A Statistical Evaluation of Factors That Attract Customers to Banks in Lagos, Nigeria

By Adamu M.O. & Adeola B.S.

University of Lagos

Abstract - Economists consider the banking system the heart of a country's economy because it pumps the money through the economy thus driving production, exchange and its growth. Competition in banking industry has become acute since the late 1980s liberalisation of the sector; it was intensified after 2005 consolidation, the keenest aspect of the competition is the competition for deposits. Nigerian banks have deployed an array of tools to position themselves for this battle for deposits, ranging from glitzy branding and marketing campaigns to the deployment of smart marketing staff. These banks also attract customers with the deployment of e-banking solutions and the construction of an ever-increasing number of branches. This work set out to find out the factors that affect the decision by individuals to open bank accounts in a particular bank, with a view to using statistical tools to evaluate the relative importance of each factor that attracts customers to a particular bank, determine the strongest factor, and also depict some types of products/services banks should include in their array.

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A Statistical Evaluation of Factors That Attract Customers to Banks in Lagos, Nigeria

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Abstract - Economists consider the banking system the heart of a country's economy because it pumps the money through the economy thus driving production, exchange and its growth. Competition in banking industry has become acute since the late 1980s liberalisation of the sector; it was intensified after 2005 consolidation, the keenest aspect of the competition is the competition for deposits. Nigerian banks have deployed an array of tools to position themselves for this battle for deposits, ranging from glitzy branding and marketing campaigns to the deployment of smart marketing staff. These banks also attract customers with the deployment of e-banking solutions and the construction of an ever-increasing number of branches. This work set out to find out the factors that affect the decision by individuals to open bank accounts in a particular bank, with a view to using statistical tools to evaluate the relative importance of each factor that attracts customers to a particular bank, determine the strongest factor, and also depict some types of products/services banks should include in their array. The main analysis was done with the use (aid) of SPSS's version of full profile conjoint analysis, where the utilities of the profile cards were analysed. However it was deduced that security of funds was the most considered factor, followed by customer relations, but the least considered was interest rates. A small descriptive analysis was done, and the result confirms what we deduced from conjoint analysis. Banks are advised to include savings plus into their array, employ smart staff and train them to be efficient and friendly, provide Automated Teller Machine ATM in strategic locations, and ensure branding right product for the right set of people or organisations.

I. Introduction

The First Bank Of Nigeria plc was established in 1894,known as Standard bank , then Union Bank of Nigeria Plc also known as Barclays bank, WEMA bank also started as Agbomagbe, so many banks came afterwards. Banking was done manually before the use of computer.

Up till 1980`s, banks were practising what you can call ARMCHAIR BANKING, because then bankers do not do marketing, they do not bother about treating customers right or acting fast, rather they use tally numbers etc, and the time spent by customers in the bank was much, but by 1990 banks started using computer fully which further strengthened the banks by reducing the average waiting time of customer, thereby drawing more customer to the banks. Increase in branch network became imperative for banks, and also easier for customers to have access to their funds on time. Introduction of great banking software that enabled the banks official serve their customers better. Almost all banks are now fashioning out good products that are Customer Friendly.

The study sought the investigation of major factors that attracts customers to a particular bank, which of the factors is the most considered, and also what banks should include or remove in their array of products/services.

Clarkson et al. (1990) study suggests that the characteristics and financial service requirements of consumers vary with age, and that these differences could be used in developing marketing strategies for such services. A paper of Boyd et al. (1994) reveals that reputation, interest charged on loans, and interest on savings accounts are viewed as having more importance than other criteria such as friendliness of employees, modern facilities, and drive-in-service. Stafford (1996) stated that demographics continue to be one of the most popular and well-accepted bases for segmenting markets and customers. Even if others types of segmentation variables are used a marketer must know and understand demographics to assess the size, reach and efficiency of the market. The general conclusion of this study is that there is a significant relationship between demographics characteristics and the service quality perception.

Banking services are characteristically different from physical products and as such the focus of differentiating customers based on these should be multi-faceted, various studies Zeithamal and Bitner ,(1996); Lovelock (1996);Legg and Baker, (1996) found banking services being closely related to intangible like Trust, Commitment, Transparency, Inseprability, Heterogeniety. Effective positioning reflects how customers perceive the products, factors that make the customer satisfied and whether customers behave differently with different factors while choosing a bank.

Customer Satisfaction has a close relationship to customer retention, in this regards, studies on customer segmentation and bank selection criteria along with customer satisfaction were done Snow et al (1996) and Furrer et al (2000). Their studies conclude that there were clear differences in the services expectation for retail banking.

Moreover, market segmentation and customer satisfaction have been largely affected by banks

Author α: Department of Mathematics, University of Lagos, Akoka, Lagos. E-mail: madamu@unilag.edu.ng

massive involvement in technological banking activities. Keeton (2001) found that some customers willingly pay high service charge since they are receiving e-banking services at the next footstep, however some people still believe in personalised attention instead of technological investment which may be bring along increase in cost.

Authors such as Luce and Tukey (1964) and Krantz, et al (1991) explored the behavioural axioms that would enable a decomposition of an overall judgment using Conjoint Analysis. In a seminal paper (Green and Rao (1971)), they drew upon this conjoint measurement theory, adapted it to the solution of marketing and product-development problems, considered carefully the practical measurement issues, and opened a flood-gate of research opportunities and applications.

Conjoint Analysis is a tool that allows a subset of the possible combination of product features to be used to determine the relative importance of each feature in purchasing decision, it is based on the fact that the relative values of attributes considered jointly can be better measured than when considered in isolation. It is a technique for measuring consumer preference for products or services, taking attributes of the products/services into consideration. The remaining parts of the paper are as follows: Section 2 presents the methodology. Section 3 involves the analysis of data and results. Simulation results are presented in section 4 and finally, section 5 concludes the study.

II.   Methodology

In this work, six factors that determine the choice of a bank were considered at different levels. These are location, customer relations, innovations, interest rate, security and product type. The levels for each of the factors are as given below:

FACTORS	LEVELS
LOCATION	PROXIMITY NATIONWIDE SPREAD LOCALISED COVERAGE
CUSTOMER RELATIONS	PROMPT SERVICE FRIENDLINESS+EFFICIENT STAFF COMPLAINT HANDLING
INNOVATION	ATM INTERNET BANKING FESTIVE/BIRTHDAY WISHES
PRICING	FIXED DEPOSIT LOAN/CREDIT FACILITY OTHERS
PRODUCT TYPE	SAVINGS PLUS TARGET SAVINGS SALARY ADVANCE
SECURITY	OTHERS VERY SECURED FAIRLY SECURED

Table 1: Factors and Levels

The questionnaire was constructed with the help of some friends and colleagues who are well versed in banking, the factors and levels were derived by the use of an interview sessions with some top bankers, some bank customers and some that does not have any account at all. A set of profile cards were distributed alongside the questionnaire to allow customers choose the their preference of some combination of factors at different levels combined at random, this was generated with the use of computer (SPSS) and all the 25 profile cards were orthogonal., as against the whole (3*3*3*3*4*2=648) possible profile cards. The respondents were charged with the responsibility of ranking all the 25 profile cards with the least number 1, going to the most preferred profile, up to 25 which goes to the least preferred profile card.

The questionnaires were administered randomly at both the mainland and Lagos Island branches of all banks. Only 200 questionnaires were completely and correctly filled, along side with the ranking of profile cards. The method of analysis was Full profile Conjoint Analysis, with the aid of Statistical Package for Social Sciences (SPSS17).

III.   Analysis Of Data And Result

From the utilities part-worth's given below, it is evident that out of the location levels the most preferred was the proximity because it has a higher utility value (1.167), next to it is nationwide spread of the   bank branches (0.068) , and the least considered was localised coverage of the branches (-1.235). A higher utility value connotes a higher preference.

Utilities

		Utility Estimate	Std. Error
LOCATION	PROXIMITY	1.167	.290
	NATIONWIDE SPREAD	.068	.290
	LOCLALIISED COVERAGE	-1.235	.346
CUSTOMER.RELATIONS	PROMPT SERVICE	-.217	.290
	FRIENDLINESS+EFFICIENT STAFF	2.284	.290
	COMPLAINT HANDLING	-2.067	.346
INNOVATION	ATM	1.150	.290
	INTERNET BANKING	.080	.290
	FESTIVE/BIRTHDAY WISHES	-1.230	.346
PRICING	FIXED DEPOSIT	.564	.290
	LOAN/CREDIT FACILITY	-.135	.290
	OTHERS	-.430	.346
PRODUCT.TYPE	SAVINGS PLUS	.865	.318
	TARGET SAVINGS	-.209	.394
	SALARY ADVANCE	-.244	.394
	OTHERS	-.412	.394
SECURITY	VERY SECURED	-10.309	.424
	FAIRLY SECURED	-20.619	.848
(Constant)		26.268	.647

Table 2 : (Utility part worth of all levels of factors)

For the Customer relations levels, the most considered level was for the staff of the bank to be very efficient as well as being friendly with utility part worth 2.284, followed by customers being attended to promptly even if the staff frowns with utility part worth -0.271 , the least considered level was for any complain from customers to be handled rightly and on time, with utility part worth -2.067. For Innovation desirability level, Availability of the Automated Teller Machine (ATM), was the most preferred, with utility part worth 1.150 followed by the access to internet banking services, with utility part worth 0.080, the least preferred was birthday and festive wishes to customers on phone, with utility part worth -1.230. For the pricing/interest rates, customers chose the high interest rate on fixed deposit with utility part worth 0.564, to be more useful than that of loan /credit facility -0.135 with a lower rate, the least considered was the bank charge on all other service(s) rendered, with utility part worth -0.435. Again, for desirability within the product type levels, the most preferred was the savings plus with utility 0.865, followed by target savings, with utility part worth -0.209 next was salary advance, -0.244 and the least considered was other types with utility part worth -0.412. Lastly, for Security, obviously, most bank customers

went for a more secured bank, with utility -10.319, rather than a fairly secured with utility -20.619, though all the banks have an average level of security because of the existence of Nigerian Deposit and Insurance Corporation, which is a body that ensures that a certain amount of money is paid back to depositors in case of distress.

LOCATION	12.959
CUSTOMER.RELATIONS	19.087
INNOVATION	11.911
PRICING	7.540
PRODUCT.TYPE	13.065
SECURITY	35.439

Table 3 : Relative Importance Values

profile	location	customer re	innovations	interest rates	security	product type	constant	total utility
1	1.167	-0.217	0.08	0.564	-10.309	-0.412	26.268	17.141
2	-1.235	-2.067	0.08	0.564	-20.619	-0.244	26.268	2.747
3	0.068	-2.067	-1.235	0.564	-10.319	0.865	26.268	14.144
4	-1.235	-0.217	1.15	0.564	-10.319	-0.412	26.268	15.799
5	1.167	-0.217	1.15	0.564	-10.309	0.865	26.268	19.488
6	1.167	-2.067	0.08	-0.43	-10.309	0.865	26.268	15.574
7	0.068	2.284	1.15	0.564	-20.619	0.865	26.268	10.58
8	0.068	-2.067	1.15	-0.135	-20.619	0.412	26.268	5.077
9	1.167	2.284	1.15	0.564	-20.619	0.865	26.268	11.679
10	0.068	-0.217	0.08	-0.135	-10.309	0.865	26.268	16.62
11	-1.235	-0.217	-1.23	-0.135	-10.309	0.865	26.268	14.007
12	1.167	2.284	0.08	-0.135	-10.309	0.865	26.268	20.22
13	0.068	2.284	0.08	-0.43	-10.309	0.412	26.268	18.373
14	1.167	-0.217	0.08	0.564	-20.619	-0.209	26.268	7.034
15	-1.235	2.284	0.08	-0.135	-20.619	0.865	26.268	7.508
16	0.068	2.284	0.08	0.564	-10.309	-0.244	26.268	18.711
17	0.068	-0.217	1.15	-0.43	-20.619	0.865	26.268	7.085
18	-1.235	2.284	1.15	-0.43	-10.309	-0.209	26.268	17.519
19	0.068	-0.217	0.08	-0.135	-20.619	-0.209	26.268	5.236
20	1.167	-2.067	1.15	-0.135	-10.309	-0.209	26.268	15.865
21	1.167	2.284	-1.23	-0.135	-20.619	0.412	26.268	8.147
22	0.068	-0.217	1.15	-0.135	-10.309	-0.244	26.268	16.581
23	1.167	2.284	1.15	-0.135	-10.309	-0.244	26.268	20.181
24	1.167	-0.217	-1.23	-0.43	-20.619	-0.244	26.268	4.695
25	0.068	2.284	-1.23	0.564	-10.309	-0.209	26.268	17.436

Table 4 : Averaged Importance Score for the 25 profiles

To get the total utility for each profile card, the individual utilities are added up, so as to evaluate the utility of the best profile card. For example,

Utility of profile1=1.167+ (-0.217) + 0.08 + 0.0564 + (-10.309) + (-0.412) + 26.268 = 17.141.

Utility of profile 2 = -1.235 + (-2.067) + 0.08 + 0.564 + (-20.619) + (-0.244) + 26.268 = 2.747

A visual inspection of Table 4 indicates that profile 12 was the best combination of a bank attribute out of all the 25 set of hypothetical product (profile cards), the second card was the profile 23, and next to it is profile 5. The least was profile 2.
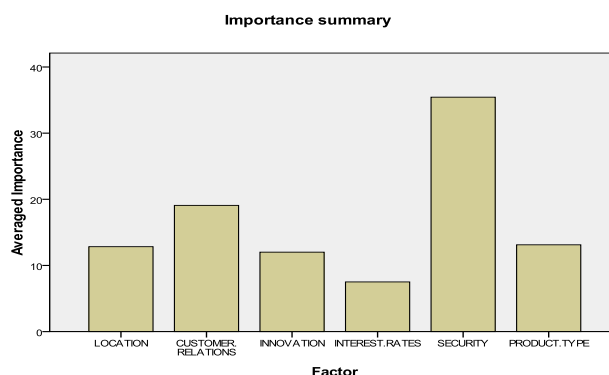

Figure 1: The Importance Summary

The relative importance of each factor was derived with the use of SPSS Conjoint analysis. It was observed that Security of funds was the most important factor, followed by customer relations, then product type, closely followed by location of the bank branch(es), the fifth factor preferred was innovation of the bank and the least preferred factor was the interest rates.

IV. SIMULATION RESULTS

The real significance of conjoint analysis is its ability to predict preference for profiles (hypothetical products) for profile cards that were not included in the main ranking, that is, it was not part of the first 25 profile cards. The numbering of the simulation products was differentiated by the use of numbers that were not serial to the main 25 profile cards.

Card Number	ID	Score
1	50	21.309
2	51	19.875

Table 5: Profile Scores

The above table shows that profile 50 has a higher score and therefore a better product than profile 51. Table 6 displays the predicted probabilities of

choosing each of the simulated products in three different ways. Maximum utility, Bradley –Terry - Luce, and Logit models.

Card Number	ID	Maximum Utility[a]	Bradley-Terry-Luce	Logit
1	50	55.3%	52.3%	56.8%
2	51	44.8%	47.7%	43.2%

Table 6 : Preference Probabilities of Simulations[b]

The maximum utility model was used to determine the probability of the number of respondents who are predicted to choose the profile divided by the total number of respondents. Bradley-Terry-Luce model is calculated as the ratio of a profile's utility to that of all simulated profiles, and then averaged across all respondents. The Logit model is very close to Bradley-Terry-Luce model, but it uses the natural logarithm of the utilities in place of the utility values.

V. CONCLUSION

The competition for deposits in Nigerian banks is very keen. All Nigerian banks have deployed an array of tools to position themselves for this battle for deposits, but before deposits can come, customers have to open account or at least maintain the account. Banks are expected to study customer's preference on factors that can attract them to their bank, in order to

satisfy the existing customers and also woo potential customers.

Conjoint analysis gave us an insight into customers' preference on factors that attract them to banks. Security of funds was the most important factor, followed by customer relations; both product type and location were also given a high consideration by customers. On the relative importance of all factors, security was placed to be the most important, interest rates was rated as the least, but this does not mean that interest rates does not have an impact, it does have but it was just the trade-off or the alternative forgone, banks are therefore advised to get the right product for the right price.

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