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Customer Profitability

Prospective vs. Retrospective Approaches in a Business-to-Business Setting

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The research question pertains to the development of a comprehensive model of customer profitability. In developing such a model, we rely upon the links between quality, customer satisfaction, loyalty, and profitability established in the literature in marketing and accounting, and place them into the business-to-business context. We maintain that customer profitability is expandable in three directions, two temporal and one spatial. The two temporal directions, represented by retrospective and prospective approaches, are discussed and analytically specified. The third direction is conceptualized as an ever-growing customer pool of "delighted" customers that become an advertising medium for the firm and its products (services). Implications of the three-dimensional model of customer profitability for the management control system are offered.

INTRODUCTION

Modern marketing managers are determined to use accounting information in order to create customer value. They attempt to direct the strategic focus by conducting customer revenue and customer cost analyses and, thereby, building customer profitability profiles [1]. Foster [2] states that:

> The 'why?' of customer profitability analysis can be reduced to the simple statement that each dollar of revenues does not contribute equally to net income. Differences in customer profitability can arise from either differences in revenue or differences in cost [2, p. 5].

Customer-profitability profiles help to pinpoint the contribution of each customer (or set of customers) to the

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Customer-profitability profiles help.

total profitability. The interests of the leading customers can then be emphasized in developing new products as well as in delivering existing products. These profiles also facilitate identifying "the least profitables," customers for whom the cost of serving them exceeds the associated gross margin.[1] Limited academic research related to the measurement of customer profitability and management control issues exists today.

Customer profitability has been explored by academics in the areas of marketing and accounting from different perspectives. Marketing literature suggests that " . . . marketing is concerned with the task of developing and managing market-based assets . . . that arise from the comingling of the firm with entities in the external environment" which include customer relationships [3, p. 1]. Cost accounting literature has concentrated on measuring customer revenues and customer costs and building their taxonomies within Activity-Based Costing [1, 2]. Among the properties of customer-profitability analysis, emphasis is placed on such features as allowing the measurements to cut across the entire value chain, encompassing multiple transactions in multiple periods and selectivity in the scope of customer-specific analysis (aggregate vs. narrow). Others suggest that emphasis on dimensions of "product," "price" and "responsiveness" be correlated with future sales [4, p. 37].

The literature in marketing and cost accounting suggests the need for responses to at least four major challenges. To ascertain usefulness of customer profitability analysis the following problems must be solved: (1) development of reliable customer revenue and customer cost figures; (2) recognition of future downstream costs of customers (environmental, litigation, warranty, etc); (3) incorporation of multiple periods into the analysis, and; (4) recognition of different drivers of customer costs [1]. In responding to these challenges, proposals consider several factors that highlight potential benefits from allocating resources across customers. These factors include: (1) levels of the short-run and long-run customer profitability; (2) likelihood of customer retention; (3) potential for customer growth and customer's industry growth; (4) increases in the overall demand from having well-known customers, and; (5) use of customers as a source of ideas about new products and/or ways to improve existing products.

The purpose of this research is to extend the literature in accounting and marketing by developing a more comprehensive model of customer profitability. In accomplishing this task, the literature that links quality, satisfaction, loyalty, and profitability is relied upon and extended into a business-to-business marketing context.[2] Customer profitability is conceptualized as expanding in at least three directions: two temporal and one spatial. After building the model, managerial and control implications of this more complete model are discussed. This approach is limited to theoretical specification of the measurement model as empirical testing of the model is underway.

The conceptual development of customer profitability is organized as follows. The next section presents retrospective and prospective theories of customer profitability and their analytical specifications. Additionally, contemporary research in marketing that investigates the nature and strength of the link between customer expectations, quality of the product, and customer satisfaction is reviewed. Section three develops the idea of future sales influenced by a customer in the form of an ever expanding profitability stream and makes a point that "de-

[1]Customer-level operating costs may include customer acquisition, order fulfillment and post-sale services. The profit metric chosen for use at the customer level is assumed to be congruent with overall company strategy.

[2]For a somewhat different focus, [4–7].

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Properly calculate the historical profitability of customers.

lighted" customers, and particularly those impacted by "unnoticeables," may become an advertising medium for the firm and its products (services) [8]. The fourth section discusses management control issues related to the accomplishment of marketing strategies implied in the proposed model of customer profitability. The final section provides a summary of propositions and offers implications for future research and for business-to-business marketing practice and its control.

RETROSPECTIVE AND PROSPECTIVE THEORIES OF CUSTOMER PROFITABILITY

The extant literature in accounting and marketing provides significant discussion and theory construction regarding the dimensions of customer profitability. The theoretical discussions can be categorized into a "retrospective" or "prospective" conceptualization of customer profitability. The retrospective is a historical perspective; it investigates what has been the absolute and relative profitability of each customer or customer group over some defined past time period. The "prospective" view focuses on the future and asks "what will be the profitability of each customer or customer group?"

Retrospective View

In its most simple form, the retrospective view is similar to the historical cost principle underlying the philosophy of financial statements presented at the end of the year to stockholders and regulators. Indeed, some companies choose to determine how each customer and customer group contributed to the Gross Margin reported on the Income Statement. With this focus, it is typical to conclude, for example, that "twenty percent of our customers provide over eighty percent of the gross margin" and that some customer relationships should be discontinued.[3]

[3]See for example, [9, 10].

To calculate properly the historical profitability of customers and customer groups, an accounting system designed for that purpose is required. For instance, an Activity Based Costing (ABC) system can be designed and implemented to provide information about costs and revenues associated with each customer and customer group [2, p. 8]. However, if no such system had been in existence over the period under analyses, calculations of customer profitability may become problematic. In other words, it is usually not feasible to create measurements *ex post* that are reliable and accurate.

As a practical matter, retrospective customer profitability is often measured in absolute dollars. However, accumulating historical costs and revenues into a future value or "current" value measure at the date of analyses is theoretically safe, if the time period encompasses several years. Thus, retrospective customer profitability may be viewed as generated through single or multiple transactions and/or during single or multiple periods. Marketing literature discusses retrospective customer profitability as a stream of past repeat purchases of current customers. It is proposed herein to accumulate historical customer profitability, in expanded form, within management control systems. Further, budgeting and tracking of future costs and revenues associated with specific customers and customer groups is a necessary, but not sufficient, part of an overall system of controls to accomplish strategic marketing goals related to profitability.

The analysis of historical data plays an extremely important role in the management control process by providing the necessary feedback for management to determine if strategies have been accomplished. Certainly, historical customer profitability plays a vital role in ascertaining: (1) the extent to which marketing strategies are being accomplished as planned; (2) whether relationships have existed between customer-related costs and profitability, and; (3) the extent to which increases in customer profitability have led to increased shareholder value. However, the primary value of historical data lies in its use for prediction, which then aids the decision-

Repeat purchases by current customers.

making process about the future. Better decisions can be made about the future if one is informed by the past relationships between actions and effects (i.e., one learns "what works.") However, only future profitability can be affected by such decisions.

Prospective View

It is widely held that customers can be viewed as an "asset" to the firm. This analogy implies that customers can have "future value" in the form of "likely" margins to be earned and thus they take the form of intangible assets [2, 11, 12]. Anderson et al. [12] suggest that profitability is a function of customer satisfaction and that customer satisfaction is a function of current actual quality and price as well as prior period expectations. Thus, future revenues from current customers stem from the linkage between customer satisfaction and profitability, Anderson and Sullivan [11] infer the following:

> . . . increased satisfaction should lead to increased repurchase intentions. Increased repurchase intentions increase the probability of repurchase and consequently, the expected future revenue from current customers" [11, p. 132].

Additionally, Anderson and Sullivan [11, p. 132] find support for their "insulation hypothesis," which posits that firms who consistently provide high satisfaction " . . . will have customers with a low variance of expectations about the firm's quality." As customer experience with the product or brand continues, the distribution of the variance of the expectations should " . . . tighten about the actual location." Anderson and Sullivan conclude that the elasticity of repurchase intentions is lower for firms that consistently provide high satisfaction to their customers, thus, these customers are more forgiving if they receive defective products, for example. Jacobs et al. [8, p. 180] refer to this type phenomenon as a "de facto monopoly." Indeed, it is a form of brand equity. It is important to note that this research focuses on existing customers in a business-to-consumer marketing context. However, repeat buyer behavior is also linked to "switching costs" which can be related to the level of investment by the customer in the buyer–seller relationship.[4]

The direct impact of customer retention, driven by customer loyalty, on profitability derives not only from future revenues and future revenue increases, but also from decreases in future costs. Reichheld [15] states: "Customer loyalty has three second order effects: (1) revenue grows as a result of repeat purchases and referrals, (2) costs decline as a result of lower acquisition expenses and from the efficiencies of serving experienced customers, and (3) employee retention increases because of job pride and satisfaction increase, in turn creating a loop that reinforces customer loyalty and further reduces costs as hiring and training costs shrink and productivity rises. . . . Measures establish the feedback loops that are the foundation of organizational learning" [15, pp. 70–71]. For example, it has been estimated that reducing customer defections by as little as 5% can increase profits from 25% to 85% [15, pp. 110].

The links between customer satisfaction and profitability, as stated in the marketing literature, allow the measurement of the net present value (NPV) of the expected margin from the retention of *current* customers by using their repurchase intentions. It is modeled as a future stream of repeat purchases by current customers. Assuming monotonic relationship between customer satisfaction and repurchase intentions that is linear for small changes in satisfaction, the current loyal and satisfied customers are viewed as an asset to the firm with an NPV of:

$$NPV = \sum_{t=0}^{T} \lambda G(Pr\{Loyal/Satisfaction\}/(1+\theta))^{t/\lambda} \quad (1)$$

where

G = average gross margin per period,
λ = the length of the average repurchase cycle in days, and
θ = a discount factor [12].

[4] See for example, [13, 14, p. 113].

Incentives and behaviors of professional purchasing agents

According to Eq. (1), the gross margin at any point in time depends on the conditional probability of the initially loyal customer being satisfied with the product/service. By summing up single-period gross margins, one obtains cumulative gross margin arising from repeated purchases. Discount rate (i.e., risk-free interest rate in the simplest form or average market rate of return assuming reinvestment of profits) serves to convert future cumulative gross margin into present value.

Anderson et al. [12] further argue, based on data from Sweden, that an inverse relationship exists between customer satisfaction and market share: year-to-year increases (decreases) in market share are likely to be associated with decreases (increases) in customer satisfaction. This finding could be an artifact of the sample or it could suggest that market share in the sample was being purchased at the cost of decreased services to existing customers. Additionally, the elasticity of repurchase intentions with respect to satisfaction is lower for firms that provide high satisfaction. This implies a long-run reputation effect insulating firms that consistently provide high satisfaction [11].

It is maintained that Eq. (1) is limited temporally and spatially because it counts future and current profitability created by loyal and satisfied *current* customers only. It assumes no changes in customers repurchase behaviors, no customer or customer's industry growth, and no expansion in the future market share or increase in future demand due to brand loyalty exhibited by famous customers. These limitations are not consistent with relationship marketing which suggest goals of: (1) increasing sales to current customers up to their total demand; (2) assisting customers to grow and thus increase their total demand; (3) creating opportunity for sales to current customers of new or different products, and; (4) creating new sales to new customers by expanding market share or expanding into new markets created by aggregate growth in the economy or product market. The probability of an efficient product market that disseminates information reasonably efficiently to potential new customers is also not considered in Eq. (1). It is also unclear whether the model in Eq. (1) applies to a group of customers with homogenous levels of brand loyalty and satisfaction or to one customer with *G*-term being gross margin per customer. Assuming the latter, we demonstrate in the next section that this historically oriented NPV model can be extended by adding "prospective profitability," with expansion, into the equation.

EXPANDED PROSPECTIVE THEORY OF CUSTOMER

Much of the literature suggesting that customer profitability should be viewed prospectively is based on theory development and testing in the context of business-to-consumer marketing. Anderson and Sullivan [11] note that "the antecedents of satisfaction have long been a subject of study for consumer research." Customer satisfaction is a critical concept in supporting the linkage from "quality" through "satisfaction" to "repurchase intentions" in the Anderson and Sullivan [11] analytical framework. In this relationship, the buyer or customer is also the consumer of the product or service whose expectations are being disconfirmed and from whom one expects loyalty evidenced by repurchase intentions as noted in Eq. (1). In business-to-business marketing, Rackham and DeVincentis [13] suggest that repeat purchase behavior may be positively related to the level of investment by both buyer and seller.[5] They describe "transactional selling" as occurring in low levels of joint investment, "consultative selling" being marked by moderate levels of joint investment and "enterprise selling" as involving high levels of joint investment. According to Rackman and DeVincentis [13], it is this latter scenario that can produce a long-range relationship marked by high investment by both buyer and seller which also implies very

[5] See for example, [13].

Positive reputation then "spills over."

significant "switching" costs.[6] It is a theoretical and ultimately an empirical question regarding the extent to which the incentives and behaviors of professional purchasing agents are similar to those of consumers of end products. Even though the utility functions of purchasing agents may be different and contain different variables than those of consumers, we expect utility-maximizing behaviors from both groups and thus customer satisfaction should play a similar role in increasing loyalty and repeat purchase behavior.

Business-to-Business Context

This section concentrates on differences between business-to-business (BtoB) marketing and marketing for consumer buyers.[7] BtoB marketing is noted by both professional buyers and sellers who are trained, knowledgeable and experienced in the products and product markets in which they are contracting. Unlike consumer buyers, purchasing agents respond to the needs of others evidenced by a purchase requisition prepared by someone authorized to order products and services.[8] Neither the purchasing agent nor the requestor may be the ultimate consumer of the product or service. However, purchased products are inspected and used with performance information normally provided as feedback to the procurement personnel for use in future buying decisions. Additionally, the utility function of the purchasing agent is largely driven by the incentive system that determines how he/she is rewarded. Purchasing agents therefore are vitally interested in all dimensions of the transaction including the following: (1) the reliability of information provided by sellers on the phone, electronically or by written communications; (2) adherence to the delivery schedule, particularly in a Just-in-Time (JIT) environment; (3) accuracy and completeness of each shipment; (4) compliance of the product shipped to specifications; (5) accuracy of the shipping documents as they reference the contents of the shipment and the underlying purchase order, and; (6) responsiveness of the seller to special needs of the users of the products, and others. All of these dimensions and more constitute the "whole product" that is being acquired as a "market basket" of utility that the purchasing agent can "trade-off" in a sophisticated manner.[9]

Given the characteristics of professional buyers and sellers described above, it is reasonable to assume that purchasing agents have "expectations" about the supplier relationship and all dimensions of the transaction, even though these dimensions may be different from the expectations criteria exhibited by an end consumer. Consequently, purchasing agents may be pleased, displeased, delighted or repulsed by the whole process of buying, receiving and using products from any supplier. Therefore, a process of establishing expectations, experiencing the purchase transaction and revising expectations by the purchasing agent seems likely.

In the consumer markets, attention has been given to the relative efficiency of the market in gathering, interpreting and disseminating information to market participants.[10] As noted earlier, unlike the consumer market, BtoB marketing involves sophisticated market participants on both sides of the transaction (i.e., purchasing agents are paid to "know the market" and to discover relevant information about potential suppliers and their products). Thus, we argue that the product markets in BtoB environments are at least as efficient as consumer markets and likely to be much more efficient.

Additionally, the ranges of positive customer satisfaction in the BtoB markets are at least as wide as in the consumer markets. Jacobs et al. [8] extended the continuum of customer satisfaction into greater positive ranges

[6] For a discussion of "Switching" costs, see, [16, 17, pp. 120–128]. It should be noted that switching costs can include real monetary expenditures, psychological costs, increased risk associated with the supplier relationship as well as other intangible costs.

[7] See for example, [14, pp. 3–33].

[8] The term "purchasing agent" as used herein refers to the entire buying center and the communication network that evolves from the process of industrial buying behavior [18].

[9] See [13, pp. 33–63] for a discussion of "The New Purchasing World." Also, see [20] for a comprehensive model of buyer motivation using an expectancy theory framework.

[10] Market efficiency has been developed in the equity security market and we use the theory developed in that context as analogous to any information market, including product and service markets. A market is *efficient* with respect to some specified information system, if and only if prices (of securities, or products) act as if all market participants observe the information system [21]. The market is efficient in a *semi-strong* form if prices fully reflect all publicly available information, including financial statement data.

The ability to communicate "delight."

of satisfaction (or negative disconfirmation) into "delight" and further into the realm of "unnoticeables":

> Unnoticeables are features of the product and related services which are thought to make a subconscious impression on the customer that can be positive and stimulate desirable repeat-buyer behavior, and possibly affect the repeat search behavior (i.e., 'entrenchment') [8, p. 174].

Further, the effects of substantially exceeding expectations might create a form of pro-activity on the part of customers that enhance the efficiency of the product market for information. Jacobs et al. [8] suggest the following:

> . . . exceeding expectations by a magnitude that delights the customer may cause the customer to tell other potential customers about the product and thereby create additional sales at no additional marketing costs to the firm [8, p. 174].

This notion of enhancing information flow regarding the high reputation of a firm and/or its products is also noted by Anderson et al. [12, p. 56] when they suggest that customer expectations are influenced "by outside sources, such as advertising, word of mouth and general media." In the discussion of the product markets, Anderson et al. [12] indicate that:

> . . . the market considers all available information concerning quality and continually updates expectations in an *efficient* [emphasis added] manner, save for 'imperfections' (e.g., uncertainty, costs) that impede the flow of information and result in a small updating effect that gives the appearance of being adaptive" [12, p. 57].

And later Anderson et al. [12] state:

> The rate of learning or adjustment by the market is not likely to be instantaneous—as it might be if the market were perfectly *efficient* [emphasis added]—due to the cost of acquiring information and the effects of uncertainty. . . . [12, p. 58].

Product market efficiency to some degree, at least in the semi-strong form, is vital to the assumption that purchasing agents are able to find out about the quality of goods and services provided to others before making the decision to purchase. The relative effectiveness of the information flow regarding the reputation of a firm and its products impacts the degree to which that firm is benefited in the marketplace by providing quality products and transaction services customers. The positive reputation then "spills over" into the marketplace with the potential of attracting new customers. The model of information dissemination in an efficient product market is depicted as shown in Figure 1.

The large circle or node, labeled "1" at the bottom of Figure 1 denotes the first transaction in the product market. The arrows emanating to the right and the left indicate information dissemination contemporaneous with the use of the product. All arrows with upward slope indicate some lag between initial use and the flow of information about the degree of satisfaction of the buyer with the product experience. The market becomes informed in the current time period and, to a greater degree, in the following or future time periods. The node just above the first one at the bottom, node "1a," represents a repeat purchase by the same buyer and each successive, vertically aligned node, also represents repeat purchases. These vertical vectors of repeat purchases are motivated by several factors including satisfaction and, perhaps, high switching costs. Nodes "2" and "3" represent new customers who were significantly influenced to become customers due to the information in the marketplace emanating from the positive experiences of customer "1." Information about each buyer's experience "leaks" into the composite information set to the left and right (contemporaneous with use) and above (the next period) to generate the "reputation" of the firm and its products. Thus, all vertical columns of nodes represent the repeat purchases of a single customer creating a "trajectory of repeat purchases" emanating from the "delight" experienced by the first experience with the product. Thus, the challenge of marketing management is to (1) continue uninterrupted the repurchase cycle of each customer, the "rise" or height of the pyramid, and (2) to enhance the rate at which the inverted pyramid expands, the width or breadth of the pyramid.

Pro-active involvement of the marketing function.

The market for information regarding firms and products can be far more complex and substantially richer than depicted in Figure 1. However, Jacobs et al. [8], Anderson et al. [12] and others suggest that Figure 1 may represent the effects of making customers "delighted" by substantially exceeding their expectations. Repeat purchases can be achieved in the short run by creating high switching costs, however, the expansion of the pyramid by positive information influence in the market is achieved through substantially exceeding expectations. The information environment is affected by the degree of promotion and advertising by the marketer in question as well as the efficiency and effectiveness of promotions and advertising by competitors.

The relationships discussed above can be shown symbolically by modifying the Anderson et al. [12] model presented earlier. If a is the number of customers at time 0 (i.e., at the time customer profitability analysis is started), and, assuming homogeneity in loyalty and satisfaction, r is the customer's and market's ability to communicate the "delight" experienced by the customer that will bring new potential customers to the firm ($r \geq 0$), the number of customers will be growing in the form of geometric series:

$$a + ar + ar^2 + \ldots + ar^{t-1} + \ldots \qquad (2)$$

with the sum at time t

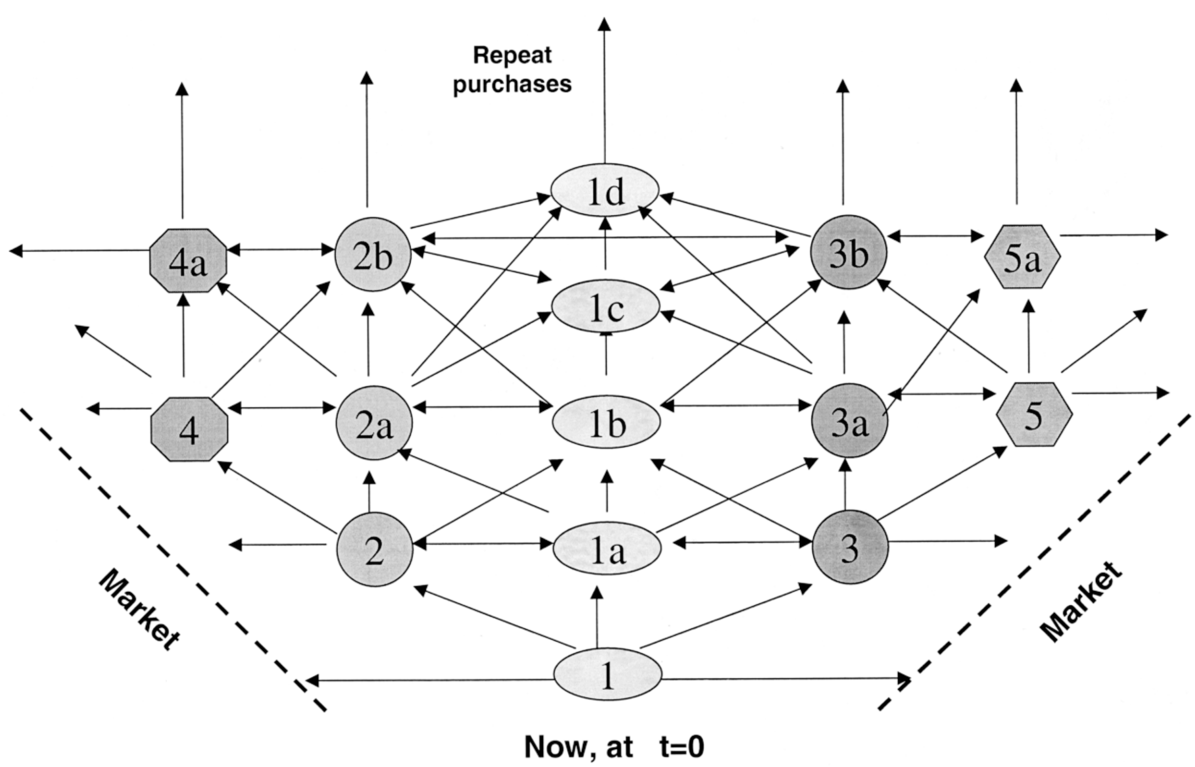

FIGURE 1. **Dissemination of information in an efficient product market.**

$$s_t = \frac{a(r^t - 1)}{r - 1} \quad (3)$$

Therefore, the total customer value will consist of the net present value of future profits from retaining every customer as in Eq. (1) and from future expansion of the "customer pool" as in Eq. (2) and (3).[11] If Eq. (1) is rewritten for the time 0 and *a* homogenous customers as

$$NPV = \sum_{a=0}^{a} \sum_{t=0}^{T} \lambda G(Pr\{Loyal/Satisfaction\}/(1+\theta))^{t/\lambda} \quad (4)$$

prospective expansion of the "customer pool" will bring the net present value of future profits to

$$NPV = \frac{(r^t - 1)}{r - 1} * \sum_{a=0}^{a} \sum_{t=0}^{T} \lambda G \frac{(Pr\{Loyal/Satisfaction\})}{(1+\theta)^{t/\lambda}} \quad (5)$$

where $\boldsymbol{r} = f(s_{t-1})$, i.e. the ability to communicate "delight" depends on the satisfaction experienced in the prior period, and, as [11] Anderson et al. 1993, indicate,

$$\begin{aligned} s_{t-1} &= f(quality_{t-1}, price_{t-1}, expectations_{t-1}) \\ expectations_{t-1} &= f(expectations_{t-2}, quality_{t-2}) \end{aligned} \quad (6)$$

The model in Eq. (5) captures the net present value of the entire pyramid shown in Figure 1. The model is designed to reflect the horizontal expansion rate experienced or planned to be experienced by the firm. It should be noted that "G" or gross margin is intended to be the result of subtracting all costs of providing product and services to the customer from all revenue from that customer, thus, it differs significantly from "gross margin" reported on the firm's Income Statement prepared in accordance with Generally Accepted Accounting Principles. The next section concentrates on management control issues and challenges associated with maximizing the net present value of profits from "delighted" customers.

MANAGEMENT CONTROL ISSUES

A framework for management control system research devised by Otley [23] is applied to the customer profitability segment of the accounting information system to examine the maximization of the net present value of future customer profits. Otley [23] argues that five main sets of issues should be addressed in managing organizational performance in any area of an enterprise. Below we discuss the five issues and specify characteristics of managing customer profitability and customer value for each one separately.

First, the "key objectives" should be defined that are fundamental to the overall future success or failure of an enterprise. Accounting literature is followed to suggest that maximizing customer profitability be in line with the overall objective to maximize value to the customer, the difference between customer benefits and customer sacrifice [24].[12] The "obvious" stakeholders of maximizing customer value are the customers themselves and the "implicit" stakeholders which are owners or shareholders of the buying and selling enterprises that are interested in the economic performance of the company and the valuation consequences of enhancing customer value. Srivastava et al. [3] suggest that customer relationships are assets that can "increase shareholder value," (i.e., the residual value of the business is an increasing function of size, loyalty and quality of customer base) [3, p. 14].

Second, "strategies and plans" should be formulated and "processes and activities" should be identified that will enable the enterprise to achieve the "key objectives." In the BtoB context, customer value is created throughout the entire value chain, from product design to customer service. At all stages of the value chain, customers' expectations, historical satisfaction, and price/taste should be considered (Eq. 6). To measure performance along satisfaction, expectation, and price/taste dimensions, marketing departments may maintain close relations with customers contributing the most to sales revenues not only by administering regular customer surveys, but also by communicating via phone, e-mail, and other

[11] Schmittlein and Peterson [22] offer an alternative, expected value approach to estimate growth of customer base. Their model is contingent upon four assumptions: (1) transactions by active customers are randomly distributed in time as a Poisson variable; (2) customers drop out randomly through time at some known rate; (3) heterogeneity in transaction rates by individual customers and in drop-out rates follows a gamma distribution; and (4) drop-out rates and active time as a customer are independent. Notwithstanding the validity of expected value estimation by Schmittlein and Peterson [22], it is heavily dependent on appropriateness of assumptions about distributional properties of independent variables. NPV approach allows us to avoid such assumptions and focus more on behavioral factors driving customer profitability via customer retention and extension of customer base.

[12] Also for a discussion of customer value see [14, pp. 98–111].

"schmoozing" or "chasing" activities.[13] It is important that data about the costs of "schmoozing" and other forms of communication are logged by marketing specialists in the way similar to the recording system adopted in professional law and accounting firms. Finally, historical measures of customer retention, turnover, and repeated purchases, as well as spatial measures of customer-to-customer referral (r from Eq. 5) would contribute to customer profitability performance management. Obviously, the collection of the appropriate measurements requires an expanded system of accounting information for marketing and substantial involvement of marketing personnel in eliciting information from current and prospective customers.

Third, achievable and understandable targets should be set for marketing personnel with respect to each measure described above. Modifying customer dimension of a Balanced Scorecard along these measures is a possibility, but it is not crucial [26]. In achieving the targets in the BtoB setting, knowledge about temporal and informational requirements of customer needs is necessary (unpublished observation). It has been suggested that "*urgency*, *frequency*, and *duration* of a need define its temporal dimensions" (unpublished observation). These dimensions are translated into the language of performance management as speed of delivery, rate of repurchase, and length of repurchase cycle, correspondingly. The information requirements of customer need (i.e., *newness*, *complexity*, and *clarity*) can be satisfied by facilitating the learning process about the product, consultation and offering alternative approaches to satisfy the need, as well as making the purchase an easy task.

Fourth, rewards and incentives should be established for marketing specialists to meet the performance targets and maintain continuous data collection on time and other costs associated with retaining current customers and expanding the customer pool. Other than compensation-based incentives (e.g., commissions), training of marketing specialists in measurement of customer costs and customer profitability would create awareness of how important these data are for the overall performance of an enterprise.

Finally, the fifth issue in managing customer profitability is to establish and periodically review the information flows (feedback and feed-forward loops). These information links should be established between the marketing specialists and line managers at each stage of the value chain who contribute to exceeding customer expectations, engineering and producing quality products, and thus, creating customer value.

The pro-active involvement of the marketing function in the design and implementation of the information system that would measure customer profitability is essential. Marketing professionals know the market best and certainly have many reasons to have an in-depth knowledge of their customer base. Collecting information about customer retention (planned and actual), executing the best and most appropriate measures of customer satisfaction and its intensity, discovering how new customers are acquired and if they are influenced by information "in the market," eliciting from existing customers their aggregate demand for all target product and service sales and finding ways to generally impact the probability that existing customers will be retained and markets will be exploited are all functions that marketing professionals are well prepared to handle. Intensive involvement in developing and nurturing the appropriate measures of customer profitability will insure "buy-in" by the whole organization and insure accuracy and relevance of all measures.

SUMMARY AND IMPLICATIONS

The measurement of customer profitability, as described in our model (Eq. 5), is necessary to assess the achievement of marketing strategies related to customer retention and to increasing market share. Without these measures, resources cannot be properly directed which implies that firm value may not be optimized. Thus, the framework of Srivastava et al. [3] is continued by attempting to make "explicit the contributions of marketing to shareholder value" [3, p. 3]. Therefore, the prospective measurement of customer profitability is a necessary prerequisite to the efficient utilization of resources and vital to directing marketing efforts toward building customer value by taking strategic advantage of the relatively efficient market for product information.

Perhaps the most important implication of the use of prospective measures of customer profitability is the likely influence on the marketing function and ultimately on the entire organization. The use of forward- looking measures of profitability can create a "planning culture" within marketing which allows their focus to shift from the past to the future. This shift in thinking has the potential for empowerment as the focus shifts forward and it

[13]See [25].

becomes clear that decisions and actions can make the future remarkably different from the past. That is, it is informative that a customer may have been relatively unprofitable in the past; however, it is more informative that creative and proactive intervention may turn that relationship around and make it beneficial to both the buyer and the seller. This is the challenge, to make the future and not allow it to unfold.

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