

## **Measuring Customer Value Gaps: An Empirical Study in Mexican Retail Market**

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## **Abstract**

The role of customer value has been largely recognized over time by the firms as an instrument towards stimulating market share and profit optimization. The customer values for a new product of firm in competitive markets are shaped more by habits, reinforcement effects, and situational influences than strongly-held attitudes. A basic premise of the paper is that the focus should be on maximizing total customer value and customer satisfaction which are inter-dependent in the decision making process towards buying new products. The framework of the construct is a proposed model which integrates all aspects so as to maximize the potential of the organization and all its subsystems to create and sustain satisfied customers. The discussion in the paper on the customer value gaps in the process of marketing new products and explores the possible situations that may lead to lower the customer value. The model discussed in the study has been subject to empirical testing through analysis of data collected from 369 respondents purposively selected. The study was conducted in the 11 retail auto service stores located in Mexico City.

Customer lifetime value (CLV) is a key-metric within customer relationship management. Although, a large number of marketing scientists and practitioners argue in favor of this metric, there are only a few studies that consider the predictive modeling of CLV. In this study, we focus on the prediction of CLV in customer goods manufacturing and marketing firms. In these industries, customer behavior is rather complex, because customers can purchase more than one service, and these purchases are often not independent from each other (Donkers *et.al.*, 2003). However, it has been observed that low perceived use value; comparative advantages over physical attributes and economic gains of the product make significant impact on determining the customer value for the relatively new products. The customer value gap, may be defined as the negative driver, that lowers the returns on the aggregate customer value. This is an important variable, which need to be carefully examined by a firm and measure its impact on the profitability of the firm in reference to spatial (coverage of the market) and temporal (over time) market dimension (Marjolein and Verspagen, 1999).

The new school of business thoughts and contemporary researchers have emphasized that, towards maximizing the lifetime value of customers, a firm must manage customer relationships for the long term. In a disagreement to this notion a study demonstrates that firm profits in competitive environments are maximized when managers focus on the short term with respect to their customers (Villanueva *et. al.*, 2004). Intuitively, while a long term focus yields more loyal customers, it sharpens short term competition to gain and keep customers to such an extent that overall firm profits are lower than when managers focus on the short term. Further, a short term focus continues to deliver higher profits even when customer loyalty yields a higher share-of-wallet or reduced costs of service from the perspective of the firm. Such revenue enhancement or cost reduction effects lead to even more intense competition to gain and keep customers in the short term. The findings of the study suggest that the competitive implications of a switch to a long term customer focus must be carefully examined before such a switch is advocated or implemented. Paradoxically, customer lifetime value may be maximized when managers focus on the short term.

There have been limited studies that have discussed the impact of convergence of product services offered by a firm to the new products towards generating customer value over time. However, some of the studies find no evidence of absolute convergence, while a few find evidence of conditional convergence, *i.e.* convergence having controlled for differences in technological and behavioral parameters (Kenny and Marshall, 2000). The lack of evidence of absolute convergence leads to the lowering of perceived use value of the new products and further results into the lowering the returns on the aggregate customer value in terms of repeat buying ( $b'$ ) and market coverage ( $s$ ) for a firm in a given time. However, most of the convergence studies are aimed at proving or disproving the neoclassical growth model and hence there is need to take the 'product' as the unit of measurement of customer value.

## **Review of Literature**

It has been observed that there is increasing number of customer goods and services offered in recent years suggest that product-line extensions have become a favored strategy of product managers. A larger assortment, it is often argued, keeps customers loyal and allows firms to charge higher prices. There also exists a disagreement about the extent to which a longer product line translates into higher profits keeping the customer value higher. The academics, consultants

and business people speculated that marketing in the new century would be very different from the time when much of the pioneering work on customer loyalty was undertaken (Churchill 1942; Brown 1953; Cunningham 1956, 1961; Tucker 1964; Frank 1967). Yet there exists the scope for improving the applied concepts as there have been many changes over conventional ideologies. A study using market-level data for the yogurt category developed an econometric model derived from a game-theoretic perspective explicitly considers firms' use of product-line length as a competitive tool (Dragnska and Jain, 2005). On the demand side, the study analytically establishes the link between customer choice and the length of the product line and includes a measure of line length in the utility function to investigate customer preference for variety using a brand-level discrete-choice model. The study reveals that the supply side is characterized by price and line length competition between oligopolistic firms.

Another study explores qualitatively the understanding of the importance of intangibles as performance drivers in reference to Swedish organizations using a combination of evolutionary theory, knowledge-based theory and organizational learning. The study reveals that the customer values are created towards the new products through individual perceptions, and organizational and relational competence (Johanson *et.al.*, 2001). The firms need to ascertain a continuous organizational learning process with respect to the value creation chain and measure performance of the new products introduced in the market. In the growing competitive markets the large and reputed firms are developing strategies to move into the provision of innovative combinations of products and services as 'high-value integrated solutions' tailored to each customer's needs than simply 'moving downstream' into services. Such firms are developing innovative combinations of service capabilities such as operations, business consultancy and finance required to provide complete solutions to each customer's needs in order to augment the customer value towards the innovative or new products. It has been argued that the provision of integrated solutions is attracting firms traditionally based in manufacturing and services to occupy a new base in the value stream centered on 'systems integration' using internal or external sources of product designing, supply and customer focused promotion (Davies,2004). Besides the organizational perspectives of enhancing the customer value, the functional variables like pricing play a significant role in developing the customer perceptions towards the new products.

A study examines the success of new product pricing practices and the conditions upon which success is contingent discussing three different pricing practices that refer to the use of information on customer value, competition, and costs respectively. The study argues that the success of these practices is contingent on relative product advantage and competitive intensity. The study reveals that there are no general "best" or "bad" practices, but that a contingency approach is appropriate (Ingenbleek *et.al.*, 2003). Value and pricing models have been developed for many different products, services and assets. Some of them are extensions and refinements of convention models value driven pricing theories (Gamrowski & Rachev, 1999; Pedersen, 2000). Also there have been some models that are developed and calibrated addressing specific issues such as model for household assets demand (Perraudin & Sorensen, 2000). The key marketing variables such as price, brand name, and product attributes affect customers' judgment processes and derive inference on its quality dimensions leading to customer satisfaction. The experimental study conducted indicates that customers use price and brand name differently to judge the quality dimensions and measure the degree of satisfaction (Brucks *et.al.*, 2000). The value of corporate brand endorsement across different products and product lines, and at lower levels of the brand hierarchy also needs to be assessed as a customer value driver. Use of corporate brand

endorsement either as a name identifier or logo identifies the product with the company, and provides reassurance for the customer (Rajagopal and Sanchez, 2004). A perspective from resource-advantage theory (Hunt and Morgan, 1995) is used to formulate expectations on the degree to which the use of information on customer value, competition, and costs contribute to the success of a price decision. It is argued that the success of these practices is contingent on the relative customer value the firm has created and the degree to which this position of relative value is sustainable in the competitive market place. These expectations are empirically tested on pricing decisions with respect to the introduction of new industrial capital goods.

The studies that advocate the models of building customer value through traditional relationship marketing discuss the long term value concepts to loyal customers. Most importantly, these are expected to raise their spending and association with the products and services of the company with increasing levels of satisfactions that attribute to values of customers (Reichheld and Sasser, 1990). In the most optimistic settings, such value creation is observed to generate new customers for new products in view of the customer relationship and value management strategies of the firm (Ganesh, *et.al.*, 2000) In the high customer value framework, the firm ensures diminished costs to serve (Knox, 1998) and exhibits reduced customer price sensitivities. A database-driven approach, customer tenure in reference to the length of a customer's relationship and values retention with a company has often been used to approximate the loyalty construct (Ganesh *et.al.*, 2000; Reinartz and Kumar, 2000; 2002). Hence the relationship marketing with a customer value orientation thrives on the concept that raises the length of the customer-company relationship which contributes in optimizing the profit for the firm (Reichheld and Sasser, 1990). However, the contributions of long-life customers were generally declining and in a non-contractual setting short-life but high-revenue customers accounted for a sizeable amount of profits (Reinartz and Kumar, 2000).

The analysis of the perceived values of customers towards new products is a complex issue. Despite considerable research in the field of measuring customer values in the recent past, it is still not clear how value interacts with marketing related constructs. However there exists the need for evolving a comprehensive application models determining the interrelationship between customer satisfaction and customer value, which may help in reducing the ambiguities surrounding both concepts. One of the studies in this regard discusses the two alternative models yielding empirically tested results in a cross-sectional survey with purchasing managers in Germany. The first model suggests a direct impact of perceived value on the purchasing managers' intentions. In the second model, perceived value is mediated by satisfaction. This research suggests that value and satisfaction can be conceptualized and measured as two distinct, yet complementary constructs (Eggert and Ulaga, 2002).

Improving customer value through faster response times for new products is a significant way to gain competitive advantage. In the globalization process many approaches to new product development emerge, which exhibit an internal focus and view the new product development process as terminating with product launch. However, it is process output that really counts, such as customer availability. A study proposes that with shortening product life cycles it should pay to get the product into the market as quickly as possible, and indicates that these markets should be defined on an international basis. The results of the study reveals that greater new product commercial success is significantly associated with a more ambitious and speedier launch into overseas markets as the process of innovation is only complete when potential customers on a

world scale are introduced effectively to the new product (Oakley, 1996). The retail sales performance and the customer value approach are conceptually and methodically analogous. Both concepts calculate the value of a particular decision unit by analytical attributes forecast and the risk-adjusted value parameters. However, virtually no scholarly attention has been devoted to the question if any of these components of the shareholder value could be determined in a more market oriented way using individual customer lifetime values (Rajagopal, 2005). The value of a customer may be defined in reference to a firm as the expected performance measures are based on key assumptions concerning retention rate and profit margin and the customer value also tracks market value of these firms over time. The value of all customers is determined by the acquisition rate and cost of acquiring new customers (Gupta, Lehmann and Stuart, 2003).

### Theoretical Motivation

A retail chain is modeled as a dummy control center (CC) that helps in evolving strategies, marketing designs and building corporate image. The CC is an integrated part of the corporate headquarters that is instrumental in making most of the business decisions. Let us assume that there are  $L$  networks and  $D_m$  spatially spread markets.  $\Delta_j \subseteq \{1, 2, \dots, D_m\}$  denotes the set of markets served by chains  $j$  and  $\phi_h \subseteq \{1, 2, \dots, L\}$  denotes the set of chains serving markets  $h$ , the operations of chain in  $j^{\text{th}}$  store in market  $h$  in period  $t$  are fully described by an  $N$ -dimensional vector,  $Z^{j,h}(t) \equiv (Z_1^{j,h}(t), \dots, Z_N^{j,h}(t)) \in \{1, \dots, R\}^N$ , where  $Z_K^{j,h}(t)$  is the practice for the  $k^{\text{th}}$  dimensions of the store operations. There are then  $R$  feasible practices for each dimension. The store operations of chain  $j$  is represented by an element of  $\{1, 2, \dots, R\}^{N|\Delta_j|}$ .

### Measuring the Customer Value

The customer values for goods and services are largely associated with the retail stores brands and customer services offered therein. The beginning of customer preferences is the basic discrete time that helps the customers in making a buying decision and maximizing the value of product. Ofek Elie (2002) discussed that the value of product and service are not always the same and are subject to value life cycle that governs the customer preferences in the long-run. If customers prefer the product and service for  $N$  periods with  $Q$  as value perceived by the customer, the value may be determined as  $Q > N$ , where  $Q$  and  $N$  both are exogenous variables. If every customer receives higher perceived values for each of his buying, the value added product  $q \geq Q$ , where 'q' refers to the change in the quality brought by innovation or up-graded technology. The customer may refrain from buying the products if  $q \leq Q$ , that does not influence his buying decisions. However, a strong referral 'R' may lead to influence the customer values, with an advantage factor  $\gamma$  that may be explained by price or quality factor. In view of the above discussion it may be assumed that customer preferences have high variability that grows the value factors in retail buyers' decisions:

$$E \left[ \sum_{t=1}^N \gamma^t \mu(C_t, \hat{Z}) + \gamma^{N+1} Q_t(V_{N+1}) \right] \quad (i)$$

Where  $C_t$  represents consumption,  $\hat{Z}$  is a vector of customer attributes (*viz.* preferential variables),  $Q_t$  is the value perceived by the customer and  $V_{N+1}$  denotes the value perceived by the

customer. The customer may maximize his value  $Q_t$  in a given time and also enhances his values for future buying if the influence of referrals is not negative  $V_{N+1} \geq 0$ .

A customer value is a dynamic attribute that plays a key role in buying and is an intangible factor to be considered in all marketing and selling functions. The value equation for customer satisfaction may be expressed as a function of all value drivers wherein each driver contains the parameters that directly or indirectly offer competitive advantages to the customers and enhance the customer value.

$$V' = K_s, K_m, K_d, K_c \left[ \prod \{V(x, t, q, p)\} \right] \quad (ii)$$

In the above equation  $V'$  is a specific customer value driver,  $K$  are constants for supplies(s), margins (m), distribution (d), and cost to customers (c);  $x$  is volume,  $t$  is time,  $q$  is quality and  $p$  denotes price. The total utility for the conventional products goes up due to economy of scale as the quality is also increased simultaneously ( $\delta_v/\delta_x > 0$ ). The customer value is enhanced by offering larger volume of product at a competitive price in a given time ( $\delta_v/\delta_p > 0$ ) and ( $\delta_v/\delta_t > 0$ ). The conventional products create lower values to the customers ( $\delta_v/\delta_x < 0$ ) while the innovative products irrespective of price advantages, enhance the customer value ( $\delta_v/\delta_x > 0$ ). The value addition in the conventional products provides lesser enhancement in customer satisfaction as compared to the innovative products. Such transition in the customer value, due to shift in the technology may be expressed as:

$$V'_{hj} = a \left[ \sum \frac{T_p}{(1 + V_p)^{(1+j+i)}} \right] + b(X_j) \quad (iii)$$

In this equation  $V'_{hj}$  represents enhancements in customer value over the transition from conventional to innovative products,  $a$  and  $b$  are constants,  $T_p$  denotes high-tech and high-value products,  $V_p$  represents value of product performance that leads to enhance the customer value, the volume is denoted by  $X$  and  $j$  is the period during which customer value is measured.

Besides the high-tech and high-value products the customers and companies may also find scope of enhancing values with appropriate promotional strategies. The customer values often get enhanced by offering better buying opportunities that reflect on short- and long- term gains. Let us assume that the competitive advantage in existing products over time is  $G_x$  that offers  $j^{\text{th}}$  level of satisfaction through various sales promotion approaches adopted by the company. Such market situation may be explained as:

$$G_x = [r_1 m_1; r_2 m_2; r_3 m_3; \dots; r_j m_j] \quad (iv)$$

Where  $r_j$  denotes the  $j^{\text{th}}$  level of satisfaction ( $j = 1, 2, 3, \dots, n$ ) and  $m_j$  is the number of customers attracted towards buying the product. Given the scope of retail networks, a feasible value structure for customers may be reflected in repeat buying behavior ( $\hat{R}_x$ ) that explains the relationship of the customer value with the product and associated marketing strategies. The impact of such customer value attributes in a given situation may be described as:

$$\sum_{j=1}^n r_j m_j = \hat{R} \quad (v)$$

### *Market Coverage and Customer Value Enhancement*

Most of the new products in the fast moving customer goods (FMCG) category, like processed food products, cosmetics, etc face competition in the market and the firms penetrate into the oligopolistic market conditions. Under such market conditions the customer value is also driven by the satisfaction that is offered by the substitutes. Often, the firms face competition within their product line due to implementation of product overlap strategy, which generates conflicting customer values. When a firm introduces a high value product derived out of the research and development efforts, it prescribes the use value for it, however the perceived use value for the product may not match with the prescribed use value tagged to the product by the firm. Such uncertainty may cause low performance of product in terms of buying preferences.

A firm may introduce the new product with the high investment  $M_t^{(i_1+i_2+i_3+\dots+i_n)j}$  in terms of product attributes ( $i_1$ ), distribution ( $i_2$ ), promotion ( $i_3$ ) and other related factors ( $\dots i_n$ ) related with gaining competitive advantage in a given time ( $t$ ) in the  $j^{\text{th}}$  market. Let us assume that  $s$  is the estimated market coverage for the new product, the customer value ( $V_{np}$ ) may be initially positive and high, resulting into deeper market penetration (with  $s$  increasing). This may be described as:

$$M_t^{(i_1+i_2+i_3+\dots)j} = \frac{\delta s}{\delta t} = k \quad (vi)$$

However,  $V_{np} \leq \frac{\delta v}{\delta t}$  may become negative following product competition within the product line due to the product overlap strategy of the firm. In the above equation, volume of buying is represented by  $\delta v$  in a given time  $t$ . To augment the customer value and enhance market coverage for the new products in the potential markets the firm may optimize the product line  $[s]_{pt}^{j,h}$  by pruning the slow moving products in the  $j^{\text{th}}$  chain in  $h$  market in order to reposition them in new market. The opportunity cost in moving the slow performance products may be derived by inputting the values of  $V'$  from equation (ii) as:

$$[s]_{pt}^{j,h} = \left[ \frac{\delta v}{\delta t} \right]^{j,h} + \Pi \{V'(x, t, q, p)\} \quad (vii)$$

Hence to enhance the market coverage for the new product with enhancing the customer value for the new product of the firm, the strategy may be described as:

$$s = \int [k + \{s\}_{pt}^{j,h}] \delta t + \beta^t R \quad (viii)$$

Where in  $s$  is the market coverage of the new product,  $k$  is the investment on market functions derived in a given time [equation (vi)] and  $R$  is the referral factor influencing the customer values with an advantage factor coefficient  $\beta$  in time  $t$ . The products constituting the optimal product line of the firm in a given time is represented by  $P_t$  in the above equation. The firm may measure the customer value shocks accordingly and shield the uncertainties occurring to the estimated market coverage due to declining customer values for the new products. As is common the new products are susceptible to such value shocks in view of the companies' own product line strategy

### *Measuring Customer Value Gaps*

The customer values are reflected in their competitive gains, perceived use values, volume of buying and level of quintessence with the customer relationship management services of the organization. If these variables do not measure significantly, there emerges the development of switching attitude among the customers. If the organizational values are low, the supplier relationship may be risk averse due to weak dissemination of values from organization to the suppliers. The CVG-1 as exhibited in the Figure 1 may exist for the new products due to the negative difference between the customer value for the product assessed by the firm and the perceived value acquired by the customers upon its buying.

//Figure 1 about here//

If the customer receives the higher degree of perceived value ( $q_p^t$ ) for the new product in each buying with increasing product attractiveness, the firm may be able to enhance its market share of the new product over time and territory. On the contrary the customer value may deteriorate and fall if  $q_p^t \leq \hat{Q}$ , where  $\hat{Q}$  refers to the value estimated for the product by the firm. Such gap may emerge due to inadequate market research, lack of focus on the product quality, poor communications within the firm, lack of appropriate market segmentation and weak customer relationship management. The customer value may also be negative or low if the attributes are not built into the new product to maximize the customer value as per the estimation of the firm. The attributes lead to the satisfaction to the customers and is reflected through the product attractiveness ( $F_x$ ). This is explained as CVG-2 as  $V_{np} \leq [F_x + C_{at}]_{k=1}^{j,h}$  wherein  $V_{np}$  represents the customer value for the new products,  $F_x$  is product attractiveness and  $C_{at}$  is competitive advantage for buying the new product in a given time. There are many factors that contribute to the CVG-2 situation such as unsystematic, vague and undefined product designs, lack of customer product defined standards and setting the quality control goals by the firm.

The customer value gap for the new products is also generated due to lack of proper product delivery at the retail stores or outlets where customer has an easy access to the product as exhibited in CVG-3. In delivering the product ( $p$ ) to the customers the major considerations that a firm should make is towards the volume of product to be penetrated ( $v'$ ) in a given time in the predetermined market coverage ( $s$ ). The just-in-time product management and services offered to the customers in the retail outlets ( $R_{sx}$ ) through which the new products are sold, largely

affects the customer preferences and the values. The customer value may enhance if there is a positive relationship of all these factors. However, it may have a negative or low impact if

$$V_{np} = \left[ \left( \frac{\delta v'}{\delta s} \right) \alpha R_{sx} \right]_{k=1}^{j,h} \leq 0 \quad (\text{ix})$$

Where,  $\alpha$  is a constant used for measuring the customer services provided by the retails stores. The external communications such as advertisements, referrals and word of mouth play significant role in building the customer value at the point of purchase. If the communication spread for the new products in terms of the above discussed variables is positive, its integrated impact would develop strong self reference criterion among the customers and help in enhancing the returns on the aggregate customer value. On the contrary the CVG-4 may be describes as

$$V_{np} = [\beta_0 + \beta_1(P_{sw})\mu_t + \beta_2(P_{sr})\mu_t + \beta_3(P_{sa})\mu_t + \varepsilon_t]_{k=1}^{j,h} \quad (\text{x})$$

Wherein,  $\beta$  is the constant used for the score of word-of-mouth ( $P_{sw}$ ), opinion score of referrals ( $P_{sr}$ ) and perceptions derived through the commercials on the product inserted in the media ( $P_{sa}$ ). In the equation  $\varepsilon_t$  has been used as the random error and  $\mu_t$  denotes the mean time of obtaining the perceptual scores on new product communication. Upon simplifying, this equation may be represented as:

$$V_{np} = \sum_{k=1}^{j,h} [P_{sc}]^\sigma \leq 0 \quad (\text{xi})$$

In the above equation ( $P_{sc}$ ) denotes the integrated effect on perceptions derived by the customers on new products. If this value goes negative across the markets in a given time, it will pull down the customer value lowering the volume of buying and shrinking market coverage estimates of the firm.

This framework analyzes optimal portfolio choice and consumption with values management in the firm-supplier-customer triadic relationship. The value concept in the above relationship governs the customer portfolio decision in terms of formulation of recursive utility over time. It shows that the optimal portfolio demand for products under competition varies strongly with the values associated with the brand, industry attractiveness, knowledge management and ethical issues of the organization. The extent of business values determines the relative risk aversion in terms of functional and logistical efficiency between the organization and supplier while the switching attitude may influence the customers if the organizational values are not strong and sustainable in the given competitive environment. The model assumes that a high functional value integrated with the triadic entities would raise the market power of organization, sustain decisions of customer portfolios and develop long-run relationships thereof. The customer value concept is utilized to assess product performance and eventually to determine the competitive market structure and the product-market boundaries.

## Study Design

In order to measure the customer value gaps through the model discussed in the paper a preliminary investigation has been conducted in 11 retail auto-service stores in the Mexico City. The data was collected on 64 variables closely related towards influencing the customer values. These variables include various perspectives of customer satisfaction and corporate strategies applied in positioning the new products for gaining optimal market share and aggregate returns on consumptions. The information pertaining to the broad frame of 64 variables were subjected to decision filters at various levels of customers' decision making process and major variables were chosen for data analysis as shown in Table 1. Data has been collected from 400 respondents purposively selected, who were involved in shopping at chosen retail auto-service stores in Mexico City administering a semi-structured questionnaire. The data of 31 respondents were omitted from the data analysis due to paucity of information. The respondents were involved in buying the new products introduced in food and beverages, apparel, cosmetics, toys and household electronics. In all, the data of 369 observations were analyzed in the study.

Table 1: Variables Chosen for the Study

Economic Variables			Relational Variables		
Product based	Application oriented	Comparative	Technology related	Retailer based	Brand based
Appearance	User friendly	Value for money	Innovative	Display	Reputation
Sensory	Multi-user	Price sensitivity	Customization	PoS support	New brand
Durability	Single use	Buying cost	Compatibility	Availability	Extensions
Resale	Multiple use	Services cost	Serviceability	Delivery	Loyal
Services		Guarantee	Up-gradable	Responsiveness	Social status
Need		Cross promotion	Value based	Prospecting	Strong referral
		Value additions		Closing sales	
		Competitiveness		Negotiation	

Data has been input to the structural equations of the model discussed in the paper. The analysis of the empirical data is exhibited in the following Tables, wherein  $\hat{\beta}$  represents the coefficient of relative satisfaction of the customers,  $\hat{\sigma}$  denotes the variability between the corporate values and perceived values of customers associated with the product,  $\gamma_0$  represents the initial satisfaction delivered by the product in terms of economic variables and  $\gamma_1$  shows the customer satisfaction derived through the relational factors as illustrated in Table 1.

The hypotheses for the study have been largely framed around the analytical framework of the gaps model. The customer values are governed by the perception on economic and relational variables conceived by the buyers on the products. The organizational values and customer relationship approaches of the company also influences the customers to acquire higher values. Hence, it has been hypothesized that:

**H1:** Higher perceived value acquired by the customers over the values assessed by the company improves the performance of the new products in the market.

**H2:** The customer value is augmented if the gap between desired product attributes perceived by the customers and the product offered remains marginal

The design standards and attributes of the new products offered, build the product attractiveness and the customer driven products help in acquiring higher level of satisfaction. The companies may involve the customers in the product designing process and incorporate their preferences in order to optimize the application derived customer values. So, the hypotheses may be frames as:

**H3:** The customer value may enhance with the higher degree of customer involvement in the product design process and increase the product attractiveness in for retailing.

**H4:** The customer value is enhanced if the gap between the product communication of the company and acquired perceptions on the product generated with reference to the same is marginal.

The product and brand loyalty is built through an augmented and sustainable customer value. A company may optimization profit over the period through systematically explored concepts in the field of customer value.

## Results and Discussion

The perceived customer value in reference to the product attractiveness  $F_x$  has been estimated through the structural equations derived in the gaps model discussed in the paper. The result has been exhibited in Table 2. The estimations represent for all the observations of the study and standard error has been calculated accordingly.

Table 2: Structural Estimation Results

Parameters	Robust Weighting	Optimal Weighting
$\hat{\beta}$	0.95982	0.95693
$SE$	0.0179	0.0154
$\hat{\sigma}$	4.188	4.507
$p$	0.5146	1.3.966
$\gamma_0$	0.0015	5.6131
$\gamma_1$	0.0710	0.0613
Chi-square	166.06	177.11

In the above Table first column displays the results when the initial robust weighting matrix is employed and the second column presents the results from optimal weighting matrix. The standard error ( $SE$ ) has been estimated with the adjusting parameters  $C_{at}$ ,  $q_p^t$  and  $\hat{Q}$  as discussed in the paper. The results showed that  $SE$  typically increases once the adjusted and calibrated parameters  $\gamma_0$  and  $\gamma_1$  have accounted for measuring the gap between the expectations of the

company and customer perceptions widen in reference to a given product and market conditions (CVG-1).

It has been observed during the study that initial consumption of the new product introduced in the market remains high. However, the long term customers value is influenced by the price and non-factors associated with the product. The performances of the company in retailing management of the product in terms of just-in-time supplies, display, point of sales approaches and customer services also help in building the customer values for the product in a given market. The Table 3 exhibits the gap between the offering strategies of the new product in terms of product design and standards and the customer expectation on economic and relational variables (CVG-2).

Table 3 Customer Value Estimations: Product Design, Standards and Customer Satisfaction

*n*=369

Variable Segments	Value Estimation Parameters for New Products	$\hat{\beta}$	$\partial$	<i>p</i>	$\gamma_0$	$\gamma_1$	Chi-Square
Economic variables	Satisfaction over price	0.962	3.94	0.283*	0.072	0.209	53.60
	Satisfaction over design	0.949	5.30	0.869	0.059	0.162	59.12
	Satisfaction on application	0.962	4.15	0.382*	0.356	0.047	84.22
	Satisfaction over non-price factors	0.930	7.48	0.694	0.721	0.055	87.26
Relational variables	Volume of supply	0.946	5.71	1.672**	0.036	0.321	64.02
	Retailer coverage	0.953	4.96	1.059**	0.210	0.369	52.86
	Just-in-time management	0.963	4.98	1.213**	0.166	0.046	66.81

*p* values \* >.001 and \*\* >.0001

It may be observed from the analysis that the difference among the  $\hat{\beta}$ , constant of relative satisfaction for various customer and company related variables have been marginal in the study. The *p*-values are also significant at >.001 and >.0001 levels for most of the critical variables. This may indicate that the perceived values acquired by the customers and corporate values associated with product offerings match closely. The relational variables stand close to the economic variables, which enhances the aggregate customer value for the product offered. Hence, it may be stated that the results of the study establish the hypotheses H1 and H2.

The product positioning strategies and product delivery approaches also determine the customer values during initial period of product offering. In this process value gaps may be created among customers in a given market due to lack of coordination among these marketing functions. The Table 4 exhibits the measures of relative customer satisfaction in reference to product positioning strategies and retailing management.

Table 4: Customer Value Estimations: Product Positioning and Retailing

*n*=369

Strategy	Value Estimation Parameters for New Products	$\hat{\beta}$	$\hat{\partial}$	<i>p</i>	$\gamma_0$	$\gamma_1$	Chi-Square
Product Positioning	By design	0.821	0.197	0.268*	0.075	0.291	53.61
	By attributes	0.869	0.194	0.291*	2.142	0.055	64.81
	By application	0.824	0.126	0.166**	2.162	0.310	69.60
	By Services	0.921	0.134	0.147**	0.921	0.046	74.81
Retailing Management	By retail stores	0.626	0.146	0.211**	0.321	0.218	76.22
	By virtual shops	0.511	0.147	0.239*	0.419	0.079	54.62
	By personal selling	0.536	0.216	0.242*	0.211	0.098	58.20

*p* values \* >.001 and \*\* >.0001

It may be observed from  $\hat{\beta}$  values that the appropriate product positioning strategies associated with the effective retailing management marginalizes the perceptual differences of the customers on new products offered in the market. The level of satisfaction derived through the virtual stores and personal selling is largely same for the respondents of the study though parameters  $\gamma_0$  and  $\gamma_1$  accounted for measuring the gap between the product positioning and retailing strategies of the company presented in the Table 3 showed wider variations. The results presented in the above Table reveal that strategic product positioning and effective retailing reduce the gap on customer perceptions and help in augmenting the long-run values. Hence, the hypotheses H3 framed gets established.

One of the prominent features emerged during the study is that the customer perception is largely governed by the marketing communications. The word-of-mouth, referrals and commercials issued by the firm drive the decision factors of customers towards the new products. It may be observed from the Table 5 that there exists a close association among the factors of communication and perceived values of the customers.

Table 5: Customer perceptions on the new products as an impact of the structured and non-structured communications

*n*=369

Effect Measurement	Value Estimation Parameters for New Products	$\hat{\beta}$	$\hat{\partial}$	<i>p</i>	$\gamma_0$	$\gamma_1$	Chi-Square
Communication variables	Word of mouth ( $P_{sw}$ )	0.936	0.183	0.241**	0.055	0.291	54.72
	Referrals ( $P_{sr}$ )	0.947	0.142	0.216*	0.036	0.281	59.22
	Commercials ( $P_{sa}$ )	0.941	0.132	0.148*	0.048	0.266	61.31
Organizational dimensions	Integrated effects ( $P_{sc}$ )	0.921	0.136	0.192**	0.039	0.312	64.21
	Product attractiveness ( $F_x$ )	0.943	0.139	0.198**	0.046	0.311	62.81

*p* values \* >.001 and \*\* >.0001

The analysis of the data presented in the above table reveals that there is a close association among the variables of communication, organizational dimensions and the perceived values of

the customers towards new products. The results show that the variability factor  $\delta$  is marginal for the selected variables and the  $\hat{\beta}$  values are close to each variable, with significant level of  $p$  values. There remains minimum gap among these variables which leads to increase in the customer values. The results exhibited in Table 5, hence establish the hypothesis H5 framed for the study.

The study reveals that the customer value is embedded in the functional variables of new product development and positioning in a given market. The individual consumption behavior is largely value driven. The model discussed in this paper has been tested and the fit of the customer values have been estimated by adjusting the tangible and intangible variables. This model may also be useful in determining the customer portfolio, choice matrix to determine the consumer behavior, retailer management strategies for optimizing the customer values, aggregate returns and discrete customer values.

### **Future Prospects in Management**

One of the challenges for the marketing manager of a firm is to incorporate the preferences of the customer into the design of new products and services in order to maximize the customer value. An augmented and sustainable customer value builds the loyalty towards the product and the brand. Systematically explored concepts in the field of customer value and market driven approach towards new products would be beneficial for a company to derive long term profit optimization strategy over the period. Hence, a comprehensive framework for estimating both the value of a customer and profit optimization need to be developed. On a tactical level, managers need to consider the optimum spread of customers on a matrix of product attractiveness and market coverage. This needs careful attention and the application of managerial judgment and experience to measure the value driven performance of the product of the firm. It is necessary for the managers to understand that customer value is context dependent and there exists a whole value network to measure, not just a value chain. This value network will contain important entities far beyond the ones commonly taken into consideration in financial projections and business analyses.

The model discussed in this paper provides a holistic view of the customer value by proposing ways to measure the different variable associated with it *viz.* product attractiveness, market coverage, communication and point-of-purchase services offered to the customers. The analysis of these variables would help the managers develop appropriate strategies to enhance the customer value for the new products and optimize the profit of the firm. Managers of a firm may consider the measurement of customer value with the advent of one-to-one marketing media, *e.g.* targeted direct mail or internet marketing; the opportunities to develop customer relationship management campaigns are enhanced in such a way that it is now both organizationally and economically feasible to support a substantially larger number of marketing segments in a profitable manner. The discussion in the paper on the customer value gaps in the process of marketing new products explores the possible situations that may lead to lower the customer value. An appropriate preventive strategy may be developed by the managers upon measuring the extent of such gaps to protect the deterioration in the customer values and optimize the profit of the firm.

## **Conclusion**

The customer value in terms of satisfaction is one of the indicators for building profit oriented strategies in a firm. The customer value concepts may be applied by the firms to evaluate the product performance in the given market and determine the approach for competitive advantage. In order to gain the returns on the aggregate customer value, firms need to methodically estimate the profitability associated thereof in terms of product attractiveness, volume of buying and market share thereof. The existing theoretical and methodological issues are reviewed in this study and a new framework has been proposed for future research in measuring the customer value in specific reference to the new products as launching innovative and high technology products is a continuous process for the firms in the present competitive markets. The framework for measuring the customer values discussed in this paper provides analytical dimensions for establishing the long run customer relationship by the firm and to optimize its profit levels.

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# Figure 1: Customer Value Gaps Model

