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INFLUENCE OF SERVICE QUALITY ON CUSTOMER RETENTION IN THE TANZANIA TELECOMMUNICATION INDUSTRY. A CASE OF THE VODACOM TANZANIA LIMITED COMPANY

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ABSTRACT

This study aimed at analyzing the influence of service quality on customer retention in the telecommunication industry in Tanzania. Specifically, the study determines the influence of Service quality on customer retention in the Tanzania telecommunication industry. The study used an explanatory research design to search for a causal relationship between the selected variables in this study. The study used a questionnaire instrument to gather quantitative data. The quantitative data collected from the respondents ware used to test the study hypothesis and the model developed. A simple random sampling technique was used to draw a sample of 400 persons from Vodacom customers in Dar-es-salaam. The data collected were analyzed using structural equation modeling (SEM). The study revealed that service quality has a positive and significant influence on customer retention. The study concludes by recommending that, the company improve its customer retention campaigns by rendering improved service quality. To achieve that, the company should ensure the services can guarantee tangibility, assurance, responsiveness, and reliability.

Key words: Customer Relationship Marketing Service Quality, customer retention.

INTRODUCTION

The world has taken cognizance of service quality as one of the best and contemporary customer relationship marketing strategies for telecommunication companies to satisfy needs and retain customers (Bolton&Tarasi(2007). Al-Hersh, Aburoub&Saaty (2014) point out that, the adoption of the service quality approach in the telecommunication industry has triggered an improved relationship between business and their customers. This provides an opportunity for companies to increase the sales volume, generating revenue, and increased shares in the market. Jayanthaa&Geethab (2018) added that improved service quality is used by the Sri Lankan telecommunication firms to promote their sales volumes. According toSenguo, Xixiang&Kilango (2017) argued that service quality is playing an integral part in building mutual benefits and relationships between a business and its customers. On the other hand, the service quality approach stands as a key component in promoting and maintain a long-lasting relationship in the commercial sector. Similarly, Chindo (2013) observed that in the context of the Nigerian telecommunication sector; the majority of companies carrying a service quality approach as part of the customer relationship marketing campaigns. The implementations of customer relationship marketing campaigns are used by business companies to maintain a good relationship and retaining customers. The companies in the telecommunication sector fully adopted customer relationship marketing as it serves as a key contributor for companies to enjoy both economic benefits and growth of the nation's GDP (Ogbechi, Okafor &Orukotan,2018). In Tanzania as in other countries, the telecommunication industry reduces the costs of doing business and increases productivity by deploying effective campaigns to offer quality products and services (SigitParawansa,2018). Companies use customer relationship marketing to create customer trust, commitment, and build a long-lasting relationship through quality and attractive package to retain customers (Sife, Kiondo&Lyimo-Macha, 2010).

Due to increased competition in retaining customers in the telecommunication sector, the companies exhibit a high competition to offer quality services. As argued by Tinashe &Eustina (2016) as a result of the rapid growth in competition and changing consumer landscape; businesses in the telecommunication sector have witnessed a strategic move using offensive marketing aimed at offering quality services to retain customers. For instance, in the US telecommunications network, companies such as Verizon Communications Inc, AT&T Inc, and Softbank Group Corp invested heavily in customer relationship marketing to create long term relationship with customers (Powell, Mihan&Weinert, 2014). Likewise, the telecommunication networks in the UK, such as Vodafone, T-mobile, and Virgin mobile adopted customer trust schemes by improving the company image and trust for retaining customers and consequently selling more of their products (Rahimi, 2014).

In the context of Asia, the study by Djajanto, Nimran&Kumadji (2014) identified that telecom firms are implementing customer-centric initiatives to retain customers through reliable services. Concerning the African telecommunication market, Dubihlela& Molise-Khosa (2014) advocate

that call center initiatives in telecommunication are increasingly adopted to ensure that there are quality and reliability on service provision for improved customer retention. Also, Mkono&Kapinga (2014) confirmed that the majority of telecommunication firms in Tanzania, including Vodacom Tanzania, are increasingly offering competitive service packages to customers. For instance, Vodacom Tanzania initiated and improved mobile payment, internet services, and call tariffs to maintain the quality of the services offered. The efforts focused on relationship marketing to improve the quality of the services as well as creating a win-win situation, from which both customers and Vodacom could uplift and maintain a good relationship with customers (Lancaster, 2017). On the other hand, the government of Tanzania initiated the ICT policy in 2016 as part of its effort to support the initiatives carried out by telecommunication firms. The government ICT policy intends to support the telecommunication sector in offering quality services and maintain a good relationship between customers and telecommunication firms (URT, 2016).

Despite the contribution from studies and benefits proven by telecommunication companies that service quality can affect customer retention (Senguo, Xixiang& Kilango,2017), but there is a need for further studies to resolve the customer retention in Tanzania telecommunication industry. Magasi (2015) indicates that the companies including Vodacom have done several initiatives on service quality, trust, and relationship commitment for companies to retain customers. The initiatives capitalized on relationship marketing campaigns intending to maintain customer retention and good relationship. Vodacom is one of the telecommunication companies in Tanzania affected by customer retention problems. Besides the initiatives, Vodacom PLC expected to maintain its sales volume and market share, but in turn, the company exhibited a customer retention problem. The company shares dropped from 36.7% to 32% in 2015, the problem is also challenging the business operation and the plan to foster the social-economic development of the country in general (Vodacom Tanzania PLC, 2019). Ofori-Dwumfuo, Owusu-Ansah & Nartey (2013) added that the Ghanaian telecommunication companies are also facing challenges related to the customer retention problem. It was further explained that if a customer retention problem is not resolved, the companies are likely to face a serious drop in market shares, sales volume, and revenue.

However, little known in the literature on how the SERVQUAL model through its scale including assurance, reliability, empathy, tangibility, and responsiveness can influence customer retention without the mediating effecting. The model the five elements as the major constructs, also the model mentioning loyalty as a mediating effect between service quality and customer retention. Given this inconsistency in the findings and inadequate explanation from the model to analyze the direct influence of customer relationship marketing on customer retention;therefore the current study measures the influence of service quality without the mediating factor. Thus, this study intends to find out how service quality constructs can influence customer retention in the Tanzania telecommunication industry.

Specifically, the objective of this study is to determine the influence of service quality on customer retention in Vodacom Tanzania Limited.

METHODOLOGY

This study considers the elements from theservice quality modelsuch as empathy, tangibility, reliability, assurance, and responsiveness as major factors affecting customer retentionin the Tanzania telecommunication industry. A structured questionnaire was designed consisting of 5 constructs from which different statements were made. Also, a 5-point Likert scale was used to rate the responses from the participants. Thereafter, data from the respondents were cleaned and invalid responses were also removed. The study involved 400 participants as a sample taken from a populationof 1,224,000 active users of the Vodacom network in Dar-es-salaam(Vodacom Tanzania PLC, 2018). All items used as the measurement in the context of this study were borrowed from prior studies and modified to ensure construct validity. The items of empathy, tangibility, reliability, assurance, and responsivenesswere adopted from Nsiah & Mensah (2014). The items of customer retention were adopted and modified from Hossain, Chowdhury &Jahan (2017). The quantitative data gathered using the survey questionnaire was entered into IBM SPSS version 20; in this regard the software-assisted the study to conduct descriptive and inferential analysis. Leech *et al*. (2005) asserted that frequencies and percentages are useful tools to explain both profile and characteristics of phenomena. In this case, frequency and percentage were used by this study in analyzing as well as explaining the profile and characteristics of the customers such as location. Moreover, structural equation modeling (SEM) was used to test hypotheses and analyze the coefficient path. Similarly, the preliminaries were done through exploratory factor analysis (EFA) and later the confirmatory factor analysis (CFA). The process assisted the study to attain the model fit indices some variables were removed and final variables were 7 under all constructs. The outcomes from the usable sample were analyzed, and the research model was examined through the assistance of Amos 24 software.

RESULTS AND DISCUSSION

Respondents' Distribution by Location

The study sample comprised respondents from three Municipalities namely Ilala, Temeke, and Kinondoni as summarized in Table 3.1. The findings show that the majority of the respondents involved in this study ie 38.8% were located in Ilala, 26.5% in Temeke, and 34.7% in Kinondoni. It is understandable, why the majority of Vodacom beneficiaries were in Ilala. The reason being that majority of Vodacom business facilities are concentrated in Ilala as a center for government and economic activities.

Table 3.1 Respondents' Distribution by Location

Location	Frequencies	Percentages
Ilala	152	38.8
Temeke	104	26.5
Kinondoni	136	34.7
Total	**392**	**100.0**

Model Validation

This section is composed of two parts: model validation and analysis of path coefficient as described below. The Model validation process intended to express how the study associated data collected with the variables used to develop the conceptual framework without data support. This section checked to confirm, whether the constructs aligned with the stated measures or indicator variables. On the analysis of the path coefficient, the study examined the hypotheses and their coefficients and scores obtained. The hypotheses were tested to determine the direction, strength, and level of significance through the path coefficients.

Exploratory and the Confirmatory factor analysis

Model validation aimed to check and verify if the proposed factor structures are consistent with the actual data collected from the field. Model validation was necessary because, at the beginning of the study, the researcher developed the conceptual framework without supporting data. It was necessary to check if the constructs were aligned with their underlining measures or indicator variables. To ensure that the constructs designed were aligned with their indicators, the researcher used both the exploratory factor analysis and the confirmatory factor analysis as described below.

Exploratory Factor Analysis

To ensure that the constructs were aligned with their indicator variables before the actual data analysis, it was necessary to carry out exploratory factor analysis. This is because, at the start of any study, the researcher mixes empirical and theoretical measures of a construct from different settings without data. Scholars such as Henson & Roberts (2006) argue that in a situation where there is a mixing of constructs from different theories and empirical literature, a poor model fit will always result. To address this in the current study, exploratory factor analysis was used to identify a set of unobserved factors that reconstruct the complexity of the observed data in an essential form.

Exploratory factor analysis with varimax rotation was conducted to assess the underlying structure for the forty (40) items in the survey questionnaire. In selecting factors to retain, four criteria were adopted namely, Eigenvalues, scree test (i.e., screen plot), the conceptual theoretical assumption, and factors that have at least three items. The use of a combination of criteria is recommended by Yong & Pearce (2013) to help to offsite the weakness of using one criterion.
Given this situation, four factors were produced based on the coded questionnaire attached inAppendix I with 70% of the cumulative variance as attached in Appendix I. The four-factor

had the Eigenvalues >1, all above the break/cut off point on-screen graph, and had at least two items aligned as in the conceptual framework. This means that all the retained factors meet Kaiser's criterion.

After discovering that the four factors had met the criteria and qualified to be retained, further analysis of measured variables was done to see if the indicators fit in their underlying factors. To assess the suitability of each measured variable to their underlying structure, the following criteria as recommended by Yong & Pearce (2013) were adopted for retaining/dropping an item/indicator as follows:

First, all items loaded into their associated factors were retained and those loaded into more than one factor were dropped. Secondly, if more than two items were loaded in one factor, all items were retained and if less than three items were loaded in one factor, all were dropped. Third, all items with a KMO p-value greater than 0.5 were retained and those with less than 0.5 were dropped. Fourth, all items with loading ranging from 0.4 to 0.8 were retained and those with loading less than 0.4 or above 0.8 were dropped. Yong & Pearce (2013) suggested these criteria to be adopted for retaining the items or dropping the items to improve the model. As far as this study is concerned, Table 4.6 presents a selected output of SPSS items that were dropped.

Table 4.2 Selected exploratory factor analysis output of Items dropped

FACTOR	ITEM REMOVED
SQ: Service Quality	SQ5
CR: Customer retention	CR1 and CR5

In-Service Quality (SQ): item SQ5was eliminated because they had weak loadings on their theoretical model and hence affected its fitting. CR1: CR1 and CR5 had a negligible contribution because it was loaded alone in a single factor which failed to support theoretical assumptions. Given this perspective, the items that did not fit well with the factor solution were dropped from the analysis as described in Table 3.3 and those which fitted very well were retained as described in Table 4.3:

Table 3.3 Exploratory Factor Analysis Rotated Component Matrix

	components	
	1	2
SQ1	.915	
SQ3	.913	
SQ4	.902	

SQ2	.894		
CR3		.916	
CR2		.889	
CR4		.888	

Having established the study framework from the exploratory factor analysis, the next step was to perform a confirmatory factor analysis as described in detail in the following section:

A Confirmatory Factor Analysis

The exploratory factor analysis failed to assess the loadings of the measures, error variances, and covariance. In the current study, it was necessary to carry out confirmatory factor analysis for theoretical constructs through assessing the loadings of the measures, error variances, and covariance (Hooper *et al.*, 2008). At this stage, the aim was to confirm and harmonize a belief about how the original variables are organized in a particular way using CFA. The study carried out a confirmatory factor analysis, a measurement model was developed to test for measurement errors and the correlation between the latent variables (Yong & Pearce, 2013). In this section, a model of the composite structure was used as presented in the conceptual framework.

Model Fitness Evaluation in a Confirmatory Factor Analysis

The following criteria were used to guide the model refinement process and so achieve a better fit as recommended by Schermelleh-Engel, *et al*. (2003) that a Standardized regression weight (S.R.W) value should be above 0.5 and Modification indexes (MI) that reveal high covariance between measurement errors accompanied by high regression weights between these errors' construct and cross-loading items were recommended for deletion.

Measurement Model for Baseline Model

In the current study, to reach a baseline measurement model that fits both components, the four individual measurement models which were developed earlier were combined and a CFA was run with the maximum likelihood estimate in IBM Amos 20 to determine its fitness. After the initial run, the results showed a bad model fit with CMIN/DF = 5.263, GFI = 0.811, AGFI = 0.762, CFI = 0.702 and RMSEA = 0. 109. Based on Hoe (2008) recommendation which requires a model to achieve the following minimum requirements CFI (> 0.90 indicates good fit), RMSEA (< 0.08 indicates acceptable fit), and commonly used $\chi 2$ statistic ($\chi 2$/ df ratio of 3 or less) to be considered fit.

To improve the model, some items that were affecting the significance of the model's fitness were removed as recommended by Hooper, *et al*. (2008) explains how to remove the items that demonstrate low loading, and those items standardized regression weights (S.R.W) values less than 0.5. The items of service quality (SQ) were not removed from the analysis because they were fitting. Customer Trust (CT): CT6 and CT7 were eliminated from the analysis because

they had weak loadings on the theoretical model and hence affected its fitting. At this point, elimination was made at the item level, and items that were removed because their effect was not only weakening the model, but they also indicated weak statistical power.

Measurement Model for Service Quality

Initially, CFI was run using IBM Amos 20 to test and confirm for Service Quality measurement model base on the following observed variable namely SQ1, SQ2, SQ3, and SQ4. The model output as illustrated in figure 4.3 indicating that the model fit well based on Hoe(2008) commonly applied fit indices which require a model to achieve the following minimum requirement, CFI (> 0.90 indicates good fit), RMSEA (< 0.08 indicates acceptable fit), and commonly used $\chi 2$ statistic ($\chi 2$/ df ratio of 3 or less) to be considered fit.

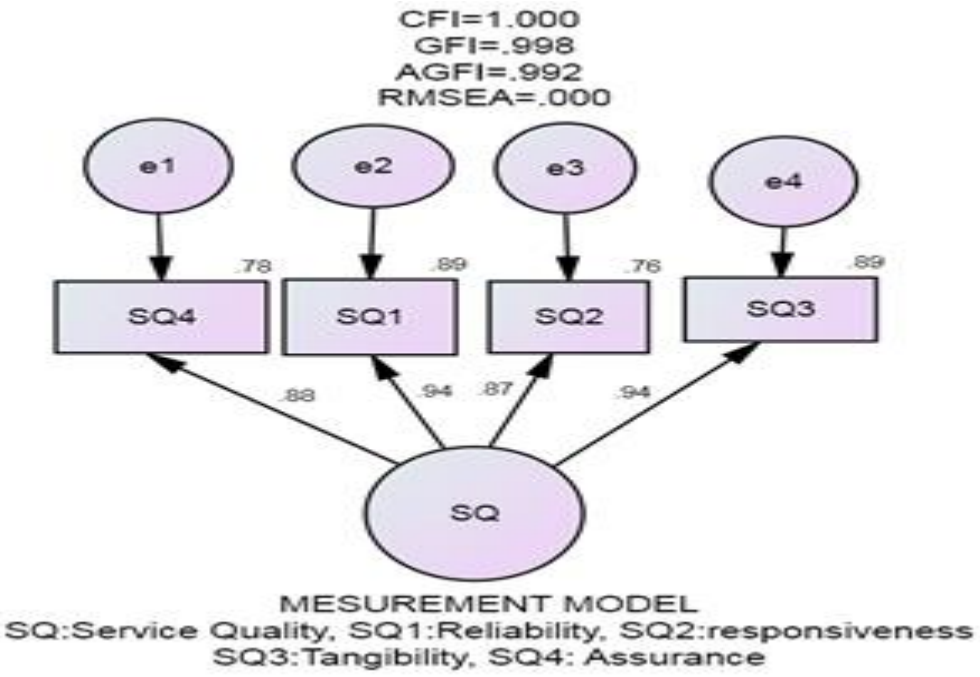

Figure 3.1: Measurement Model for Service Quality

4.4.3 Influence of Service Quality on Customer retention

The third postulated relationship in this study hypothesized a positive and strongly significant relationship between service quality and customer retention as stated below.

Null hypothesis:H_0: service quality has a positive significant influence on Customer retention

For testing this hypothesis, descriptive statistic analysis was run first to profile the influence of service quality on predicting customer retention as illustrated in Table 3.4 below.

Table 3.4: Descriptive Statistics

	N	Minimum	Maximum	Mean
SQ3	392	1	5	3.88
SQ1	392	1	5	3.87
SQ4	392	1	5	3.81
SQ2	392	1	5	3.81
Valid N (listwise)	392			

Table 3.4 shows the results of the analysis. Among the four attributes of service quality in Table 3.4, tangibility had a high impact on customer retention in telecommunication followed by reliability, assurance, and responsiveness. This means that tangibility yields a high mean value of 3.88 with a mean of 3.88 close to 4. The greater the mean the higher the impact or the more the mean value closer to five, has more impact.

Further analysis was done using SEM to determine whether service quality has a significant influence on customer retention as illustrated in Table 3.4.

Table 3.5: Service Quality Path Coefficient

			Estimate	S.E.	C.R.	P	Label	S.R.W	REMARKS
CR	<---	SQ	.209	.043	4.899	***	par_14	0.254	Accepted
SQ4	<---	SQ	.973	.033	29.758	***		0.882	
SQ3	<---	SQ	.997	.027	37.510	***		0.945	
SQ2	<---	SQ	.966	.034	28.737	***		0.872	
SQ1	<---	SQ	1.000					0.944	

The path leading from *SQ* to CR in Table 3.5 is used to examine the relationship between service quality and customer retention. A positive path coefficient ($\gamma = 0.254$) using standardized estimate results in Table 3.5 indicates that service quality is positively related to customer retention. These study findings concur with those of Chin (1998) and Hoe (2008) who argue that a standardized paths coefficient (γ) should be at least 0.2 to be considered significant and meaningful for discussion. The results thus in the current study confirm a strong positive relationship between service quality and customer retention.

Apart from the standardized coefficient, further analysis was done using critical ratio and p-value to determining the significant influence of service quality on customer retention. In this study, findings yielded critical values (C.R = 4.943 which is >1.96) and a significance level of p = 0.000.

The results concur with Greenland, *et al* (2016) who argued that a relationship that has yield a critical ratio greater than 1.96 and a p-value less than 0.05 is considered significant. This means that the null hypothesis (Ha)was accepted as it has a critical ratio of 5.648 which indicates the service quality has a significant influence on customer retention. On the other hand, the alternative hypothesis (Hb) was rejected. The current study has similar results to the findings presented by Agyei &Kilika (2013), which indicated a strongly significant influence of service quality on customer retention.

Prior studies includingRanaweera& Neely (2003) and Kihara&Ngugi (2014)confirming that service quality has a positive and significant influence on customer retention. For example, Ranaweera and Neely's (2003) perceptions of service quality have a direct linear relationship with customer retention as compared to low-cost offers. On the other hand, Kihara& Ngugi (2014) found and confirmed that quality service has a significant influence on customer retention in the telecommunication industry. It means that quality service is a pushing factor towards customer retention in the telecommunication industry. Therefore, this study implies that customers with high rated perception towards quality service have a high intention to purchase the pertinent product repetitively.

Moreover, the study by Venetis&Ghauri (2014) found results that are in line with this study. The study indicates that quality service can contribute to the long-term relationship which leads to customer retention. Similarly, quality service variables such as tangibility, assurance, responsiveness, and reliability were found to have a significant influence on customer retention. Furthermore, Blery*et al*. (2010) explain that price and trends of quality service had a direct effect on customer retention in the Greece mobile telecommunication industry.

Other studies were found to be inconsistent with the current study. Notably, Kapai&Moronge (2015) revealed that quality service factors like customer care and price (tariff structure) are negatively correlated with customer retention. Contrary to the study by Molapo&Mukwanda (2011) who argued that quality service offers affordable service and provision of customer support services have shown a significant influence on customer retention. Its findings concur with the results found by this study, where both price perceptions and customer indifference were not significantly affected by service quality on retention. It means the perceived quality service improvement does not depend on how customers perceive the price and eventually the service quality will strengthen customer retention.Sedighimanesh *et al* (2017) revealed that often customers are looking for quality regardless of how much price they pay. From this

understanding, it is obvious that the customers mainly focus on quality service improvement to build their loyalty. The improvement made by telecommunication companies targeting customer satisfaction is what leads to repeat purchases and eventually customer retention.

Similarly,Zangmo, Liampreecha&Chemsripong (2015) tested constructs such as reliability, assurance, and empathy quality service values were tested and it was revealed that the factors were positive and significantly influenced customer retention. These studies came out with the same conclusion. On their part, Idrees &Xinping (2017) used reliability, responsiveness, assurance, empathy, and tangibles as salient determinants on customer retention. This study is in agreement with other scholars who found that quality service has a positive and significant influence on customer retention. The findings support the argument made on the quality service model. The study by Nsiah & Mensah (2014) added that quality service has a positive impact on overall customer retention. The research proves that empathy and responsiveness play the most important roles in customer retention levels followed by tangibility, assurance, and reliability. The research findings also indicate that offering high-quality service increases customer retention, which in turn leads to a high level of customer commitment to repurchase products from the business.

The findings from this study are also in contrast with the argument made by Sari &Mugiono (2018) who shows that quality service does not influence customer retention. Studies including the one done by Kapai&Moronge (2015) found that quality service does not directly influence customer retention. However, customers can be retained when quality service is reflected through attractive prices offered by the service provider. Kapai&Moronge (2015) added that Airtel in Kenya managed to retain its customers by offering quality service.

Furthermore, this study is supported by the argument made by Rehman, Shareef &Ishaque, (2012) who disclosed that quality service creates the willingness to trust the services offered and build a strong relationship that calls for customers to stay on. Similarly, these results are in agreement with Prasad (2013) who indicated that there was a significant relationship between quality service and customer retention. In this study the constructs such reliability, assurance, and empathy. These service quality attributes were tested and revealed that they have a positive relationship and a significant influence on customer retention.

Conclusively; the tangibility, assurance, responsiveness, and reliability indicate that the services have a strong significant influence on customer retention. Based on the findings this study concludes that not all service quality attributes offered by telecom companies are used to retain customers, some are not rewarding. This can be due to the contextual difference in which a telecommunication company operates. This tends to explain the characteristics of the unique services which are rewarding in retaining customers of a telecommunication company.

Nevertheless, this study has some limitations which offer opportunities for future research. The first limitation of this research paper is that it is concerned with only factors of service quality that affect customer retention. But,several factors can influence customer retention. Therefore, future studies should focus on multiple settings in addressing customer retention phenomena.

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Appendix I: Summary of Variance

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.816	36.348	36.348	5.816	36.348	36.348	3.622	22.635	22.635
2	3.091	19.322	55.669	3.091	19.322	55.669	3.609	22.559	45.194
3	2.127	13.296	68.965	2.127	13.296	68.965	2.717	16.984	62.178
4	1.545	9.657	78.622	1.545	9.657	78.622	2.631	16.444	78.622
5	1.067	6.670	85.292						
6	.507	3.171	88.463						
7	.447	2.793	91.256						
8	.282	1.763	93.019						
9	.236	1.472	94.491						
10	.205	1.280	95.772						
11	.175	1.093	96.865						
12	.162	1.012	97.876						
13	.118	.738	98.614						
14	.101	.630	99.244						

15	.070	.437	99.682						
16	.051	.318	100.000						

Extraction Method: Principal Component Analysis.