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DO LOYAL CUSTOMERS BUY DIFFERENTLY? EXAMINING CUSTOMERS' LOYALTY IN A SELF-SERVICE SETTING

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Abstract:
The purpose of the current paper is to study how customer loyalty varies in time according to customer segments and external factors. In the first part of the paper, the authors have reviewed in a funnel-like manner the relevant literature, starting with relationship marketing and customer relationship management theories, and ending with customer loyalty. To achieve the paper's research purpose, buying behavior data (recency of last transaction, buying frequency and monetary value spent) from a company's internal information system was analyzed for 2019 and 2020, respectively. RFM model was applied on the 2019 data and resulted in three segments: heavy, medium, and low users - segments which varied in their loyalty for the year 2020. Based on the obtained findings, the authors concluded that the more intense a customer's buying behavior is, the higher their probability is of being loyal in the future. A second conclusion assumes that customers characterized by intense buying behavior are less vulnerable to external threats, the Covid-19 pandemic in our case.

Key words: *customer loyalty, behavioral loyalty, relationship marketing, customer relationship management, Covid-19*

1. Introduction

Gaining customer loyalty is every company's desideratum because of the multiple advantages it brings. Some of these advantages are: loyal customers ensure an on-going revenue stream, they may recommend the company to their peers and the costs of keeping them are lower than the costs of attracting new ones. From a theoretical perspective, customer loyalty - and the related customer retention - are focal points of the relationship marketing and customer relationship management theories which are reviewed in the first part of the paper. From an operational point of view, customer loyalty can be measured through both secondary and primary data. Secondary data is usually data related to the customer's buying behavior such as: buying frequency, monetary value spent within the last shop visit, recency of last transaction and can be retrieved and stored through the company's information system. This manner of measuring customer loyalty is associated with the behavioral perspective of customer loyalty which considers that a customer is loyal to a company as long as they generate revenues to the company. Primary data specific to customer loyalty can be retrieved through direct research methods such as surveys, interviews, and focus-groups. By using surveys, information related to customers' attitude can be measured and analyzed together with behavioral data for an in-depth understanding of customer loyalty.

Within the current paper, customer loyalty is defined as behavioral loyalty and measured through the buying behavior specific dimensions (recency of last transaction, monetary value and buying frequency). The internal information system of a self-service car wash company from a middle-sized town of Romania was used as a data source and unit of analysis. Data was retrieved and analyzed in two years, 2019 and 2020, respectively, for achieving the paper's purpose of studying how the customers' loyalty varies in time according to customer segments and external factors.

2. Theoretical background

Relationship marketing

Relationship marketing is considered by some authors a new understanding and application of marketing (Pop, 2002; Henning-Thurau, Gwinner and Gremler, 2002; Maxim, 2009); this understanding being considered the result of a paradigm shift from the transactional view to the relational view of the exchange as a main concept of market functionality (Cannon and Sheth, 1994; Cristopher et al., 2002). In this regard, the market actors are not engaging in independent transactions with each other, but in exchanges that are based on previous interactions between them. Several definitions have tried to capture the essence of relationship marketing. One of the most known and cited of them implies that relationship marketing's purpose is to create, maintain and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met (Grönroos, 1994). This broad perspective of relationship marketing (Gummenson, 1999; Payne and Frow, 2017) which includes all partners in the company's relationship efforts is different from and comprises the focused approach which considers only the clients as focal point of relational efforts (Sheth, 1994).

A core concept of relationship marketing is that of customer relationship cycle (Bruhn, 2009) which describes the ideal phase-oriented relationship between the company and its customers. This relationship evolves in time according to its intensity and can be split into (mainly) three phases: client acquisition, client retention and client regaining phase. According to the company's marketing objectives and resources, the relationship intensity can be measured either through psychological indicators (e.g. customer's perceived value), behavioral indicators (e.g. buying frequency) and/or economic indicators (e.g. revenue/customer). These indicators provide the company with the necessary data for developing marketing actions meant to achieve relationship marketing specific objectives. In their study, Gilboa et al. (2019) propose small business owners to seek in their communication with customers, their interest in them as persons, not only as clients. By doing that (in a not-intrusive way), social benefits and familiarity can be perceived by the customer, thus increasing their experience which may lead to loyalty. Additionally, the authors concluded that the use of customer data (demo- and psychographic) for creating personalized offers may result in clients perceiving the special treatment benefits which might increase their commitment to the service (Dagger et al., 2011) or their perceived price and value (Han and Kim, 2009) and further their loyalty towards the company (Lee et al., 2008). Buying behavior indicators like the number of purchases in a specific period (or buying frequency) and monetary value (mean buying basket value) are used by Meyer-Waarden (2008) to study the impact of retailers' (supermarkets) loyalty programs on customer purchasing behavior (behavioral loyalty). The results prove that loyalty programs (as a marketing tool) have a significant impact on the clients' buying behavior in that loyalty program members buy more (Kwiatek and Thanasi-Boce, 2019; Kopalle et al., 2012) and more often (Villace-Mollinero et al., 2016) than non-members over the studied three-year period and areas.

This key concept of customer relationship lifecycle is associated with various disciplines, theories, and correspondent models in the scientific literature, its operationalization within companies following similar stages and aiming for the same goal: to understand and effectively manage the relationships between a business and its customers in order to maximize customer lifetime value and create a sustainable competitive advantage in the marketplace (Rust et al., 2004; Payne and Frow, 2005; Reinartz et al., 2005; Lemon and Verhoef, 2016; Peppers and Rogers, 2017). Therefore, the customer relationship lifecycle may be viewed as a strategic framework wherein the overarching philosophy and principles of relationship marketing can be applied, by leveraging the systems, tools, and processes the customer relationship management (CRM) provides. Introducing CRM to this equation relies on the need to differentiate between, yet synergistically and dynamically align at company level philosophy/strategy and action/implementation to strengthen customer relationships, foster customer loyalty and ultimately enhance the shareholder value; also, it is in line with the dominant logic in the current literature (Fletcher, 2001; Boujena and Johnston, 2013; Udaya et al., 2017; Abuhashesh et al., 2019).

Customer relationship management

Since its first introduction to the academic community (in the 1990s), CRM has known a plethora of approaches – mainly mirroring the researchers' area of interest (marketing, management or technology related), the organizational level (strategic, tactical or operational) and the functional areas (e.g., marketing, sales, customer service, information technology) they considered "responsible" for CRM, and/or the prevailing perspective they adopted (philosophical, methodological or analytical) (Ngai, 2005; Sota et al., 2018; Meena and Sahu, 2021).

From a relationship marketing approach - which is of most interest for this paper - Frow and Payne (2009), define CRM as "a cross-functional strategic approach concerned with creating improved shareholder value through the development of appropriate relationships with key customers and customer segments". Building on the philosophy of relationship marketing (Christopher et al., 2002), CRM pertains to the "strategic management of relationships with customers, involving appropriate use of technology" (Frow and Payne, 2009).

Of the four (sub-fields in CRM research and respective) focuses of CRM endeavors - i.e., "customer acquisition, customer retention, customer churn and customer win-back" (Liu et al., 2020) - customer retention has gained particular attention. Characterized as "a phenomenon whereby a customer uses a particular product or service regularly and shows signs of being loyal to the company" (Donaldson and O'Toole, 2007), customer retention has proven to play a crucial role in increasing the overall value of a company's customer base (Peppers and Rogers, 2017) and its profitability (Donaldson and O'Toole, 2007).

The literature on customer retention mainly targets the drives/key determinants of customer retention - and the related customer outcomes of loyalty and satisfaction - (particularly from the customer's perspective) and the CRM strategies and systems (supporting the execution of CRM strategies) to enhance customer retention (reflecting the company's perspective on its relationships with customers).

Thus, Milan et al. (2015) develop and test a model on the (relations among the) determinants of customer retention (in service companies); using structural equation modeling on a sample of 269 client companies of corporate health plans, they relate perceived value, reputation, trust, and switching costs as determinants of customer retention. More recently, Aityassine (2022) outline - using IBM SPSS and AMOS software to analyze data collected via a survey on a 376 restaurant customers sample - that "customer satisfaction had no significant direct effect on customer loyalty but had a significant indirect effect on customer loyalty through customer retention, whereas customer delight had direct and indirect effects on customer effects".

From the company's perspective, the literature highlights the significance of an integrated approach of CRM, built on customer centricity (Peppers and Rogers, 2017), wherein strategic CRM is enforced through operational CRM and analytical CRM (Prior et al. 2024). Thus, Hong-kit Yim et al. (2004) design and test a model on "the effects of CRM performance dimensions on customer satisfaction, customer retention, and sales growth"; using factor analysis on a survey sample of 215 senior-level respondents from service firms, their findings show that: 'Focusing on key customers' significantly affects customer satisfaction while indirectly affecting customer retention and sales growth. 'Managing knowledge' has a significant direct effect on customer satisfaction and retention, while also indirectly influencing customer retention and sales growth (through customer satisfaction). 'Organizing around CRM' directly impacts customer retention (and indirectly and significantly influences sales growth). There is no indication that integrating CRM-based technologies has a major impact on performance metrics (Hong-kit Yim et al., 2004). In a recent study, using PLS-SEM to analyze data collected via an online survey on 128 Portuguese companies, Miguel and Crespo (2023) outline the significant and positive influence of the integrated implementation of CRM strategy's dimensions - i.e., customer management, organizational alignment, CRM technology and CRM strategy implementation - on WOM, customer satisfaction, and customer retention; they outline that, "to generate a positive impact on consumer behavior (…) there should be an integrated execution of CRM implementation strategy, customer management and organizational alignment supported by technologies" (Miguel and Crespo, 2023).

Customer loyalty

Gaining customer loyalty is considered a main marketing objective of every company (Varadarajan, 2010) due to the advantages it brings (Reichfeld and Teal, 2001). It can be achieved by using relationship marketing instruments specific for the retention phase of customers, loyalty being thus a direct and/or indirect result of the company's actions. Being such an important practical aim, a stream of studies has tried to provide insights into what is customer loyalty, what are the factors influencing it and what are its effects. One stream definition for customer loyalty considers customer loyalty as the repeated buying behavior of a customer in a specific period (Dawes et al. 2015). This understanding of customer loyalty considers the action-oriented aspect of loyalty, named behavioral loyalty in the specific literature. Thus, buying behavior specific indicators such as monetary value spent by the customer (within the last shop visit or within a period), buying frequency, quantity bought, date of last buy are measures of behavioral loyalty.

Academic literature has studied the influence factors, either moderating or mediating, on behavioral loyalty in different industries. Moreover, the studied influence factors were either psychological, specific for the customers and/or company actions related. Martos-Partal and Gonzales-Benito (2013) considered the Spanish retail industry for studying the influence of shopping motivations (expected utilitarian and hedonic benefits) on store loyalty. They used share of wallet with the main retailer as a measure for behavioral loyalty (panel data) alongside with the consumers' self-assessed loyalty (primary data). Results showed that loyal customers tend to be less price-sensitive (Low et al., 2013; Stangl et al., 2016), more time and service sensitive and less concerned about new experiences. Additionally, the two measures of loyalty relate differently to the customers' shopping motivations, in that the motivational variables influence in a higher degree the customers' self-assessed loyalty than the observed loyalty (panel data). Behavioral loyalty measures such as transaction date, quantity and price paid for the purchased items were modeled by Jaiswal et al. (2018) in relation with customers' transactional characteristics (service communication, product return activity, types of products) and relationship characteristics (trust, acquired by referral, relationship length). The use of longitudinal (secondary) data alongside cross-sectional data (primary) enabled the authors to link customer specific attitudinal factors (trust) with behavioral ones (transactional data) and prove that customers' trust in the company positively affects the customers' behavioral loyalty. Connecting customers specific attitudinal and behavioral variables is in line with the customer value chain research (Bruhn, 2009; Dumitrescu and Tichindelean, 2011) which integrates company inputs (e.g. marketing actions), customer (attitude and behavior), company outputs (e.g. revenues) and external factors into one *multiple black-box* model.

This understanding of customer loyalty through its behavioral dimensions undoubtedly has several advantages for both theoretical development and practice. From the practical perspective, behavioral loyalty shows what the consumer does by measuring the actual buying behavior which is a revenue generator for the company. In theory, it is the base for other developments of customer loyalty which tap into the psychological aspects of loyalty which may determine actual behavior.

In this regard, a seminal work is that of Dick and Basu (1994), who consider customer loyalty as the relationship between the customer's relative attitude towards the entity and their patronage behavior (repeat buying behavior). This blend of relative attitude with patronage behavior can result in four types of customer loyalty: loyalty, latent loyalty, spurious loyalty, and no loyalty at all. Out of these four categories of loyalty, for one company, the most desirable one is the first one characterized by the customers' high relative attitude towards the company (meaning that they have an intense, positive attitude towards the company, and they can easily differentiate the company from its competition) and by their strong patronage behavior. Another strongpoint of this framework resides in the possible antecedents it proposes for relative attitude (cognitive, affective, and conative) and the external factors which may influence repeat patronage (social norms and situational factors).

Oliver (1999) split the attitude-behavior understanding of loyalty into four successive stages of loyalty each with its own markers (characteristics) and vulnerabilities. The first stage has been called cognitive loyalty and is characterized by the brand attribute specific information the consumer has available at a certain moment of time. As the author presumes, this cognitive loyalty is of shallow nature in that the consumer processes only attribute-specific information and no feelings (positive or negative) associated with the brand. Positive feelings (likings or preferences) towards the brand can emerge if the consumer acknowledges several satisfactory encounters with the brand, thus enabling the second stage of affective loyalty. The third stage of loyalty, conative loyalty, assumes that the consumer has had several positive experiences with the brand, has developed a preference towards the brand and has the intention to rebuy the brand. Only one step is left to transform the buying intention into actual buying (fourth stage of loyalty, action loyalty), this one step being related to the motivational process (Schiffman and Kanuk, 2014) of the consumer which is ready to eliminate obstacles (e.g. physical effort, time spent, money paid) for buying the brand, and ultimately need fulfillment.

3. Research methodology

The purpose of the current study is to get insights into how customer loyalty varies in time according to customer segments and external factors.

The needed data was collected from the internal information system of a SME which operates in the self-service sector of Sibiu, a medium-sized town of Romania. A business line of the considered SME includes a self-service car washing system in which the customer uses the company's facilities to clean their car. The customer's involvement in performing the service by using the company's resources, thus contributing to their perceived value co-creation, is a classic example of the service-dominant logic paradigm (Vargo and Lusch, 2017) - a consistent theoretical body linked to the relationship marketing theory (Vargo and Lusch, 2004). From an operational point of view, the company uses a card-based system which allows customers to buy points (via a vending machine) which are used to perform the car-washing service. All customer transactions-related information is stored in an internal database which is used as data source for the current research. It is worth mentioning that every card has a unique identification number (no personal data like name, e-mail or telephone number of the cardholder), thus allowing to associate transactions performed in a period of time to a unique cardholder.

For achieving the proposed research purpose, the following research objectives are developed:

RO1: Identifying the dynamics of the customers' buying frequency for the period 2019/2020

Buying frequency is considered one measurement of the customers' behavioral loyalty and is defined as the number of transactions performed by a customer during a period. For the present study, buying frequency represents the number of car washes a customer performed during the years 2019 and 2020 within the considered company.

RO2: Identifying the dynamics of the customers' monetary value for the period 2019/2020

The spent monetary value is a second dimension characterizing the customers' behavioral loyalty and may represent the amount of money spent by the customer within their last transaction or total or average amount of money spent by the customer in a period. In the present study, monetary value depicts the average lei (Romanian currency) spent by a customer during the years 2019 and 2020 within the considered company.

RO3: Segmenting the customers by using the RFM model

The RFM model is a well-known clustering model used for segmenting existing customers according to three buying behavior dimensions - recency of last transaction, buying frequency and monetary value spent (Hughes, 1994; Rungruang et al., 2024). Several algorithms can be used for grouping the customers, all of them using either the relative distance (e.g. Pearson correlation) or the absolute one (Euclidean distances) between the considered objects, customers, respectively (Țichindelean, 2014).

Alongside buying frequency and monetary value which were previously defined, a third measurement of behavioral loyalty is represented by the recency of the last transaction performed by a customer in a period. This recency denotes how close (either in days or weeks) the last customer's transaction was to what the researchers consider as the present moment. For the current research, recency of last transaction denotes the week of the years 2019, and 2020 respectively, the customer has used lastly the company's services.

RO4: Determining the customers' loyalty rate for the period 2019/2020

As previously mentioned, customer loyalty is understood as behavioral loyalty and is measured as the number of customers who have used the company's services at least once in both years, 2019 and 2020, respectively. Specifically, a customer who had at least one transaction with the company in 2019 and 2020 is considered a loyal customer.

RO5: Analyzing if and how the customers' loyalty varies across segments and external factors

To achieve this research objective and thus, the research purpose, the authors hypothesize that the loyal customers (RO4) will vary according to the identified customer segments (RO3). Additionally, the authors consider that the Covid-19 pandemic may have an influence on the customers' loyalty according to the resulted customer segments (RO3).

4. Data analysis and results

Based on the nature of the research purpose, the current study is classical descriptive research which uses longitudinal data to check the possible evolution of the studied marketing phenomena (Malhotra, 2019), customer loyalty, in particular. The available data is secondary and quantitative, ratio scales being used for measuring the variables of interest for the years 2019 and 2020. Moreover, the internal database was edited and analyzed by using Microsoft Excel and IBM SPSS v.24 tools and software.

RO1: Identifying the dynamics of the customers' buying frequency for the period 2019/2020

For the year 2019, 10.757 unique customers have used the company's car washing services on an average of 11,49 times. Additionally, a mode of 2 suggests that most of the customers have washed their car 2 times in 2019 while the median of 5 splits the customers in two equal groups according to their buying frequency, half of them having used the company's services more than 5 times in 2019, the other half under 5 times. Relating the buying frequency average to its standard deviation (17,78) and considering the Skewness (4,77) and Kurtosis (46,4) values, it can be concluded that the buying frequency is characterized by heterogeneity, positively skewed and leptokurtic (Table 1).

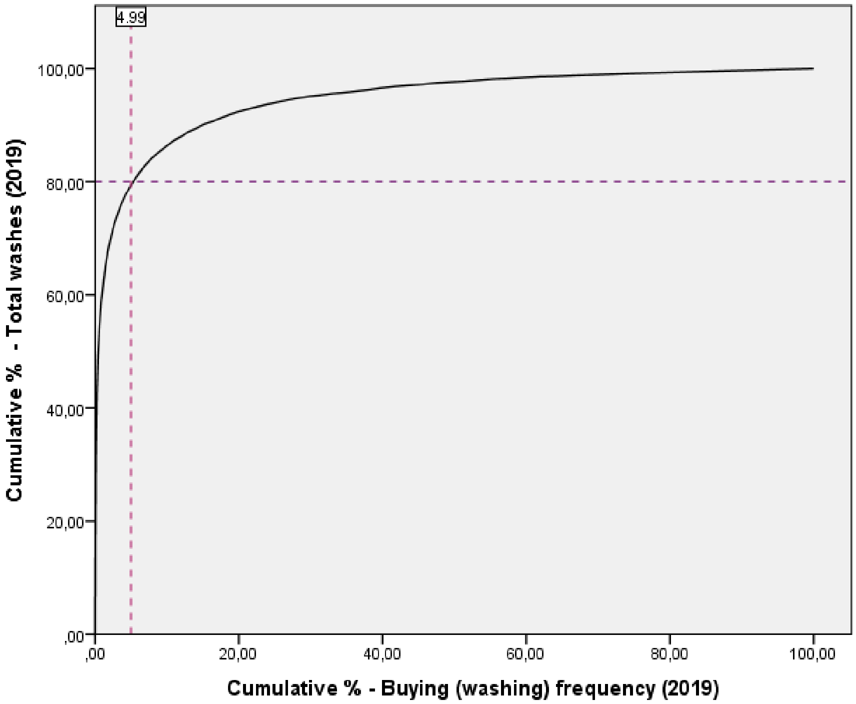
Table 1 Descriptive statistics of the customers' buying frequency for the year 2019

Buying frequency (year 2019)	
Mean	11,49
Median	5,00
Mode	2
Standard Deviation	17,79
Skewness	4,77
Kurtosis	46,4
Minimum	1
Maximum	379
Valid cases	10.757

An adaptation of the Lorenz curve has been performed to know what percentage of customers have used what percentage of the company's services (Figure 1). It can be seen that 80% of the customers have had a buying frequency of maximum 15 washes for the year 2019, suggesting that there is a group of customers (the other 20%) who are high users of the company's services. The 5% on the Ox axes represents the cumulative percent of the buying (washing) frequency which starts at 1 (minimum) and ends at 379 (maximum) corresponding to the 80% of total washes. Thus, the buying frequency values from 1 to 15 represents 5% of the whole buying frequency values.

The year 2020 meant an overall monetary value decrease of 11,15% in the company's business. Although this decline implied less unique customers and less used car washing services, the average buying frequency (=11,39) was similar to the one in 2019, as was the standard deviation (=18,1). This could only suggest that independent of the decline, the buying frequency followed the same pattern as in 2019 described by high heterogeneity, positively skewed and leptokurtic shaped. It is important to mention that in the beginning of 2020 the Covid-19 disease spread globally, Europe and Romania included, and was declared by the World Health Organization (WHO) a pandemic on the 11th of March 2020 (WHO, 2020). To fight the spread of the virus, the Romanian government took the first measures (restrictions) for protecting its citizens on 15th March 2020 by declaring a state of emergency. Thus, schools, cinemas, shopping malls, theaters, museums were closed and during day-time citizens were allowed to move freely only with a personal statement specifying their purpose and itinerary (Europa Liberă România, 2020). During the night, the citizens' movement was forbidden with few exceptions. The pandemic and the resulting restrictions negatively affected almost every aspect of personal and professional life.

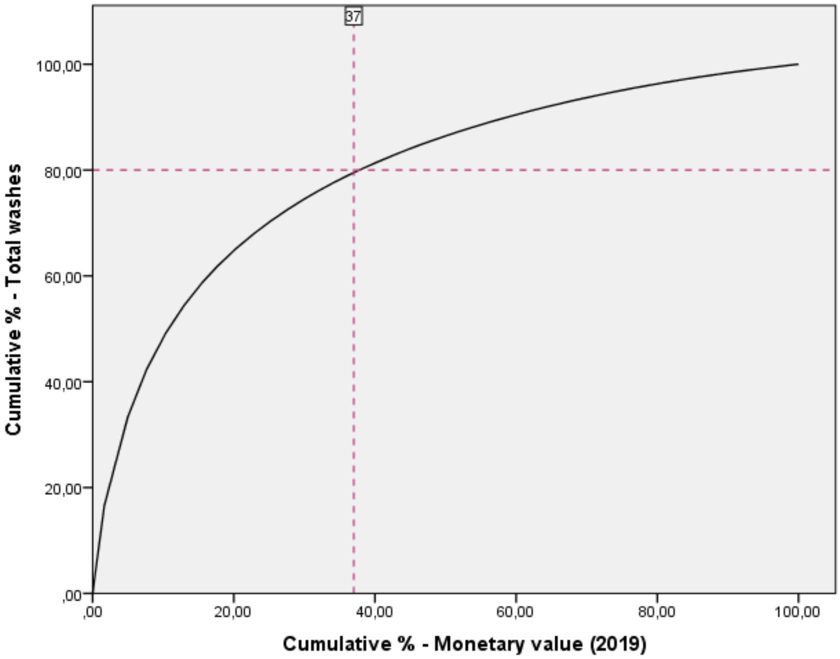
Figure 1 Adapted Lorenz curve applied on the customers' buying frequency for the year 2019



RO2: Identifying the dynamics of the customers' monetary value for the period 2019/2020

In analyzing the monetary value spent by the customers for the years 2019 and 2020, respectively, the authors considered the company's request to use relative values and not absolute ones. Thus, for the year 2019, the monetary value variable is characterized by a standard deviation higher than the mean, with a variation coefficient value of 1,6 indicating high heterogeneity. Additionally, the Skewness (4,77) and Kurtosis (46,4) values suggest a positively skewed and asymmetric distribution. The adapted Lorenz curve (Figure 2) indicates interesting results in that 80% of the clients (those clients who have a buying frequency from 1 to 15 times/year) generate 37% of revenues; meaning that 63% of revenues are the result of 20% of the company's clients (in particular, those clients which have a buying frequency over 16 times/year).

Figure 2 Adapted Lorenz curve applied on the customers' spent monetary value for the year 2019



Keeping in mind that the year 2020 meant a general business contraction of 11,15% relative to 2019, the average monetary value spent by the customers decreased with 0,8% while the standard deviation grew with 1,8% resulting in a variation coefficient value of 1,6 (identical with the one in 2019). As for the buying frequency, the monetary variable seems to vary in the same manner in 2020 compared to 2019, being highly heterogeneous, positively skewed, and leptokurtic.

RO3: Segmenting the customers by using the RFM model

IBM SPSS V.24 software was used to perform customer segmentation based on the RFM model. More specifically, k-means cluster analysis was applied by including the three variables (2019 values) - buying frequency, monetary value, and recency of last transaction as clustering variables. After 23 iterations and using a convergence criterion of 0,02, three clusters were obtained, with the final cluster centers being presented in Table 2.

Table 2 Client clusters resulted after applying the RFM model (2019)

Final Cluster Centers			
	Clusters		
	1 (211)	2 (1655)	3 (8891)
Buying frequency	95	34	5
Monetary value	68	24	4
Recency	49	46	32

To maintain the confidentiality of the monetary value cluster centers and to keep the differences between them, their values were divided by a positive number.

Due to the highest centers' values, customers in Cluster 1 can be considered *heavy users* of the company's car washing services. In this regard, for the year 2019, a heavy user has used on average the company's services 95 times, has spent a mean value of 68 and has bought lastly in the 49th week of the year. *Medium users* (Cluster 2 customers) had a less intense buying behavior than the heavy ones, but still favorable for the company. Thus, a medium user had an average buying frequency of 34 times for the year 2019, had spent an average amount of 24 and had bought lastly in the 46th week of the considered year. Most of the company's customers (8.891) can be considered *light users* of the company's car washing services, having the lowest average values for all three clustering variables. These customers represent the majority in terms of buying frequency (80% of them but maximum 15 times/year - RO1), but not in terms of money spent (they represent 37% of the total amount of money spent by the customers).

RO4: Determining the customers' loyalty rate for the period 2019/2020

For computing the customers' loyalty rate for the period 2019/2020, a loyal customer is considered a customer which has used the company's services at least once both in 2019 and 2020. Based on the upper, out of 9.630 unique customers in 2020, 4.785 of them have used at least once the company's services in 2019, resulting in a loyalty rate of 49,64%.

More in depth analysis shows that there is a drop-out rate of 44,48% for the period 2019-2020 (out of 10.757 unique customers in 2019, 5.973 have not used at least once the company's services in 2020) and a new client acquisition rate of 50,36% for the same period (out of 9.630 unique customers in 2020, 4.845 are new customers who have started to use the company's services in 2020).

RO5: Analyzing if and how the customers' loyalty varies across segments and external factors

Figure 3 Client structure according to RFM clusters (2019)

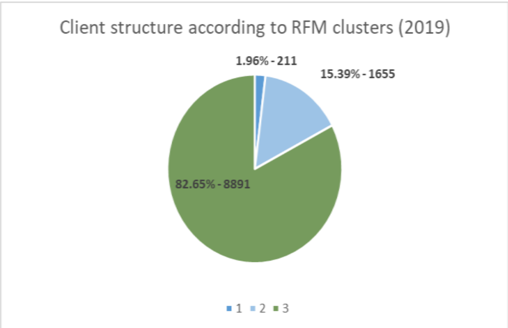
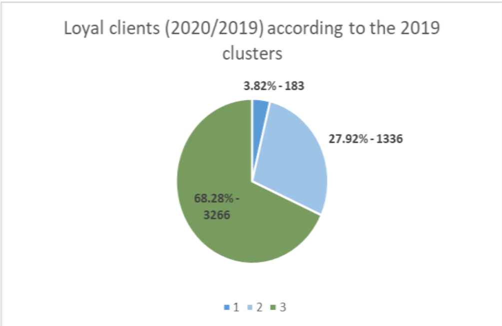


Figure 4 Loyal clients (2019/2020) according to the 2019 clusters



As previously defined (RO4), a loyal customer is a customer who has used the company's services at least once in both years, 2019 and 2020, respectively. These loyal customers were grouped in one of the three clusters developed in RO3 (heavy, medium, or light users). Thus, out of 4.785 (100%) loyal customers in 2020, 183 (3,82%) are heavy users, 1.336 (27,92%) are medium users and 3.266 (68,28%) are light users of the company's services.

The absolute values of the clusters in 2020 (Figure 4) are lower than those in 2019 (Figure 3) because of the simple reason of clients dropping out in 2020 relative to 2019 (drop-out rate of 44,48%). When considering the relative decrease of the cluster member numbers, interesting insights result. Thus, out of 211 heavy users in 2019, 183 remain loyal to the company in 2020, resulting in a relative decrease of 13,27%. The medium users decrease from 1.655 members in 2019 to 1.336 loyal ones in 2020 (19,27% decrease) and the light users from 8.891 (2019) to 3.266 loyal clients (drop of 63,26%). These results suggest (not statistically validate) a possible relationship between the intensity of the clients' buying behavior and their loyalty towards the company. Otherwise said, the more frequent a client buys in a specific period, the more money they spend in that period, and the more recent relative to a considered point in time they use the company's services, the higher the probability is of being loyal in the next period. Subsequently, the more intense the clients' buying behavior (and accordingly their cluster membership), the higher is the probability of them being loyal to the company.

5. Conclusions, managerial implications, and directions for future research

This article proposed a study of customers' loyalty over time by considering the customers' buying behavior (intensity) in a self-service context. Using the company's CRM system, secondary data was collected regarding the customers' buying behavior for the year 2019; more specifically, recent transaction (R), buying frequency (F) and monetary value (M) spent by every one of the 10.757 customers. The three mentioned variables were used as input for applying the known RFM model which grouped the customers in three clusters in accordance with their buying behavior intensity (Table 2). Customer loyalty was defined and measured according to the behavioral perspective, thus a customer who used the company's services at least once both in 2019 and 2020 was considered a loyal customer. A loyalty rate of 49,64% was computed for the period 2019-2020, this loyalty being split differently according to the customers' buying behavior intensity, as follows: heavy users had the highest degree of loyalty (86,73%), followed by the medium (80,73%) and light users (36,73%). Such results point to the first conclusion that the more intense the customers' buying behavior is, the higher the probability is of them being loyal to the company in the future. This conclusion is in line with the findings of Dawes (2022), Buckinx and Van den Poel (2005), Baltas et al. (2010), Baloglu (2002), Morisada et al. (2018).

A second conclusion relates to the re-buying behavior of loyal customers despite the competitions' marketing efforts (Oliver, 1999) - therefore proving "true loyalty" to the company (Kumar and Shah, 2004) - and the threats posed by external, macroeconomic factors (Vlachos and Skoumpopoulou, 2014; Morgeson III et al., 2024). Such an external, macroeconomic factor which affected (mostly) negatively every person's life and businesses' activity was the Covid-19 global pandemic. In Romania, the first restrictions were imposed on 15 March 2020 (MO 212/2020), including limitations of free movement of citizens without a pertinent reason approved by the government. The data used for the current study was particular for the years 2019 and 2020, meaning that after the 15th of March 2020 the data captured the pandemic specific buying behavior of customers. Based on the results that the loyalty rate (2020/2019) decreased according to the cluster membership - from a 86,73% rate (heavy users) to 80,73% (medium users) and 36,73% (light users) - it can be speculated that the Covid-19 pandemic with all its negative effects, movement restrictions included, had a less negative impact on heavy users relative to medium and light ones. In other words, the more intense the buying behavior, the less vulnerable a customer to external threats is, movement restrictions and health exposure in our case. Few authors have studied how the Covid-19 pandemic has impacted customers' loyalty, especially behavioral loyalty (re-buying behavior), probably because of the lack of behavioral data before, during and after the pandemic. Some authors (Laparojkit, 2022) have considered the pandemic as a context for validating relationships between relationship marketing variables (Rootman, 2022; Herreo, 2022; Suhartanto, 2024; Woossnam, 2021) - the used variables being measured through interval scales, thus, as perceived by the respondents. Other authors (Ping, 2022; Esmailpour, 2022) have used the Covid-19 context as a moderating variable (customers' Covid-19 attitudes and engagement) of the relation between customer brand engagement and customer loyalty, once again all variables being interval ones.

The results confirm that loyal customers, one of any company's (relational) marketing main objectives, could represent valuable competitive assets, determinants of its (sustained) competitive advantage on the market (Arslan, 2020; Al Karim et al., 2023). To fully capitalize on this potential, CRM - viewed "as a strategic process in which firms take advantage of customer data and technology methodologies to acquire, retain and win back customers in order to create both customer and firm value" (Liu et al., 2020) - plays a crucial role. Managing its customer retention dimension - aiming to strengthen customer relationships and drive customer loyalty - may consider Ascarza et al.'s (2018) proposed comprehensive framework that "starts with a retention infrastructure - data and methods - and proceeds to the design of individual campaigns, coordinating multiple campaigns, and integrating retention efforts with marketing strategy". In terms of specific systems and initiatives (contingent to the company's market circumstances and objectives), companies may consider, among others: customer loyalty programs (Hofman-Kohlmeyer, 2016), customer journey mapping (Rana et al., 2022), customer engagement (Bansal and Pruhti, 2021), personalization and customization (enabled by Big Data) (Anshari et al., 2019), or complaint management (Kumar and Kaur, 2020).

The current study considers loyalty only from its behavioral perspective, ignoring the attitudinal component and understanding. Future research in studying customers' loyalty should also include the attitudinal part, alongside the behavioral one. Leveraging the company's CRM system - seen as "the underlying technology employed to deliver on the [CRM] strategy" (O'Reilly, 2009) - is likely to provide more customer-related data and insights to be used to increase customer retention/loyalty and ultimately both company and customer (long-term) value. By using customer cards or Apps, buying behavior specific information can be stored every time a customer interacts with the company. Moreover, periodical surveys can be sent to the company's customers to retrieve attitudinal loyalty specific information. Linking and analyzing behavioral and attitudinal information may provide a more comprehensive understanding of customer loyalty. For validating (or not) the obtained results and conclusions, this study should be replicated by using data from companies competing in the same industry (self-service car washing industry) or in other industries. The self-service setting is in line with the service-dominant logic (Vargo and Lusch, 2017) which supposes that by actively participating in the co-creation of value, the customer may have an additional motivation for obtaining excellent service performance. In this regard, it should be checked if the self-service setting itself may be a determinant of customer loyalty which makes them more immune to external factors.

There are two main limitations of the study, the first one being that the used data analysis methods are descriptive and not inferential in nature. The applied data analysis methods (cluster analysis and descriptive statistics) were chosen considering the study's purpose and type of available data (ratio and longitudinal data). Inferential statistics methods were not fitted for the current analysis because the whole population (entire customer base of a company) and not just a sample was studied. The second research limitation is an effect of the first one in that the findings are empirical in nature for the first conclusion and represent the base for deduction for the second one. The authors' result-based deduction that customers characterized by an intensive buying behavior are less vulnerable to external threats (Covid-19 pandemic in our case) than other customers should be verified and (possibly) proven through specific data.

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