



## Mobile Network Portability in Post Covid-19 Era in Nigeria

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### ABSTRACT

Porting has come to stay in Nigeria and subscribers are freely using the service to improve their satisfaction by porting to a desired network free of charge. In Nigeria, retaining existing customers is a major responsibility for network providers since the establishment of mobile number portability in 2013. In this study, ten months (June 2021 to March 2022) porting activity (Outgoing and Incoming) of major network providers in Nigeria are analysed. The result shows that the quality of services offered by MTN is better than other networks considering the high net gain of 10387 subscribers followed by globacom with a net gain of 407 subscribers. 9mobile has the highest net loss of 7862 subscribers followed by Airtel with a net loss of 4718 subscribers to other mobile networks showing response of their customers to their services within the specified time. A better quality of service and larger network coverage with fair pricing reduces the loss of subscribers due to porting.

Keywords: NCC, MNP, Services, network coverage, win-back, quality of service

### 1. Introduction

Nigeria of today is a force to reckon with in the telecommunication industry because of her huge subscriber base. Hence, Central to the objectives of NCC is to promote and protect consumer's interest in a healthy competition among service provider in Nigeria. This extends to providing a platform for the subscribers to change service provider seamlessly. The attendant cost of changing mobile numbers when switching service providers such as losing contact with business partners is a serious setback to subscribers. Consequently, subscribers were fixed with the option to give up their mobile numbers for new ones or make do with the service the operator was offering even if they were unsatisfied with it [2] [3].

One of the most challenging tasks for major network providers is the ability to retain their customers [15]. In April 2013, NCC launched the pilot Mobile Number Portability (MNP) service for GSM subscribers in Lagos Nigeria [2]. The MNP is a platform that enables a subscriber in search of an optimized quality of service to switch network provider without losing her cellular phone number [1]. This consumer freedom became a cause for service providers to optimize their contracted services or then face the attendant consequences of losing existing customers. MNP will indirectly improve Quality of Service (QoS) as the market competition matures [4] and also enhance billing integrity [16]. However, subscribers will be discouraged to use MNP services if it takes long to complete the process [14]. According to [7] for instance, Porting is free on MTN network and takes about 15 – 20 minutes to complete, which offers you widest network coverage and fast data quality. To complete the port-in process in MTN you would be required to do the following:

- Visit any MTN outlet with your current phone number
- Present valid ID (driver's license, Voters card, national ID etc.)
- Complete port-in form and submit
- Complete port validation by sending 'PORT' to 3232 by SMS or dial 3232 and follow the IVR voice prompt

A subscriber who ports to another mobile network operator will be assigned a new IMSI by the recipient operator while retaining his MSISDN from the donor. Consequently, the effect of MNP will be on MSISDN based functionalities and services such as prepaid services, short messages (SMS and MMS)

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inbound and outbound calls etc [5]. Subscribers do not port for fun, therefore several reasons prompt subscribers to use the porting service. According to [6] subscribers port because of poor quality of service, high tariff rate on data bundles and Non-efficient Customer Care Agents.

To prevent unfair practices and maintain stable operation of MNP facility in a domain with diverse mobile network providers like Nigeria, the national regulator initiated a regulatory framework for a healthy operation of MNP. The framework is driven and managed by NCC in furtherance to her objectives of protecting consumer interest through the development, monitoring of MNP operations and enforcement of compliance with MNP regulations where necessary in order to ensure better quality services, fair pricing and healthy competition [9][17]. Furthermore, discrimination between ported and non-ported number, is highly discouraged. Hence, NCC mandated all Nigeria's mobile service providers to offer equivalent services to both ported and non-ported numbers [9].

Recipient-led porting is adopted in many countries of the world including Nigeria [2] [9] [13]. With MNP it is expected that the network improves with greater flexibility and mobility across networks [11]. Hence, to prevent abuse of the porting service, NCC regulatory framework stipulates that "NPC will for every porting request, check the porting history of the number (s) being ported and will reject requests where the number (s) has (have) been previously ported within the previous forty-five (45) day period [9]. The validation against this requirement will be automatically processed by the NPC which will reject porting orders which have been ported within the previous forty-five (45) day period"

### ***1.1. Win-back Protection Provision***

It is expected that a subscriber after making a port request could be persuaded through calls or any other means by the donor network to remain with it by making different offers to the subscriber, this is called win-back. According to [2] [8] win-back may cause competition problems and also aggrieve subscribers who receive unwanted calls from operators. Hence, NCC absolutely prohibits win-back, stating that "a donor operator is not allowed to contact the subscriber to try to win-back the subscriber to stay with it both whilst the porting process is underway and for a period of forty five (45) days from the date porting was completed. The only permissible contact a donor operator may have with a subscriber who has made a port request is either a) recovery of outstanding debts or b) to discuss products/ services other than the ported mobile service [9]. Hence NCC guideline advises the recipient network to successfully lodge the corresponding porting request onto the NPC before initiating any discussion with the donor network about porting request (especially Multi-line/ Block Porting requests). .

### ***1.2. Ring-Fence Protection of Multiple/ Block Porting Requests***

NCC proposed an optional facility to protect an identified subscriber who initiated a port request from potential Win-back by a donor network. Recipient network who received a port request from a subscriber who may wish to port a portion of the mobile numbers they have with the donor network under the same account or port multiple or blocks of numbers in a batches could prevent win-back through this provision. The proposed process by NCC utilizes the NPC Administrator helpdesk as a neutral party to register and time-stamp the recipient network's multiple/ block porting request ahead of the initial porting request being sent to the donor operator [9]. This approach enables the recipient network to ring-fence the numbers within the customer's porting transaction. All numbers within the customer's multiple/ block porting transaction duly registered with the NPC Administrator will be subject to Win-back protection for a period of forty five (45) days from the date the recipient operator registers the initial request [9].

### ***1.3. Related works***

DhavalMotwani in [11] investigated the impact of mobile number portability on the consumers in Saurashtra region of India. His investigations are based on the customer perception of MNP, the effectiveness of MNP across various service providers, the general preference of the users regarding service provider, the various factors considered by the customers for MNP and finally the post MNP feeling or opinion of the customers. The study captured that the main reason for porting their numbers was dissatisfaction from their existing services because of weak networks. It was observed from the analysis that 88% of the consumers are confident of having a better service after MNP while only 12% are not confident. The study provided clear evidence that the introduction of MNP created a healthy and productive competition among all the telecom companies in Saurashtra. Thus the competition stands as an advantage to the customer and to providers with superior service in terms of network call rate and low call drops.

The effect of MNP on the revenue of mobile operators in Nigeria was studied in [6] by comparing statistics, rate of porting and analysis of case studies. Since the launch of MNP subscribers have migrated from one network to another. As a result, some operators have gained customers and some have lost customers through MNP. The study shows that the gain and loss of customers have direct effects on the revenue of these operators. From the analysis, Airtel is the highest beneficiary of MNP whereas Glo appears to be the biggest loser in terms of revenue. Although the impact on the revenue of MTN and Etisalat seem to be slightly affected. A general observation on the revenue of mobile operators shows that MNP has significantly affected the revenue generated by mobile network operators in Nigeria.

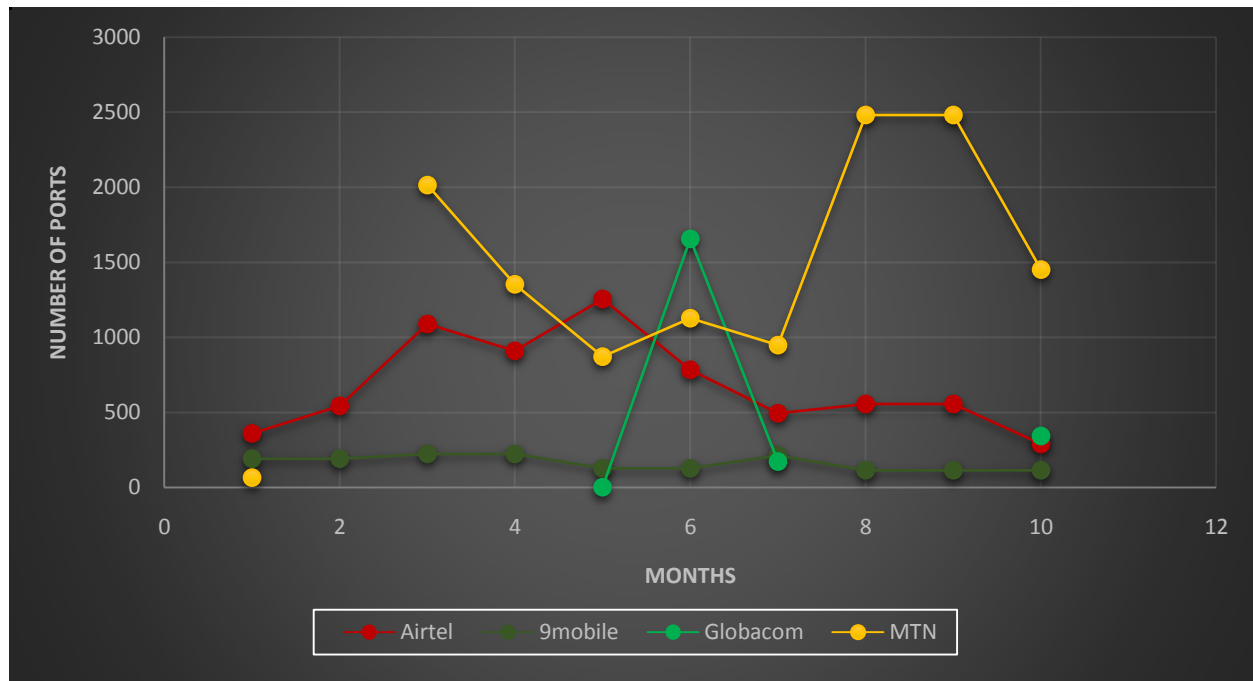
A critical investigation of the Effect of Mobile Number Portability on Network Switching Capacity in Nigeria is presented [3]. Their aim was to find out the rate at which traditional services (voice, data, and video) carried out by these network providers shall be affected if the rate of port number- requests become very high. The performance of the network was therefore measured with respect to the percentage of the numbers ported as against the average arrival rate, service rate and the processing rate. These variables account for the switching capacity of a network. The study noted that initiating an MNP request up to completion utilizes the resources meant for traditional services and also it indicated that MNP request set-up is more complex and has a longer duration than the normal services. The study indicated congested switching nodes, which is an indication that porting activities will introduce traffic congestion in the operational channels.

#### 1.4. Case study

Owing to the proliferation of online business models during the lockdown, many Nigerians switched to the use of smartphones. The Nigerian Communications Commission (NCC) reported that in Q2 2020, Internet users hit 7.5 million, taking the total number of data users in Nigeria to 143.3 million as of June 2020 [10]. The search for better data services among Nigerians led to porting activities from one network provider to another. The analysis of data obtained from NCC data base on ten months (June 2021 to March 2022) Porting Activities of Mobile Network Operators (GSM) is presented. A thorough investigation into the Outgoing (Outward) Porting which is the number of numbers ported to another service provider's network from a service provider's own network will show the general response of subscribers to the quality of service offered by the network providers within the post covid-19 era. We will compare the outgoing porting activities among the major four service providers in Nigeria after the data users reached 143.3 million.

**Table 1 –Monthly incoming (Inward) porting activities**

	Jun'21	Jul'21	Aug'21	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22
Airtel	360	543	1,089	909	1,256	785	495	555	555	290
9mobile	191	191	224	224	128	128	212	114	114	115
Globacom	-	-	-	-	2	1,657	173	-	-	343
MTN	65	-	2,014	1,354	872	1,127	948	2,482	2,482	1,452



**Fig. 1-Monthly incoming (Inward) porting activities**

**Table 2 - Monthly incoming (Inward) porting activities**

	Jun'21	Jul'21	Aug'21	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22
Airtel	101	219	323	376	240	245	28	1,815	1,815	6,393
9mobile	323	323	1,716	1,238	834	1,170	969	780	780	1,370
Globacom	172	232	343	306	160	12	93	87	87	276
MTN	106	-	498	365	324	292	242	208	208	166

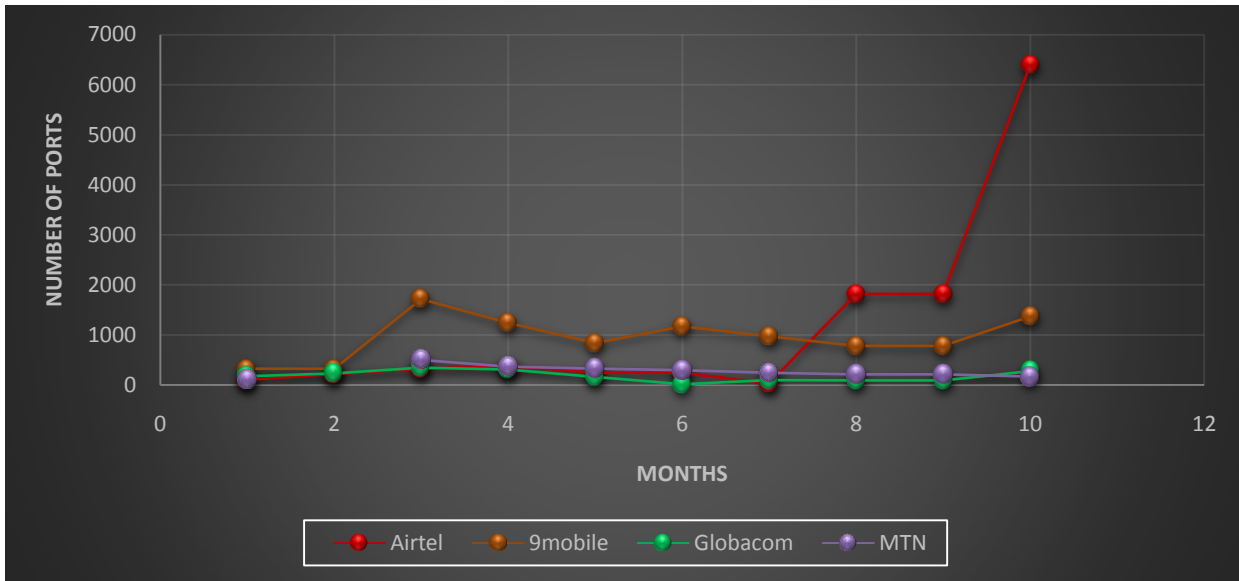


Fig. 2-Monthly outgoing (Outward) porting activities

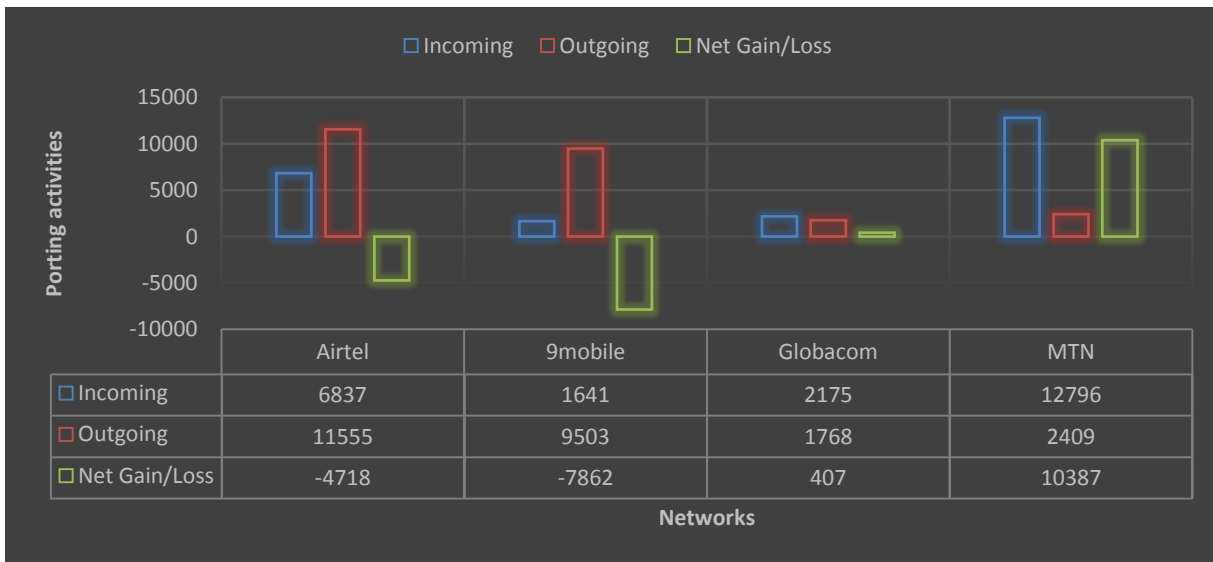


Fig. 3: Ten months porting activities

### 1.5. Discussion

Porting activities is a viable indicator of customer experience and perception about their existing mobile network services. A critical analysis based on the available data shows the level of satisfaction each customer gets from the contracted services offered by mobile network operators (MNO). Contrary to [6], Figure 3 show that the quality of services offered by MTN is better than other networks considering the high net gain of 10387 subscribers followed by globacom with a net gain of 407 subscribers within the specified time. 9mobile has the highest net loss of 7862 subscribers followed by Airtel with a net loss of 4718 subscribers to other mobile networks showing a dissatisfaction of their customers about their services within the specified time. Besides quality of services offered by the MNO as a reason for porting out of a given network, network coverage could be another important reason. Nigerians relocate to other cities or towns or villages within Nigeria due to work or for some other reasons. One will be prompted to port from hisnetwork to another if the existing network do not properly cover the new environment. Based on this fact, the analysis show that MTN has the best coverage followed by globacom.

### 1.6. Conclusion

Improved network services and coverage will discourage subscribers from porting to another network. Network portability database is a major indices to the measure of quality of service and coverage offered by network providers. The porting activities in MTN and globacom has shown their superiority to other network providers. Other network providers are recommended to improve their network services and coverage.

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