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MOBILE NUMBER PORTABILITY (MNP) IN NIGERIA

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ABSTRACT: *The Nigerian Communications Commission (NCC) introduced Mobile Number Portability (MNP) to allow subscribers switch between Mobile Network Operators (MNO) while retaining their mobile numbers. This paper gives an overview of MNP, the types and benefits and briefly discusses the Nigerian telecommunications landscape. Drawing on a sample of 80 mobile subscribers in Nigeria, this research work investigates the effect of mobile number portability (MNP) focusing on subscribers' perception and reasons for switching operators and opinion about the MNP process. Findings suggest that expectation of improved Quality of Service (QoS), improved customer service and more competitive tariffs were key reasons of porting among subscribers.*

KEYWORDS: Mobile Number Portability (MNP), Mobile Network Operator (MNO), Quality of Service (QoS), Nigerian Communications Commission (NCC).

INTRODUCTION

Nigeria today has one of the largest telecom markets in the world, with a combined subscriber base of about 147 Million.(NCC., 2016) The subscriber base is continuously increasing and the sector has delivered strong return on investments year on year. The telecom sector is a major sector of the economy contributing greatly to the economic growth of the country, contributing to nearly 8.88% of the Nigerian GDP. (NBS, 2015)

In the past, mobile network operator subscribers were required to give up their mobile numbers for new ones when switching providers. This was not convenient for subscribers because of the attendant costs, so majority of the customers had to make do with the service the operator was offering even if they were unsatisfied with it. With MNP however, the landscape has changed. Consumers can switch operators without losing their mobile numbers and so the onus is now on the service providers to improve the quality of service offered to ensure their customers are always satisfied, or risk losing them. (Boateng & Owusu, 2013)

MNP is a process that enables consumers to change service provider whilst keeping their existing mobile number. It is a game-changer because it provides a range of options for the consumers and promotes effective competition by allowing consumers to switch between service providers without the associated costs or inconveniences of changing their mobile numbers.(Ofcom, 2009) (Siwach, 2011) (Zhou, 2009).

Singapore was the first country to implement MNP in 1997. At present, over 73 countries including Canada, USA, Japan, India, Germany, France, Russia, UK have successfully deployed MNP. MNP was launched on 22nd April 2013 in Nigeria, empowering Telco subscribers to freely and conveniently switch between service providers. Other African countries with the MNP scheme are South Africa, Egypt, Ghana, Kenya and Senegal. For MNP to be implemented and deployed successfully, the national regulator must initiate, drive and manage the process. The Nigerian Communications Commission is in charge of providing the

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regulatory framework for the operation of Mobile Number Portability in Nigeria. The NCC is required to ensure an effective and efficient porting regime, strengthen the relationships between Mobile Service Providers, safeguard Subscribers' rights and ensure Subscribers' satisfaction with the MNP process and where necessary, stipulate penalties for non-compliance with the provisions of these Regulations (NCC, 2013)

MNP involves only the Mobile Subscriber ISDN Numbers (MSISDN) number and not the International Subscriber Mobile Identity (IMSI) thus MNP can affect all MSISDN based services like SMS and MMS, outgoing and incoming calls, prepaid services etc. (Siwach, 2011). It is important to note however that with the advent of MNP, one cannot accurately identify a service provider mobile number by the number prefix alone. For instance, In Nigeria, before implementation of MNP, Airtel numbers used to begin with 0802, MTN 0803, MTEL/NTEL 0804, Globacom 0805, Etisalat 0809 etc. (Dave & Vyas, n.d.)

Overview of Mobile Number Portability (MNP)

The MNP process could either be donor-led or recipient led. In a donor-led process, the subscriber intending to switch operators while retaining their phone number must contact their existing operator (the "donor operator") and request a Port Authorization Code (PAC). After validating the subscriber, the donor-operator issues the PAC, which the subscriber must provide to the new MNO (the "recipient operator") to enable him port in to the new network. In a recipient–led process however, the customer involvement is minimal as the recipient operator is authorized to act on behalf of the customer. Here the recipient-operator sends the port request to the donor-operator on behalf of the customer to complete the port process. The major difference between the donor and recipient-led processes is in the means of authorizing the number port request. (Ofcom, 2009)

Many industry experts have criticized the donor-led MNP process because asides the fact that it is a little cumbersome for the customer, they also opine that most donors use that opportunity to try to win back the subscriber which might ultimately negatively affect the competition if they succeed (Yadav & Dabhade, 2013). The Porting process in Nigeria and in many other comparable markets elsewhere in the world is recipient led.

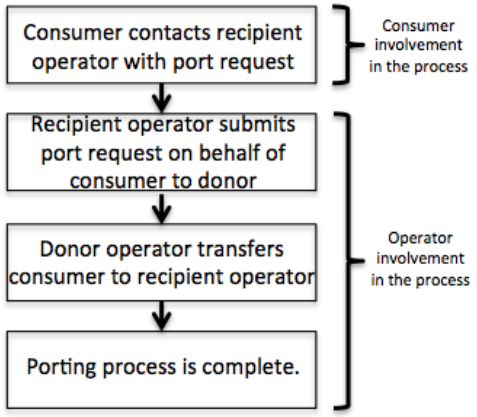

Figure 1: Recipient-led process (Ofcom, 2009)

To be most effective, the porting process should be convenient, fast and easy for customers. This is important because during the porting process, all activities are suspended on the mobile

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line. The ported number cannot handle incoming or outgoing calls and SMS (Buehler, Dewenter, & Haucap, 2006).

Why MNP?

With MNP, switching costs (such as learning, transaction or contract costs) are tremendously reduced for the end users. A natural consequence of this is that the end user has more options. Since the customer has more options, competition between MNO's will increase. MNO's will be forced to reduce service tariffs and improve their quality of service to maintain and improve their market share.

Similarly, for the service providers, MNP introduces more competition for the existing market share. This in turn will force MNO's to improve their quality of service in order to retain existing subscribers and attract new ones. Furthermore, the competition that will be experienced as a result of MNP will ensure standard market rates / little variation in tariffs and therefore reduce entry barriers for new entrants.

Conversely, There is going to be an increase in hardware and software infrastructure costs to support MNP and also an increase in customer transfer costs (administrative costs) or porting costs. Other costs expected to go up are advertising and marketing costs, as massive advertising campaign would be needed to retain old customers and attract new ones. (Boateng & Owusu, 2013)

Nigerian Mobile Telecommunications Landscape

Nigerian MNO's operate vertically integrated business models and are largely integrated service providers. They provide a gamut of telecommunication services, which includes phone calls, broadband Internet services, VPN and WAN interconnectivity. In Nigeria, the total number of mobile subscribers as at March 2016 was about 147 million. Table 1 shows the market share of subscribers according to operators. Four mobile operators dominate the market: Airtel, Etisalat, Globacom and MTN with market shares of 23%, 15%, 23% and 39% respectively.

Table 1: Market share & subscriber base (NCC., 2016)

Operator	No of Subscribers	Percentage
Airtel	33,866,798	23%
Etisalat	21,877,542	15%
Globacom	34,608,793	23%
MTN	57,045,721	39%
Total	147,398,854	100%

As of March 2016, a total of 92,285,052 mobile subscribers had an Internet subscription with their service providers (Airtel, Etisalat, Globacom and MTN), translating to 62.6% of all mobile subscribers. Table 2 shows the number of Internet subscribers according to operators.

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Table 2: Number of Internet subscribers (NCC., 2016)

Operator	No of Internet Subscribers	Percentage
Airtel	17,155,181	18.5%
Etisalat	15,242,856	16.5%
Globacom	26,530,420	29%
MTN	33,356,595	36%
Total	92,285,052	100%

In the Nigerian landscape, MNP has gained traction since it was deployed in 2013. The year-on-year statistics show steady increase in number porting requests. The average daily ports completed in 2013, 2014 and 2015 were 228, 405 and 592 respectively. To improve the user porting experience, the NCC has reduced the port restriction time for subscribers (minimum number of days a subscriber must be on a new network before he can port again) from 90days to 45days and it has also imposed a restriction barring newly registered mobile numbers from initiating a porting request until seven days after registration (Fakorede, 2016). Table 3 shows the porting statistics for the major operators since the inception of MNP in Nigeria.

Comparing the incoming and outgoing port statistics shows that in the Nigerian market, Etisalat continued to be the biggest beneficiary of MNP with a net gain of 201,668 subscribers while MTN has lost the most subscribers with a net loss of 224,324 subscribers.

Table 3: Porting data from May 2013 – Mar 2016 (NCC., 2016)

Operator	Subscribers Porting In	Subscribers Porting Out	Net Gain / Loss
Airtel	152,860	103,414	49,446
Etisalat	255,288	53,620	201,668
Globacom	60,283	81,144	-20,861
MTN	28,723	253,047	-224,324

RESEARCH METHODOLOGY

This research work makes an attempt to investigate the effect of mobile number portability (MNP) on subscribers in Nigeria. In addition, it seeks to understand users' perception and reasons for switching operators and their opinion about the MNP process. Quantitative research design, using the survey technique was used to carry out this study. This involved conducting interviews with respondents and using questionnaires. The key metrics that explain MNP choices and their effects on subscribers were determined and these metrics were used to carefully design the questionnaire. Pilot testing of the questionnaire was carried out and the Cronbach's Alpha (measure of scale reliability) was found to be 0.731

Primary data for this study was obtained through questionnaires and personal interviews, while secondary data was obtained from journals, books, the Nigerian National Bureau of Statistics (NBS) and the Nigerian Communications Commission (NCC) reports and statistics.

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The sample size for this study comprised 80 people. The respondents were made up of students and professionals in the private and public sector from all walks of life in Nigeria. The respondents were asked a series of questions relating to pricing and billing schemes, customer service, porting process and quality of service of mobile network operators. SPSS and Microsoft Excel were used to analyze the data obtained from the survey.

Selected Results from Questionnaire & Interpretations

Table 4: Table showing the Mobile Network Operator (MNO) of respondents

S/N	**MNO**	**No.**	**Percent**
1	Airtel	15	18.75
2	Etisalat	18	22.5
3	Globacom	13	16.25
4	MTN	34	42.5
Total		80	100

Interpretation:

Table 4 above shows that of the total respondents, 42.5% use MTN, 22.5% use Etisalat, 18.75% use Airtel while 16.25% use Globacom as their Mobile Network Operator (MNO). Fig. 2 below shows a pictorial representation of the distribution of respondents among the network operators.

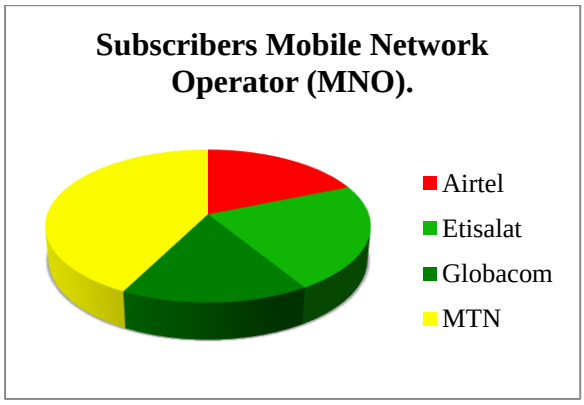

Figure 2: Respondents Mobile Network Operator (MNO)

Table 5. Table showing respondents' opinion about the call setup success rate of their mobile network operator (MNO)?

S/N	Opinion	No.	Percent
1	Very dissatisfied	4	5
2	Somewhat dissatisfied	9	11.25
3	Neither satisfied nor dissatisfied	18	22.5
4	Somewhat satisfied	32	40
5	Very satisfied	17	21.25

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Total		80	100

Interpretation:

When asked about the call success setup rate, 21.25% of the respondents felt very satisfied with the call success setup rate. 40% were somewhat satisfied, 11.25% somewhat dissatisfied and 5% very dissatisfied.

Table 6. Table showing frequency of network downtimes experienced.

S/N	Opinion	No.	Percent
1	Frequently	8	10
2	Sometimes	37	46.25
3	Occasionally	18	22.5
4	Hardly ever	17	21.25
Total		80	100

Interpretation:

When asked about the frequency of network downtimes experienced on their operators, 21.25% of the respondents hardly ever experienced network downtimes, 22.5% occasionally did, 46.25% sometimes experienced downtimes while 10% frequently experienced downtimes.

Table 7. Table showing frequency of SMS delivery failure.

S/N	Opinion	No.	Percent
1	Frequently	3	3.75
2	Sometimes	24	30
3	Occasionally	25	31.25
4	Hardly ever	28	35
Total		80	100

Interpretation:

35% of the respondents hardly ever experienced SMS delivery failure, 31.25% occasionally did, and 30% experienced failure sometimes while 3.75% frequently experienced SMS failures.

Table 8. Table showing opinion about how knowledgeable customer service employees are about their brand & product offerings.

S/N	Opinion	No.	Percent
1	Strongly Disagree	2	2.5
2	Disagree	10	12.5
3	Neither Agree Nor Disagree	18	22.5
4	Agree	40	50

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5	Strongly Agree	10	12.5
Total		80	100

Interpretation:

62.5% of respondents believed that the customer service employees were knowledgeable about their brand and product offerings while about 15% didn't think the customer service employees were knowledgeable enough.

Table 9. Table showing opinion about the speed of resolution of respondents' complaints by the customer service team.

S/N	Opinion	No.	Percent
1	Very dissatisfied	6	7.5
2	Somewhat dissatisfied	9	11.25
3	Neither satisfied nor dissatisfied	18	22.5
4	Somewhat satisfied	31	38.75
5	Very satisfied	16	20
Total		80	100

Interpretation:

When asked about the speed of resolution of queries by the customer service experts, 20% of the respondents felt very satisfied with how fast they were responded to, 38.75% felt somewhat satisfied, 22.5% were neither satisfied nor dissatisfied, while 7.5% were very dissatisfied with the speed of resolution of queries.

Table 10. Table showing the opinion of respondents about the length of waiting time they experience when they contact the customer service?

S/N	Opinion	No.	Percent
1	Almost always	18	22.5
2	Frequently	13	16.25
3	Sometimes	27	33.75
4	Occasionally	14	17.5
5	Hardly ever	7	8.75
Total		79	98.75

Interpretation

When asked about the length of waiting time experienced when they contacted the customer service professionals, 22.5% of the respondents stated that the almost always experience long waiting times, 16.25% frequently experienced long waiting times, 17.5% occasionally did and 8.75% hardly ever experienced long waiting times.

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Table 11. Table showing the respondents' perspective about whether the customer service personnel are accessible.

S/N	Opinion	No.	Percent
1	Strongly Disagree	1	1.25
2	Disagree	16	20
3	Neither Agree Nor Disagree	22	27.5
4	Agree	34	42.5
5	Strongly Agree	7	8.75
Total		80	100

Interpretation

Over 50% of the respondents felt they could access the customer service personnel, 27.5% were indifferent about their chances of accessing the service personnel while only about 1.25% strongly disagreed that the customer service personnel were accessible.

Table 12. Table showing the respondents' opinion about the quality of service rendered by the customer service personnel.

S/N	Opinion	No.	Percent
1	Very dissatisfied	6	7.5
2	Somewhat dissatisfied	10	12.5
3	Neither satisfied nor dissatisfied	20	25
4	Somewhat satisfied	28	35
5	Very satisfied	16	20
Total		80	100

Interpretation

Over 50% of the respondents were satisfied with the services rendered by the customer service personnel. About 12.5% were somewhat dissatisfied while 7.5% were very dissatisfied with the services rendered.

Table 13. Table showing the respondents aware about MNP (I.e. their right to port?)

S/N	Opinion	No.	Percent
1	No	8	10
2	Yes	71	88.75
Total		79	98.75

Interpretation

Of the total respondents, 88.75% were aware of mobile number portability and their right to port while about 10% did not know about mobile number portability.

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Table 14. Table showing the respondents planning to port to a new operator soon.

S/N	Opinion	No.	Percent
1	No	55	68.75
2	Maybe	22	27.5
3	Yes	2	2.5
Total		79	98.75

Interpretation

Of the total respondents, 68.75% were definitely sure they were not switching operators anytime soon, 27.5% could switch in future and 2.5% were positive that they would switch mobile operators soon.

Table 15. Table showing the respondents that have ported before.

S/N	Opinion	No.	Percent
1	No	65	81.25
2	Yes	14	17.5
Total		79	98.75

Interpretation

17.5% of the total respondents have ported from their previous mobile operator to the present one, while 81.25% have not ported before.

Table 16. Table showing whether the respondents were satisfied with the time it took to complete the porting process.

S/N	Opinion	No.	Percent
1	Very dissatisfied	3	21.4
2	Neither satisfied nor dissatisfied	2	14.3
3	Somewhat satisfied	4	28.6
4	Very satisfied	5	35.7
Total		14	100

Interpretation

Of the total respondents that have switched mobile operators, 35.7% felt very satisfied with the time it took to complete the porting process, 28.6% felt somewhat satisfied, 14.3% were neither satisfied nor dissatisfied while 21.4% were very dissatisfied with the time it took to complete the porting process.

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Table 17. Table showing the reasons why respondents ported to a new MNO.

S/N	Opinion	No.	Percent
1	Better Quality of Service	6	42.9
2	Better QoS & Customer Service	2	14.3
3	Better QoS & Tariffs	5	35.7
4	Better QoS & Tariffs & Family & Friends	1	7.1
Total		14	100

Interpretation

42.9% of the total respondents that have switched mobile operators did so because of better quality of service expected from the new operator. 14.3% ported because they expected better customer service & quality of service from the new operator. 35.7% ported because of better quality of service expected and more competitive tariffs expected from the new operator, while 7.1% switched operators because of the influence of family and friends, expectation of better quality of service and more competitive tariffs from the new operator.

Table 18. Table showing if the respondents felt there was significant difference in quality of service between their previous operator and their present operator.

S/N	Opinion	No.	Percent
1	Strongly Disagree	1	7.1
2	Disagree	1	7.1
3	Agree	7	50
4	Strongly Agree	4	28.6
Total		13	92.9

Interpretation

Over 70% of the respondents that switched operators believed that there was a significant difference in the quality of service provided between their previous operator and their present operator.

Table 19. Table showing if the respondents have had any issues since porting.

S/N	Opinion	No.	Percent
1	No Issue, it works perfectly	7	50
2	Others	4	28.6
3	I couldn't receive bulk sms & sms from my bank	1	7.1
Total		12	85.7

Interpretation

About 50% of the respondents that switched operators didn’t have any issues after porting while about 35.7% had issues ranging from irregular billing to sms related issues like inability to send / receive sms, inability to receive sms from financial institutions and inability to receive bulk sms.

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Table 20. Table showing whether the respondents that ported switched back to their previous MNO?

S/N	Opinion	No.	Percent
1	No	13	92.9
2	Yes	1	7.1
Total		14	100

Interpretation

92.9% of the respondents that switched operators were content with the new operator and did not have any plans of switching back to their original operator while 7.1% switched back to their previous operator because of sms related issues experienced with the new operator.

Findings and Discussions

- MTN Nigeria has the largest market share (about 39%) for mobile subscribers in Nigeria. Similarly, in this study, 42.5% of the respondents were MTN subscribers.
- 65% of the respondents that switched operators ported into the Etisalat network. For Airtel, the figure was 21% and 14% for MTN
- In the Quality of Service (QoS) metrics investigated, most respondents were satisfied with the call setup success rate and the SMS delivery success rate. However, they experienced network downtimes from time to time. This may not be unconnected with epileptic power issues, network upgrades and vandalisation of key network infrastructure.
- With respect to the customer service metrics, respondents were of the opinion that the customer service professionals were knowledgeable about their brand and product offerings even though they experienced long waiting times before their issues were resolved.
- Of the over 80% of the respondents aware of their right to port, 17.5% have switched operators. The key factors that influenced their choice of switching operators were expectation of improved Quality of Service (QoS), Customer service and more competitive tariffs.
- Respondents who have switched operators were mostly satisfied with the process and the time it took to complete the porting process. This is likely due to the fact that the MNP process in Nigeria is recipient-led.
- The main challenges experienced by subscribers who have ported were sms related issues like inability to send / receive sms, inability to receive sms from financial institutions and inability to receive bulk sms.

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CONCLUSION

Increased competition in the Nigerian mobile communications market confirmed by promotional activities, new and improved value added services, more competitive tariffs and improved quality of service has been observed since the inception of MNP. Majority of the subscribers are now aware about their right to port and the attendant benefits- changing service providers, service mix, geographical location without changing phone number. Thus, the introduction of MNP in the Nigerian landscape can be considered a huge success.

MNP works well for majority of the respondents and the process is fairly straightforward when no problems arise after porting. The porting experience can be frustrating when issues do arise and this is where the NCC can do more by ensuring telecommunication operators resolve all related issues.

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