Bulletin of the *Transilvania* University of Brakov ÅVol. 9 (58) No. 2 - Special Issue ï 2016
Series I: Engineering Sciences

ESTIMATES ON MEASURING THE CONSUMER'S SATISFACTION

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Abstract: *This work intends to sustain the fact that a process of measuring the consumer's satisfaction carried out in an objective and correct manner, may offer the necessary data and information for making compatible, within the process, all participating parties. It will result a sustainable value at consumer and a participative orientation of the own employees and partners able for added value.*

Key words: *economic, crisis, consumers, satisfaction, satisfaction, measurement, success, business*

1. Introduction

A process of measuring the consumerôs satisfaction, performed in an objective manner, offers data on competitors, market, employees and suppliers as well and these data will stay at the basis of strategies, operations, action, portfolio, products and services of the respective company. Kotller suggests as performing strategies for the current companies, those that use innovative ideas and requirements of the consumersô /2/. Top companies develop models of profit generating business that allow the anticipated knowledge of the consumerôs satisfaction results on the company performances. Facing such a reality, even when using the process of consumerôs satisfaction measurement, several companies do not trust enough in getting those data and information that lead to performance in business. A possible model of the consumerôs satisfaction process may be configured, Fig.1.

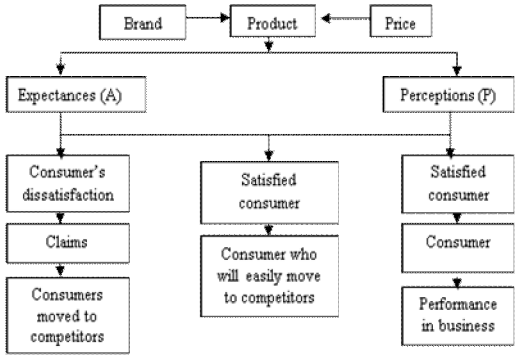

Fig.1. *A possible model for consumer's satisfaction measurement*

Starting from this model this research aims at determining the consumerôs satisfaction degree, identifying the strategies that allow a big international company (Agricola International) to get the position of leader and, at the same time, generating reliable recommendations to the top management. The consumers of this company are individuals fully trusting the producers.

2. Methodology and Sampling

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The sample selection includes the following stages: Extracting the representative sampling from the targeted population consisting of the persons living in Bacau, employees, with medium incomes, in urban environment, that use to do shopping in supermarkets and the companyôs own shops and belong to the 25 - 40 years group of age. The sampling source - the data system from where the sample is extracted belongs to the statistic annuals, yearly reports and private studies. The sampling method has been chosen from the probabilistic sampling category: cluster type sample. N = 117871 ï sampling volume. The sample necessary size is considered n = 320 persons. After calculating the sample size the sampling points or the primary sampling units have been settled (UPE = 3). In this study the measuring scale with 4 gradations has been used because, on one side, the respondents have the possibility to decide whether their assessment is positive or not and, on the other side, they are much easier working with such a measuring scale. The adequate scale being used is: 1 ï dissatisfied; 2 ï satisfactory; 3 ï contented; 4 ï very contented.

3. Research Method

The research in this work uses individual interviews based on a questionnaire. The data are collected with the help of the questionnaire that is structured on three interviewing levels, as follows: the first level has the role to measure the consumerôs satisfaction and loyalty at a global level with the company products; the second level follows up the measurement of the consumerôs satisfaction with the functional parameters; the last level follows up the detailing of the domains measured through the previous level. Opening questions have the role to make the researcher sure that the respondent belongs to the target sample in terms of his/her relationship with the product and social and demographic characteristics. Opening Questions: ñWhat persuaded you to buy the company products?ò, Response: ñThe quality of Agricola products ñ (43%). ñWhich are the most important advantages of the company products?ò, Response: ñThey are healthyò (100%), ñVarious preparation modesò (40%), ñFreshnessò (30%).

3.1. General Evaluation of the Consumer's Satisfaction

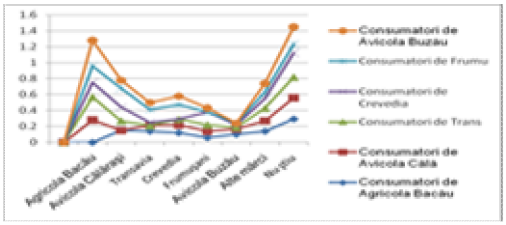

Fig 2**.** *If the brand known by you disappeared from the market, which brand s would you buy?*

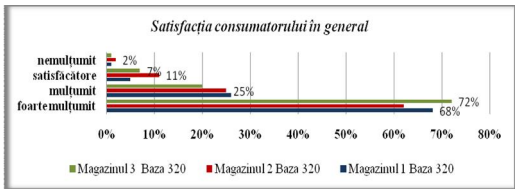

Fig.3. *On a scale from 1 to 4 assess how satisfied you are with the company products*

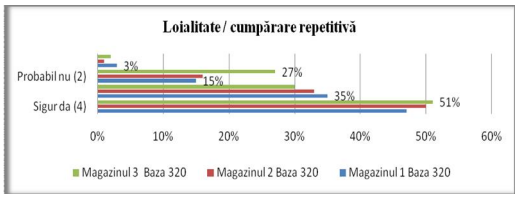

Fig.4. *On a scale from 1 to 4, if you should buy more similar porducts, would you buy the company products too?*

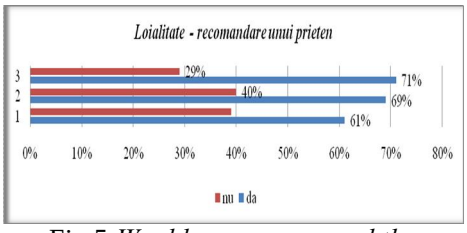

Fig.5.*Would you recommend the company products?*

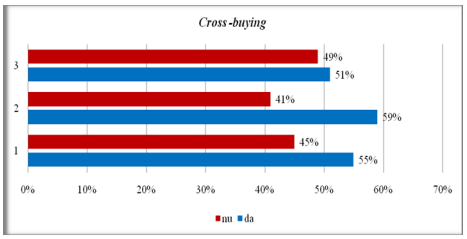

Fig.6. *Did you buy more categories of the company products?*

3.2. Evaluation of the „Critical Incident"

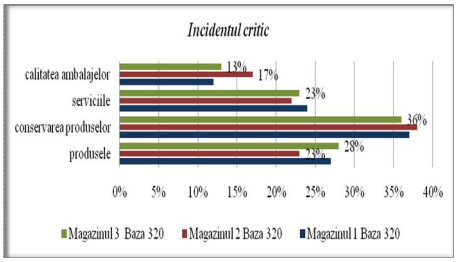

Fig. 7. *Specify which are your problems with the company porducts?*

3.3. Evaluation of satisfaction with the Functional Parameters

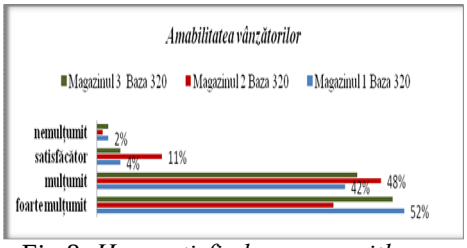

Fig.8. *How satisfied are you with our shop assistants' kindness?*

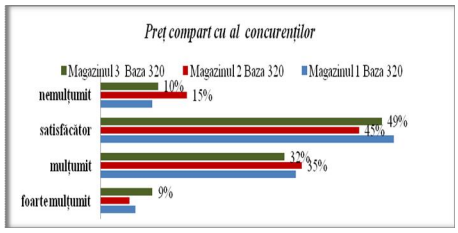

Fig.9. *How satisfied are you with the price of the company products?*

3.4. Detailed Evaluation of the Performance Criteria

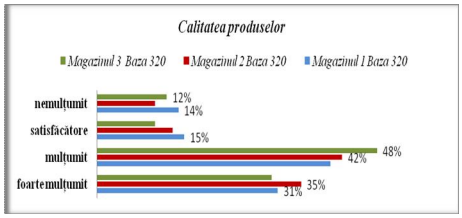

Fig.10. *On a scale from 1 to 4 specify how satisfied you are with the product quality?*

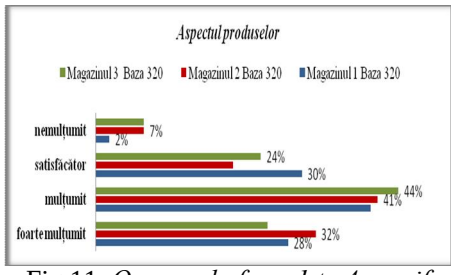

Fig.11. *On a scale from 1 to 4 specify how satisfied you are with the product aspect?*

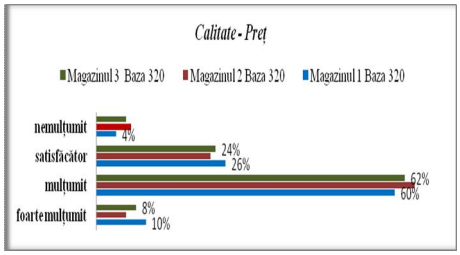

Fig.12. On a scale from 1 to 4 specify how satisfied you are with the quality-price ratio?

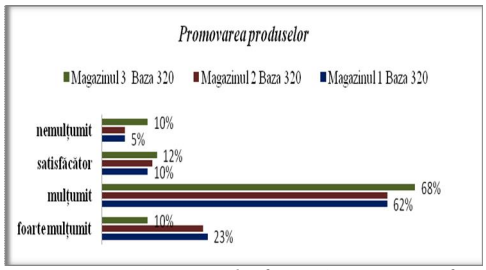

Fig.13. *On a scale from 1 to 4 specify how satisfied you are with the promotion manner of the products?*

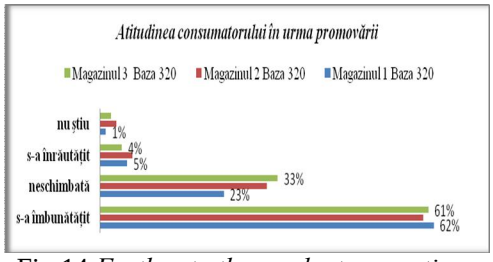

Fig.14.*Further to the product promotion, your attitude towards the company: got improved, did not change, got worse, I don't know?*

4. Calculation of the Consumer's Satisfaction Indexes

The consumerôs satisfaction index *ISC* is calculated through transforming the values into points. For the 4 point scale that has been used, ISC_g (index of global satisfaction plus loyalty) may be calculated as an average of all answers. 4 (very contented) = 100 points, 3 (contented) = 50 points, 2 (satisfactory) = 25 points and 1 (dissatisfied) = 0 points. ISC_g = 86,3 points. The index of satisfaction with the functional parameters is calculated, $ISC_{pf.}$ = 76,2 points. The index of satisfaction with the performance parameters is $ISC_{pp.}$ = 78.14 points.

According to the norms of interpreting /1/, the companyôs consumer is in general satisfied in a score above the average, but if it relates to the functional and performance parameters, it might be noticed that consumers are generally content, not happy. This is caused on one side by the high prices compared to competitorsô and, on the other side, by the problems of quality, preservation and packing of the products. Norms of score interpreting: danger (0 ï 70), medium indifference (71 ï 80), over satisfaction (81 ï 100). /1/

By calculating the global satisfaction index $ISC_g^{\,l}$ = 89.16 and the loyalty index ISC_l = 85.09 the ñbi dimensional matrix satisfaction ï loyalty that divides consumers into satisfied/dissatisfied and loyal/not loyalò may be determined.

Table 1

Bi-dimensional Matrix Satisfaction ï Loyalty /1/

Loyalty index

14,91%	35,09%
39,16%	10,84%

0 Indifference area ← 0 → Optimal are

5. Impact of Functional and Performance Parameters on the Consumer's satisfaction /1/

This analysis is important because it establishes, indirectly, the importance of various parameters to the global score of the consumerôs satisfaction. It starts from

the conceptual model.

$$S = f(X_1, X_2, X_3 \ldots\ldots\ldots\ldots X_n) \qquad (1)$$

Notations: S ï Global consumerôs satisfaction; X_{1-n} ï Functional and performance parameters.

The regression analysis will be used and the model will be estimated:

$$S = a + b_1X_1 + b_2X_2 + b_3X_3 + \ldots\ldots + b_nX_n \qquad (2)$$

Notations: a ï Estimated constant; b_{1-n} ï Regression coefficients; X_1, X_2, ï Functional parameters; X_3, X_4, X_5, X_6, X_7, X_8, ï Performance parameters.

For our sample the following regression coefficients will be obtained, according to the estimates (3) and (4):

$$a_n = \frac{\sum_{i=1}^{n} y \cdot \sum_{i=1}^{n} x^2 - \sum_{i=1}^{n} x \cdot \sum_{i=1}^{n} xy}{n\sum_{i=1}^{n} x^2 - \left(\sum_{i=1}^{n} xy\right)^2}, \quad a_n = \bar{y} - b_n \cdot \bar{x} \qquad b_n = \frac{n \cdot \sum_{i=1}^{n} xy - \sum_{i=1}^{n} x \cdot \sum_{i=1}^{n} y}{n\sum_{i=1}^{n} x^2 - \left(\sum_{i=1'}^{n} xy\right)^2}, \quad i = \overline{1,n} \qquad (3, 4)$$

For the parameter X_1 ï shop assistantsô kindness and for a 4 point scale (4 ï 100 points, 3 ï 50 points, 2 ï 25 points, 1 ï 0 points).

Table 2
Calculated Parameters

X	Y	XY	X^2
61,4	100	6130	3757,6
23,6	50	1180	556,96
11	25	275	121
4	0	0	16
100	175	7585	4451,65

By inserting the data of Table 2 to the relations (3) and (4), it will result: b_n = 1,6 and a_n = 0,02 ï that means that, for a consumerôs satisfaction increase by one point it will be necessary the parameter X_1 to increase by a score of 1,6. By using the same reasoning, the results will be as follows: Parameter X_2 ï price compared to competitorsô, b_n = 1 (for increasing the consumerôs satisfaction by one point the parameter X_2 must increase by a score of 1); Parameter X_3 ï product quality, b_n = 1,7 (for increasing the consumerôs satisfaction by one point the parameter X_3 must increase by a score of 1,7); Parameter X_4 ï product aspect, b_n = 1,74 (for increasing the consumerôs satisfaction by one point the parameter X_4 must increase by a score of 1,74); Parameter X_5 ï quality-price ration, b_n = 1 (for increasing the consumerôs satisfaction by one point the parameter X_5 must increase by a score of 1); Parameter X_6 ï product promotion, b_n = 1,14 (for increasing the consumerôs satisfaction by one point the parameter X_6 must increase by a score of 1,14);

Parameter X_7 ï attitude towards company, b_n = 1,67 (for increasing the consumerôs satisfaction by one point the parameter X_7 must increase by a score of 1,67); Parameter X_8 ï purchase of products due to promotion, b_n = 1,9 (for increasing the consumerôs satisfaction by one point the parameter X_8 must increase by a score of 1.9). By inserting the above data to the relation (3), the regression model will have the form:

$$S = 1,6\,X_1 + X_2 + 1,7\,X_3 + 1,74\,X_4 + X_5 + 1,14\,X_6 + 1,67\,X_7 + \ + 1,9\,X_8 \qquad (5)$$

From the regression model of above the consumerôs satisfaction versus the importance of the satisfaction generating parameters may be analysed, thus resulting the opportunities and strong points of the company and its weak points and threats too. The opportunities include those parameters that have a decisive role in determining the satisfaction and loyalty. The recommendations are, in this case, ñto maintain and exploit to maximum this competitive advantage. The strong points must include those parameters that are less important in determining satisfaction.

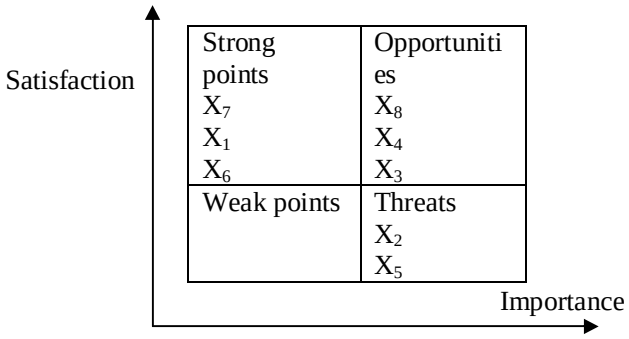

Fig.15. ï *Analysis of satisfaction versus importance of satisfaction*

Threats include those parameters extremely important in determining satisfaction, but insufficiently met by the company. In this case the improvement of these parameters will determine the highest increase of consumerôs satisfaction and loyalty. The weak points contain those parameters of low importance to consumerôs satisfaction so that the company efforts must focus on other parameters, more important. Making consumers loyal means that they will buy at a relatively high proportion the products of the company, to recommend the brand, to buy more categories of the company products, to have prices comparable to competitorsô and to be satisfied with the quality-price ratio.

6. SPSS Results

Further to the analysis of the tables obtained through applying the SPSS program, it results:

- Between the consumerôs satisfaction and purchase of the company products a medium to strong quadratic relation exists:

$$Y = - 3,904 + 3,094\,X \text{ ï } 0,60\,X_2 \qquad (6)$$

where: Y ï I_5 ï question: - *On a scale from 1 to 4, if you should buy more meat products, would you buy the company products too?;* X ï Consumerôs satisfaction

The sign of the regression parameters shows the fact that there is not a too strong connection between the consumerôs satisfaction and purchase of the companyôs products.

Table 4
ANOVA - The independent variable is I_7.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	873.605	1	873.605	27.330	.003
Residual	159.824	5	31.965		
Total	1033.429	6			

Direct, strong linear connection between the consumerôs satisfaction and brand of companyôs products. The regression equation has the form:

$$Y = 3,793 + 0,734\ X \qquad (7)$$

where: Y ï I_7 question ï *Would you recommend other persons to buy the company' s products, if your opinion was requested?;* X ï Consumerôs satisfaction

The model construing supposes that for an increase by one unit of the consumerôs satisfaction, the brand of the companyôs products to increase by 0,734 units. Since the question I_7 focuses on the consumerôs loyalty, then for X = 1 (i.e. for an increase by one percent of the consumerôs satisfaction degree) then Y = 4,527 ï the consumerôs loyalty degree increases by 4,527 units.

Strong connection between the consumerôs satisfaction and recommendation of the company products. The regression equation has the form:

$$Y = - 1,738 + 1,122\ X \qquad (8)$$

where: Y ï I_6 - question ï *Would recommend the company products to a close friend?;* X ï Consumerôs satisfaction. As such, for an increase of the consumerôs satisfaction by one unit, the recommendation of products increases by 1,122 units. Since the product recommendation refers to loyalty, then for X = 1 the consumer cannot be made loyal, but the more the satisfaction degree increases, the more the loyalty possibility increases (X =2, Y = 0,507 / X = 3, Y = 1, 628).

Table 5.
ANOVA - The independent variable is P_{10}.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1054.459	2	527.229	12.335	.019
Residual	170.970	4	42.742		
Total	1225.429	6			

Between the consumerôs satisfaction and the price of the company products compared to the competitorsô there is a strong quadratic connection. The regression equation is:

$$Y = -2,829 + 2,452\ X \text{ ï } 0,41\ X_2 \qquad (9)$$

where: $Y = I_{10}$ ï *On a scale from 1 to 4 how satisfied are you with our shop assistants' kindness?;* X = Consumerôs satisfaction.

The sign of the regression parameters shows the fact that the price of the

company products does not consider the consumerôs satisfaction. The management should reconsider this attribute and be able to issue products of the same quality at lower prices.

Table 6.

ANOVA - The independent variable is I_{13}.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1013.674	2	506.837	13.512	.017
Residual	150.040	4	37.510		
Total	1163.714	6			

Between the consumerôs satisfaction and the quality-price ratio there is a strong quadratic connection. The regression equation is:

$$Y = -2{,}243 + 2{,}362\ X - 0{,}16\ X_2 \qquad (10)$$

where: $Y = I_{13}$ - *On a scale from 1 to 4 how satisfied are you with the aspect of the company products?;* X ï consumerôs satisfaction. The management should consider this attribute and to make products of the same quality, but at lower prices.

7. Conclusions

1. There is a medium to strong quadratic relation between the consumerôs satisfaction and purchase of the company products.
2. There is a strong, direct, linear connection between the consumerôs satisfaction and the brand of the company products, as well as between the consumerôs satisfaction and the recommendation of the company products.
3. There is a strong quadratic relation between the consumerôs satisfaction and the price of the company products, compared to the competitorsô prices as well as between the consumerôs satisfaction and the quality-price ratio.

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