The Use of Demographic and Psychographic Segmentation to Creating Marketing Strategy of Brand Loyalty

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Abstract

With growing competition, loyal customers have become the key to the company's success. Brand loyalty has been a central structure for marketing for almost a century, yet this research topic is still modern and up to date. The aim of this contribution is to answer the research question of whether there are different segments of customers based on demographic and psychographic aspects that would differ in the level of brand loyalty in the company. In other words, do certain groups of company's customers (according to demographic or psychographic segmentation) have a higher degree of loyalty to the company's brand? To answer the research question, we have identified hypotheses expressing the existence of a statistical dependence between individual segmentation variable and the level of brand loyalty. Based on statistical testing of established hypotheses, we have confirmed the existence of certain company's segments that have a higher degree of loyalty.

Keywords: brand; brand loyalty; customer segmentation; demographic segmentation; psychographic segmentation.

JEL classification: M21; M31.

1. INTRODUCTION

Everyday practice has shown that loyal customers are a very valuable, but very volatile, capital of each organization. It's much easier to keep a customer than to gain. While on acquiring new customers, the company must spend on average six times more resources than to maintain the current ones (Chlebovsky, 2005; Kotler and Keller, 2012; Krizanova, 2015). Simultaneously there are researches that show that the likelihood of selling to an

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existing customer is around 60-70%, while the likelihood of sales to a new customer varies between just 5-20% (Stárová, 2003). Aaker (2003) states that companies often invest in groups of passively loyal and dedicated customers. According to Karlicek (2013), firms tend to regard loyal customers as a matter of course and focus more on gaining new customers, but this approach can be very risky. Costs incurred to ensure and increase customer loyalty should therefore be both a necessary but also highly efficient investment for the organization that brings long-term benefits (Mece, 2017; Musova, 2016). Despite all these familiar conclusions, most companies are currently investing more and more in acquiring new customers rather than in keeping existing ones. Many companies have not yet accepted the fact that customer loyalty becomes an economic necessity and a prerequisite for their further and successful work in a competitive environment. Brand loyalty will ensure the business impact, which is particularly important when introducing new product variants (Aaker, 2003). According to Kotler and Keller (2012), the loyalty of the brand provides the company a predictable and certain demand. Brand loyalty also leads to certain marketing advantages (Chaudhuri and Holbrook, 2001).

This paper focuses on possibility of creating the loyalty program within the surveyed company according to use of demographic and psychographic customer segmentation. The aim of the research was to verify if there is the statistically significant relationship between categories of customer segmentation and brand loyalty level of customers. It was achieved through the application of the One-way Anova test and Chi-square test of independence and subsequent correspondence analysis. The analysis of the research results confirmed that the company should focus on a certain customer segment when creating a loyalty program as a next step in CRM strategy

2. BRAND

The word brand was first introduced in the world of advertising in the late 1950s, by David Ogilvy who created brand-image advertising (Majerova and Kliestik, 2015). For a basic demarcation of a brand it can be used these definition: a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors (Kotler and Armstrong, 2004). Aaker (1995) defines brand a set of assets (or liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provided by a product or service. The brand identifies the manufacturer, service provider, or merchant. Branding is a key tool for communicating with target groups. The goal of marketing strategies is to make consumer brand perception as something specific, which can optimally satisfy his / her needs (Stensova, 2006).

The concept of brand can also be an important phenomenon of the marketing mix. Mostly, in this context, external brand features such as name or artistic expression that distinguish goods or services in a competitive offer from competition are emphasized (Lizbetinova, 2017; Starchon et al., 2017). The brand, however, is not only a rational phenomenon that meets functional needs. It has strong emotional characteristics based on the subjectivity of the perceptions of the brand and the feelings they produce. This is also a concept of a brand that emphasizes the link of the brand to the needs of the customer, which is created and changed in every encounter with the brand. The brand is above all the notion of "brand placement" in the customer's head (Vysekalova, 2007; Weberova et al., 2016).

Some other authors further develop the idea and emphasize the role of associations in the mind of the customer with the brand and also with emotional links to the brand. In the view of many managers, the concept of the brand contains much more - they define it as something that has already penetrated people into the consciousness, has its name and important position in the commercial sphere (Keller, 2007). The brand according to Adamson (2011) is a set of thought associations that are settled in people's heads. Kapferer (2008) claims that the brand is a shared desirable and exclusive idea embedded in products, services, places and / or experience. If more people share this idea, the brand becomes stronger.

The brand can be almost everything from products, services, organizations and people through places, regions and countries to sports, entertainment, art or thoughts. In addition to this fact it allows to the product to escape from anonymity, it also carries certain characteristics, culture and values, and the presence of functional and emotional values that differ the trademark and brand (De Chernatony, 2009).

2.1 Brand loyalty

Strong and lasting relationships between the customer and the seller are the cornerstones of long-term profitability. According to Mitchell (2004) only a customer-oriented business can acquire its loyal customers over time and with it a higher profitability.

Many authors deal with loyalty in connection with the brand. Brand loyalty has been a central structure for marketing for almost a century, yet this research topic is still modern and up to date. Brand loyalty is a complex construct, which leads to many definitions, which are often very different. Pelsmacker (2003) indicates loyalty as mental positive correlation or relationship between the customer and the brand. Reichheld (1996) defines loyalty as the long-term preference of the brand or firm based on maximum satisfaction with the provided value and the positive expectations of the customer for the future. Jacoby and Kyner (1973) quote six brand loyalty conditions: biased (i.e. nonrandom), behavioural response (i.e. purchase), expressed over time, by some decision-making unit, with respect to one or more alternative brands out of a set of such brands, and is a function of psychological (decision-making, evaluative) processes. The American Marketing Association defines brand loyalty the situation in which a consumer generally buys the same manufacturer originated product or service repeatedly over time rather than buying from multiple suppliers within the category or the degree to which a consumer consistently purchases the same brand within a product class (Moisescu, 2006).

Aaker (1991) considers that brand loyalty reflects the likelihood that the customer will go to another brand, especially if the brand makes a change in price, product function, communication or distribution programs. Brand loyalty is also defined as a measure of consumer loyalty to a particular brand expressed by repeat purchase regardless of the market pressure generated by competing brands. When consumers commit to a brand, they make repeated purchases over time. Brand loyalty is the result of consumer behaviour and is influenced by personal preferences. Faithful customers consistently buy the products of their preferred brands, regardless of convenience or price. Brand loyalty is a key goal and the result of successful marketing programs, business initiatives, and product development efforts. The core of every successful brand is the core of loyal customers. They understand the brand better, buy more often and recommend the brand to others. Roy (2011) referring to

Aaker, states that brand loyalty reflects the extent to which the customer is willing and able to switch from one brand to another. Tuominen (1999) defines brand loyalty as a positive attitude towards the brand, which leads to a consistent purchase of this brand over time. It is the result of knowing the consumer that only a brand can satisfy its needs. One of the newest definitions of brand loyalty comes from Chegini (2010) who describes it as theory and guidance leadership and positive behaviour including, repurchase, support and offer to purchase which may control a new potential customer.

2.2 Brand loyalty and customer segmentation

With growing competition, loyal customers have become the key to the company's success. The loyalty of the brand may be different and its development over time clearly predicts the market position of the brand (Pribova, 2003; Sebestova *et al.*, 2017). Therefore, it is important to identify different types of customer loyalty to the brand and to know the impact of various marketing tools on these levels. According to Aaker (2003), the focus on segmentation of customer loyalty provides a strategic and tactical insight into how to build a strong brand.

Jones and Sasser (1995) distributes customers based on the satisfaction and size of loyalty to four groups. The first, called Advocates, is made up of highly loyal and satisfied customers who spread a good name. The second group, the Hostages, are loyal but dissatisfied customers who cannot get rid of the company because of the excessive costs associated with the change (switching costs) or because of the lack of substitution. The third group is the Mercenaries. They are satisfied customers who are not loyal. The chance of their transition to competition is great, so they need to offer something extra, which forces them to stay. The last group is Terrorists, they are disloyal and very dissatisfied, and they spread negative experiences and discourage potential customers (Gyalog *et al.*, 2017).

Dick and Basu (1994) assess loyalty in terms of brand attitude (relative attitude) and re-purchase frequency (repeat patronage). They distinguish two aspects of the attitude towards the brand: the strength of the relation to the given brand and the degree of differentiation, which means how many brands the customer prefers for the given category. If he / she is loyal to one brand, the differentiation is high. Furthermore, on a basis of these two categories, attitude towards the brand and re-purchase, they created a simple four-pane table, dividing loyalty into four categories:

• True loyalty (high relative attitude and high repeat patronage) – the most preferred of all four options, which is the result of strong branding and is supported by re-purchases at a given brand.

• Spurious loyalty (low relative attitude and high repeat patronage) – this case of loyalty is characterized by the fact that the attitude does not affect the behaviour of the customer. The customer has low brand differentiation and the choice of brand is determined by factors such as low cost, discounts, visible location, convenient placement of a branch.

• Latent loyalty (high relative attitude and low repeat patronage) – this case is relatively significant for the brand. It may be a likely consequence of the fact, that the factors in the market are of greater importance that exceed over the customer's own attitude.

• No loyalty (low relative attitude and low repeat patronage) – this situation can occur under different circumstances. A low attitude may indicate that it is a new product or is caused by a weak communication that cannot highlight the benefits of this product. The

solution should be to increase brand awareness, along with customer re-purchase orientation.

American Walker Company offers another customer segmentation approach based on loyalty. Loyalty matrix is a framework that puts customers into 4 groups according to their answers to a short battery of questions. The two axes in the matrix represent two key aspects of loyalty - behavioural (what the customer plans to do) and attitude (how they feel in relation to a particular brand). Based on these responses, we get a rank of 4 quadrants:

• Truly loyal – these customers are intent on continuing with a brand and have a positive attitude towards the company. They like buying that brand and are more likely to increase their brand purchases and recommend it to others.

• Accessible – customers feel good about buying the particular brand, but they do not plan to continue with it. This is a very special combination. It also includes a small percentage of customers. It often means that something has changed in their life situation / lifestyle and they no longer need / use a brand / product. This kind of customers typically speak highly of company.

• Trapped – these customers show all signs of continuing to buy the brand, but they are not happy about it. They feel trapped in this relationship with the brand. This phenomenon is common for customers who are bounded on a brand or service by contract, they do not found a suitable substitute, or it seems that changing the brand would be a very difficult process. Over time, this customer group will find a better opportunity and leave.

• High risk – as the name suggests, these customers are not faithful to the brand and do not want to continue to buy / cooperate with the company. These are people who are "halfway out the door" and not only do not want to be customers, they also speak badly about the brand / company among other people (Gibbsons, 2012).

Aaker (2003) divides consumers into five levels of brand loyalty in the customer pyramid: Switcher, Habitual, Satisfied, Likers and Committed. The first level is the most basic level of loyalty. Customer of this level are not loyal buyers, who are indifferent to the brand and buy product / brand based on the accepted price. The second level consists of satisfied or at least not dissatisfied consumers who buy brands due to the habit factor. The third level represents a category of buyers who are satisfied with the brand (Rodriques and Alessandro, 2017; Rataj *et al.*, 2017). However, the buyer can easily change brands because of switching cost. The fourth level is the category of buyers who love the brand. There is a sense of connection associated with the symbol, a set of use experience or a high perceived quality. The last level is a category of loyal buyers. They are proud to use the brand and it becomes even more important to them in terms of functionality and the expression of their personality.

With regard to product engagement and perceived differences between brands, Kotler and Keller (2012) identifies four consumer brand fidelity types:

• Complex loyals: Consumers are looking for information about the product they want to buy. Once the necessary data has been obtained, their attitudes towards the brand are formed, on the basis of which they make the choice. These people try to behave rationally in the buying process.

• Dissonance loyals: These people make their purchasing decisions quickly and without any worries. If they have the same price in one category, they consider them as the same. Even in the case of expensive products or products reflecting their social status. Later, consumers are looking for information that advocates their past choice.

• Habitual loyals: These consumers make their purchasing decisions based on brand awareness and spontaneous brand knowledge. They are not influenced by advertising, and their buying decisions are constantly being repeated over time.

• Variety seeker: These consumers change their decisions more often than others. This is not due to dissatisfaction with the existing brand or product, but because of a diverse personality. They usually judge their decisions during the consumption or use of the product.

Reichheld (1996) argues that classical methods of measuring loyalty and subsequent segmentation are unnecessarily complicated and he comes with a new idea that just one question is enough to measure customer loyalty and that is a question of willingness to recommend the brand to other people. Reichheld's loyalty is based on maximum satisfaction with the provided value and the customer's positive expectations for the future. In order to measure loyalty, it is enough to ask the question: "How likely are you to recommend to s friend or colleague?" From the results of this one question, we can simply and efficiently complete a single number (as the author says "The one number you need to grow."), from which you derive the current state of brand loyalty. Reichheld (2003) argues that this is an effective measurement that tests both the rational and emotional dimensions of the customer as well. The basis for the measurement is that if we ask a statistically valid sample of customers for that question, it will allow us to calculate that Net Promoter Score, which expresses the ratio of the promoter versus the detractor. This ratio calculation is based on the 11-point scale, where respondents will indicate a number 0-10 (where 0 is not at all likely to 10, which is extremely likely). According to these values, respondents can be divided into 3 basic groups - promoters, passives and detractors. The respondent, who indicated the 9 or 10 option on the scale, is marked as promoter, so it is very likely that she / he will really recommend you to other people. Respondents who have indicated their willingness to recommend as 7-8 would be described as passives. Other critics, or those who have indicated a willingness to recommend by a number of 0-6 on the scale, are unlikely to recommend you to other people.

3. METHODOLOGY

Based on the delimitation of the theoretical backgrounds and the requirements of the surveyed enterprise, we identified a research problem as follows: Does psychographic and demographic segmentation make sense for creating a variety of marketing strategy of brand loyalty?

In other words, do certain groups of company's customers (according to demographic or psychographic segmentation) have a higher degree of loyalty to the company's brand? After confirming the existence of these segments, the company plans to focus more on these customer groups because of the fact that the management of the company is aware, according to the secondary data, that the customer loyalty becomes an economic necessity and a prerequisite for their further and successful work in a competitive environment. The enterprise for which this analysis was conducted operates on the B2C market in the Slovak Republic in the telecommunications sector. From the point of view of annual turnover, the enterprise is classified as a medium-sized enterprise and is also classified as a medium-sized enterprise from the point of view of number of employees. It has been operating since 2001. The company has applied the CRM strategy for five years and regularly surveys the satisfaction of its customers through a questionnaire survey.

Based on the research problem identified in the first phase of the research, a method of selecting a suitable sample, sample size, appropriate methods and survey tools was then established. The choice of the target group of respondents is an important step for successful marketing research. It is necessary to decide who will be the ultimate target entity. As the final respondents, we defined the customers of the analysed enterprise, i.e. the stratified available sample selection (Krizanova, 2014). The size of the research sample was determined on the basis of a formula determined by Chráska in accordance with Nowak (2007):

$$n=(t_\alpha^2 \times p(1-p))/d^2 \quad (1)$$

where n is the minimum number of respondents, t_α is the critical value of the normal distribution, p is the likely sample proportion, expressed as a decimal, and d is the confidence interval, expressed as a decimal. The confidence level was set at 95%. The critical value of the normal distribution at confidence level $\alpha = 0.05$ was 1.96. This is based on the fact, that 95% of the area of the normal distribution is within 1.96 standard deviations of the mean. For those cases where the likely sample proportion was not known, p was set at 50%. The confidence interval was set at 5%.

The confidence interval determines the margin of error we tolerate within the marketing research and the rate is based on current trends in marketing research (Kliestikova et al., 2018). Therefore, the needed sample size is 384 customers of the monitored business. In our case, we surveyed 500 respondents. The choice of method for data collection depends on the information needs, as well as the budget, availability of resources and timetable. For the purposes of this research, we chose the method of collecting data through a questionnaire, even though we are aware of its shortcomings as time consuming and low returns. The questionnaire contained 10 questions that we asked about brand loyalty and segmentation variables.

3.1 Segmentation variables

There are many ways to sort and categorize individual segmentation variables. Evidence may also be literature in which a variety of variants can be encountered, always according to a particular author (Pelsmacker, 2003; Jobber, 2004; Kotler and Armstrong, 2004; Doyle and Stern, 2006; Drummond, 2008). However, they do not differ significantly in the description of the individual segmentation criteria. For the needs of our research, we are guided by the categorization developed by Foret and Stavkova (2003). They list three categories for the significant segmentation variables: Geographic, Demographic, and Psychographic Criteria.

Due to a small geographical area and the assumption that in the Slovak Republic it does not envisage different purchasing behaviour due to geographic factors, the company under investigation did not have an interest in geographically segmentation. Demographic criteria are among the most commonly used segmentation variable. Drummond (2008) and Jobber (2004) define key demographic criteria such as age, gender, and lifecycle. Age - Customers want and expect a different offer with increasing age. Gender - This segmentation criterion can be used where different product acceptance can be expected depending on gender. Life cycle - the ideal way to indirectly combine the age, gender and lifestyle criterion. This variable is based on the assumption that during the lifetime the

consumer changes his / her requirements and preferences depending on the role he or she is in the family, which is approximately related to age and gender (Jobber, 2004; Drummond, 2008). Pelsmacker (2003) illustrates these individual segments according to the life cycle: young single human; young childless spouses; young spouses with children; young divorced with children; middle-aged spouses with children; middle-aged spouses without children, which are dependent; middle-aged divorced without children, which are dependent; older spouses and older without partner. The first three questions in the questionnaire were devoted to the above segmentation criteria (Kliestik *et al.*, 2018).

Psychographic segmentation criteria divide consumers into different segments based on belonging to particular social classes, based on different lifestyles or types of personalities (Kotler and Armstrong, 2004). Their goal is to explain the differences in market manner based on the psychological and social predispositions of consumers. It seeks to uncover the reasons why some consumers with the same descriptive characteristics show different buying behaviour.

Kotler and Armstrong (2004) define social class as society's relatively permanent and ordered divisions whose members share similar values, interests and behaviour. Affiliation to the social class is not only determined by income but is influenced by employment, education, or property. In terms of marketing, this classification is interesting because members of a particular social class are characterized by similar shopping behaviour. Different social classes have different preferences in consumer behaviour. Consumer behaviour is to a large extent influenced by the lifestyle of customers, on the other hand consumer behaviour reflects their lifestyle (Kotler and Armstrong, 2004).

One way to distinguish social classes is by using ABCDE classification by Nielsen Admosphere (2016). It is based on the principle of the ABCDE index, which has been compiled by ESOMAR for the purposes of dividing the socio-economic distribution of the population, and consists of dimensions: the number of persons, the number of minors and the number of economically active persons in the household, the education and status of the head of the family, and property ownership. Other questions in the questionnaire were intend to this factors. This classification is applied in the Slovak Republic because there are no social classes in society in terms of more homogeneous and separate layers of society. Terms such as "upper class", "middle class", etc. have no generally accepted meaningful exact definition. ABCDE classification by Nielsen Admosphere has an ordinal character (a fully structured system of categories) and strongly correlates with education, economic activity, occupational status, facilities and income. The classification contains 8 categories A, B, C1, C2, C3, D1, D2 and E. For the conditions of the Slovak market, it is sufficient to use only the basic division into ABCDE, because this detailed breakdown from the marketing perspective is applicable only in countries with a developed social structure. We have constructed a methodological classification based on the ABECE socio-economic classification by Nielsen Admosphere.

Lifestyle as one of the characteristics of market behaviour can be tracked and analysed from many different viewpoints, often in combination with other segmentation factors. For purpose of this research we used lifestyle generational market segmentation (Michman *et al.*, 2003). Understanding generation values and motivations has become essential because each generations is driven by unique ideas about the lifestyle to which it aspires (Smith and Clurman, 1997). Each generation represents a different set of unique expectations, experiences, generational history, lifestyles, values, and demographics that influence their

buying behaviours. This information empowers you to craft a relevant message that draws a direct connection between individuals and how they relate to your brand. There are many studies that identify and analyse differences in consumer behaviour according to the customers generations. For the purposes of this contribution, respondents are segmented into six classifications by their generational cohort: (Post-War Cohort - born: 1928-1945; The Baby Boomers - born: 1946-1954; Generation Jones - born: 1955-1965; Generation X - born: 1966-1976; Generation Y- born: 1977-1994 and Generation Z - born: 1995-2012).

The idea that consumer behaviour is also influenced by the type of personality or character traits is very attractive in the light of the two preceding criteria. In part, it may actually be, but for this criterion, its usefulness depends primarily on the product category. The personality criterion can be used primarily where a consumer expresses attitude by purchasing a particular good or service or the customer is defined within the society by this purchase. Such a customer segmentation is not meaningful for the company under review. (Kliestikova *et al.*, 2017; Shvindina, 2016).

3.2 Brand loyalty variable

Based on the research problem, we had to identify the level of brand loyalty. Using secondary data, we decided to find this variable by straightforward question. Through this question, respondents themselves ranked in the category of their loyalty. For this reason, we chose Walker's brand loyalty segmentation as an alternative. The segmentation itself consists of four groups (the most common level of brand loyalty), and the description of each group is comprehensible by a general public. This should prevent the misclassification of the respondent.

To confirm the accuracy of classification, i.e. rejecting the respondent's subjectivity we also put a question by Reichheld (2003) in the questionnaire. Subsequently, we tested the hypothesis that examined the existence of a statistical relationship between the levels of brand loyalty gained in these ways. Statistical hypothesis testing is one of the most important statistical inference procedures. The role of statistical inference is to decide on the basis of information on the available choices whether to accept or reject certain hypotheses with respect to the basic sample set. In order to do so, we proceeded in accordance with the methodology of statistical hypothesis testing, which consists of the following steps: Formulation of the null hypothesis (H0); Formulation of the alternative hypothesis (H1); Determination of the level of significance (α); Calculation of test statistics and probability; and Conclusion (Rimarčík, 2007).

The goal of most statistical tests is to evaluate the relationship between variables. The null hypothesis expresses the independence of those variables. However, in the majority of cases we want to prove the validity of the alternative hypothesis, which expresses the actual relationship between the variables. The validity of the alternative hypothesis is proven indirectly by showing that the null hypothesis is incorrect and the alternative (the only remaining one) is correct. The null and alternative hypotheses must be mutually exclusive. The level of significance (α) is the probability of the first type error, which occurs when the null hypothesis is rejected even though it actually holds true, that is, we conclude that there is and there is not a relationship between the variables. The significance level is traditionally set at between 1% and 10%. For this research, the significance level was set at 0.05, which corresponds to a confidence interval of 95%. The test statistic is calculated from the sample

set. It has an appropriate probability distribution based on the validity of the null hypothesis. Because the majority of primary data in this research is of a nominal nature, the test statistic is a Chi-square test of independence. Only the variable of age is cardinal. We used the one-way anova test (also known as a one-factor, single-factor, or single-classification anova), in which there is one measurement variable and one nominal variable. The p-value is the probability that the test statistic, assuming the veracity of the null hypothesis, achieves a value that is at least equal to the value calculated from the sample set. The p-value is the probability that the relationship found in the sample is only a consequence of chance. The p-value is the lowest value of the significance level that leads to the rejection of the null hypothesis. The smaller the p-value is, the more likely the null hypothesis is not true and should be rejected. If the p-value is so low that the statement is valid (the null hypothesis is rejected) at the significance level of 0.01 as well, it can be assumed that there is a statistically significant relationship between the observed variables. To calculate the test statistics for the hypothesis, IBM SPSS Statistics software was used. This software also calculates the correlation coefficient. If the nominal variables are being examined in the number of 3+ x 2+, it is appropriate to investigate the strength of the dependence between the variables using Cramer's V measure of association. Cramer's V is the most common strength test with which to test data when a significant Chi-square result has been obtained. While the correlation is a measure of the linear relationship between variable, the Eta coefficient actually measures any relationship between the categorical variable and the continuous variable. If the calculated p-value is less than the determined significance level, the null hypothesis is rejected (thus the alternative hypothesis is accepted). The conclusion is that the difference found in the sample set is too large to be reasonably considered as random, so it is statistically significant. If the p-value is equal to or greater than the established significance level, the difference found in the sample is not statistically significant and the null hypothesis is not rejected (Rimarčík, 2007; Durica and Svabova, 2015; McHugh *et al.*, 2013; Salking, 2010; Gravetter and Wallnau, 2016).

The hypothesis was: Between the level of brand loyalty according to Walker and the level of brand loyalty according Reichheld there is no statistical dependence.

To calculate the test statistic, we used the IBM SPSS Statistics software and is shown in Table no. 1.

Table no. 1 – Chi-Square tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	116.749[a]	6	0.000
Likelihood Ratio	118.341	6	0.000
N of Valid Cases	500		

Note: [a] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.91.
Source: self-processed

Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was rejected and we can confirm an alternative hypothesis, so there is a statistical dependence between the variables examined (the level of brand loyalty according to Walker and the level of brand loyalty according Reichheld). The intensity of the interdependence of variables by the Cramer's V measure of association (0.342) indicates a moderate dependence.

Based on the existence of dependence between variables it makes sense to examine the internal structure of the contingency table. Therefore, we have subsequently used a correspondence analysis that we can understand as the analogue of main components method a factor analysis for qualitative characters in the contingency tables. Correspondence analysis is a multivariate graphical technique designed to explore relationships among categorical variables. When the study variables of interest are categorical, correspondence analysis is an appropriate technique to explore the relationships amongst variable response categories and can play a complementary role in analysing data (Sourial *et al.*, 2010). This method therefore lends itself well to marketing surveys that explore customer preferences and attitudes, and which seek to assess brand attractiveness. Examining the internal structure of the variables only makes sense if there is a dependency between the observed characters (factors). The use of correspondence analysis have to therefore be preceded by the testing of hypotheses on the independence of the observed characters (Kráľ *et al.*, 2009). We processed the result using the IBM SPSS Statistics software and is shown in Figure no. 1.
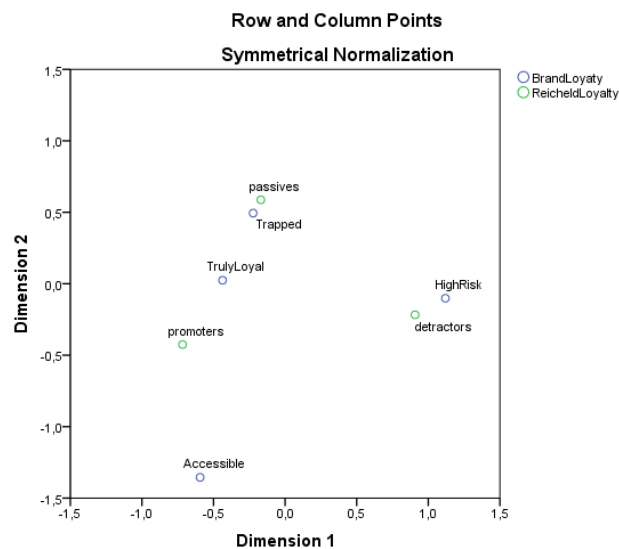
Source: self-processed
Figure no. 1 – Correspondence map

The essence of the correspondence analysis is the transformation of the points of the multidimensional space, which represent the examined categories, into a space of lower dimension, most often in the plane (2 dimensions). This transformation is unambiguous and allows us to focus on revealing a certain type of relationship between categories (variables). We evaluate the transformation quality based on the rates derived from the total inertia.

Interpretation of the correspondence map we have obtained in this way is relatively simple. If the points are closer to each other, so the categories are more similar, they correspond more to each other. There are three groups of similar categories of the level of brand loyalty according to Walker and the level of brand loyalty according Reichheld.

Categorical variables Truly Loyal and Promoters form the first group, Trapped and Passives form the second one and High Risk and Detractors form the last one. Brand loyalty level "Accessible" is within the correspondence map remote because it is a very special group of customers and also includes a small percentage of customers. From the correspondence analysis we can conclude that the identification of the brand loyalty level was determined correctly by the respondents without error based on a false of subjective self-assessment. Based on the above, we were able to test statistical hypotheses resulting from research questions.

4. RESULTS

To answer the research question, we have identified hypotheses expressing the existence of a statistical dependence between individual segmentation variable and the level of brand loyalty, see Table no. 2.

Table no. 2 – Hypotheses

Variables		Hypothesis
Demographic	**Age**	Between the age and brand loyalty level there is no statistically significant dependence.
	Gender	Between the gender and brand loyalty level there is no statistically significant dependence.
	Life cycle	Between the life cycle and brand loyalty level there is no statistically significant dependence.
Psychographic	**Social class**	Between the social class and brand loyalty level there is no statistically significant dependence.
	Generation	Between the generation and brand loyalty level there is no statistically significant dependence.

Source: self-processed

To calculate the test statistic of the first hypothesis, we used the IBM SPSS Statistic software and is shown in Table no. 3.

Table no. 3 – One-way Anova tests results of the first hypothesis

	Sum of Squares	Df	Mean Square	Significance
Between Groups	9,769.989	3	3,256.663	0.000
Within Groups	165,288.353	496	333.243	
Total	175,058.342	499		

Source: self-processed

A significance level was determined at 0.05 and corresponded to a 95% confidence interval. Based on the comparison of the significance level with the P-value (Significance), the null hypothesis was rejected and we can confirm an alternative hypothesis, so there is a statistical dependence between the variables examined (age and brand loyalty level). The intensity of the interdependence of variables by the Eta coefficient (0.236) indicates a low dependence.

To calculate the test statistic of the second hypothesis, we used the IBM SPSS Statistics software and is shown in Table no. 4.

Table no. 4 – Chi-Square tests results of the second hypothesis

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.914[a]	3	0.075
Likelihood Ratio	6.930	3	0.074
N of Valid Cases	500		

Source: self-processed

A significance level was determined at 0.05 and corresponded to a 95% confidence interval. Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was confirmed, so there is no statistical dependence bet between the variables examined (gender and brand loyalty level).

To calculate the test statistic of the third hypothesis, we used the IBM SPSS Statistics software and is shown in Table no. 5.

Table no. 5 – Chi-Square tests results of the third hypothesis

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	53.708[a]	24	0.000
Likelihood Ratio	60.158	24	0.000
N of Valid Cases	500		

Note: [a] 11 cells (30.6%) have expected count less than 5. The minimum expected count is 0.37.
Source: self-processed

When testing the third hypothesis using the Chi-square test, the condition that at least 80% of the expected frequencies exceeds 5 and all the expected frequencies exceeds 1 was not met. Consequently, we did not merge the characters of life cycle in the contingency table, since the modified scaling was very similar to variable "age", which we examined in more detail. But we could merge the characters of brand loyalty level, specifically the Accessible and Trapped. The logic of linking these variables is based on the fact that accessible customers although feel good about buying the particular brand, they do not plan to continue with it and also the trapped customers will leave the brand. Chi-Square Tests Results of the third hypothesis after adjusted variables is shown in Table no. 6.

Table no. 6 – Chi-Square tests results of the third hypothesis after adjusting of variables

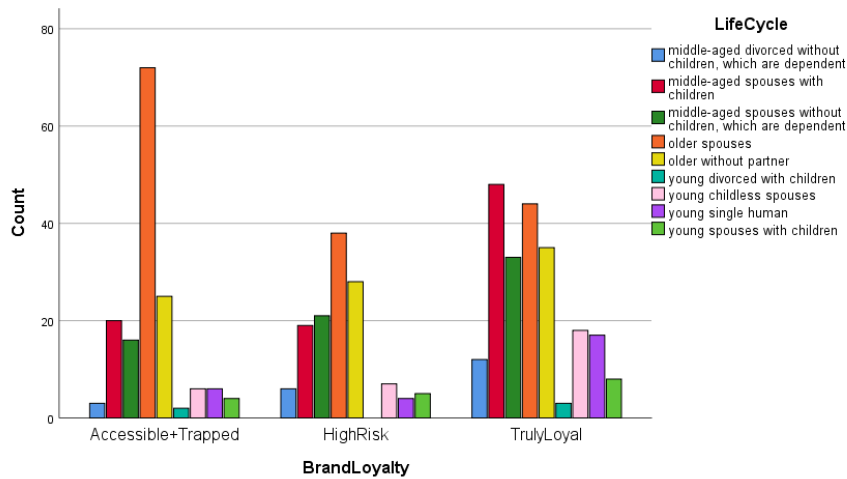|	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	41.670[a]	16	0.000
Likelihood Ratio	42.752	16	0.000
N of Valid Cases	500		

Note: [a] 4 cells (14.8%) have expected count less than 5. The minimum expected count is 1.28.
Source: self-processed

A significance level was determined at 0.05 and corresponded to a 95% confidence interval. Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was rejected and we can confirm an alternative

hypothesis, so there is a statistical dependence between the variables examined (life cycle and brand loyalty level).

The intensity of the interdependence of variables by the Cramer's V measure of association (0.204) indicates a low dependence. Based on the existence of dependence between variables it makes sense to examine the internal structure of the contingency table by a correspondence analysis. Due to the big number of life cycle characters the correspondence map is intricate, so we used bar chart to visualisation of internal structure of contingency table. It is shown in Figure no. 2.

Source: self-processed
Figure no. 2 – Bar chart

To calculate the test statistic of the fourth hypothesis, we used the IBM SPSS Statistics software and is shown in Table no. 7.

Table no. 7 – Chi-Square tests results of the fourth hypothesis

|	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	73.138[a]	12	0.000
Likelihood Ratio	81.934	12	0.000
N of Valid Cases	500		

Note: [a] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.85.
Source: self-processed

A significance level was determined at 0.05 and corresponded to a 95% confidence interval. Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was rejected and we can confirm an alternative hypothesis, so there is a statistical dependence between the variables examined (social class and brand loyalty level).

The intensity of the interdependence of variables by the Cramer's V measure of association (0.221) indicates a low dependence. Based on the existence of dependence

between variables it makes sense to examine the internal structure of the contingency table by a correspondence analysis. We processed the result using the IBM SPSS Statistics software and is shown in Figure no. 3.
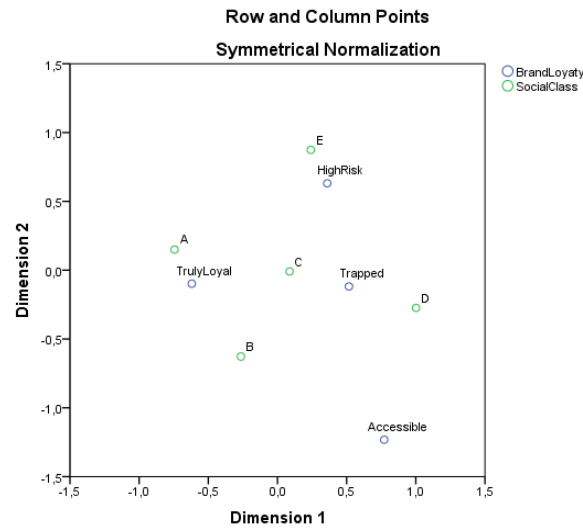
Source: self-processed
Figure no. 3 – Correspondence map of Social class and Brand Loyalty

To calculate the test statistic of the fifth hypothesis, we used the IBM SPSS Statistic software and is shown in Table no. 8.

Table no. 8 – Chi-Square tests results of the first hypothesis

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	103.793[a]	15	0.000
Likelihood Ratio	117.660	15	0.000
N of Valid Cases	500		

Note: [a] cells (0.0%) have expected count less than 5. The minimum expected count is 5.03.
Source: self-processed

A significance level was determined at 0.05 and corresponded to a 95% confidence interval. Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was rejected and we can confirm an alternative hypothesis, so there is a statistical dependence between the variables examined (generation and brand loyalty level).

The intensity of the interdependence of variables by the Cramer's V measure of association (0.263) indicates a low dependence. Based on the existence of dependence between variables it makes sense to examine the internal structure of the contingency table by a correspondence analysis. We processed the result using the IBM SPSS Statistics software and is shown in Figure no. 4.
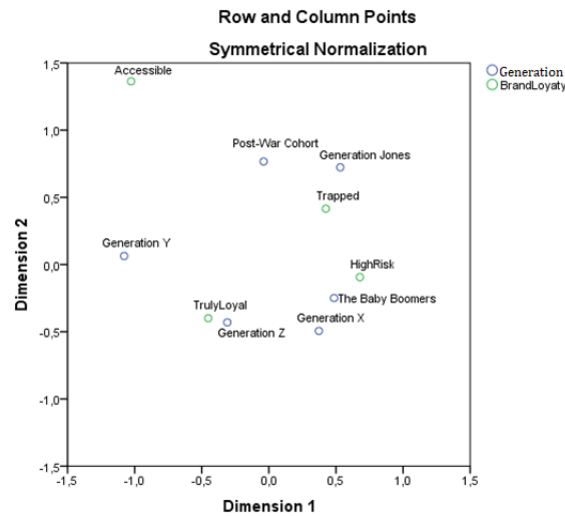
Source: self-processed

Figure no. 4 – Correspondence map of Generation and Brand Loyalty

5. CONCLUSIONS

Marketers spend more money on acquiring new customers than on keeping existing ones who are loyal and persistent. Estimates in this area show that a portion of the budget devoted to acquiring new customers is six times larger than the one dedicated to existing ones. Similarly, efforts to gain new customers are far greater than keeping loyal ones. Companies can even increase profits if they avoid losing their customers. The customer will generate profits for as long as they are committed to a firm or brand. The result is declining acquisition costs, lower operating costs and services per customer per year combined with rising annual average purchases for a loyal client, declining sensitivity to benefits and, last but not least, the transfer of positive information among people.

The managers of the surveyed company is aware of these facts and therefore they have decided to apply its loyalty program as a next step in CRM strategy within its CRM. The basis of this program is to create an emotional link between the company and the customer by providing individual, special benefits. However, the existence of consumer loyalty need to precede. For this reason, the company wanted to find out whether there are certain groups of company's customers (according to demographic or psychographic segmentation) which have a higher degree of loyalty to the company's brand. After confirming the existence of these segments, the company plans to focus more on these customer groups and create a variety of marketing strategies of brand loyalty. We have identified five hypotheses expressing the existence of a statistical dependence between individual segmentation variable and the level of brand loyalty.

The first surveyed demographic variable was the age. There is a statistical dependence between the age and brand loyalty level. The intensity of the interdependence of variables by the Eta coefficient is at the level 0.236. The second surveyed demographic variable was the gender and there is no statistical dependence bet between the gender and brand loyalty

level. The third surveyed demographic variable was life cycle. There is a statistical dependence between the life cycle and brand loyalty level. The intensity of the interdependence of variables by the Cramer's V measure of association is at the level 0.204. Because these examined variables are of categorical nature, we used correspondence analysis to gain information about which categories are more similar. It was essential to find out which category of life cycle variable is the most similar to the truly loyal customers. The young childless spouses, the middle-aged spouses with children and young single human mostly correspondent to the truly loyal customers. The first psychographic variable was social class. There is a statistical dependence between the social class and brand loyalty level. The intensity of the interdependence of variables by the Cramer's V measure of association is at the level 0.221. Based on the existence of dependence between these variables we examined the internal structure of the contingency table by a correspondence analysis. Once again, we had to find out which category of social class variable is the most similar to the truly loyal customers and that are the categories A and B. The second psychographic variable was generation. There is a statistical dependence between generation and brand loyalty level. The intensity of the interdependence of variables by the Cramer's V measure of association is at the level 0.263. Because these examined variables are of categorical nature, we used correspondence analysis. The category generation Z mostly correspondents to the truly loyal customers.

From the above-mentioned results of statistical hypothesis testing for an enterprise, it is meaningful to focus on customer segmentation based on selected psychographic and demographic aspects for development of brand loyalty program. It is the category of life cycle from the demographic variables. The category of the age is not appropriate. Although there is a statistical relationship between this category and brand loyalty level, but it is impossible to find out which age most corresponds with truly loyal customers, because of the variable character. We could use these values to create categorical variables by creating groups born in a certain period, but any finer division, by example, intermittently after several years, it leads to the division of the characteristic group. From the psychographics variables, it is the category of generation, because there is the stronger value of Cramer's V measure of association and this category more reflect the essence of psychographic segmentation.

The methodology of this research can also serve as the basis for other businesses in different sectors as well.

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