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MEASURING THE BEHAVIOURAL LOYALTY OF GARAGE CUSTOMERS

POMIAR LOJALNOŚCI BEHAWIORALNEJ KLIENTÓW WARSZTATÓW SAMOCHODOWYCH

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Summary

This study was undertaken: (1) to quantify the behavioural loyalty of garage customers and (2) to identify the formal characteristics that differentiate this loyalty.

When examining a hypothesis that the level of behavioural loyalty of garage customers is low, it was found that as many as 58% of the customers surveyed were characterized by a high level of loyalty, because the value of the L coefficient was equal to or higher than 0,75. In consequence, the first hypothesis could not be confirmed.

Another hypothesis was also considered, which stated that there exist formal criteria capable of differentiating the behavioural loyalty of garage customers; in this case, nine out of the ten formal criteria under analysis were found to differentiate the loyalty to a significant degree. Thus, the second hypothesis was confirmed.

A practical implication of this study is the identification of customer groups that are differentiated from each other by the level of their loyalty; thanks to this, garage managers may be enabled to choose marketing-mix tools in a better way.

The author's contribution and novelty of the paper consist in the concept of measuring the behavioural loyalty of garage customers and in the segmentation results obtained.

Keywords: behavioural loyalty, garages, services, customers

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Streszczenie

Cel artykułu był dwojaki: (1) kwantyfikacja lojalności behawioralnej klientów warsztatów samochodowych oraz (2) identyfikacja formalnych charakterystyk różnicujących tę lojalność.

Weryfikując hipotezę H1, zgodnie z którą lojalność behawioralna klientów warsztatów jest niska, stwierdzono, że w przypadku aż 58% badanych lojalność behawioralna osiąga wysoki poziom, gdyż wartość współczynnika L jest większa lub równa 0,75. Zatem nie potwierdzono tej hipotezy.

W zakresie hipotezy drugiej, stanowiącej, że istnieją formalne kryteria różnicujące lojalność behawioralną klientów warsztatów, wykazano, że dziewięć spośród dziesięciu analizowanych kryteriów formalnych różnicuje tę lojalność. Zatem hipotezę potwierdzono.

Implikacją praktyczną opracowania jest identyfikacja grup klientów charakteryzujących się różnymi poziomami lojalności, co powinno pozwolić menedżerom warsztatów lepiej dobrać mieszankę wykorzystywanych narzędzi marketingowych.

Wkładem własnym autora i elementem innowacyjnym opracowania jest koncepcja pomiaru lojalności behawioralnej klientów warsztatów samochodowych oraz uzyskane wyniki segmentacji.

Słowa kluczowe: lojalność behawioralna, warsztaty samochodowe, usługi, klienci

1. Introduction

In the conditions of strong competition in many trades, the present-day business organizations become "customer seekers" [14]. Therefore, the customers' loyalty is now particularly valuable. Researchers identify loyalty models based on customer satisfaction, customer relations with the brand, image of the organization, and social factors and attitudes [6, 9, 5]. Simultaneously, increasing insensitivity or even immunity of consumers to traditional promotion instruments can be observed [11, 13]. This problem concerns in particular the highly competitive trades, such as the automotive service industry. The strong competition in the market chiefly manifests itself in the number of motor vehicles per a garage; in Poland, this ratio is much lower than in the Western European countries [27]. An extremely important aspect of this issue is the customers themselves, whose expectations are continuously growing [11]. Therefore, the problem under consideration may be considered important for the economic practice and worth being methodically worked out.

In 2016, there were 27.4 million motor vehicles and tractors registered in Poland, which included 20.7 million passenger cars, according to the data published by the Central Statistical Office [17]. These figures have multiple, i.e. technical, economic, marketing, sociological, and psychological meaning. In worldwide scale, the average time of motor vehicle possession by a single user is extending and this entails growing demand for spare parts and for vehicle maintenance and repair services [3]. During a one-year period, the Poles visit garages about 38.5 million times to have their vehicles serviced or repaired. More than 83 % of such visits (about 32 million) are paid to independent workshops. In total, 89.9 % of drivers use the services of such garages while only 10.1 % of them decide to go to authorized service centres (ASC) [19]. Motor vehicles are serviced and repaired by service centres and automobile workshops. In Poland, there are about 21 000 such businesses that have been officially registered, which include 19 500 independent workshops and over

1 500 ASCs [19]. Since 2004, the number of independent workshops has been slowly but steadily declining while the number of garages organized in independent workshop chains has been growing and the existing workshops have been increasing their personnel [20].

The value of the Polish market of motor vehicle repairs and automotive spare parts distribution is continuously growing. In 2016, it exceeded 8 billion euros [20]. For comparison, these markets in Germany, France, and the UK are valued at 50 billion, 31 billion, and 27 billion euros, respectively. The Polish market is one of those most dynamically developing in Europe; it reached 3 % growth rate in 2016.

In consideration of the above, the objectives of this study were formulated as follows:

- (1) to quantify the behavioural loyalty of garage customers and
- (2) to identify the formal characteristics that differentiate this loyalty.

For this research work, the following hypotheses were proposed:

H1: The level of behavioural loyalty of garage customers is low;

H2: There exist formal criteria capable of differentiating the behavioural loyalty of garage customers.

The above hypotheses were verified empirically.

2. Meaning and types of customers' loyalty

The loyalty is one of the most important notions in marketing [23]. Simultaneously, the complex nature of customers' loyalty, diversity of reasons for such a behaviour, and multitude of ways how it is understood and presented give rise to problems with unequivocal defining of this notion and with developing the methods and instruments of measuring it [7]. The loyalty is popularly understood as attachment, devotion, commitment, etc. [15, 23]. In the simplest way, the loyalty is defined as fidelity, reliability, integrity, and consistency [15]. This notion may be used interchangeably with such terms as habit, repeated purchases, preferences, retention, fidelity, imparting of good opinions, or even compulsion [25]. The loyalty may be perceived in many ways [4]. R. Oliver stresses that customer's loyalty means deep commitment and consistent buying of a specific product or choosing of a specific brand [16]. This means that loyal customers do not change their favourite brand in result of changes in the market situation or competitors' actions. It is particularly emphasized in many definitions that loyalty is a sense of customer's tie and attachment to a firm, its personnel, or the products offered by it [23].

In the literature on the subject, two basic ways of understanding the notion of loyalty are presented: first, loyalty as customer's behaviour ("behavioural loyalty") and second, loyalty as customer's attitude ("attitudinal loyalty") [21]. It is worth noticing a trend, according to which loyalty is considered traditionally in behavioural terms, i.e. from the point of view of customers' behaviour; in the present-day literature on the subject, however, this loyalty is being superseded by loyalty understood as customer's attitude or mindset, which determines his/her behaviour [28, 33]. Such an approach has been introduced to distinguish the customers who are loyal because of compulsion or lack of a choice (due

to monopoly, geographical reasons, etc.) from the customers who are actually attached to a specific brand, firm, or firm's personnel. Nevertheless, only the behavioural loyalty of garage customers was explored in this study, with the issue of motivational loyalty being left for separate consideration.

In broader terms, three approaches to the problem of customers' loyalty are discerned [26, 22, 23]:

1. Behavioural approach, related to customer's behaviour consisting in regular habitual repeating of purchases, which every time results in the feeling of satisfaction. This approach is the oldest way of understanding the loyalty.
2. Cognitive approach, where loyalty is considered as an effect of a cognitive process, in result of which the purchaser makes a conscious decision to choose a specific product, with taking into account its bad and good points in comparison with competing offers. This is related to the information collected and knowledge acquired.
3. Emotional (affective) approach, related to the attitudes caused by the sense of a liking for, and attachment to, a specific product, brand, firm, or place of the purchase.

There are also researchers [2, 24] who define the following two basic loyalty types:

1. Cognitive loyalty, related to customer's preferences and unbiased assessment of the offer, but also to the conformity of the brand's image with customer's system of values.
2. Affective loyalty, related to feelings, affects, temporary mood, and emotional involvement.

Other authors [16, 4, 12] add yet the third and fourth type (phase) of customers' loyalty:

3. Conative (intentional) loyalty, which means the intention of repeating the purchase in the future.
4. Action (active, real) loyalty, where actions are consciously taken to overcome any difficulties if necessary for the purchase to be repeated.

L. Gronholdt et al. [10] prove in their more detailed analyses that the customer's loyalty is defined by four factors: intention to repeat the purchase, tolerance to a change in the price, referrals, and intention of cross-buying of various products. D. Yao shows that the customer's loyalty covers the spheres of both customer's behaviours and emotions [29]. In general, however, the researchers who work on customers' loyalty in the services sector emphasize the importance of customers' loyalty for the reduction of costs of marketing activities [1], brand promotion, and increasing firm's share in the market [8].

3. Discussion of results of the experimental research

The quantitative empirical investigation was carried out with using the traditional survey method. It covered a group of 381 garage customers, sampled in accordance with the survey objective. The survey was carried out in July 2017. The inquiry form included (1) identification questions asked to prepare formal profiles of the sample (i.e. the respondents, the motor vehicles used by them, and their specific modes of vehicle operation), (2) questions about assessment of the quality of the services provided by the garages,

and (3) questions about the dependent variables, covering three areas, i.e. behavioural and motivational loyalty (2 measures and 1 measure, respectively), expenses incurred for garage services, and purpose of visiting the garage. The results obtained have been presented in a monograph [15]; in this study, the analysis of the data collected was deepened to explore in more detail the customers' behavioural loyalty and the diversity in this loyalty.

Two measures of the behavioural loyalty were analysed. The first one was the share of the number of customer's visits paid to the garage that he/she most frequently visited in the number of all the visits paid by him/her to automobile workshops during the recent year; this share was denoted by L. In consideration of the significant importance of taking also into account the value-related approach [15], the "Share of Wallet" (SOW), defined as the ratio of the value of services purchased from a specific garage to the value of services purchased from all the automobile workshops, was adopted as the second measure. The results obtained for these two measures proved to be similar to each other; therefore, it was considered sufficient to use only the first one for analysing the diversity in the loyalty. Such an approach also depicts the strength of the loyalty, i.e. it makes it possible to distinguish a customer who e.g. seven times purchased services from one garage and used services of another workshop only once from a customer who had its vehicle serviced e.g. once by one garage and once by the other.

An analysis of the empirical data collected has shown that as many as 83 % of the respondents used garage services at least twice a year, while 12 % of the total visited a garage at least 6 times in the same period. This means that customers of the latter group had their vehicles serviced or repaired every two months, on average. Among all the visits analysed, as many as 70 % of them were those paid again. It can be seen from the above that the customer retention (sustaining of customers' loyalty) should be particularly important for automobile workshops.

Fig. 1 shows the behavioural loyalty of garage customers, grouped by the annual numbers of visits paid to a garage by an individual customer.

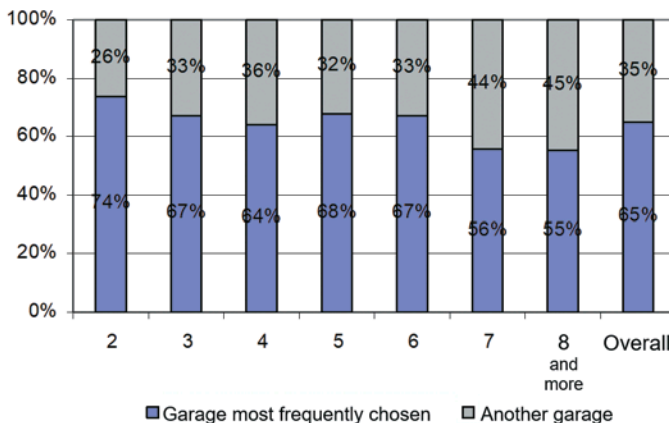


Fig. 1. Annual numbers of visits to garages per a customer, in percentage terms

Source: Author's study

An analysis of the data presented in Fig. 1 shows that in a distinct majority of cases, the visits are paid by customers to the workshops that are frequently chosen. An interesting downward trend can be seen here: along with growing total numbers of visits paid by individual customers to automobile workshops, a growth takes place in the share of visits paid to garages other than those usually preferred. This means that the customers who must more often have their vehicles serviced or repaired begin to seek and choose other providers of such services. This may arise from disappointment and irritation by inability of garage personnel to diagnose or rectify a defect, will to find services offered at lower prices, or necessity to find a specialized workshop. Thus, customers' loyalty declines with a growth in the number of visits to a garage.

Then, the distribution of individual fractions of the values of coefficient L was determined; it has been shown in Fig. 2.

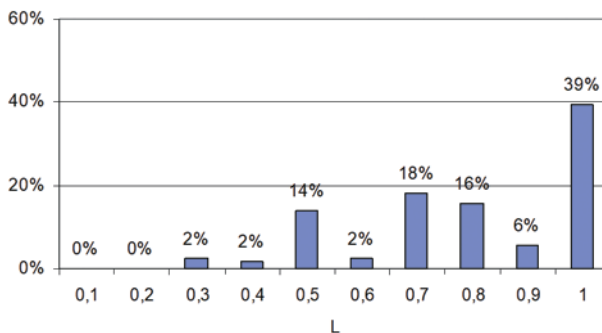


Fig. 2. Individual fractions of the values of behavioural loyalty coefficient L

Source: Author's study

An analysis of Fig. 2 shows that the customers for whom the value of coefficient L did not exceed 0.4 made as little as 4 % of the total. Definitely the biggest group, making as much as 39 % of the total, consisted of the customers for whom $L = 1$, i.e. who exclusively used services of only one garage. The next biggest fractions of the customers under survey were those where the L value was 0.7, 0.8, and 0.5 (they made 18 %, 16 %, and 14 % of the total, respectively). The median value was 0.75, which means that a half of the customers visited the garage that was most frequently chosen by them in not more than in $\frac{3}{4}$ of the cases and the other half did it in at least the same number of cases. Therefore, the median value was adopted as a criterion of the high loyalty level.

Then, the numerical values of coefficient L , i.e. of the share of visits paid to the garage preferred in the number of all the visits paid to automobile workshops, belonging to interval $\langle 0; 1 \rangle$, were arranged in ordered groups, where:

- the values referred to as "low" were those in the interval $\langle 0; 0.5 \rangle$;
- the values referred to as "medium" were those in the interval $\langle 0.5; 0.75 \rangle$;
- the values referred to as "high" were those in the interval $\langle 0.75; 1 \rangle$.

The grouping like this corresponds to the commonly accepted system of customer classification in respect of loyalty as proposed by F. Reichheld [18].

The fractions of the three customer groups defined by the specified ranges of the behavioural loyalty coefficient values have been presented in percentage terms in Table 1.

Table 1. Customer fractions defined by their behavioural loyalty

Item	Loyalty	Fraction
1	Low	21 %
2	Medium	21 %
3	High	58 %

Source: Author's study

It can be seen from the data given in Table 1 that the low behavioural loyalty was manifested by 21 % of the customers. The value of coefficient L for this group was, by definition, below 0.5. Another 21 % of the customers were characterized by medium loyalty, with the L value being within the interval $(0.5; 0.75)$. Conversely, the loyalty of as many as 58 % of the respondents could be assessed as high, as the L coefficient value in this group reached a level equal to, or exceeding, 0.75.

For further analysis of the diversity in customers' behavioural loyalty, a number of variables were chosen, e.g. formal characteristics of the customers (5 variables), their vehicles (2 variables), and vehicle operation modes (3 variables). In total, 10 variables were analysed.

The diversity in customers' behavioural loyalty in respect of their sex has been presented in Table 2.

Table 2. Diversity in customers' behavioural loyalty in respect of their sex

Item	Loyalty	Women	Men
1	Low	22 %	20 %
2	Medium	26 %	18 %
3	High	52 %	62 %

Source: Author's study

The data given in Table 2 indicate that the proportion of the men who manifested high loyalty to automobile workshops was much higher in comparison with that of women (62 % as against 52 %, respectively). The percentage of the men who manifested medium loyalty was lower by 8 percentage points than that of women (18 % as against 26 %, respectively). As regards the low loyalty, this fraction in the case of women exceeded that determined for men by 2 percentage points. In general, men were found to be more loyal to garages in comparison with women.

The diversity in customers' behavioural loyalty in respect of their age has been presented in Table 3.

Table 3. Diversity in customers' behavioural loyalty in respect of their age

Item	Loyalty	Below 20 years	20-30 years	30-40 years	40-50 years	Over 50 years
1	Low	33 %	22 %	22 %	22 %	16 %
2	Medium	17 %	26 %	19 %	24 %	16 %
3	High	50 %	53 %	59 %	53 %	68 %

Source: Author's study

An analysis of the data of Table 3 leads to a conclusion that markedly the most people characterized by the high degree of behavioural loyalty (68 %) belonged to the oldest age group (over 50 years). The next most loyal age group was the one with people aged 30-40 years, where this percentage proportion was 59 %. The least people who were highly loyal (50 %) were found among the youngest customers surveyed (below 20 years). On the other hand, this is the age group where the most customers with the lowest loyalty level (33 %) could be found. The least percentage of such people (only 16 %) was recorded in the oldest group. For the other age groups, identical values of this loyalty fraction (22 %) were recorded. In general, an unequivocal conclusion may be drawn that the fraction of highly loyal customers increased and the fraction of customers' with the low loyalty level declined with growing respondents' age.

The diversity in customers' behavioural loyalty in respect of their education level has been presented in Table 4.

Table 4. Diversity in customers' behavioural loyalty in respect of their education level

Item	Loyalty	Primary education	Secondary education	Higher education
1	Low	24 %	20 %	20 %
2	Medium	24 %	27 %	16 %
3	High	52 %	53 %	64 %

Source: Author's study

Based on the data of Table 4, a statement may be made that the percentage of the most loyal customers increases with their education level: for the two lowest education levels, this percentage was 52 % and 53 %, in comparison with as high a figure as 64 % for the customers with higher education. Simultaneously, the percentage of the respondents who manifested low loyalty slightly declined, from 24 % for those with primary education to 20 % for the customers with secondary and higher education. Similarly, a decline in the fraction showing medium loyalty can be observed with a growth in the education level. In general, a finding may be formulated that the higher customers' education level is, the more loyal they are.

The diversity in customers' behavioural loyalty in respect of the time of using a motor vehicle (i.e. any motor vehicle, not only the one being currently used) has been presented in Table 5.

Table 5. Diversity in customers' behavioural loyalty in respect of the time of using a motor vehicle

Item	Loyalty	Below 10 years	10-20 years	20-30 years	Over 30 years
1	Low	24 %	26 %	15 %	14 %
2	Medium	20 %	25 %	19 %	17 %
3	High	56 %	49 %	66 %	69 %

Source: Author's study

An analysis of the data of Table 5 shows that, except for the group of people who had been using a motor vehicle for the shortest time, the fraction of customers with the high loyalty level definitely grew with lengthening time of using a motor vehicle. In the successive customer groups (apart from the first one), this fraction grew from 49 % through 66 % to 69 %. Consistently, the fractions of customers manifesting both the medium and low loyalty level considerably decreased for the customers who were motor vehicle users for longer and longer periods. In the group of customers who had been using a motor vehicle for more than 30 years, these fractions shrank to 17 % and 14 %, respectively, i.e. to values markedly lower than those recorded for all the other customer groups. In general, the lengthening of the time of being a motor vehicle user is conducive to an increase in the loyalty to automobile workshops.

The diversity in customers' behavioural loyalty in respect of the loyalty to a motor vehicle brand has been presented in Table 6.

Table 6. Diversity in customers' behavioural loyalty in respect of the loyalty to a motor vehicle brand

Item	Loyalty to a garage	Loyal to a brand	Not loyal to a brand
1	Low	22 %	21 %
2	Medium	17 %	21 %
3	High	61 %	58 %

Source: Author's study

As it can be seen from the data in Table 6, the differences between these two respondent groups were not big. The fraction of customers highly loyal to a garage was somewhat bigger in the group of customers loyal to a vehicle brand than it was in the group of customers not particularly loyal to a brand (61 % as against 58 %, respectively). Simultaneously, the proportion of respondents with low level of loyalty to a garage was also slightly higher in the group loyal to a brand. However, the loyalty to a brand cannot be considered a factor diversifying the loyalty to workshops.

The diversity in customers' behavioural loyalty in respect of the status of the vehicle when being purchased (whether bought in the primary market or secondary market, i.e. as a brand-new or second-hand one) has been presented in Table 7.

Table 7. Diversity in customers' behavioural loyalty in respect of the status of the vehicle when being purchased

Item	Loyalty	Brand-new	Second-hand
1	Low	17 %	22 %
2	Medium	13 %	22 %
3	High	70 %	56 %

Source: Author's study

According to the data presented in Table 7, the fraction of highly loyal garage customers was definitely bigger among the users of vehicles purchased in the primary market (70 %) than it was among those who bought second-hand vehicles (56 %). As regards the customers with the low loyalty level, they made 22 % of the latter group, while their proportion in the group of buyers of brand-new vehicles was 17 %. Seemingly, one of the reasons for such a distribution may be the specific nature of the servicing of new vehicles, e.g. under warranty or within free maintenance packages. In general, the customers more loyal to automobile workshops proved to be those who bought their vehicles in the primary market.

The diversity in customers' behavioural loyalty in respect of the vehicle age has been presented in Table 8.

Table 8. Diversity in customers' behavioural loyalty in respect of the vehicle age

Item	Loyalty	Below 5 years	5-10 years	10-15 years	Over 15 years
1	Low	19 %	23 %	20 %	18 %
2	Medium	22 %	19 %	24 %	18 %
3	High	59 %	58 %	56 %	64 %

Source: Author's study

The data given in Table 8 show an interesting relation, according to which the fraction of highly loyal customers was approximately equal (56-59 %) for the first three groups and markedly higher (64 %) in the group of users of vehicles 15 or more years old. The latter group also comprised the least number (18 %) of the vehicle users with the lowest level of loyalty to a garage. On the other hand, the greatest number of such garage customers (23 %) was recorded in the group of those who had been using their vehicles for 5-10 years. The fraction of the customers with the medium loyalty level ranged from 18 % to 24 %. In general, a trend could be seen that the loyalty to garages clearly grew with the age of the vehicles used. However, this growth was not linear; actually, it became visible for the users of the oldest vehicles.

The diversity in customers' behavioural loyalty in respect of the annual vehicle mileage has been presented in Table 9.

Table 9. Diversity in customers' behavioural loyalty in respect of the annual vehicle mileage

Item	Loyalty	Below 10 000 km	10 000-20 000 km	20 000-30 000 km	Over 30 000 km
1	Low	22 %	23 %	16 %	20 %
2	Medium	20 %	19 %	24 %	30 %
3	High	58 %	58 %	60 %	50 %

Source: Author's study

An analysis of the data shown in Table 9 provides grounds for a statement that for the first three groups, the percentage of the customers who manifested high loyalty to a garage varied within very narrow limits, from 58 % to 60 %. Only in the group of garage customers who drove their vehicles for more than 30 000 km a year, this percentage was definitely lower and dropped to 50 % in favour of the respondents with the medium loyalty level, where it reached definitely the highest value, i.e. 30 %, as against 19-24 % for the other customer groups. Thus, it can be seen that in the group of vehicle users who achieved the highest annual mileage values, the fraction of the garage customers characterized by the high loyalty level dropped in favour of those manifesting the medium level of behavioural loyalty.

The diversity in customers' behavioural loyalty in respect of the vehicle servicing place has been presented in Table 10.

Table 10. Diversity in customers' behavioural loyalty in respect of the vehicle servicing place

Item	Loyalty	ASC	Independent garages	Both
1	Low	20 %	26 %	13 %
2	Medium	12 %	18 %	30 %
3	High	68 %	56 %	57 %

Source: Author's study

The data presented in Table 10 show that the most customers characterized by the high loyalty level were in the group of the respondents who had their vehicles served by ASCs only. The fraction of such customers in this group was as big as 68 %, as against mere 56 % in the group of customers of independent garages only. However, the similar disproportion between these groups with regard to the garage customers who showed the low loyalty level was not so big: the difference amounted to 6 percentage points only and the fraction of the not very loyal customers was bigger for the customers of independent garages. Interestingly, the fraction of the respondents who manifested the high loyalty level in the group of customers of both ASCs and independent garages (57 %) was close to that in the group of customers who did not use ASCs' services at all (56 %), while the proportion of respondents declaring the low loyalty level in the group of customers of garages of both types was definitely the lowest (i.e. 13 % only). On the other hand, the percentage of customers with the medium loyalty level in this "mixed" group was clearly the highest (it amounted to as much as 30 % in comparison with 12 % and 18 % for the other two customer groups). In general, an unequivocal conclusion may be drawn that the biggest

fraction of respondents with the high loyalty level was in the group of customers of ASCs only. In turn, the biggest fraction of customers with the medium loyalty level (30 %) and the smallest fraction of customers with the low loyalty level (13 %) were in the group of customers of garages of both types. In general, the loyalty to ASCs was higher than that to independent garages and the lowest loyalty level was manifested by customers of both ASCs and independent garages.

The diversity in customers' behavioural loyalty in respect of the annual frequency of visits to automobile workshops has been presented in Table 11.

Table 11. Diversity in customers' behavioural loyalty in respect of the annual frequency of visits to automobile workshops

Item	Loyalty	Below 4 visits a year	4-7 visits a year	Over 7 visits a year
1	Low	20 %	17 %	58 %
2	Medium	25 %	13 %	16 %
3	High	55 %	70 %	26 %

Source: Author's study

The data provided in Table 11 and concerning the diversity in customers' behavioural loyalty in respect of the annual frequency of visits to automobile workshops showed a definite drop in the percentage of customers with the high loyalty level in the group of customers who visited garages more than 7 times a year (as low as 26 % in comparison with 55 % and 70 % in the two other groups) in favour of the vehicle users with the low loyalty level, who made here definitely the biggest fraction (with this proportion being as high as 58 % as against 20 % and 17 % in the other two groups). The least customers with the low loyalty level were in the first and second groups (20 % and 17 %, respectively). In general, a relation can be seen, according to which a growth in the number of visits paid to a service centre above 7 visits a year results in a dramatic drop in the fraction of customers showing the high loyalty level in favour of the fraction of vehicle users with the low loyalty level. Such a conclusion was already suggested by the previous analysis of graphs in Figs 1 and 2.

The above has completed the analysis of diversity in the behavioural loyalty of garage customers in respect of all the variables that characterized the sample under survey.

4. Conclusions

The following conclusions have been drawn from the measurements of loyalty of automobile workshop customers.

1. Most of visits are paid by customers to the automobile workshops that have been deliberately chosen. A downward trend in customers' loyalty has been noticed: along with growing total numbers of visits paid by individual customers to automobile workshops, a growth takes place in the share of visits paid to garages other than those usually preferred.
2. As many as 39 % of customers exclusively use services of only one garage.

3. When examining hypothesis H1, according to which the level of behavioural loyalty of garage customers was assumed as low, it was found that in as many as 58% of the customers examined, the level of behavioural loyalty was high; in another 21 %, this level was low. Thus, this hypothesis has not been confirmed.
4. As regards hypothesis H2, which stated that there exist formal criteria capable of differentiating the behavioural loyalty of garage customers, as many as nine out of the ten formal criteria under analysis differentiate the loyalty as described below.
 - Much more men than women, in percentage terms, are characterized by high loyalty to automobile workshops (62 % as against 52 %, respectively). Conversely, there are more women than men among the customers who show the low loyalty level (22 % as against 20 %, respectively).
 - A trend can be seen that the fraction of highly loyal customers increases with growing respondents' age (in the age group of over 50 years, this percentage is as high as 68 %). On the other hand, the most customers with the low loyalty level belong to the youngest age group. Thus, it can be clearly seen that the loyalty is inversely proportional to customers' age.
 - An increase in customers' loyalty with growing customers' education level can also be seen.
 - Along with the lengthening of the time of being a motor vehicle user, the fraction of customers with the high loyalty level definitely increases and the fraction of customers with the low loyalty level decreases.
 - The loyalty to a motor vehicle brand almost does not diversify the customers' level of behavioural loyalty to automobile workshops (only very insignificant diversity can be caused by this factor).
 - The fraction of highly loyal customers is definitely bigger among the users of vehicles bought in the primary market than among the users of second-hand vehicles (70 % as against mere 56 %, respectively).
 - The loyalty level markedly rises among the users of the oldest vehicles (aged more than 15 years).
 - Among the garage customers whose vehicles cover more than 30 000 km a year, the fraction characterized by the high loyalty level decreases in favour of those manifesting the medium loyalty level.
 - Evidently, the most respondents manifesting the high loyalty level are in the group of customers of ASCs only. In turn, the smallest fraction of customers with the low loyalty level is in the group of customers of both ASCs and independent garages.
 - A growth in the number of visits paid to a service centre above 7 visits a year results in a dramatic drop in the fraction of customers showing the high loyalty level in favour of the fraction of vehicle users with the low level of behavioural loyalty.

The conclusions having been obtained can be considered applicable to the identification of specific customer segments and to the selection of the actions and marketing-mix tools that might be used in relation to the said segments, which is important in the conditions of strong competition in the passenger car servicing and repairing market.

The full text of the article is available in Polish online on the website
<http://archiwummotoryzacji.pl>.

Tekst artykułu w polskiej wersji językowej dostępny jest na stronie
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References

- [1] Aaker D. *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. New York: The Free Press; 1991. 299.
- [2] Allen D, Rao T. *Analysis of Customer Satisfaction Data*. Milwaukee: ASQ Quality Press; 2000. 235.
- [3] Auto Expo. *Charakterystyka rynku w Polsce (Characterization of the market in Poland)*. Warszawa: International Fair Auto Expo Parts, Tires & Service; 2014.
- [4] Banahene S, Ahudey E, Asamoah A. Analysis of SERVQUAL Application to Service Quality Measurement and Its Impact on Loyalty in Ghanaian Private Universities. *Journal of Management and Strategy*. 2017; 8(4): 18-33. <https://doi.org/10.5430/jms.v8n4p18>.
- [5] Bolton R, Kannan P, Bramlett M. Implications of Loyalty Program Membership and Service Experiences on Customer Retention and Value. *Academy of Marketing Science Journal*. 2000; 28 (1): 95-108. 10.1.1.334.9888.
- [6] Brogan C, Smith J. *Zaufanie 2.0. Jak wywierać wpływ, zdobyć lojalność klientów i kreować markę (Trust Agents: Using the Web to Build Influence, Improve Reputation, and Earn Trust)*. Warszawa: OnePress; 2011. 240.
- [7] Burgiel A. Psychologiczne aspekty kształtowania lojalności i ich praktyczne konsekwencje (Psychological aspects of the forming of loyalty and their practical consequences). *Handel Wewnętrzny*; 2007; 6: 13-20.
- [8] Buzzell R, Gale B. *The PIMS Principles: Linking Strategy to Performance*. New York: The Free Press; 1987. 322.
- [9] Dejnaka A. *Budowanie lojalności klientów (Building customers' loyalty)*. Warszawa: OnePress; 2007. 208.
- [10] Gronholdt L, Martensen A, Kristensen K. The Relationship between Customer Satisfaction and Loyalty: Cross-industry Differences. *Total Quality Management & Business Excellence*. 2000; 11(4-6): 509-514. 10.1080/09544120050007823.
- [11] Kotler P. *Marketing Management*. New York: Prentice Hall; 2000. 456
- [12] Kwiatkowska A. Utrzymanie lojalności konsumenckiej w sytuacjach kryzysowych (Sustaining consumer loyalty in critical situations). In: WIŚNIEWSKA A. (ed.). *Kształtowanie lojalności konsumenckiej (Forming consumer loyalty)*. Warszawa: WSP; 2013. 175-203.
- [13] Lotko A. *Marketing wobec ponowoczesności (Marketing in the face of postmodernism)*. Warszawa: CeDeWu; 2013. 139.
- [14] Lotko A. *Classifying Customers According to NPS Index: Cluster Analysis for Contact Center Services*. *Central European Review of Economics and Finance*. 2015; 8(2): 5-30.
- [15] Lotko M, Lotko A, Korneta P. *Jakość usług obsługi technicznej i naprawy samochodów osobowych (Quality of passenger car maintenance and repair services)*. Radom: INW Spatium; 2018. 182.
- [16] Oliver R. Whence consumer loyalty? *Journal of Marketing*. 1999; 63: 33-44. <https://doi.org/10.2307/1252099>.
- [17] PZPM. *Park pojazdów zarejestrowanych w Polsce (The fleet of vehicles registered in Poland)*. Warszawa: Polish Association of Automotive Industry; 2016.
- [18] Reichheld F. *The One Number You Need to Grow*. *Harvard Business Review*. 2003; December: 46-54.
- [19] SDCM. *Branża motoryzacyjna w Polsce 2015 – Liczby, podsumowania, analizy (Automotive trade in Poland 2015 – Figures, summaries, analyses)*. Warszawa: Stowarzyszenie Dystrybutorów i Producentów Części Motoryzacyjnych; 2016.
- [20] Sdcm. *Motoryzacja w Polsce i Europie 2016 (Automotive trade in Poland and Europe 2016)*. Warszawa: Stowarzyszenie Dystrybutorów i Producentów Części Motoryzacyjnych; 2017.

- [21] Siemieniako D. Proces identyfikacji i kwalifikacji lojalnych klientów w organizacji (The process of identification and qualification of loyal customers in an organization). In: Makarski S. (ed.). Marketingowe mechanizmy kształtowania lojalności (Marketing-mix loyalty forming mechanisms). Rzeszów: Wydawnictwo Uniwersytetu Rzeszowskiego; 2007: 68-75.
- [22] Stodulny P. Analiza satysfakcji i lojalności klientów bankowych (Analysis of the satisfaction and loyalty of bank customers). Warszawa: CeDeWu; 2007. 72.
- [23] Studzińska E. Lojalność klienta – pojęcie, podział, rodzaje i stopnie (Customer's loyalty: the notion, classification, types, and degrees). In: Borys T, Rogala P, Skowron P. (ed.). Zrównoważony rozwój organizacji – odpowiedzialne zarządzanie (Sustainable development of an organization – responsible management). Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu; 2015. 195-215. 10.15611/pn.2015.376.14.
- [24] Sulikowski P, Zdbiecko T. Uwarunkowania lojalności, retencji i churnu klientów na przykładzie branży telekomunikacyjnej (Determinants of customers' loyalty, retention and churn on the example of the telecommunication branch). Handel Wewnętrzny. 2015; 3: 273-284.
- [25] Urban W, Siemieniako D. Lojalność klientów. Modele, motywacja i pomiar (Customers' loyalty. Models, motivation, and measurements). Warszawa: PWN; 2008. 150.
- [26] Wilmańska-Sosnowska S. Satysfakcja i lojalność jako wyznacznik kompetencji marketingowych współczesnego przedsiębiorstwa (Satisfaction and loyalty as an indicator of marketing competence of a modern business organization). Handel Wewnętrzny: Marketing, Rynek, Przedsiębiorstwo. 2007; June: 23-28.
- [27] Włodarczyk M, Janczewski J. Warsztaty samochodowe w warunkach globalizacji (Automobile workshops under globalization). In: Ziolo Z, Rachwał T. (ed.). Przedsiębiorczość w warunkach globalizacji (Enterprise under globalization). Kraków: Pedagogical University of Cracow; 2011: 159-172.
- [28] Woźniak M. Reklama jako element kształtujący lojalność handlową (Advertising as a commercial loyalty forming factor). In: Makarski S (ed.). Marketingowe mechanizmy kształtowania lojalności (Marketing-mix loyalty forming mechanisms). Rzeszów: Wydawnictwo Uniwersytetu Rzeszowskiego; 2007. 215-226.
- [29] Yao D. Empirical Research of Perceived Value as a Mediator between Group-buying Service Quality and Customer Loyalty in Catering Industry. Nanjing, Nanjing University; 2011. 179.

