Mobile Number Portability in Ghana: A Paradigm Shift from the Past

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ABSTRACT

Although cellular communications have existed in Ghana, West Africa, since 1992, it was not until July 7, 2011 that mobile phone number porting took off. Thus for the almost 20 years that cellular services existed without number porting, subscribers in Ghana endured the inconvenience of having to change their numbers entirely anytime they felt dissatisfied with the services of any telecommunications company (Telco) and wanted to switch to another network. However, to increase competition among the networks and hence precipitate improvements in services delivery, the government of Ghana decided to embark on number porting as a way of checking the otherwise unsatisfactory performances of the various networks. Ghana currently has six mobile phone network providers who all operate on GSM except one which has deployed CDMA. The six networks are Mobile Telecommunications Network (MTN), Airtel, Tigo, Vodafone Ghana, Glo Mobile, and Expresso. In this research paper, we report on some of the vital statistics as reported by the country’s communications authority 20 months into the implementation of mobile number portability (MNP) in Ghana.

Keywords: Ghana, cellular, network, MNP, Telco, number porting.

1. INTRODUCTION

By mobile number portability (MNP), we simply mean switching your phone service provider from one Telco to another whilst still keeping the same old number [1, 2, 3]. This was not possible in Ghana until the second half of the year 2011. The major reason why the government of the day undertook this exercise was to revive a sector of the Ghanaian economy which was still virgin given the fact that multinational telcos were now inundating the Ghanaian market with their services but were also sadly enough, ripping the average Ghanaian off with their very poor services. With the implementation of the MNP supervised by the country’s National Communications Authority (NCA), the hope was that providers will up their game to ensure that they are not outdone by their competitors. The real issue is that once a particular Telco was able to stabilize its services and meet the expectations of customers, it was likely that others will also do everything possible to improve their services else they will risk losing their customers to their competitors who have better service quality. It cannot be gainsaid the fact that cellular communications in Ghana is still in the teething stages and out of a Ghanaian population of 24,658,823, the rate of subscription as reported keeps surging with each passing day.

Worldwide, MNP is implemented in one of two main ways; namely donor-led porting or receiver-led porting. In donor-led porting, the customer initiates the process by first contacting the current service provider to request authorization for service transfer. However, in the receiver-led porting, it is the new service provider that takes the initiative on the behalf of the prospective customer by contacting the customer’s current service provider. Ghana opted for the latter which is the more popular system used by most countries globally owing to its not so stressful advantage to the consumer. Moreover, the NCA further resolved that porting will be free of charge to consumers [4, 5, 6, 22]. These notwithstanding, in rolling out the novel technology, the Ghanaian NCA set the following benchmarks for consumers to fulfill before they could port their numbers:

- Firstly, the prospective applicant’s personal data must match that in the operator’s database.
- Secondly, the applicant must not have any form of contract whatsoever with the donor operator and moreover, the number to be ported must still be in active service at the time of porting.
- Thirdly, in case the donor operator is currently experiencing technical challenges, the application can be denied until those challenges are resolved.
- Fourthly, the same numbers cannot be ported more than once in 30 days even though there is no restriction over the number of times one can port the same number.
- Fifthly, if the applicant happens to have any prepaid balance left it will be impossible to transfer it onto the new network [7, 8].

However, the process of porting itself from the customer’s viewpoint is quite simple. It involves the following three steps:

- A subscriber walks into the offices of his/her new service provider (Recipient).
- The old service provider (Donor) is contacted by the recipient and the porting process begins.
- In a matter of about 24 hours, the subscriber is informed of the success of the process and he/she starts using the new service.

By July 2012, the telcos had been able to achieve a dramatic average porting time of between 7 and 8 minutes. Thus, it can now be said that Ghana has achieved “on the spot” mobile number porting.

2. IMPLEMENTATION OF MNP

This is done in one of two ways; either you use the centralized database system or the decentralized type [9, 10]. In the case of Ghana, the centralized system was adopted. This means that all the six networks ported...
through one central database system which kept records of numbers ported in and out of various networks. Ghana chose the Dutch company, Porting Access b.v. and CIS Ghana Limited who had formed a consortium by name Porting Access Ghana Limited (“PXS”) to install and run the centralized porting database. Fig.1 below shows the two types of implementation techniques.

Fig 1: (a) decentralized and (b) centralized portability database (source: electronicsforu.com)

3. HOW THE CENTRALIZED PORTING SYSTEM WORKS

From Fig.2, it can be seen that a direct routing scheme is employed to port numbers. Here, the originating network directly queries the centralized database to determine the routing number required to transfer the call to the recipient network [10, 11, 15]. After determining the routing number, the donor operator is bypassed as the call is directly routed to the recipient network from the originating network. The home location register (HLR) of the recipient network then assigns a mobile station routing number to the incoming call so that it gets through the mobile switching center (MSC) for the ported mobile number to successfully place a call.

Fig 2: All-call-query approach for MNP (Source: electronicsforu.com)

4. RESEARCH OBSERVATIONS

In this research, we report on the statistical figures released by the NCA to the Ghanaian and global public on the 1st anniversary of the launch of the MNP in Ghana on 6th July, 2012. At that particular time, there had been 370,107 successful partings in Ghana, representing 75% of total porting requests for the year. The remaining 25% were aborted due to either operator network failure or as a result of consumers’ inability to meet the porting requirements. Table 1 below gives the breakdown of the six operators’ performances in the first year since MNP came into force.
Table 1: Tabular representation of the MNP results exactly one year after implementation

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>MTN</td>
<td>66,320</td>
<td>191,681</td>
<td>125,361 lost</td>
<td>Biggest loser in the first year of MNP</td>
</tr>
<tr>
<td>Vodafone</td>
<td>103,243</td>
<td>59,751</td>
<td>43,492 gained</td>
<td>2nd biggest gainer</td>
</tr>
<tr>
<td>Tigo</td>
<td>147,709</td>
<td>79,479</td>
<td>68,230 gained</td>
<td>Biggest gainer</td>
</tr>
<tr>
<td>Airtel</td>
<td>44,742</td>
<td>38,244</td>
<td>6,498 gained</td>
<td>-</td>
</tr>
<tr>
<td>Glo Mobile</td>
<td>7,984</td>
<td>425</td>
<td>7,559 gained</td>
<td>Had been in operation for barely 2 months</td>
</tr>
<tr>
<td>Expresso</td>
<td>304</td>
<td>722</td>
<td>418 lost</td>
<td>The only other loser</td>
</tr>
</tbody>
</table>

From the table, it is obvious that biggest winner in this game of numbers was Tigo and why was that so? This is because during that time, Tigo embarked on a vigorous advertising campaign during which its call costs were substantially revised downwards and it also heightened its free calls promotions at certain times of the day thus appealing to customers more than the others. The biggest loser here was MTN even though it is the market leader in Ghana with 11,857,772 subscribers as at Jan 2013. If the number lost is weighed against its total subscriber base, then it becomes almost insignificant. This loss also is to be expected because the large subscriber base will impact on its network efficacy especially at peak times resulting in many call drops that will surely leave customers livid. These observations notwithstanding, it can be safely assumed that averagely subscribers are in one way or the other contented with their service providers given that MNP is now available for disgruntled customers to move on.

From statistical data released by the NCA as at Jan 2013, the total mobile subscriber base of Ghana stood at 26,086,795 lines. The breakdown is as shown in (Table 2).

Table 2: Mobile phone subscription numbers in Ghana for the six operators

<table>
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<tbody>
<tr>
<td>MTN</td>
<td>6,592,243</td>
<td>8,202,829</td>
<td>8,869,254</td>
<td>10,249,528</td>
<td>11,857,772</td>
</tr>
<tr>
<td>Vodafone</td>
<td>1,733,711</td>
<td>2,793,986</td>
<td>2,810,487</td>
<td>4,340,905</td>
<td>5,423,932</td>
</tr>
<tr>
<td>Tigo</td>
<td>2,785,714</td>
<td>3,469,862</td>
<td>3,928,908</td>
<td>3,766,538</td>
<td>3,669,472</td>
</tr>
<tr>
<td>Airtel</td>
<td>463,824</td>
<td>1,316,698</td>
<td>1,583,573</td>
<td>2,725,128</td>
<td>3,273,048</td>
</tr>
<tr>
<td>Glo Mobile</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,649,767</td>
</tr>
<tr>
<td>Expresso</td>
<td>386,732</td>
<td>248,604</td>
<td>244,674</td>
<td>183,607</td>
<td>212,804</td>
</tr>
<tr>
<td>TOTALS</td>
<td>11,962,224</td>
<td>16,031,979</td>
<td>17,436,896</td>
<td>21,265,706</td>
<td>26,086,795</td>
</tr>
</tbody>
</table>

Note: Glo Mobile started operating in Ghana in May 2012.

Fig 3: Graphical representation of the cellular numbers in Ghana over five years
4.1 Deductions from Fig. 3:

With the exception of Expresso, all the other networks have experienced a near linear growth in the last five years since the competition became very keen. Likewise, it is safe to assume that so long as a particular network does not at worst maintain standards or at best improve on the quality of service, disgruntled customers will likely migrate to other networks taking advantage of MNP which also most likely will have a linear growth.

Table 2 and the pie chart above (Fig.4) attest to how far Ghana has come much as mobile cellular communications are concerned. From data available from 1997 to 2006, the mobile phone subscription figures were very low. This was mainly because it was very expensive then in those nascent days and could only be afforded by an exclusive few. Even some of those who had the means to subscribe just about 10 years ago could not succeed because of a lack of handsets on the market and also the absence of base transceiver stations (BTSs) in even some other urban areas apart from the major cities. However, some 10 years on, Ghana has suddenly become overwhelmed with cell phones [20, 24]. In every nook and cranny of Ghana’s major towns and cities these days, there are outlets that sell very affordable mobile phone handsets. This is also complemented by the inundation of the Ghanaian market by various multinationals thus raising the number of network operators to six. As a result, the average consumer now has a wider variety now more than before and hence the introduction of the MNP to further increase competition [12, 13, 14, 21]. If one considers the fact that a little over 10 years ago, Ghana had just a handful of mobile phone subscribers compared to the figure of 26,086,795 mobile phone lines as at Jan 2013, then one can conclude that a major technological revolution has occurred in Ghana in the last few years. Even the fact that the number of active mobile phone lines exceeds the total population of Ghana attests to how far Ghana has come in this revolution [21,22]. As a matter of fact, the experts and optimists predict that perhaps 10 more years from now, voice calls in Ghana will be almost free and the telcos would have fully settled on broadband services as their main source of income generation [16, 17, 18]. Long before the advent of mobile telecommunications in Ghana, the telecommunications landscape was extremely underdeveloped with only a few landlines operated by the then Ghana telecom, now Vodafone Ghana. Then in the mid 1990s, another company by name Westel, also now Airtel, joined the fray to deploy fixed lines and pay phones but could only cover the Ghanaian capital, Accra, and its immediate environs. In those days, these unreliable fixed line networks which suffered from a lot of cross-talks were mainly owned by the elites of the Ghana society as well government set-ups and other private corporate institutions. Fast forward to today, and mobile phones services have now so upstaged fixed line networks such that even those who used to own fixed lines have signed out and gone wholly mobile [23, 25, 26]. No
wonder, the figures indicate now that mobile phones make up 98.9% of the telecommunications voice market whilst the fixed lines account for the remaining 1.1%. This 1.1% is made up of 278,149 active fixed lines operated by Vodafone and 10,114 also by Airtel (Jan 2013).

5. CONSUMER CHALLENGES

The main issue that bothered consumers from the onset of the MNP were the scenario of agents of some of the networks deceiving consumers who wanted to purchase a new line altogether into porting their already existing lines. Actually, what most of those affected wanted was to acquire a new line with the same last 7 digits on a new network as it was on their current networks, a practice some loosely called “prefixing”. By and large, this very problem is being addressed by the various networks since the regulator, NCA, threatened sanctions.

Another birthing problem of the MNP is also the inability of some less educated consumers to properly fill out forms which is usually one of the first things done before porting can take place. This sometimes led to customers being misunderstood or misled by some agents of the various telcos. However, the various networks have over time ensured that their agents meticulously took prospective customers through the registration process thus cutting down some of these difficulties to the barest minimum.

In general, one can say that consumers have bought into the MNP idea very well and have been relatively satisfied with the choices they made through porting. In a simple survey I conducted among 63 consumers, I had responses which reflected that customers were on the average okay with their choices (Table 3).

Table 3: Responses of 63 consumers who had experienced MNP

<table>
<thead>
<tr>
<th>Type of response</th>
<th>Number of respondents</th>
<th>Percentage of respondents</th>
</tr>
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<tbody>
<tr>
<td>Satisfied</td>
<td>53</td>
<td>84.1 %</td>
</tr>
<tr>
<td>Not satisfied</td>
<td>7</td>
<td>11.1 %</td>
</tr>
<tr>
<td>Do not know</td>
<td>3</td>
<td>4.8 %</td>
</tr>
</tbody>
</table>

6. CONCLUSIONS AND FUTURE WORK

Ghana has become one of the successful countries much as MNP is concerned over such a short span. The vast majority of customers who have ported have remained with their new service providers, implying satisfaction with the choices they made. Singapore, the first country to introduce MNP in 1997 could not have made such giant strides in such short time duration. Even for some of the major European countries such as Spain, Holland and the UK, porting does not happen as quickly as it does in Ghana. This indeed is a landmark achievement for Ghana. The MNP has surely come to stay and will forever keep the competitors on their toes so that consumers can obtain value for money [19]. Also, the fact that the porting cost is solely borne by the network providers as against what happens in some other jurisdictions makes Ghana’s case quite unique. All these innovations notwithstanding, we can still say that the MNP launch has not changed the market indicators of the mobile industry in Ghana very much.

Future works on this research should include collecting full details of data from the mobile operators and also undertaking more comprehensive surveys of successfully ported lines and the rejected or failed lines. This will help question the conclusions of this research more thoroughly.

REFERENCES


