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HOW NON-TECHNICAL DIMENSIONS OF SERVICE QUALITY EFFECTS SATISFACTION AND LOYALTY OF COSTOMERS AT GSM SERVICE SECTOR IN GEORGIA ?

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ABSTRACT

In this research, authors hypothesized the effects of five dimensions of service quality on customer satisfaction and loyalty. Data was collected via a survey questionnaire. The survey questionnaire was adapted from the research of Parasuraman et al.'s SERVQUAL. After validity and reliability analysis, hypothesis was proven by Regression Analysis and Analysis of Variance. It was observed that Assurance, Empathy, and Responsiveness have significant impact on satisfaction. However, loyalty depends on satisfaction significantly.

Keywords: Service Quality, SERVQUAL, Satisfaction of the Customers, GSM Operating Service, Loyalty of the Customer, Georgian GSM Operators.

INTRODUCTION AND LITERATURE REVIEW

GSM service is an enormously wide sector all over the world. There is a serious competition on most of the markets and every company struggles to increase their market share. On the other hand, due to the incentives caused by the competition and increasing number of firms in the field, customers enjoy the availability of the option to select the best service for their needs in telecommunication. From this point of view, every company has to understand the needs, demands, and points of satisfaction of their customers in order to increase their market shares. One of the most common ways to understand customer needs is doing a survey questionnaire. By this way, one can understand what effects the satisfaction of a customer and/or factors that makes a customer loyal to the company.

Improving the service quality is an important *weapon* for the service providers in order to attract the customers' satisfaction (Soriano, 2002;Haciefendioglu and Koc,

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2009), though it may sound vague and like a deep analysis of "what is the service quality". According to Johnston (1995), Grönroos (1998), Dabholkar and Overby (2005), any given service can be called as quality when a customer thinks that his/her demands and expectations have been met by the concerning provider. This concept urges the service providers to think about how the customer expectations can be met Therefore, the right questions should be asked to the customers so that the company understand the expectations and can demands of the real market

Satisfaction is exceeding of service provision over customers' expectations (Kotler, 1997; Looy et al., 2003; Su, Swanson, and Chen, 2015). On the other hand, in order to increase service provision a head of the customers' expectations, a company should make a market research initially about the customers' expectations then whether what they are doing fulfills customers' demands or not. By this way a company catches customers' loyalty.

Loyalty can be considered as a consequent feeling of customers about satisfaction. From this point, loyalty can be defined as continues and repeatedly satisfaction of a customer about a service or product from the behavior, shape, worth-of-mouth ...etc. and repurchasing of concerning service or product (Oliver, 1999). When a customer feels loyal to a company, may will to pay more for this quality good or service rather than others companies'. cliché, something which then calls for a Willingness to pay more is amount of money that customer would like to pay more for a better qualified good rather than giving less to a less qualified good.

Furthermore, customer satisfaction is very important because this is the principle of the business (Drucker, 1954) in order to increase the market share. There are surely many factors that affect customer satisfaction (Hallowell,1996) but this study only uses Empathy, Responsiveness, Assurance, Reliability, and Tangibles.

In recent years, companies tend to improve the quality of service offices of the GSM operators, tangible factors (wearing, facilities, office design...etc.), their call centers and so on. The question is how effective are these factors in increasing the satisfaction of customers and make them loyal to the company? In this research, the answer is found through conducting a survey questionnaire to the customers of GSM operators.

The impact of non-technical dimensions was taken into consideration in this study. The term *non-technical* means five dimensions of service quality which were defined by Parasuraman et al. (1988), and used in a great deal of scientific work. Everyone can more or less estimate how strong the technical dimensions effect customer trust, value, commitment, etc. (Thaichon et al., 2014). What about the impact of non-

technical dimensions on such a special sector like GSM?

There have been various studies performed on assessing the quality of different service provision sectors as internet retailing (Zhang, 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). These studies were carried out in different countries. However, there was no study that evaluated the service quality and its effects in Georgia. From this point of view, this research attempts to fill the gap in Georgia.

Hypothesis of this research are;

Thus, the Hypothesis could be networked as;

H1_a: Empathy has a significant effect on satisfaction of the customers in Georgia

H1_b: Responsiveness has a significant effect on satisfaction of the customers in Georgia

H1_c: Assurance has a significant effect on satisfaction of the customers in Georgia

H1_d: Reliability has a significant effect on satisfaction of the customers in Georgia

 $H1_e$: Tangibles have a significant effect on satisfaction of the customers in Georgia

H2: Satisfaction has a significant effect on loyalty of the customers in Georgia

H3: Satisfaction of the customers significantly depends on the GSM brand in Georgia



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METHODOLOGY

In this study, researchers applied the questionnaire in Tbilisi, Georgia to 260 people who use the service of at least one of

the following GSM operators: Geocell, Magti, or Beeline. Remaining demographic explanations are determined on the Table 1, 2, 3, and 4;

	Table 1: Age of the population										
		Frequency	Percent	Valid Percent	Cumulative Percent						
Valid	18-25	163	63,2	63,2	63,2						
	26-35	39	15,1	15,1	78,3						
	36-45	21	8,1	8,1	86,4						
	46-55	19	7,4	7,4	93,8						
	55+	16	6,2	6,2	100,0						
	Total	258	100,0	100,0							

Table 2: Gender of the population										
Frequency Percent Valid Percent Cumulative Percent										
Valid	Male	132	51,2	51,2	51,2					
	Female	126	48,8	48,8	100,0					
	Total	258	100,0	100,0						

	Table 3: GSM operator usage of the population											
		Frequency	Percent	Valid Percent	Cumulative Percent							
Valid	Geocell	103	39,9	39,9	39,9							
	Magti	85	32,9	32,9	72,9							
	Beeline	57	22,1	22,1	95,0							
	Others	13	5,0	5,0	100,0							
	Total	258	100,0	100,0								

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	Table 4: Amount of Money that the population spends per month										
		Frequency	Percent	Valid Percent	Cumulative Percent						
Valid	Less than 10 GEL	58	22,5	22,5	22,5						
	10-20 GEL	120	46,5	46,5	69,0						
	20-30 GEL	76	29,5	29,5	98,4						
	30-50 GEL	4	1,6	1,6	100,0						
	Total	258	100,0	100,0							

63% of the research population is between 18-25 years old, 15% is between 26 and 35, 8% is between 36 and 45, 7.4% is between 46 and 55, and 6% of the population is above 55 years old. 132 people (51.2 %) of this study are male and 126 people (48.8%)are female. 39% of the population is utilizing Geocell service, 32.9% Magti, and 22.1% is Beeline. Remaining 5% of the population is utilizing other GSM operators. 22.5% of the research population spends less than 10 Lari for their GSM operators monthly. 46.5% spends monthly from 10 to 20Lari, 29.5% spends between 30 and 50 Lari, and 1.6% of the population spends monthly from 30 to 50 Lari for their GSM operators. In order to start analysis of the hypothesis, we need to prove the validity and the reliability of the survey questionnaire. For this reason, principle components analysis was performed using IBM SPSS 20.

Table 5: KMO and Bartlett's Test results							
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. ,902							
Bartlett's Test of Sphericity	Approx. Chi-Square	2284,041					
	df	276					
	Sig.	,000					

The table above indicates Kaiser-Meyer-Olkinand Barlett's test results. Minimum acceptable level of KMO measure of sampling adequacy is 0.50 (Field, 2000). In this research, the level is 0.902 and it shows that the sampling is sufficient to perform further analysis. The second condition is that Barlett's test result must be significant at Sig≤0.05. This result shows that the factors were not clustered accidentally. Further statistics have been given below:

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	Table 6: Descriptive statistics of the scale								
	Mean	Std. Deviation	Anti-Image Correlation	Extraction					
Q1	2,283	,8873	.867	.616					
Q2	2,527	,8650	.803	.682					
Q3	2,198	,8574	.904	.635					
Q4	2,426	,8757	.899	.593					
Q5	2,349	,7905	.922	.475					
Q6	2,357	,8350	.927	.410					
Q7	2,291	,9965	.912	.440					
Q8	2,434	,9365	.928	.590					
Q9	2,484	,9134	.913	.586					
Q10	2,450	,8774	.863	.599					
Q11	2,473	1,0103	.876	.546					
Q12	2,519	,9672	.904	.682					
Q13	2,531	,9828	.884	.678					
Q14	2,376	,9094	.930	.444					
Q15	2,500	,9136	.918	.594					
Q16	2,581	,9918	.926	.534					
Q17	2,543	,9295	.910	.596					
Q18	2,512	,8876	.938	.469					
Q19	2,481	,9949	.923	.400					
Q20	2,419	,9269	.904	.530					
Q21	2,333	,9025	.907	.526					
Q22	2,298	,9083	.924	.581					
Q23	2,391	,8854	.862	.622					
Q24	2,399	,9621	.878	.581					

Results of anti-image correlation matrix should not be less than .50, and in this case the minimum level of anti-image correlation matrix is .803. However, extraction results are from .400 up to .682. It shows that there is no need to extract any question from the scale. On the other hand, it is important how much of the total variance is explained by this scale. It is shown on the table below:

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Table 7: Total variance explained											
Component		Initial Eigen val	ues	Extrac	tion Sums of Square	ed Loadings					
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %					
1	8,162	34,010	34,010	8,162	34,010	34,010					
2	1,588	6,618	40,627	1,588	6,618	40,627					
3	1,312	5,467	46,094	1,312	5,467	46,094					
4	1,191	4,963	51,057	1,191	4,963	51,057					
5	1,103	4,595	55,652	1,103	4,595	55,652					

It can be seen on the table above that there are five main factors that represent the all scale. In order to say that, Eigen value of each factor must be at least 1.000. The table shows that minimum Eigen value of the factors is 1.103 and the maximum is 8.162. Furthermore, these five factors explain 55.652% of the overall factors. It is also important to know the load of each question on each factor. It is known that the minimum load of a question must be 0.300 in a factor. Pattern matrix of the factors is shown on the table below:

	Cronbach'sAl					
		pha				
	Tangibles	Reliability	Empathy	Responsiveness	Assurance	
Q1			,706			
Q2			,921			
Q3			,710			0 707
Q4			,470			0.797
Q5			,460			
Q6			,372			
Q7				,469		
Q8				,769		0 746
Q9				,699		0.740
Q10				,818		
Q11					,676	
Q12					,732	0 745
Q13					,809	0.745
Q14					,437	

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Q15					,690	
Q16					,655	
Q17		,722				
Q18		,471				0.700
Q19		,350				
Q20	,618					
Q21	,721					
Q22	,689					0.802
Q23	,875					
Q24	,783					
Total Cronbach's Alpha					0.914	
Total	Total Variance Explained					55.652

The table above shows that the minimum factor loading on the matrix is 0.350 and the maximum is .921. It can be said that there is no problem with the factor loadings. It can be said that each question that lies under each factor is valid. Furthermore, the reliability of each factor is also tested and the Cronbach's alpha levels are determined on the extensions of the group of questions. It is known that minimum level of Cronbach's alpha is .700 (Lance, Butts, and Michels. 2006).In this research. the minimum level is 0.700 and maximum is .802. However, the Cronbach's alpha of the total scale is 0.914. It can be said that the

sale is reliable enough and valid to measure the expectations of the customers. Now that the scale is valid and reliable, the hypothesis testing operations can be performed.

First of all, multiple regression analysis was performed in order to see the factors that affect the satisfaction of the customer. It was seen that Empathy, Responsiveness, Assurance, Reliability, and Tangibles explained 36% of the overall variance. On the other hand, it was seen that some of the factors significantly affected the satisfaction and some of them did not. The table below shows the results of the regression analysis;

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	Table 9: Coefficients of each factor on customer satisfaction										
Model		Unstandardize	d Coefficients	Standardized Coefficients	t	Sig.					
		В	Std. Error	Beta							
1	(Constant)	,250	,192		1,304	,193					
	Empathy	,320	,095	,235	3,380	,001					
	Responsiveness	,016	,085	,013	,186	,853					
	Assurance	,283	,090	,233	3,136	,002					
	Reliability	,080,	,077	,071	1,036	,301					
	Tangibles	,209	,080	,175	2,611	,010					
a. Dep	endent Variable: Satis	faction									

The table above shows that Empathy, Assurance, and Tangibles affect the customer satisfaction significantly at $P \le 0.05$. Remaining factors' affects were not significant. Beyond that, Empathy is the most important factor among the other significantly effecting ones with the weight of 0.320. Assurance comes the second (0.283) and the last one is Tangibles (0.209). Within these results, it can be said that $H1_a$, $H1_c$, and $H1_e$, were accepted and $H1_b$, and $H1_d$, were rejected. Secondly, simple regression analysis was performed in order to see if satisfaction affects loyalty significantly or not. The results are shown below:

	Table 10: Coefficient of Satisfaction on Loyalty											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.						
		В	Std. Error	Beta								
1	(Constant)	,694	,108		6,448	,000						
	Satisfaction	,696	,042	,722	16,674	,000						
a. Depe	a. Dependent Variable: Loyalty											

It was seen that satisfaction explains 52% of overall variance on loyalty. However, it is obvious to see that the effect of satisfaction (0.696) is significant (at P \leq 0.05) on loyalty. It can be said that satisfaction has a significant impact on loyalty. So according to this result, H₂ was accepted. In order to test H_3 (Satisfaction of the customers significantly depends on brand of GSM operators), ANOVA test was performed and as a result, it was seen that satisfaction of the customers did not depend on the brand of the GSM operator. The results are shown as:

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Table 11: ANOVA Results									
Satisfaction									
	Sum of Squares	df	Mean Square	F	Sig.				
Between Groups	1,420	3	,473	,707	,549				
Within Groups	170,123	254	,670						

As significance of F test result is not significant at P \leq 0.05, it can be said that there is no difference among the satisfaction of the GSM operators. Thus, the H₃ is rejected.

As a result, the network below shows the accepted and the rejected hypothesis. Dark colored (red) cells show the rejected hypothesis and the light cells (no color) show the ones that are accepted.





CONCLUSION AND DISCUSSION

As a result, validity and the reliability of the scale were proven. Secondly, each hypothesis was tested and the results were explained.

According to the results that were explained the methodology part, in Empathy, Assurance. Tangibles and factors significantly affect the service satisfaction of GSM operators' customers. However, Empathy is the most important factor which has the highest weight of coefficient value as 0.320. Secondly, Assurance factor comes

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with the value of 0.283. Lastly, Tangibles have the least importance with the load of 0.203. This shows that the managers should care about the Empathy, Assurance, and Tangibles by giving due importance respectively. By this way, the company may gain the satisfaction of the customers.

Beyond this, the satisfaction affects the loyalty of the customers significantly and occupies the 52% of the overall variance. It means that the customer may probably become a loyal customer of the GSM service if he/she is satisfied with the service.

As a conclusion, it has been proven that customers' loyalty to the GSM operator depends on their satisfaction; and the customer satisfaction depends on Empathy, Assurance, and Tangibles, respectively.

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