendalls’ W test, multiple regression analysis, averages on SPSS (version 13.0) and Conjoint model on Marketing Engineering Software (version 1.1). The data was collected to test following hypotheses and objectives:

1. The customer values for goods and services are largely associated with the retail stores brands, customer services offered therein and differs across generations in the long run. (Ofek Elie 2002). This prompts SSI sector to enhance customer value drivers or sources including product related factors such as product quality, and product customization, quality-related factors such as responsiveness, flexibility, reliability and technical competencies and relationship related factors such as corporate image, time/effort/energy and solidarity. (Bolton and Drew 1991, Zeithaml 1988). Thus the first hypothesis formed is tested by the responses obtained from two groups of customers to represent difference in mean ranks for most of the positive benefit drivers of customer value.

   \( H_1: \) There are significant mean differences in the responses of old and new group of customer for value delivering strategies adopted by SSIs.

   \( O_1: \) To analyse difference in opinions of two groups of customers for customer value constructs.

2. Customer intimacy is the outcome of customer satisfaction and customer loyalty: customer satisfaction is determined by product attractiveness, product performance as per expectations and price management whereas customer loyalty is determined by product warranty, price reasonability, product selection, follow up services (Anderson and Mittal 2000, Oliver 1997, Yi 1990& Bolton 1998) and word of mouth (Anderson and Narus 1998). The behavioural components of customer satisfaction and loyalty construct have been assessed using customer intimacy construct variables (Dick and Basu 1994, Johnson et al. 1997, Narayandas 1997). Extrapolating from these associations, the following hypotheses and objectives have been formed:

   \( H_2: \) Customer satisfaction and loyalty is positively related to customer intimacy among the group of new customers.

   \( O_2: \) To assess and analyse the strength of relationship between customer intimacy and various dimensions of customer satisfaction and loyalty for SSI products as opined by new group of customers in urban Kathua block.

   \( H_3: \) Customer satisfaction and loyalty is positively related to customer intimacy among the group of old customers.

   \( O_3: \) To assess and analyse the strength of relationship between customer intimacy and various dimensions of customer satisfaction and loyalty for SSI products as opined by old group of customers in urban Kathua block.
3. Consumers may switch brands due to poor service quality (Yavas, Benkenstein, & Stuhldreier 2004), price (Gerrard and Cunningham 2004), behavioural reasons such as variety seeking (Givon 1984), impulse (Stern 2002), quality of life (Boyle et al 1998) and situational context (Skoglan and Siguaw et al. 1998). Patton (1990) through brainstorming exercises generated factors that might induce switching and found that when a consumer perceives low service quality and value, experiences low satisfaction with the service provider, has low trust and commitment to that service provider, and perceives the price to be high, he or she is more likely to feel pushed to switch. Conjoint analysis is commonly found in behavioral studies (Green & Srinivasan 1978) and in marketing studies (Green, Rao 1971, & Bajaj 1998) where the predictor variables are called attributes, and the dependent variable is often an overall evaluation of a product. Given that research has found that brand switching behaviour is influenced by brand recognition, product cues and brand switching factors such as complaint handling and previous experience, the relevant hypotheses (H4, H5 and H6) and objectives (O4, O5 and O6) are:

\( H_4: \) Customer brand switching behaviour is affected by brand recognition.

\( O_4: \) To determine the contributions of predictor variable of brand recognition and their respective values (or levels) to the dependant variable (usually overall evaluation).

\( H_5: \) Customer brand switching behaviour is affected by product cues.

\( O_5: \) To determine the contributions of predictor variable of product cues and their respective values (or levels) to the dependant variable (usually overall evaluation).

\( H_6: \) Customer brand switching behaviour is affected by complaint handling and previous experience as brand switching factors.

\( O_6: \) To determine the contributions of predictor variable of brand switching factors and their respective values (or levels) to the dependant variable (usually overall evaluation).

**EVALUATION PROCEDURES AND ANALYSES**

**Purification of Strategic Value Based Management (SVBM) Measurement Scale**

The raw data obtained from 200 customers after proper editing and adjustments was purified and reduced using factor analysis SPSS (version 13.0). Visual inspection of the correlation matrix and anti-image matrix was performed in which Bartlett’s test yielded a chi-square value of 915.971 (p-value = 0.000) indicating sufficient common variance and correlation matrix significantly different from an identity matrix to render factor analysis appropriateness. The appropriateness of using factor analysis was further supported by the KMO-measure of Sampling Adequacy (MSA), for which a value of 0.802 was obtained falling into the range of ‘meritorious’ (MSA>0.80–0.89) indicating a very satisfactory level (Dess et al. 1997, Field 2000). Exploratory factor analysis (EFA) gave as many as 16 statements falling within the domain of strategic value based management (SVBM) framework using R-Mode Principal Components Analysis (PCA) with varimax rotation which finally resulted into 12 items of customer behavioural variables after the scale purification. Initially the 1st exercise failed in providing any stable factorial framework with 6 iterations and 56.78% of the total variance explained because 3 items of four-factor solution were not having appropriate factor loading values and commonalities indicating their weak interconnectedness with other variables. In the 2nd exercise of 1st round, 3 items got dropped as the four-factor solution was not able to attain traditional component loading of 0.5 as a cut off for significance (Hultink and Robben 1999). This round got converged in 7 iterations with four-factor solution explaining 62.50% of the total variance. Since the criteria for the study was finalised at FL≥0.55 as the statements within each factor were not from one dimension and also the respondents were greater than the variables,
another round was needed to assess the extent to which the judgments for the constructs shared a common structure. Hence, the final factorial design with four-factor solution using Kaiser Criteria (i.e eigenvalues≥1) accounted for 65.19% of the total variance with the deletion of only one item in 6 iterations (Kakati and Dhar 2002). The values of Kaiser’s Measure of Sampling Adequacy (MSA) and Bartlett’s test of Sphericity were also satisfactory at 0.784 and $\chi^2(66) = 629.660$, $p<.001$ respectively. In this round factor loadings were consistent with conservative criteria although the statements obtained within each factor were not related to only one dimension. The component loadings, commonalities and % of variance explained by each factor by an orthogonal varimax rotation are displayed in Table 1.

**RELIABILITY AND VALIDITY**

Reliability was arrived after the scale purification which resulted in 4 factors viz., $F_1$, $F_2$, $F_3$ and $F_4$. Table 1 presents the factor-wise Cronbach alpha reliability coefficients, cumulative variance explained (CVE), Eigen-values and KMO value for all the 4 factors. The Alpha reliability coefficients of the 12 scale items within all the four factors ranged from 0.53 to 0.75. The reliability coefficient for $F_1$ was at 0.75 indicating high consistency for being nearby to the criteria of 0.77 obtained by Gordon and Naryanan (1984). Nevertheless $F_2$ (0.64), $F_3$ (0.57) and $F_4$ (0.53) also obtained satisfactory internal consistency which was at a minimum acceptable level of 0.50 as recommended by Nunnally (1978). However, the composite reliability score for all the factors was very much satisfactory at 0.74. The value of Kaiser-Meyer-Olkin measure of sampling adequacy of 0.78 and all factor loadings between items and their respective constructs being greater than equal to 0.60 also demonstrated adequacy and reliability of sample size to yield distinct and reliable factors.

Validity: The $F_1$, $F_2$, $F_3$ and $F_4$ yielded reliability coefficients higher and equal to 0.50 and KMO value was also very much satisfactory at 0.784, indicating high construct validity of the construct (Hair et al. 1995).

**Measurement of customer value**

Friedman’s analysis of variance (ANOVA) test and Kendall’s W’ test (Burgess et al. 1998 and Ahmed and Hassan 2003) has been conducted to analyse the mean difference in ranks assigned by new and old group of customers to various dimensions of customer value such as intrinsic value, product performance, durability, perceived reliability and corporate image (table 2). The highest chi-square value and Kendall’s W coefficients of concordance ($\chi^2 = 15.511$; K-S = 0.155) was generated for ‘intrinsic value’ and lowest ($\chi^2 = 2.848$; K-S = 0.028) for ‘perceived reliability’ that was insignificant thereby declaring significant statistical differences in the mean ranks obtained from two groups of customers for all the five customer value dimensions except for ‘perceived reliability’. Hence, the results offer full support to the first hypothesis ($H_1$).

**Relationship of customer intimacy with customer satisfaction and loyalty**

In order to investigate the link between dependent variable of customer intimacy and two independent variables i.e., customer satisfaction and loyalty, the sum of customer intimacy scale was regressed with the sum for two aforementioned independent variables for two groups of new and old customers (Leyland et al. 1996) The results of the regression analysis shows two independent variables of customer loyalty as significant in the regression model i.e., ‘product selection’ variable of customer loyalty among new as well as old group of customers and ‘reasonable prices’ as significant only among
the old group of customers. The value of R as 0.536 (new customers) and 0.497 (old customers) signify positive correlation between predictor and the outcome. ‘Product selection’ has emerged as the strongest predictor whereas ‘price management’ was found to be the weakest as confirmed by their relative ‘t’-values. The total variability in customer intimacy accounted for by new and old group of customers for three independent variables was 28.7% and 24.7% respectively. Change in $R^2$ was also found to be significant as the values of F are well below 0.05 percent significance level. The value of Durbin-Watson being above 2 is also indicative of the fact that errors in regression are independent. The results (as given in the table 3) revealed that ‘product selection and ‘price reasonability’ as loyalty constructs predict ‘customer intimacy’ for SSI products. Therefore, this offers partial support for H2 and H3.

**Inter-attribute trade-off to evaluate factor importance**

Conjoint analysis to estimate or determine how respondents develop preferences for products or services, and to measure the trade-offs people make when making a decision (Hair et al. 1995) was carried out mathematically as well as using Marketing Engineering Software (version 1.1) by assigning weights to three attributes namely, brand recognition, product cues and brand switching factors. First, three attributes with six related options (2 each) were edited. Thereafter ‘utility assessment’ was done by assigning weights to each attribute and underlying options (in order of merit) followed by operationalisation resulting into 8 possible stimuli combinations. These combinations were given weights as per customer responses obtained in the form of Likert scale items (5<->1 coded as +2, +1, 0, -1, -2). After the completion of ‘utility assessment’, part worth file was loaded from coded excel file and conjoint matrix was generated as per responses obtained from 200 customers from urban Kathua block. The results of analysis revealed that at each factor level ‘golden vanaspati’ with ‘better quality’ and due to ‘complaint handling’ nature of SSIs emerged as ‘optimal product choice’ whereas in terms of attribute importance ‘brand switching factors’ were given highest weightage followed by ‘brand recognition’ and least important attributes were ‘product cues’ as evident from Table 4. This led to the complete acceptance of $H_6$ and partial agreement to $H_4$ and $H_5$.

**Managerial and Academic Implications**

Customers are value maximizers. Recognizing that intrinsic product value leads to high customer value, many small firms today are aiming for delivering superior customer value. For such companies, customer value enhancement is both a goal and a marketing tool. Customer value also depends on product performance, durability, and corporate image that bear on its ability to satisfy stated or implied needs. Small firms need to understand products’ perceived reliability that carried less importance while analysing customers value attainment. The key to customer intimacy lies in strengthening its relationship with customer satisfaction and loyalty. The survey demonstrated the outstanding importance of customer intimacy which is closely connected with wider product choice at reasonable prices as customer loyalty. This invites more efforts from small businesses towards wider availability of products keeping into view cost factor. However, customer intimacy was not found to be very closely linked with customer satisfaction in terms of performance equals satisfaction and price management efforts by small businesses. This enforces further research efforts. Moreover the survey indicated that determinants customer satisfaction was not interlinked to customer intimacy that may vary for broader sample. An understanding of the relative impact of brand switching variables and interactions affords marketers the opportunity to design more effective customer acquisition and/or retention programs. Our results underscored the importance of alternative attributes such as brand recognition and product cues in consumers’ decisions to switch.
This survey is not very comprehensive as being limited to only 200 customers. More important, this study suggested that switching behaviour is influenced less by customer evaluations of brands and product cues than by alternative attributes of complaint handling and past experience. As discussed here, the migration literature has much to offer to those interested in understanding customer switching behavior.

REFERENCES

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Article/Pdf/1310050405.pdf


### Table 1: Summary of Results Showing Factor Loadings and Variance Explained After Scale Purification (Using Rotated Component Method) for Kathua Town/Block

<table>
<thead>
<tr>
<th>Factor-wise dimension</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Factor loadings</th>
<th>Eigen value</th>
<th>Variance explained</th>
<th>Cumulative variance %</th>
<th>Comm-onality</th>
<th>Alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F1</strong></td>
<td>3.88</td>
<td>0.796</td>
<td>3.760</td>
<td>24.739</td>
<td>24.739</td>
<td>0.7524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Intrinsic Value</td>
<td>4.11</td>
<td>0.668</td>
<td>0.865</td>
<td></td>
<td></td>
<td>0.762</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Product performance</td>
<td>4.07</td>
<td>0.658</td>
<td>0.860</td>
<td></td>
<td></td>
<td>0.743</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Durability</td>
<td>4.04</td>
<td>0.671</td>
<td>0.708</td>
<td></td>
<td></td>
<td>0.632</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Reasonable prices</td>
<td>4.08</td>
<td>0.520</td>
<td>0.652</td>
<td></td>
<td></td>
<td>0.627</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Perceived reliability</td>
<td>3.10</td>
<td>1.413</td>
<td>0.604</td>
<td></td>
<td></td>
<td>0.513</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F2</strong></td>
<td>3.81</td>
<td>0.952</td>
<td>1.493</td>
<td>15.523</td>
<td>40.262</td>
<td>0.6403</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: An Analysis of Difference in Mean Ranks for Customer Value Between Two Groups Using Friedman’s ANOVA and Kendall’s W test

<table>
<thead>
<tr>
<th>Constructs</th>
<th>New customers Mean ranks</th>
<th>Old customers Mean ranks</th>
<th>Kolmogorov-Smirnov</th>
<th>Kendall’s W</th>
<th>Asymptotic sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic value</td>
<td>1.37</td>
<td>1.63</td>
<td>0.650</td>
<td>15.511* (S)</td>
<td>0.155</td>
</tr>
<tr>
<td>Performance</td>
<td>1.40</td>
<td>1.60</td>
<td>0.683</td>
<td>8.805* (S)</td>
<td>0.088</td>
</tr>
<tr>
<td>Durability</td>
<td>1.44</td>
<td>1.56</td>
<td>0.661</td>
<td>3.789** (S)</td>
<td>0.038</td>
</tr>
<tr>
<td>Perceived reliability</td>
<td>1.42</td>
<td>1.58</td>
<td>1.44</td>
<td>2.848 (NS)</td>
<td>0.028</td>
</tr>
<tr>
<td>Corporate image</td>
<td>1.42</td>
<td>1.58</td>
<td>1.44</td>
<td>4.129* (S)</td>
<td>0.041</td>
</tr>
</tbody>
</table>

**Footnotes:** *p>0.01 and **p>0.05
S’ stands for significant and ‘NS’ for not significant

Table 3: Regression Model Summary (with coefficient) of Customer Satisfaction and Customer Loyalty Variables as Predictors of Customer Intimacy with Customer Care as Dependent Variable (Enter Multiple Regression Method) Among New and Old Customers

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>New customers</th>
<th>Old customers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta Coefficient</td>
<td>S.E</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>0.050</td>
<td>0.083</td>
</tr>
<tr>
<td>Performance equals expectations</td>
<td>-0.037</td>
<td>0.081</td>
</tr>
<tr>
<td>Price mgt.</td>
<td>0.479</td>
<td>0.081</td>
</tr>
</tbody>
</table>

**Footnotes:** *K MO Value = .784; Bartlett’s test of sphericity = 629.660, df = 66, sig. = .000.
Extraction Method: Principal Component Analysis Varimax with Kaiser Normalization.
Rotation converged in 2 rounds and 6 iterations.
Table 4: An Analysis of Consumer Inputs and Estimated Part-Worth Using Conjoint Analysis

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Consumer inputs (equals 100% total)</th>
<th>Factor levels</th>
<th>Utility scores (Part-worth)</th>
<th>Range of utility Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>H4: Brand recognition</td>
<td>28.6%</td>
<td>Brand</td>
<td></td>
<td>1.512</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Golden vanaspati</td>
<td>+ 0.756</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shahzada vanaspati</td>
<td>- 0.756</td>
<td></td>
</tr>
<tr>
<td>H5: Product cues</td>
<td>14.3%</td>
<td>Product Cues</td>
<td></td>
<td>0.756</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Better quality</td>
<td>+ 0.378</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less price</td>
<td>- 0.378</td>
<td></td>
</tr>
<tr>
<td>H6: Complaint handling &amp; previous experience</td>
<td>57.13%</td>
<td>Brand switching factors</td>
<td></td>
<td>3.022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complaint handling</td>
<td>+ 1.511</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Previous experience</td>
<td>- 1.511</td>
<td></td>
</tr>
</tbody>
</table>

The utility range was used as a measure of importance for the attributes of loyalty programs included in the conjoint analysis. The utility range is calculated by subtracting the part-worth utilities of the least preferred level of each attribute from the part-worth utilities of the most preferred level of each attribute. Relative importance (on the basis of inter-attribute tradeoffs) is expressed in percent of total range.

Mathematical formulation of conjoint is as under:

1. Averages ranking \( (x_{i}) \) across these 8 stimuli were obtained and then their deviations from overall mean scores were taken. These deviations were squared \( (d^2) \) after reversing them at each factor level.
2. Standardised value was obtained \( (S.V) = f/\Sigma d^2 \), here ‘f’ stands for number of factor levels and \( \Sigma d^2 \) stands for sum of squared deviations. These squared deviations \( (d^2) \) were multiplied with S.V.
3. EPW = \( \sqrt{\text{St.D}} \), here EPW stands for ‘estimated part worth’ and St.D for ‘standardised deviation’.
4. RPW = \( (HPv-LPv) \), here RPW stands for range of part worth, HPv for highest part worth or utility score within each factor level and LPv for lowest part worth or utility score within each factor level.
5. FI = \( \text{RPW}/\Sigma \text{RPW}*100 \), here FI stands for ‘factor importance’.