

## Article

# Role of Service Quality in Improving Customer Loyalty towards Telecom Companies in Hungary during the COVID-19 Pandemic

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**Abstract:** The telecommunication sector is one of the most rapidly growing sectors in the world. The COVID-19 pandemic has created an increased dependence of customers on telecommunications to continue their work and studies. The increased usage of internet and telecom services during the COVID-19 pandemic has brought many risks and challenges for the telecom companies to meet the requirements of the consumers. In this regard, it is crucial to understand the factors affecting customer loyalty towards telecom companies during the COVID-19 pandemic. This study is conducted to evaluate the effect of service quality, perception towards promotional packages, and customer delight on customer loyalty towards telecom companies in Hungary. The study also examined the mediating role of customer delight and perception towards promotional packages between service quality and customer loyalty. Another aim of the study is to compare the behavior of Hungarian customers and foreign customers living in Hungary towards telecom companies in the course of the COVID-19 pandemic. The study used a linear snowball sampling method and a well-structured questionnaire to collect the data. In total, 589 completed responses were used for analysis out of which 208 responses are from Hungarian customers and 381 are from foreigners. To analyze the collected data, regression analysis was applied by using AMOS 22 package. The results of our study revealed that service quality and perception towards promotional packages positively influence customer loyalty among both Hungarian and foreign customers. On the other hand, customer delight significantly influences customer loyalty only among foreign customers. The results also proved the mediating role of promotional packages and customer delight between service quality and customer delight. This study will provide significant practical implications for managers of telecom companies in Hungary.

**Keywords:** customer loyalty; COVID-19; promotional packages; service quality; telecommunications



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## 1. Introduction

The greatest challenge for organizations in this current scenario is the increasing competition and customer expectations. This strong environment of competition has changed the marketing ideology from the acquisition of consumers to consumer loyalty (Shahzad et al. 2021). However, achieving customer loyalty is becoming a challenge for businesses because of the competitive market situation. Thus, marketers and practitioners show an increasing concern towards maintaining a long-term relationship with the consumers. However, increasing demand and publicity from various marketing players are making it harder to please and satisfy the existing customers (Moreira et al. 2016). These trends are apparent in the telecommunication sector as well, and the telecom service providers are still facing difficulties in creating long-term loyalty development, irrespective of huge investments and plans to enhance customer experiences. Long-term customer loyalty is still a dream for many organizations, which indicates that there is still much to research about the subject (Karjaluoto et al. 2012). The concept regarding the loyal customers

states that they are less expensive to work for, they are ready to pay premium prices, and they perform as strong advocates of the organization (Reinartz and Kumar 2002). The capability to retain existing customers and strengthen loyalty is essential to gain a competitive advantage (López-Miguens and Vázquez 2017).

The current situation of the COVID-19 pandemic has created big challenges for many companies and in this regard, telecommunication companies have gone through great trials as millions of employees had to switch to work from home. These companies worked hard to catch up with the rising demand and surge in internet usage. The telecommunication sector has played a crucial role in building up the economy as well as meeting increased demand from consumers. It was reported that mobile internet data traffic has increased to 20–25% during the emergency of Coronavirus. The significance of digital channels was recognized more during the pandemic and according to Telenor, this high usage of online channels has never been seen previously (Budapest Business Journal (BBJ) 2020). The risk caused by the COVID-19 pandemic, such as lockdowns and compulsory home office working, created a high level of uncertainty (Gorgenyi-Hegybes et al. 2021). In Hungary, during the lockdown period, the most frequent kind of online consumption through the internet was downloading and watching movies, during which the respondents were using 73 percent of their internet share (Statista 2020). Internet usage has drastically increased during the COVID-19 pandemic for online activities, social media usage, watching movies, working from home, online meetings, and education. This has created an opportunity for telecom companies to attract new customers or to retain existing ones. Many telecom companies had offered multiple promotional offers for their customers in Hungary; for instance, Telenor offered 100Gb free internet to its users and comparatively, Vodafone and Telekom gave free internet to all students and teachers (Hungary Today 2020). These three companies are the major players in the Hungarian telecommunication market, holding 44%, 27%, and 26% of the market share for Telekom, Telenor, and Vodafone, respectively, in the second quarter of the year 2020 (Statista 2021).

This pandemic has changed the entire work environment and forced people to become dependent on online technology. The COVID-19 pandemic has shifted face-to-face communication to virtual. The governments' restrictive regulations and restricted movement of the global population have transformed the market into the world of digital technologies (Valaskova et al. 2021), and consumers prefer the use of digital devices for their online purchase or retrieving information (Štefko et al. 2019). Education, work meetings, online workshops, management, and academic conferences were forced to adjust to the change according to the risks and challenges this pandemic has posed (Mheidly et al. 2020; Appolloni et al. 2021). To keep work and studies going, telecommunication played a crucial role. The internet has become an integral part of our lives (Horvath et al. 2021), and the current situation of pandemic made us more dependent on the internet than ever before. Hence, it is necessary to examine the behavior of the customers towards their telecom companies during the COVID-19 pandemic. Previous literature has supported the factors that can maintain or increase customer loyalty. For instance, studies conducted by Santouridis and Trivellas (2010), and Dhasan and Kowathanakul (2021) reported a significant positive influence of service quality on customer loyalty, and they considered service quality as a major antecedent of loyalty. In addition to this, other predictors of customer loyalty have been examined by different studies, such as customer delight (Elias-Almeida et al. 2016), satisfaction (Anabila et al. 2021), trust (Karjaluoto et al. 2012), and competitive promotional package (Dhasan and Kowathanakul 2017), etc. However, the current scenario of the internet and digitization require more supportive studies for a better understanding of customer loyalty during the COVID-19 pandemic.

Therefore, this study was conducted to analyze customer loyalty by investigating the influence of service quality, customer delight, and perception towards promotional packages on the loyalty of the consumer towards telecom companies in Hungary. The current study will provide a comparison between the behavior of Hungarian and foreign customers living in Hungary towards telecom companies. To investigate customer

loyalty, this comparison between Hungarian and foreign customers was examined because cultural differences affect the perception of service quality and also influence loyalty (Malai and Speece 2005). As mentioned above, previous studies have been conducted to examine customer loyalty, including several variables such as service quality and customer delight, etc., but few studies have adopted the competitive promotional package to analyze customer loyalty (Dhasan and Kowathanakul 2017). Previous studies did not consider the competitive promotional package as the main antecedent of customer loyalty. Therefore, the authors attempted to provide evidence to contribute to the above-mentioned research gap within the current scenario of COVID-19.

This study aims to investigate the impact of service quality on customer loyalty towards telecom companies in Hungary during the COVID-19 pandemic. It will also examine the mediating effect of promotional packages and customer delight between service quality and customer loyalty. The study will further provide insights into the behavioral comparison regarding customer loyalty between Hungarian customers and foreign customers living in Hungary because it is important for the policymakers and managers to identify the differences in the perception of two targeted segments of the consumers. As both consumer segments have cultural and behavioral differences, their perception towards service quality and loyalty might differ. To the best of the authors knowledge, no previous studies have been conducted in the context of telecom companies in Hungary during the COVID-19 pandemic to examine customer loyalty by the above-mentioned variables. This study attempted to fill this research gap by providing valuable insights into this field of research. The present study will answer the following research questions: Does service quality increase customer loyalty towards telecom companies in Hungary during the COVID-19 pandemic? Do other variables such as perception towards competitive promotional packages and customer delight have any significant impact on customer loyalty? Is there any difference between Hungarian and foreign customer's loyalty towards telecom companies in Hungary? Do customer delight and perception towards competitive promotional packages have any mediation effect between customer loyalty and service quality?

The present study will first provide a review of the literature by discussing previous studies conducted before and during the COVID-19 pandemic. Then the sample and procedures will be explained. After that, the study will discuss the analysis and findings. In this study, the evaluation and proposed hypothesis tests were performed by using confirmatory factor analysis (CFA) and regression analysis. Lastly, discussion, implications, conclusion, and future research directions will be provided.

## 2. Literature Review

The researchers and scholars in the field of marketing are constantly attempting to identify determinants of customer loyalty. Therefore, for several years, a significant number of studies were conducted in this field of research. However, the changes and disruptions that occurred due to the COVID-19 pandemic concerning consumer behavior and marketing strategies necessitated more studies to identify factors affecting customer loyalty. This review of literature will provide an insight into the studies conducted in this field of research before or during the COVID-19 pandemic.

### 2.1. Customer Loyalty

Customer Loyalty means to develop, create, maintain, and retain the functional and emotional long-term relationship between an organization and consumers. According to Watson et al. (2015, p. 803), loyalty is "a collection of attitudes aligned with a series of purchase behaviors that systematically favor one entity over competing entities". In addition, customer loyalty was conceptualized by Casidy and Wymer (2016, p. 196) as "one's feelings of devoted attachment to the loyalty object, rather than repeated commercial transactions". An organization needs to have the ability to hold its customers and to make them loyal to their products and services for continuous success (Hossain and Ullah 2011).

The customers who show their loyalty towards a business will help it grow by continuously purchasing, paying premium prices, and introducing and inviting new consumers through positive word of mouth (Ganesh et al. 2000; Naz et al. 2020). In this regard, Oliver (1997) also described customer loyalty as a profound commitment to continuously re-purchasing or re-utilizing a particular product and recommending it to their peers, even though certain factors such as marketing and situational influences are attempting to persuade them to switch behavior.

The loyalty of the customers towards their telecom company will fade if they are using multiple service providers and they are getting better services from another service provider, or if their needs are not fulfilled (Morgan and Govender 2017). According to Reichheld and Scheffer (2000), companies generate a high return on investment when they have high retention rates, as loyal consumers refer the services to potential customers with positive word of mouth (Hur et al. 2010), which leads to lower costs. A key strategy to remain competitive in a challenging telecommunication market is to create a pool of loyal consumers (Izogo 2017). According to Solimun and Fernandes (2018), the main reason for a company to retain its customers is to maintain the viability of the firm and to improve financial performance, in which customer loyalty plays an important role. Therefore, telecommunication companies should be concerned about a loss of customers and make necessary strategies to overcome this issue (Sweeney and Swait 2008). Several studies have been conducted in different sectors to examine customer loyalty through different variables, such as in the hospitality sector (Bowen and Chen 2001), banking sector (Anwar et al. 2019), and tourism sector (Kandampully et al. 2011), etc.

However, examining customer loyalty during the time of the pandemic is crucial in understanding the consumer response towards their telecom companies. To examine customer loyalty, a study was conducted by Rachmawati (2020) on Indonesian customers of mobile operators; it was reported that users remain loyal if they enjoy a good experience from their telecom company or have good value for money during the COVID-19 pandemic. In another study conducted on telecom users in Pakistan, it was suggested that to retain consumers, telecommunications companies should employ more rational approaches concerning customer loyalty. Retaining existing consumers has been proven to be more profitable than attracting new consumers (Shahzad et al. 2021). On the other hand, Thai telecom consumers tend to become more loyal to their telecom company if they are provided with more efficient technical services (Dhasan and Kowathanakul 2021). However, there is a lack of literature regarding customer loyalty towards telecom companies during the time of the COVID-19 pandemic. Therefore, this study was conducted to emphasize the role of telecom companies during the pandemic to provide better services for employees and students working from home. Moreover, the current study evaluates the mediating impact of promotional packages and customer delight between customer loyalty and service quality.

## 2.2. Service Quality

Service quality is considered as a measure of the extent to which service is delivered to the consumers as per their expectations (Lewis and Booms 1983). In other words, within a company, it is regarded as the comparison between expected service and service received from that company (Liu and Wu 2007). It is also termed as the gap between expectations of consumers and the actual service provided to them (Parasuraman et al. 1988). It is an important determining factor that will make consumers show positive behavior towards the company and refer its product to their peers (Gounaris et al. 2003; Stefko et al. 2020). To deliver quality service implies constantly fulfilling customer expectations. Previous studies have proposed the notion that to measure service quality, SERVQUAL instrument can be used (Parasuraman et al. 1988), and it can be managed using the expectations–performance gap model (Zeithaml and Bitner 1996). The SERVQUAL instrument as a reliable multiple-item scale has been accepted widely as a valid instrument to measure service quality (Kandampully 1998).

According to Zeithaml and Bitner (1996), consumers will show their loyalty to an organization or product if the value of the product or service is relatively higher than that expected from other competitors. Service quality is regarded as an essential factor to make customers choose one service organization over another; therefore, many organizations have understood that to earn customer loyalty, it is imperative to maintain a constant standard of excellence in service. A strong shift in positioning service promise from service strategy has been created from this long-term perspective (Kandampully 1998). Previous studies support the positive influence of service quality on customer loyalty in the telecommunication sector (Malhotra and Malhotra 2013; Shen and Yahya 2021; Santouridis and Trivellas 2010). The study conducted by Dhasan and Kowathanakul (2021) on Thai mobile consumers reported that consumers who are satisfied with the service quality provided by their mobile network companies tend to be more loyal consumers. In another study conducted by Shen and Yahya (2021) it was reported that service quality and price play a significant role in improving customer loyalty towards low-cost airlines during the COVID-19 pandemic. A recent study on telecom customers in India reported that for customer loyalty towards telecom companies, the strongest antecedent is service quality (Turaga et al. 2021). Omar et al. (2021) conducted a study in the UK during the COVID-19 pandemic to analyze the impact of mobile shopping service quality on customer loyalty; the results suggested that customers need to perceive high service quality to remain loyal to the company. Hence, the following hypothesis was framed.

**Hypothesis 1 (H1).** *Service quality positively and significantly influences customer loyalty in the telecommunication sector.*

### 2.3. Promotional Package

In selecting the telecommunications service provider, promotional offers play an important role that directly influences the choice of the consumers (Haque et al. 2010). A relevant and cohesive promotional offer integrated with customer engagement channels will directly influence the consumer to purchase that brand (Keylock and Faulds 2012). According to Rowley (1998), a properly designed competitive promotional package addressing the target audience requires direct marketing, advertising, and proper sales promotions. Consumers are progressively involved in sharing the promotional package information with their friends and family because of the prevalence of competitive promotional packages (Theingi et al. 2016). These competitive promotional packages and prices offered play a significant role in influencing the consumers to continue using the service (Dhasan and Kowathanakul 2021). However, McMullan and Gilmore (2008) reported that consumers who are not loyal to the company are not interested in maintaining the relationship but seem to be very interested in promotional offers. This shows that customers benefiting from promotional packages does not necessarily equate to customer loyalty.

To continue using a service, the price offers and promotional packages create an impact on the willingness of consumers (Dhasan and Kowathanakul 2021). In previous studies concerning customer loyalty, the researchers found a significant positive relationship between customer loyalty and perceived price fairness (Santouridis and Trivellas 2010; Kaura et al. 2015). According to Agu (2021); many researchers considered promotional packages as one of the drivers of customer loyalty (Kotler and Keller 2007; Agbonifoh et al. 2007; Okpara 2012) in the complex and multifaceted behavior of consumer preferences and choices, as it directly influences the decision-making of target consumers. Many companies have continued to give importance to total promotional package (Agbonifoh et al. 2007), because of their competitive role (Onuoha 2016; Agu and Uduak 2018), mainly leading to positive reactions of consumers and driving customer loyalty (Agu 2021; Farris and Quelch 2004; Okpara 2012). Alsulami (2021) conducted a study to identify the customer loyalty of supermarket retailers in Saudi Arabia and found that promotional packages are among the factors that encourage customer loyalty. However, in previous literature based on the telecommunication sector, very few studies considered promotional packages as an antecedent of consumer loyalty, in

order to assess the direct or indirect relationship between them in the telecommunication sector (Dhasan and Kowathanakul 2017; Dhasan and Kowathanakul 2021). Hence, there is a lack of literature that provides evidence of the significant impact of promotional packages on the consumer loyalty of the telecom customers during COVID-19 in Hungary.

In addition, it will be interesting to identify the impact of promotional packages on customer delight during the COVID-19 pandemic, as it was reported in previous studies that promotional packages can act as an antecedent for customer delight (Berman 2005; Finn 2005). Therefore, it could be assumed that promotional packages will lead to customer delight, which will further enhance customer loyalty. Moreover, it is assumed in this study that service quality could also pose a significant positive impact on perception towards promotional packages, which could lead to customer loyalty. Shamout (2016) reported that promotional tools such as samples or price discounts have a significant relationship with consumer buying behavior, which involves customer loyalty. Therefore, to provide evidence for the influence of promotional packages on customer loyalty during the COVID-19 pandemic, this study has taken it as the main variable, and the following hypotheses were developed.

**Hypothesis 2 (H2).** *Service quality positively and significantly influences perception towards promotional packages in the telecommunication sector.*

**Hypothesis 3 (H3).** *Perception towards promotional packages positively and significantly influences customer delight in the telecommunication sector.*

**Hypothesis 4 (H4).** *Perception towards promotional packages positively and significantly influences customer loyalty in the telecommunication sector.*

#### 2.4. Customer Delight

Customer delight can be explained as an emotional response that is the result of surprising or positive levels of performance (Finn 2005). Patterson (1997, p. 224) defined delight as “... going beyond satisfaction to delivering what can be best described as a pleasurable experience for the client.” It could also be regarded that delighting the consumers can be related to satisfying their needs (Schneider and Bowen 1999). It was found by Westbrook and Oliver (1991) that the customer group that reports the highest level of joy and surprise is found to be more satisfied than other consumers. On the contrary, Rust and Oliver (2000) stated that it is not always the best alternative to delight a customer for the business, as delighting a customer could bring out incremental benefits and it could also lead a business to suffer incremental costs. A recent study conducted by Ji and Prentice (2021) on the transactional experience of customers in a casino resort in Macau reported the mediating impact of customer delight on customer loyalty; however, customer delight had little impact on customer loyalty. Previous research suggests that delight, which is a positive emotional response, has crucial behavioral outcomes (Mattila and Enz 2002; Oliver 1997).

Nevertheless, it was found in a study that customers who are delighted have a greater propensity to become engaged in a positive suggestion through word-of-mouth (Arnold et al. 2005). Some studies found that delight directly influences the repurchase intentions of customers for a product or service (Finn 2005; Oliver 1997). On the other hand, in the hotel industry of Ghana, Anabila et al. (2021) found a positive impact of service quality on customer delight and a positive mediating impact of customer delight between service quality and customer loyalty. Pratondo and Zaid (2021) conducted their study to analyze customer loyalty during the COVID-19 pandemic towards the online ride-hailing industry in Indonesia, and the findings of their study suggested that service quality has a positive impact on customer delight, and customer delight positively mediates the relationship between service quality and customer loyalty. Contrary to this, Hadiwijaya et al. (2021) reported that there is no significant effect of service quality on cus-

customer delight. On the other hand, previous studies constructively supported the positive influence of delight on customer loyalty (Elias-Almeida et al. 2016; Finn 2005). However, there is a lack of studies which analyze the impact of customer delight on customer loyalty in the context of telecom companies during the COVID-19 pandemic. So, the current study attempted to identify the relationship amongst customer delight, service quality, and customer loyalty during the COVID-19 pandemic in telecom companies in Hungary. Therefore, the following hypotheses are proposed.

**Hypothesis 5 (H5).** *Service quality positively and significantly influences customer delight in the telecommunication sector.*

**Hypothesis 6 (H6).** *Customer delight positively and significantly influences customer loyalty in the telecommunication sector.*

### 2.5. Mediation Effects

As far as mediation effects of customer delight between service quality and customer loyalty are concerned, several researchers found that customer delight significantly and positively mediates the indirect effect of service quality on customer loyalty (Ali et al. 2016; Desiyanti et al. 2018; Anabila et al. 2021). Ahrholdt et al. (2017) stressed the role of the quality–delight–loyalty system and found that the predicted relationship is possible and that customer delight poses a significant positive mediating effect between service quality and customer loyalty. On the other hand, Pelet et al. (2018) analyzed the mediating impact of promotional offers between website loyalty and buying behavior and found a significant positive mediating effect of promotional offers between the two variables. Similarly, Lee and Chen-Yu (2018) analyzed the mediating effect of price discounts on perceived quality and perceived value of consumers' perception towards apparel products and they found a significant mediating role of price discounts. However, it was discussed above that perception towards promotional package can pose a significant positive impact on customer loyalty, but to the best of our knowledge, none of the previous literature has analyzed its mediating role between service quality and customer loyalty. Therefore, this study proposes to incorporate the theory of perception towards promotional packages into the service quality–customer loyalty framework. Hence, the following hypotheses are developed.

**Hypothesis 7 (H7).** *Perception towards promotional packages significantly mediates the relationship between service quality and customer loyalty.*

**Hypothesis 8 (H8).** *Customer delight significantly mediates the relationship between service quality and customer loyalty.*

**Hypothesis 9 (H9).** *The relationship between service quality and customer loyalty is serially mediated by perception towards promotional packages and customer delight.*

Based on the review of the literature, the study proposed the following conceptual model (Figure 1).

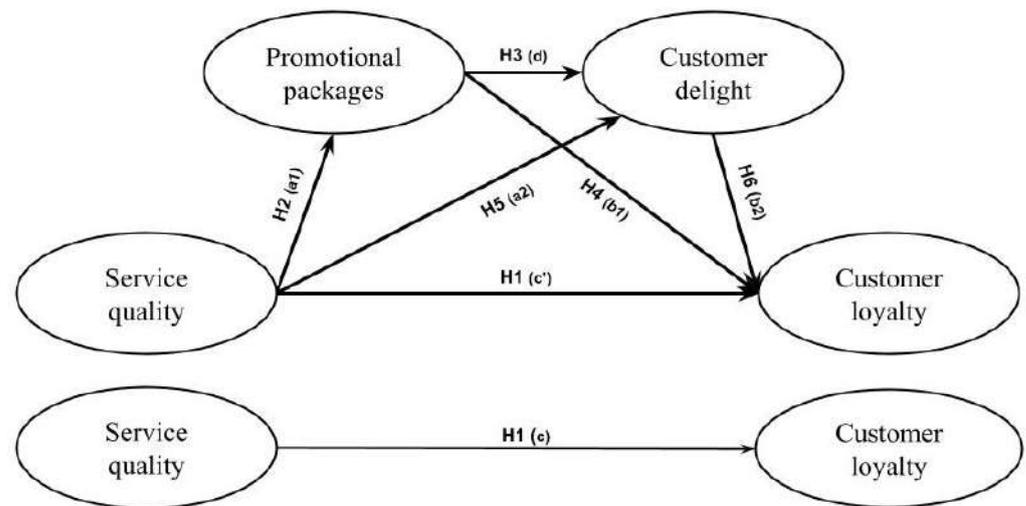


Figure 1. Conceptual model.

### 3. Materials and Methods

#### 3.1. Sample and Procedures

This research's participants are the customers of the 3 main telecommunications companies in Hungary. The three companies are Telenor, Vodafone, and T-Mobile. The data for the research were collected through online channels and by using the linear snowball sampling method. A structured questionnaire was distributed to the customers in an electronic form through social media platforms such as Facebook and LinkedIn, with an introductory message clarifying the aim of the study and its scope. The questionnaire was written in both Hungarian and English languages. The total number of the sent requests was 1000 during a period of three months (February to April) with one reminder message at the end of April. A total of 589 customers completed the questionnaire and submitted it to the researchers; this is a response rate of nearly 59%, which is considered as an adequate response rate (Baruch and Holtom 2008). On the other hand, a minimum sample size of 150 cases is considered adequate to conduct confirmatory factor analysis and the final analysis (Muthén and Muthén 2002). Moreover, in this study, out of 589 respondents, there were 381 foreigners and 208 Hungarians. Table 1 shows the "personal characteristics" of the sample, divided into Hungarian and foreigners.

Table 1. Sample characteristics.

Traits	Item	Foreigners		Hungarians	
		Count	Percentage %	Count	Percentage %
Gender	Male	228	59.8	88	42.4
	Female	143	37.5	116	55.7
	Prefer not to say	10	2.6	4	1.9
Age	18–24	84	22	65	31.3
	25–34	244	64	89	42.8
	35–44	42	11	14	6.7
	45–54	8	2.1	35	16.8
	≥55 years	3	0.8	5	2.4
Tele Provider	Vodafone	212	55.6	100	48.1
	T-Mobile	80	21	70	33.6
	Telenor	89	23.4	38	18.3

Table 1. Cont.

Traits	Item	Foreigners		Hungarians	
		Count	Percentage %	Count	Percentage %
Customer service contact	Very infrequently	132	34.6	78	37.5
	Infrequently	101	26.5	53	25.5
	Occasionally	110	28.9	66	31.7
	Somewhat frequently	27	7.1	9	4.3
	Very frequently	11	2.9	2	1

(Source: Author).

As it could be noticed from Table 1, males are prevailing among foreigners (59.8%), whereas females are the prevailing gender among Hungarian respondents (55.7%). The majority of respondents were “between 25 to 34 years old” for both foreigners ( $N = 244$ ) and Hungarians ( $N = 89$ ). Most of the respondents used Vodafone, foreigners ( $N = 212$ ) and Hungarians ( $N = 100$ ). Finally, most of the respondents, both Hungarian and foreigners, did not contact customer service frequently.

### 3.2. Measures

Customers reported their perception about service quality, customer delight, promotional packages, and customer loyalty through a standard online questionnaire comprising four sections:

**Service quality:** the study used a scale adopted from Zameer et al. (2018); the scale consisted of 8 items, using a 5 points Likert scale “1 = totally-disagree to 5 = totally-agree”. A sample of the items is “Staff here always behave professionally”.

**Promotional packages:** the study used a measure of 4 items adapted from Dhasan and Kowathanakul (2021). The measurement was based on a 5 points Likert scale “1 = totally-disagree to 5 = totally-agree”. A sample of the items include “The company I use gives attractive promotional packages”.

**Customer delight:** the study used the measure of Al-Hawari (2011), which consists of 3 items, by using a 5 points Likert scale “1 = totally-disagree to 5 = totally-agree”. A sample of the items is “I am pleased to deal with my telecom company”.

**Customer loyalty:** to measure the last variable, the researchers adopted the study of Yee et al. (2011), which consisted of 5 items, with a 5 points Likers scale “1 = totally-disagree to 5 = totally-agree”. A sample of the items is “I say something good about this company to others”. All the measures were used and validated widely by previous researchers.

### 3.3. Data Analysis

To test the hypothesized mediation relationships, a three-path mediated effect model was tested following the recommendations of Hayes (2013); some previous researchers have followed this method, such as Huertas-Valdivia et al. (2018) and van Jaarsveld et al. (2010). To estimate the path coefficients, the researchers used regression analysis with the PROCESS macro for SPSS developed by Hayes (2013). The advantage of this approach is that it allows separation of each mediator’s direct and indirect effect. It also helps in the investigation of the indirect effect that passes through the two mediators in a series (van Jaarsveld et al. 2010). This approach in addition “directly tests the indirect effect between the predictor and the criterion variables through the mediator via a bootstrapping procedure, addressing some weaknesses associated with the Sobel test” (van Jaarsveld et al. 2010, p. 1497). Therefore, to test the hypothetical model, it is important to specify the confident interval level and the bootstrap samples.

The researchers also used “confirmatory factor analysis” (CFA) by using AMOS 22 package to test the model fit along with testing the regression analysis (Hair et al. 2016). First, CFA was performed on the data set and the goodness of the model fit was identified. Afterward, Cronbach alpha reliability, “average variance extracted (AVE)”, and “composite

reliability (CR)" were calculated. Following that, the correlation between variables was examined, and to test the hypotheses, the coefficients were estimated.

## 4. Results

### 4.1. Measurement Model

To test the model fit, the recommendations of (Schumacker and Lomax 2004) were used. These recommendations suggest that before making any conclusion about the study's model, the researchers are required to consider model diagnostics by assessing the goodness of the fit indices. By using CFA, the researchers investigated the model fit indices of the study's model.

The main indices to be reported according to Bentler (1990) and Schumacker and Lomax (2004), include the "model's chi-square" ( $\chi^2$ ), "degree of freedom of the model" (df), "the ratio of the chi-square statistic to the respective degrees of freedom ( $\chi^2/df$ )", "comparative fit index" (CFI), "the root mean square error of approximation" (RMSEA), "the Tucker-Lewis index" (TLI), and "the standardized root mean residual" (SRMR). According to Awang (2012), for a good model fit measure, the accepted thresholds' values of the mentioned indices must be met. The recommended values of these indices are  $\chi^2/df < 5$ , RMSEA  $\leq 0.08$ , CFI  $> 0.90$ , TLI  $> 0.90$ , GFI  $> 0.95$ , AGFI  $> 0.90$ , and SRMR  $< 0.05$  (Awang 2012). Before conducting the final analysis, it is necessary to examine the model fit. In Table 2, the key diagnostics are shown for both Hungarians and foreign customers separately, and the values support the model fit. (The hypothesized model is presented in Figure 1).

**Table 2.** The goodness of fit indices of the total models for foreign customers and Hungarian customers.

Fit Index	$\chi^2$	df	$\chi^2/df$	TLI	CFI	GFI	AGFI	RMSEA	SRMR
Foreigners	332.643	143	2.326	0.949	0.962	0.951	0.902	0.057	0.034
Hungarians	270.636	142	1.906	0.900	0.931	0.936	0.899	0.060	0.046

(Source: Author).

### 4.2. Reliability and Validity Analysis

Before doing the final analysis, the Cronbach alpha reliability was conducted to examine the "internal consistency" of the study's variables for both Hungarians and foreigners separately. This test was based on the calculations of all variables' items separately, indicating their alpha Cronbach values, considering that this value should be over 0.60 to be considered as an accepted reliability level of the variable items, as was recommended by Sekaran and Bougie (2016). The results of the reliability test shown in Table 3 indicate an accepted reliability value of all variables for both Hungarian and foreign customers.

**Table 3.** The reliability tests. Foreigners ( $N = 381$ ), Hungarians ( $N = 208$ ).

Variable	No. Items	Foreigners	Hungarians
		Cronbach's alpha	Cronbach's alpha
Independent variables			
Service quality	8	0.90	0.79
Promotional packages	4	0.84	0.74
Customer delight	3	0.85	0.78
Dependent variables			
Customer Loyalty	5	0.91	0.83

(Source: Author).

The validity test was conducted after reliability analysis, and to check and test the variables, CFA was applied, and to this end, first factor loadings were calculated (Table 4), then the "convergent validity" test was performed. The degree of correlation of a variables' items is assessed from the latent variables' average variance extracted (AVE) and the

composite reliability (CR) (Bagozzi et al. 1991; Chin 1998). These two studies suggested that the value of AVE of each variable should be higher than 0.5, whereas the “composite reliability” (CR) value should not be under 0.7. The calculations of AVE and CR are shown in Table 3, and as it could be noticed that their values for both Hungarians and foreign customers are in the accepted threshold.

**Table 4.** Factor loadings.

Variable	Loadings	Hungarians	Foreigners
Service quality	SQs1	0.807	0.810
	SQs2	0.869	0.719
	SQs3	0.757	0.737
	SQs4	0.784	0.791
	SQs5	0.539	0.754
	SQs6	0.648	0.795
	SQs7	0.715	0.818
	SQs8	0.708	0.802
Promotional packages	Pa1	0.638	0.763
	Pa2	0.772	0.872
	Pa3	0.845	0.825
	Pa4	0.881	0.822
Customer delight	CD1	0.703	0.878
	CD2	0.774	0.908
	CD3	0.802	0.843
Customer loyalty	CLs1	0.662	0.805
	CLs2	0.847	0.825
	CLs3	0.834	0.921
	CLs4	0.720	0.862
	CLs5	0.785	0.855

(Source: Author).

Discriminant validity clarifies whether the measures of one variable are distinct from the other one. To test it, we used the methods of Fornell and Larcker (1981), to assess the measured discriminant validity by making a comparison of the relationship between the correlations among the study’s constructs and “the square root” of the AVE of the constructs. As shown in Tables 5–7, “the square roots” of the AVE of all variables are higher than the correlations among constructs for both Hungarians and foreigners, thus indicating good discriminant validity. Therefore, the study tool is considered validated.

**Table 5.** The convergent validity tests (AVE and CR).

Variable	No. Items	Foreigners		Hungarians	
		AVE	CR	AVE	CR
Independent variables					
Service quality	8	0.61	0.92	0.54	0.90
Promotional packages	4	0.67	0.89	0.62	0.87
Customer delight	3	0.77	0.91	0.58	0.80
Dependent variables					
Customer loyalty	5	0.73	0.93	0.60	0.88

(Source: Author).

**Table 6.** Discriminant validity of Hungarians and descriptive analysis.

Variables	Mean	SD	1	2	3	4
1. Service quality	3.53	0.60	<b>(0.72)</b>			
2. Promotional packages	3.63	0.56	0.419 **	<b>(0.79)</b>		
3. Customer delight	3.42	0.60	0.286 **	0.278 **	<b>(0.76)</b>	
4. Customer loyalty	3.37	0.68	0.584 **	0.656 **	0.286 **	<b>(0.79)</b>

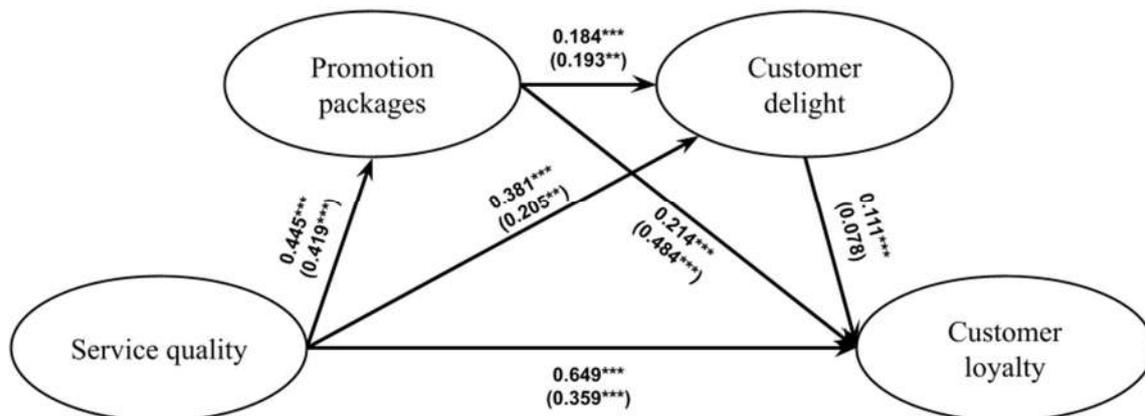
(Source: Author). \*\*  $p < 0.01$ .**Table 7.** Discriminant validity of foreigners and descriptive analysis.

Variables	Mean	SD	1	2	3	4
1. Service quality	3.63	0.70	<b>(0.78)</b>			
2. Promotional packages	3.40	0.71	0.445 **	<b>(0.82)</b>		
3. Customer delight	3.25	0.80	0.463 **	0.353 **	<b>(0.88)</b>	
4. Customer loyalty	3.51	0.79	0.771 **	0.541 **	0.486 **	<b>(0.86)</b>

(Source: Author). \*\*  $p < 0.01$ .

#### 4.3. Hypotheses Test

Following the approach of Hayes, 2013, for testing the three-path mediated effect model, the researchers have used regression analysis with the PROCESS macro for SPSS developed by Hayes, 2013. The researchers specified a 95% “confidence interval” with 5000 bootstrap samples. Figure 2 displays the variables of the model with the estimates of the standard path coefficients.

**Figure 2.** Hypotheses results. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ . Note: The numbers between the two brackets are for Hungarian customers.

The results of the regression analysis are presented in Table 8, which indicates that for foreign customers, service quality of the telecommunication companies directly and significantly influenced their loyalty toward the company ( $\beta = 0.73$ ,  $SE = 0.04$ ,  $p < 0.001$ ) (path c); therefore, it could be noted that this impact is strong. Similarly, for Hungarians, the service quality can influence their loyalty significantly in a positive way ( $\beta = 0.59$ ,  $SE = 0.06$ ,  $p < 0.001$ ); however, this effect is less when compared to foreign customers. Therefore, we could conclude that (hypothesis H1) is accepted for both international and Hungarian customers.

Table 8 also shows that service quality can influence perceptions toward promotional packages significantly in a positive way for both foreign and Hungarian customers ( $\beta = 0.445$ ,  $SE = 0.04$ ,  $p < 0.001$ ) ( $\beta = 0.419$ ,  $SE = 0.06$ ,  $p < 0.001$ ) (path a1), respectively. Moreover, it could be noticed that this effect is very close to each other in both segments of customers, which leads the researchers to accept hypothesis H2.

Table 8. Direct effects.

Direct Path Coefficient			Foreign Customers			Hungarian Customers			Path Code
			Standard Coefficient $\beta$	S.E.	$p$	Standard Coefficient $\beta$	S.E.	$p$	
Service quality	→	Promotional packages	0.445	0.046	***	0.419	0.060	***	a1
Service quality	→	Customer delight	0.380	0.057	***	0.205	0.073	0.005	a2
Promotional package	→	Customer loyalty	0.214	0.036	***	0.484	0.064	***	b1
Customer delight	→	Customer loyalty	0.110	0.035	***	0.078	0.056	0.114	b2
Promotional packages	→	Customer delight	0.184	0.056	***	0.193	0.078	0.008	d
Service quality	→	Customer loyalty	0.649	0.039	***	0.359	0.060	***	c'
R <sup>2</sup>		Promotional packages		0.19			0.17		
		Customer delight		0.24			0.11		
		Customer loyalty		0.68			0.55		

(Source: Author). \*\*\*  $p < 0.001$ .

The perceptions toward promotional packages significantly influence customer delight for both international and Hungarian customers at a weak level ( $\beta = 0.184$ , SE = 0.05,  $p < 0.001$ ) ( $\beta = 0.193$ , SE = 0.07,  $p = 0.008$ ) (path d), respectively. Therefore, hypothesis H3 was accepted.

The results also showed that the perceptions towards promotional packages significantly influence customer loyalty for both international and Hungarian customers ( $\beta = 0.214$ , SE = 0.03,  $p < 0.001$ ) ( $\beta = 0.484$ , SE = 0.06,  $p < 0.001$ ) (path b1), respectively. It could be noticed that this impact between international customers is low compared to Hungarians. Based on the previous results we could conclude to accept hypothesis H4 for both customer segments.

In the same way, the service quality was found to significantly predict customer delight for both international and Hungarian customers of telecommunication companies ( $\beta = 0.380$ , SE = 0.05,  $p < 0.001$ ) ( $\beta = 0.205$ , SE = 0.07,  $p = 0.005$ ) (path a2), respectively. However, this effect is weak for Hungarian customers, while it was moderate for international customers. Therefore, hypothesis H5 was accepted.

The regression analysis table also showed that customer delight could significantly influence customer loyalty, but this effect was weak for international customers ( $\beta = 0.110$ , SE = 0.03,  $p = 0.009$ ) (path b2). However, this effect was not significant for Hungarians ( $\beta = 0.078$ , SE = 0.05,  $p = 0.114$ ), which led to accepting hypothesis H6 for internationals and rejecting it for Hungarians.

The model explained 11% of the variance in customer delight for Hungarian customers compared to 24% for international customers. This means that service quality is more greatly perceived as a reason for higher customer delight for international customers. Comparatively, the variance in promotional packages was very close to each other for both international and Hungarians, which means that for both segments, service quality can affect the way that customers perceived the promotional packages. Finally, for the variance in customer loyalty, the results showed that the three variables could explain 68.5% of the variance in customer loyalty for internationals compared to 55% for Hungarians (See Table 8).

The standardized coefficients for the direct effects are shown in Figure 2, indicating the standardized weights.

For testing the mediation influences of promotional packages and customer delight, the researchers used the bootstrapping method, which resampled the data to analyze the mediation effects and to validate the direct, indirect, and total effects (Hayes 2017). Then, the researchers conducted indirect path analysis from service quality to loyalty through promotional packages and customer delight by checking the 95% confidence interval of model results.

The findings shown in Table 9 showed that there was a significant positive total indirect effect between service quality and customer loyalty for both Hungarians and international customers of telecommunication companies.

**Table 9.** Indirect paths.

Indirect Path	Foreigners		Hungarians	
	$\beta$	(LLCI-ULCI)	$\beta$	(LLCI-ULCI)
Quality → promotional packages → customer loyalty	0.100 ***	(0.06–0.14)	0.201 ***	(0.13–0.30)
Quality → customer delight → customer loyalty	0.043 ***	(0.01–0.08)	0.016	(−0.05–0.05)
Quality → promotional packages → customer delight → customer loyalty	0.010 ***	(0.01–0.02)	0.007	(−0.02–0.02)

\*\*\*  $p < 0.001$ . (Source: Author).

However, the results showed that for Hungarian customers, only customers' perceptions toward promotional packages could mediate the effect of service quality on customer loyalty. Whereas for international customers, both customer delight and the perception toward promotional packages mediated the relationship between service quality and customer loyalty. This leads to accepting hypothesis H7 for both segments of customers, whereas hypothesis H8 could be accepted for the international customers only.

Furthermore, the results showed that the three-path mediation was significant for foreign customers but insignificant for Hungarian customers. However, it was weak in the case of foreign customers as well. Therefore, the last hypothesis was accepted for international customers and rejected for Hungarian customers.

## 5. Discussion

This study was conducted to examine the customer loyalty towards telecom companies in Hungary during the COVID-19 pandemic. The study explored the impact of service quality, perception towards promotional packages, and customer delight on customer loyalty in the context of telecom companies, namely Vodafone, T-Mobile, and Telenor, in Hungary. It also examined the mediating impacts of promotional packages and customer delight between service quality and customer loyalty. The findings of this study reveal the behavioral comparison towards telecom companies between Hungarians and foreigners in Hungary and determine the measures of customer loyalty among both customer segments.

The results of this study show that service quality plays a significant positive role in enhancing customer loyalty towards telecom consumers in Hungary. Hence, hypothesis H1 is strongly supported. The result is in accordance with previous studies conducted during or before the COVID-19 pandemic (Dhasan and Kowathanakul 2021; Shen and Yahya 2021; Malhotra and Malhotra 2013; Santouridis and Trivellas 2010), indicating the importance of service quality on the loyalty of the customers. However, according to our findings, these effects can vary regarding their nationality (Hungarian or foreigners), as our results showed that the impact of service quality is stronger among foreign customers to influence their loyalty in comparison to Hungarian customers. This result suggests that foreign customers living in Hungary are more influenced by the service quality of their telecom companies. The reason behind this might be that the foreigners are more frequent in calling customer service and in return receive better feedback. Moreover, foreigners often receive English-speaking executives to provide assistance for their problems, which makes them happy with the provided service. Furthermore, other dimensions of service quality such as time of waiting, location of customer service office, availability of customer services, and helpfulness of the employees affects the consumer's perception towards service quality. On the other hand, Hungarian customers are not very influenced by service quality, which should be the topic of concern for the managers of Hungarian telecom companies.

Secondly, the influence of service quality on perception towards promotional packages was examined. The results of our study showed that service quality positively influences the perception of consumers towards promotional packages. So, hypothesis H2 is also strongly supported. It suggests that if the customers are happy with the service quality, then they are more likely to perceive promotional packages as additional benefits. This result is in line with [Paulrajan and Rajkumar \(2011\)](#), who noted that perceptions of customers toward promotional packages can be the key reason for choosing a particular telecom company over others. The results showed that perceptions of promotional packages positively impact customer delight, which proved our proposed hypothesis H3. This result provided support to the previous studies, which suggested that perceptions towards promotional packages could be the antecedents of customer delight ([Berman 2005](#); [Finn 2005](#)). Furthermore, [Dubey et al. \(2020\)](#) explained that perceptions of promotional packages of mobile companies are one of many dimensions of the company's perceived value for the customers and it positively enhances customer delight. These results are almost the same for both Hungarian and foreign customers in Hungary, but the impact of promotional packages on customer delight is relatively low for both customer segments. This implies that even if the customers perceive promotional packages as additional benefits, it still does not lead to a high level of customer delight. This may lead us to conclude that the current promotional packages are not sufficient in increasing the cheerfulness of the customers and their delight.

Further, promotional packages positively influence customer loyalty and support our proposed hypothesis H4. This result is in accordance with the previous literature ([Dhasan and Kowathanakul 2017](#); [Dhasan and Kowathanakul 2021](#)). The findings of our study implied that during the COVID-19 pandemic, the promotional packages provided by the telecom companies lead to improved customer loyalty. However, this influence is rather low among foreigners in comparison to Hungarian customers. There could be several reasons behind this low-level influence of promotional packages among foreign customers, such as fewer packages available for foreign customers, inability to understand and avail existing packages, the language barrier in understanding the terms and conditions for the packages, or unawareness regarding available promotional packages.

Next, the findings suggested that service quality significantly and positively affects customer delight. Hence, our proposed hypothesis H5 is also supported. In support of this, [Pratondo and Zaid, 2021](#), explained the significant positive impact of service quality on customer delight. The findings also indicated that the influence of service quality on delight is higher among foreign customers in comparison to Hungarians. This implies that Hungarian customers are less likely to be delighted by the quality of service of telecom companies, while foreign customers show a moderate level of delight. On the other hand, customer delight significantly influences customer loyalty among foreign customers but is not significant for Hungarian customers. This supports our proposed hypothesis H6 for foreigners but not supported for Hungarian customers. However, in the case of foreign customers, the influence of delight on customer loyalty is also very weak. These findings imply that even if the companies aim to delight their customers, it will not result in improving their loyalty towards the company. These results are supported by [Bowden and Dagger \(2011\)](#), who reported in their study that delight cannot be considered as the determining factor for customer loyalty. However, delight could be a segment-specific phenomenon ([Bowden 2009](#)).

In addition to this, our findings also suggested that in the case of Hungarian customers, it is only the customer's perception towards promotional packages that positively mediated the relationship between service quality and customer loyalty. When analyzing the mediation effect of customer delight between service quality and customer loyalty, we could not find any significant effect among Hungarian customers. However, in the case of foreign customers, both promotional packages and customer delight individually mediate the relationship between service quality and customer loyalty. Hence, our hypothesis H7 is supported for both customer segments, and hypothesis H8 is supported only for foreign customers. The results imply that to enhance customer loyalty, both promotional

packages and customer delight can act as a mediator in the case of foreign customers living in Hungary.

Lastly, the mediation effects of promotional packages and customer delight between service quality and customer loyalty were examined. The results of our study showed that there is a significantly positive mediation effect of promotional packages and customer delight between service quality and customer loyalty among foreign customers only. Hence, our hypothesis H9 is supported for foreign customers and rejected for Hungarians. This implies that quality of service will significantly influence the perception of customers towards promotional packages, which will further lead to delighting customers and as a result will improve their loyalty towards telecom companies among foreign customers. [Quach et al. \(2016\)](#) explained that promotion strategies and perceived reliability of promotional packages enable firms to retain their customers and, apart from service quality, other factors also affect consumer behavior, such as perceived value, promotional offers, and positive word of mouth. To the best of the authors knowledge, none of the studies were conducted to analyze the mediation effect of both promotional packages and customer delight together. This finding will provide evidence for the mediation effect of promotional packages and customer delight between service quality and customer loyalty in the context of telecom companies during the COVID-19 pandemic.

## 6. Implications

Several theoretical implications concerning consumer behavior are associated with this study. First, the findings of this study provide a holistic model for service quality, promotional packages, and delight, to develop loyalty in the telecommunication industry in Hungary. Second, it provided a systematic comparison between Hungarian customers and foreigners living in Hungary to show the difference in the behaviors of each segment.

Previously, it has been widely argued that service quality affects customer loyalty positively, but there is a lack of studies that investigate the role of the other two mediating variables in this effect. The study highlighted the role of service quality in enhancing the customers' perceptions of promotional packages indicating that this role is significant for both Hungarian and non-Hungarian customers. To the best of the authors knowledge, none of the previous studies have identified the influence of service quality on customers' perceptions toward promotional packages. These perceptions toward promotional packages are important for organizations because they are an important element of the company's perceived value of the customers ([Dubey et al. 2020](#)). Furthermore, these perceptions towards promotional packages can influence the customers' willingness to pursue the usage of the service ([Dhasan and Kowathanakul 2021](#)) and increase the loyalty and perceived fairness of the customers ([Santouridis and Trivellas 2010](#)). Thus, the presented mediation process in the current study proposed a comprehensive framework to understand the influence of service quality on customer loyalty. This research work is also a significant contribution to the current literature because it has addressed the customer loyalty issues in the telecom sector in Hungary; moreover, it made a comparison between local and foreign customers related to the study's framework variables. This is especially important as this sector is facing various challenges during the pandemic due to overloaded and strong competition. There are few studies on promotional packages and customer delight ([Berman 2005](#); [Finn 2005](#)), and the largest part of those studies has focused on them as a predictor of other customer behaviors; therefore, this study is examining the impact of these variables, and the interaction between them, on customer loyalty, for the first time. In addition, their role as serial mediators is also considered to be a new model for understanding customer loyalty.

This study provides several practical implications. During the COVID-19 pandemic, the telecom industry has faced various challenges. In this regard, understanding the impact of various factors on customer loyalty is necessarily significant. Hence, this study incorporates three variables to examine customer loyalty, such as service quality, perception towards promotional packages, and customer delight. The results of the study suggested

the impact of these variables on the customer loyalty of Hungarian as well as foreign customers living in Hungary. These results will provide a better understanding of the consumer behavior of both segments and will help policymakers and managers to create marketing strategies accordingly. The service quality of selected telecom companies poses a different impact on Hungarian and foreign customers' loyalty. The results suggest that among Hungarian customers, service quality is a weak predictor of customer loyalty. Therefore, managers can modify their service quality dimensions concerning Hungarian customers. In addition, managers and policymakers should create various promotional packages, which can help in increasing customer loyalty during the COVID-19 pandemic. Our results also suggested that customer delight had a weak influence on customer loyalty among foreign customers and had an insignificant relationship among Hungarian customers. Therefore, companies should work towards making service quality and promotional packages better to enhance customer loyalty, as delighting customers is not positively affecting loyalty.

## 7. Conclusions and Future Research Directions

The impact of the COVID-19 pandemic has created risks and challenges for every sector in every country. The rapid surge in demand and data traffic were some of the challenges faced by the telecommunication sector. The shift to virtual work and study environments has created a huge burden on telecom companies to provide essential services to the customers. In this regard, it is necessary to understand the impact of service quality on the loyalty of the customers towards telecom companies. This study was conducted to examine the role of service quality, promotional packages, and customer delight in improving customer loyalty towards telecom companies in Hungary during the COVID-19 pandemic. This study also provided the difference in the impact of these antecedents of loyalty among Hungarian and foreign customers' loyalty, which is important for policymakers and managers to identify the behavioral differences and cater to each segment accordingly. The results suggested that foreign customers are more delighted by the service quality of telecom companies than Hungarian customers. In the case of both Hungarian and foreign customers, promotional packages play a significant role in improving customer loyalty. Service quality is a stronger predictor of customer loyalty in the case of foreign customers. However, in both customer segments, promotional packages positively mediate the relationship between service quality and customer loyalty, while customer delight mediates the relationship between service quality and customer loyalty among foreign customers only. The findings of our study will fill the research gap and provide future research directions in the framework of service quality and customer loyalty.

Future studies can be conducted on different sectors by following the model presented in this study. The current study did not identify the impact of demographic variables such as age, gender, and income on customer loyalty, hence future researchers can identify its impact on customer loyalty. Future studies can add more variables into the model such as customer satisfaction, trust, perceived value, and customer expectation, etc. This study did not clarify the services provided by the company, so future studies can focus on different services and then, based on service quality, can identify loyalty.

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