

## **E-Banking Service Quality and Customers Perception in Commercial Banks in Nigeria**

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### ***Abstract***

The massive development in technology, particularly those allied to the Internet, has led to strategic and dramatic transformations on how customers relate banks employees. This study was design to advance a framework for understanding banks customers perceptions of E-banking service from the context of developing economy. A structured questionnaire was administered to the sample respondents. To observe customer perception of online banking service quality the researchers adopted factor analysis approach with aid of correlations and regression analysis. The outcomes show E-banking service quality strongly influence customer perception. The outcomes further demonstrate the need for the measurement E-banking service quality to become a fundamental part of any banking operations. This will strength the banks strategies for effective and efficient service quality delivery.

**Keywords:** Service quality, E-banking, customer perceptions.

## **1. Introduction**

Considerable findings on service quality dimension were piloted in recent years on conventional businesses operations. According to Han and Baek (2004) service quality dimensions in different form of businesses varying from financial non to financial services. Some of these findings adopted the service quality (SERVQUAL) tool to observe service quality provided through common offline mechanism (Han and Baek, 2004) which were predominantly centered on the notion of disconfirmation; hence service quality is observed across an association between experiences and expectations over a number of quality characteristics (Grönroos, 2007, Mehta, Lalwani and Han, 2000).

The recent advancement in technological that was driven by globalization resulted to great innovation in international financial, pushing the boundary of information systems in to a new opportunity and approach for managing business operation has unlocked up via online tools. (Hamadi, 2010). To attend competitive advantage and market leadership banks specifically, have primarily changed their delivery to E-banking services that offer the customers need flexibility in attracting with banking services (Pikkarainen, et. al, 2004). These advancements have altered the method banks do business with clients in business conduct. Nowadays, commercial banks contest in the market with largely homogenous products E-service superiority is the key discrepancy factor among banks (Kumar, Kee and Charles, 2010).

Current ever dynamic business atmosphere has further forced the advancements of services market providers to adopt unconventional delivery mechanism with aim of drawing new clients, cultivating consumers' perceptions and expectations (Bauer, Hammerschmidt and Falk, 2005). The dimension of E-banking service, nevertheless, has attract very slight consideration. Perhaps this may principally

because banks commonly ignored its significance, and, because the conceptualization of service quality in E-technologies is very hard (Du Plessis & Rousseau, 2007).

E-banking is often employed to define online technology-driven electronic services delivery. E-banking is equally generic word adopt to explain the method by which a client may carry out banking transactions electronically without call on a banking room (Ombati et al, 2010). E-banking in the framework of this research is described as an Internet portal via which clients can adopt different kinds of banking services, varying from payment of bills and investment making (Pikkarainen et al., 2004). It involves opening of accounts, funds withdrawal and transfer, purchasing financial merchandises or other online services.

## **2. Service Quality and E-Banking Services**

According to Ganguli and Roy, (2010) service quality is the total appraisal of quality of a service by clients. The observed service quality outcomes assessment by clients' previous anticipations about a service and their opinions after the real knowledge of the service experience; to see if the performance is less than expectations, then observed service quality is less than adequate this may lead to the client's dissatisfaction. To observe service quality several frameworks have been advanced and adopted over the years. Grönroos (1984) postulate three dimensions service quality model namely, functional quality (how the customer gets it), technical quality (what the customer gets), and corporate image (how the customer observes the business and its products and service) (Parasuraman, Zeithaml and Berry, 1985).

On the other hand, Lehtinen and Lehtinen (1991) suggested alternative model with equally three constructs: the tangible products quality, collaboration among clients and company quality as observed by the clients. The

service quality model (SERVQUAL) advanced by Parasuraman et al. (1985), which has been the basis of appraising service quality, is one of the most popular models for measuring service quality globally. The model measures clients' opinions and anticipations of actual service quality, employing these five dimensions: reliability, responsiveness, assurance, empathy and tangibles. The e-service perspective of service quality is described as the "clients' total assessment and decision of best and e-service service delivered in the cybernetic market" (Santos, 2003).

However, in contrary to their assessment of conventional service presents, clients may not be able to assess every sub-element in detail. In fact, within a particular website visit, they probably to observe the service a total process and result. There is number of findings of disparity in the conclusions of findings on the construct of e-banking service quality that have appeared to tackle the key features of E-banking services quality precisely (Zeithaml and Malhotra, 2005, Han and Baek, 2004).

The Web Quality tool that has been advanced by Barnes and Vidgen (2003) with 24 constructs, purposely for online service quality understanding. On the other hand, Parasuraman et al. (2005) advanced yet another seven dimensions model, with element namely, competence, reliability, responsiveness, access, credibility, communication and sympathetic of the client were founded. The model suggested to as the electronic service quality model. Several scholars employed adjusted kinds of electronic-service quality elements (Santos, 2003; Yang & Fang, 2004; Jun and Cai, 2001) to observe the elements are in diverse kinds of marketing business.

### **3. Service Quality and Customer Perception**

Dong, (2003) observed the growing argument on notion of perception. Bloemer and De Ruyter (1998) describe perception (perception as "the result of the individual appraisal that the

select substitute surpasses anticipations. This center on disconfirmation model as a before purchase assessment (Torres, Summers and Belleau, 2001). Perception is equally measured by the perspective of total perception and is described as clients' whole knowledge with service subsequent to a sequence of service involvement (Johnson, Gustafsson and Andreassen, 2001). Previous findings see experience from an aggregate perception, i.e. an over-all assessment through a succession of client involvement (Dong, 2003, Gupta and Zeithaml, 2006; Ganguli and Roy, 2010).

On the other hand, (Bearden, 1977) posit a positive relationship among perception and satisfaction. Newman (2001) suggests that service quality strongly spurs client perception and it is a requirement for client perception about product or service perception. Though, the precise outcome on the connection between the dimensions E-service quality and perception is inconclusive.

Hoffman and Bateson (2006) advanced clarification on the associations between the element of service quality and perception of the customer and post-purchase intent. The scholars suggest that most findings observed that client satisfaction is for small period of time, purchase particular determinant, while attitude formed overtime, after total assessment of performance is call service quality. Client perception and quality of service are exclusive of a hesitation intertwined. Though, their correlation is not a strong. Most findings consider client satisfaction resulted to observed service quality, although others scholars observed that quality service resulted to client satisfaction. Nevertheless, the literature review observed that sufficient findings suggests that the delivery of quality service create new clients and repeat purchases.

Carlson and O'Cass (2011) advanced a model for observing service quality, its predecessors, and intermediaries. Findings observed some significant subjects associated to the

conceptualization and dimension of service quality. The scholars' absorbed on the e-remarketing field by tackling the conceptualization of e- service quality, and the associations among international satisfaction and service quality, and new customers perception. The study established substantial interactions amongst these variables. The conceptualization and sympathetic of the association of service quality, client perception remains critical to a service sector, where the service is delivered online or in the banking hall.

### **5.0 Objective of the Study**

This study examines the correlation among E-banking service quality and client perception in the Nigerian conventional banks.

### **5.0 Research Hypotheses**

Pioneer studies on the association among e-banking service quality and client perception are varied, some findings suggested that not all service quality constructs are vital to customer perception (Khan, Mahapatra, 2009). Customer perception was found to be positively predicted by service quality (Dabholkar, Sheperd and Thorpe, 2000; Cronin). Consider the banking sector specific, service quality elements were confirmed as determinant of customer perception (Webb, Webster and Krepapa, 2000, Brady and Hult, 2000), it was proven that not all constructs are robust predictors of E-banking service quality. Furthermore, several findings have observed mixed interactions with dimensions service quality and perception (Ganguli and Roy, 2010). Hence, to further examine this relationship three hypotheses were advanced:

H1: There is positive relationship between E-banking services and customer perception in the commercial banking sector.

H2: There is positive relationship between E-banking services and customer satisfaction in the commercial banking sector.

H3: There is positive relationship between customer satisfaction and perception in the commercial banking sector.

## **6.0 Research Design**

Based on the nature of the study descriptive research approach was adopted in tackling the study objectives. Du Plessis and Rousseau (2007) posit that descriptive research method as efficient attempt to obtain primary data directly from the sample respondents. Information acquired are simply measurable and the tools have accuracy, particularly in hypothesis testing. Customers from Yobe State, Nigeria who adopt online banking platform from commercial banks are the population for the current study (Martins, Loubser and Van Wyk 1999).

### **6.1 Sampling technique**

A probability sampling method was adopted where snowball sampling was used to determine initial sample size of online bank clients, which is in line with similar studies piloted on online banking services using a probability sampling method (Pikkarainen et al., 2004; Santos, 2003; Akinyele and Olorunleke, 2010; Ombati et al., 2010), 199 commercial bank customers are the sample size of the current study.

### **6.2 Data collection**

To measure online services, the commonly adopted instruments developed are: E-SQ, E-RecS- Qual, Web Qual and E-banking portal quality elements from those instruments were adopted to measure e-service scale to suit the Nigerian context (Parasuraman et al., 2005; Santos, 2003; Barnes and Vidgen, 2003, Bauer et al., 2005).

## **7.0 Results Analysis**

### **7.1 Demographic profile of the sample**

Out of 199 questionnaires administered 175 questionnaires were found to be usable where 121 that is 69% are male and 54 that is 31% are female respondents. On the other hand, the age group 30-39 years was 62, that is 35%; 20-29 years are 43 that is 26%; 40-49 years was 39 that is 22%; and age group 50-59 years was 31 that is 18%. On the other hand, 31 that is 18% of the sampled respondents who used Internet banking were aged 20 years. About 66 that is 38% of the respondents accessed the Internet from their employers' network and 63 that is

36% used fixed line or wireless broadband at home. Finally, 46 that is 26% used dial-up access at homes.

### 7.2 Service quality Constructs

To measure the seven constructs of service quality, we employed Principal Component Analysis. The constructs loadings greater than 0.50 was adopted as a limit for the removal of constructs. The descriptions of the elements were stated in Table 1 below.

Table 1: Description of the Construct

Construct	Description
Assurance, belief and demand	The level at which clients find transacting online safe, and consistent appearance of the website of the bank's and appealing
Openness	Effective management of enquiries and difficulties whenever clients need the bank help
Simplicity	Easy of accessing and adopting the bank's website for searching, navigating and operation
Convenience	Accessibility of a bank's website for undertaking businesses
Fulfilment	The level of bank's website redness for online business
Accuracy and Speed	How fast and precisely clients can carry out banking business through the bank's website
Contact	The bank can meet the customers by a diverse mechanism to aid customers when they encountering challenges

### 7.3 Reliability

The scale internal consistency was established by adapting the coefficient of Cronbach alpha (Leo et al., 2005). Cronbach alpha Coefficient values were calculated for every element and the total reliability of the scale that was employed in computing online banking services. A reliability value of 0.70 and above was observed as adequate (Santos, 2003). The

Cronbach alpha values are described in Table 2. The total Cronbach value of the online banking scale was 0.923 suggested good reliability. The reliabilities of the individual factors ranged from 0.703 to 0.923, which were considered satisfactory (Malhotra, 2004). The reliability for the customer perception scale and for the scale was 0.765, which was found to be adequate.

Table 2: Scale Reliability

<i>Measurement explanation/construct</i>	<i>No of elements</i>	<i>Cronbach Alpha</i>
Scale of the E-banking service quality		
Construct 1: Trust and Assurance	6	0.760
Construct 2: Responsiveness	5	0.872

Construct 3: Ease of use	5	0.776
Construct 4: Accessibility	6	0.823
Construct 5: Fulfilment	6	0.745
Construct 6: Speed and accuracy	4	0.862
Construct 7: Contact	5	0.703
Perception	6	0.765
Whole reliability: E-banking measure	42	0.923

### 7.4 Correlations

As suggested by the study objective it was essential to observe the correlation between customer perceptions and E-banking service. The researchers perform correlation analysis to ascertain association level among the variables of the study and correlation coefficient (r) was adopted. This is aimed at evaluating the association between the six dimensions and perception. Table 3 summarizes associations among dimensions E-banking service and perception.

Cohen’s d-measure of effect sizes was employed to measuring the extent of the correlation and determine the significance of the outcome. The effect, size as advocated by Steyn (2000), is stated as follows: small effect where  $r = 0.10$  to  $0.29$ , medium effect  $r = 0.30$  to  $0.49$  and large effect  $r = 0.50$ . On the other hand, positive outcomes were range from  $r=0.222$  to  $r = 0.548$  at  $p<0.01$  are the significance level which, demonstrating the existence of positive linear inter-factor association, and the smallest correlation was found among responsiveness and simple to use

( $r=0.222$ ). The correlation ranged from strong to weak, the significance of the effect sizes, Cohen’s d-statistics showed effect sizes ranging from large to small effects between elements.

Similarly, table 2 has further demonstrated significant relationships among the constructs and satisfaction  $r=0.333$  to  $r= 0.420$  at  $p<0.01$  where the significance level has signifying a positive linear relationship among the elements of E-banking service and perception. Correspondingly, the correlations of the constructs with perception were also substantial, ranging from  $r=0.221$  to  $r= 0.482$  at  $p<0.01$  which is indicating positive linear relationship among the variables of satisfactions and E-banking service.

It can be observed, Table 3 below shows Pearson correlation coefficients with strong linear association,  $r=0.639$  at  $p<0.01$  level of significance, demonstrating that perception with E-banking impacts client satisfaction. In relate of the effect sizes, Cohen’s measure of effect sizes displayed a great significance. As the findings indicate strong connection of the constructs with perception.

**Table 3: Correlations and reliability -E-banking service quality element, perception**

Constructs	C1	C2	C3	C4	C5	C6	C7	Per
Assurance, trust and appeal	1	.488*	339**	456**	.548**	0.310	385**	.440**
Responsiveness		1	329**	.399*	.374**	457**	.467**	341**
Ease of use			1	233**	384**	432**	433**	255**
Accessibility				1	499**	.311*	243**	.360**
Fulfilment					1**	324**	447**	392**



Speed and accuracy						1**	424*	434*
Contact							1**	638**
Perception scale								1**

Because the relationships were proven to be positive between the elements of E-banking, and perception is considered essential to observe the level of association and predictive association between the constructs. Hence, regression models were advanced to observe and update the correlation predictive level.

### 7.5 Regression analysis

Regression analysis among the dimensions of perception and E-banking service was demonstrated on table 4. The indicators of E-banking service quality were held constant dependent and independent variable that inserted to the model was perception, the relationship among the specific elements and the aggregate perception rating, the adjusted  $R^2 = 0.37$  indicates that the E-banking construct described 37% discrepancy in the clients' total perception score.

The variables, trust, assurance and appeal, construct, ease of use and construct, speed and accuracy were found to be significant at  $p < 0.05$ . Construct responsiveness, construct accessibility, and construct contact indicated low predictive correlation with aggregate E-banking perception.

However, construct 5 fulfilment, indicated a negative relation to aggregate perception. Perception was initially expected and donated to by construct 3 ease of use;  $= 0.387$ ), by construct 6 speed and accuracy;  $= 0.251$  and construct 1 assurance, trust and appeal;  $= 0.222$ ). The correlation was positive among construct 3 ease of use and client perception. Similarly, the association among construct 6 accuracy and client perception.

Table 4: Regression: element of E-banking and perception

Constructs	B	Beta ()	T	p-level
Assurance, trust and appeal	.181	.222	2.753	.008*
Awareness	.023	.027	0.188	.853
Ease of use	.238	.287	3.731	.000*
Availability	.092	.131	1.509	.144
Accomplishment	-.027	-.033	-0 3.688	.788
Speed and accuracy	.186	.271	3.666	.000*
Interaction	.001	.001	0.018	.975
R = 0.597 R <sup>2</sup> = 0.357 Adjusted R <sup>2</sup> = 0.331 F = 13.643				
*p<0.05. Dependent variable: perception				

Table 5 summaries the regression analysis among the elements of E-banking and perception. The elements of E-banking were held constant dependent and independent variable that was introduced to the model. On evaluating the connection among the construct and the total perception ranking, the  $R^2 = 0.28$  suggests that E-banking service quality construct described 28% discrepancy in the clients' total perception. The outcomes show that construct 1 assurance, trust and appeal and construct 2 responsiveness were significant at  $p < 0.05$ . construct 3 ease of use, factor 5 (fulfilment) and factor 6 speed and accuracy showed no predictive relationship with loyalty. On the other hand, factor 4 accessibility and construct 7 contact presented a negative relation with perception. Perception intention was thus predicted and contributed to by construct 1 assurance, trust and appeal;  $= 0.393$ ) and construct 2 (responsiveness;  $= 0.181$ ).

Table 5: Regression: client perception

E-Banking Service Quality and Customers perception in Commercial Banks in Nigeria

Independent variable	B	Beta ()	T	p-level
Perception	0.622	0.639	10.768	0.000*
R = 0.622 R <sup>2</sup> = 0.385 Adjusted R <sup>2</sup> = 0.383 F = 117.403 *p<0.0000. Dependent variable: Perception				

The hypotheses were tested by referring to the outcomes of regression and correlation analyses.

### 7.6 Hypotheses Testing

The relationships among the elements of E-banking and client perception was found to be positive. The coefficients of the beta for construct one assurance, trust and appeal), construct three ease of use and construct six speed and accuracy helped considerably to the determination of client perception, although construct two responsiveness, construct four accessibility, construct five fulfilment and construct seven contact displayed poor predictive correlation. Hence, we partially accepted Hypothesis.

On the other hand, the outcomes of correlations analysis of E- banking services and perception indicate the existence of positive causal association. The regression analysis disclosed that intention was contributed to by construct one (= 0.394) and construct four (= 0.181). construct three ease of use, construct five fulfilment and construct six speed and accuracy displayed zero predictive correlation with perception, whereas construct four accessibility and construct seven contact displayed a no correlation with perception. Hence, hypothesis two is accepted.

Observing the correlation among client satisfaction and perception, the relationship and the analyses exposed a strong association among constructs. The outcomes of the Pearson correlation coefficients (r=0.638) at p=0.00 level indicate positive correlations among client satisfaction and perception. The analysis developed beta coefficient (= 0.638) at p<0.000, signifying a robust predictive

association among client satisfaction and perception. Hypothesis three is equally positive.

### 8. Discussion

Outcomes from current study were in line with that of earlier findings. The result of studies on the relationship between E-banking and client perception were mixt, as findings demonstrate that some constructs are not vital to customer perception (Khan et al., 2009). E-banking service quality has been observed to be a positive predictor of client perception (Dabholkar et al., 2000; Cronin et al., 2000). Though, within the banking sector, service quality coctructs were measure as predictors of consumer perception (Webb et al., 2000; Ganguli and Roy, 2010) where it was recognized that not all element are positive predictors of E- banking service quality.

Even though some factors exhibited slight predictive correlation or did not make a great influence on perception did not suggested that construct less important, as perception of service quality and behavior is difficult and unlikely to argued that all elements can lead to a large amount of flexibility (Schiffman, Dash and Dillon, 1977). Philosophy supports such associations, which is essential need's elements of Kano's quality model (Zhang and Von Dran, 2002). Fundamental the features suitable to a given client (Shen, Tan and Xie, 2000) and involve characteristics consumers were nor seriously exploit. Their occurrence ignored, but their deficiency will create grievances and displeasure among clients. Customer perception does not increase with a great performance. These services are anticipated and clients usually do not express the requests or openly.



The main objective of this study was to establish the kind of the association between the constructs of E-banking and customers perception. Therefore, correlation and regression analyses were done to advance update the relationship that exists between these variables. As explained previously the outcomes demonstrate positive linear relationship among these variables.

### **9. Limitations of the Study**

To determine the study sample; snowball sampling the researchers adopted to create a sample of E-bank clients, the size of the sample is coherent with related studies piloted on E-banking services, generalizing of the study outcomes over population should be adopted with restraint. Add existing body of literature on E-banking. It is buttressed that future findings involves a greater sample in order to test the sturdiness of the measurement model.

Clients from Yobe who use of E-banking services instituted the population of the study. Although the element that were obtained in this study correspondence with earlier findings, taking into consideration that Nigeria is involved of diverse sub-markets, each with different features, it would be impracticable to generalize the outcomes disclosed in the study to other states in the country. Future study could donate to analysis of customers behavior by involving other perception element that may affect E-banking service quality. A quantitative research design was adopted in this study. Future research may consider both a qualitative or mix method.

### **10. Conclusion**

Poor interpersonal skills and over depend on technology have severe results for the element to use when evaluating E-banking for purposes of client perception. Current study has contributed to the existing literature of an understanding of E-banking, its dimension within E-banking settings and its association

with perception in a emerging economy. Whilst the outcomes of this study are consistent with existing findings on the topic, extant findings indicate that the degree of client perception resulting from service quality influence on pre-buying intents of clients. Thus, perception clients that are doing business frequently with the similar business that are more probable to involve in substituting actions. Attaining satisfied clients who utilize and associate themselves with E-banking is of specific importance for banks to flourish impending markets and prosper in instable and competitive E-banking settings.

### **References**

- Bauer, H., Hammerschmidt, M. & Falk, T. (2005). Measuring the quality of E-banking portals. *International Journal of Bank Marketing*, 23(2), 153-175.
- Bearden, W.O. (1977). Determinant attributes of store patronage: Downtown versus outlying shopping centres. *Journal of Retailing*, 53(2), 15-22.
- Bloemer, J. & De Ruyter, K. (1998). On the relationship between store image, store satisfaction, and store loyalty. *European Journal of Marketing*, 32, 499- 513.
- Carlson, J. & O`cass, A. 2011. Developing a framework for understanding e-service quality, its antecedents, consequences, and mediators. *Managing Service Quality*, 21(3):264-285.
- Cronin, J.J. (Jr.), Brady, M.K. & Hult, G.T.M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Dabholkar, P.A., Shepherd, C.D. & Thorpe, D.I. (2000). A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study.

- Journal of Retailing, 76(2), 139-173.
- Dhurup, M. & Oosthuizen, A. (2010). Salient store image attributes in consumer store selection decisions and the relationship with store satisfaction and loyalty. *Journal of Contemporary Management*, 7, 380-401.
- Dick, A. & Basu, K. (1994). Customer loyalty, toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22, 99-113.
- Dong, M.K. (2003). Inter-relationships among store image, store satisfaction, and store loyalty among Korea discount retail patrons. *Asia Pacific Journal of Marketing and*
- Du Plessis, F. & Rousseau, G.G. (2007). *Buyer Behaviour: Understanding Consumer Psychology*
- Ganguli, S. & Roy, S.K. (2010). Generic terminology-based service quality dimensions in banking: Impact on customer satisfaction and loyalty. *International Journal of Bank Marketing*, 29(2), 276-291.
- Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Grönroos, C. (2007). *Service Management and Marketing: Customer Management in Service Competition*. John Wiley & Sons Ltd: England.
- Gupta, S. & Zeithaml, V. (2006). Customer metrics and their impact on financial performance. *Marketing Science*, 25(6), 718-739.
- Hamadi, C. (2010). The impact of quality of online banking on consumer commitment. *Communications of the IBIMA* 2.
- Han, S. & Baek, S. (2004). Antecedents and consequences of service quality in online banking: An application of the SERVQUAL instrument. *Advances in Consumer Research*, 31, 208-214.
- Hoffman, K.D. & Bateson, J.E.G. 2006. *Service Marketing: Concepts, Strategies & Cases*. New York: Thompson South Western.
- Johnson, M.D., Gustafsson, A. & Andreassen, T.W. (2001). The evolution and future of national customer satisfaction index models. *Journal of*
- Jun, M. & Cai, S. (2001). The key determinants of internet banking service quality: a content analysis. *International Journal of Bank Marketing*, 19(7), 276-291.
- Khan, M.S., Mahapatra, S.S. & Sreekumar, S. (2009). Service quality evaluation in internet banking: An empirical study in India. *International Journal of Indian Culture and Business Management*, 2(1), 30-46.
- Knox, S. & Denison, T. (2000). Store loyalty: its impact on retail revenue. An empirical study of purchasing behaviour in the UK. *Journal of Retailing and Consumer Services*, 7, 34-45.
- Kumar, M., Kee, F.T. & Charles, V. (2010). Comparative evaluation of critical factors in delivering service quality of banks: An application of dominance analysis in modified SERVQUAL model. *International Journal of Quality & Reliability Management*, 27(3), 351-377.
- Lehtinen, U. & Lehtinen, J.R. (1991). Two approaches to service quality dimensions. *The Service Industries Journal*, 11(3), 287-303.
- Malhotra, N.K. (2004). *Marketing Research: An Applied Orientation*. 4th ed. Upper Saddle River, New Jersey: Pearson Education Prentice Hall.
- Martins, J.H., Loubser, M. & Van Wyk, H.D.J. (1999). *Marketing Research: A South African Approach*. 2nd ed. Pretoria: University of South Africa Press.
- Matzler, K. & Hinterhuber, H.H. (1998). How to make product development projects

- more successful by integrating Kano's model of customer satisfaction into quality function
- Mehta, C., Lalwani, A.K. & Han, L.S. (2000). Service quality in retailing: relative efficiency of alternative measurement scales for different product-service environments. *International Journal of Retail & Distribution Management*, 28(2), 62-72.
- Newman, K. (2001). Interrogating SERVQUAL: a critical assessment of service quality measurement in a High Street retail. *International Journal of Bank Marketing*, 3(19), 126-139.
- Ombati, T.O., Mangatu, P.O., Nyamwange, S.O. & Nyaoa, R.B. (2010). Technology and service quality in the banking industry. *African Journal of Business and*
- Parasuraman, A., Zeithaml, V. & Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49, 41-50.
- Parasuraman, A., Zeithaml, V. & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213-233.
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H. & Pahnla, S. (2004). Consumer acceptance of online banking: an extension of technology acceptance model.
- Santos, F. (2003). E-service quality: S model of virtual service quality dimensions. *Managing*
- Schiffman, L.G., Dash, J.F. & Dillon, W.R. (1977). The contribution of store-image characteristics to store-type choice. *Journal of Retailing*, 53(2), 3-14.
- Shen, X.X., Tan, K.C. & Xie, M. (2000). An integrated approach to innovative product development using Kano's model of QFD. *European Journal of Innovative Management*,
- Steyn, H.S. (Jr). (2000). Practical significance of the difference in means. *Journal of Industrial Psychology*,
- Torres, M., Summers, T. & Belleau, D. (2001). Men's shopping satisfaction and store references. *Journal of Retailing and Consumer Services*, 8, 205-212.
- Webb, D., Webster, C. & Krepapa, A. (2000). An exploration of the meaning and outcomes of a customer-defined market orientation. *Journal of Business Research*, 48,101-112.
- Yang, Z. & Fang, X. (2004). Online service quality dimensions and their relationships satisfaction; A content analysis of customer reviews of securities brokerage services. *International Journal of Service Industry Management*, 15(3), 302-325.
- Zhang, P. & Von Dran, G.M. (2002). User expectations and ranking of quality factors in different web site domains. *International Journal of Electronic Commerce*, 6(3), 9-33.