CUSTOMER VALUE ASSESSMENT METHODS

Ana-Andreea MIHARTESCU[1], Mircea Liviu NEGRUT[2], Mihai MISCA[3]

[1]Politehnica University Timisoara, e-mail: andreea.mihartescu@upt.ro
[2] Politehnica University Timisoara, e-mail: mircea.negrut@upt.ro
[3] Politehnica University Timisoara, e-mail: mihai_misca@yahoo.com

Abstract — In the current economic climate with strong competition and few financial resources, each client is imperative to the company. Customers are not only generating business benefits, but also some expenses. In this context, the objective of this paper is to identify customer assessment methods, through which it could show the importance of each client for the company. In this paper are presented the assessment methods of the customers who can be used by corporations, as well as a model of their application in business from the automotive industry.

Keywords — customer, assessment, enterprise, monetary methods, non-monetary methods.

I. INTRODUCTION

IN a global market where creating the most qualitative and complex products is a challenge, customers have become the focal point for the success of an enterprise, being the largest source of income. It was a time when the phrase "the client is the king" was applied, and an enterprise was doing everything to satisfy its customers, nowadays many companies have concluded that only a part of customers contributes to the success of the company, the rest of the customers causing costs for their administration. In this context, the enterprise wants to know and assess the customers to invest in "the good ones" and to reduce costs with those "less good." To evaluate a customer, companies use assessment methods that refer to determining their value.

The expression "value of a client" may have different meanings, depending on the point of view from which it is analyzed, as follows:

1) *From the customer's perspective, as buyer/consumer is the utility that it obtains from purchasing a product, including the actual utility of the product, as well as the effects of the image. A customer will be interested in the product that offers the greatest utility and satisfaction, but which best corresponds to the quality-price ratio.*

2) *From the bidder, of the enterprise who sells the product, "customer value" means an indicator that contributes to the objectives of the company, (financial and non-financial). In the past, the client was considered to be financially valuable for the enterprise; then it was found that a customer can generate added value for the enterprise also through other activities: informing, creating a positive image or recommending new clients.*

II. CUSTOMERS VALUE ASSESSMENT METHODS

Several customer assessment methods are based on various elements that help determine the value of a customer. Customer's value evaluation methods can be divided into several categories:

1) First *structuring is made according to the number of dimensions used: one-dimensional methods and multidimensional methods;*

2) *The second division is done according to the monetary or non-monetary valuation mode,* by H. Ehrmann [1].

A. Monetary valuation methods for clients

Monetary methods of assessing customer refer to a financial value that a company obtains from a customer. The financial value generated by a client is reflected by its contribution to turnover, income or profits of the enterprise from which it buys.

The most significant monetary valuation methods for customers are:

1) *ABC analysis;*
2) *The net profit method brought by a customer;*
3) *The value of a client's lifecycle;*
4) *The method of covering costs with a customer.*

B. Non-monetary valuation methods for clients

Through non-monetary valuation methods, is being analyzed the qualitative aspects of the relationship with a client that cannot be financially expressed, but that contribute positively to the success of an enterprise. Some customers do not make a significant contribution to the company's revenue, but they can recommend other larger customers, can help to improve the image of an enterprise, being reference customers.

The most commonly used non-monetary client valuation methods are:

1) *Scoring methods: the RFM (Recency Frequency Monetary Ratio);*
2) *Portfolio methods;*
3) *The dynamic value of a client.*

III. CASE STUDY: APPLICATION OF CUSTOMER VALUE ASSESSMENT METHODS IN THE AUTOMOTIVE INDUSTRY:

In the developed case study are presented monetary methods (ABC Analysis) and non-monetary methods (RFM method, portfolio methods) for assessing the clients of an enterprise in the automotive industry. The purpose of this case study is to analyze the portfolio of business customers. Based on the conclusions drawn from the analysis, the company will base its decisions.

A. ABC Analysis

One of the most widely used customer value assessment methods is ABC analysis. ABC's analysis provides client segmentation and ordering, based on their contribution to the company's turnover.

Type A customers are the ones who performs most of the turnover of the enterprise. Type A customers are the clients who bring the most revenue to the business. To keep them, enterprises should take various measures such as facilities, discounts, etc. Often, a key account manager is not enough to bear in touch with them, but more teams are needed to better meet the needs of these customers.

Type B customers are those who have an average contribution to the enterprise's turnover. Type B customers are those who bring lower incomes than A-type clients, but they are paramount to the success of business. In general, for B-type clients, there is a key account manager to coordinate work to satisfy all of these customers.

Type C customers are the ones that have the lowest share of the enterprise's turnover. Type C clients are the ones that bring the lowest revenue/customer for a firm. However, the cumulative sum of the revenues of all C customers can bring significant business turnover. Also, there is the possibility that a large part of C-type customers will grow in the future. People who are in touch with C-type customers are from customer relations offices, information offices, complaints offices, by E. Peelen [4].

Although A-type customers are the ones, who do the most of their turnover in absolute value, in practice, it has been proven that customer profits are higher for B-type customers. This is due to higher costs or more favorable terms offered to A-type customers, by H. Diller, A. Haas and B. Ivens [2].

Numerous studies have highlighted the fact that customer turnover is based on Pareto's rule that 20% of customers account for 80% of an enterprise's turnover while the remaining 80% earn 20% of turnover. This uneven distribution of revenue can easily be represented graphically by a Lorenz-type curve, where both the abscissa and the ordinate are the cumulative values of the variables considered.

In Table, I, the customers of the enterprise under review are ranked according to their turnover contribution, for the purpose of applying the ABC Analysis.

TABLE I
CLASSIFICATION OF CLIENTS FOR THE APPLICATION OF ABC ANALYSIS

Table II shows the share of customers in the turnover of the enterprise analyzed.

TABLE II
THE SHARE OF EACH CLIENT IN THE TURNOVER OF THE ENTERPRISE.

Following the ABC analysis, it is found that 2 customers generate 65.94% (Table I and II) of the turnover of the analyzed enterprise, PwP(website) [5].

As in Fig. 1. based on the distribution of the company's customers, on a Lorentz-type curve, there is a dependence of the firm on A-type customers. The more the curve is oriented to the left, with that much decrease the number of customers who have a great contribution to the turnover, increasing the risk of dependence on these customers.
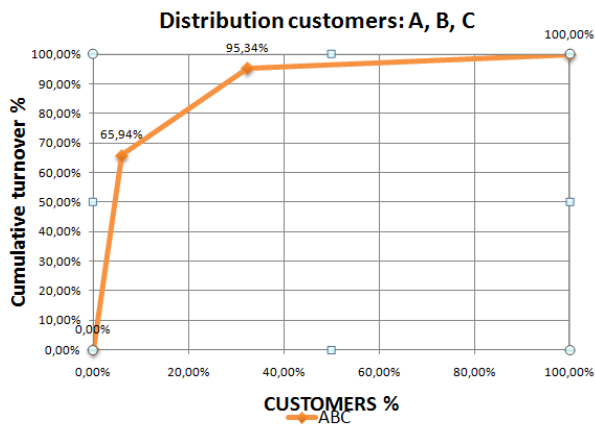
Fig. 1. Customers - ABC type distribution

B. Scoring methods - RFM method

Scoring methods are well-structured mathematical evaluation methods whereby each item being analyzed is assigned a score calculated by several quantitative or qualitative criteria that define the product in question. In scoring clients' valuation methods, it is possible to combine monetary factors that determine the value of a client such as the income of the client, with qualitative factors such as loyalty or customer satisfaction, by C. Pelau [3].

One of the most popular scoring methods for customer evaluation is the RFM (Recency-Frequency-Monetary Ratio) method. This model analyzes the value of a customer based on the period since the last purchase (recency), by the frequency of purchase (frequency) and the volume of purchases in the currency unit (financial ratio), by E. Peelen [4].

The higher the date of your last purchase, is more recent, the more a client is better rated, because it is assumed that a customer who has not bought an extended time from an enterprise has lost interest in it. Customers with a higher purchasing frequency are more loyal and are therefore receive more points than customers with a lower purchasing frequency, by H. Diller, A. Haas and B. Ivens [2].

Following the application of the RFM method, it is found that the analyzed enterprise has a portfolio of 20 clients (Table III) that buy with a high frequency and the date of the last purchase is in the range of 1-3 months.

C. Portfolio methods

Portfolio methods are a way of evaluating customers based on multiple criteria. In portfolio methods, customers are divided according to the criteria selected in several groups. These groups are analyzed, and for each of the customer groups, is determine the necessary strategies and measures, to optimize the company's results. As can be seen, portfolio methods deal more with the enterprise's customer groups, not with each customer, by C. Pelau [3].

In practice, there are several portfolio models because any customer characteristics can be considered as a classification criterion. One of the most efficient portfolio valuation methods for customers is the one described by Diller, based on customer attractiveness and customer loyalty.

Depending on the two criteria, the measures to be taken with the four groups of clients are suggested. Customers with high loyalty potential and great attractiveness are the ideal customers and should, therefore, be retained. They not only bring incomes, they make big profits for the enterprise, they are also very loyal, and therefore it is not necessary to invest much in their loyalty.

Customers with high attractiveness but with low loyalty potential are those who have purchasing power but are divided among several suppliers.

The loyalty of this type of customer can bring valuable revenue to an enterprise, and exit barriers must, therefore, be created to prevent their migration to competitors. Loyal customers, but with low-income must be stimulated to turn them into loyal customers with high attractiveness.

Clients with low attractiveness and low loyalty are the so-called "question marks" of the enterprise.

These customers need to be carefully analyzed: if there is a possibility to turn them into clients of other classes, they can be kept; otherwise, they should be eliminated because they cause too many costs to the enterprise, by H. Diller, A. Haas and B. Ivens [2].

TABLE III
RECENCY-FREQUENCY-MONETARY METHOD

Customer	Initial score	Recency	Frequency	Monetary	Number of returns	Promotions/ Protocol	Final score
	25	1 lună => +40 3 luni => +25 6 luni => +15 12 luni => +5 18 luni => -5 24 luni => -15	Numărul cumpărăturilor în ultimele 12 luni * 5	<1000 => +5 1001-10000 => +15 10001-50000 => +25 50001-100000 => +35 100001-200000 => +40 200001 => +45	0 => -5 0-2=> -10 2,5 => -15 >5=> -20	Protocol sărbătoare => -5 Vizită => -10	X= Very Good X= Good X= Low
EL INDUTRY France	25	40	60	45	-15	-15	140
VAEO SYS DE CONTROLE MOTEUR	25	40	60	45	-5	-15	150
HELLA ROMANIA S.R.L.	25	40	60	45	-20	-15	135
INTEVA PRODUCTS SAS FRANCE - S	25	40	60	45	-15	-15	140
TRW AUTOMOTIVE OSS	25	40	60	45	-5	-15	150
CONTINENTAL AUTOMOTIVE ROMANIA	25	40	60	45	-5	-15	150
ELBROMPLAST	25	40	60	45	-5	-15	150
KEY SAFETY SYSTEMS UK LTD	25	40	60	45	-5	-15	150
SALOMON SAS	25	40	60	45	-5	-15	150
DURA AUTOMOTIVE ROMANIA SRL	25	40	60	40	-10	-15	140
TRW AUTOMOTIVE LTDA	25	40	60	40	-15	-15	135
AUTOLIV ROMANIA SRL	25	40	60	40	-10	-15	140
AUTOLIV CANKOR OTO.EMME SIST A	25	40	60	35	-5	-5	150
TRW AUTOMOTIVE HOLDING CO	25	30	50	35	-5	-5	130
AUTOLIV B.V.&Co. KG	25	40	60	35	-5	-5	150
MGI COUTIER ROM SRL	25	25	45	25	-10	-5	105
DURA AUTOMOTIVE SYSTEMS SA	25	25	40	25	-5	-5	70
VALEO LIGHTING INJECTION	25	40	60	25	-20	-5	60
TRW OCCUPANT RESTRAINTS SOUTH	25	25	30	25	-5	-5	70
HUF ROMANIA SRL	25	35	55	25	-5	-5	50
DURA AUTOMOTIVE PORTUGUESA	25	20	25	25	-5	-5	135
NEMATECH Kft	25	15	10	25	-5	-5	30
TRW Automotive Safety Systems	25	25	35	25	-5	-5	100
FLORASYS KFT	25	5	5	15	-5	-5	40
VALEO LIGHTING SYSTEM	25	35	55	15	-5	-5	120
TECHNICAL DIE CASTING SRL	25	15	20	15	-5	0	70
KEY SAFETY SYSTEMS RO S R L	25	5	5	15	-10	0	40
CONTINENTAL AUTOMOTIVE CZECH R	25	25	35	15	-5	0	95
STABILUS ROMANIA SRL	25	30	50	15	-5	0	95
AUTOLIV TOGLIATTI BRANCH	25	5	5	15	-5	0	45
FARBA OTOMOTIV A.S.	25	5	5	15	-5	0	35
PARKER HANNIFIN MFGT SWITZERLA	25	5	5	5	-5	0	35
RA-OL	25	-5	5	5	-5	0	35
SC DECARDOS SRL	25	-15	5	5	-5	0	15
OSTERPACK SRL	25	-5	5	5	-5	0	20

TABLE IV
RATING CRITERIA USED IN THE PORTFOLIO METHOD

Turnover	<1000 => +5 1001-10000 => +15 10001-50000 => +25 50001-100000 => +35 100001-200000 => +40 200001 => +45
Profit	<100 => +5 101-500 => +15 501-1000 => +25 1001- 5000 => +35 5001-1500 => +40 >1501 => 45 (Euro)
Recomandation	Score from 0=mininim to 20=maxim
Information	Score from 0=mininim to 20=maxim
Cross-selling	Score from 0=mininim to 20=maxim
Total customer activity	Collect the scores obtained in the previous
RFM	Score obtained by the RFM method
Satisfaction	Score from 0=mininim to 20=maxim
The duration of the relationship	<1 year => 5 1-3 years => 10 3-5 years => 15 5-10 years => 20 >10 years => 25
Loyalty potential	Collect the scores obtained in the previous

TABLE V
CALCULATION MODE FOR PORTFOLIO METHODS

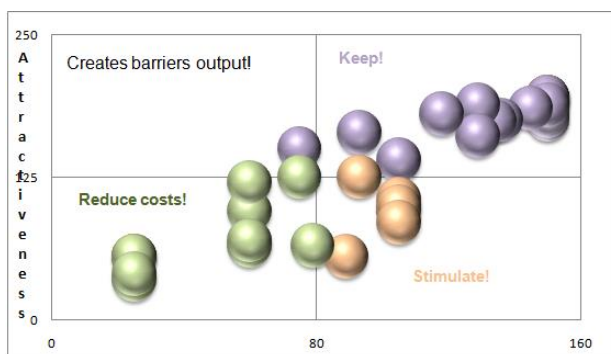| Customer	Customer Attractiveness						Loyalty potential			
	Turnover	Loyalty potential	Recomandation	Information	Cross-selling	Total	RFM	Satisfaction	The duration of the relationship	Total
EL INDUSTRY France	45	45	20	20	20	150	140	20	25	185
VAEO SYS DE CONTROLE MOTEUR	45	45	20	20	20	150	150	20	25	195
HELLA ROMANIA S.R.L.	45	45	20	20	20	150	135	15	25	175
INTEVA PRODUCTS SAS FRANCE S	45	45	20	20	20	150	140	13	25	178
TRW AUTOMOTIVE OSS	45	45	20	20	20	150	150	20	25	195
CONTINENTAL AUTOMOTIVE ROMANIA	45	45	20	20	20	150	150	19	25	194
ELBROMPLAST	45	45	20	20	20	150	150	20	25	195
KEY SAFETY SYSTEMS UK LTD	45	45	20	20	20	150	150	20	25	195
SALOMON SAS	45	45	20	20	20	150	150	13	25	188
DURA AUTOMOTIVE ROMANIA SRL	40	45	20	20	20	145	140	20	25	185
TRW AUTOMOTIVE LTDA	40	40	18	20	18	136	135	20	20	175
AUTOLIV ROMANIA SRL	40	40	18	18	18	134	140	14	20	174
AUTOLIV CANKOR OTO EMME SIST A	35	40	18	18	18	129	150	18	20	188
TRW AUTOMOTIVE HOLDING CO	35	40	18	18	18	129	130	16	15	161
AUTOLIV B V &Co. KG	35	35	15	18	15	118	150	15	15	180
MGI COUTIER ROM SRL	25	35	15	15	15	105	105	20	15	140
DURA AUTOMOTIVE SYSTEMS	25	35	15	15	15	105	70	20	15	105
VALEO LIGHTING INJECTION SA	25	35	15	15	15	105	60	20	15	95
DURA AUTOMOTIVE PORTUGUESA	25	25	13	15	15	93	135	14	15	164
NEMATECH Kft	25	25	13	13	13	89	30	15	10	55
TRW Automotive Safety Systems	25	25	13	15	15	93	100	15	10	125
FLORASYS KFT	15	25	15	15	15	79	40	15	10	65
VALEO LIGHTING SYSTEM TECHNICAL DIE CASTING SRL	15	15	15	15	15	75	120	20	10	150
KEY SAFETY SYSTEMS RO S.R.L.	15	15	10	10	10	60	70	15	10	95
CONTINENTAL AUTOMOTIVE CZECH R	15	15	10	10	10	60	40	15	10	65
STABLUS ROMANIA SRL	15	15	10	10	10	60	95	15	10	120
AUTOLIV TOGLIATTI BRANCH	15	15	15	15	15	75	95	20	10	125
FARBA OTOMOTIV A.S.	15	15	10	10	10	60	45	14	10	69
PARKER HANIFIN MFGT SWITZERLA	5	5	5	5	5	25	35	15	5	55
RA-OL	5	5	5	5	5	25	35	15	5	55
SC DECARDOS SRL	5	5	5	5	5	25	15	15	5	55
OSTERPACK SRL	5	5	5	5	5	25	20	15	5	40

Fig. 2. Portfolio of customer attractiveness and loyalty

Based on the data in Tables IV and V, as well as the correlation in Fig. 2. (customer attractiveness and

loyalty), it can be said that the company under review has clients with high loyalty potential. Thus, customers can be grouped into two categories, namely: a category of clients to be kept, they are especially large customers and have characteristics of high attractiveness and high loyalty potential. In the second category, there are the clients that need to be stimulated, they have a low attractiveness, but they have a great loyalty potential. For this reason, they need to be stimulated to increase both the turnover and the profit rate. There is also the possibility of improving the loyalty rate.

IV.   CONCLUSIONS

By using client valuation methods, monetary and non-monetary methods, enterprises have the ability to discover early, adverse trends and potential problems. Also, through the evaluation methods, the evolution of the business relationship between the firm and the clients can be continuously monitored, as well as the way to approach them.

In the application of the customer valuation method, the ABC analysis, it is critical the period for which the client's contribution to the company's turnover is calculated. Seasonal or short-term fluctuations, as well as payment delays, can lead to significant errors in customer segmentation through ABC analysis. For this reason, many enterprises opted for a combination of customer valuation methods. The use of ABC analysis in conjunction with a client's lifecycle allows you to calculate revenue earned by customers for longer periods (5 years).

Some customer valuation methods (ABC analysis, net profit method, etc.) are based on historical data (turnover), and therefore the results obtained from applying these methods cannot be effectively used in the selection process of potential (future) customers. For this reason, these methods are more used to optimize customer relationship processes (reducing customer relationship costs).

Customer valuation methods are used to evaluate specialized clients (buyers, wholesalers, distributors, etc.). Evaluating individual clients hard to achieve, sometimes impossible, with these methods.

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