SALESPERSON PROFITABILITY IN RELATIONSHIP MARKETING

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INTRODUCTION

Unfortunately, though several authors have underscored the importance of the salesperson’s role in the creation of purchaser-salesperson relationships (Weitz and Bradford 1999), few studies have focused on the relationship between customer value and salesperson’s profitability in relationship approach. For example, consider the scenario of a manager who wishes to recruit a salesperson to maintain and develop a portfolio customer relationship. An important issue for the manager to consider is the following: Under which condition is this decision profitable for the firm? This in turn gives rise three keys questions: How does the salesperson’s profitability vary as a function of customer value? How should compensation be structured in response to such changes? And is it profitable that salesperson’s compensation should be equal across customer when the firm has a customer portfolio?

The purpose of this study is to show how a simple analytical model can be used to help sales managers to assess the dynamic long-run profitability impact of salesperson hiring in relationship marketing. Through this model, we try to give answers to the above importance questions.

MODEL DESIGN

For the purposes of this article, we are concerned only with the financial value that has a direct relationship with the salesperson’s tangible compensation. To assess salesperson profitability in relationship, we use two steps. The first step consists to establish the firm financial value with respect to time since the salesperson is recruited. Next, conditions of salesperson profitability are derived. The "firm-salesperson-customer" system (see Figure 1) is based on the principle of conservation which postulates at a specific time, the rate of change within the system is equal to the rate of creation in the system less the rate of destruction.

**Step 1: firm financial value**

For each customer, we consider the Basis as the baseline against which we can measure salesperson’s profitability progress. The simple average of margins that firm made with this customer before salesperson is recruited is taken as Baseline formula. We call this value “h”, that become the firm financial value at t=0 (time that salesperson recruited), in other words, without the intervention of the salesperson, the firm realizes with this customer an average margin equal to h. The creation of firm value is dependent upon the representation of the organization in terms of an exchange of values between the various players (customers, firm, and salesperson). This value is determined based on an identification of the inputs and outputs of the “firm value” system. The rate of input of the “firm value” system is simply the customer lifetime value at time t (CLVT) which is due to the effort expended by the salesperson. Several formulas are available for calculating CLV, but the formula proposed by Calciu and Salerno (2002) is the most common. According to this formula, CLV is equal to the present value of the anticipated revenue from a relationship with a customer over a number of periods, from which are subtracted the expected costs of maintaining the relationship with this customer.

Therefore, firm financial value and its variation with respect to time can be expressed as:

$$\frac{\partial V_t}{\partial t} = \alpha_t V_t + \int_{k=0}^{t} M_k \exp(-\beta k) \, dk$$

V:

- Firm financial value at time t.
- \(\alpha_t\): Rate of transfer of firm value to salespeople at time t. It expresses the compensation paid at time t to the salesperson as a ratio of \(V_t\) (\(s_t = \alpha_t V_t\)).
- \(M_k\): Firm’s gross margin resulting from a customer.
- \(\beta\): Index of defection. Reversely, Gupta et al. (2004) have used the index of retention (\(\beta = \frac{1}{r}\)) \(r\): Customer retention probability.
- \(d\): Discount rate appropriate for marketing investment.

The values of \(M_k\), \(\beta\), and \(\alpha_t\) are dependent upon several factors that may vary as a function of time, such as the firm’s production costs, the communications expenditures, the intensity of the competition, and the effectiveness of the distribution network, all
of which render the solution complex. For this reason, we examine the solution of the equation over a compensation period (e.g., quarter, year) and consider \( M, \beta \) (i.e., \( r \)), and \( \alpha \) as the respective means of \( M_t, \beta_t \), and \( \alpha_t \) over this period. Considering at \( t=0, V_{t=0} = h \), the solution of the above equation is:

\[
V_t = \left( h + \frac{M}{\alpha - \beta} \right) e^{-\alpha t} - \frac{M}{\beta \alpha - \beta} e^{-\beta t} + \frac{M}{\alpha \beta}
\]

**Step 2: conditions of salesperson profitability**

We can deduce from the above that the salesperson profitability in a relationship orientation is dependent of three parameters: 1) the position of the retention probability with respect to the value of the critical coefficient \( r_c \), 2) the salary rate with respect to the value of the critical rate \( \alpha_c \), and 3) the duration of the relationship with the customer with respect to the value of the critical duration \( t_h \).  

\( r_c = \frac{h}{h + M} \), \( \alpha_c = \frac{M}{\beta h} \).

More specifically, in two cases the salesperson can be profitable: 1) the retention coefficient salesperson-customer \( r \) is less than \( r_c \) \( (r < r_c) \), in this case (see case III, figure 2), the salesperson’s commission rate must be below \( \alpha_c \) and the firm must encourage salesperson to develop or maintain relationships with the customers for at least a length of time \( t \) that is greater than \( t_h \); 2) the retention coefficient salesperson-customer \( r \) is greater than or equal to \( r_c \) \( (r \geq r_c) \), in this case \( \alpha_c \) doesn’t exist, exist. Salesperson's rate has no constraint except the minimization of duration of his return at Baseline, and the firm must encourage salesperson to develop or maintain relationships with the customers for at least a length of time \( t \) that is greater than \( t_h \). In the other cases (see case I and case II, figure 2), salesperson is not profitable \( (\alpha_{ce} = \frac{r h^{n-c} + r^{n-2} h^{r-2} r h^{r-4} M^{r-2} h M^{r-2} h}{2 h r}) \).

The value of \( t_h \) is dependent upon the value of \( t_c \): the lower the \( t_c \), the lower the \( t_h \). The value of \( t_c \) is dependent upon the financial value generated by the firm \( (h) \), the margin generated by the salesperson \( (M) \), the customer retention probability \( (r) \), and the compensation paid to the salesperson \( (\alpha) \) \( (t_c = \frac{\ln(M h^{a=\beta} M - h^{a=\beta})}{\alpha - \beta}) \).

**DISCUSSION AND MANAGERIAL IMPLICATIONS**

Despite the importance of relationship marketing and customer lifetime value (CLV), there has been no research on the quantitative utility of the salesperson from this perspective and his/her assignment to a customer portfolio. In this article, we have explored the impact of customer lifetime value and compensation on the salesperson’s profitability from a relationship perspective. The model developed at the level of the "firm-salesperson-customer" system has allowed us to isolate the salesperson’s contribution and to assess his/her profitability in a relationship approach as of function of customer value. This process has given rise to four significant results. First, the effectiveness of a firm’s strategy to use a salesperson for developing a customer relationship is dependent upon the customer value, and the compensation paid to the salesperson. This result is not only consistent with Palmatier (2008) propositions, but further develops it as well by specifying that salesperson’s profitability as a function of the retention probability and compensation paid to the salesperson. In addition, our study has determined the critical duration of the salesperson-customer relationship for the profitability of the salesperson in a relationship perspective. Specifically, the results of our study indicate that in case I and case II (see Figure 1), it is not appropriate for a firm to go through a salesperson. In contrast, in case III, the salesperson’s profitability and therefore, his/her utility is dependent upon the compensation parameters in place, the firm’s financial value in the absence of the salesperson, certain characteristics of the customer, the effort expended by the salesperson to generate a margin and/or increase customer retention, and the duration of the relationship with the customer. Second, our results demonstrate how the salesperson’s compensation should be structured as a function of customer value, and in particular, the retention probability, margin, and the duration of the salesperson-customer relationship. This result is important because it has the potential to open up promising avenues of research regarding the development of compensation plans. To our knowledge, our knowledge, only Kalra et al. (2003) study has considered satisfaction in the conception of the sales force compensation plan. Other studies have made reference solely to the sales or to the profits resulting from the sales effort expended with respect to customers. Consequently, customer lifetime value has been neglected despite the importance of the concept as underscored by several authors (e.g., Blattberg and Deighton 1996; Berger and Nasr 1998). Lastly, the model developed in our study allows for an operationalization of the relationship stages or retention probability. Through such operationalization the firm can choose the appropriate type of salesperson and determine his/her compensation as a function of the various relationship stages with the customers.

Our study has at least three implications for managers who wish to focus on long-term relation- ships with customers. First, our simplified categorization of the cases (I, II and III) is an initial step so that firms can appreciate that a return on investment