Service Quality Perspectives in Telecommunication Sector: Trust and Loyalty Investigation

Perspectivas de calidad del servicio en el sector de las telecomunicaciones: investigación de confianza y lealtad

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Abstract

The goal of this paper is to investigate the effect on trust and loyalty in internet services of functional and technological service quality. We have received 300 internet service users from different cities in Iraqi Kurdistan Region. The date has been evaluated through structural equations modeling. The results reveal that technical quality has more impact on trust and loyalty than functional quality does. Secondly, it was observed that technical quality impacts both trust and loyalty directly while function al quality has only indirect relationship with loyalty over trust. We have given managerial implications to the managers in the sector.

Keywords: Functional Quality, Technical Quality, Trust, Loyalty, Internet services.

Resumen

El objetivo de este documento es investigar el efecto sobre la confianza y la lealtad en los servicios de Internet de calidad de servicio funcional y tecnológico. Hemos recibido 300 usuarios de servicios de internet de diferentes ciudades de la región del Kurdistán iraquí. La fecha ha sido evaluada a través del modelado de ecuaciones estructurales. Los resultados revelan que la calidad técnica tiene más impacto en la confianza y la lealtad que la calidad funcional. En segundo lugar, se observó que la calidad técnica afecta tanto la confianza como la lealtad directamente, mientras que la calidad funcional solo tiene una relación indirecta con la lealtad sobre la confianza. Hemos dado implicaciones gerenciales a los gerentes del sector.

Palabras clave: calidad funcional, calidad técnica, confianza, lealtad, servicios de Internet.

Introduction

Telecommunication is a growing sector all over the world. Especially, developing countries are trying to catch other countries through these communication possibilities. By doing these managers of the companies should be careful about using appropriate techniques and strategies to provide quality services to customers (Budur, 2018a; Budur et al., 2018). Besides, one of the fundamental aim of marketers of growing corporations is providing internal and external effectiveness to their organizations to increase competitive advantageous in the market (Budur and Demir, 2019a, b). So far, managers of the businesses should focus on the employee relationship to positively impact their commitment, satisfaction and performance, which is going to positively affect customer relationship and service quality respectively (Demir and Budur, 2019).

Since the twenties of the last century, the service sector has been growing rapidly, and there is no sign of it slowing down. In fact, according to the World Bank (2017), The service sector records for 65,029 per cent of the gross domestic product (GDP) of the world. Comparing this to the manufacturing sector which accounts for only 15.586 percent of the world's GDP (World Bank, 2017), the role of the service sector, as a driving force of the world's economy, becomes clear. As

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a major player in the service sector, the telecommunications industry plays a key role in shaping and developing any country, as telecommunications and mobile technologies have become the means to stay up to date and in touch with family, friends and loved ones. With the internet becoming readily available in most corners of the world, and the rise of social media and streaming services; mobile devices have become the main means for media consumption.

Within this sense, the performance of the companies plays a key role within quality of service, customer satisfaction and loyalty. Following this further, different author define service quality differently. For example, Grönroos (1984) described service quality as the product of an evaluation process, in which customers evaluate their expectations with the service they received. While Parasuraman et al. (1988) define it as "The degree of disparity between the normative expectations of customers about the service and their perceptions of service performance. Finally, in Kotler's (1999) definition of service quality is ' the trait of products or services that show the capacity of the business to satisfy consumer needs regardless of their observable existence'. Examining the various definitions mentioned above, we note that some authors describe the quality of service as to the difference of what is offered and what is received (Demir and Mukhlis, 2017; Demir, 2019a). Although some seek to describe the quality of service in terms of the discrepancy between what the service provider says it would do and what consumers believe the service provider did (Demir and Eray, 2015). Combining the previous views on service quality, we describe service quality as the gap according to what the service is supposed to be and what it is actually for the customer.

While management of internet services plays a pivotal role in increasing market share and business success in competitive markets, there are very limited studies in this field in Kurdistan Region of Iraq. Moreover, managers are not aware strongly and technically whether technical quality or functional quality impacts brand loyalty.

In this respect, current study has 5 sections, which are; literature that deals with elaboration of previous studies. In the next section, demographics and analyses of the study demonstrated. In the fourth section, we have tested the hypotheses within the framework of the study. In the fifth section, we have explained the managerial implications over the findings of the study.

Literature Review

Service quality

Current literature includes enough research that affirm the correlation among service quality and concepts such as customer satisfaction (Demir, Eray, and Erguvan, 2015), trust, and loyalty across various industries (Ozmen, Demir, and Celepli, 2013; Budur, 2018b). For instance, Ribbink et al. (2004) noted that service quality positively related with satisfaction and loyalty in e-commerce. Similarly, Kasiri et al. (2017), Nimako (2012), and Ibáñez et al. (2006) stated that customer satisfaction has positive and significant association with loyalty. Zehir et al. (2011) further claimed that the quality of service is a prerequisite for customer trust, which in turn is essential for customer loyalty. Besides, in telecommunication industry; Lai et al., (2009) in China; Ojo (2010) in Nigeria; Chen and Cheng (2012) in Taiwan; Leisen and Vance (2001) in Germany and Amin et al., (2012) in Malaysia found that the quality of the serviced provided is positively related with customers satisfaction and future purchases. Consequently, scholars noted that this prolific effectiveness increase customers loyalty respectively.

Further, Parasuraman et al. (1988) classified dimensions of service quality namely, empathy, assurance, reliability, responsiveness, and tangibles (Demir, 2019b; Demir, 2017). Empathy is the service provider's ability to care for the customer and make them feel special. Empathy is the willingness of the company to care for the customer, and to make them feel different. Assurance is the service provider's capacity to instill faith and trust in the client. Reliability is the overall capacity of the company to provide the service, as planned. Responsiveness refer to the service provider's ability and capacity to provide the service efficiently and in a timely manner. Finally, tangibles involve how the company looks to the customer.

Furthermore, Torlak, Demir, and Budur (2019) noted that measuring the intangible level of operations is considerably more difficult than measuring the level of tangible goods. Thus, measuring the quality of service is the subject of intense debate and disagreement among academics in the literature on marketing and service quality (Demir, Ozmen and Rashid, 2014; Budur et al., 2019). Consequently, multiple models for calculating and describing

the quality of service have been suggested. Of these three, the service quality model of Grönroos (1984), SERVQUAL (Parasuraman et al., 1988) and SERVPERF (Cronin Jr. & Taylor, 1994) stand out. SERVQUAL contrasts the perceptions of the consumer with the actual output. As both an improvement to SERVQUAL, SERVPERF was developed. Service quality in the Grönroos model consists of three dimensions, namely technical quality, functional quality and corporate image. Although one of the three dimensions of Grönroos's model, corporate image has not attracted as much attention as the other two (i.e. technical and functional quality). Therefore, current paper is going to consider technical and functional quality in this regard.

So far following the Grönroos (1984) model; technical quality is concerned with the actual service that is being provided to the customers. It is worthwhile to mention that technical quality is easier to measure objectively than functional quality, whereas functional quality refers to "how the customer receives the technical quality" (Grönroos, 1984). Furthermore, Ibáñez and colleagues (2006) claimed that functional quality depends greatly on the employee's knowledge, skill, and capabilities, whereas Grönroos (1984) noted in this regard that functional quality is more difficult to evaluate.

Trust

Trust is the cornerstone of a good, long-lasting partnership between companies and their customers (Akbar & Parvez, 2009). However, in order for customers to trust a particular business or brand the products and services of that business or brand should be perceived as having high quality. Since high quality results in satisfaction and satisfied customers are more likely to continue their relationship with the company, as the benefits of such a relationship are reciprocal. Ayden and Özer (2005) have found this to be true in the Turkish telecommunication industry, and Hazra & Srivastava noted the same thing in the Indian banking industry (2009).

What makes trust so fundamental for building a relationship with customers is the fact that it gives them a sense of security and a relatively risk-free experience using a specific service or product (Garbarino & Johnson, 1999), because trust relies on the idea that a business would not deceive its customers (Zehir et al., 2011). In the telecom industry, trust can play an even greater role in building relationships, because customers of telecommunication companies do not deal directly with their respective service providers but through a medium (i.e. their services), which is why telecom companies should pay increased attention to gaining their customers' trust (Akbar & Parvez, 2009).

It is worthwhile to note that customers' trust in a telecommunication company is as good as the promises of future gain from that company (Jahanzeb et al., 2011; Ayden & Özer, 2005). In other words, if the customers do not believe that they will continue to receive positive and high-quality services from their service providers they will stop trusting the company and possibly switch to a competing company. To stop their customers from switching to competing service providers and gaining their trust, Eisingerich and Bell argue that educating customers through providing them with critical information about their services can lead to higher levels of trust (2008). This information is of particular importance to the telecom companies due to the ease with which they can provide information to their subscribers.

Loyalty

In today's market, which is characterized by fierce competition and ample choice for customers to choose from, it is quite clear that gaining and keeping loyal customers is key to success. Because loyal customers can decide whether a business is profitable and thriving or not (Rizomyliotis et al., 2020; Hocky et al., 2020; Firend, & Abadi, 2014; Chen & Cheng, 2012; Hazra & Srivastava, 2009; Caceres & Paparoidamis, 2007; Aydin & Özer, 2005).

Few loyal customers can have a far greater impact on a business's bottom line than many disloyal ones, because it is very likely that they make more purchases and not switch to competing brands (Lam & Burton 2006; Baldinger & Rubinson, 1996). In this respect, the 80/20 rule of Vilfredo Pareto, which states that 20 per cent of people own 80 per cent of the resources of any given economy, can also refer to marketing. We argue that 80 percent of profit can come from only 20 percent of customers. Proving the likelihood of the 80/20 rule being true in marketing as well is Gould and Reichheld's claim that a large increase in profits can come from a fairly small percentage of loyal customers (1995 & 1996) respectively.

When it comes to defining loyalty, there seems to be disagreement as to what exactly loyalty is, which is why many definitions of loyalty exist. Repeat purchasing appears to be the angle from

which some authors try to define loyalty (Beerli et al., 2002). Oliver, (1997, p. 392; 1999, p. 34) defines customer loyalty as a strongly continues process of repurchasing any product or services from the same brand (Boohene and Agyapong, 2011; Nimako, 2012).

What makes loyalty even more important to companies is the high cost of attracting new customers relative to the current loyal ones (Ojo, 2010; Ibáñez et al., 2006). Loyalty is even more critical in the telecommunication industry (Chen & Cheng, 2012), Since telecommunications firms lose two to four per cent of their monthly customers (Ayden & Özer, 2005). Moreover, in their study of the Estonian telecommunication industry Kuusik and Varblane have found that telecom companies face greater difficulty in retaining loyal customers (2009). This was proven to be true for the Taiwanese

telecommunication industry by Chen and Cheng (2012).

Methodology

Model of the study

Given in the aforementioned literature, we have developed hypothesis as:

H1 technical quality has direct positive correlation to trust
H2 technical quality has direct positive correlation to loyalty
H3 functional quality has direct positive correlation to trust
H4 functional quality has direct positive correlation to loyalty
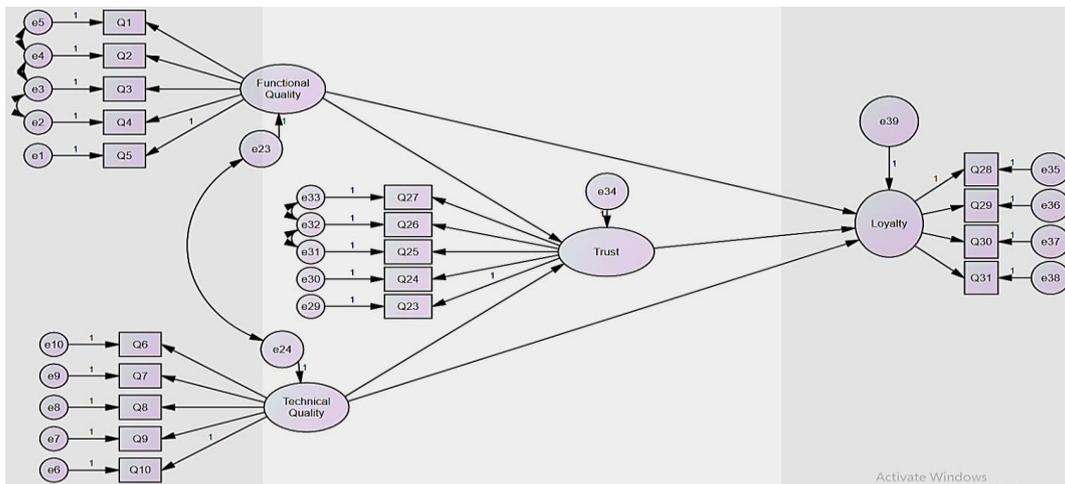H5 trust has direct positive correlation to loyalty

Figure 1. Model of the study

Sampling

Samples of this study were obtained from internet users who live in the most crowded cities in Iraq's Kurdistan Region, such as Sulaymaniyah and Erbil. Participants were randomly selected among the citizens who use internet services continuously from a specific internet service provider. Respondents answered questions based on their experiences of service quality and brand experiences evaluating their internet service providers. Samples were gathered via face-to-face interviews with the respondents to clarify the potential blind spots in the questions. Respondents were found in the crowded locations of the cities such as malls, parks and shops. Questionnaire starts with the

demographic questions assuring them of the confidentiality. Evaluation constructs of service quality, brand experience, brand trust, and brand loyalty were raised after the demographic questions, respectively. It interviewed a total of 300 internet users.

Instrumentation

We have used four dimensions in this study primarily in terms of functional service quality, technical service quality, brand trust and brand loyalty. Technical service quality assessment has been developed based on the Park et al. (2013) study. Their questions were modified to be appropriate for this study. In total, there were five questions under this dimension. Second, items

for calculating functional service were adopted and amended from Kang (2006). In total, five questions were designed for the questionnaire. Taichon et al. (2014) work has been used for brand trust. The questions were modified and there were four questions of trust in total for this study. Lastly, questions of brand loyalty were adopted and modified from the study of Chiou (2004). We have designed four questions in total.

Findings and discussion

Demographic descriptive

Gender and nationality of the respondents were asked a long with the package they were using and the amount they were spending for that package of internet services monthly. The respondents were predominantly males which represent 68.8% of the all data and female respondents were 32.2%. Mainly, Kurdish society were responding the questions because there are Kurdish nationality living in the region. Among the respondents, 10.9% were using platinum package, 31.7% were using gold package, 54.4% were using silver package, and 3.1% were using any other packages.

Factor Analysis

The results of the exploratory factor analysis are given in Table 1. Initial results showed that Kaiser-Meyer-Olkin (KMO) were 0.88 that is above 0.5. Second, Barlett's Sphericity Test was shown to be significant at p<0.01. These findings show that the sampling was adequate for further analyses.

Table 1.
EFA Results

Items	Mean	Std. Deviation	Extraction	TQ	BL	BT	FQ	Cronbach's Alpha
FQ1	5.10	2.377	0.710				0.630	
FQ2	5.39	2.432	0.767				0.735	
FQ3	5.66	2.482	0.750				0.780	0.85
FQ4	5.25	2.500	0.777				0.620	
FQ5	5.47	2.306	0.675				0.647	
TQ1	5.45	2.519	0.779	0.642				
TQ2	5.47	2.502	0.749	0.677				
TQ3	5.37	2.396	0.817	0.739				0.87
TQ4	5.59	2.450	0.824	0.755				
TQ5	5.25	2.536	0.773	0.757				
TR1	5.04	2.417	0.803			0.638		
TR2	5.04	2.389	0.819			0.614		
TR3	5.35	2.486	0.832			0.794		0.82
TR4	5.10	2.468	0.810			0.739		
TR5	5.08	2.348	0.793			0.648		
LY1	5.48	2.602	0.831		0.678			
LY2	5.20	2.817	0.856		0.736			
LY3	5.39	2.732	0.892		0.752			0.91
LY4	5.34	2.723	0.890		0.768			

Average variance extracted for all survey questionnaire was 0.79, which is above 0.5. Each latent variable was scaled based on the Eigen values. There have been mainly four dimensions those are technical quality, functional quality, trust, and loyalty. It was observed that the Cronbach's Alpha values of each construct was above 0.7 which is considered to be reliable.

With these results, it can be said that initial validity and reliability was achieved. Remaining details can be observed on Table 1.

We have used discriminant and convergent validity in order to elaborate the correlation of each variable with each other and sufficient distance of each grouped variables with other dimensions.

Table 2.
Discriminant and convergent validity

	CR	AVE	Trust	FQ	TQ	BL
Trust	0.833	0.736	0.858a			
Functional Quality	0.888	0.615	0.845b	0.884		
Technical Quality	0.832	0.734	0.836	0.821	0.857	
Loyalty	0.953	0.784	0.836	0.806	0.839	0.914

The findings of discriminant and converging validity are shown in Table 2. It can be observed that the discriminating validity obtained as the square root of the average variance extracted for each variable surpassed the correlations between the other variables and the related dimension. Second, convergent validity was achieved because both the composite reliability and the derived average variance were above the threshold values of 0.7 and 0.5, respectively.

Hypothesis testing

Structural equations modeling was developed to check the hypothesized model. In this definition, we have mainly divided quality of service into two main parts, technical quality and functional quality. Consequently, we checked the trust and loyalty impacts of those two constructs. Third, we've tested trust's effect on loyalty.

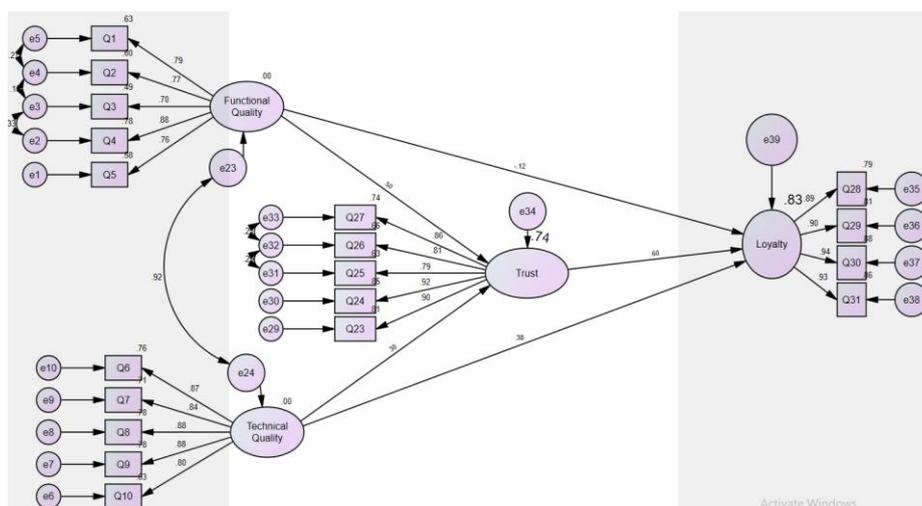|			Estimate	S.E.	C.R.	P	Result
Trust	<---	Functional Quality	0.612	0.131	4.671	***	Accepted
Trust	<---	Technical Quality	0.409	0.112	3.649	***	Accepted
Loyalty	<---	Trust	0.722	0.061	11.806	***	Accepted
Loyalty	<---	Functional Quality	-0.115	0.121	-1.276	0.202	Rejected
Loyalty	<---	Technical Quality	0.438	0.100	4.372	***	Accepted

Figure 2.
Hypothesis results

Figure 3.
Model results

Model fit index values are necessary to evaluate before initiating the results of the hypothesis in order to validate the model. The verification of the constructs is based mainly on the fit values of the model, namely the comparative fit values and the absolute fit values. The comparative fit values were assessed by IFI and CFI, while the absolute fit values were assessed by chi-square/df (X2/df), RMSEA, GFI and AGFI values.

Model fit results showed that IFI and CFI values were respectively 0.93 and 0.92, respectively. Second, it was 3.21 x2/df which

is far below 5. Finally, the values RMSEA, GFI and AGFI were respectively 0.068, 0.92 and 0.90. Hence, the results of the model are valid for evaluation.

It was observed that functional and technical quality of internet services explained 74% of the variance on trust. Furthermore, it was discovered that 83 per cent of the total loyalty variance was explained by functional quality, technical quality and trust.

Provided the hypothesis is accepted and rejected in Table 3 and Figure 2. Functional quality (β= 0.612) and technical quality (β= 0.409) have been found to have a major and direct effect on the trust. Second, technical quality (β= 0.438) had a substantial and direct effect on loyalty while functional quality (β= -0.115) did not have any influence on loyalty. Ultimately, trust (β= 0.722) has been found to have a major and direct effect on the loyalty. So H1, H2, H3, and H5 were admitted while H4 was discarded.

Conclusion

The purpose of this research was to assess the effect on trust and loyalty of the technical and functional quality of service. Secondly, we tested the effect of trust on loyalty. The work was carried out in the Kurdistan Region of Iraq on the internet services market. Data were collected as to the region's metropolis cities.

The findings showed that the technical quality of internet infrastructure had an important and direct effect on the trust in internet services and loyalty to internet provider. When the functional quality was elaborated, it was observed that functional quality had significant impact on the trust to internet service provider while didn't have any significant impact on the loyalty to the internet provider.

These results reveal that technical quality is main important element for the internet service providers for both trust to the brand, and remaining loyal to the internet service provider. Second, it was discovered that the usable standard of internet services will not remain loyal to consumers unless it enhances the brand's credibility. In this situation, Internet service providers will set the network infrastructure for faster loading speed, uninterrupted calls and uncut video viewing opportunities.

Besides, the significance and effect of functional quality on trust is not diminished by this. When the trust is assessed as having the greatest effect on loyalty, the significance of the influence of functional quality on the trust is undeniable. Functional quality can be said to have an indirect effect on brand loyalty by growing trust. Therefore, internet service providers need to behave proactively to solve problems of internet users, responsive to communicate with them, precise with keeping the internet records of the users safe, and providing accurate billing systems for them.

The current research faces limitations. The analysis is performed initially on the internet service market. So far, it can't be generalized to other service sectors such as hospital, education…etc. secondly, the study was conducted on Kurdistan Region of Iraq and can't be generalized to all Iraq. Future studies are expected to be conducted on the various service sectors and all Iraq.

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