

Market segmentation based on the correlation between the customers' satisfaction and their loyalty

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Abstract— The globalization and digitalization of the world's economies have created the premises for the assertion of relationship marketing as theory and practice of modern marketing. A main strategic dimension of the relationship marketing concept is represented by the strategy of gaining customer fidelity, which has as a primary purpose the extension of the client retention towards the company. Setting as a leading goal the client's rational/emotional fidelity, the strategy of gaining customer fidelity implies two positive effects for the company: individualizing the relationship with the client and improving the company's performance. The development of the strategy implying gaining customer fidelity is conditioned by the manner in which a company can operate with three variables: customer satisfaction, customer fidelity and customer loyalty. Modeling in a correct manner these three variables enables the company to segment the relevant market in profitable ways. The aim of this paper is to study the correlation between the customer satisfaction and his or hers corresponding loyalty within the Romanian fuel market. The results consist in a market segmentation based on the up mentioned correlation through which the chosen company can acquire relevant insights in developing differentiated strategies of gaining customer fidelity.

Keywords-relationship marketing, customer satisfaction, customer fidelity, customer loyalty.

I. INTRODUCTION

By aiming the development of a durable relationship between the company and its end customers, relationship marketing targets the fulfillment of the following three main objectives: 1) attracting customers; 2) gaining the fidelity of existing customers; 3) renewing the company's image [L. Dumitrescu, C. Apostu, 2009].

Gaining the fidelity of the existing customers is a process which assumes a differentiation and a separate analysis of the customer relationship phases. To formulate or develop strategic and operative recommendations for each of these phases, it was necessary to include the concept of life cycle in the area of the customer relationships. Thus, three customer life cycles were identified: 1) The customer life length cycle; 2) The customer episode cycle and 3) The customer relationship cycle [B. Stauss, 2000].

In this view, knowing the determinant factors upon which a strategy of gaining the customer fidelity is developed, starts with solving the following three main problems which constitute the content of this paper: 1) identifying the phases

of the three earlier mentioned life cycles; 2) operating the concepts of satisfaction, fidelity and loyalty and 3) segmenting the market based on the correlation between satisfaction and loyalty.

II. THE CUSTOMER RELATIONSHIP CYCLE

By analyzing the phases of the customer relationship cycle, a company can identify the intensity of its relationship with a certain client. In this view, three categories of indicators are relevant to characterize the intensity of the relationship: 1) psychological indicators (price/utility rate, relationship quality from the client's perspective, client satisfaction etc.); 2) behavioral indicators (client retention, information behavior, integration behavior, communication behavior); 3) economic indicators (turnover, market share, client value etc.).

The phases of a client's relationship cycle can reveal some useful insights for the company:

+ The attraction phase of a client describes the beginning of a company's relationship with a certain client and contains an initiation phase (the client accumulates information and the company undertakes actions in order to attract the client) and a socializing phase (the client accumulates his first experiences with the company's performance and evaluates the performance's quality).

+ The client retention phase represents an extension of the relationship which occurs between the company and the client and is subdivided into two phases: a growing phase and a maturity phase.

+ The client regaining phase ends the relationship cycle of a client and it contains a danger phase (the client thinks that he does not wish to benefit from the company's performance anymore) and a dissolution phase (the client does not use the company's offer anymore).

III. THE CONCEPTS OF CUSTOMER SATISFACTION, FIDELITY AND LOYALTY

The evaluation phase of the customer orientation process [M. Bruhn, 2001] starts with the analysis of client satisfaction. Satisfaction is defined as the result of a complex information analysis process performed by the client. [Oliver R.L., Swan, J.E, 1989]. Bloemer [1998] defines the client satisfaction towards a certain brand/product as the felt experience after the consumption, a subjective evaluation of the measure in which the client's initial expectations are met

by the company's performance. Ph. Kotler [2008] argues that satisfaction appears as a feeling of pleasure or disappointment experienced by a client when he compares his perception of the company's performance with his initial expectations regarding that particular performance. The several satisfaction levels should be carefully studied by the company due to the fact that the customer satisfaction represents the main impact factor of the customer's fidelity or loyalty towards the company.

The customer's fidelity is the result of the felt satisfaction after the consumption of a product/service. Some authors consider that customer fidelity is obtained when his initial expectations regarding the company's performance are equal to his "after consumption" perception. Fidelity is state-of-mind of the customer, which resulted after an evaluation process. This process can be partially influenced by the company through the use of specific actions for earning client fidelity, actions which gravitate around the four variables of the marketing-mix. Bruhn defines the client fidelity as an assembly of a company's measures which target the positive orientation of the behavioral intentions of the actual and future clients towards a company's offer, with the purpose of obtaining a client relationship stabilization and development, respectively. The two concepts (fidelity and gaining customer fidelity) are significantly different: customer fidelity is specific for the demand holder (the client attaches himself to the company), while gaining customer fidelity is specific for the supplier (i.e. the company).

The customer loyalty is considered to be a superior state of customer fidelity. A precise difference must be made between a fragile loyalty and a complete loyalty. The development of fragile loyalty can be considered the basis for reaching a complete client loyalty. For the establishment of a client's loyalty, a company should measure the following five relative dimensions of the consumer behavior within a certain period of time: the percentage of clients who buy a certain product; their buying frequency, the percentage of clients who buy a certain brand, the percentage of clients who are completely loyal and the percentage of clients who buy other brands [Ehrenberg, 1988]. From a psychological point of view, there are three aspects of the human psyche (affect, cognition and conation) which have a direct influence on the level of customer loyalty, but with distinct intensities.

Finally, it should be assessed the fact that customer loyalty depends also on a second dimension (along with the behavioral dimension) – the customer's attitude. Loyalty based on attitude represents a customer long term engagement and cannot be determined by the simple observation of the buying behavior.

If a company's main purpose is to obtain a complete customer loyalty, it should target its marketing efforts in attaining a behavioral and an attitudinal loyalty of its clients. The two loyalty dimensions should be measured and saved within a database. By analyzing the saved data, a company gets insights regarding three useful marketing actions: building a behavioral loyalty, cultivating attitudinal loyalty and correlating loyalty with client profitability.

IV. RESEARCH METHODOLOGY

The presented theoretical background within the first three sections of this paper can be used by a company to segment its relevant market based on the correlation between customer satisfaction and the equivalent loyalty. In this view, the authors will present the process of the retail market segmentation of Mol România Petroleum Products SRL, based on the correlation between the customer satisfaction and the corresponded loyalty. The undertaken marketing research respects the three phases of the marketing research process.

Within the preliminary phase, the authors identified the following possible problem definition of the examined company, Mol România Petroleum Products SRL (further named the company): determining the maintenance rate of actual retail customer share. Based on this mentioned decision problem, the purpose of this research is to segment the relevant retail market of the company within the area of the Sibiu town based on the possible correlation between customer satisfaction and the corresponded loyalty. To attain this purpose, seven objectives with their associated hypothesis were established.

The design phase contains research activities which have as goals identifying of the needed sources of information, choosing the data gathering method, systemizing the information and planning the research over a period of time. The sources of information used in this research are an external source (a source from the company's marketing environment) and a primary source (primary data used to achieve this research's main purpose). The first six used variables are measured with an interval scale in general, a differential semantic scale, in particular, with nine intervals and 10 points. The points represent a synthesis of the mental process performed by the clients when answering each question. The last three variables are measured through three nominal scales. The three variables (age, education level and income) are categorical variables with a limited number of states or options (4, 7 and 5, respectively).

The present research uses as a method the survey. A survey is defined as a gathering method of primary data, based on a questionnaire which is administrated to a representative sample of respondents [Catoiu, 2009]. The used questionnaire was administrated during a time period of ten days, between 5 March and 15 March 2010, within the online and "offline" environment. The gathered data has constituted the necessary informational input for creating a database within the statistic analyzing software PASW 18.0. The created database contains 9 columns (9 used variables) and 139 rows (number of observations).

According to the settled objectives and the scale types, specific statistical methods were used.

In this research, the following elements were established, for the measurement of customer satisfaction (within the four variable: S1, S2, S3 and S4): descriptive statistics elements (mean and standard deviation), values of the simple or linear correlation coefficient (an indicator which measures the intensity level of the association between the factorial variable and the result variable) and the p-value (the

probability of obtaining a value of the simple correlation coefficient due to chance).

The sign (+) of the values of the correlation coefficient indicates the existence of a positive correlation (correlation direction) and the values of this coefficient measure the intensity of the correlations between the four analyzed variables. The correlation with the highest intensity is found between variable S1 and variable S3 – a high level of satisfaction regarding the company's brands implies a high level of satisfaction regarding the company's brands in comparison with other competitors' brands (the value of 0.711 can be interpreted as follows: 71.1% of the S1 variable's variance is due to the variance of S3). The correlation with the lowest intensity is found between variables S3 and S2. This low intensity can be explained through the fact that the customer's initial expectations are fulfilled in a better manner by the competitors' performance, rather than by the company's one.

The p-value is 0.00 for all the settled correlations, leads to the rejection of the null hypothesis (H_0), which presumes that there is no correlation between the variables.

The mean values of the four analyzed variables (7,64 for S1 – general satisfaction, 7,44 – satisfaction based on the initial expectations, 7,28 – satisfaction in comparison with the competitors and 7,15 – customer's image of the company) are higher than the mean value of the scale (4,5); and these results confirm the first four hypothesis associated to the first four objectives of the research.

The same statistical methods were used to determine the descriptive statistics elements and the values of the linear correlation coefficient for the next considered variables (L1 – Customer loyalty based on their buying intention and L2 - Customer loyalty based on a price growth scenario), which measure customer loyalty. A strong positive correlation (+0.718) exists between the two considered variables; the variance of the L1 variable is explained in a ratio of 71,8% by the variance of the L2 variable. Thus, a high score obtained by the first variable (L1 – Customer loyalty based on their buying intention) implies a high score for the second variable (L2 - Customer loyalty based on a price growth scenario); the customer who manifests his/hers buying intention would buy the company's brands in a 10% price growth scenario (the opposite situation is also valid). The high value of 2,497 of the standard deviation (for L1) shows that the scores for this variable are not grouped around the mean, thus there is heterogeneity CFD of this variable.

The mean value of the first variable (L1) is 7.05 higher than the mean value of the scale, which confirms the fifth hypothesis associated to the fifth objective.

The mean value of the second variable (L2) is 5.32 lower than the mean value of the scale, and this result rejects the sixth hypothesis associated to the sixth objective. In this regard, the authors affirm that the respondents are highly price sensitive, resulting in a low attitudinal loyalty.

The p-value is 0.00 for the settled correlation, rejecting the null hypothesis of the chi test.

To achieve a segmentation of the company's retail market, based on the correlation between the customer satisfaction and their loyalty, the authors created two more

variables (Total satisfaction and Total loyalty) based on the four initial variables (S1, S2, S3 and S4), which measure different aspects of customer satisfaction and on the two initial variables (L1 and L2), which measure different aspects of customer loyalty. The new created variables are characterized by variation, which is influenced by the variation of the initial variables. In this view, the authors used the procedure of Data Reduction – Factor, with the extraction method Alpha Factoring.

The Alpha Factoring method presumes the creation of a number of factors (new variables) equal to the number of the initial variables (for Total Satisfaction there are four initial factors). These factors are created through linear algebraic combinations of the first four initial variables that are weighted with the variance of one variable common to the variance of the other three variables. An Initial Eigenvalue of 1 means that the created factor absorbs 100% of the variation of one variable. The result of applying this method was the creation of one factor, whose Initial Eigenvalue is 2.905, absorbing 290.5% of the total variance (400%) of the initial four variables. Thus, this factor is considered to be the new created variable of Total satisfaction.

The same procedure was used to create a second new variable (Total Loyalty), whose variation is influenced by the variation of the initial two variables (L1 - Customer loyalty based on their buying intention and L2 - Customer loyalty based on a price growth scenario). The variation of the new created variable (Total Loyalty) is influenced in the same ratio (85.7%) by the variation of the two initial variables and absorbs 143.4% of the total variance (200%) of the initial two variables.

The two created variables (Total satisfaction and Total loyalty) were used as segmentation variables within the PASW 18 procedure: Classify –TwoStep Cluster. In this regard, a finite number (4) of market segments was created, which significantly differ according to the correlation levels between the newly created variables (Total satisfaction and Total Loyalty). The identified segments were characterized through the three nominal variables (age, education level and income) with the purpose of achieving clients' profiles.

Segment no.1 is characterized by a strong positive correlation between the total satisfaction and total loyalty. Thus, a high level of satisfaction implies a high level of loyalty.

Segment no.3 contains a weak positive correlation between the total satisfaction and total loyalty. Clients within this segment manifest a weak satisfaction and a weak loyalty regarding the company's brands.

Segment no.4 is characterized by a strong negative or inverse correlation between the total satisfaction and total loyalty. Although the members of this segment are not satisfied with the company's performance they are loyal to the brand.

Segment no.2 contains a strong negative correlation between total satisfaction and total loyalty. Clients within this segment manifest high levels of satisfaction, but low levels of loyalty.

These results can be structured in a bidimensional diagram which has as abscise the levels of loyalty and as ordinate the levels of satisfaction. (Figure 1), as follows:

High satisfaction	Segment no.2	Segment no.1
Low satisfaction	Segment no.3	Segment no.4
	Low loyalty	High loyalty

Figure 1. Identified market segments based on the correlation between the customer total satisfaction and total loyalty

The persons of the first segment (high level of satisfaction which implies a high level of loyalty) are characterized by an age range between 31-40 years, highly educated (Bachelor Degree, Master Degree or PhD) and earn a high income (over 52% of the members have had the last income over 3001 Lei (700 Euro) /month).

The members of the second segment (high satisfaction/low loyalty) are young people (between 18 and 30 years old), with Bachelor Degrees (82% of the members) and have medium incomes (between 1001 and 1500 Lei – between 230 and 350 Euro/month) or high incomes (over 3001 Lei – 700 Euro/month). The main characteristic of these persons is their price sensibility. Although they are satisfied by the company’s performance, they will migrate to the competition in the case of a price growth of the company’s brands.

The persons which form the third segment (low level of satisfaction that implies a low level of loyalty) are young people, with Bachelor Degrees and low or medium incomes (34% have a gross income under 1000 Lei – 230 Euro/month, 39% earn a gross income between 1501 and 2000 Lei – 350 Euro and 450 Euro/month and 27% a gross income between 2001 and 3000 Lei – 450 Euro and 700 Euro/month). Based on these demographic characteristics, they are not satisfied with the company’s performance which implies a low loyalty (idea of multi-brand loyalty).

The members of the last segment (4) are young people (97% with an age range between 18 and 30 years), are highly educated (91% have a Masters Degree) with a relative uniform distribution of income among them. Being young and educated people, the members of this segment are aware of the dimensions of the performance’s quality, thus they have high initial expectations. The initial expectation level exceeds the company’s performance, creating a feeling of low satisfaction or even dissatisfaction. Being aware of this feeling, they ignore it and continue to repurchase (behavioral loyalty) the company’s brands, demonstrating their attitudinal loyalty to the company.

V. CONCLUSIONS AND FUTURE RECOMMENDATION

The main purpose of this paper is to review and extend the literature regarding the link between the satisfaction felt by the customers after products/services consumption and their loyalty towards them. In this view, the paper has been structured in three parts; the first two parts describe the theoretical background of the concepts used in the research – client’s relationship cycle, customer’s satisfaction, fidelity and loyalty. The third part contains a marketing research which had as main goal the segmentation of the retail market of Mol Romania Petroleum Products (in the town of Sibiu) based on the existing correlation between the satisfaction felt by the clients and their loyalty. The data were analyzed by using the procedures of the statistical software PASW18. Four retail market segments have been found, which differ significantly one from the other, based on the different degrees of correlation between customers satisfaction and their loyalty. The segments found were characterized through three categorical variables (age, education level and income level). The most important aspect of the obtained results relies in the empirical confirmation of the theoretical differentiation between behavioral loyalty and attitudinal loyalty of the customers (segment 4).

Future research should be oriented towards a market segmentation based on the customer’s buying motives and their description based on the satisfaction-loyalty correlation. Also, the authors will try to evaluate the monetary value of these segments, with the purpose of developing instruments for customer retention.

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