

Mobile Number Portability in Bangladesh, A Threat to Customer Retention



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SYNOPSIS: The research intends to identify whether MNP should be considered a threat to current market leader in the telecom industry and why mobile subscribers accept this innovative service. The researcher studied the reasons for taking this service using the primary empirical research method using 385 samples selected through snowballing. The technology acceptance model is the theoretical basis. Regression and factor analysis results show that customers accept the innovative service due to their perceived value creation, which incurs purchase intention. Perceived usefulness, perceived cost, and perceived ease of getting this service have added value creation and influenced customers' purchase intention. Future studies could be done to identify post-purchase satisfaction of customers and also the steps taken by telecom companies in Bangladesh or any other country where it is recently introduced.

Originality and value: The concept of Mobile number portability is an innovation itself in Bangladesh. Significant studies have not been done on this concern; this research will put some clarity on the situation and future direction on this area of research. This research is solely conducted by the researcher and it is an original study.

KEYWORDS: Mobile Number Portability (MNP); Telecom Industry; Innovation, TAM, Switching cost; Value creation; Retention.

INTRODUCTION

Bangladesh has an already grown telecom industry. Currently, four mobile operators are operating here- Grameen phone Ltd (GP), Banglalink Digital Communications Limited, Robi Axiata Limited (Robi), and Teletalk Bangladesh Ltd (Teletalk). The Grameen phone has the largest market share of 83.46 million subscribers out of **181.02** million. The telecom market has achieved massive growth since 2004, as soon as the mobile phone was introduced here. There was a 100% growth in the subscriber base in the year 2004, 137% in 2005, and 148% in 2006. But 2007, the growth rate started declining, and in 2010 it reduced to 10% (Kader & Salam, 2018). As a result, the total number of Mobile Phone subscribers reached 181.02 Million at the end of December 2021 (BTRC, 2021).

Mobile number portability (MNP) is the ability to change mobile operators without having to change existing numbers. MNP lessens the exit barrier for customers by eliminating one of the switching costs assumed by customers. MNP has been introduced in many countries in the world. It was initiated on October 1, 2018, in Bangladesh. Right after its introduction, mobile operators are experiencing a massive response among customers. Since its launch on October 1, 2018, within the 1st year, around 3 million users switched operators while retaining their 11-digit numbers. Mobile number portability opens a new horizon for marketers and customers. This service has been present in many countries. MNP was introduced in Singapore in 1997 and then in the UK, Netherlands, and Hong Kong two years later (Kutlu & Bogazici, 2013)

Bangladesh is the 72nd country to launch the service. Customers will be charged Tk. 50 plus a vat of 15 percent if regular porting time is used, which is 72 hours. If someone wants to do it in 24 hours, an additional BDT 100 is needed to be paid. The customers taking this service once must wait 90 days to switch again. Infozillion BD Teletech, which is a joint venture between a Bangladeshi firm and a Slovenian firm, has completed preparations for the launch (The Daily Star, 2021)

MNP covers only the Mobile Subscriber ISDN Numbers (MSISDN) number so it can affect services like SMS and MMS, outgoing and incoming calls, prepaid services, etc., as it does not change International Subscriber Mobile Identity (Siwach, 2011). However, it is important to note that with the advent of MNP, one cannot accurately identify a service provider by just knowing the mobile

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number. For example, In Bangladesh, before the implementation of MNP, GP numbers were used, to begin with, 017 or 013, Robi and Airtel with 018 or 016, Banglalink with 019, etc.

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 companies will increase. They will be forced to reduce service tariffs and improve their quality of service to maintain and improve their market share.

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

All these will definitely make it easier for customers to switch between the service providers. With the hassle-free transfer of operators, customers can choose the service providers they feel comfortable with. However, the firms here need to consider this a challenge to keep customers from switching by increasing their loyalty through various strategies. They must understand why customers leave a firm and concentrate on increasing their loyalty programs and perceived service quality. It is also noted that additional services and pricing contribute a significant role in loyalty creation or termination.

Research objectives: The primary objective of the research is to identify the factors that initiate switching so that telecom companies may take preventive or corrective measures to tackle that.

LITERATURE REVIEW

Mobile number portability (MNP) is an excellent opportunity for subscribers to switch between operators without changing numbers. It can be of three types- location portability, service portability, and operator portability (Sutherland, 2007). Initially, it was expected that mobile operators would focus on improving the quality of their service in order to create satisfied, loyal customers (Khan, 2010).

The MNP could either be donor-led or recipient-led. When the subscriber change operator through the permission of the existing operator, it is called donor-led Porting. Furthermore, in the case of the recipient-led porting, the recipient operator does everything (Ofcom, 2009). Because of the MNP opportunity, switching costs are reduced, allowing end users to make choices easily. This, in turn, forces operators to rethink their service tariffs and improve service quality (Ominike & Akpovi, 2016). Customers' switching costs are incurred while switching to a competitor's product or services, such as the opportunity costs of customers' time, effort, knowledge, services, or relationships. (Hess & Ricart, 2002). Moreover, Burnham, Frels, and Mahajan (2003) identified transaction costs, learning costs, and contractual costs as switching costs.

Though MNP reduces these switching costs, an increase in hardware and software infrastructure costs for initiating MNP happens. In addition, advertising and marketing costs also increase. (Boateng & Owusu, 2013)

It has been found that the switching cost, the interpersonal relationship, the alternatives' attractiveness, and the service's recovery affect customer retention by creating a switching barrier (M.K. Kim, Park, & Park, 2003). Other studies on customer retention have emphasized customer satisfaction and the switching barrier (e.g., Dick & Basu, 1994; Gerpott, Rams, & Schindler, 2001; Lee & Cunningham, 2001). Customers experiencing a high level of satisfaction are likely to remain with their existing providers and maintain their subscriptions. However, some found that customer satisfaction increases loyalty, but more is needed sometimes. In this context concept of the switching barrier was proposed (Jones, Mothersbaugh, & Betty, 2002). Customer satisfaction means customers' perception of the state of fulfillment and how they judge the fulfilled state (Oliver, 1997)(Moon Koo Kim, Park, & Jeong, 2004). Also, the finding that service quality is not as significant as switching cost predicts that customers may stay with their current service provider despite having low satisfaction (Habib et al., 2011; Shin, 2006).

The technology acceptance model (TAM), introduced by Davis in 1986, was based on the theory of reasoned action (Fishbein & Ajzen, 1975). The model has been designed to show how users come to accept and use technology. The theoretical basis is built on the premise that when there is a chance to use a new technology, three factors impact customers' decision regarding accepting it. The first determinant is the perceived usefulness (PU) of the new technology, the second one is the perceived ease of use (PE), and the third determinant is user attitude towards usage (PA). In case of mobile number portability, as it is a new technology in Bangladesh with its unique feature of having collaboration among the operators to coordinate and cooperate in providing more uniform service. For this, there is another thing that should be considered, and it is the cost factor associated with the use of MNP services.

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Current status of Mobile Number Portability in Bangladesh:

After introducing Mobile number portability, it has gained significant responses among subscribers in Bangladesh. Table 1 shows the existing scenario of Bangladesh's telecom industry's market structure. Table 2, on the other hand, provides the statistics of customers who already used the service for changing their operator using MNP.

Table 1: Mobile Operators and their market share in Bangladesh

OPERATOR	SUBSCRIBER (IN MILLIONS)	Percentage
Grameen Phone Ltd. (GP)	83.46	46.12%
Robi Axiata Limited (Robi)	53.67	29.64%
Banglalink Digital Communications Limited	37.22	20.56%
Teletalk Bangladesh Ltd. (Teletalk)	6.67	3.68%
Total	181.02	100

Source: BTRC (BTRC, 2021)

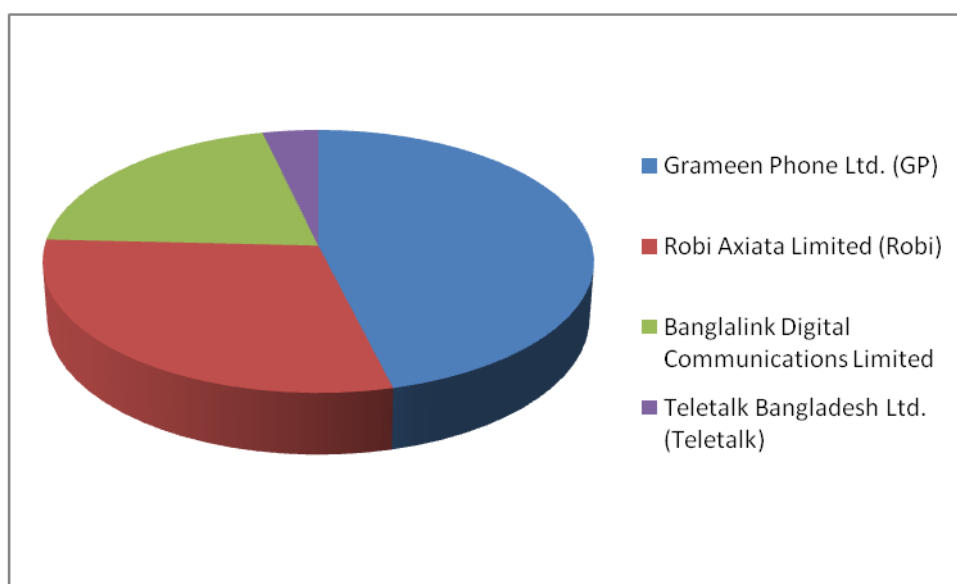


Figure 1: Telecom industry market share in Bangladesh

Table 2: statistics of customer switching from October 2018 to October 2019

OPERATOR	Joined	Left	Net Gain/Loss
Robi Axiata Limited (Robi)	4.96 lakh	1.69 lakh	3.27 lakh
Grameen Phone Ltd. (GP)	1.26 lakh	2.74 lakh	-1.48 lakh
Banglalink Digital Communications Limited	68528	2.89 lakh	-2.20 lakh
Teletalk Bangladesh Ltd. (Teletalk)	4427	8101	-3694

Source: Dailystar (The Daily Star, 2021)

After MNP was launched in 2018, within just one year time period, 6.944 lakh subscribers have used MNP to change their operator. Among those subscribers, 4.96 chose Robi switching from their previous operator. Alongside, 1.69 lakh customers left Robi. The net customer gain of Robi is 3.27 lakhs. This may indicate that there is a chance that GP might face a great challenge from Robi. It is found that, normally, the dominant GSM operator loses the most number of subscribers (Buehler et al., 2006; Samura, 2004; Levin, 2006).

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Conceptual Framework:

Based on the technology acceptance model introduced by Davis in 1989, we can prepare the following relationship of perceived usefulness and perceived ease of use along with the perceived cost of using the new technology toward the intention of using MNP service.

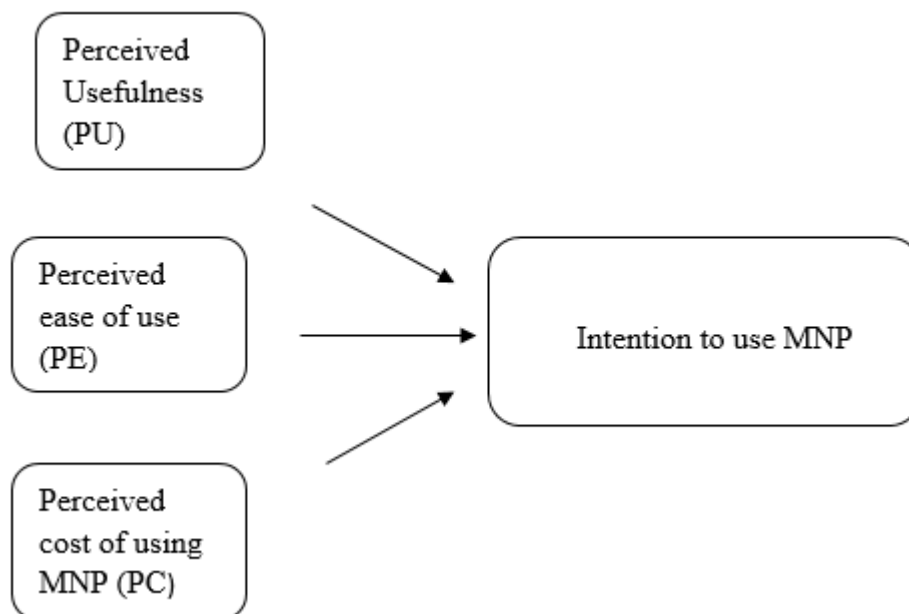


Figure 2: Conceptual model for the research

Source: Technology Acceptance Model (Adapted from Davis, Bagozzi, & Warsaw, 1989). Modified Technology Acceptance Model (Samuel, 2016).

METHODOLOGY

The research aims at studying the prospects of number portability in Bangladesh. The researcher has conducted a survey that consists of 28 questions in total. A pilot survey was administered with five end-users to revise and complement survey questions. The survey is prepared in 2 parts. The first part contains questions to obtain the respondent's background data (age, education, gender, etc.), and the second part includes questions to determine the mobile usage (number of subscriptions, usage period) of the respondent. The data for this study are gathered through conducting a survey through face-to-face structured interviews and online via Google form. The questionnaire was designed to measure the perceived usefulness and ease of using MNP and the perceived cost for it so that the usage intention could be measured. The total population taken was 181.02 million subscribers as on December 2021. The sample size is 385, according to (Krejcie & Morgan, 1970). The sample was chosen via snowballing due to the inability to collect data face-to-face during the pandemic situation.

DATA ANALYSIS AND FINDINGS

No.	Variables	Items	Reference
1	Perceived Usefulness	<p>MNP will provide more flexibility in trying several operators.</p> <p>MNP will enable me to stick to my previous number.</p> <p>MNP can enhance healthy competition among service providers.</p> <p>MNP induces better quality of service and reduced prices in the cost of calls.</p>	<p>Buehler & Haucap (2004) ; Durukan, Bozaci, & Dogan (2011)</p> <p>Park (2010)</p> <p>Shin (2006)</p>

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2	Perceived ease of using MNP service	With MNP, it takes minimal formality to port from one operator to another. Easy for anyone to use the service Switching process is easy to understand	Davis (1989) and Grefen et al. (2003) Adams, Nelson & Todd, (1992).
3	Perceived cost for using MNP	Changing operator takes minimal time Switching charge in Bangladesh is low The perceived quality of switching is very good	Olaru et al, (2008, 556)) Voss et al. (1998)
4	Intention to use MNP	I will use MNP to avail better service will port if I am dissatisfied with the current operator I will recommend others to use MNP	Roos (1999) Kim and Yoon (2004)

Table 3: Reliability analysis

Factor	Number of Items	Cronbach's Alpha Value
Perceived Usefulness	4	0.827
Perceived ease of using MNP service	3	0.800
Perceived cost for using MNP	3	0.743
Intention to use MNP	3	0.720

The first step in this analysis is to assess the reliability of the survey using Cronbach's Alpha test (Table 3). A value greater than 0.7 shows that the reliability of the questionnaire is high (Griethuijsen et al., 2014). For each set of items, the reliability of the questionnaire is greater than the acceptable range. The reliability assures the acceptability of the samples and questionnaire construction.

Table 4. Background Data of the Respondents (n=385)

Descriptive Statistics of Respondents	Frequencies			
	Gender	Male		Female
	210		175	
Age Level	18 to 28 years	28 to 38 years	38 to 48 years	Above 48 years
	44	142	136	63
Education Level	Less than or at least Undergraduate	Graduate		Postgraduate or Higher
	122	130		133
Awareness about MNP	Aware		Not Aware	
	319		66	

Table 5: Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.507 ^a	.257	.237	2.012

Predictors: (Constant), Perceived Cost, Perceived Usefulness, Perceived Ease

The regression results show that the predictors explain around 50% variation in the dependent variable, which is the intention to adopt MNP.

Table 6: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	524.327	10	52.433	12.948	.000 ^b
Residual	1514.462	374	4.049		
Total	2038.790	384			

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a. Dependent Variable: Intention to use MNP

Predictors: (Constant), Perceived Cost, Perceived Usefulness, and Perceived Ease

We know that for 10 degrees of freedom, the critical value of F is less than 1.91, which is less than the calculated value 12.498 found here. So we may infer that it is prominent that perceived cost, usefulness and ease of use have significant influence on purchase intention.

Table 7: Factor Analysis

	Component		
	1	2	3
Flexibility	.841	.000	.135
Opportunity to Use current number	.818	-.050	.057
Competitive offers	.793	-.060	-.081
Better service quality	.752	.009	-.288
Minimal formality	.049	.841	-.009
Possible for anyone	.051	.875	.039
Easy to adopt	-.240	.725	.228
Low porting charge	-.050	.481	.637
Option to switch back to the former operator	-.066	-.065	.795
Minimal time required to initiate	.019	.124	.792

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

According to the factor analysis, flexibility, opportunity to use the current number, and competitive offers are the first group of components to affect the intention to use MNP. On the other hand, minimal formality, possible for anyone, and easy adoption belong to the second group. The third group of components is low cost to avail the service, switching back, and minimal time requirement.

CONCLUSION

Mobile number portability, though quite new in the context of Bangladesh, can really arise as an important threat to prominent telecom service providers here. The opportunity that it creates for switching in and out of the current service provider is actually making it very attractive to the customer. Whenever a customer feels dissatisfied, he or she may decide to take up this service, and this will make companies struggle harder to retain existing customers. The bright side is that MNP can make it necessary for firms to compete in identifying and stressing service innovation in the telecom industry of Bangladesh (Buehler & Haucap, 2004); (Durukan et al., 2011). However, Shin (Shin, 2006) also MNP aids in creating an equal playing field and encourages the entry of new mobile operators. Existing firms like Grameen phone Bd or Robi can use this MNP as a necessitating service not only for getting new customers but also to look into identifying gaps in their service to avoid customer switching. They can identify new services or offers that might engage customers more positively toward their brand and services. MNP offering offers that can outrun the competitors can keep current customers as well as get new ones (Boateng & Owusu, 2013). Future studies can be attempted to assess the customer satisfaction of MNP and also the issues faced by the telecom industry regarding this.

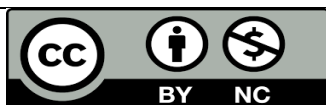
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