



Impact of Service Quality Dimensions on Satisfaction and Loyalty: A Cross-National Research on Internet Service Customers

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ABSTRACT

The aim of this research is to study about the impact level of service quality dimensions such as empathy, responsiveness, assurance, reliability, and tangibles on satisfaction and loyalty of the internet service consumers. The research was performed between customers from Turkey and Georgia. ServQual scale was conducted to obtain the data and evaluated using SPSS. Regression analysis was performed in order to see the impact of dimensions on the satisfaction and loyalty. Furthermore, Independent Samples T Test was performed to see which country was more satisfied about internet service provision than one another.

Keywords

ServQual, Service Quality, Cross-national, Satisfaction of Customers, Service Quality Dimensions



Council for Innovative Research

Peer Review Research Publishing System

Journal: Journal of Social Sciences Research

Vol. 9, No. 3

editor@jssronline.com

www.jssronline.com



INTRODUCTION AND LITERATURE REVIEW

Internet Service is a tremendously wide sector all around the world. There are many firms providing internet service to huge amount of customers. It can be easily said that there are at least several companies in every country that are struggling to increase their market shares (Demir and Eray, 2015). In order to increase their market share, companies must satisfy the customers' needs and expectations (Demir, Talaat, and Aydinli, 2015). From this point of view, firms must explore and evaluate the parameters those effect the satisfaction of the customers (Aydinli and Demir, 2015). By this way, customers buy the same service continuously from the same company (Demir, Eray, and Erguvan, 2015).

Demir and Eray (2015) has stated about the service quality that "*Service quality can be considered as the perception of customer(s) about meeting his/her expectations from the concerning service provision*". From this point of view, by the time service quality is considered as perception of customers ((De Jong et al., 2005; Yee et al., 2013; Grönroos 1998), then the companies should investigate the market about the expectations of the customers.

Satisfaction comes while service quality increases up to the level of customers' expectations (Kotler, 1997; Looy et al., 2003; Su, Swanson, and Chen, 2015). Of course, it is almost impossible to obtain 100% of the satisfaction but the level of the satisfaction can be consistently increasing. This will provide company's customers become loyal.

Loyalty can be considered as consistent purchase of a customer from a provider because of the satisfaction (Oliver, 1999; Demir, Eray, and Erguvan, 2015; Aydinli and Demir, 2015; Demir, Talaat, and Aydinli, 2015). Loyal customer makes purchases from the same provider as long as s/he is satisfied with the service. There are many researches performed on the evaluation of the service quality and satisfaction dependency on the service quality dimensions such as ((Yang, Peterson, and Cai, 2003), airport service (Bezerra and Gomes, 2015), health care industry (Kitapci, Akdogan, and Dortyol, 2014), banking (Oncu, Kutukiz, and Kocoglu, 2010), transportation service (Celik, 2009), restaurant and café (Oyevole, 2013), education (Rayimah and Ahmad, 2007), tourism (Simiton et Al, 2012), and GSM (Hotamisli and Eleren, 2012). In this study, we have performed a cross-national study on the internet service provision sector between Turkey and Georgia. In the literature there was no such a research in this topic between two countries. This point makes this research novel.

Questions in this research can be sequenced as;

Q1 which of the countries between Turkey and Georgia is more satisfied with the Internet Service Provision?

Q2 which of the countries between Turkey and Georgia is more loyal to their internet Service provision companies?

Hypothesis of this research can be defined as;

H1a Empathy has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Turkey;

H1b Empathy has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Georgia;

H1c Responsiveness has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Turkey;

H1d Responsiveness has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Georgia;

H1e Assurance has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Turkey;

H1f Assurance has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Georgia;

H1g Reliability has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Turkey;

H1h Reliability has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Georgia;

H1i Tangibles has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Turkey;

H1j Tangibles has significant effect on satisfaction of customers on Internet Service Providers' evaluation in Georgia;

H2a Satisfaction has significant effect on loyalty of customers on Internet Service Providers' evaluation in Turkey;

H2b Satisfaction has significant effect on loyalty of customers on Internet Service Providers' evaluation in Georgia;

These hypotheses can be graphed as;

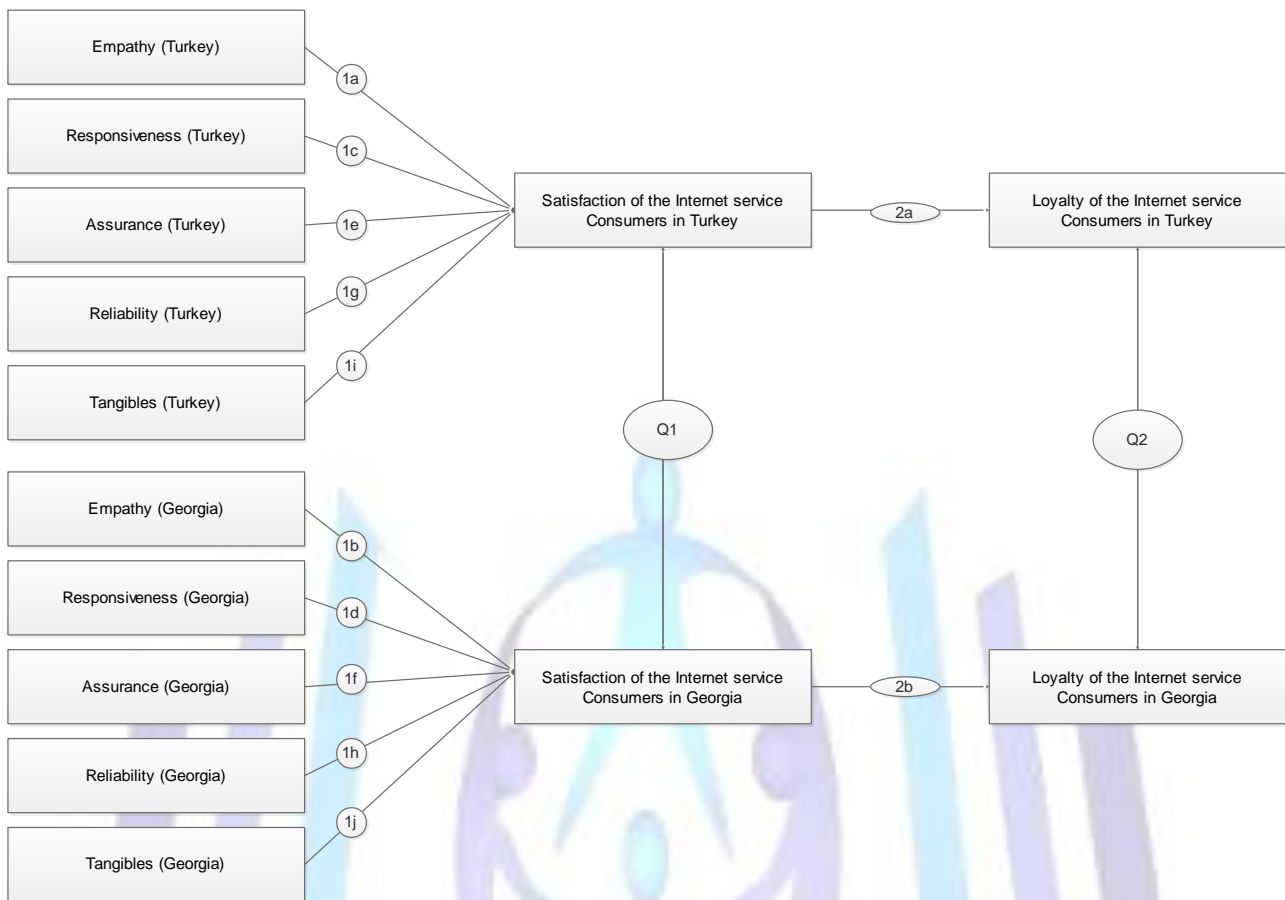


Figure 1: Model of the Research

METHODOLOGY

In this research, we have used ServQual scale which was first used by (Parasuraman, A. Zeithaml, VA. and Berry, LL., 1988). There were 305 people participated in this research from Turkey and 247 people participated from Georgia. 215 people of the applicant from Turkey are male while 90 of them are female. The picture in Georgia is 124 of the participators are male while 123 of them are female.

10 people among the participators from Turkey are between 18 and 25 years old, 112 people between 26 and 35, 137 people between 36 and 45, 36 people between 46 and 55 years old and 10 people are 55 years old or above. On the other hand, 169 people of participants from Georgia are between 18 and 25, 37 of them are between 26 and 35, 31 of them are between 36-45, 5 of them are between 46-55 years old and 5 of them are 55 years old or above. Remaining details are shown on the table 1 below.

Table 1. Age Frequency Distribution of Turkey and Georgia

Age(Turkey)					Age (Georgia)				
	Frequency	Percent	Valid Percent	Cumulative Percent		Frequency	Percent	Valid Percent	Cumulative Percent
18-25	10	3,3	3,3	3,3	18-25	169	68,4	68,4	68,4
26-35	112	36,7	36,7	40,0	26-35	37	15,0	15,0	83,4
36-45	137	44,9	44,9	84,9	36-45	31	12,6	12,6	96,0
46-55	36	11,8	11,8	96,7	46-55	5	2,0	2,0	98,0
55+	10	3,3	3,3	100,0	55+	5	2,0	2,0	100,0
Total	305	100,0	100,0		Total	247	100,0	100,0	



Before developing the hypotheses, we need to prove the validity and the reliability of the scale. From this point we need to take a look at the Kaiser-Meyer-Olkin and Bartlett's Test results.

Table 2. KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,939
Bartlett's Test of Sphericity	Approx. Chi-Square	7489,484
	df	276
	Sig.	,000

When a person looks at the table 2 above, it must be seen that KMO level minimum 0,50 and Bartlett's Test result must be significant at the concerning Chi-Square. In our case it can be seen that KMO level is 0.939 and Bartlett's Test result is 0,000 at the concerning Chi-Square. It means that the sampling for this scale was enough and the factors of this scale were clustered significantly. The statistical results are shown on the table 3 below;

Table 3. Descriptive Statistics of the Scale

	Mean	Std. Deviation	Anti-Image Correlation	Extraction
Q1	2,499	,9398	,941	,666
Q2	2,935	1,0511	,922	,670
Q3	2,221	,9015	,929	,731
Q4	2,488	,8439	,930	,752
Q5	2,808	1,0033	,892	,748
Q6	2,891	1,0833	,917	,698
Q7	2,512	,9645	,946	,667
Q8	2,702	,9157	,943	,673
Q9	2,505	,9023	,947	,523
Q10	2,711	,8996	,943	,595
Q11	2,459	1,0223	,970	,564
Q12	2,546	,9171	,958	,629
Q13	2,508	,9551	,959	,639
Q14	2,601	,9344	,949	,587
Q15	2,604	,9513	,935	,588
Q16	2,860	1,0324	,917	,624
Q17	2,672	1,1197	,923	,720
Q18	2,657	1,0464	,944	,696
Q19	2,679	1,0199	,962	,622
Q21	2,575	,9348	,936	,595
Q22	2,497	,9378	,945	,616
Q23	2,301	,9742	,910	,725
Q24	2,530	,8520	,911	,652
Q25	2,592	,9372	,952	,666

It is known that the level of anti-image correlation shouldn't be lower than 0,50. In this paper it is seen on table 3 that the minimum level of the anti-image correlation is ,892 and maximum level is ,962. This level is quite enough to be accepted.



However, extraction level also shouldn't be lower than 0,40. In this research minimum level of extraction is 0,523 and this level also is sufficient otherwise we had to subtract poor performing question from the scale. Table 4 shows about the reliability, explained variance level, Eigen values, and factor loads of the each question.

Table 4. Factor Statistics

	Component					Cronbach's Alpha
	Tangibles	Responsiveness	Assurance	Empathy	Reliability	
Q1				,586		0,804
Q2				,685		
Q3				,721		
Q4				,856		
Q5				,811		
Q6				,395		
Q7		,711				0,842
Q8		,613				
Q9		,426				
Q10		,468				
Q11		,549				
Q12			,665			0,823
Q13			,684			
Q14			,337			
Q15			,433			
Q16			,767			
Q17					,775	0,797
Q18					,729	
Q19	,402				,475	
Q21	,601					0,852
Q22	,733					
Q23	,818					
Q24	,795					
Q25	,641					
Eigen Values	10,485	2,021	1,242	1,150	1,111	
Explained Variance	43,686	8,420	5,174	4,097	3,811	65,188

It is known that the factor loadings of any question under any component shouldn't be lower than 0,30. in this paper all of the factor loadings seems to be enough for each of the concerning components. Furthermore, reliability levels of all of the components are above 0,65 and this shows that the scale is very reliable. However, these components explains 65% of the overall variance which should be minimum 0,40. These results show that the scale that was used in this research is valid and reliable to develop hypotheses from. Now, regression analysis are performed to develop the hypotheses.

CASE OF TURKEY

It was observed from the obtained results that 69% of the variance of satisfaction was explained by Empathy, Responsiveness, Assurance, Reliability, and Tangibles in Turkey. However, it was seen from table 5 that Empathy, Responsiveness, Assurance, Reliability, and Tangibles were all significantly affecting the level of satisfaction.

Table 5. Results of Multiple Regression Analysis



Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,408	,155		-2,629	,009
	Empathy	,273	,085	,178	3,205	,001
	Responsiveness	-,185	,087	-,132	-2,132	,034
	Assurance	,222	,088	,158	2,530	,012
	Reliability	,455	,060	,421	7,563	,000
	Tangibles	,363	,066	,285	5,469	,000
a. Dependent Variable: Satisfaction						

Furthermore, Reliability has the most important impact rather than other dimensions. Later Tangibles, Empathy, Assurance, and Responsiveness, respectively.

Table 6. Impact of Satisfaction on Loyalty

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,364	,087		4,164	,000
	Satisfaction	,841	,032	,838	26,693	,000
a. Dependent Variable: Loyalty						

It was also seen that satisfaction has explained 70% of the variance on loyalty. Which means that if a person of the concerning company is satisfied with the service, will be loyal customer of the concerning company 70%. Remaining reasons of becoming loyal for the concerning company should be investigated in different factors. However, satisfaction has significant impact at 0,841 coefficient level. In this case H1a, H1c, H1e, H1g, H1i, and H2a are accepted.

CASE OF GEORGIA

Test results show that Empathy, Responsiveness, Assurance, Reliability, and Tangibles dimensions explain 43% of the total variance. However, Empathy, Responsiveness, and Assurance have significant effect on satisfaction while Reliability and Tangibles do not.

Table 7. Results of Multiple Regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,292	,169		1,727	,085
	Empathy	,273	,088	,214	3,113	,002
	Responsiveness	,188	,075	,178	2,493	,013
	Assurance	,320	,083	,289	3,875	,000
	Reliability	,021	,071	,022	,295	,768
	Tangibles	,090	,069	,080	1,306	,193
a. Dependent Variable: Satisfaction						

However, Assurance has the most important effect with the coefficient of 0,320 then Empathy (0,273) and Responsiveness (0,188), respectively. Furthermore, table 8 shows the impact of satisfaction on the loyalty of the customers. Table 8 shows the impact of satisfaction on loyalty. It can be seen that satisfaction has a significant impact on loyalty with the coefficient of 0,746.

Table 8. Impact of Satisfaction on Loyalty

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,583	,103		5,646	,000
	Satisfaction	,746	,041	,761	18,375	,000

a. Dependent Variable: Loyalty

These results show that H1b, H1d, H1f, and H2b are accepted and H1h, H1j are rejected.

SATISFACTION COMPARISON

In this part, Independent Samples T Test was performed in order to check which of the countries between Turkey and Georgia are more satisfied of the Internet Services. Table 9 shows the means of two countries that shows the level of satisfaction about the internet service provision.

Table 9. Group Statistics of T Test

	Group	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction	Turkey	305	2,5852	1,01353	,05803
	Georgia	247	2,4251	,75806	,04823

It is seen that satisfaction level of Turkey is 2,5852 and Georgia is 2,4251. From this information it is observed that satisfaction level of Turkey seems more than Satisfaction level of Georgia. On the other hand, we need to check if this difference is significant or accidental. Table 10 shows the details about this question.

Table 10. Independent Samples Test Results of Significance

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Satisfaction	Equal variances assumed	23,357	,000	2,060	550	,040	,16014	,07774	,00744	,31285
	Equal variances not assumed			2,122	546,685	,034	,16014	,07546	,01191	,30838

The table above shows the results of the significance. It can be said that the mean difference between Turkey and Georgia is significant at $P \leq 0.05$ (0.040). This means that Turkish internet consumers are more satisfied than Georgian internet consumers. Now let's compare the level of loyalty between two countries. The same method was used for the test. Table 11 shows the statistical difference between two groups.

Table 11. Group Statistics of T Test

	Group	N	Mean	Std. Deviation	Std. Error Mean
Loyalty	Turkey	305	2,5393	1,01798	,05829
	Georgia	247	2,3927	,74328	,04729

Table 11 shows that there is a difference between loyalty levels of two countries. Loyalty level of Turkish internet consumers are 2,5393 and Georgian internet consumers are 2,3927. In order to check the significance of the difference, table 12 is below;

Table 12. Independent Samples Test Results of Significance

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Loyalty	Equal variances assumed	32,679	,000	1,892	550	,059	,14663	,07751	-,00562	,29888
	Equal variances not assumed			1,953	544,429	,051	,14663	,07506	-,00082	,29408

Table 12 shows that there is a significant difference between two groups at $P \leq 0.05$ (0.051). This result shows that Turkish internet consumers seem more satisfied and loyal to their internet service providers.

CONCLUSION

As a conclusion, Empathy, Responsiveness, Assurance, Reliability, and Tangibles all effect the satisfaction of the internet service consumers significantly. Moreover, these factors explain the 69% of the total variance of satisfaction. Beside this, Reliability is the most effecting factor on the satisfaction and then Tangibles, Empathy, and Assurance.

It was also seen that Satisfaction was affecting the loyalty of the internet consumers in Turkey significantly as 0,841 coefficients. Moreover, satisfaction explained the 70% of the total loyalty variance.

In Georgia it was not like the case in Turkey and only Empathy, Responsiveness, and Assurance was affecting the satisfaction level of internet consumers. However, Assurance was the most significant factor that affects the satisfaction level and then Empathy and Responsiveness, respectively. These three factors explained 43% of the overall variance of satisfaction.

Loyalty affected by satisfaction significantly in Georgia also. Satisfaction explained 58% of the total variance of loyalty. The coefficient level of satisfaction on loyalty was 0,746 and is also strong coefficient like it was for the Turkish internet consumers.

When we compared two countries, it was seen that Turkish Internet consumers were happier with the internet providers than Georgian internet service consumers. Beside this, Turkish internet consumers were more loyal to their internet service providers than Georgian users. It seems a very normal consequence because if satisfaction affects the loyalty, and if Turkey is more satisfied with the service, of course Turkey must have been more loyal, too./

Finally, we have elaborated the situation of satisfaction and loyalty levels of two countries. We have determined the effects of five service quality parameters on the satisfaction levels and loyalty of the internet service consumers in both countries.

As a limitation of this research, because of Georgia is not our mother country, we couldn't reach people as much as we have reached. That is why the number of two groups became not equal. Furthermore, in order to increase the variance of satisfaction and loyalty, some other factors also can be included such as price, trust, technical dimensions...etc.

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