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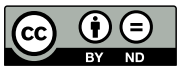

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Marketing Budget Allocation: Using Customer Lifetime Value as Your Guide

Olga K. Oyner · Olga Sukhorukova

Abstract: The paper evaluates the usefulness of a customer lifetime value (CLV)-based framework for allocating marketing resources in business-to-business settings in an emerging market. The CLV-based framework enables managers to build long-term customer relationships through customizing different elements of the marketing mix with the purpose of enhancing brand equity and maximizing the lifetime value of each business customer. Previous research does not address the issue of applying the CLV-based model for resource allocation in emerging economies and this study attempts to fill that void. The analysis is based on the data from a multinational company selling computer hardware components to business customers in Russia. Marketing managers can use results of this study to guide their marketing budget distribution decisions to effectively and efficiently reduce the costs associated with customer acquisition, enhance customer retention, and increase customer profitability with marketing–based activities.

Keywords: Marketing performance · Brand equity · Customer lifetime value · Marketing budgets · Resource allocation

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Introduction

Effective and efficient resource allocation is one of the fundamental questions of strategic marketing planning. Until the recent global financial crisis, marketing budgets were gradually increasing from one year to the next, although marketing productivity was still in question (Rust et al. 2004). As a consequence of fiscal constraint, coupled with the inherent uncertainly associated in a rapidly evolving field, ever greater attention has been focused on marketing performance metrics (Lehmann and Reibstein 2006; Srinivasan and Hanssens 2009). Marketing professionals need to be able to justify their budget proposals and allocation decisions as well as be able to document the efficacy and efficiency of those activities. Two marketing constructs, brand equity and customer lifetime value (CLV), have been shown to be related to each other and marketing performance (Stahl et al. 2012). More specifically, more favorable brand equity leads to greater customer lifetime value by reducing the costs associated with customer acquisition, enhancing customer retention, and increasing the profitability associated with customer purchases (Keller 1993; Keller 2008).

Many marketing activities, however, are aimed at short-term increases in sales or market share rather than increases in brand equity and customer lifetime value. Such a short term orientation often undermines long term company profitability and the value of the former marketing assets to a company (Rust et al. 2004). For example, couponing may stimulate short term sales volume but result in less favorable brand equity (consumer attributions that a product is only worth the lower price) and lower long run profitability (consumers only purchase when a coupon is available, retailers stock up during trade promotions and otherwise delay acquisition).

Discerning how much to spend on various marketing activities in order to achieve performance goals has always been one of the most difficult marketing choices to make and assess. Using long term marketing metrics as a guide could help ensure that organizations invest in marketing activities that prove to be both efficient and effective as well as consistent over time. Consistency in communication is just as important as consistency in product quality for building relationships with profitable customers. In the current economic climate, it is even more crucial for companies to be market-oriented and focus on clients that maximize customer lifetime value through brand equity (Ramani and Kumar 2008; Venkatesan and Kumar 2004).

The paradigm of using customer lifetime value as a guide for allocating company's resources and establishing strategic priorities has been developed and empirically tested using the data from developed markets (e.g., Stahl et al. 2012; Venkatesan and Kumar 2004). There is little direct evidence, however, that this theoretical model will still hold for emerging economies. Emerging markets are different from developed markets in innumerable ways, including substantial voids in economic infrastructure (Khanna, Palepu, and Sinha 2005), and might justify a different or modified approach. For instance, Kumar et. al. (2013) proposes a list of potential influencing factors that might contribute to profitable customer loyalty in emerging economies. The former study contributes to the marketing literature by exploring and delineating a range of very specific marketing mix elements without demonstrating their relative influence on customer lifetime value.

The goal of this paper is to assess the influence of alternative marketing activities on the components of brand equity and customer lifetime value in an emerging economy. We also explore a method for using the results as a means for setting and allocating marketing budgets that would result in higher levels of brand equity and lifetime customer value. First, we review research findings on brand equity and customer lifetime value and relate them to different components of the marketing mix. Next, we use the data from a regional branch of the Russian subsidiary of a large multinational computer hardware manufacturer to demonstrate its validity in an emerging economy and the potential utility of this approach for setting and allocating marketing budgets.

Conceptual Framework

The marketing literature is rich in studies linking marketing activities to firm performance. A number of authors (Gupta and Lehmann 2006; Gupta and Zeithaml 2005; Rust et al. 2004; Schultze et al. 2012) advocate an approach linking the chain of marketing productivity to firm value. This conceptualization is supported by the findings in a number of empirical studies demonstrating the impact of marketing activities on a wide variety of business outcomes (Ambler et al. 2002; Berger et al. 2002; Blattberg and Deighton 1996; Bolton, Lemon, and Verhoef 2004; Fornell 1995, 2001; Fornell et al. 1996; Hogan, Lemon, and Rust 2002; Rust et al. 2004).

Customer lifetime value is the most important marketing performance metric associated with the former studies. Customer lifetime value is a measure that captures the value of purchases made by a customer over the period that this customer stays with a company or, in other words: "…the present value of the future cash flows attributed to the customer relationship" (Farris et al., 2006, p. 143). Retention rates, acquisition rates, and profit margins directly affect customer lifetime value (Farris et al. 2006). CLV is a very important marketing metric, because it reveals the difference between customer groups, allowing to identify the most profitable customer segments and then tailor the firm's marketing program to either maximize the group's customer value (e.g., reward the firm's most profitable customers and enhance their retention rates through a loyalty program) or to "fire" the least profitable customers (Pfeifer et al. 2005; Venkatesan and Kumar 2004). One of the fundamental advantages provided by the use of the CLV metric is that it can serve as a basis for allocating financial resources between consumer groups (Gupta and Lehmann 2006; Reinartz, Thomas, and Kumar 2005; Rust, Lemon and Zeithaml 2005). At the same time, CLV can serve as an indicator of the customer equity and firm value (Gupta, Lehmann, and Stuart 2002).

The model presented in this paper is based on the following theoretical assumptions. Marketing activities (i.e., elements of the marketing mix, such as product, price, and promotions) lead to brand differentiation, create added value for the customer and, therefore, positively affect brand equity and customer lifetime value (Stahl et al. 2012; Venkatesan and Kumar 2004). Satisfied customers are more likely to repurchase preferred brands, pay higher prices for preferred brands, provide favorable word of mouth about those brands, and buy related products.

Figure 1 graphically presents the range of factors affecting customer lifetime value in the computer hardware industry in Russia. We start our discussion with a broad range of potential factors that could influence CLV and then focus on a more refined group of elements which will be included in the subsequent regression analysis. The criteria for including factors in our regression model will be explained further in this section.

Exogenous Environmental Factors

Customer Characteristics. Product upgrades and cross-buying (purchasing across different product categories) have been shown to increase purchase frequency and sales volumes (Bolton, Lemon, and Verhoef 2004; Gupta et al. 2006; Reinartz and Kumar 2003). Relatively more contact between the buyer and the seller, be it bidirectional communication (Morgan and Hunt 1994), or greater use of various modes of communication (Venkatesan and Kumar 2004) strengthens the relationships, has also been demonstrated to provide greater opportunities for the seller to tailor the proposed solutions to customers' specific needs, and sustain or enhance awareness about the seller's products.

The company in our study manufactures one core computer hardware product. The other products manufactured by this company are complementary to the core product. The core product's market share for the company is about 80%, while the market share of its complementary products generally does not exceed 5%. The core product has the most profitable margin as well as accounts for the majority of sales for this hardware manufacturer. The disparity in market share positions held by the core product and the complementary products, explains why cross-selling does not play a crucial role for this company. This was the basis for our decision not to include cross selling in the subsequent regression analysis.

Economic Situation. The data in this study were collected during the economic recession (the consequence of the world financial crisis of 2008-2010) in Russia. Sales of computer components were negatively affected primarily due to business customers' postponing new personal computer acquisitions and replacements.

Increases in Grey Market activity was also impacted by the economic recession. Assmus and Wiese (1995) define gray market goods (also known as parallel imports) as "brand name products sold through unauthorized channels (p. 31)." Gray markets are the result of price difference between two country-markets. Lower-priced products are bought in one country-market and then sold in other markets at a profit. The company in our study was constantly forced to confront the efforts of the authorized distributors to import the core product into Russia. Various elements of the marketing mix, in particularly, the relationship marketing methods (loyalty programs, educational seminars for the end-users) can be used to create added value for customers and so prevail in the competition with the gray market by using non-price oriented marketing methods.

Competitors. Even for the indisputable market leader, like the company in this study, competitors' actions (e.g., price discounts, product and customer service quality improvements) can potentially affect CLV by reducing purchase frequency. However,

the company's market dominance and technological superiority of its core product help insulate it from the negative impact of the competition on company's sales.

Marketing Mix Elements. Marketing mix elements utilized by the company in our study are aimed at stimulating customers' purchases and impact brand equity and CLV (Stahl et al. 2012). The marketing mix elements shown in Figure 1 can be divided into two groups according to the time horizon of their potential impact on sales and CLV. Starting from the left, Fig. 1 lists the long-range (LR) components of the marketing mix, such as product innovation, product availability to the local subsidiary, etc.

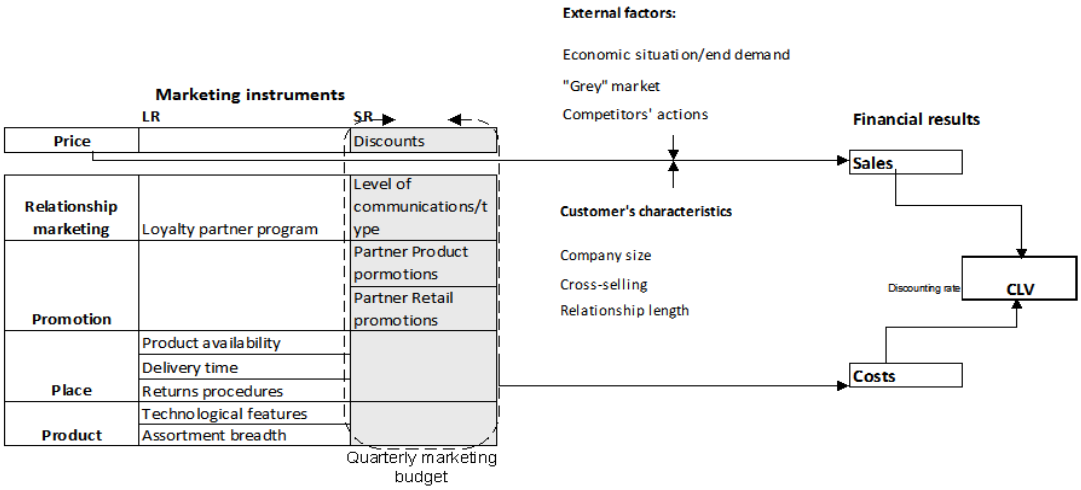

Fig. 1: Drivers impacting customer lifetime value (CLV)

The short-range (SR) factors (discounts, level of sales effort/support, retail and product promotions) are mostly comprised of promotional and relationship marketing activities. The amount of funding available for providing discounts is determined by the corporate headquarters but the Russian branch personnel can determine whether a discount will be provided to a specific business customer. The allocation of funds between the remaining short-range elements of the marketing mix occurs at the local subsidiary level and of primary interest to our research. Therefore, all of the short-range factors shown in Figure 1 are included in the subsequent regression analysis.

According to the conceptualization by Venkatesan and Kumar (2004) and by Stahl et al. (2012), each element of the marketing mix influences the length of the relationship, the frequency of purchases, and the profit margin. They help generate revenue (by influencing customer perceptions) and thus determine the CLV value.

Factors Included into Regression Model

The exogenous environmental factors (competitors' influence, economic environment, customer characteristics) and the long-range marketing mix components were not included in the subsequent regression analysis for the following reasons. First, the long-range effects could not be estimated over the relatively short-term, four year, timeframe of our study. Second, all of the environmental factors and most of the long-range marketing mix components (product innovation, delivery time, returns policy, etc.) are, by definition, not controllable by the personnel of the Russian subsidiary. The purpose of our study is to evaluate the utility of the CLV-based resource allocation model specifically for use by a local subsidiary in an emerging economy and, as a consequence, this investigation explores just those CLV-influencing variables that can be measured and controlled at the local subsidiary level.

Most notably, our regression analysis focuses on identifying the elements of the marketing mix with the greatest impact on CLV and does not attempt to estimate the influence of uncontrollable exogenous factors (competitors' actions, the effects of parallel ("grey") imports of computer components, the length of customer relationships, etc.). Being guided by the paradigm stating that the marketing mix elements affect brand equity and CLV (Stahl et al. 2012; Venkatesan and Kumar 2004), we set forth four formal hypotheses regarding the marketing mix elements that are controllable at the local subsidiary level.

One of the most powerful elements of the marketing mix is the price, specifically, the subsidiary's ability to offer discounts to its business customers. Discounts have a great impact on sales volume in the short term (e.g., Tellis 1988). However, empirical studies in the automotive and the retail catalogue industries revealed that price reductions have a negative effect on customer equity (Anderson and Simester 2004; Yoo and Hanssens 2004). Pauwels (2003) arrived at a similar conclusion and added to this that discounts have a negative impact on the firm capitalization in long term period. The local Russian subsidiary of the company in our study used to provide discounts that were volume-based and offered only to established customers. New customers typically did not get any discounts. Price reductions were, therefore, used for customer retention, not for customer acquisition. As of recently, due to changes in regulation, the company in our study terminated its discount program. Therefore, the impact of the discounts on CLV and sales volume is estimated in retrospect.

H1: The volume of discounts offered to business customers positively influences sales revenues, but does not affect customer lifetime value (CLV).

The company is also capable of influencing brand equity (by sustaining brand awareness levels and building brand associations) through communication with its customers (Keller 1993, 2008; Stahl et al., 2012; Venkatesan and Kumar, 2004). Following Venkatesan and Kumar (2004) study, we divided methods of communication into three categories: rich/personal (face to face meetings, trade shows, etc.), standard (phone calls, direct mail, etc.), and online communications. Different means of communication have different impact on the customers and on the frequency of their purchases. Personal communications help establish closer contact with the customers. The greater is the degree of personal interaction with the company

personnel (rich communication), the greater is the potential to generate positive customer experience, thus building brand equity and CLV. More close (rich) communication provides a greater opportunity to educate a customer about the products, cross-sell or up-sell the customer, thus generating greater sales volumes. Greater personal attention to customers' needs results in greater customer satisfaction levels, leading to increased CLV through the increased customer retention rates and frequency of purchases.

The company discussed in this research practices a customer relationship management (CRM) approach by segmenting its customers into three categories. Each segment is entitled to a specific level of account support. The first segment, comprised of the most strategically important customers, uses the direct touch mode of communication made possible by assigning a personal account manager to every customer within this category. We assume that the fewer companies each manager covers, the more time she spends on each account and the higher the level of communication.

The second category of customers receives support through a sales call center. Managers of the call center are less experienced than the regular account managers, and each call center employee covers 40-50 accounts. It is apparent that the level of customer support is lower for this segment.

The third category of customers is served using the so-called E-touch communication mode. These companies are contacted via emails sent from the company website. This latter category of customers makes low volume purchases and is not considered to be strategically important to the computer hardware manufacturer.

In this study we measure the level of communication using a metric of the total expenditures on customer account support. Our second hypothesis presents this consideration formally:

H2: Greater expenditures on communication are positively related to greater sales volumes and increased CLV.

Since the demand for computer hardware depends on end-users' demand for the computers, the hardware company in our case study helps its customers stimulate primary demand for computers. In order to do this, the company allocates marketing funds for partners' (i.e., business customers') promotional activities, funding up to 50% of the total cost of promotional campaigns. Eligible cooperative communication campaigns differ widely and range from conducting seminars for end users to promotional activities taking place at retail distribution level.

We include these activities in the co-marketing category since they require cooperation and collaboration on the part of the company's business customers. We expect that this type of marketing will significantly impact sales volume as well as CLV. These promotions are budgeted separately for the campaigns at the retail level (referred to as retail promotions henceforth), and for the trade show/seminar activities meant to support each of the following three categories of products: server products, motherboards, and the core product. Given the vastly different weight of these product categories for the company's sales and profits (recall that the core product accounts for 80% of sales), this calls for an investigation of a

potentially different impact of these product categories on sales and CLV. To sum up, we propose that:

H3: Retail promotions positively affect sales volumes and CLV,
and
H4: Co-marketing activities consisting of trade show/seminar support for business customers positively affect sales volumes and CLV for all three main product categories: server products, motherboards, and the core product.

Model Estimation and Results

Our paper is based on the data about the marketing expenditures and sales to business customers in one of the Russian provinces over four years of quarterly reporting periods. The company in this study has a market share of about 80% for its core product. Such market dominance effectively precludes customers from entirely defecting. However, the company's share of a customer's wallet (on average between 50% and 100%) can change over time as a result of a positive or negative experience with the vendor. The customer is "gone for good" only if it goes bankrupt and exits the market. Therefore, we assume that the customer retention rate equal to 100%.

Over the studied period, the company did not acquire any significant new customers, so for the CLV calculation we used the formula below (Venkatesan and Kumar 2004):

$$CLV_i = \sum_{t=1}^{n} \frac{(\text{Future contribution margin}_{it} - \text{Future cost}_{it})}{(1+r)^t},$$

Where *i* is the customer's index, R= 4%, t = 4.

The dataset contains 1471 observations for 451 customers over 4 time periods. Following Venkatesan and Kumar (2004), we forecast for a limited number of periods starting with t-2, t-1, t, where the forecasted period is denoted as t+1. Marketing spending in past periods are given, but we can optimize future spending for CLV maximization. The discount rate is estimated at 15, based on the guidelines set by the multinational's executives for its Russian offices.

We have their purchase volumes and marketing budgets spent on various marketing activities supporting these business customers

As stated previously, the proposed model is aimed at increasing the efficiency of the intrafirm allocation of the marketing budget by determining which of the marketing mix elements that are controllable by the local Russian subsidiary have the greatest impact on sales volume and CLV. Independent variables for the models were:

CRM – this variable captures the company's investments in relationship marketing by measuring the dollar amount spent on marketing to customers through all three levels of communication.

- Retail promotions – budgets for co-marketing with retailers
- Discount – price reductions given to specific customers
- ServProd Promo (EPSD) –budgets for co-marketing activities with clients for server products (seminars for end-users, trade-shows
- M-Board (UPSD) – budgets for co-marketing activities with clients for motherboards (seminars for end-users, trade-shows)
- CoreProd DT - budgets for co-marketing activities with clients for core product (seminars for end- users, trade-shows)

The dependent variables are the sales revenue, measured in dollars, and the CLV. Sums of the variables for all customers are in the table below:

Table 1: Dependent and independent variables, U.S. dollars

Sales revenues	CLV	Discounts	Retail promotions	CRM	M-Board	ServProd	CoreProd
13,073,530	50,692,756	376,987	17,000	63,110	9,000	4,000	14,700

Details of the overall correlation between the variables left in the models and the dependent variable for CLV and the sales out volume are below. After performing the validation analysis, we found out that the selected method can be used.

Table 2: Regression using sales revenues as a dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.735(a)	.541	.540	110,167.890
2	.923(b)	.852	.852	62,514.641
3	.932(c)	.868	.867	59,117.986
4	.937(d)	.878	.876	57,085.673
5	.939(e)	.881	.880	56,339.154
6	.940(f)	.884	.882	55,737.730

Predictors: (Constant), CRM, MBoard Promo, ServerProd Promo, CoreProd Promo EPSD, UPSD, DT, Retail promotions, Discounts, Dependent Variable: Sales Revenue

Table 3: Model Summary for CLV

Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778(a)	.605	.604	482,183
2	.883(b)	.779	.778	360,998
3	.895(c)	.801	.799	343,446
4	.900(d)	.810	.808	336,185
5	.905(e)	.820	.818	327,312

Predictors: (Constant), Account Manager, EPSD, UPSD, Retail promotions, DT, Dependent Variable: CLV

The regression model (containing discounts, CRM, ServProd Promo, M-Board Prod Promo, Core Prod Promo, and Retail Promotions as independent variables. With models 5 above, some 88% of the sales out volume and 82% of the variation in the dependent variable can be explained using the independent variables. Moreover, the CLV table does not contain the discount variable, which confirms that they do not influence CLV significantly. Below is a Coefficients table, showing the linear regression equation coefficients for the various model variables.

Table 4: Influence of marketing mix variables on sales volume/revenue

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
6 (Constant)	-2080,950	2844,633		-.732	.465	-7672,915	3511,016
Account Manager	215,468	8,273	.764	26,045	.000	199,205	231,731
EPSD	594,232	19,225	.719	30,910	.000	556,440	632,023
UPSD	-163,746	18,840	-.226	-8,691	.000	-200,783	-126,709
DT	55,565	8,672	.117	6,408	.000	38,518	72,612
Retail promotions	-115,572	26,309	-.141	-4,393	.000	-167,290	-63,854
Discounts	1,548	,493	.062	3,142	.002	.580	2,517

Dependent Variable: Sales revenues

Table 5: Influence of marketing mix variables on CLV

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
5 (Constant)	-43336,460	16671,892		-2,599	.010	-76109,750	-10563,170
Account Manager	1204,753	48,275	.904	24,956	.000	1109,855	1299,651
EPSD	2261,849	111,820	.579	20,228	.000	2042,036	2481,662
UPSD	-775,462	109,376	-.227	-7,090	.000	-990,472	-560,453
DT	-767,601	144,021	-.199	-5,330	.000	-1050,714	-484,487
Retail promotions	246,695	50,856	.110	4,851	.000	146,722	346,667

Dependent Variable: CLV

The models are presented in Tables 4 and 5 and reveal that different short-range elements of the marketing mix have different impact on the sales revenues and on CLV. By examining the significance of standardized beta coefficients we can see which variables influence the dependent variable and the direction of such impact. Following a stepwise regression analysis, the regression parameters were estimated as follows:

Sales Revenues = -2,080,950+215,468*CRM +594,232*ServProd Promo -163,746*M-Board Promo +55,565*Core Prod promo - 115,572*retail promo+1,548*discount

CLV = -43336,460+ 1204,753* CRM +2261,849** ServProd Promo - 775,462* -Board Promo -767,601* Retail Promo + 246,695 CoreProd Promo +0*Discount

Interpretation of the coefficients for the independent variables is as follows: if the server promotion (EPSD) is increased by one dollar, sales in the quarter will increase by an average of 549 dollars and the CLV for 4 quarters will increase by 2261 dollars.

In order to rationalize the budget allocations, we need to determine the equation of the multiple regression. In order to do this we add calculated variables, such as product of each independent variable with another. Then we repeat the STEPWISE SPSS analysis. So the non-linear equation for Sales will be:

Sales revenues = 11311.215 + 0.247Account Manager*EPSD+0.056 Account Manager2+0* Discounts2+ -0.051 Account Manager * UPSD + 0.034 DT2-51.218 Account Manager+0.109 Retail promotions*DT-0.003 Discounts*EPSD-79.975 DT

For the next step in the analysis, our study used the “Microsoft Excel Solver” add-in module in order to estimate optimal allocation of marketing budget funds to each

element of the marketing mix with the purpose of maximizing sales volume and CLV. With Solver, an analyst can find an optimal value for a formula in the target cell, given the parameter estimates. We set overall marketing budget as a limitation for our models. We also set empirical limits for non-core product promotions due to the limited market capacity. We also set discount equal to zero due to the recently imposed legal limitations.

Table 6: Budget allocation optimization

	Current budget allocation	Optimized budget allocation	Difference
Discounts	376,987	0	
Retail promotions	17,000	9,634	
Account Manager	63,110	69,000	
UPSD	9,000	0	
EPSD	4,000	5,000	
DT	14,700	24,176	
Company local budget	107,810	107,810	
Company overall budget (including discounts)	484,797	107,810	- 376,987
CLV	285,515,711	391,037,021	105,521,311

Thus, we came to a conclusion that in order to have the optimal marketing budget allocation, the Russian subsidiary of the computer hardware company in the study should not provide discounts (even if/when the legal restrictions on discounting are eliminated), decrease spending on co-marketing campaigns in retail, increase budgets on account management, decrease co-marketing on motherboards and substantially increase investments in co-marketing for the core business. The proposed resource allocation model presented in Table 6) should decrease marketing spending by $376,987 due to the elimination of discounts. According to our estimates, these moves would still allow for the 37% increase in CLV. Our research results suggest that the CLV-based model of marketing budget allocation (Stahl et al. 2012; Venkatesan and Kumar 2004) fits the data from a local Russian subsidiary of a large multinational computer hardware company. It appears that this framework can be used by management of the company while prioritizing the budget expenses and potentially could guide the decisions in other similar companies in their business.

Framework limitations and directions for further research

The fragmentation of marketing communication channels, in conjunction with a diversity of other rapidly evolving marketing mix options, make setting marketing budgets and allocating those resources even more important and problematic than it has been in the past.

Simply being effective, having a positive marketing return on investment, may not proof to be adequate and, by itself, cannot ensure an organizations long term success. In order to remain competitive in the long run, firms must be able to discern both how to efficiently spend marketing resources (maximize the total benefits associated with a given level of marketing effort) as well as how much to spend (maximize the marginal net benefit associated with marketing effort).

This would be especially true for small companies in emerging markets who may compete with large multinational organizations which can afford to subsidize poor in country performance with cash flows from other products or activities in other markets.

A firm in an emerging market, with favorable brand equity and corresponding levels of customer lifetime value, may find success limited in the long run if competitors are even better able to recruit, retain, and develop customers for the future. It won't really matter much if a company grows profit margins and overall profitability by 20 percent a year if its competitors are able to grow at 200 percent a year. The outcome is quite predictable and will not be pleasant for the firm that doesn't realize how badly it is underperforming relative to a market's potential.

All hypotheses of our study were supported. However, this research has a number of limitations. Firstly, after implementing the described changes the company should re-evaluate the model on order to adjust the coefficients. Secondly, the conducted study is based on one hardware computer company which limits the generalizability of our findings. The study has to be replicated for several different companies from a range of industries in order to determine to test the robustness of the reported findings in IT industry. Researchers need to conduct similar studies in identical companies.—Thirdly, it could be useful to calculate CLV and customers' profitability not on aggregated level, but on an individual, in order to tailor marketing mix tactics for each customer specifically. Fourthly, we evaluated only those budgets that can be attributed to each customer specifically. We did not take into account corporate marketing activities, such as Public Relations, Above the Line Communications , etc. How will the proportion between those "customer-specific" and "general" budgets influence the CLV? What if "general" budgets are more efficient on the company level? Moreover, we supposed that there are no "lost for good" customers. But during the financial crisis it is highly possible, so how will the company predict the number of these lost customers? Finally, we did not attempt to estimate the influence of competitors' response to marketing actions. Future research could address these issues.

References

Anderson Eric T. and Duncan Simester (2004), "Long Run Effects of Promotion Depth on New Versus Established Customers: Three Field Studies," *Marketing Science*, 23(1), 4-20.

Ambler Tim, C.B. Bhattacharya, Julie Edell, Kevin L. Keller, Katherine N. Lemon, and Vikas Mittal (2002), " Relating Brand and Customer Perspectives on Marketing Management," *Journal of Service Research*, 5, 13-26.

Assmus, Gert and Carsten Wiese (1995), "How to Address the Gray Market Threat Using Price Coordination," *Sloan Management Review*, 36 (3), 31-41.

Berger, Paul D. and N. I. Nasr (1998), "Customer Lifetime Value: Marketing Models and applications," *Journal of Interactive Marketing*, 12(1), 17–30.

____, Ruth N. Bolton, Douglas Bowman, Ellen Briggs, V. Kumar, A. Parasuraman, and Creed Terry (2002), "Marketing Actions and the Value of Customer Assets: A Framework for Customer Asset Management," *Journal of Service Research*, 5 (1), 39-54.

Blattberg Robert and John Deigton (1996), "Manage Marketing by the Customer Equity Test," *Harvard Business Review*, 74(4), 136-144.

____, Mailhouse, E.C., & Neslin, S.A. (2009). Customer Lifetime Value: Empirical Generalizations and Some Conceptual Questions," *Journal of Interactive Marketing*, 23(2), 157-168.

Bolton, Ruth, Katherine N. Lemon and Peter C. Verhoef (2004), "The Theoretical Underpinnings of Customer Asset Management: A Framework and Propositions for Future Research," *Journal of the Academy of Marketing Science*, 32 (3), 271–92.

_____, and Katherine N. Lemon (1999), "A Dynamic Model of Customers' Usage of Services: Usage as an Antecedent and Consequence of Satisfaction," *Journal of Marketing Research* 36(2), 171–186.

_____, Katherine Lemon, S.C. Verhoef (2004), "The Theoretical Underpinnings of Customer Asset Management: A Framework and Propositions for Future Research," *Journal of the Academy of Marketing Science*, 32 (3), 271-292.

Dwyer, R., Paul H Schurr, and Oh Sejo (1987), "Developing Buyer–Seller Relationships," *Journal of Marketing*, 51 (April), 11–27.

Dwyer, F. R. (1997), "Customer lifetime valuation to support marketing decision making," *Journal of Direct Marketing,* 11(4), 6–13.

Drèze Xavier, Bonfrer A. (2008), "Moving from Customer Lifetime Value to Customer Equity, Working paper.

Farris, Paul W., Neil T. Bendle, Phillip E. Pfeifer, and David J.Reibstein (2000), "Markeitng Metrics: 50+ Metrics Every Executive Should Master," 3rd ed. Upper Saddle River, NJ6 Warton School Publishing.

Fornell, Claes (1995), "The Quality of Economic Output: Empirical Generalizations About

Its Distribution and Relationship to Market Share", *Marketing Science*, 14 (3), G203–G211.

_____ (2001), "The Science of Satisfaction," *Harvard Business Review*, 79 (March), 120-121.

_____, Michael D. Johnson, Eugene W. Anderson, Jaesung Cha, and Barbara Everitt Bryant (1996), "The American Customer Satisfaction Index: Nature, Purpose, and Findings," *Journal of Marketing*, 60, 7-18.

Gupta, Sunil and Donald R. Lehman (2003), "Customers as Assets," *Journal of Interactive Marketing*, 17(1), 9–24.

Gupta, Sunil, Donald R. Lehman, and Jennifer A. Stuart (2002), "Valuing Customers," *Journal of Marketing Research*, 41 (February), 7–18.

Gupta, Sunil and Donald R. Lehmann (2006), "Customer Lifetime Value and Firm Valuation," *Journal of Relationship Marketing*, 5(2-3), 87-110.

Gupta, Sunil and Valerie Zeithaml (2005), "Customer Metrics and Their Impact on Financial Performance," Marketing Science.

Gupta, S, D. Hanssens, Hardie B, V. Kumar (2006), "Modeling Customer Lifetime Value," *Journal of Service Research*, 9 (2), 2006, 139-155.

Hakansson, H. and Snehota, I. (1995), "Developing Relationships in Business Networks," London: Routledge.

Hogan, John E., Donald R. Lehmann, Marina Merino, Rajendra K. Srivastava, Jacquelyn. S. Thomas, and Peter C. Verhoef (2002), "Linking Customer Assets to Financial Performance," *Journal of Service Research*, 5(1), 36–38.

Hogan, John E., Katherine N. Lemon, and Ronald R. Rust (2002), "Customer Equity Management: Charting New Directions for the Future of Marketing," *Journal of Service Research*, 5(1), 4-12.

Khanna, Tarun, Palepu, Krishna G., and Jayant Sinha (2005), "Strategies that Fit Emerging Markets," *Harvard Business Review*, June, 63-76.

Keller, Kevin (1993) "The Effects of Corporate Branding Strategies on Brand Equity," *Advances in Consumer Research*, 20 (1), 27-27.

_____, (2008), Strategic Brand Management, 3d ed. Englewood Cliffs, NJ: Prentice Hall.

Kumar, V., Amalesh Sharma, Riddhi Shah, and Bharath Rajan (2013), "Establishing Profitable Customer Loyalty for Multinational Companies in the Emerging Economies: A Conceptual Framework," *Journal of International Marketing,* 21(1), 57-80.

Lemon, Katherine N., Tifany Barnett White, and Russell S. Winer (2002), "Dynamic Customer Relationship Management: Incorporating Future Considerations into the Service Retention Decision Automobile Industry," *Journal of Marketing*, 66, 1-14.

Lewis, M. (2006), "Customer Acquisition Promotions and Customer Asset Value," *Journal of Marketing Research*, 43 (2), 195–203.

Oliver, Richard L. (1997) *Satisfaction: A Behavioral Perspective on the Consumer*. Boston: Irwin/McGraw-Hill.

Pauwels, Koen (2003), "How Dynamic Consumer Response, Dynamic Competitor Response and Expanded Company Action Shape Long-Term Marketing Effectiveness", Social Science Research Network, Tuck School of Business Working Paper No 03-19, [available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=405123].

Pfeifer, P. E. and R. L. Carraway (2000), "Modeling customer relationships as Markov chains," *Journal of Interactive Marketing*, 14(2), 43–55.

Pfeifer P E., Mark E. Haskins, and Robert M. Conroy (2005), "Customer Lifetime Value, Customer Profitability, and the Treatment of Acquisition Spending," *Journal of Managerial Issues,* XVII(1), 11-25.

Ramani, Girish and V. Kumar (2008), "Interaction Orientation and Firm Performance," *Journal of Marketing*, 72 (1), 27-45.

Reinartz, W. and V. Kumar (2000), "On the Profitability of Long-Life Customers in a Noncontractual Setting: An Empirical Investigation and Implications for Marketing," *Journal of Marketing*, 64 (4), 17–35.

_____and _____ (2003), "The impact of customer relationship characteristics on profitable lifetime duration," *Journal of Marketing*, 67(1), 77–99.

_____, J. S. Thomas, and V. Kumar (2005), "Balancing acquisition and retention resources to maximize customer profitability," *Journal of Marketing*, 69, 63–79.

Rust, Ronald, T., T. Ambler, G. S. Carpenter, V. Kumar, and R.K. Srivastava (2004), "Measuring Marketing Productivity: Current Knowledge and Future Directions," *Journal of Marketing*, 68 (4), 76 –89.

Rust, Roland, Katherine N. Lemon, and Valarie A. Zeithaml (2004), "Return on Marketing: Using Customer Equity to Focus Marketing Strategy," *Journal of Marketing*, 68 (1), 109–127.

Schultze, Christian, Bernd Skiera, and Thorsten Wiesel (2012), "Linking Customer and Financial Metrics to Shareholder Value: The Leverage Effect in Customer-Based Valuation," *Journal of Marketing*, 76 (March), 17-32.

Srivastava, Rajendra, Liam Fahey, and Kurt Christiansen (2001), "Resource-Based View and Marketing," *Journal of Management*, 27 (6), 777-802.

Srivastava, Rajendra, Tasadduq Shervani, and Liam Fahey (1998), "Market-Based Assets and Shareholder Value: A Framework for Analysis." *Journal of Marketing,* 62 (1), 2-18.

Stahl, F., Heitmann, M., Lehmann, D.R. and Neslin, S.A. (2012), "The impact of brand equity on customer acquisition, retention, and profit margin". *Journal of Marketing* 76, 44-63.

Tellis, G.J. (1988), "The Price Elasticity of Selective Demand: A Meta-Analysis of Sales

Response Models", *Journal of Marketing Research,* 15(2), 134-144.

Thomas, Jacquelyn S. (2001), "A Methodology for Linking Customer Acquisition to

Customer Retention," *Journal of Marketing Research,* 38 (2), 262–268.

Venkatesan, R. and V. Kumar (2004), "A Customer Lifetime Value Framework for Customer Selection and Resource Allocation Strategy," *Journal of Marketing,* 68 (October), 106–125.

Yoo, S. and D. M. Hanssens (2004). "The Impact of Marketing on Customer Equity: From Relationship Marketing to Product Marketing", Working paper.