

**Measuring Variability Factors in Consumer Values for  
Profit Optimization in a Firm – A Framework for Analysis**

**Rajagopal, Ph.D.**  
Professor of Marketing, Business Division  
Institute of Technology and Higher Education, ITESM  
Mexico City Campus, Mexico 14380 DF  
E-mail : [rajagopal@itesm.mx](mailto:rajagopal@itesm.mx)

## Abstract

Consumer value may be defined as a tool to measure the prolonged satisfaction and an on-going propensity to buy the product and services. Though there are many issues floating in an on-going debate about the consumer value, it may be argued that the consumer value in terms of the level of satisfaction is evident in providing a revenue stream to the company with high involvement and thereby the repeat purchase behavior is of strategic importance to management. The consumer value concept is utilized to assess product performance and eventually to determine the competitive market structure and the product-market boundaries. The consumer value may be measured as the product efficiency viewed from the consumer's perspective, i.e., as a ratio of outputs (e.g., resale value, reliability, safety, comfort) that consumers obtain from a product relative to inputs (price, running costs) that consumers have to deliver in exchange. The efficiency value derived can be understood as the return on the consumer's investment. Products offering a maximum consumer value relative to all other alternatives in the market are characterized as efficient. This paper develops the framework for measuring the consumer values in reference to establish the long run relationship by the firm and optimize its profit levels. The discussions in the paper attempts to endure the core issues of consumer values in retailing the products and services as how to conceptualize consumer values, how to measure it, and how to manage it.

Developing consumer value through retailing lies at the heart of the marketing concept. The pursuit of this goal implies that the company is not only interested in making the sale or achieving trial purchase at any cost, but is aiming on developing the strategies to achieve long-term profitability through repeat buying and consumer retention. Such approach builds the loyalty on one hand and enriches the consumer values on products, services and related factors on the other. The consumer products companies attempt to build and maintain consumer value, wherein the brand managers supplement their mass-media advertising with more direct communications, through direct and interactive methods, internet communications, and other innovative channels of distribution (Pearson 1996; Peppers and Rogers 1997; Barwise and Hammond 1998). Consumer value may be defined as a tool to measure the prolonged satisfaction and an on-going propensity to buy the product and services. While there are continuing discussions on the consumer value, it may be argued that the consumer value highlights the *manifest* nature of consumer satisfaction in providing a revenue stream to the company with high involvement, repeat purchase behavior and is of strategic importance to management. The individual value of the consumer may be estimated as a base value and changes in such values are affected by the corresponding measures of the specific value drivers. The base value ties to the most important of all complements that may be determined as a *consumer need*. The base value may be estimated in reference to the price that a consumer is already paying for obtaining a similar utility or from the size of the savings that the product brings. It is challenging to estimate the base value far out in the future because unexpected new applications are often discovered over a very long period of time.

Estimating value drivers for a new product can be tricky because there is no direct historical data. However, we can assume that the impact from changes in price or availability of complements will be similar to what other markets have experienced. This paper develops the framework for measuring the consumer values in reference to establishing the long run relationship by the firm and optimize its profit levels. The discussions in the paper attempt to endure the core issues of consumer values in retailing the products and services as how to conceptualize consumer values, how to measure it, and how to manage it.

### **Review of Literature**

The concept of consumer satisfaction has a long history in marketing thoughts. Studies of consumer behavior emphasize consumer satisfaction as the core of the post-purchase period. Because consumer satisfaction presumably leads to repeat purchases and favorable word-of-mouth publicity, the concept is essential to marketers. In saturated markets consumer satisfaction is thought to be one of the most valuable assets of a firm. Consumer satisfaction serves as an exit barrier, thereby helping the firm to retain its consumers. The impact of loyal consumers is considerable; for many industries, the profitability of a firm increases proportionally with the number of loyal consumers and high sales to new consumers can be attributed to word-of-mouth referrals. During the 90's numerous studies have focused the consumer satisfaction and service quality in to the hospitality industry. Several contributions have been made in relation to various

mechanisms for improving and using consumer satisfaction. Barsky and Labagh (1992) proposed a consumer-satisfaction matrix as a tool for evaluating guest information and attitudes, and for identifying related strengths and weaknesses. Dube et al. (1994) describes how consumer satisfaction data can be used for positioning strategies that will help the business carve a niche, whereas Morgan (1993) investigated consumers' value of benefits offered in mid-scale restaurant chains. The applied marketing literature suggests that there are very high expectations for these loyalty-building initiatives (Reichheld and Sasser 1990; Nalebuff and Brandenburger 1996; Reichheld 1996). The academics, consultants and business people speculated that marketing in the new century will be very different from the time when much of the pioneering work on consumer loyalty was undertaken (e.g. by Churchill 1942; Brown 1953; Cunningham 1956, 1961; Tucker 1964; Frank 1967). Yet there exists the scope for improving the applied concepts as many of the changes over conventional ideologies.

The well-known disconfirmation of expectations model of satisfaction suggests that consumer satisfaction is a result of a comparison between company performance and consumer expectations (Oliver, 1980; 1981). Disconfirmation models are usually focused on performance of specific attributes and expectations (Bearden and Teel, 1983; Churchill and Surprenant, 1982; Tse and Wilton, 1988; Oliver, 1993). However, there is a gap in our current understanding of satisfaction in a channels context where relationship-building rather than transactional exchange assumes importance. The comparison process between actual performance and expectations may be moderated by the presence of firm and environmental variables such as consumer power, consumer size, rivalry, channel

configuration, product line growth rate, supplier flexibility and consumer service. The relationship between consumer service and satisfaction is examined in the logistics consumer service literature and will be discussed in the following section. The relationship between consumer service and satisfaction has been investigated to a limited extent in the logistics literature (Mentzer *et al.*, 1989; Emerson and Grimm, 1996). Mentzer *et al.* (1989) call for a formal analysis of logistics and marketing consumer service items in order to establish certain general dimensions of consumer service and to investigate their impact on consumer satisfaction. Following Mentzer *et al.* (1989), Emerson and Grimm (1996) found that performance on certain logistics and marketing consumer service dimensions directly contributes to consumer satisfaction in a channels setting. However, it is a mistake to conclude that consumer satisfaction is solely influenced by performance on consumer service variables.

The consumer value concept is utilized to assess product performance and eventually to determine the competitive market structure and the product-market boundaries. The consumer value may be measured as the product efficiency viewed from the consumer's perspective, i.e., as a ratio of outputs (e.g., resale value, reliability, safety, comfort) that consumers obtain from a product relative to inputs (price, running costs) that consumers have to deliver in exchange. The efficiency value derived can be understood as the return on the consumer's investment. Products offering a maximum consumer value relative to all other alternatives in the market are characterized as efficient. Different efficient products may create value in different ways using different strategies (output-input-combinations). Each efficient product can be viewed as a benchmark for a distinct sub-

market. Jointly, these products form the efficient frontier, which serves as a reference function for the inefficient products. This ensures that only the products with a similar output-input structure are partitioned into the same sub-market. As a result, a sub-market consists of highly substitutable products. In addition, value-creating strategies (i.e., indications of how to vary inputs and outputs) to improve product performance in order to offer maximum consumer value are provided. The impact of each performance parameter on consumer value may be determined that is identified along with the value drivers among them. Based on the interplay between potential value and realized value, managers can devise consumer specific strategies. Christopher(1988) after surveying existing models of retailing, discusses on the idea that the retailer saves its consumers costs by assembling goods in one place. This introduces an essential non-convexity and importantly affects the conditions under which shops compete with each other and the constraints on their value attributes. The value of a consumer 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 consumer value also tracks market value of these firms over time. The value of all consumers is determined by the acquisition rate and cost of acquiring new consumers as discussed by Gupta, Lehmann and Stuart (2003).However, one of the effective methods of implementing consumer value-based marketing is a component pricing system.

### **Framework for Analysis**

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 is  $j^{\text{th}}$  store in market  $h$  in period  $t$  is 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 Consumer Value*

The consumer values for goods and services are largely associated with the retail stores brands and consumer services offered therein. The beginning of consumer preferences is the basic discrete time that help the consumers in making a buying decision and maximize the value of product. The value of product and service are not always the same and are subject to value life cycle that governs the consumer preferences in the long-run. If consumers prefer the product and service for  $N$  periods, the value may be determined as  $Q > N$ , where  $Q$  and  $N$  both are exogenous/and variables. If every consumer receives higher perceived values for each of his buying the value added product  $q \geq Q$ , when 'q' refers to the change in the quality brought by innovation or up-graded technology. The consumer may refrain from buying the products if  $q \leq Q$ , that does not influence his buying decisions. However, a strong referrals 'R' may lead to influence the consumer values, with an advantage factor  $\beta$  that may be explained by price or quality factor. In

view of the above discussion it may be assumed that consumer preferences have high variability that grows the value factors in retail buyers decisions:

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

Where  $C_t$  represents consumption  $\tilde{Z}$  is a vector of consumer attributes (Viz. Preferential variables),  $Q_t$  is the value perceived by the consumer and  $V_{N+1}$  denotes the value perceived by the consumer maximizes his value  $Q_t$  in a given time and also enhances his values for future buying as the influence of referrals is not negative  $V_{N+1} \geq 0$ .

Consumer values is a dynamic attribute that plays key role in buying and in an intangible factor to be considered in all marketing and selling functions. The value equation for consumer satisfaction may be expressed as a function of all value driver's where in each driver contains the parameters that directly or indirectly offers competitive advantages to the consumers and enhance the consumer 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 consumer value driver,  $K$  are constants for supplies(s), margins (m), distribution 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 consumer

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 consumers ( $\delta_v/\delta_x < 0$ ) while the innovative products, irrespective of price advantages enhance the consumer value ( $\delta_v/\delta_x > 0$ ). The value addition in the conventional products provides lesser enhancement in consumer satisfaction as compared to the innovative products. Such transition in the consumer value, due to shift in the production product may be expressed as

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

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

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

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

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

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

the prospect theory proposes that the intensity of gains play strategic role in value enhancement as  $G_{xt} = g_{pt} (\delta_x/\delta_p)$ . In this situation 't' represents the period wherein the promotional strategies were implemented to enhance the consumer values in reference to product specific gains ( $g_{pt}$ ). However in order to measure relationship/variability between the repeat buying behavior and consumer value it would be appropriate to determine the cumulative decision weights ( $w$ ) substituting in the equation (i), (iv) and (v), that may reveal as

$$G_{xt} = w \sum_{k=1}^{jm} [g_{pt} (r_j m_j) + \beta^{n+1} Q_{N+1} (V_{n+1})]$$

the consumer value, however may be the driver function of gains on buying decisions and the influencing variables such as perceived use value and referrals.

The value measurements have been used as one of the principal tools to assess the trend of consumer behavior for the non-conventional products. The value syndrome influences the individual and group decisions in retail and bulk deals, and conditionalizes the decision process of consumers. The conditional consumption behavior suggests that the consumption depends heavily on the utility function and on the source of uncertainty (Carroll and Kimball, 1996 and Deaton 1992). The dynamics of retail consumption behavior may be expressed as

$$c_t = \alpha_0 + \alpha_1 y_t + \alpha_2 w_t + u_t \quad (\text{vi})$$

where  $c_t$  is a log of real per capita total consumption,  $y_t$  is the log of real per capita disposal income,  $w_t$  is the per capita expenditure on buying and  $u$  denotes the random error term. Under this assumption  $c_t$ ,  $y_t$ , and  $w_t$  are co-integrated,  $u_t$  is  $\leq 0$ . in the process of measuring the consumer behavior in reference to preference variables leading to price and non-price determinants, the dependent factor is the rate of change in the consumption ( $\Delta_{ct}$ ). In view of the above discussion the dynamic consumption function, that reflects the retail consumer behavior for particular products may be estimated as [deriving from equation (vi)]

$$\Delta_{ct} = \beta_0 + \beta_1(L)u_{t-1} + \beta_2(L)\Delta_{yt} + \beta_3(L)\Delta_{wt} + \beta_4(L)\Delta_{rt} + \varepsilon_t \quad (\text{vii})$$

where  $\Delta$  is the change factor,  $r$  is the concentration ratio of retail stores in a given location and  $\varepsilon_t$  is a random error term. The test of this model requires time series data to be analyzed for trend values, taking (L) as polynomial log operator. It has been observed in previous studies that value to expenditure ratios increase consumer sensitivity in volume of buying and driving repeat buying decisions for the regular and high tech products. (Carroll and Dunn 1997). Belessiotis (1996) had explained in one of his studies that consumer confidence index derived of value factors, forecasts more than changing expectations.

#### *Rationale of Consumer Preference and Market Demand*

Each market operates in a predetermined consumer segment being defined by a vector of ideal store practices which is referred to as a consumer's type. A consumer's type is a random draw from a distribution which is parameterized by his core benefit value which is an element of a proper subset of  $\{1, \dots, R\}$ . If a consumer's core benefit value is  $s$  then his type is a random draw from  $\{s-E, \dots, s+E\}^N \subset \{1, \dots, R\}^N$  according to a uniform distribution where  $E$  is a parameter. The seeds for the 992 consumers in market  $h$  are distributed according to a triangular density function over  $\{S_h-G, \dots, S_h+G\} \subset \{1, \dots, R\}$ . this construction of the distribution of consumer types is performed independently for each market. By this specification, markets differ according to the single parameter  $S_h$  and the heterogeneity between markets  $h'$  and  $h''$  can be measured  $|S_{h'} - S_{h''}|$ .

E controls the degree of correlation in a consumer's preference; that is, the degree to which preferring particular values for one dimension imply that similar values tend to be preferred for other dimensions. If  $E = 0$  the a consumer's ideal vector of store practices is an element of  $\{(1, \dots, 1), \dots, (R, \dots, R)\}$  so that consumers assign the same correlation ideal value to all dimensions. More generally, the lower the E, the greater is the correlation across dimensions. A reason for such a correlation is the presence of a few consumer traits – such as income, parents' traits, education – which influence preferences over a large set of dimensions. For example, people with higher income may incur greater search costs (due to their higher value of time) so they would prefer everyday low prices with fewer sales (which avoids having to spend time searching for sales), fewer product lines and larger inventories (reducing the chances of being out-of-stock of a product and thus creating the need for another trip to the store), and more attentive though more aggressive sales personnel (which might speed up the time spent buying) as might be achieved by having sales personnel work on commissions.

While a more complete specification of consumer preferences is provided in the Appendix, we describe here the basic properties essential to the analysis. Consumer decision making with respect to 'which store to buy from' and 'how much to buy from that store' is assumed to depend only on the distance between the consumer's ideal store practices and the actual practices of stores. We use Euclidean distance which takes the

form  $\sqrt{\sum_{k=1}^N (z_k - w_k)^2}$  for a consumer of type  $\underline{w} \equiv (w_1, \dots, w_N)$  and a store with practices

$\underline{z} \equiv (z_1, \dots, z_N)$ . A consumer ranks stores according to this metric. Furthermore, it is assumed that the number of units demand by a consumer equals

$$\left[ A - \sqrt{\sum_{k=1}^N (z_k - w_k)^2} \right]^\sigma \quad (\text{viii})$$

and such decisions are largely governed by the convenience factor associated with buying the products and services; where  $\sigma > 1$  and  $A \geq \sqrt{N(R-1)^2} + 1$  so that

$$\left[ A - \sqrt{\sum_{k=1}^N (z_k - w_k)^2} \right] > 1 \text{ for all } (\underline{w}, \underline{z}).$$

### *Consumer Positioning*

If a Market  $h$  is served by the chains in  $\Phi_h$ , each consumer has  $|\Phi_h|$  stores from which to chose. In any time period, a consumer shops from exactly one store but, as will be described below, he can change stores over time. As started above, consumers rank buying points according to the convenience between his preferences and accessibility. Thus, a consumer of type  $\underline{w}$  prefers a store with practices  $\underline{z}'$  to a store with practices  $\underline{z}''$  if and only if:

$$\sqrt{\sum_{k=1}^N (z'_k - w_k)^2} < \sqrt{\sum_{k=1}^N (z''_k - w_k)^2} \quad (\text{ix})$$

A consumer enters each period with a “favorite buying place” that is the place he currently most prefers. Associated with a favorite store is the consumer’s perception of the distance between the store and the consumer. Suppose chain  $j$ ’s store in market  $h$  is the favorite store of a consumer in market  $h$ . Furthermore, suppose the consumer last visited that store in period  $t'$  (why it might not have been the previous period will be made clear momentarily). The consumer’s perception of the distance between the store and the consumer is specified to be  $\sqrt{\sum_{k=1}^N (z_k^{j,h}(t') - w_k)^2}$  where  $\underline{z}^{j,h}(t)$  is this store’s set of practices as of period  $t$ .

Search proceeds as follows. In each period, a consumer buys from his favorite store with probability  $1-Q$ . In that event, his favorite store remains unchanged though the perceived distance from that store is updated to reflect the current practices of the store. With probability  $Q$ , he engages in search which involves randomly selecting a store from the rest of all stores in his market (excluding his favorite store) and then buying from that store. At the end of the period, the consumer compares the distance for the store just visited with the distance assigned to his favorite store. If the former is larger then the consumer does not change his favorite store (nor the distance assigned to it). If the former is smaller then the consumer changes his favorite store to the store just visited and assigns to that store a distance based on the store’s current practices. The random variable determining whether a consumer positioning is appropriate or not is assumed across strength of existing consumers and time interval during the search and realizing the

purchase. If  $Q = \frac{|\Phi_h| - 1}{|\Phi_h|}$ , a consumer has no loyalty as the *ex ante* probability of buying

from a predetermined place is the same, it may be assumed that  $Q \in \left[0, \frac{|\Phi_h| - 1}{|\Phi_h|}\right]$  where

$Q = 0$  is absolute loyalty as no experimentation occurs.

This framework analyzes optimal portfolio choice and consumption with values management in the firm-supplier-consumer triadic relationship. The value concept in the above relationship governs the consumer 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 consumers 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 consumer portfolios and develop long-run relationships thereof. The consumer value concept is utilized to assess product performance and eventually to determine the competitive market structure and the product-market boundaries.

The model explains that the value based consumer portfolios would enhance the consumer value as the product efficiency viewed from the consumers perspective, i.e., as a ratio of outputs (e.g., resale value, reliability, safety, comfort) that the consumers obtain from a product relative to inputs (price, running costs) that the consumers have to deliver in exchange. The derived efficiency value can be understood as the return on the

consumer's investment. Products offering a maximum consumer value relative to all other alternatives in the market are characterized as efficient. Market partitioning is achieved endogenously by clustering products in one segment that are benchmarked by the same efficient peer(s). This ensures that only the products with a similar output-input structure are partitioned into the same sub-market. As a result, a sub-market consists of highly substitutable products.

The value brand portfolio model illustrates the consumer portfolio management within the triadic relationship of the firm-supplier and consumer. The consumer values are reflected in their competitive gains, perceived use values, volume of buying and level of quintessence with the consumer relationship management services of the organization. If these variables do not measure significantly, there emerges the development of switching attitude among the consumers. If the organizational values are low the supplier relationship may be risk averse due to weak dissemination of values from organization to the suppliers.

### **Managerial Applications**

The retail sales performance and the consumer lifetime 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 consumer lifetime values. A systematically explored concepts in the field of consumer value and market driven approach 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 consumer and profit optimization need to be developed. On a tactical level, managers need to consider what is the optimum spread of consumers on a matrix. This needs careful attention and the application of managerial judgment and experience to measure the value driven performance of the firm. It cannot be prescribed by a text. They should also be prepared to vary their management style in response to the analysis they prepare. For example, a different style may well be needed to deal with consumers who do not yield much profit and present high costs to serve. All of these have postulated that portfolio theory is a useful theoretical approach to the analysis, categorization and management of supplier-consumer relationships. The following applied portfolios may be developed by the companies in order to gain the high consumer value –high profit matrix :

- High-Profitability- Consumers who have high actual and potential value, coupled with relatively low cost to service.
- High-Potential- Consumers who have high potential value, medium actual value, and low cost to service.
- Underperforming- Consumers who are currently unprofitable.

The consumer portfolio management process should then lead to plan and create strategies to maximize return on consumer relationships, either by portfolio or individual accounts.

## References

- Barsky, J. D., Labagh, R. (1992), A strategy for consumer satisfaction, *The Cornell Hotel and Restaurant Administration Quarterly*, 33, 32-37
- Barwise, Patrick and Kathy Hammond (1998). *Predictions: Media*. London: Phoenix Paperback.
- Bearden, W.O. and Teel, J.E. (1993), Some determinants of consumer satisfaction and complaint reports, *Journal of Marketing Research*, No. 20, February, 21-8.
- Belessiotis (1996), *Consumer Confidence and Consumer Spending in France*, Economic Paper #116, European Commission, September.
- Brown, George H. (1953), Brand Loyalty - Fact or Fiction, *Advertising Age*, Vol. 24. Reprinted in A.S.C. Ehrenberg and F.G. Pratt, *Consumer Behaviour*. Middlesex: UK: Penguin, 1971, 28-35.
- Carroll CD and Kimball MS (1996) On the concavity of the consumption function, *Econometrics*, 64(4), 981-992.
- Carroll D and Dunn WE (1997), *Unemployment Expectations*, working paper, 6081, NBER
- Christopher Bliss (1988), A theory of Retail Pricing, *Journal of Industrial Economics*, 36 (4), 375-391
- Churchill, H. (1942), How To Measure Brand Loyalty, *Advertising and Selling*, 35, 24.
- Churchill, G.A. and Surprenant, C. (1982) An investigation into the determinants of consumer satisfaction, *Journal of Marketing Research*, No. 19, November, 491-504.

- Cunningham, R.M. (1956), Brand Loyalty - what, where, how much?, *Harvard Business Review*, 34 January-February, 116-128.
- Cunningham, R.M. (1961), Consumer Loyalty to Store and Brand, *Harvard Business Review*, November-December, 127-137.
- Deaton A (1992), *Understanding Competition*, Oxford University Press, Oxford.
- Dube, L., Renaghan, L. M., Miller, J. M. (1994) Measuring consumer satisfaction for strategic management. *Cornell Hotel and Restaurant Administration Quarterly*, 35, 39-47
- Emerson, C.J. and Grimm, C.M. (1996), Logistics and marketing consumer service: an empirical test of the Mentzer, Gomes, and Krapfel model, *International Journal of Physical Distribution & Logistics Management*, Vol. 26 No. 9, 29-42.
- Emerson, C.J. and Grimm, C.M. (1998), The relative importance of logistics and marketing consumer service: a strategic perspective, *Journal of Business Logistics*, Vol. 19 No. 1, 17-32.
- Frank, Ronald E. (1967), Is Brand Loyalty a Useful Basis for Market Segmentation?, *Journal of Advertising Research*, 7 (2), 27-33.
- Gupta Sunil, Lehmann Donald R and Stuart Jennifer Ames (2003), Valuing Consumers, *HBS Marketing Research Paper # 03-08*
- Mentzer, J.T., Gomes, R. and Krapfel, R.E. Jr (1989), Physical distribution service: a fundamental marketing concept?, *Journal of the Academy of Marketing Science*, Vol. 17 No. 1, pp. 53-62.
- Morgan, M. S. (1993), Benefit dimensions of midscale restaurant chains, *Cornell Hotel and Restaurant Administration Quarterly*, 34, 40-45

- Nalebuff, Barry J. and Adam M. Brandenburger (1996), *Co-opetition*. London: Harper-Collins Business.
- Oliver, R. (1980), A cognitive model of the antecedents and consequences of satisfaction decisions, *Journal of Marketing Research*, No. 17, November, 460-469.
- Oliver, R. (1981), Measurement and evaluation of satisfaction processes in retail settings, *Journal of Retailing*, No. 57, Fall, 25-48.
- Oliver, R. (1993), Cognitive, affective, and attribute bases of the satisfaction response, *Journal of Consumer Research*, No. 20, December, 418-30.
- Pearson, Stewart (1996), *Building Brands Directly*. London: Macmillan Business.
- Peppers, Don and Martha Rogers (1997), *Enterprise One to One: Tools for Competing in the Interactive Age*. New York: Currency Doubleday.
- Reichheld, Frederick F. and Sasser, William E. (1990), Zero Defections: Quality Comes to Services, *Harvard Business Review*, 68 (September-October), 105-111.
- Reichheld, Frederick F. (1996), *The Loyalty Effect: The Hidden Force Behind Growth, Profits and Lasting Value*. Boston, MA: Harvard Business School Press
- Tse, D.K. and Wilton, P.C. (1988), Models of consumer satisfaction formation: an extension, *Journal of Marketing Research*, No. 25, May, 204-12.
- Tucker, William T. (1964), The Development of Brand Loyalty, *Journal of Marketing Research*, 1(3), 32-35.