

# The Impact of the Coronavirus Pandemic on SMEs in Term of Customer Centricity in Slovakia and Hungary



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**Abstract** The purpose of the study is to examine the impact of the coronavirus pandemic on SMEs, with a particular focus on their customer centricity. In the theoretical approach, we explore role and importance of customer centricity, as well as changes in buying behavior, using scientific literature. In primary research phase, based on questionnaire survey, we present the effects of the pandemic using various statistical methods, with specific focus on corporate reliability, customer re-engagement, and encouraging repeat purchases. We can conclude that the more attention a company pays to reliability, the easier it can persuade customers to purchase their services and/or products. Companies that have experienced a crisis situation to a large extent are heavily focused on re-engaging their existing customers for repeat purchases. Companies that believe it is more challenging to persuade customers after the COVID-19 pandemic are looking to introduce new marketing tools in the hope of incentivizing purchases.

**Keywords** Impact of coronavirus pandemic · SMEs · Customer centricity · Buying behavior · Statistical methods · Corporate reliability · Customer re-engagement · Repeat purchases

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## 1 Introduction

The coronavirus pandemic has fundamentally changed the lives of both businesses and individuals. In most cases, uncertainty dominated the lives and everyday routines of businesses and employees alike [1]. The pandemic often forced participants in the economy to adapt to changes. It is important to highlight that, in addition to customers, companies also had to prioritize the health protection of their employees. The outbreak had negative impact on both consumer and business confidence, potentially resulting in reduced consumption and investment. As a result, many companies struggled to adjust to the new circumstances. Since the pandemic significantly affected the daily lives of various economic actors, including households, it can be said that both demand and consumer behavior underwent significant changes. For companies aiming to adapt more quickly to the newly emerging market situation, it was necessary to closely monitor the dynamically shifting consumer needs. In order for organizations to achieve maximum growth and maximize their sustainability, it has been and will continue to be crucial to rethink their operational strategies. According to study by Dore et al. [2], customer experience has become extremely important nowadays. Companies have generally approached the desired customer experience by creating seamless and convenient customer journeys, allowing them to better meet their customers' needs. Organizations will make much greater efforts to satisfy their customers' primary needs. Building on this, customer centricity has become a key issue during the pandemic and is expected to continue to strengthen even after the pandemic. Various needs have intensified. If companies fail to meet them, there is a high likelihood of decline in the customer base. To retain customers, continuous monitoring of the evolving situation, introduction of new marketing tools, and implementation of strategies have become crucial. According to Engidaw [3], the most characteristic trend among small businesses during the pandemic was the utilization of internet-based opportunities. In reality, the tools offered by the internet served as a lifeline for small businesses, enabling them to ensure their operations. However, according to the OECD report [4], SMEs were particularly vulnerable to the shocks caused by the pandemic, as they were overrepresented in sectors such as tourism and other services that were heavily impacted. Several significant studies have demonstrated that SMEs were greatly affected during the pandemic [5, 6]. Based on this, our thesis examines the main tools utilized by companies to ensure successful sales and strengthen their customer-centric approach.

## 2 Theoretical Background

Customer-centricity is a widely discussed topic among researchers as well as corporate leaders. It is clear that customer orientation has numerous positive implications, allowing companies to significantly increase their profits and, in certain cases, even create a competitive advantage over their rivals in the market [7]. The COVID-19

pandemic has significantly amplified the role of customer-centricity, and customers now tend to choose companies that go above and beyond to meet their needs at the highest level of quality. It is evident that satisfied and loyal customers are easier and more cost-effective to retain and are more likely to engage in repeat purchases compared to new customers. Due to the impact of the COVID-19 pandemic, the importance of customer-centricity has undeniably strengthened both among the companies and the customers. In our terms, customer-centricity is crucial for companies to maximize customer satisfaction. From the perspective of companies, it is extremely important to delve deeper into customer expectations and satisfaction in order to adjust and potentially improve their customer-centricity. To achieve this, continuous monitoring of customer satisfaction is necessary as these analyses provide valuable insights for companies. According to Belandria [8], oversupply has placed the customer in a central role, where the efforts of companies are solely focused on satisfying the customer. Companies that genuinely adopt a customer-oriented approach place customer values at the core of their objectives. Based on this, certain departments within the company are also operated based on this philosophy.

According to Hemel and Radmakers [9], companies that prioritize becoming customer-centric and make every effort to achieve this can gain significant advantages. They believe that companies should primarily motivate their employees and provide guidance to ensure that customers have positive experiences and form a favorable impression of the company and its customer-centric practices.

For companies following a customer-centric approach, it is crucial to ensure that they can deliver the best possible value to customers given the circumstances. According to Hughes et al. [10], it is worthwhile to focus on simple yet bold approaches that tangibly reinforce the key messages formulated and advertised by the company, contributing to customer-centricity. Building on the findings of the authors, it is important first to assess the current level of customer-centricity within the company to gain a comprehensive understanding of the tools that can contribute to achieve customer-centricity. Additionally, documenting and closely monitoring the entire customer lifecycle can be beneficial, as it provides crucial insights into the customer experience. Performing in-depth research analysis can yield positive results by deriving conclusions from the data that can guide informed decision-making within the company. Finally, companies need to consider both short-term and long-term developments to concentrate on achieving customer-centricity. According to Ulwick [11], becoming a customer-centric company is not easy, but it is not impossible either. The main goal for each employee is not to be a customer-centric expert, but rather understand and draw the appropriate conclusions from the relevant customer data. To achieve this, companies need to initiate customer-centric research processes that enable the collection of unique customer information that can be used for future value creation.

Fader [12] presents a somewhat different approach compared to the previous perspectives, as he believes that customer-centricity is mainly about successfully identifying the most valuable customers, and then apply all the possible tools to gain significant profit for the company. Subsequently, the company should strive to attract and acquire as many similar customers as possible. By retaining and

acquiring these customers, the company can gain significant strategic advantages over its competitors.

According to a study by Lake [13], Jančíková and Strážovská [41] or Csabay and Stehlíková [43], micro and small businesses tend to place a greater emphasis on developing customer-centric approaches in order to understand the needs of their customer base. Cradden [14] and Csabay et al. [44] suggests that many small and medium-sized enterprises (SMEs) may assume that customer satisfaction and establishing customer-centricity are primarily achievable and relevant to large corporations. However, it is undeniably important for SMEs to have a presence and maintain a focus on customer satisfaction and customer-centricity as well.

According to the article by Miller [15] published in the Harvard Business School online repository, observing customer behavior can be an effective strategy. It is worthwhile to monitor customer actions at each stage of the purchasing process and make informed business decisions [46, 47] based on the data and observations obtained. In our view, it may be beneficial to utilize the platform, where the company strives to establish a connection with customers, which can include various social media platforms. Through these online platforms, customer needs can be effectively assessed by observing social conversations, keywords, and hashtags. This allows the identification of emerging trends, which can inform relevant and well-timed business decisions.

Patel [16] highlights that providing high-quality customer service is another method through which a company can thoroughly assess customer needs. From a specific perspective, real-time support can be incredibly important to customers. The use of various chatbots allows companies to engage in live conversations with customers, providing real-time assistance during the sales process. Chatbots enable round-the-clock communication, but it is important to consider the limitations of this method as well. In many cases, customers have very specific requests that may not guarantee an appropriate response since chatbots typically operate based on predefined patterns. Despite this limitation, chatbots remain highly effective and rewarding, as they provide valuable insights to the company through the reception of various customer inquiries.

Rubkiewicz and Kowaska [17] suggest that conducting detailed competitor research can be an effective method for assessing customer needs. This approach involves identifying competitors' problems and desires, as it provides a simple way to uncover customer preferences and issues. For example, if a company offers a service that is also provided by its competitors, it can be valuable to investigate the complaints and feedback from customers who have used the service. This information can be used to improve and further develop the service offered. By understanding the shortcomings of competitors and addressing them in their own offerings, companies can better meet customer needs and gain a competitive advantage.

Caliskan-Esmer [18] and Ďuriš et al. [42] emphasizes that companies are placing greater emphasis on customer-centricity to stay connected with new trends. Relationship marketing can be a useful tool in this regard, as it helps build stronger connections with customers, which is essential for survival in the current market environment. According to Minguez-Sese [19], relationship marketing can be a key

factor in companies' strategies, as it leads to higher levels of customer commitment and loyalty. Referring to the findings of Sedalo et al. [20], the application of relationship marketing significantly contributes to brand reputation and customer acquisition, as it encourages repeat purchases. In our view, by utilizing relationship marketing, companies aim to retain their existing customers and strengthen their satisfaction. Building long-term relationships is a clear objective of this approach. To achieve this, companies often conduct post-purchase surveys through various platforms and provide other post-purchase services.

Yo-Campos [21] suggests that the increasing availability and accessibility of data can provide professionals with higher quality information, enabling them to make better strategic decisions. This data and information allow them to better understand customer behaviors and preferences, which play an essential role in developing effective relationship marketing strategies. By leveraging these insights, companies can tailor their marketing efforts to align with customer needs and expectations, ultimately enhancing customer satisfaction and loyalty.

Gilboa et al. [22] share a similar viewpoint, stating that small businesses can create a key competitive advantage over other small businesses in the market by offering personalized services. To achieve this, they encourage these businesses to store important customer information, including their purchases, in a database. With this data, they can make decisions that enable them to provide highly personalized services or products, which in turn increases trust and loyalty. Based on this data, the relationship marketing strategy can be improved according to specific customer needs, maximizing its effectiveness and success.

Firdaus and Kanyan [23] propose four main categories of relationship marketing. The first step is trust, where the company focuses on building trust with both employees and customers. In both cases, participants should be aware of their responsibilities and be able to rely on each other. This is followed by communication, which can be approached from two sides: effective information transmission from the seller's side and effective communication of individual needs and feedback from the buyer's side. However, we believe that companies need to take initiative to encourage customers to provide feedback on their shopping experiences and overall satisfaction. The third category is empathy, wherein the company strives to understand and assess the needs of its customers and aims to find rational solutions to address any dissatisfaction that may arise. The last category is commitment, which requires both parties to be willing to establish a strong relationship. Both the buyer and the seller need to make efforts to create a fruitful relationship that can be shaped into a positive outcome according to their respective needs.

During the coronavirus pandemic, consumers' attitudes and purchasing habits underwent significant changes, and it is likely that a portion of this new mindset will remain even after the pandemic subsides. According to a press release from the European Commission in 2021, 71% of consumers made online purchases in 2020. Furthermore, 42% of consumers considered postponing major purchases, while 80% had no travel plans until the situation improves. During their purchases, 56% of consumers took various environmental factors into account, and 67% stated that they bought products with a lower environmental impact, even if the price of the product

significantly increased. Additionally, 81% of consumers supported local businesses by making purchases closer to home whenever feasible. The aforementioned data is supported by Sinclair's [24] research, which indicates a significant increase in "near me" type searches based on user search interests, as consumers sought to meet their needs locally. Tao et al. [25] suggest that consumers experience various psychological changes during challenging times, which tangibly influence their purchasing behavior. In such times, hoarding, panic buying, impulse buying, compulsive buying, and a preference for online shopping may come to the forefront. According to Pantano and Willems [26], increased shopping and impulsive and compulsive buying can lead to dependency and financial difficulties [45]. On the other hand, when individuals experience a crisis, there is a greater chance that they will carefully consider their expenses and purchasing habits, and potentially strive not only for rational decision-making but also for more sustainable choices. Das et al. [27] suggest that individuals who have experienced a pay cut or job loss have become quite active in practicing yoga and purchasing herbal remedies. These facts indicate that people will pay much greater attention to preserving their health in the future.

According to Sinclair's [24] analysis for Google, it can be said that during the COVID-19 period, there was a significant increase in interest in virtual alternatives. Furthermore, consumers became incredibly concerned about obtaining accurate information about the products, making it particularly necessary for merchants to keep the information about their offered products or services up to date. These factors should be taken into account by companies as continuous monitoring of consumer changes can facilitate the introduction of innovations. It may be worth considering the use of QR codes, the introduction of applications and virtual alternatives, as there is a clear increase in demand for these based on research data. Considering the study by Sinclair and Moneta [28], the consequences of the pandemic have clearly accelerated the development of the digital world. New digital habits have also emerged in the area of consumer behavior, which will continue to evolve in the coming years. Since different countries are currently in various stages of economic recovery, this presents a suitable opportunity for companies to think big and change their business activities to meet the new digital expectations. What is certain is that the default shopping platform has become the online space. Since the beginning of March 2020, global interest in online shopping has doubled. Aronson [29] shares a similar opinion, as he believes that leaders need to understand the underlying reasons for individual needs and personal preferences and how these factors will influence consumers, their lifestyles, and spending habits. Building a relationship with customers will be incredibly important after this period. Click-and-collect, which combines online and offline interactions, enabling online shopping and human contact, can play a significant role in sales methods in the coming years.

Bilková et al. [30] found that over half of the consumers in Slovakia have changed their shopping habits during the pandemic. These changes primarily focused on shopping sizes, as consumers opted for larger purchases instead of multiple smaller ones, leading to shift in shopping frequency. Due to various mobility restrictions, about one-third of consumers were engaged in stockpiling. One of their most important findings reflects the emergence of a new phenomenon due to the pandemic, as more

than one-fifth of respondents stated that they will never return to their pre-pandemic habits. According to Behúňová [31], in the second half of 2020, the value of card payments exceeded cash withdrawals, which had previously been consistently higher than card payments. Furthermore, there was a significant increase in the transition to digital shopping, with consumers also preferring card payments. In the last quarter of 2020, the share of card payments reached 12.4%, nearly a 2% point increase compared to the first quarter of the same year. The research also reveals that in the third quarter of 2019, mobile payments accounted for a 3.7% share of all card payments. By the last quarter of 2020, this percentage had doubled, as the same payment method accounted for 7.8% share, showing continuous growth. Based on these data, it may be reasonable for businesses where card payments are not currently possible to consider introducing this method, as Slovak consumers have shown a shift towards digital payment methods. The research assumes that these mentioned trends will continue. In the study conducted by MasterCard, Big Fish, and Frontira [32], 1,000 participants were surveyed about the online shopping habits of Hungarian consumers. The results indicate that consumers love to shop from the comfort of their homes, with nearly 60% of respondents making purchases while lying in bed. According to the study, the circumstances in which consumers make purchases are closely related to the type of product they buy. For example, those making purchases from the bathroom primarily choose household products. 10% of the respondents stated that although they wanted to, they often couldn't prepay. These findings suggest that even after the first few waves of the pandemic, not every company was able to offer card subscriptions. Companies often believe that they face significant obstacles in reaching out to the older demographic group. However, the results of the research clearly reflect that this is no longer true, as the pandemic has impacted online shoppers of all age groups to such an extent that the category of weekly shoppers is led by those aged 55–60 with a 17% share. In a study conducted by PwC [33], more than 9,000 shoppers were surveyed in 25 different countries, and it can be concluded that 37% of shoppers purchase from various companies in order to fully meet their needs. Consequently, the importance of customer-centricity is stronger than ever, as shoppers show a greater willingness to purchase from different sources. Building on another study by PwC [33], sustainability has clearly become more important to shoppers, likely influenced to a significant extent by the pandemic. Based on the results, it can be stated that companies capable of gaining the trust of shoppers and willing to invest the right amount to create a seamless shopping experience will gain significant advantages.

### **3 The Purpose and Methodology of the Research**

The primary purpose of the research is to gain a comprehensive understanding of customer centricity, its attainment, and its tools from the perspective of SMEs in Slovakia and Hungary. Applying a questionnaire survey, we assessed the extent to which the COVID-19 pandemic has affected the companies in Slovakia and Hungary,

examining various aspects. The research employed a descriptive study design using a cross-sectional research method. A single sample was taken from the population, and data collection was carried out based on this sample. It is important to note that this research method does not allow the exploration of causal relationships. Within the quantitative research methodology, we utilized the option of questionnaire surveys, which were distributed via email to companies in our database, as well as made available in various online groups. The data collection period spanned from September 2021 to December 2022. Throughout the data collection process, a total of 545 responses were collected, with the distribution between the two countries as follows: Hungarian companies accounted for 45.50% (248 responses), while Slovakian companies accounted for 54.50% (297 responses).

In order to strengthen the validity of our findings, we conducted a representativeness calculation. However, it is important to note that due to the sample size, our research cannot be considered representative. The following formula was used in the calculation:

$$n = \frac{N * Z^2 * p * (1 - p)}{(N - 1) * e^2 + Z^2 * p * (1 - p)}$$

where  $N$  = total population, which according to the data from the Slovak Statistical Office and the Central Statistical Office is 1,335,102 companies,  $Z$  = critical value of 1.96 for a 95% confidence interval,  $P$  = expected participation rate of 40%, and  $d$  = margin of error of 5%. After performing the calculation, we determined that a total of 385 respondents are needed to strengthen our results. Following the survey period, we collected 545 responses, which further reinforces the findings. In the primary research, we presented the sample using various descriptive statistical tools, and subsequently conducted statistical tests to examine the hypotheses formulated, which are as follows:

1. The more attention a company pays to reliability, the easier it can convince customers to purchase its services and/or products.

H0: There is no linear trend that can be identified between reliability and convincing customers to make a purchase.

H1: A linear trend can be observed between reliability and convincing customers.

2. Companies that experienced a critical situation during COVID-19 pay greater attention to reactivating their existing customers.

H0: There is no significant relationship observed between experiencing a critical situation and reactivating the existing customer base.

H1: A significant relationship can be identified between experiencing a critical situation and reactivating the existing customer base.



3. Companies that believe it is much more challenging to persuade customers after the COVID-19 pandemic are looking to introduce new marketing tools in the hope of incentivizing them to make purchases.

H0: There is no linear relationship between the introduction of new tools and the increased difficulty of convincing customers.

H1: A linear relationship can be observed between the introduction of new tools and the increased difficulty of convincing customers.

We performed the Jonckheere-Terpstra trend test to examine the first hypothesis of our study, as we were investigating a linearly decreasing monotonic trend. It is important to note that the question formulated in the Likert scale we examined represented a positive trend. However, in the statistical software SPSS, we set up the test to analyze a decreasing trend to correctly conduct our hypothesis testing. In accordance with statistical rules, to ensure successful interpretation, it is necessary to establish six different conditions. In our case, all six conditions are met, which are as follows:

Based on the first condition, our dependent variable is an ordinal-level variable. According to the second condition, we can conclude that the independent variable has at least two groups since the data was measured on a Likert scale. Regarding the third assumption, the observations are independent as each respondent belongs to only one group. The fourth condition implies that the ordering of the independent variable's attributes has been established since we are dealing with data measured on a Likert scale, where 1 represents "strongly disagree" and 5 represents "strongly agree." As for the fifth assumption, we can state that the alternative hypothesis has been formulated in the correct direction, assuming a linearly decreasing trend. The sixth assumption requires us to examine the form of the ordinal independent variable's attributes since the Jonckheere-Terpstra test can only be performed for similar or equal forms. To test this assumption, we created histograms for both countries. Based on both histograms, we can conclude that the attributes have somewhat similar shapes, allowing us to conduct the test. However, the results will be evaluated based on the effects observed.

Based on these findings, the null hypothesis and the alternative hypothesis are modified as follows:

$\tau_{\text{not at all characteristic}} = \tau_{\text{somewhat characteristic}} = \tau_{\text{cannot decide}} = \tau_{\text{highly characteristic}} = \tau_{\text{fully characteristic}}$ .

In this null hypothesis,  $\tau$  represents the effect of the independent variable on the dependent variable, and the subscripts represent the groups of the independent variable. In null hypothesis, it can be stated that the effects of all groups of the independent variable on the dependent variable are equal within the studied population.

IF:  $\tau_{\text{completely characteristic}} \geq \tau_{\text{highly characteristic}} \geq \tau_{\text{undecided}} \geq \tau_{\text{slightly characteristic}} \geq \tau_{\text{not characteristic}}$  at all.

At least one strict inequality, meaning that at least one group's median or effect is smaller than another group's median or effect. Based on this, the alternative hypothesis states that as the level of the independent variable increases, the median or strength of the effect decreases.

We applied the Chi-square test for our second hypothesis. In our analysis, we used the contingency table with the “re-engagement of customers” as a dependent variable and the “critical situation” as an independent variable. Both variables were measured at an ordinal level. We conducted the analysis using the Pearson chi-square test. Since a statistically significant relationship was found, we also conducted post hoc tests using the ADR method.

We conducted a Cochran-Armitage trend test to examine our third hypothesis. Two conditions must be met for the test, which are as follows: Firstly, there needs to be an independent ordinal variable, which is fulfilled in our case as the Likert scale data can be ordered. Secondly, a dichotomous dependent variable is required, which is also fulfilled in our case. Consequently, we are essentially examining whether there is a linear relationship between the variables under investigation.

## 4 The Purpose and Methodology of the Research

In terms of the composition of the sample, considering both countries, the highest proportion of respondents in the study consisted of limited liability companies. In the case of Slovakian respondents, this accounts for 60.94%, while for Hungarian respondents, the same category represents 55.87% of the sample. Furthermore, concerning the respondents from Hungary, 14.17% of them are registered as general partnerships, whereas in the other country, this accounts for 19.87%. In Hungary, 8.50% of the respondents are registered as joint-stock companies, while 6.48% are registered as limited partnerships. Regarding the proportions of individual entrepreneurs, it can be stated that Hungarian respondents account for 14.98%, whereas Slovakian respondents account for 19.19%.

In the survey, Slovakian companies are predominantly operating in accommodation services sector (15.20%), IT sector (14.19%), education (14.53%), and other services sector (13.85%). On the other hand, Hungarian companies are primarily active in transportation and storage sector (17.34%) and also in the IT sector (16.13%). Additionally, 8.06% of Hungarian companies operate in the construction industry, while 9.46% of Slovakian respondents are engaged in the same field.

The first hypothesis was tested using the Jonckheere-Terpstra trend test, which aimed to examine whether companies that prioritize reliability can more easily persuade customers to purchase their services and/or products.

The specific median values obtained during the test were provided for each group of the independent variable and the corresponding dependent variable (Table 1).

Based on the above table, in the case of Slovakia, we can say that the approach to customers in the reliability groups was 2.0 in the “not at all characteristic” group ( $n = 5$ ), 1.5 in the “somewhat characteristic” group ( $n = 14$ ), 0.0 in the “cannot decide” group ( $n = 0$ ), 2.0 in the “highly characteristic” group ( $n = 163$ ), and 3.0 in the “fully characteristic” group ( $n = 115$ ). On the other hand, in the case of Hungary, it was 0.0 in the “not at all characteristic” group ( $n = 0$ ), 0.0 in the “somewhat characteristic” group ( $n = 0$ ), 0.0 in the “cannot decide” group ( $n = 0$ ), 3.0 in the

**Table 1** Median values—Slovakia, Hungary

Approaching customers				
Reliability	N—SK	Median	N—HU	Median
Not characteristic at all	5	2.00	0	0.00
Slightly characteristic	14	1.50	0	0.00
Cannot decide	0	0	0	0.00
Highly characteristic	163	2.00	42	3.00
Fully characteristic	115	3.00	206	3.00
Total	297		248	

Source own editing in the SPSS software based on primary data collection

“highly characteristic” group ( $n = 42$ ), and 3.0 in the “fully characteristic” group ( $n = 206$ ).

Based on the previous values, we assume that our monotonic trend follows a decreasing direction. The following Table 2 illustrates the statistical values for both countries.

In the case of Slovakia, based on the statistical value of  $-4.110$ , a decreasing linear monotonous trend can be observed, which is statistically significant as the two-sided significance level is  $p < 0.001$ . On the other hand, in the case of Hungary, this value is  $0.533$ , and the two-sided significance level is  $p > 0.001$ .

As a result, it is necessary to examine the value of Kendall’s tau-b in the case of Slovakia, which is shown in the following Table 3.

Based on the above table, in the case of Slovakia, the correlation value is  $-0.210$ , indicating a moderate negative monotonic trend between the two variables. This finding reinforces the results obtained from the Jonckheere-Terpstra trend test. According to the test, in Slovakia, it can be concluded that the more emphasis is placed on reliability, the easier it is to convince customers to purchase the service and/or product.

In the case of the second hypothesis of our research, we applied the Chi-square test. In this case, we examined whether companies that experienced a critical situation during the COVID-19 period pay more attention to reactivating existing customers. The following Table 4 illustrates the Chi-square test for both countries.

**Table 2** Jonckheere-Terpstra statistical values

Slovakia		Hungary	
Total N	297	Total N	248
Statistical value	15.045	Statistical value	4.544.000
Standardized error	729.240	Standardized error	408.877
Standardized statistical value	$-4.110$	Standardized statistical value	0.533
Two-sided significance level	0.000	Two-sided significance level	0.594

Source own editing in the SPSS software based on primary data collection

**Table 3** Kendall's tau-b values

			SK
Kendall's tau_b	Approaching customers	Correlation coefficient	1.000
		One-sided significance	
		N	297
	The importance of reliability	Correlation coefficient	−0.210
		One-sided significance	0.000
		N	297

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**Table 4** Chi-square test

	Value SK	Two—sided sig	Value HU	Two—sided sig
Chi-square	53.46	0.000	4.159	0.125
Likelihood ratio	63.31	0.000	6.632	0.036
Linear association	0.313	0.576	0.469	0.494
N of valid cases	184		76	

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Based on the above table, a significant relationship can be observed between the two variables in the case of Slovakia, as the significance level is  $p < 0.001$ . In contrast, no significant relationship can be observed in the case of Hungary. Therefore, in the case of Slovakia, we further examine the value of the Gamma coefficient, which is shown in the following Table 5.

The value of the Gamma coefficient is 0.178, indicating a weak but statistically significant relationship between the two variables. Considering that a statistically significant relationship was found between the variables, we further examined the Adjusted Residuals to determine which attributes show the strongest association. Based on the values, we can conclude that those who experienced a crisis situation to a large extent or completely are highly focused on re-engaging their existing customers for repeat purchases.

In the case of the following hypothesis, we conducted the Cochran-Armitage trend test, starting with the elaboration of a contingency table. The results for Slovakia can be seen in the following Table 6:

**Table 5** Gamma coefficient value for Slovakia

	Value SK	Error value SK	Sig. Level SK
Gamma	0.178	0.104	0.094
N	184		

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**Table 6** Cohran-Armitage cross table—Slovakia

			Crisis situation					Total
			Not at all	A little bit	Don't know	To a great extent	Completely	
New tool	Yes	Count	2	9	41	54	0	192
		% within critical	5.7%	16.7%	75.9%	53.5%	0.0%	64.4%
	No	Count	33	45	13	47	54	106
		% within critical	94.3%	83.3%	24.1%	46.5%	100.0%	35.6%
Total		Count	35	54	54	101	54	298
		% within critical	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source own editing in the SPSS software based on primary data collection

Despite the indication from the above contingency table of companies that experienced a critical situation during COVID-19 are not likely to work on introducing a new tool for stimulating purchases, we conducted the test to confirm or reject this.

Based on the above information, we also conducted the Cohran-Armitage trend test, which is shown in the following Table 7.

Based on the results in the above table, the following can be concluded for Slovakia: A Cohran-Armitage trend test was conducted to examine whether there is a linear relationship between experiencing a critical period and the introduction of new tools. The Cohran-Armitage trend test revealed a statistically significant linear relationship between the two variables, as  $p < 0.001$ .

In the case of Hungary, we followed the same procedure. For the Hungarian cross-tabulation, we obtained the following values: the frequency of experiencing a critical situation was 1—not at all characteristic ( $n = 21$ ), 2—slightly characteristic ( $n = 42$ ), 3—cannot decide ( $n = 49$ ), 4—highly characteristic ( $n = 38$ ), 5—fully characteristic ( $n = 49$ ), while the willingness to introduce new tools had proportions of 1, 0.689, 0.891, 0.905, and 0.710, respectively. The value of the Cohran-Armitage

**Table 7** Cohran-Armitage trend test

			Value	Sig
Step 0	Variable	Critical period	0.002	0.000
	Statistical values		0.002	0.000

Source own editing in the SPSS software based on primary data collection

trend test (1.376) also indicated a statistically significant relationship between the two variables, as  $p < 0.001$ .

## 5 Summary, Recommendation

Based on the results of the hypothesis testing in both countries, it can be concluded that companies that prioritize reliability are more likely to convince customers to purchase their services and/or products. To gain a broader understanding of these findings, we compared our research results with other international studies. In a quantitative study conducted by Ngaliman et al. [34], which also utilized a questionnaire survey, it was found that reliability has a direct impact on customer satisfaction. The study mainly focused on service-providing companies and revealed that if companies are able to exceed customer expectations slightly, there is a greater likelihood of customers evaluating the service positively.

Based on this and referring to the empirical findings of Johnson and Karlay [35], it can be stated that providing higher quality services increases the customer happiness and satisfaction significantly. In our view, when the customer base is more satisfied, it becomes much easier for the company to encourage repeat purchases from the already satisfied customers.

Referring to the insights of Akula [36], it is commonly observed that businesses tend to focus on acquiring new customers, often neglecting the importance of retaining the existing ones. However, equal attention should be given to retained customers as well. To achieve this, it is crucial to leverage modern technological tools and opportunities. This includes approaches such as “Machine Learning” and “Big Data Analysis”, which are integral to harnessing the power of data. We believe that data has become an integral part of our daily lives, and by analyzing and researching it, we can gain deeper and more accurate insights into our business inquiries, leading to data-driven decision-making within the company. It is important to note that micro and small businesses may not always have the budget to employ a dedicated data analyst. However, whenever possible, it would be necessary to utilize these resources, as they can improve planning and enable more efficient achievement of set goals.

Based on our statistical analysis, it has been revealed that Slovakian companies that experienced a critical situation during the COVID-19, will pay greater attention to reactivating existing customers. In our opinion, one of the most cost-effective ways to generate revenue is undoubtedly retaining existing customers and reactivating them. By retaining customers, we can increase the number of repeat purchases and revenue levels. According to Ascarza et al. [37], companies need to utilize various metrics and measurement tools to gain a comprehensive understanding of customer retention. This includes metrics such as retention rate, which according to Reichheld [38], achieving a 5% increase in customer retention can lead to a 95% increase in profits. Small businesses can achieve a more cost-effective customer retention rate by utilizing opportunities such as community building. Becoming a pillar of the local community and integrating into the community can result in fruitful relationships.

Another important factor that small businesses can leverage in customer retention is a quick response time. If a dissatisfied customer receives a prompt solution or response to their problem, there is a chance to increase satisfaction.

Our findings also indicate that companies who believe it is more challenging to persuade customers following the COVID-19 pandemic are interested in implementing new marketing tools to incentivize purchases. The COVID-19 outbreak has clearly altered consumer shopping habits and demand. During these times, online shopping, impulse buying, stockpiling, panic buying, compulsive buying, patriotism, and environmental factors have come to the forefront. The changing purchasing behaviors make it more difficult for companies to reach out to customers. In such cases, it may be worthwhile to introduce new tools to enhance reach. According to Hoekstra and Leeflang [39], the COVID-19 period provided an opportunity for marketers and marketing researchers to study the transient and enduring effects of the pandemic on consumer behavior. By studying these effects, future marketing strategies and newly introduced tools can be determined more effectively. Koppala [40] argues that post-pandemic, emphasizing the company values is more critical than ever before. If a company's values align strongly with those of its customers, it is crucial to communicate them clearly and comprehensively. The author's perspective also aligns with community building, as it plays a pivotal role in reaching out to and retaining customers in the future.

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