Examining the influence of service reliability on customer satisfaction in the insurance industry in Kenya

Catherine Njoki Chege

School of Business and Economics, Zetech University, Nairobi,Kenya

ARTICLE INFO

ABSTRACT

This study examines the influence of service reliability on customer satisfaction in the insurance industry in Kenya. The study was anchored on the Assimilation Contrast Theory and employed a descriptive research design. Primary data was collected using a structured self-administered questionnaire. Data analysis was conducted using descriptive statistics where the mean and standard deviation were determined. Data were analyzed in two levels, the customer level, and the entity level. The study employed the linear mixed effect models of structural equation modeling (SEM) considering the multi-level structure of the data collected. Results were presented in form of tables and path diagrams for the structural equation models. Service reliability was found to have a statistically significant influence on customer satisfaction (? =0.840, p-value= 0.027). The study found that there was a variation of levels of customer satisfaction across entities but this was not attributed to service reliability. The conclusion made was that service reliability significantly influenced customer satisfaction in the insurance industry in Kenya at the customer level but did not significantly influence the variations of customer satisfaction between the insurance companies.

Introduction

The insurance sector plays a very significant role in the economic development of any nation. The economic importance of the insurance industry has continued to increase in both developed and developing countries. Customer satisfaction is a significant factor that the insurance industry must achieve so as to survive and thrive in today's competitive financial services sector, hence has become a priority in today's corporate world. Service quality and customer satisfaction are closely related because service quality is said to have a direct impact on customer satisfaction.

Gachau (2016) explored customer satisfaction and insurance service delivery quality in Kenya and established that insurance customers derive full satisfaction from good treatment, prompt and accurate service from employees and agents which makes them buy more products from the same insurer and also recommend the insurance company to family and friends. The study further stated that customers value insurer flexibility and speed which are both indicators of service reliability (timeliness in service delivery). A study by Klynveld, Peat, Marwick, Goerdeler [KPMG] (2016) revealed that, more than 80 percent of insurance firms in East Africa have no confidence in their customer service delivery with 10 percent believing that their customer care is below average. The survey report further disclosed that, 49 percent of insurance firms consider customer satisfaction as their biggest challenge.

Akalu (2015) conducted a study of the effect of service quality on customer satisfaction in selected insurance companies in Addis Ababa and confirmed a huge gap in service reliability which was found to be inadequate leading to customer dissatisfaction. The staff and the insurance agents tended to make promises they could not deliver to the customers and this was the genesis of low levels of customer satisfaction. Hossein and Farokhian (2013) studied the factors influencing customer satisfaction in the insurance industry in Iran. The study similarly established gaps in service reliability for example service providers did not offer services in a timely manner, hence were not reliable and this caused dissatisfaction amongst the customers.

Parasuraman, Zeithaml and Berry, (1988) concluded that service reliability was the most significant dimension of service quality in private sector institutions. This was consistent with other studies by Yuen and Chan, (2010); Prabha, (2012); Hamed, Kamarudin and Kamaruzziman, (2015); Amani, (2017) and Albrian, Ruri, Novi, Yoyok, Dhiah, Lucky, Riza, Retno, Muhammad, Nimatushi, Kirwani, Novi, Irin, Ajeng, Solichin and Eka, (2017) who all found reliability to be the strongest dimension of service quality and the most significant determinant of customer satisfaction in different service sectors. This study therefore examined the influence of service reliability on customer satisfaction in the insurance industry in Kenya.

Literature Review

This section comprises of theoretical and empirical review relevant to the study.

Theoretical and Empirical Review

Anderson, (1973) proposed the theory of Assimilation-Contrast theory which suggests that where a product or service is a little below expectation but within the customer's acceptance range, assimilation will kick in to make its performance acceptable and discrepancy will be disregarded. However, if it falls in the range of rejection, contrast will operate and exaggerate the discrepancy, hence the service or product will be unacceptable. The theory suggests that customer satisfaction is the level of disparity between the expected and the perceived performance where consumers make up for the differences between their perception and the service or product performance to make it equal with expectations but only if the disparity is small (Rao and Sahu, 2013).

This theory is applicable to the reliability dimension of service quality (service reliability) which describes the service providers' readiness to offer timely services as well as understand needs and wants of the customers in order to provide accurate services. Managers of insurance firms should ensure they focus on service reliability so that they offer services promised to the customers therefore meeting their expectations and making the perceived performance acceptable to the customer who will then disregard any discrepancy that may exist and hence achieve satisfaction.

Parasuraman, et al., (1988) described reliability as the ability to perform the promised service in a dependable and accurate manner. They carried out studies in various private sector institutions and concluded that service reliability was the most significant dimension of all the five "SERVQUAL" dimensions.

Hamilton and Crompton, (1991) carried out a study of service quality in a Park where they ranked the service quality dimensions in terms of which had the strongest influence on service quality. Reliability was ranked second after tangibles meaning it still ranked very high as a strong determinant of service quality and hence customer satisfaction. Yuen and Chan, (2010) examined the effect of retail service quality and product quality on customer loyalty and found reliability to be a strong determinant of customer satisfaction hence loyalty. Prabha, Soolakshna and Perunjodi, (2010) also established that reliability had a very significant relationship with customer satisfaction in the public service in Mauritius.

Prabha, (2012) studied the service quality dimensions to determine the perceived service quality in restaurant services in Mauritius and found reliability to be the strongest determinant of quality. He posited that improving reliability helps an organization to build a good reputation for the restaurant leading to increased sales and revenue. Summit, Deepak and Thakur, (2013) assessed service quality in Indian call centers while Sarat, (2013) explored customer satisfaction of Life Assurance customers in India and they both identified service reliability as the strongest influencer of customer satisfaction.

Hong and Maran, (2014) examined the relationship between service quality and customer satisfaction in the Malaysian banking industry and identified service reliability as the strongest determinant of customer satisfaction. This meant that customers are very sensitive to how reliable a bank is in their service provision.

Hamed, et al., (2015) assessed the influence of reliability of service quality on customer satisfaction of Libyan E-Commerce customers and concluded that there is a strong relationship between reliability and customer satisfaction. Reliability represented the website's ability to fulfil orders correctly, deliver goods and services promptly as well as secure personal and confidential information.

Albrian, et al., (2017) analyzed all the five dimensions of service quality and found reliability to have the most impact on service quality and customer satisfaction in cooperative societies. Amani, (2017) studied service quality in the higher education in Tanzania and similarly concluded that reliability is the most important dimension of service quality. This meant that student perception of service quality would increase greatly if service reliability was improved. The ability to provide accurate and dependable service would improve students' perception of service quality and increase satisfaction.

Studies were also carried out in different service sectors in Kenya to determine the relationship between reliability and customer satisfaction. Rand, (2004) diagnosed service quality in the insurance industry in both Greece and Kenya; Owino, (2013) carried out studies amongst university students in Kenya; Watiki, (2014) studied hotels in Nairobi; Oanda, (2015) explored service quality in Barclays bank of Kenya. All these studies concluded that service reliability had the strongest relationship with customer satisfaction compared to the other SERVQUAL dimensions. None of the above studies sought to determine whether the influence of reliability on customer satisfaction varied from one insurance company to another. This study sought to fill this gap with the multi-level data analysis.

Methodology

The objective of this study was to examine the influence of service reliability on customer satisfaction. A structured questionnaire was used to collect primary data from policy holders of composite insurance companies in Kenya. A descriptive research design was adopted to help determine the influence of the independent variable on the dependent variable. The study population comprised of policy holders from the 17 licensed composite insurance companies in Kenya. A sample size of 400 respondents was drawn using multi stage sampling technique. The multi-level structure of the data collected necessitated the application of structural equation modelling. The study tested the following hypotheses;

H0₁: Service reliability does not have a statistical significant influence on customer satisfaction in the insurance industry in Kenya

Research Philosophy

Research philosophy refers to assumptions and the intellectual structure on which research in any field is founded. Epistemology is that relationship between a researcher and the reality while the technique used to discover that reality is referred to as the methodology. This study used quantitative research to examine the variables and to analyze the relationship between reliability dimension and customer satisfaction and this is consistent with the positivist approach (Sobh & Perry, 2006). This study therefore used a positivist research paradigm with an epistemological element to allow for reporting of findings as per observation and interpretation of the new knowledge discovered.

Target population

The target population of comprised policy holders of insurance companies that sell both life and general insurance policies, otherwise known as composite insurance companies. According to the annual insurance regulatory report [IRA], (2017), Kenya has 17 composite insurance companies with a total of 1,695,312 policy holders. These insurance companies were able to produce a representative sample of respondents that would help to address the variables of the study with respect to service quality and customer satisfaction.

Sampling

The population of study had a multi-level structure, whereby data was to be analyzed in two levels; the client level (policy holders) and the entity level (insurance companies). Multi stage sampling technique was adopted for the study. Multistage sampling is appropriate where units of observation are geographically or organizationally grouped (Snijders & Bosker, 2011). The formula proposed by Israel, (2009) was applied in sample size determination as follows:

$$n = \frac{N}{(1 + N(e)^2)}$$

Where; n was the sample size, N was the population size and e was the confidence level (0.05). Using N = 1,695,312 in the formula, the resulting sample size (n) was 400

Data Collection

A structured self-administered questionnaire was used to collect primary data from 400 respondents. The questionnaire had multiple choice questions and Likert scale questions. The rating scale was a 5 point Likert type scale, where 1 was set for not at all and 5 set for very large extent.

Data Presentation and Analysis

Data was analyzed in three stages; preparation, analysis and reporting. Computer statistical package R-Gui was used for three types of statistical analysis; descriptive analysis, factor analysis and hierarchical regression. The questionnaires' background information was subjected to descriptive analysis to provide the respondents' profile. A pilot study was conducted and used to determine reliability of the instrument by testing for internal consistency using Cronbach alpha. The instrument was also tested for convergent using Average variances extracted (AVEs) and discriminant validity was tested using squared multiple correlations. The study hypothesis was tested using multi-level structural equation modelling (SEM) which was based on restricted maximum likelihood estimation (REML) for linear mixed effect modeling. McDonald and Ho, (2002) proposed that study models should be tested for fitness. The fitted models were hence subjected to computation of fit indices to determine their fitness; Chi-square test, root mean square error of approximation (RMSEA) to test for absolute fitness, goodness of fit index (GFI) to assess how well they fit the sample data and normed fit index (NFI) for incremental fit indices. Comparative fit index (CFI) and Tucker Lewis index (TLI) were also generated to test the models' fitness against the null model. The study also tested for the assumptions of normality, heteroscedasticity and multicollinearity.
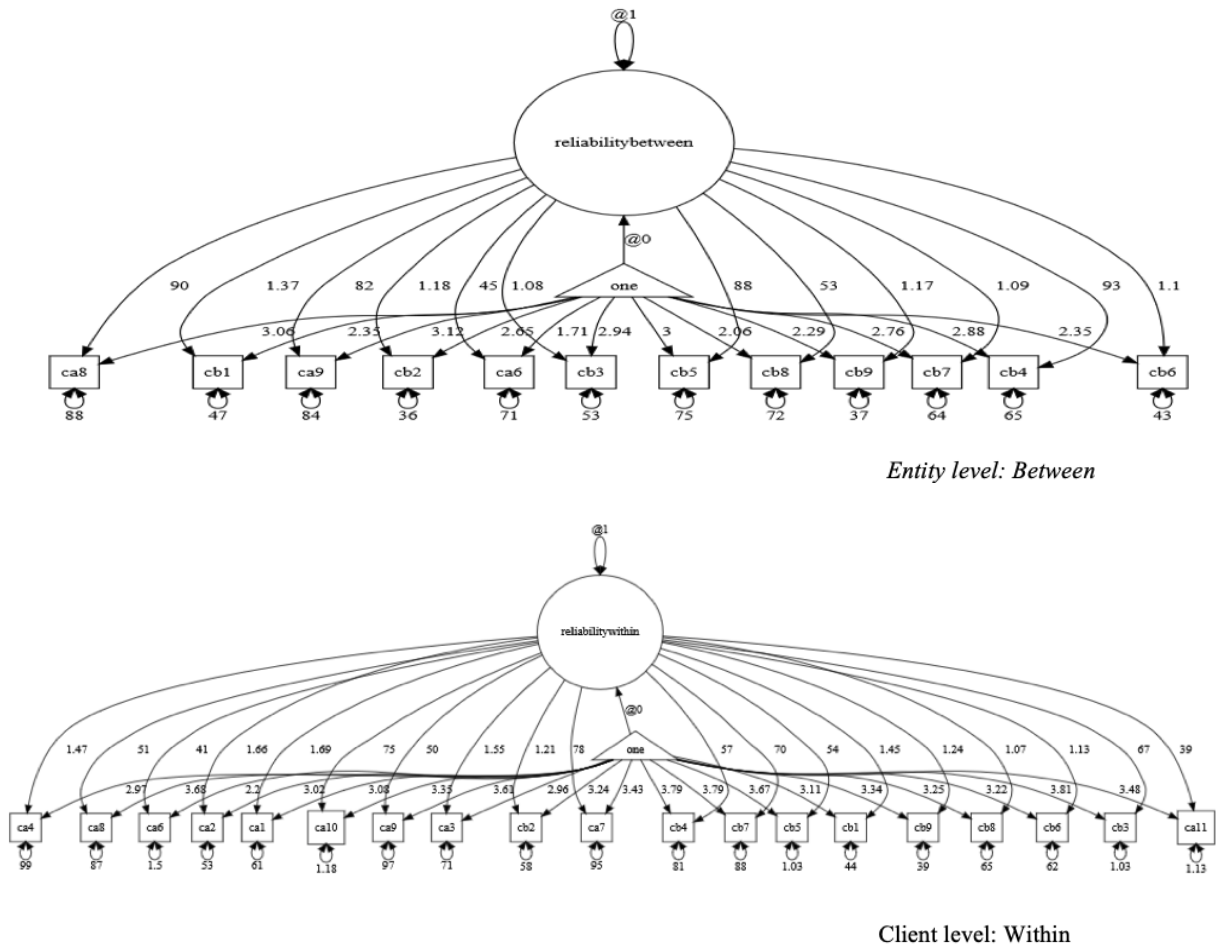
Measurement model of Service Reliability

The measurement model showed that all nine indicators of service reliability significantly loaded on the latent variable Service reliability. Service reliability measurement model also met all the required cut offs of absolute and incremental fit indices as shown in Table 1.

Table 1: Model fit indices for the reliability SEM

	Chi-square χ^2	Sig.	CFI	NFI	TLI	GFI	RMSEA
Statistic	630.877	0.000	0.944	0.953	0.988	0.943	0.051
Cut-off	P-value <0.05		≥0.9	≥0.9	≥0.95	≥0.9	≤0.08

Figure 1 shows the path diagram of the measurement of service reliability by the manifest variables at each level. All the nine manifest variables were retained in both level 1 and 2 with path coefficients represented by standardized factor loading.

Entity level: Between

Client level: Within

Figure 1: Path diagram showing the measurement of Service Reliability

Structural Equation Model for Service Reliability and Customer Satisfaction

The structural equation model found service reliability to have a significant fixed effect as a level-1 independent latent construct but with no significance at level-2 as a random covariate.

Table 2: Influence of Service Reliability on Customer satisfaction

Level	Path		Estimate	Std. Error	Critical ratio
Level1-client	Customer satisfaction within	Service Reliability within	2.243	0.149	14.993
Level2-org	Customer satisfaction between	Service Reliability between	0.514	0.282	1.823

The path diagram in figure 1 showed the influence of service reliability on customer satisfaction by the path from reliability to customer satisfaction only at the client level but showed no structural path effect at the entity level.

Table 3: Effect of Reliability: fixed effect with random intercept

Mixed-effects GLM				**Number of obs**		=	**364**
Group variable: insurer				Number of groups		=	17
		Obs per group:		Min		=	2
				Avg		=	21.4
				Max		=	108
				Wald chi2(1)		=	.
Log restricted-likelihood = -344.98146				Prob > chi2		=	.

Customer satisfaction (fac1_1_y)	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf. Interval]**	
X3	0.840	0.027	31.350	0.000	0.788	0.893
_cons	0.038	0.044	0.870	0.387	-0.048	0.123

Random-effects Parameters	**Estimate**	**Std. Err.**		**[95% Conf. Interval]**	
Insurer					
var(_cons)	0.016	0.010		0.005	0.057
var(Residual)	0.203	0.015		0.175	0.235

LR test vs. linear regression: chibar2 (01) =   13.36 Prob >= chibar2 = 0.000

Level	ICC	Std. Err.	[95% Conf.	Interval]
Insurer	0.074	0.045	0.022	0.223

The model showed that the random component of the influence of reliability on customer satisfaction at level 2, was found to be significant with LR statistic that had a p-value less than 0.05 and interclass correlation of 10.1%. Reliability was added as a random covariate and results showed no significant change in the LR chi-square statistics with a p-value of 1, which is greater than 0.05, hence no significant random slope due to service reliability. This means service reliability has a significant fixed effect on customer satisfaction at the client level but no random effect across the entities.

Table 4: LR test on the effect of reliability as level-2 random covariate

Likelihood-ratio test				**LR chi2(2)**	**=**	**0.000**
(Assumption: M1 nested in M2)				Prob > chi2	=	1.000

Akaike's information criterion and Bayesian information criterion

Model	**Obs**	**ll(null)**	**ll(model)**	**df**	**AIC**	**BIC**
M1 – me no random slopes	364	.	-233.309	4	474.618	490.207
M2 – me random slopes	364	.	-233.309	5	476.618	496.104

The results of the study analysis formed the basis to reject the hypothesis and draw conclusion on the objective.

H$_{01}$: Service Reliability does not have a statistically significant Influence on Customer Satisfaction in the insurance industry in Kenya

The results showed a fixed effect coefficient of reliability to be 0.000 which is less than 0.05 hence rejecting the null hypothesis. This led to the conclusion that service reliability has a significant influence on customer satisfaction in the insurance industry in Kenya. Results further showed that if customers perceived higher levels of reliability by one unit, their level of satisfaction would increase by 0.840. Results did not show any effects of reliability on customer satisfaction across the insurance companies.

Table 5: Summary of Hypotheses Tests

Hypothesis	Statistic	P-value	Conclusion
H$_{01:}$ Service Reliability does not have a statistical significant influence on Customer Satisfaction in the insurance industry in Kenya	Fixed effect parameter =0.840	0.027	H$_{01}$ was rejected and a conclusion drawn that Service Reliability has a statistical significant influence on Customer Satisfaction in the insurance industry in Kenya at the client level but not on the entity level.
	Random effect L.R χ^2=0.000	1.000	

Discussion

The purpose of this study was to examine the influence of service reliability on customer satisfaction in the insurance industry in Kenya. The null hypothesis tested was that service reliability does not have a statistically significant influence on customer satisfaction in the insurance industry in Kenya. The findings of the study indicated that service reliability has a statistically significant influence on customer satisfaction in the insurance industry in Kenya, hence the null hypothesis was rejected. However, the variations in customer satisfaction between the insurance companies was not attributed to service reliability.

The literature review showed service reliability gaps in the insurance industry. The services of the insurance companies were found not to be dependable and timely and that the companies did not deliver services as promised. The study found that customers prioritize and value time-related (reliability) attributes pointing to the reinforcement of service reliability as a very important determinant of customer satisfaction in the insurance industry in Kenya. The study findings are aligned to past research studies in recognizing that focus on features such as customer relations in an effort to improve customers' perception of service quality provision can be effectively used to compete in order to drive customer satisfaction (Yuen and Thai, 2015). The implication is that if service reliability is fully enhanced by the insurance companies, then maximum customer satisfaction will be achieved.

Conclusion

The findings of this study are consistent with findings of other researchers, such as Parasuraman et al., (1988), Hamilton et al., (1991), Yuen, and Chan, (2010), Prabha, (2012), Hamed et al., (2015), Albrian et al., (2017) and Amani, (2017) who all established that service reliability has a significant influence on customer satisfaction. These results have shown that keeping promises made to customers, having sincere and dependable staff, error free services, keeping accurate records, timely payment of claims and benefits, understanding and meeting customer needs all influence customer satisfaction in the insurance industry. This implies that if customers feel they can depend on the service provider, they will experience maximum customer satisfaction.

The study recommends that insurance firm managers implement policies to ensure their employees become reliable and dependable in all their interactions with customers. Employees interact directly with customers and the behavior they exhibit determines whether the customer will have a positive or negative perception towards the quality of service and also the service provider. This will further determine whether the customer will be satisfied or dissatisfied and satisfaction will lead to repeat patronage and ultimately loyalty. The insurance firm managers should therefore include the indicators of service reliability in their policy discussions about service quality improvement in the industry. This will help to make service reliability an important policy tool that will help improve quality and reduce costs. Human resource managers of insurance firms should also develop policies that will include service reliability as one of the requirements of a service employee. This implies that they should only employ service employees that portray dependable and reliable behavior so that they can extend the same to customers and the result will be "satisfied customers". The Insurance regulatory authority (IRA) should include reliability in their "treating customers fairly "(TCF) framework which is meant to resolve the issue of numerous customer complaints in the industry. This will improve the public's perception towards insurance products, hence creating trust and acceptance. This will help to increase market share and penetration rates which are very low. The study finally recommends that service reliability be adopted as one of the standard indices of measuring service quality with relation to customer satisfaction in the insurance industry in Kenya.

This study found that service reliability influenced customer satisfaction at level- (the client level). There were variations in customer satisfaction between the entities (insurance companies) but this variation was not attributed to service reliability. Researchers can therefore conduct studies to determine the factors that influence customer satisfaction between the entities.

References

Akalu, A. (2015). *The effect of service quality on customer satisfaction in selected insurance companies in Addis Ababa.* (Unpublished MBA project). University of Addis Ababa, Ethiopia.

Muhammad, A.G, Nimatush,S., Kirwani, L.H., Novi, M., Irin, W., Ajeng, H., Solichin, M. & Eka, H.A., (2017). Reliability, responsiveness, assurance, empathy and tangibles: Still can satisfy the customer? *International journal of business and management invention (6)3*

Amani, G.T., (2017). The relative importance of service quality dimensions: An empirical Study in the Tanzanian higher education industry International journal of interdisciplinary and multi-disciplinary studies (3)1, 76-86.

Anderson, R. E., (1973). Consumer dissatisfaction: The effect of Disconfirmed Expectancy On perceived product performance. *Journal of Marketing Research, 10(1), 38-44.*

Gachau, J. (2016). *Customer satisfaction and Insurance service delivery quality in Kenya.* (Unpublished MBA project). University of Nairobi, Kenya.

Hamed, F.O., Kamarudin, B.S., and Kamaruzziman, B, S., (2015). Determining the influence of the reliability of service quality on customer satisfaction: The case of Libyan E-Commerce customers. International journal of learning and development (5)1, 86-89.

Hamilton, J.A. and Crompton, J.L., (1991). Identifying the dimensions of service quality in a Park context. Journal of Environmental management (32)21

Hong, T. and Maran, M., (2014). Relationship between service quality and customer satisfaction: A study of Malaysian banking industry. *Journal of technology management and technopreneurship (2)2*

Hossain, V., & Farokhian, S. (2013). Factors influencing customer satisfaction with the success factors identified in the insurance industry. *African Journal of Business Management, 7*(21), 2026-2032.

Insurance Regulatory Authority. (2017). *Annual insurance industry report for the year ended 31st December 2017.*

Israel, G.D., (2009). *Determining Sample Size; Institute of Food and Agricultural Sciences*. University of Florida.

KPMG (2016). *Klynveld Peat Marwick Goerdeler Annual Insurance Survey report.* Nairobi, Kenya: Author.

McDonald, R. & Ho., M. (2002). Principles and practice in reporting structural equation Analyses. *Psychological methods.* 7, 64-82.

Nthenge, P., (2012). Challenges facing the success of insurance services provision in Tanzania. MBA Thesis. University of Nairobi

Oanda, D., (2015). *Service Quality dimensions and Customer Satisfaction in Barclays Bank of Kenya*. University of Nairobi.

Owino, E., (2013). *The influence of Service Quality and Corporate Image on Customer Satisfaction among University students in Kenya.* University of Nairobi

Parasuraman, P.A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item Scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.

Prabha, R, M., Soolakshna, D. and Perunjodi, N., (2010). Service quality in the public service In Mauritius. International journal of management and marketing research (3)1, 37-50. http://www.acadpubl.eu/hub/

Prabha, R, M., (2012). Percieved service quality in restaurant services: Evidence from Mauritius. International journal of management and marketing research (5)3, 1-14.

Rand, G.K., (2004). Diagnosis and improvement of service quality in the insurance industries Of Greece and Kenya. Lancaster University management school; Working paper 046

Rao, P. & Sahu, P., (2013). Impact of service quality on customer satisfaction in hotel industry. *IQSR Journal of humanities and social science*. Vol. 18 (5), 39-44.

Sarat, B., (2013). A study on customer satisfaction towards private sector life insurance companies with special reference to Kotak Mahindra and Aviva Life insurance company of Jorhat district. Indian journal of commerce and management studies (4)3

Snijders, T.A., & Bosker, R, J. (2011). *Multilevel analysis; An introduction to basic and advanced multilevel modelling.* (2nd Ed.). London, The United Kingdom of Great Britain: Sage Publications.

Sobh, R. & Perry, C. (2006). Research Design and Data Analysis in Realism Research. *European Journal of Marketing*, 40(11/12)

Sumit, A., Deepak, S. & Thakur, S., (2013). Impact of service quality dimensions towards customer satisfaction in Indian Call centers. *Pacific Business Review International*, Vol. 6(1), 51-64. www.pbr.co.in

Watiki, C., (2014). *Service Quality and Customer Satisfaction in Hotels in Nairobi Kenya*. University of Nairobi.

Yuen, E. and Chan, S., (2010). Effect of retail service quality and product quality on customer loyalty. Journal of database marketing and customer strategy management (17)3

Zeithaml V. A., Bitner M. J. & Gremler D. D. (2006) Services marketing, 4th edition, McGraw-Hill.