### DEVELOPMENT OF CUSTOMER LOYALTY MEASUREMENT AT CZECH COMPANIES

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Any efficient quality management system must use permanent feedback from customers. All organizations certified against the ISO 9001 standard should measure customer satisfaction. At present, such feedback seems to be unsufficient. A customer loyalty or value for customer represent advanced values for modern organizations. Unfortunately, these values are underestimated or completely ignored at Czech organizations as only about 30 % of them are interested in some customer loyalty indicators. An article is not only focused on current state analysis of customer loyalty measurement at Czech companies. The main topic is oriented to development and launching a comprehensive approach to customer loyalty measurement. This comprehensive approach includes customer loyalty measurement through future customers intentions, effects of customers loyalty, customer loss and finally, through loyalty index. Some lessons learned related to practical implementation of this approach from Czech companies will be also presented.

#### **KEYWORDS**

quality management system, customer loyalty, feedback, measurement, customer retention, customer loyalty, organization's performance.

#### **1** INTRODUCTION

Some organizations throughout the world have already revealed that in spite of positive trends of customer satisfaction, they had registered an important market loss. There are more approaches to the customer satisfaction measurement, the most frequent one is based on measurement of key customer satisfaction features and customer satisfaction index calculation. Relevant question is if the set of information obtained from the customer satisfaction measurement have decisive validity for top manager's decisions makings. But we are able to discover also other shortcomings related to the customer satisfaction measurement:

- it is oriented only to own customers and own products – information about other matters are mostly ignored,
- it processes data from the past and future view is not possible through such type of measurement,
- consideration of economic characteristics as price, life-cycle costs, etc. is not recommended there,
- it is usually starting point to mere product improvement, the processes improvements are underestimated.

That is why the customer loyalty measurement seems to be more important type of measurements within customer feedback development in practice. But it is difficult to measure customer loyalty because proof of loyalty, the state of being loyal, is mostly often shown after an action that indicates a person's or company loyalty. We will try to introduce some practical approaches to the effective customer loyalty measurement.

First of all, we must explain core term "customer loyalty". This term is usually defined by following way: customer loyalty is twofold customer behaviour resulting in an effective continuation and development of a business relationship in the one hand and in the recommendation of the supplier, its brand, products or services to any potential customers on the other hand [Hayes 2008]. We can also say that loyalty is customers continuing to believe, that one organization's products or services offer remains their best option. But customer loyalty is more than just behaviour or repeated business! It also represents a positive level of commitment by customer to supplier! The customer commitment will be very often reflected in customer's future behaviour. Theoretically, we can discuss two categories of customer loyalty: emotional and behavioural. Emotional loyalty is about how customers generally feel about a supplier or brand. On the other hand behavioural loyalty is about the actions customers engage in when dealing with the products or brand. Kumar and Shah argued that a majority of existing loyalty programs follow such measures to award behavioural loyalty. [Kumar 2004].

Many authors have been started their discussions about customer loyalty (including relationships between customer satisfaction and customer loyalty) in 90<sup>th</sup> of the last century, when appeared clear evidence saying that in spite of high level of customer satisfaction lot of organizations had serious market loss – see [Dick 1994] [Reichheld 1996], [Gitomer 1998], [Bowen 2001], [Griffin 2002], [Kumar 2004], [Hayes 2011], [Garfield 2013], [Santouridis 2014] and many others. Also this paper author's first remarks related to the customer loyalty have been already published in 2001 [Nenadal 2001]. Some authors see loyalty concept as marketing tool [McMullan 2003] for example, but clear linkage between quality management and customer loyalty was also confirmed [Rauyruen 2007].

#### 2 CUSTOMER LOYALTY MEASUREMENT

#### 2.1 Fundamentals of customer loyalty measurement

To control and manage customer loyalty effectively, the organizations need reliable data which track the level of customer's future intention. Loyal customers believe that offered products or services are superior to those of the competition. They believe there a strong relationship exists between buyer and seller, between suppliers and consumers or final customers. Measuring the loyalty means measuring the strength of this relationship. During this measurement, all important emotional and behavioural attributes should be converted to hard data and numbers.

Probably, the oldiest approach to the customer loyalty measurement was presented by Reichheld – see also [Reichheld 2011]. He recommended to monitor simple customer loyalty indicator known as the Net Promoter Score -NPS. It is usually calculated from answers to the only question: "How likely are you to recommend us to your friends or colleagues?" On the basis of their response to this question, the customers are segmented into three groups:

- detractors (rating of 0 6),
- passives (rating of 7 and 8) and
- promoters (rating of 9 or 10).

The Net Promoter Score - NPS is calculated as:

NPS = Number of promoters – Number of detractors (1)

It is easy and quick for customers to express their level of future intentions. Simplicity is the only advantage if we choose such approach to the customer loyalty measurement. Slightly similar approach to the customer loyalty measurement is based on fact that customers can be influenced by their effort when try to obtain some product or service. The metric to gain popularity (especially in USA) was titled as Customer Effort Score – CES. This indicator is derived from asking a question: "How much effort did you personally have to put forth to handle your request?" Scores range from 1 (very low effort) to 5 (very high effort) is used usually. Market research proved that this indicator should be stronger predictor of future customer loyalty than NPS: with 96 % of customers reporting high – effort experience becoming more disloyal, compared with only 9% of those with low – effort experience [Adamson 2015].

We can distinguish two principal approaches to the customer loyalty measurement and monitoring:

a) an objective measurement approach, which includes hard numbers obtained from various company records or other resources. Indicators as number of purchased products, time spent on our Web site, etc. can serve as examples of such metrics.

b) a subjective measurement approach which involves soft data gathered mostly by way of systematic market research. Indicators as NPS or CES (presented above) are typical for this approach.

See [Hayes 2013] for more details.

# 2.2 Current state of customer loyalty measurement at Czech companies

Many Czech organizations apply customer feedback based on traditional approaches: they process data and information from customer's reclaims or make some market surveys oriented to the customer satisfaction as it is one of the ISO 9001 requirements. But customer satisfaction (as evidence that all his/her needs and expectations were met) must be understood as absolute minimum at present! According to [Goetsch 2012], total fulfillment of customer's requirements does not bring any remarkable value. Current customers require delivery of the highest value and it seems to be decisive condition of his/her loyalty. Therefore a special research was made by Department of Quality Management, VSB-TU of Ostrava during 2012 with aim to investigate current trends and approaches to the customer loyalty measurement and monitoring. Let me briefly introduce main findings from this research.

a) A total of 183 organizations operating in metallurgical industry were addressed in the survey. The response rate of questionnaires was just below 19%. Out of 183 questionnaires sent, 34 returned.

b) The survey revealed that less than one third of the organizations conduct some customer loyalty surveys, but mostly by chance.

c) In addition, the customer loyalty measurement is practised primarily by those organizations whose quality management system had been implemented in accordance with some of the available standards (ISO 9001, ISO/TS 16 949, or other). There was just one respondent claiming to conduct customer loyalty measurement, while not having a quality management system certificate.

d) It was found that the size of the organization is not a decisive factor. Customer loyalty measurement is performed equally by small, medium-sized and large organizations.

e) The most frequently mentioned reason of the customer loyalty measurement was systematic customer care.

f) At the same time, however, the organizations gave reasons why they did not measure customer loyalty. Two general reasons were discovered:

- there are no external requirements for providing such type of measurement,

- respondents have no knowledge related to the customer loyalty measurement or monitoring procedures.

g) The most common loyalty indicators include the sales volume per customer, customer retention and long-term relationship.

h) No evidence about trends of customer loyalty indicators as well as about correlation between loyalty changes and economic performance were offered during this survey.

See [Licka 2013] for more details. Briefly: some Czech organizations are aware of customer feedback importance, but current approaches to the customer loyalty measurement discover a lot of weaknesses, it means also opportunities for improvement! The main lesson learned is that there are not available any comprehensive methodology for customer loyalty measurement at Czech organizations. The proposed methodology should contribute to overcoming this weakness.

### 2.3 Comprehensive approach to the customer loyalty measurement

It is naturally possible to use such indicators as Net Promoter Score, Customer Effort Score or market loss for measurement and monitoring customer loyalty. But these measures are relatively limited and do not give fully objective picture about future customer's intention or behaviour. That is why we have developed more comprehensive approach to the customer loyalty measurement on basis of analysis of current trends as well as lessons learned from various methods and indicators of loyalty measurement as overall development of the customer loyalty measurement is on progress at present throughout the world. Now, we are able to propose customer loyalty measurement framework to help understand how to conceptualize and measure such fuzzy concept as customer loyalty is. Our proposal includes four areas for customer loyalty measurement:

- through future customer's intention,
- through loyalty effects,
- through customer loss and
- through loyalty index.

# **2.3.1 Customer loyalty measurement through future customer's intention**

This approach should be considered as important starting point and basis of any customer loyalty measurement as it is closely linked to core definition of the customer loyalty. We can estimate future behaviour of customers on condition that relevant market research is conducted on representative sample of our or competitive customers. To propose set of loyalty indicators, we had inspired by B. Hayes who identified three loyalty components: advocacy, purchasing and retention [Hayes 2009]. Fundamental framework for this approach to the customer loyalty measurement is described by Tab. 1:

Loyalty component	Description	Loyalty factor	Loyalty category	Loyalty component	Loyalty factor	Loyalty Indicator
Advocacy loyalty	cacy       It reflects the       - Overall satisfactio         ty       degree to       - Choose the         which       product again         will be       -Recommendations         advocates of       - Recommendations		E Advocacy loyalty E	Advocacy loyalty	Overall satisfaction	Level of overall customer satisfaction
		will be dvocates of the rganization and can be used to ncrease the size of the			Choose the product again	Probability to choose again without any hesitation
	organization and can be				Recommendations	Probability to recommend products
				Purchasing loyalty	Purchase different products	Probability to purchase different products
	size of the customers base.				Purchase more expensive	Probability to purchase more expensive products
Purchasing loyalty	It reflects the degree to which customers	<ul> <li>Purchase different products</li> <li>Purchase more</li> </ul>			Purchase more often	Probability to purchase more often
	will increase their	expensive - Purchase more			Purchase larger	Probability to increase total amount of products
	purchasing often behaviour - Purchase larger and can be used to	В	Retention loyalty	Purchase from competitors	Probability to purchase also from competitors	
	increase the number of purchases by customers.	he of by			Stop purchasing Switch to another supplier	Probability to stop purchasing Probability to switch to another supplier
Retention loyalty	It reflects the degree of which customers will remain with given organization and can be used to increase the average customer	<ul> <li>Purchase from competitors</li> <li>Stop purchasing</li> <li>Switch to another supplier</li> </ul>	B B B	Table 2. Set of loyalty indicators related to future intention (own work)We can practically use the same and simple formula for allkinds of the probabilities calculation: the number of customerswho declared certain intention without any hesitation dividedby the survey sample size.Similarly: the advocacy loyalty level – ALL: $ALL = 0,33 (P_{rp} + P_{ch} + C)$ (3)Where: $P_{rp}$ – probability to recommend products,		
	life.				ty to choose again,	,

 
 Table 1. Framework of the customer loyalty measurement through future customer's intention . E – emotional, B – behavioral (own work)

For each of loyalty factor inherent loyalty indicator was designed. These indicators are mostly based on empirical probability. List of proposed indicators related to different loyalty factors is shown at Tab.2.

Level of any customer loyalty indicator should be simply quantified. For example, the purchasing loyalty level - PLL is calculated using the following formula:

$$PLL = 0,25 (P_{pdp} + P_{pep} + P_{pip} + P_{plp})$$
(2)

Where:

 $P_{pdp}$  – probability to purchase different products,

 $P_{pep}$  – probability to purchase more expensive products,

 $P_{pip}$  – probability to increase a total number of purchased products,

 $P_{plp}$  – probability to purchase more often.

$$RLL = O, 33[(1 - P_{pc})+(1 - P_{sp})+(1 - P_{ss})].$$

(4)

Where:

 $P_{pc}$  – probability to purchase also from competitors,

 $P_{sp}$  – probability to stop purchasing,

C - level of overall customer satisfaction

The retention loyalty level RLL:

 $P_{ss}$  – probability to switch another supplier,

Overall customer loyalty level - OCLL can be calculated as:

$$OCLL = ALL \cdot w_{ALL} + PLL \cdot w_{PLL} + RLL \cdot w_{RLL}$$
(5)

Provided an importance of each loyalty component is weighted by formula

$$w_{ALL} + w_{PLL} + w_{RLL} = 1 \tag{6}$$

Future behaviour of customers can be estimated according value of OCLL – see Tab. 3.

OCLL value	Type of customer	Description of future intention
0,81 – 1,0	Very loyal	Customer promotes our products or services, as well as brand, and his/her value for our organization is increasing
0,61 – 0,80	Slightly loyal	Customer can eventually increase his/her value for our organization, but his/her likelihood to be loyal is not high
0,41 - 060	Indifferent	Customer's attitude towards our organization and products is not estimable. Probability of his/her loss is the same as probability of his/her retention
0,21 - 0,40	Not sure	There is high level of probability of customer's loss
0-0,20	Loss	Customer is certainly lost for our organization

Table 3. Estimation of future customer's intention (own work)

This model of customer loyalty measurement was developed and verified at Department of Quality Management, VSB-TU of Ostrava [Licka 2013]. Such intentions have serious impact to the organization's success.

#### 2.3.2 Customer loyalty measurement through loyalty effects

It stands to reason that customer loyalty increasing can bring interesting effects which influence overall organization's performance. Therefore, another approach to the customer loyalty measurement should be based on monitoring and calculation of all important economic effects, directly caused by customer loyalty changes. Such consequences as customer retention, longevity of relationship with customers, high level of market penetration and positive recommendations develop positive economic results. Loyal customers:

- buy more,
- buy across product lines,
- will pay more for value of products or services,
- require less product usage instruction,
- do not need extensive sale support,
- are more likely to sole source,
- make referrals on organization's behalf, etc.

To direct measurement of loyalty impact to changes of profitability, cash-flow, etc. is mostly rather complicated, as these economic results are usually influenced also by set of other factors rather than customers behaviour. That is why indirect indicators are recommended for such measurement. We are going to introduce only two of them:

Longevity of customer relationship indicator - LCR:

 $LCR = TT_r : CC \tag{7}$ 

Where:

 $TT_r$  - – total sum of customer relationship periods calculated as sum of all current contract time within the organization,

CC - total number of contracted customers.

Customer penetration indicator - CP:

$$CP = S : P_c \tag{8}$$

Where:

S - total sales of the organization's products at the market,

 $\mathsf{P}_{\mathsf{c}}$  - total customers potential defined by total amount of certain products with the same function (e.g. TV sets, computers, cars, etc.) that could be absorbed by the market during defined period of time.

#### 2.3.3 Customer loyalty measurement through customer loss

It is commonly recognized that customer retention is much more effective in comparison to searching new customers due to their loss. While previous approach is based on quantification of all important positive effects caused by customer loyalty – and all these effects contribute to the overall economic performance of the organization, measurement and monitoring of customer loss is fully oriented to negative impacts or economic loss caused by customer's dissatisfaction and disloyalty. Under lot of experience in B2B area of business we can estimate that from total number of lost customers about 2/3 of them are lost just due to their dissatisfaction and only rest 1/3 customers are lost due to change of product portfolio at consumers.

To calculate customer loss is relatively simple to do: we must record all market loss per year and analyze root cause of such economic problem. If this root cause analysis discovers high level of customer dissatisfaction, all economic impacts are developed by low level of his/her loyalty.

#### 2.3.4 Customer loyalty measurement through loyalty index

The last approach to the customer loyalty measurement represents another simple tool. It is based on interconnection of terms as customer satisfaction and customer loyalty. The customer loyalty index can be calculated through correction of traditional customer satisfaction index – see [Nenadál 2008] for example. Basic formula of customer loyalty index (CLI) looks like this:

(9)

$$CLI = CSI \times P_{cr} \times P_{rf}$$

Where:

CSI - customer satisfaction index,

Pcr - probability of customers retention,

P<sub>rf</sub> - probability of customers referrals.

As mentioned above, both probabilities have less value than 1 and therefore the customer loyalty index will be always importantly less with comparison of the former customer satisfaction index. There are two prerequisites for CLI calculation:

- a) the organization must measure customer satisfaction through regular market surveys and calculate value of customer satisfaction index,
- b) such surveys must be supplemented by surveys focused on future customer behaviour (retention and referrals).

All mentioned approaches to the customer loyalty measurement are based on special customer surveys. The organizations see this subjective measurement approach as more practical because:

- this is way how to obtain lot of valuable information about customer's experience,

- this provide a forward oriented look into customer's future intentions,

- it is usually quick and simple to do such surveys.

# 2. 4 Basic steps of comprehensive customer loyalty measurement

Up to now, we discussed only approaches to the core loyalty measurement. But: to apply some of these approaches efficiently and objectively requires building of necessary system environment. Let me describe some fundamental steps which are linked to the customer loyalty measurement and should be included into overall organization's management system:

1) The organization's top managers should establish special strategic goals focused on level of key customers loyalty. These goals should work on overall strategy and values of the organization.

2) The top managers should assign relevant responsibilities and authorities related to all activities focused on the customer satisfaction or loyalty measurement.

3) The top managers should release all necessary resources for such measurement, including people and money.

4) Special written and controlled procedure, which describes all necessary activities of customer loyalty measurement, should be prepared, approved and released for regular use.

5) The top managers should decide in which customer segment a core loyalty measurement will be provided. It stands to reason that all key customers should be included into such surveys.

6) The special questionnaire should be prepared for each of customer loyalty measurement. It is necessary to pay attention to selection of right response format. Verbal or numerical – type of formats are recommended and 5 scale points to quantify level of likelihood should be preferred. For example, for probability to recommend pointing 0 can be "not at all likely" and pointing 5 is "extremely likely".

7) For the sake of high level of results objectivity it is necessary to define representative sample size. In practice, we mostly cannot gather data from all customers. Therefore, objective customer sampling may be very important part of any customer satisfaction or loyalty survey. Customer sampling is a method of selecting a sample of customers from larger population which ensure that results of customer loyalty measurement will be equal (or near) with results obtained by survey across total population on defined level of probability. Regardless of which group of customers we survey, three basic types of customer sampling exist:

- Census,
- Judgemental and
- Statistical sampling.

If the Census (where the sample is equal to the population) cannot be used, some of statistical methods of sampling should be preferred.

8) When a number of surveyed customers is clear, we must select suitable method of data collection. At present, we are able to use various methods on this purpose. The selection of core data gathering method depends on resources which were released for such type of market research and on technical support (including IT support). In-depth interview gives a highest level of customer response but it is much time and resources consuming. This method should be used within B2B area without any hesitations. In case we survey final users, we can select also some other method of data collection, for example telephone interview, mailing questionnaire, internet aided survey, etc. – all of them are less reliable as response rate

#### can be only about 10 % or so!

9) Data processing can follow. We can use various forms of data processing according to selected approach to the customer loyalty measurement – see description of these possibilities above at clause 2.3. But some of statistical tools as mean, range, trend analysis, t-test, etc. should be used for discovering changes from time to time, from one customer segment to another and so on.

10) Subjective approach to the customer loyalty measurement (performed through customer surveys) should be supplemented by objective measures, which are about internal "hard" data processing from sales, quality department, etc.

11) Special attention during any customer loyalty measurement should be payed to linkage analysis. The searching mutual linkage between customer loyalty data and organizational financial performance can appear important impact of customer's intention to sales, revenues and profits. Hallowell published first findings related to mutual relationship between customer loyalty and profitability in 1996 already [Hallowel 1996] and some remarks were presented also by Hayes [Hayes 2009]. Unfortunately, such research completely absents in Czech organizations and that is why we must see it as huge challenge - money language should be the most understandable for any top manager! Additionally: also loyalty drivers analysis should be valuable to identify opportunities for customer loyalty improvements. Technical support, ways of communication, quality of the products and their value, time to response customer's requirements, etc. can serve as example of such drivers.

11) Results of any customer loyalty measurement should be reported to top managers group of the organizations. So called management review process (which is required also by the ISO 9001 standard) creates good basis for reporting data from any customer loyalty measurement. The organization's top management should decide about ways and areas of necessary improvements or changes. Key loyalty drivers represent frequent matters of such improvements.

12) A follow – up customer loyalty measurement should verify if implemented improvements bring some positive shifting in the field of customer loyalty.

#### **3** CONCLUSIONS

The companies can consider their customers in two ways: either they exist or they do not. But organizations without their customers cannot survive from the long term perspective. Therefore, guestions related to customer retention or customer loyalty seem to be crucial today. There is no doubt about it that customer satisfaction and especially customer loyalty are key factors of organization's long-term success. As F. Reichheld argued some years ago, a 5 % improvement of customer retention and loyalty rates will yield between a 20 to 100 % increase on profits across a wide range of industries [Reichheld 1996]. We are also aware another fact that acquiring new customers can be about ten times more expensive than servicing existing customers. If customers play role as promoters, they provide "word-of-mouth" sales service for you without any additional expenditure. Therefore an implementation of such customer feedback represents one of key activities within any modern and efficient quality management system. And it is also fundamentals of customer relationship management development.

The paper tried to introduce not only unsatisfactory results of special survey oriented to current approaches to the customer loyalty measurement at Czech companies, but mainly proposed systematic approach to development and practical implementation of such type of customer feedback. We are sure that proposed methodology, including mathematic formulas, can be used not only at Czech organizations, bur also at any company abroad.

Regarding Czech organizations, they will have to invest huge efforts in improvements and positive changes in this field. But common experience says it is not a question of money, shortage of manager's goodwill seems to be a key obstacle!

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