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Investigation into Customer Relation of Two Global Systems for Mobile Communication (GSM) Service Provider in Nigeria

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Abstract. The assessment of customer care response of TEL1 and TEL2 global systems for mobile communication (GSM) service providers in Nigeria was done. Data were obtained from the customer care Departments of these two mobile service providers in their head office in Lagos for six months period. The data assessment result shows that the four service types: prepaid/postpaid, premium/HNI, BB/3G-HIS, and call roaming had 445510, 328396, 45221, and 4127 number of calls respectively for TEL 1 and 416935, 357810, 41968, and 2106 respectively for TEL 2, with prepaid/postpaid having the highest values and call roaming service type had the least for both TEL 1 and TEL2. The number of calls answered followed the same trend for both TEL1 and TEL2. It was observed that about 96% of the calls offered by prepaid/postpaid customers, 95% of Premium/HNI, were answered for both TEL 1 and TEL 2. About 93% of calls offered by BB/3G-HIS, and 95% of call roaming customers were answered for TEL1, while it is 92% and 93% respectively for TEL2. It can be deduced that PREPAID/POSTPAID customers enjoy highest customer service care in both telecommunication networks. Higher values of AHT(S) of TEL 1 over TEL 2 imply that TEL 1 spends the more time with its subscribers when attending to a complaint.

Keywords: GSM, customer care, service providers, subscribers, Nigeria

1. Introduction

Communication is the major tool that makes the world a global village. Telecommunication is arguably the most used amongst all existing means of communication. Telecommunication industries are moving at swift speeds in innovation and weekly come up with better inventions to satisfy customers. One renowned breakthrough in the industry is the wireless telephone system that is controlled on fixed wireless lines. The wireless telephone breakthrough became the global system for mobile communication, now a marquee for an international wireless communications network for cellular phones [1].

Telecommunication development trend has really been a tortuous long journey. The development history of telecommunication in Nigeria can be dated back to 1886, during the British colonial administration. They were the first to institute telecommunication facilities in the country. By 1960, when Nigeria gained independence, the number of telephone lines was recorded to be about 18,724, serving population of about 40 million Nigerians. This tele-density transformation was analyzed to be at the ration of 1000 people to 0.5 telephone lines. The total telephone network exchanges at that time was 121 in number, with 116 manual types (analogue) and 5 automatic. A target to install 460,000 switching capacity telephone lines was set to be achieved at the end of 1985, but only 200,000 analogue exchanges was successfully installed at the close of the year 1985. This gave a ration of 1 phone line to 440 inhabitants. This ratio is below the Internal Tele Communion (ITU) recommendation of 1 Phone line to 100 inhabitants for developing countries. Issues of telephone lines congestions, poor service quality, unreliability, customer unfriendliness and high call charge rates became a burden to the telecommunication. Then Nigerian Telecommunication (NITEL) was instituted to plan, harmonize and coordinate both internal-external telecommunications services. NITEL responsibilities included rationalization of investments, provision of affordable, accessible and



efficient telecommunication services. The monopoly of NITEL as the only national telecom provider had its issues, such as, bad management, epileptic and unsatisfactory services. Chief Olusegun Obasanjo's administration swung into action to tackle the telecommunication issues immediately he assumed the office as Nigerian president on May 29, 1999. He brought complete deregulation and dissolved the NITEL monopoly of the telecom sector by granting Global System for Mobile Communications (GSM) network providers' operational licenses and setting in motion the privatization of NITEL [2]. These Network providers amongst others includes: MTN Nigeria, Airtel, Globacom and 9Mobile that operates on the 900/1800 MHz. Consequently, cell phones gradually replaced NITEL analogue telephone lines became the most used. By October 2011, the estimate of mobile cellular phones numbered about 88,005,862 million; some person had two or more cell phones in the stated number. The analogue telephones (land lines) in use at that time were about 511695 million as well [3 - 8]. In Nigeria, services offered by AIRTEL (former ECONET), MTN and GLOBACOM are contract line, prepaid phone card, fax, voice mail, data communication, short messages services service, conference calling, call divert, caller line identification, call barring, call waiting, switching of cells, itemized bills and directory inquiry [7]. In line with the terms of their licenses, they are to provide telecommunication to all Nigerians, to serve as pioneer, develop efficient and sustain reliable and make available high quality telecommunication of uncompromising world class standard and ethics [8]. They are to offer total quality products and services to subscribers. Also to provide high quality, world-class communication network that will make available high quality content voice, multi-media and data to consumers, sub-service providers or enterprises. Apart from the addition to economic development by GSM services, the development brought an upgrade of local infrastructure and facilities, improvement of the quality of life through communication and facilitating changes that have long term domestic benefits is needed. It is therefore necessary to study the effectiveness of customer care and quality of service provided by two (TEL1-GLO Mobile and TEL2-Airtel) major cellular network companies in Nigeria.

2. Methodology

Data were obtained from the customer care department of two mobile service providers GLOBACOM telecommunications represented by TEL 1 and AIRTEL represented by TEL 2 in their head office in Lagos for the period of six months. The following data were collected from the customer care systems: Percentage abandoned in ringing, Idle duration, hold time, average handling time (AHT), average talk time (AVG talk), average ring time (AVG ring) for prepaid/postpaid, blackberry (BB)/3rd generation-high internet speed (3G-His), premium /HNI service type and call roaming were obtained. Listed are some of the complaints lodged by customers: Unable to make and receive calls; Prepaid accounts not getting bonus Megabytes, Unable to check balance after SIM replacements; Unable to recharge account i.e. Card loaded not reflected, No access to internet; Slow browsing; No 3G network coverage; Recharge card over scratched; Unable to send and receive SMS; Can't make free night calls; Unable to do call roaming etc.

3. Results and Discussion

Data obtained from TEL1 and TEL2 for a period of six months from their call centers service providers are shown in Table 1 and 2. Listed are reasons why customers wait long on queue to reach Call Centre: Hoax call: those who call for irrelevant or no issue i.e. irresponsible time wasters; high volume of calls owing to network failure/customer complaints; Much AHT that is, Spending much time resolving customers issue while others are waiting; No network coverage from area of call; Many dropped calls i.e. it could be from customer's device or network itself; When call centre agents excessively go on withdrawals or busy duration, When there are irate customers who stay longer on calls preventing other calls.

Figure 1 shows the comparison of percentage abandoned in ringing for TEL1 and TEL 2. It was observed that BB/3G-HIS had the highest percentage abandoned in ringing of 6.9% and the Prepaid/Postpaid service type had the lowest % abandoned in ringing of 4.14% for TEL 1. When this abandoned in ringing percent was compared with TEL 2, BB/3G-HIS also recorded the highest percentage of 7.64% and Prepaid/Postpaid users had the least of 4.26%. The highest percentage of abandoned in ringing calls was found to be higher in TEL 2. The percentage abandoned in ringing for TEL1 and TEL2 as seen in figure 1, actually depicts that BB/3G-HIS customers are not easily attended to while much attention is given to Prepaid/Postpaid customers. This is in consonance with what the authors previously observed in MTN network [9]. Also TEL2 results have higher values except for service type 2 (Premium/HNI). In Figure 2, it was observed that Call Roaming had the highest idle duration(s) of 72542 s and 79012 s for both TEL1 and TEL2 respectively, while the service type 1 (Prepaid/Postpaid) had the lowest idle duration (s) of 30128 s and 29621 s for TEL1 and TEL2 respectively. TEL2 had the higher idle duration than TEL1.

In Figure 3, service type 1(Prepaid/Postpaid) recorded highest AVG ring (s) value of 694 for TEL1 and 770 is for TEL2, while Call Roaming is observed to have the lowest AVG ring (s) of 423 and 391 for TEL 1 and TEL2 respectively. Figure 4, displays the variation of AVG talk (s) of TEL1 customers in Lagos state for the selected months, it was observed that service type 3(BB/3G-HIS) has the highest AVG talk (s) value of 50,659s for TEL1 and 42868s for TEL2, while the service type 4(Call Roaming) had the lowest AVG talk (s) value of 15,117 s for TEL1 and 12100 s for TEL2. Figure 5 shows the variation of hold time (s), Prepaid/Postpaid customer, represented as service type 1 recorded highest hold time (s) value of 2911 s for TEL1 and 2741 for TEL2, while BB/3G-HIS denoted as service type 3 is observed to have the lowest hold time (s), value of 1893 s for TEL1. In TEL2, the least was recorded with value of 1749 s for service type 4(Call Roaming).

Figure 6 showed the AHT (s) for TEL1 and TEL2, it was observed that service type 3 (BB/3G-HIS) had the highest AHT (s) of 52,522 s and 44,985 s for TEL1 and TEL2 respectively, while service type 4 (Call Roaming) had the lowest AHT (s) of 17,260 s for TEL 1 and 13849 s for TEL 2. Figure 6 showed the AHT (s) for TEL1 is higher than TEL 2. The data revealed that Postpaid/Prepaid of TEL 1 customers have more attention than those of TEL 2 despite the fact that TEL1 has more clientele. The PREMIUM/HNI service type users had more attention from TEL2 customer care than TEL1, while Call Roaming service type had the lowest percentage number of calls received by both TEL1 and TEL2 customer care. It was observed that 95.86% of the calls offered by prepaid/postpaid customers, 94.52% of Premium/HNI, 93.10% BB 3G-HIS, 94.79% of call roaming were answered

Table 1: TEL1 specialized help desk report

Service Type	Number of Calls Offered	Number of Calls Answered	% Abandoned in Ringing	Idle Duration (s)	AVG RING (s)	AVG TALK (s)	Hold Time (s)	AHT(s)
PREPAID/ POSTPAID (1)	445510	427047	4.14%	30128	694	35685	2911	38596
PREMIUM/HNI (2)	328396	310412	5.47%	49216	647	39140	2120	41260
BB/3G-HIS (3)	45221	42100	6.90%	63210	680	50659	1893	52522
CALL ROAMING (4)	4127	3912	5.20%	72542	423	15117	2143	17260

Table 2: TEL2 specialized help desk report

Service Type	Number of Calls Offered	Number of Calls Answered	% Abandoned In Ringing	Idle Duration (s)	AVG RING (s)	AVG TALK (s)	Hold Time (s)	AHT (s)
PREPAID/ POSTPAID (1)	416935	399385	4.20%	29621	770	25614	2741	28355
PREMIUM /HNI (2)	357810	339942	4.99%	51032	687	32531	1864	34395
BB/3G- HIS(3)	41968	38758	7.64%	67429	696	42868	2117	44985
CALL ROAMING (4)	2106	1958	7.02%	79012	391	12100	1749	13849

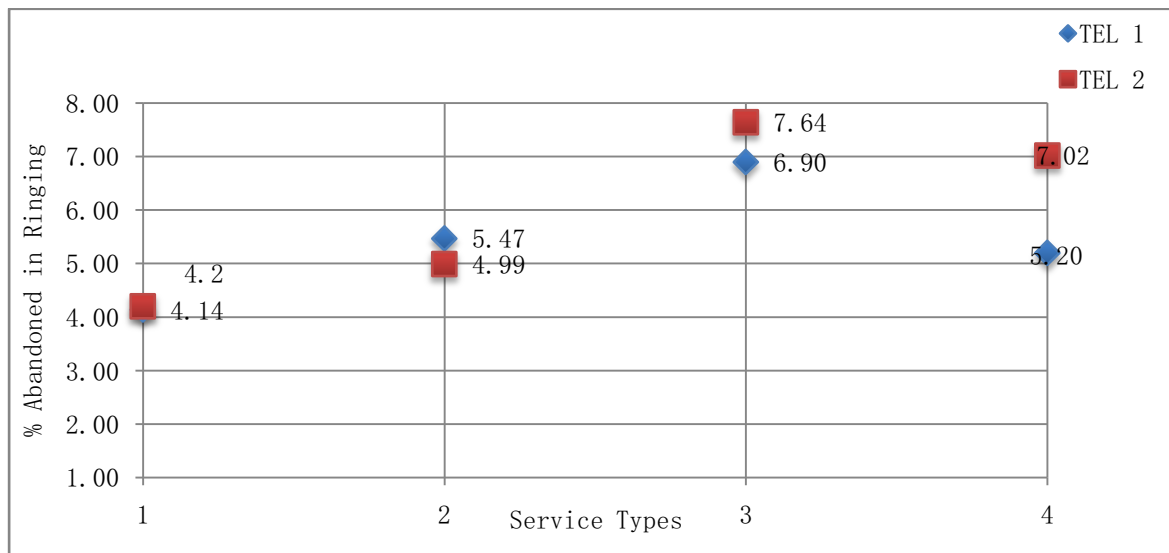


Figure 1: Variation in percentage abandoned in ringing for TEL1 and TEL2
 Service Types: 1(Prepaid/Postaid), 2(PREMIUM/HNI), 3(BB/3G-HIS), 4(Call Roaming)

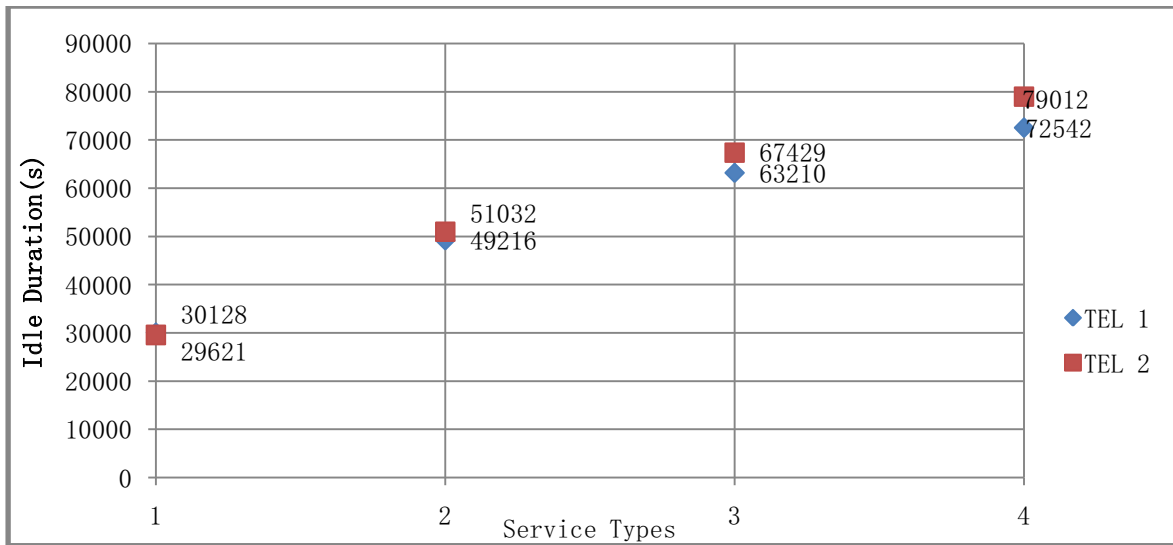


Figure 2: Variation of idle duration(s) for TEL1 and TEL2
 Service Types: 1(Prepaid/Postaid), 2(PREMNIUM/HNI), 3(BB/3G-HIS), 4(Call Roaming)

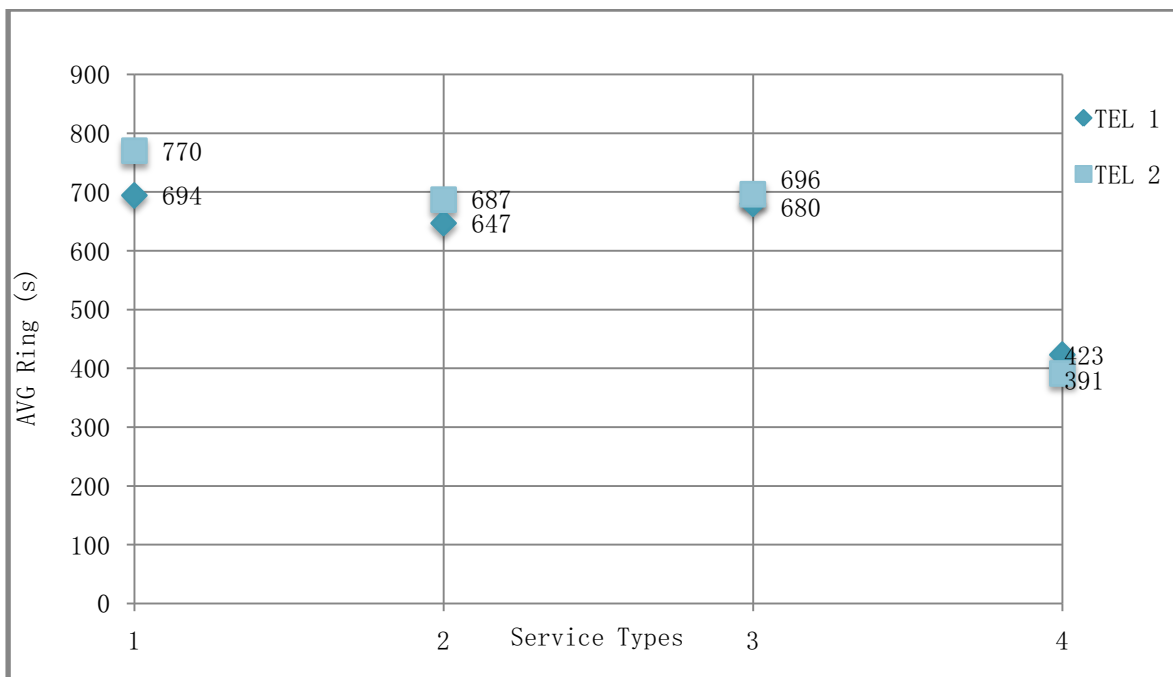


Figure 3: Variation of AVG ring(s) in TEL1 and TEL2
 Service Types: 1(Prepaid/Postaid), 2(PREMNIUM/HNI), 3(BB/3G-HIS), 4(Call Roaming)

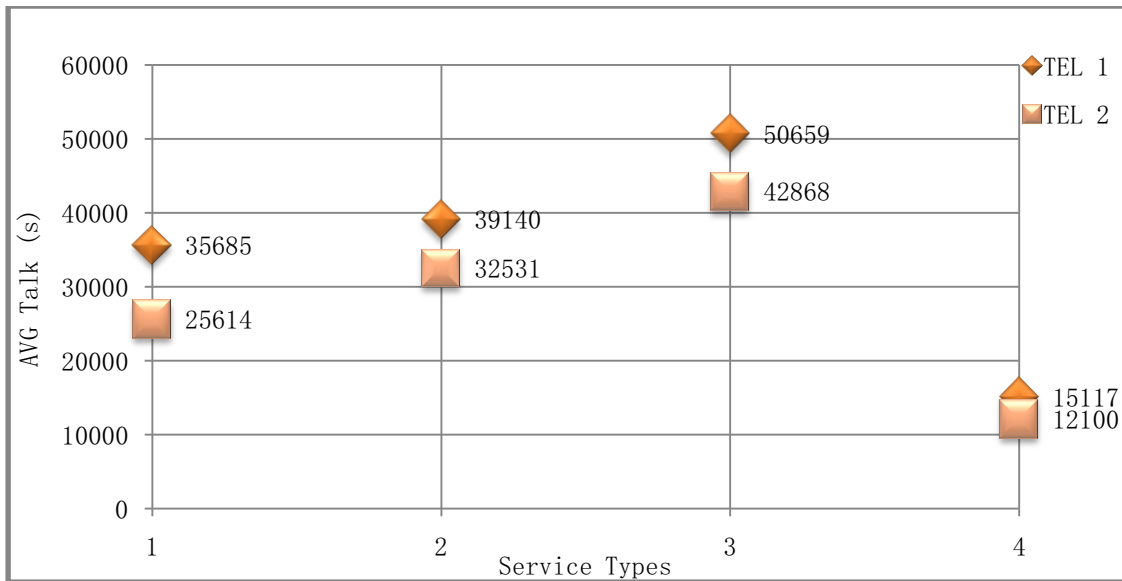


Figure 4: Variation of AVG talk(s) in TEL1 and TEL2
 Service Types: 1(Prepaid/Postaid), 2(PREMNIUM/HNI), 3(BB/3G-HIS), 4(Call Roaming)

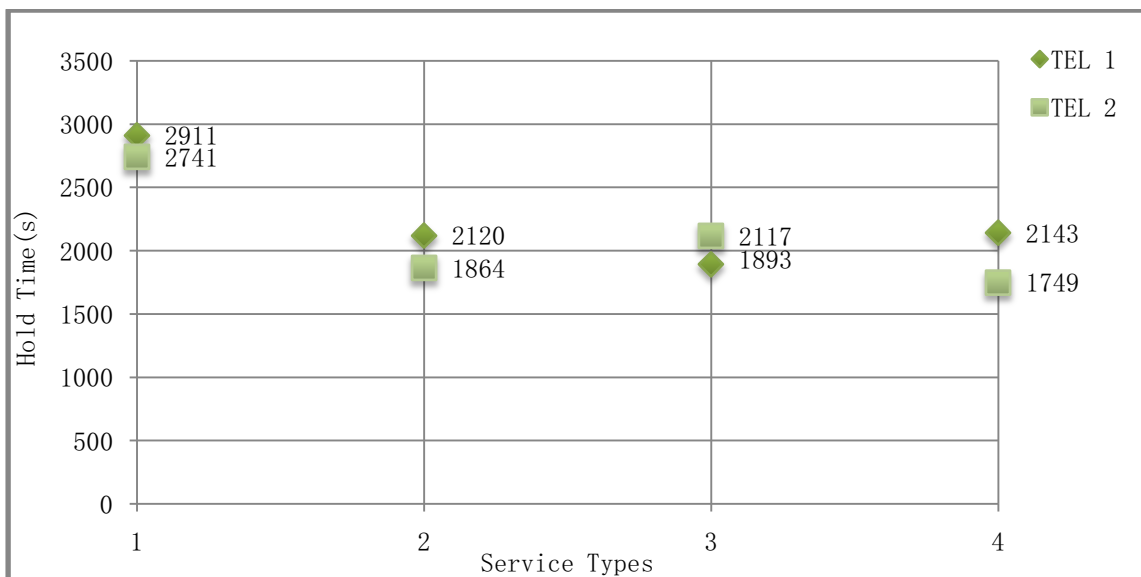


Figure 5 Variations of hold time(s) TEL1 and TEL2
 Service Types: 1(Prepaid/Postaid), 2(PREMNIUM/HNI), 3(BB/3G-HIS), 4(Call Roaming)

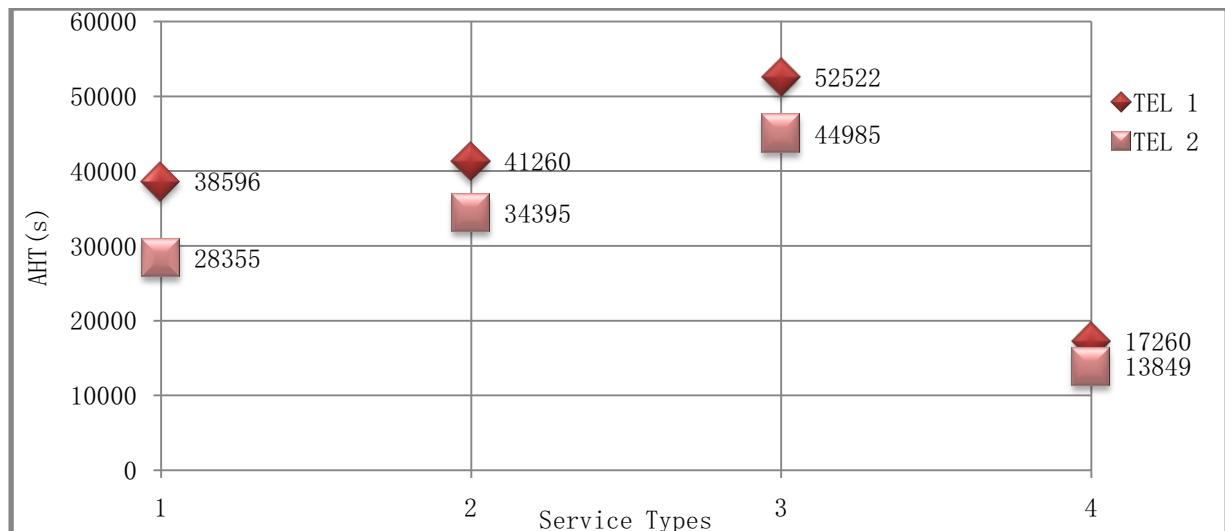


Figure 6: Variation of AHT(s) TEL1 and TEL2

Service Types: 1(Prepaid/Postpaid), 2(PREMIUM/HNI), 3(BB/3G-HIS), 4(Call Roaming)

4. Conclusion

In this work, customer relation of two GSM services provided in Nigeria has been studied. It was found that Prepaid/Postpaid customers enjoy highest customer service care in both telecommunication networks. Higher values of AHT (s) of TEL 1 over TEL 2 imply that TEL 1 spends more time with its subscribers when attending to a complaint. Also despite the fact that TEL 1 has more customers than TEL 2, their customer care centers handle complaints faster and efficiently than TEL 2. This hereby recommended that the service providers should have an improved version of CRM (customer relationship management) application so as to reduce the way in which the CRM Application servers lose their signals while calls are coming in.

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