International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531
(Print & Online)

http://gssrr.org/index.php?journal=JournalOfBasicAndApplied

Gauging the Effect of Internet Banking on Consumer Satisfaction in Ghana: An Empirical Study on Internet Banking in Ghana

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Abstract

The study examined whether or not consumers gain satisfaction from internet banking services in Ghana. It brings the perspectives of both bankers (internal consumers) and customers (external consumers) into the discussion and considers both parties as consumers. The study employed the SERVQUAL service quality dimensions and gap score methodology to evaluate consumer response on service quality and thus gauge their satisfaction levels. Findings from the study indicated that the general consensus of consumers was geared towards dissatisfaction. Consumers however were least dissatisfied with how online banking dealt with the promptness of services promised to be delivered. On the other hand, consumers were most dissatisfied with the unavailability of online customer service. One major implication of this study is that it is realistic and not unusual for consumers to express dissatisfaction. This means that better service quality is therefore indicated by less dissatisfaction.

Keywords: Internet Banking; SERVQUAL; Service Quality; Consumer Satisfaction..

1. Introduction

Electronic business by virtue of the internet is revolutionizing the way business is conducted in every industry [28].

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The banking industry is not an exception to this transformational trend, hence the advent of internet banking. Two of the areas affected by this trend are service quality and consumer satisfaction [35]. Service delight is without doubt a prime consideration of many progressive companies all over the world [36]. With this growing stress on service quality, the banking industry in Ghana is becoming increasingly competitive [6].

Today's consumer expects high-quality services from banks, which could result in significantly enhanced consumer satisfaction levels, if fulfilled [4]. In an era of intense competitive pressures, many firms focus their efforts on maintaining a satisfied customer base. No wonder it is a shared assertion among theorists that customer service quality is vital to business success [37]. In response to this, many financial institutions have long been directing their strategies towards increasing customer loyalty through improved service quality [10].

According to Ankrah [6], the Ghanaian economy has experienced a rise in foreign banks in recent times. Such banks and their banking operations are characterized by much complexity and competition [14]. Most banks are now offering electronic services with various levels of originality [6]. Thus, banks in Ghana today will even be more focused on their most important stakeholders - their consumers – to remain relevant and competitive [5].

The banking sector in Ghana has resisted change by maintaining its "brick and mortar" banking tradition [23]. However, in recent times, the banks have been ushered into the connected world and this is drastically changing the way banking business is done in Ghana [6]. Online banking is evidently the current stage in the advancement of banking services in Ghana. With more people using the internet, many bank customers expect to be able to access features, enabling them to perform basic internet banking tasks [33].

The services provided by banks on the internet have evolved over time to a full range of banking services [32]. Compared to traditional banking, the internet has the advantage of reducing most of the costs attached to other banking services [9]. The internet also has the quality of being nearly omnipresent to serve in just in any place and at any time [32].

The importance of the use of digital innovations in the banking sector has grown over the years [6]. Internet banking seems to have caught on in Ghana for good reason. It makes the regular transactions for customers speedy and efficient [8]. Many of the banks in Ghana have clients overseas and thus, online banking help cater for these customers by eliminating the geographic barriers to undertaking simple transactions [22]. Hence, internet banking has improved customer diversity as well as the quality of services to client stakeholders.

Against the backdrop of the above overview, internet banking services are undoubtedly associated with consumer satisfaction. As much as internet banking has paved the way for firms to render more services in their various complexities and competitiveness, this study probes into and gauges whether or not consumers gain satisfaction from online banking services.

2. Literature Review

2.1 Service Quality

Business units have come to see quality as a strategic tool for reaching process efficiency and improving general business performance [19]. This is likewise true for the service industry. Kang and James [19], notes that service quality is an important issue in service management and marketing. According to them, the past three decades alone has seen efforts in trying to understand, identify and even measure service quality. Quality has since been variously defined by different authors.

Researchers like Parasuraman, Zeithaml, and Malhotra [27] describe service quality as the degree of excellence or superiority that an organization's product possesses as perceived by a customer. One important contribution of Parasuraman, Zeithaml and Berry [25] was to provide a concise definition of what service quality is. They defined service quality as 'a [universal] judgment, or attitude, relating to the superiority of the service'. They expounded upon it as encompassing assessments of the result (what the user essentially receives from service) and process of service provision (the mode in which service is delivered). Thus Parasuraman, Zeithaml, and Berry [24] argued that service quality goes beyond outcomes; it involves the delivery process.

Many researchers have thus conceptualized service quality as a difference between expectations of what consumers want and perceptions of what they obtain. According to Jain and Garima [17], however, the concern with the management of quality in the service industry is that quality is not straightforwardly detectible and measurable. This is due to intrinsic characteristics of services that make them distinct from goods. Researchers have proposed various models of 'Service Quality' and different attributes for measuring service quality [17]. Hence, to evaluate consumer perceived quality, it is significant to determine the determinants or variables by which to gauge service quality.

2.2 Measuring Service Quality: Quality Variables

Situating service quality within the internet banking domain introduces a whole perspective to the study. Services are innately and fundamentally immaterial, diverse, and involve a continuum of an inseparability of production and consumption. Services thus require a different framework for quality identification and measurement [17]. In the goods industry, concrete signs exist to enable customers to evaluate product quality. Parasuraman and his colleagues [24], however, explained service quality in terms of constraints that largely come under the field of abstract properties and are as such difficult to gauge.

Importance Performance Analysis (IPA) for instance uses the way customers perceive the importance of factors or variables that affect quality with the aim of improving performance and customer delight [30]. Zeithaml, Parasuraman and Malhotra [36] contended that variables for gauging internet service quality include: access, ease of navigation, efficiency, flexibility, reliability, personalization, security, responsiveness, assurance, site aesthetics and price knowledge. Based on the conceptualization that Service Quality is essentially the gap between expectations before experience and perceptions after experience, Parasuraman and his colleagues [24] proposed a service quality measurement scale.

They argued that service quality is influenced by certain quality variables: tangibles, competence, courtesy, credibility, security, access, communication, knowing the customer, reliability and responsiveness [25]. These vari-

ables serve as the components of the multiple-item scale for measuring service quality, called SERV-QUAL, as proposed and coined by Parasuraman and his colleagues [24]. They later revised SERVQUAL and reduced it to five dimensions: reliability, assurance, tangibles, empathy and responsiveness (Parasuraman, Zeithaml, & Berry, 1991) [26]. The SERVQUAL scale has become a crucial breakthrough in the service quality literature. Researchers have widely used it in diverse service settings to evaluate consumer satisfaction [17].

2.3 Consumer Satisfaction

Any business endeavour to ascertain Service Quality is essentially done to achieve customer satisfaction. According to Agbor [1], customers are purchasers of goods and services delivered by businesses. Agbor asserted that the words customer and consumer could be confusing. A customer may be a consumer, but a consumer may not necessarily be a customer. A customer does the purchasing of the products and services and the consumer is the one who eventually consumes or makes use of the product [1]. This is another reason this study favours the term "consumer satisfaction".

Consumer satisfaction has received numerous attention and interest among researchers because of its role in service and service quality [6]. According to Churchill and Surprenant [11], consumer satisfaction can be described as a "disconfirmation paradigm" since it is a result of confirmation or disconfirmation of expectation and perceptions that evaluates a product's performance. Oliver [22] asserted that consumers' satisfaction can be described as a firm's ability to live up to the economic, emotional, and psychological needs as perceived by its consumers. It must be rightfully acknowledged that customers will usually have inconsistent levels of satisfaction since they have different world views and experiences in relation to products and services [24]. As the adage goes, "One man's meat is another man's poison."

Consumer satisfaction is thus an appraisal or rating made by consumers by comparing their expectation before purchase to their final perceptions of actual performance after purchase [21]. In other words, satisfaction is the emotional reaction following an experience where expectation of a product is coupled with the consumption perception [21]. These concepts are central to the theoretical models of quality and satisfaction.

2.4 Empirical Studies on Internet Banking and Satisfaction

As noted by Porter and Heppelmann [28], many innovations have in recent times reformed the way business units carry out banking businesses. This arises from innovative forms of delivery of services. Among such innovations is the use of online services to cater for banking needs, typically referred to as internet banking. Online businesses according to an empirical study by Ho and Wu [15] have five contributing factors that impact on consumer satisfaction. These determinants are logistic support, technical characteristics, features of information, presentation of the home page and product personality [15].

Attitude towards the use of internet banking has been lukewarm or ignored by most consumers because of the perceived problems connected with technology-based service delivery systems. Most people lack confidence that it can be used to addresses challenges of security [3]. Bringing the focus to the African continent, especially developing African countries, Wungwanitchakorn [34] indicated that internet banking is still at its growth stage.

Very few bank customers are familiar with the use of electronic systems to manage their financial concerns. This explains the low rate at which people adopt internet banking. Wungwanitchakorn [34] also showed that frustration with internet banking platforms is due to high failure rates of most of their innovative products and services.

Moreover, Boateng [9] indicated that the operational restrictions of internet banking is connected with the location of the customer, the requirement to maintain customer satisfaction and the competences of the internet system to act as a persuasive factor in inspiring the decision to indulge in electronic banking. As a result this, the usage experience is influenced which in turn affects the level of consumer satisfaction [9]. Bebli [8] also identified that age was significance because the youth were much more interested in internet banking than other age groups.

2.5 Relationship between Service Quality and Customer Satisfaction

In the view of Zeithaml [37], service quality and customer satisfaction are the two essential concepts that are at the apex of the marketing practice; in this case internet banking. The importance of service quality and customer satisfaction is shown by the sheer number of empirical studies on the two concepts in recent times. According to Parasuraman and his colleagues [24], there is an established strong relationship between quality of service and consumer satisfaction. A perceived higher level of service quality results in increased consumer satisfaction and a lower level of service quality results in a dissatisfied consumer.

The relationship between expectation, perceived service quality and customers satisfaction have been investigated in a number of empirical studies (Zeithaml, Berry, & Parasuraman, [35]; Parasuraman and his colleagues [24,25]. As indicated by Parasuraman and his colleagues [26] in their empirical work, they argue that if the "expected quality of service and actual perceived performance is equal or near equal the customers can be satisfy, while a negative discrepancy between perceptions and expectations or 'performance-gap' lead to customer dissatisfaction, and positive discrepancy leads to consumer delight".

Bebli [8] argues that perceived usefulness, ease of use, reliability, responsiveness, security, and continuous improvement has led to the adoption of internet banking in Ghana. Liao and Cheung (2002)[20] found in their study that individual expectations with reference to accuracy, security, network speed, user-friendliness, user involvement and convenience were crucial to customers' satisfaction. Hence in order to gauge successfully how internet banking contributes to customer satisfaction, it is imperative to consider it alongside service quality.

The above discussion indicates the role of expectations and perceptions in bringing customer satisfaction and service quality together. Expectations of service quality are formed prior to the service while perceptions usually develop after the service. It is the combination of these two, defined by quality variables, which describes an individual's perspective.

2.6 SERVQUAL Model

The groundwork for the SERVQUAL model is the gap model propounded by Parasuraman and his colleagues [24,25]. With its origins in "Disconfirmation Paradigm", the gap model holds that satisfaction is associated with the magnitude and direction of disconfirmation of a one's experience alongside his or her original expecta-

tions [24].

As a gap or difference between consumer expectations and perceptions, service quality is regarded as ranging along a scale from "excellent quality" to "utterly unacceptable quality", with some points along the scale signifying "reasonable quality" [17]. Parasuraman and his colleagues [25] held that when experienced service is below expected service, the implication is that it is below satisfactory service quality.

However, when experienced service is greater than expected service, it follows logically that the quality is more than satisfactory. Parasuraman and his colleagues [24] in developing their conceptual model of service identified five gaps that could influence the consumer's assessment of service quality in the service industry. Shahin [29], however, includes two more gaps as an extension. These gaps are:

2.7 GAP 1: Consumer Expectations versus Management Perception Gap

Service firms may not always recognize what traits a service must have in order to meet user desires and what levels of performance on those traits are needed to provide high-quality service. Such a lapse can affect consumers' assessment of service quality.

2.8 GAP 2: Management Perception versus Service Quality Specification Gap

This gap manifests when the firm recognizes what the customers want, but the means to provide the expectation does not exist. Some reasons for this gap could be supply limitations, market circumstances and management inefficiency. These could affect the service quality experience of the consumer.

2.9 GAP 3: Service Quality Specification versus Service Delivery Gap

Organizations could have procedures for performing service well and treating customers properly, but this does necessarily lead to high service quality performance. Employees play an important role in assuring good service quality experience. This can affect the provision of service which can in turn affect the way customers perceive service quality.

2.10 GAP 4: Service Delivery versus External Communication Gap

External communications can impact not only user expectations of service but also user experience of the supplied service. Firms can neglect to notify users of special labours to guarantee quality that are not readily discernible to them, and this could impact service quality perceptions by consumers.

2.11GAP 5: Expected Service versus Perceived Service Gap

According to Parasuraman and his colleagues [24], guaranteeing good service quality is meeting or exceeding consumers' expectations from the service. The verdict of low and high service quality depends on how consumers perceive the actual delivery against what they expected.

2.12 GAP 6: Consumer Expectation versus Employee Perception Gap

This gap is as a result of the differences or discrepancies in the understanding of customer expectations by employee service providers [29].

2.13 GAP 7: Employee Perception versus Management Perception Gap

This gap is simply as a result of the differences or discrepancies in the understanding of customer expectations between managers and employee service providers [29].

Gap 5, however, relates exclusively to the customer and hence a true gauge of user satisfaction [29]. The SERVQUAL model is based on Gap 5.

2.14 Internet Banking in Ghana

In an endeavour to get closer to international evolvements and improve the quality of their service provision, most banks in Ghana have allowed some form of internet banking for their customers. Customers can check their account balances and transfer money from one account to another [33]. The usage of the internet in Ghana has also seen substantial growths since the "liberalization" of the telecommunication sector in 1990s [2]. According to Woldie and his colleagues [33], the era from the early to mid-1990s saw a steady and persistent application of telecommunication technology into banking procedures by Ghanaian banks. Information and communication technology, in the twenty-first century, has become an essential tactical tool for competitive advantage. To this end, there has been an enormous inflow of information and communication technology (ICT) of various forms into numerous banking processes [33].

Customers of banks with internet banking services now use the internet for nearly all their banking needs. They can access their account in order to undertake transfer of funds, pay bills, check their account balances, manage their accounts as well as perform a varied list of functions including retrieving and printing of bank statements over a specified period. The provision of these e-banking services, especially internet banking, seems to be an entry level approach adopted by most of the new banks in Ghana [33].

Some traditional banks, according to Woldie and his colleagues [33], however, tend to be development and commercial oriented banks. They explain that such banks have a nation-wide coverage and a huge customer base which are predominantly "low-income earners, low-skilled workers, and relatively less 'technology savvy', having no access or limited access to computers and the Internet". With this consumer composition, internet banking tends to be rather farfetched, unsustainable and not a currently relevant service provision for them [33]. With the growing internet penetration, and also the increasing ICT literacy of

Ghanaians, marketing strategies seems to target the technology inclined market. Such people may be set to move from the old-fashioned banking medium to the online banking medium [33]. In an online survey of banks offering internet banking services, I can essentially group online services available in Ghana into the following main features:

- **Check Account Balance**: You can check your account balances at any time with online banking.
- **View Transactions**: Internet banking grant the ability to view transaction history for up to a specified period.
- **Cheque Status**: You can monitor the status of cheques you have issued with Internet Banking.
- **Standing Orders**: You can also set up and maintain standing orders without having to visit a branch

More specifically, banks offering internet banking services in Ghana grant the ability to do the following [31]:

- Request physical statements
- Order cheque books
- Pay utility bills and Transfer funds to another account
- Change your Online Banking password
- Stay up-to-date on the market
- Download online account statements
- View credit card transactions and statements
- Make credit card payments

3. Research Methodology

3.1 Research Design

The study dwells a lot on subjective perspectives; however, these have been quantified for a more objective viewpoint. Hence, the study used a quantitative research approach since it fits the problem situation.

3.2 Sample Size and Sampling Technique

The study focused not only on customers but also bankers on the issue of consumer satisfaction. I used the convenience sampling method for data collection to maximize the possibility of answering the research questions. Accordingly, out of the population of stakeholders of five chosen banks in Ghana, the sample size I used for this study was fifty subjects overall. I chose twenty-five customers from five banks in Ghana as well as twenty-five bankers from those banks. Therefore, I conveniently selected five customers and five bankers from each of the five banks respectively. I engaged any customer or banker who was willing and ready to answer instantly; this was done in a bid to make the most of the time and resources.The study utilized these particular banks: Ecobank Ghana, Barclays Bank Ghana, Standard Chartered, Stanbic Bank and Ghana Commercial Bank (GCB Bank). Due to their consistently high market share, they can serve as a fair representation of the Ghanaian banking industry (Ghana Banking Survey, 2013) [14]. I conveniently selected any particular branch of the five banks for the study depending on their availability and proximity.

3.3 Data Analysis

The data analysis was largely inspired by the "expectancy disconfirmation" SERVQUAL model of expectations verses perceptions. The discrepancy between expectations and perceptions computed from the SERVQUAL instrument is what the study used to ascertain satisfaction. A positive discrepancy will thus indicate satisfaction while a negative discrepancy will point to dissatisfaction. A null discrepancy will hence indicate a neutral satisfactory stance on the part of the subject. This mode of analysis catered for the second part of the questionnaires and answers the questions:

- **How do consumers perceive internet banking service quality?**
- **What is the satisfaction level of consumers on their usage of internet banking?**

4. Results

4.1 Principal Component Analysis for Expectations Survey

Consumer Satisfaction, as used in these questions indicates a condition of satisfaction or dissatisfaction. The questionnaires for both bankers and customers catered for both questions. Both sets employed the same SERVQUAL instrumentation, yet captured two diverse viewpoints (Bankers and Customers) on the subject of consumer satisfaction. Bankers and customers, form the core part of the consumption of internet banking services. The first part of both sets of questionnaires captured the demographic data on bankers and customers. The data from this tackled the question:First of all, I initiated the KMO (Kaiser-Meyer-Olkin) Test and Bartlett's Test to check the appropriateness of factor analysis for the research. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy indicates the fraction of variance in the selected variables that might be affected by certain causal factors [16]. While KMO ranges from 0 to 1, high values close to 1.0 normally indicate that a factor analysis may be useful with the data under study. If the value is less than 0.50, the results of the factor analysis will most likely not be very beneficial [16]. Others opt for an acceptable index over 0.6. Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables under test are unrelated and therefore unsuitable for a construct validity test [16]. It determines if the correlations between the selected variables looked at simultaneously; do not diverge significantly from zero [12]. Small values less than 0.05 of the significance level show that a factor analysis may be useful with the data [16].

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the expectation survey was 0.702 which was higher than the acceptable level and the Bartlett's test of sphericity had a significant value less than 0.05 (Appendix H). Gauging from the underlying statistical rules pertaining to the interpretation of the figures, the results gave an indication that principal component analysis was appropriate and was thus useful for the study.

To determine the number of useful factors under the Principal Component Analysis, the common method is to look for components which have their Eigenvalues to be greater than 1 as shown in Table 1 [7]. I observed seven components having Eigenvalues which were greater than 1 and thus I specified seven factors for the test. The Rotated Component Matrix displays the component or factor loadings for each variable. In Table 1, it is plain that for the purpose of analysis, I disregarded those loading below a certain threshold (0.49) on each factor.

In other words, only positive loadings above 0.49 have been highlighted. I determined this by following the regular trend of the factor loadings. The Rotated Component Matrix shows the correlation between a specific observed variable and a specific factor.

Table 1: Rotated Component Matrix for Expectations Survey

Rotated Component Matrix[a]							
Component							
ITEM STATEMENTS	**1**	**2**	**3**	**4**	**5**	**6**	**7**
E11	.822	.140	.140	.139	-.072	-.111	.061
E9	.730	-.069	.265	.262	.029	.068	-.175
E21	.713	.187	.060	.054	.233	.180	-.057
E3	.657	.010	.064	-.101	-.343	.074	.395
E16	.649	-.074	.417	-.146	.264	.252	-.099
E8	.574	.127	.445	.364	-.045	-.102	.013
E18	-.006	.856	.128	.236	.055	-.033	.014
E19	-.041	.844	-.051	-.089	.141	.124	.224
E7	.193	.677	.318	.168	.188	.104	.017
E6	.223	.649	.430	-.002	-.212	-.061	-.288
E10	.150	.556	-.064	.016	-.532	-.048	.098
E5	.252	.151	.727	.118	-.081	-.098	-.057
E4	.168	-.112	.704	.418	-.152	.171	-.015
E2	.077	.249	.675	.089	-.028	.465	.101
E17	.242	.336	.634	.023	.392	-.102	.094
E13	.298	.043	.109	.820	.197	.168	.051
E12	.009	.306	.359	.750	.037	.141	-.008
E20	.083	.148	-.116	.162	.757	-.032	.096
E1	.060	-.008	-.002	.268	-.059	.813	-.026
E15	.361	.249	.275	-.296	.395	.494	-.103
E22	.104	.171	-.038	.142	.106	.034	.803
E14	.469	.083	-.101	.228	.095	.187	-.613

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 9 iterations.

Higher values mean a closer relationship. The higher the value the better or closer the relationship. The higher the component load, the more significant it is in describing the factor's dimensionality. A negative value designates a converse effect on the factor. This examination suggests that each observed variable is affected by certain basic common factors. As shown in Table 1, the power of the connection between each factor and each variable differs in that a factor could influence some variables more than others.

From table 1, I noted that items from different dimensions (SERVQUAL dimensions) were reorganized under the individual factors respectively; this was with respect to their high positive loadings. I made no observation of any of the items with their high loadings falling in more than one factor. All the items were clustered under similar factors and were spread across all seven factors. I interpreted this as a good indication that, at least for the expectations survey, the SERVQUAL model was a good measure of service quality in online banking since I expected that the items should load under similar factors and thus show that they measure the same overall thing - internet banking service quality.

Attesting to this is the fact that, in the first factor, all the items represented (E11, E9, E21, E3, E16, and E8) were individually members from all five SERVQUAL dimensions to measure quality service. Thus, in factor one alone, each of the dimensions was represented, showing a high correlation under a single factor and hence solidifying the suspicion that they are cumulatively measuring the same service quality under study. The dimension of reliability alone was represented twice and appeared fully in the first three factors, and this indicated that, from an expectations point of view, consumers put more weight on the dimension of reliability. The majority of the expectations variables presented a good case for validity.

Eigenvalues show the variance explained by the corresponding factor out of the total variance. The first factor accounts for 29.1% of the total variances. By comparison, here is indication that the first factor is the most important. This fact, combined with the observation that all five dimensions are represented in factor one (Table 2), added more credence to the claim of validity. Items under the second factor accounted for 11.8% of total variances accordingly. The third and fourth accounted for nearly 8%. Items under the fifth and sixth factor accounted for approximately 6% each and the seventh factor accounts for 5% of the variance. Between these seven factors, they explain 73.395% of the total variability of the data.

4.2 Principal Component Analysis for Perceptions Survey

For the perceptions survey, I initiated the KMO (Kaiser-Meyer-Olkin) Test and Bartlett's Test to check the appropriateness of principal component analysis for the research (Appendix H). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the perceptions survey was 0.674 (approximately 0.7 and similar to the results for the expectations survey) which was higher than the acceptable level and the Bartlett's test of sphericity had a significant value less than 0.05. All indications pointed to the conclusion that principal component analysis was appropriate and thus was useful to the survey.

Similar to the expectations analysis, I observed seven components having Eigenvalues which were greater than 1 (Table 3) and thus I specified seven factors for the test. In the Rotated Component Matrix (Table 4), it is clear

that, for the purpose of analysis, I disregarded items loading below a certain threshold (0.5) on each factor. By following the trend of the loadings, I highlighted only positive loadings above 0.5. From Table 6, it's observed that high loaded items from different dimensions were spread across the individual factors respectively. By the given threshold point, I made no observations of any of the variables with their high loadings falling in more than one factor.

Table 2: Total Variance Explained for Expectations Survey

Total Variance Explained			
	Initial Eigenvalues		
Component	Total	Variance	Cumulative
1	6.395	29.069	29.069
2	2.6	11.816	40.885
3	1.724	7.837	48.722
4	1.663	7.558	56.28
5	1.394	6.338	62.618
6	1.258	5.72	68.338
7	1.113	5.057	73.395
8	0.998	4.535	77.93
9	0.835	3.797	81.728
10	0.685	3.114	84.842
11	0.655	2.976	87.818
12	0.484	2.202	90.02
13	0.42	1.91	91.93
14	0.353	1.607	93.537
15	0.303	1.379	94.916
16	0.234	1.064	95.98
17	0.223	1.013	96.993
18	0.18	0.817	97.81
19	0.156	0.711	98.521
20	0.13	0.589	99.11
21	0.111	0.506	99.615
22	0.085	0.385	100

Extraction Method: Principal Component Analysis.

Table 3: Rotated Component Matrix for Perceptions Survey

Rotated Component Matrix[a]							
Component							
	1	**2**	**3**	**4**	**5**	**6**	**7**
P5	.813	-.004	.125	.070	.182	.098	.193
P6	.737	.131	.216	.157	.082	.196	.099
P2	.557	.133	.303	.054	.171	.433	-.145
P21	.554	.189	.128	.184	.076	.050	-.200
P1	.546	.159	.411	-.017	.180	.058	-.340
P15	.041	.847	.191	.129	.162	-.036	-.034
P16	-.076	.739	.404	-.020	.022	.160	.190
P7	.365	.643	.060	.255	-.038	.207	-.083
P14	.496	.600	.022	-.004	-.105	-.346	.066
P8	.424	.563	.131	-.273	.125	.275	.340
P12	.240	.253	.859	.086	.073	-.035	-.063
P11	.154	.331	.697	-.029	.333	-.031	.026
P4	.423	-.099	.630	-.129	-.329	.246	.120
P13	.114	.152	.576	.234	.395	-.037	.148
P19	.064	.011	-.053	.848	-.089	-.041	.183
P18	.400	.127	.344	.608	.081	.342	-.042
P17	.196	.335	.308	.501	.147	.470	.078
P10	.095	-.070	.131	-.023	.853	-.104	-.070
P9	.376	.310	.153	-.079	.677	.198	.100
P3	.190	.039	-.080	.033	-.093	.836	-.060
P22	-.056	.049	.088	.136	.001	-.026	.907
P20	.402	.292	-.090	.357	.013	-.213	.491

Extraction Method: Principal Component Analysis.

Of service quality in online banking since it was expected that the items should fall under similar factors and

thus show that they measure the same general thing: internet banking service quality. Attesting to this is the fact that out of the seven factors, the first three factors had representations from all the five dimensions. This disclosed a high correlation under the three top factors and hence solidifying the suspicion that they are cumulatively measuring the same service quality under study.

The dimension of reliability maintained a strong presence in the first two factors since it was represented twice in each. This indicated that, from a perceptions point of view, consumers put more weight on the dimension of reliability.

This observation is in concord with that of the expectations survey which also indicated that consumers considered the dimension of reliability the most important dimension. Conversely, it was quite clear which of the dimensions consumers put the least weight on; the dimension of responsiveness only began to make an appearance in the third factor (P12, P11, and P13) and made its next and final appearance in the fifth factor (P10). This suggested that consumers considered the dimension of responsiveness of least importance in the online banking environment.

P20 didn't load strongly since it fell below the specified threshold point. Despite this, the evidence presented by the majority of the items pointed to a consistency of correlation of variables under similar factors. It suggests that the construct measures what is intends to measure: internet banking service quality. It is, however, noteworthy that other researchers assert that each factor must load items from the same dimension and thus point to a contrary output as a deficiency of construct (Daniel & Berinyuy, 2010) [13].

This study, however, strongly focused on the overall measurability of service quality. Parasuraman and his colleagues [27], for instance states that: "questions remain about whether the five dimensions are separate", yet "the five dimensions capture the overall sphere of service quality fairly well."

Table 4 indicates how much of the total data fit into the seven factors by explaining their variability. The first factor accounts for 32% of the total variances. Here is indication that the first factor is the most important. Variables under the second factor accounted for 9% (9.174%) of total variances accordingly; this means that items in the second factor explains 9% of total variance.

The third factor accounted for nearly 9% (8.798%) and just like the second factor, items in the third factor explain approximately 9% of the total variance. All five dimensions are represented in the first three factors (Table 4.9), accounting for 50% of the variance; this gave credence and confirmation to the claim of validity of the SERVQUAL instrumentation utilized by the study. Items under the fourth factor explained approximately 7% (6.567%) of the variability of the instrumentation and those under the fifth factor explained approximately 6% (6.034%) of variability respectively.

Items under the sixth factor accounted for 5% (5.461%) of the total variance and items under the seventh factor accounted for nearly 5% (4.962%) of the total variability. Between all seven factors, they explain 73.2% of the total variability of the data. Both the expectations and perceptions survey accounted for more than two-thirds of the total variance.

Table 4: Total Variance Explained for Perceptions Survey

Total Variance Explained			
	Eigenvalues		
	Total	Variance	Cumulative
1	7.091	32.231	32.231
2	2.018	9.174	41.405
3	1.936	8.798	50.203
4	1.445	6.567	56.77
5	1.325	6.024	62.794
6	1.201	5.461	68.255
7	1.092	4.962	73.217
8	0.9	4.09	77.306
9	0.71	3.229	80.535
10	0.671	3.052	83.587
11	0.621	2.825	86.412
12	0.496	2.254	88.666
13	0.45	2.047	90.712
14	0.416	1.891	92.603
15	0.387	1.76	94.364
16	0.364	1.656	96.02
17	0.288	1.307	97.327
18	0.191	0.869	98.196
19	0.149	0.679	98.875
20	0.106	0.48	99.354
21	0.076	0.346	99.7
22	0.066	0.3	100

4.3 Consumer Expectations versus Perceptions (Gap Score Analysis)

Table 5 shows the mean gap scores from the analysis. I derived theses by summing the cumulative mean scores for consumer expectations and perceptions for each of the 22 items of the five dimensions under study. Subtracting the respective mean expectation scores from the mean perception scores generated the mean gap scores for

each of the items. The study opted for the mean analysis for deriving the gap scores because it potentially eliminates random errors in the responses during the data collection and it usually gives a more accurate value in the representation of the entire data set [18].

Table 5: Gap Score Derivation using Means **SERVQUAL | Perceptions - Expectations = GAP**

Item Statements	Expectations |E|	Perceptions |P|	GAP Score
(In)Tangibles			
1	5.98	5.66	**-0.32**
2	6.14	5.58	**-0.56**
3	5.28	4.82	**-0.46**
4	5.66	5.22	**-0.44**
Reliability			
5	5.8	5.58	**-0.22**
6	5.76	5.26	**-0.5**
7	5.3	5.02	**-0.28**
8	5.36	5.3	**-0.06**
9	6.08	5.74	**-0.34**
Responsiveness			
10	6	5.58	**-0.42**
11	5.96	5.1	**-0.86**
12	5.7	5.02	**-0.68**
13	5.56	5.36	**-0.2**
Assurance			
14	5.76	5.04	**-0.72**
15	5.66	5.32	**-0.34**
16	5.68	5.4	**-0.28**
17	5.58	4.98	**-0.6**
Empathy			
18	5.14	4.78	**-0.36**
19	4.64	4.38	**-0.26**
20	4.64	3.96	**-0.68**
21	5.54	5.32	**-0.22**
22	5.02	4.2	**-0.82**

Consumers evaluate service quality by contrasting their expectations of service with their perceptions of service received. A service is deemed quality when these expectations are met (or exceeded). There is low service quality when firms do not meet expectations and a negative gap emerges. It is only by explicitly evaluating expectations as well as perceptions that one can, with a certain degree of success, determine whether there are any service quality gaps in terms of the services provided [21].

With the data from the field survey, I could arithmetically calculate gap score for any of the item services of focus (Table 5). A positive gap score implies that consumer expectations are being exceeded and a negative gap score implies that consumer expectations are not being met. A null scores means that services have met consumer expectations precisely. The greater the magnitude of the gap score the greater the gulf between what the consumers expected from the service and what they actually received. With a 7-point scaling system, the gap score could vary from -6 to +6 with zero implying expectations were precisely met.

Such gap scores are very likely to be negative for most services [20]. Table 5 clearly shows that consumer expectations exceeded the perceived levels of service quality. This resulted in wholly negative gap scores as expected. According to Parasuraman and his colleagues [25] it is not unusual for consumer expectations to exceed the actual service perceived and this implies that there is always the room for progress and advancements.

From Table 4.8, some notable observations on the individual items were as follows: The items with the highest expectation scores were E2 (easy user interface of online facility) at 6.14, E9 (provision of accurate records) at 6.08 and E10 (platform for feedback) at 6.00.

The lowest expectations scores were E19 (provision of incentives) and E20 (reversal of transaction mistakes) each at 4.64. Perception scores were lower than expectations. P20 (reversal of transaction mistakes) was lowest perception score at 3.96. The highest gap score was item 11 (customer service availability) at - 0.86 and the lowest, item 8 (prompt performance) at -0.06.

4.4 Average Gap Score Analysis

Apart from enabling researchers to find out how consumers feels about service quality on specific items in online banking (by gauging the discrepancies between their expectations and perceptions across all 22 items to gauge their satisfaction on each individual items), gap score analysis also enables researchers to take a broader view by looking at the scores for each of the five SERVQUAL dimensions to gauge satisfaction on them. The study achieved this by obtaining an "Average Gap Score" for each dimension of service quality. I divided the sum of the gap scores for each of the statements that make up the dimension by the number of statements constituting the dimension (See APPENDIX G for Derivation).

The mean is the primary focus of the statistics. From the above table, the dimension with the highest gap score was "Responsiveness" with a score of -0.5400. The lowest gap score at - 0.2800 was scored by the "Reliability" dimension. In descending order of magnitude, the gap score ranking is: Responsiveness, Assurance, Empathy, Intangibles, and then Reliability.

Table 6: Descriptive Statistics for Dimensions

Statistics					
Mean	-.4450	-.2800	-.5400	-.4850	-.4680
Std. Error of Mean	.04924	.07211	.14491	.10468	.11943
Median	-.4500	-.2800	-.5500	-.4700	-.3600
Mode	-.56[a]	-.50[a]	-.86[a]	-.72[a]	-.82[a]
Std. Deviation	.09849	.16125	.28983	.20936	.26706
Skewness	.299	.000	.151	-.206	-.604
Std. Error of Skewness	1.014	.913	1.014	1.014	.913
Kurtosis	1.347	.711	-1.954	-4.075	-2.308
Std. Error of Kurtosis	2.619	2.000	2.619	2.619	2.000

a. Multiple modes exist. The smallest value is shown

Note: The mean result represent the Average Gap Scores

4.5 Overall Service Quality (SERVQUAL Score Analysis)

Following the average gap score analysis, apart from enabling researchers to take a broader view by looking at the scores for each of the five dimensions of (Intangibles, Reliability, Responsiveness, Assurance and Empathy) and gauging satisfaction on them, the gap score analysis further enables researchers to take the broadest view by looking at the scores for the overall service quality. I achieved this by summing the averages (or means) in Table 6 and dividing the sum by the number of dimensions to obtain an average SERVQUAL score. This score is the overall measure of service quality for the area being measured (See Appendix G for Derivation).

Table 7: Descriptive Statistics for Overall Service Quality

Statistics						
Overall Service Quality						
Mean	Std. Error of Mean	Median	Mode	Std. Deviation	Skewness	Std. Error of Skewness
-0.4436	0.0438	-0.468	-.540[a]	0.09794	1.507	0.913

a. Multiple modes exist. The smallest value is shown

Note: The mean result represent the SERVQUAL Score.

The mean result is the overall score for service quality. This is a statement on the overall service quality of the area of internet banking being measured. As expected, from the above table, the overall service quality score is in the negative at -0.44360. It shows that consumers' expectations were higher than their experience of the internet banking services they used and thus they were unsatisfied. The score with the highest frequency or occurrence was -0.540. This was higher than the median score and it indicates that the most occurring scores where at higher dissatisfaction levels.

5. Conclusion

In conclusion the findings from the study indicated that the general consensus of consumers was geared towards dissatisfaction. Consumers however were least dissatisfied with how online banking dealt with the promptness of services promised to be delivered. On the other hand, consumers were most dissatisfied with the unavailability of online customer service. One major implication of this study is that it is realistic and not unusual for consumers to express dissatisfaction. This means that better service quality is therefore indicated by less dissatisfaction. Despite the general negativity of the gap scores and subsequently the overall SERVQUAL score - which is realistic and not unusual for most services [20]; [24] – it is useful to note how wide the gulf is between what the consumers expected from the service and what they actually received. Rather than being unrealistic and pessimistic about the negative result, the gap analysis could present good reasons for optimism.

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