



RESEARCH ARTICLE

The Implications of Switching Barriers on Subscriber Retention in Developing Economies

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Abstract— Issues of retention have become very complex and challenging for mobile network operators in developing economies. Fierce competition and growing customer expectations have made it increasingly difficult in recent years for mobile network operators to retain their subscribers and maintain them profitably. The situation is exacerbated with the introduction of mobile number portability (MNP) in 2011, as mobile network operators in Ghana face rising subscriber churn, because subscribers have more flexibility to switch mobile networks. As a result, it becomes critical for service providers to improve their retention strategies. Switching barriers refers to any factor that makes it costly or difficult for a subscriber to change his/her service provider and this research contributes towards a better understanding of their nature, dimensions and effects on subscriber retention in a developing economic mobile telecommunications industry. Switching barriers studied were the switching costs and attractiveness of alternatives. Three factors of the perceived switching costs identified were learning cost, search costs, and uncertainty cost. Data was collected through questionnaires from amongst 400 target pre-paid subscribers in Accra. Each research question was measured on a 5-point Likert scale. The findings of the research reveal that switching barriers have a negative effect on subscriber retention in Ghana because subscribers have a low perception of switching costs. That is, they don't perceive any costs associated with switching, and also there's a high perception of viable alternatives, which poses as threats to substitutes amongst the mobile operators.

Keywords— Switching Barriers, Subscriber Retention, Developing Economies, Customer Retention, Mobile Network Operators

I. INTRODUCTION

The surge in service providers and the numerous offerings available in the telecommunications markets has necessitated various investments and the deployment of subscriber-driven initiatives that seek to understand, attract, retain, and build intimate long-term relationships with their subscribers [1]. Mobile network operators have come to the realization that customer-centric innovative offerings are paramount in doing business in the current millennium dispensation. Through these novel and innovative services, the service providers are pre-disposed to appreciate and meet the ever-changing needs of their customers.

Customers today are increasingly impatient, very demanding, tech-savvy and less forgiving [2]. They demand for more, better, faster, and yet, reasonably priced products and services that are innovative and personalized [2] [3]. Prior studies conducted on the topic of customer retention, show that while older subscribers tend to be more loyal to their mobile operators, younger subscribers are used to shopping around;

driven by factors such as best pricing plans, best network performance, and number portability [3]. The prevalence of competitive alternatives, often at relatively cheap prices, increases the challenges facing mobile operators to satisfy their subscribers [4]. Nevertheless, mobile service providers ought to be creative as well as investing huge sums of money into meeting subscriber's needs and expectations.

Subscribers in developing economies are peculiarly saddled with uncertainties, such as fluctuating currencies and associated income levels, lack of information, socio-technical effects of direct importation of telecoms solutions and offerings [5] [6]. Yeboah-Boateng [5] posits that developing economies, have adapted ICTs for their developmental goals, and are utilizing the opportunities presented to improve the way they live, work and play. The implications of usage of ICTs in developing economies is phenomenal.

a. Status of Mobile Telecommunications in Ghana

There are six mobile operators in Ghana namely: MTN, Glo, Tigo, Vodafone, Airtel and Expresso. These operators not only supply the basic mobile voice services, but also offer value-added services such as data and multimedia. According to the June 2014 telecommunication voice subscription trends report released by the regulator (NCA, 2014), MTN dominates the market with 13,438,770 (45.99%) subscribers. Vodafone follows in second position with 6,678,141 (22.85%) subscribers. Tigo comes in third position with 4,034,563 (13.81%) subscribers. Glo and Airtel have 1,570,282 (4.69%) subscribers and 3,570,282 (12.22%) subscribers respectively. Expresso comes in sixth position with 127,505 subscribers (0.44%).

Glo was the last mobile network to enter the Ghanaian mobile market in 2012. Before its arrival, the market was shared among MTN which had 10,156,112 subscribers (48%); Vodafone, 4,275,521 subscribers (20.2%); Tigo, 3,921,754 subscribers (18.53%); Expresso, 191,779 subscribers (0.88%) and Airtel, 2,625,705 subscribers (12.4%). However, despite the high entry barriers and challenges faced when entering the Ghanaian mobile market, Glo was able to chip off some of the market share of each of the five mobile networks to build up its subscriber base by means of promotions, advertisements, innovative pricing-plans and bonuses such as: "Biiiiiig 5", "Zero balance bonus", "Good Day Ghana", "Glo Gista". This clearly indicates that mobile network operators in Ghana do not set high switching costs or barriers to prevent their subscribers from switching. As a result, these latter are easily taken away by the attractive offers of the rival firms.

The NCA, through several actions, has contributed to the reduction of switching costs perceived by subscribers. Examples of actions taken by the regulator include: the introduction of mobile number portability (MNP) in order to reduce the costs (time, effort and money) associated with informing friends, family members and relatives about the new number. Another action taken by the regulator and which is anticipated to be implemented in early November 2014, is the harmonization of short codes aimed at reducing the costs of learning new short codes every time a subscriber switches [7].

b. Problem Definition

Customer retention is critical for the growth and profitability of any organization. Efforts at customer retention are geared towards ensuring that continuous purchase and up-sales of products and services. That notwithstanding, customer retention becomes complex and cumbersome in a competitive environment, as with the mobile communications sector. In a related development, the availability of various products and services drives subscribers to think that there is always something better; therefore enhancing their curiosity and expectations [2]. Furthermore, one of the biggest challenges faced by mobile network operators is subscriber churn. When a subscriber switches from one mobile network to another, mobile network operators are negatively impacted because they lose revenue, market share, and it also delays their return on investment. Moreover, since 2011, when the NCA introduced the MNP, mobile network operators face rising subscriber churn. As a matter of fact, a recent report released by the regulator shows that three years after the introduction of mobile number portability, over 1,6 million subscribers have successfully ported their numbers. As a result, it becomes critical for mobile network operators to improve their retention strategies. A way by which they can achieve that is by identifying the factors that could prevent their subscribers from switching and strategize to effectively lower their subscribers churn rate.

The foregoing has been a preamble to the study. The next section reviews relevant literature on switching barriers, its characteristics and different types. The methodological approaches adopted are then examined. The results and findings of the study are presented to show the implications of switching barriers on mobile telecommunications subscribers retention in developing economies. Finally, the implications arising from the study are also offered and conclusions are drawn.

II. SWITCHING BARRIERS

A. Defining Switching Barriers

Switching barriers refers to the difficulty of switching to another provider that is encountered or perceived by a subscriber who is dissatisfied with the existing service. Switching barriers also include the effects of the financial, social and psychological burden felt by a customer when switching to a new mobile network [8] [9]. According to literature, switching barriers are made up of switching costs, and attractiveness of alternatives.

Switching costs are the costs that are incurred or perceived by subscribers as factors which make it difficult for them to change mobile networks [10]. Switching costs are not only financial. They can also be procedural, relational, and psychological.

B. Types of Switching Costs

The type of switching costs prevalent in a particular market, especially in developing economies, are dependent upon some socio-technical factors in that jurisdiction. In some cases, switching costs are tangible and relatively easy to measure, and can sometimes be precisely quantified. Though there is no standardized categorization of switching costs, the following types of switching costs can be useful in analyzing competition in mobile telecommunication markets [11].

Search costs: refer to customer perception of time and effort needed in finding and gathering information on any new appropriate service provider when switching. Mobile network operators offer many services with different quality and pricing plans. As a result, it can be time consuming for subscribers to search and evaluate the different mobile networks in the marketplace along with their quality of service and tariffs. For example, in deciding whether to change mobile network, a subscriber can search for alternative mobile networks, the quality of service on these mobile networks, whether there are lower-priced plans and/or subsidized devices available, and whether there are promotional pricing plans available to cover some or all the costs of switching from another mobile network [11]. If subscribers perceive that the search costs are high, and will be incurred whether or not they switch, that may be sufficient reason not to undertake the search, making their current mobile network the default [11].

Learning costs: refers to the customer perception of time or effort in learning, or getting used to a new product or service. According to [10], the complex a firm's products/services are, the more time/effort customers have to invest in order to learn how to use it. As a result, the time and effort spent in learning how to use that product/service has become a sunk cost that will be lost if a customer switches to another product/service. In mobile telecommunications, the only learning cost associated with switching is learning the short codes of the new mobile network. Due to the substantial differences in the services and short codes offered by mobile network operators in developing economies, there could be considerable learning costs associated with switching from one mobile network to another. According to [11] however, subscribers of mobile telecommunication services face little to no learning costs due to the similarities of the services offered by mobile network operators and also the simplicity of the short codes.

This study maintains that there is a learning cost associated with switching in developing economies. For instance, in Ghana the basic re-charge or top-up of prepaid units amongst the network operators requires different short-codes; e.g. *123*rechargePIN# is required to recharge in Vodafone Ghana, whilst Airtel Ghana requires *134*rechargePIN#; similarly, credit balance enquiry requires *122# from Vodafone, *124# from MTN Ghana and *133# from Airtel Ghana.

Uncertainty cost: refers to the customer's perception of risks associated with changing mobile networks. These risks arise because customers are reluctant to change from a mobile network of known quality, and convenience to one which is unknown [11]. Uncertainty cost is also tied to other cost such as search cost [12]. An increase in search cost may decrease uncertainty cost. In other words, the more a customer research about a product, service or a firm, the more certain, convince he/she is regarding the performance of the product, service or firm he/she intends to switch to [12].

C. Attractiveness of Alternatives

Ping [13] defines attractiveness of alternatives as the customer estimation of the likely satisfaction available from an alternative relationship. In order to attract new subscribers, mobile network operators have to give them incentives to switch which can be in terms of low tariffs, attractive promotions, good customer service etc. Many studies have shown that perceived alternative attractiveness is directly and positively correlated with exit, whilst it is negatively correlated with loyalty [14]. In other words, the more appealing an alternative is, the higher the probability that customers would switch; and the less attractive an alternative is perceived, the higher the probability that customers will stay.

This is substantiated in theory by the Five (5) Forces model [15]. The threat of substitutes for a mobile network service, here, is necessitated by an attractive costs of switching and a perceived quality anticipated. In

essence, the less costly and easier it is to switch, implies that the substitute offers (or poses) a threat of alternative to that service [15].

III.METHODOLOGY

A. Research Design

A cross sectional survey design was adopted to identify the effect of switching barriers on subscriber retention in Ghana, the case developing economy. The population comprised pre-paid subscribers of mobile telecommunication services in the capital city, Accra, which approximates to 3,835,246. A non-probabilistic sampling technique; convenience sampling was used to select 400 target samples from the study population.

B. Research Approach

A structured questionnaire was used to collect the required primary data from the mobile phone users. The questionnaire consisted of two sections. Section A elicited respondent’s demographic characteristic such as age, gender, highest educational background, mobile network used and duration with mobile network. Section B comprised questions on search cost, uncertainty cost and learning cost which were adapted from [16].

C. Data Collection & Analysis

The survey was conducted through face-to-face contact with mobile phone users. In all, 400 copies of the questionnaire were distributed but 385 (96.25%) copies were retrieved and used for analysis. The variables used to measure the influencing factors (search cost, uncertainty cost and learning cost), using the 5-point Likert scale were re-coded as follow: 5=Strongly agree, 4=Agree, 3= Neutral, 2=Disagree and 1= Strongly Disagree

The data analysis was done using Microsoft Excel 2013. Descriptive statistics were used to analyze the collected data, which involved the computation of frequency distribution, and cross tabulations. The use of frequency distribution was to tell how many respondents answered the survey question in a certain way. It also showed the number (and percentage) of respondents who approve (and disapprove) of certain survey questions. The use of graphical summaries of descriptive statistics also helped to describe various sets of data through descriptive measures, such as bar charts.

IV. RESULTS & ANALYSIS

In this section, we present the results and analyse the findings inferred from them in accordance with key research objectives.

A. Effects of Learning Costs on Subscriber Retention in Developing Economies

The key determinant is whether or not time and effort needed to learn an operator’s short-codes could be a factor in switching networks. How much time and effort does it take to get used to the short-codes of new network operator?

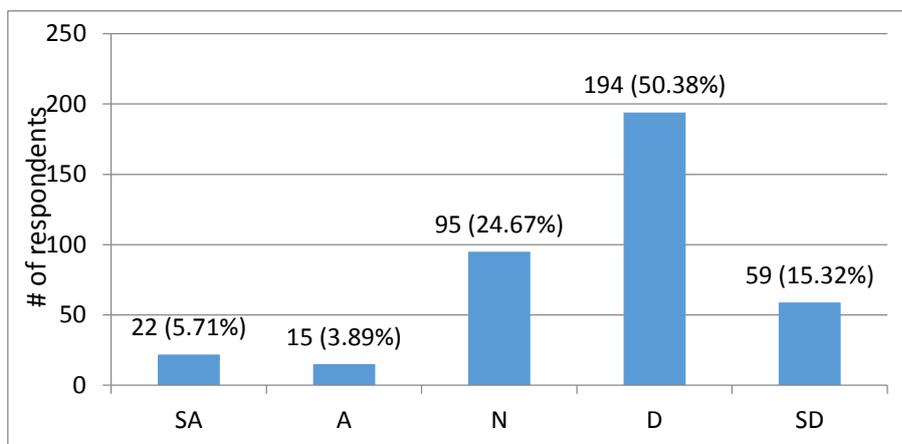


Fig.1: The Effects of Learning Costs on Subscriber Retention (*source: Field survey, June 2014*).

The figure above depicts the responses of subscribers regarding their perception of learning cost. It shows that, 253 respondents (i.e. 194 disagrees and 59 strongly disagrees) representing 65.71% of the total sample size,

did not perceive any expenditure of time or effort, in getting used to a new mobile operator. 95 respondents representing 24.67% of the total sample size were uncertain or neutral regarding the time it takes to get used to a new mobile network. However, 37 respondents representing 9.6% of the total sample size perceived some expenditure of time and effort in getting used to a new mobile network. These results indicate that learning cost has a negative effect on subscriber retention. In other words, a reason why subscribers switch mobile networks, is because they do not incur any high learning costs.

As switching cost increases, there is high cost and risk for subscribers, which tends to cause them to stay with the default or incumbent service provider [8]. Conversely, there’s high retention rates when switching cost is minimal, even in the face of poor service quality and delivery.

B. Effects of Search Costs on Subscriber Retention in Developing Economies

Here, subscribers were probed on the time required to search and/or compare the tariffs and services of a competing network provider, before switching. How demanding in terms of time, would it be required to compare the one’s current services and tariffs with a competing provider prior making a switching decision?

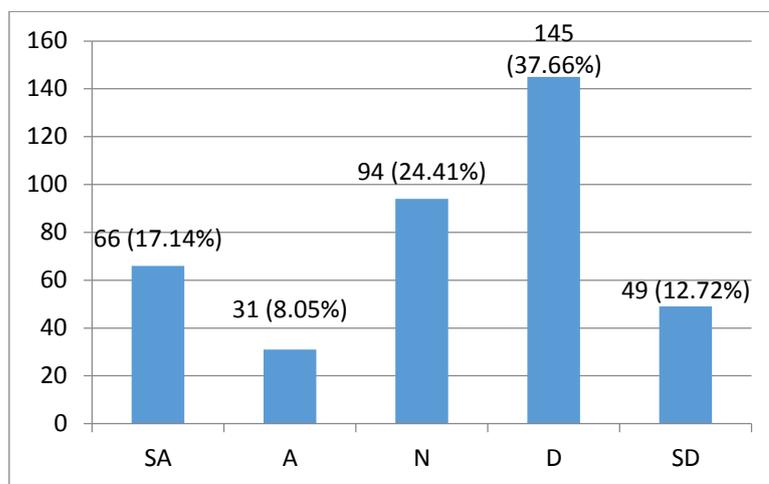


Fig. 2: The Effects of Search Costs on Subscriber Retention (source: Field survey, June 2014).

The figure -2 above depicts the different responses obtained on the perceived search and evaluation cost. It shows that, 194 respondents representing 50.38% of the total sample size don’t find it time consuming to search for and compare the pricing plans of the different mobile carriers prior to switch. 94 respondents representing 24.41% of the total sample size were neutral while 97 respondents representing 25.19% of the sample size said it would be time consuming for them to search for such information. These results indicate that search cost has a negative effect on subscriber retention. In other words, for majority of subscribers in developing economies, the process of searching for a new mobile network is not a time consuming task. This result is in line with past studies conducted in the United States and in Europe which found that subscribers in these areas use the search capabilities of the internet to reduce their search costs, especially “comparison shopping sites” that enable consumers to compare coverage areas, service qualities and price offerings of several mobile networks in one place [11].

C. Effects of Uncertainty Costs on Subscriber Retention in Developing Economies

Here, we ascertain the perceived uncertainty costs associated with switching to new service provider. What is the extent of subscriber reluctance to switch mainly due to lack of knowledge on the new provider’s quality of service and any associated inconveniences?

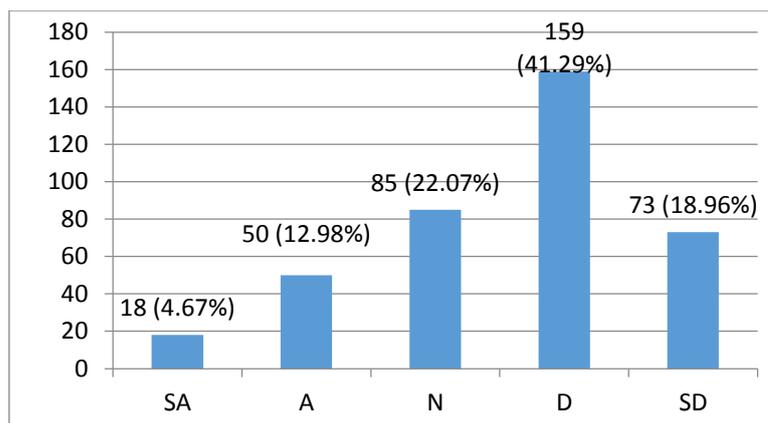


Figure 3: The Effects of Uncertainty Costs on Subscriber Retention (*source: Field survey, June 2014*).

This chart shows the subscribers perception of uncertainty costs. As can be seen on the chart, 232 respondents representing 60.25% of the total sample size disagree to the statement that switching their mobile networks would result in a loss of quality and convenience. 85 respondents representing 22.07% of the sample size were neutral while 68 respondents representing 17.66% of the sample size agreed that switching mobile network would result in a loss of service quality and convenience. These results indicate that uncertainty cost has a negative effect on subscriber retention. In other words, subscribers do not perceive that changing mobile network would result in a loss of convenience or service quality. This result however diverges from a study conducted in the U.K which found that uncertainty cost is a very serious barrier to subscribers [11].

D. Effects of Attractiveness of Alternatives on Subscriber Retention in Developing Economies

Here, we examined the ease of switching to alternative and competing service providers, either based on knowledge of the provider’s delivery and quality or the perceived attractiveness as a substitute for the current service offerings. So, what is the extent of switching due to perceived attractiveness of alternatives or threat to substitute?

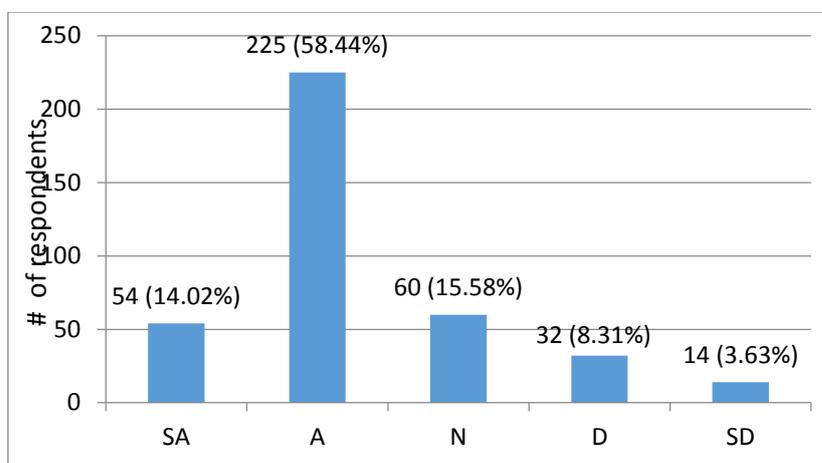


Fig. 4: The Effects of Attractiveness of Alternatives on Subscriber Retention (*source: Field survey, June 2014*).

This figure -4 depicts the subscribers’ perception of the attractiveness and viability of the competing mobile networks in the marketplace. The figure shows that, 279 respondents representing 72.46% of the total sample size perceive competing mobile carriers as a good replacements to their mobile networks. 60 respondents representing 15.58% of the total sample size were neutral; and 46 respondents, representing 11.94% do not perceive competing mobile carriers as attractive or viable. These results indicate that subscribers in developing economies perceive viable and better alternatives in the marketplace. That perception has a negative influence on subscriber retention in the sense that it gives them a very good incentive to switch.

E. Validating the Results & Findings

Here, we use the Chi-square test statistic to validate the results, to ascertain whether or not the results, and by extension the findings, were statistically independent or otherwise. In order to ascertain that the findings deduced from the results were not due to pure chance, the Chi-square statistic tests was applied on the data [17]. The results for a significance of 0.01, at the degrees of freedom (DF) of 12, were as follows:

- Pearson's Chi-square, $\lambda^2 = 557.56$ with p-value = 0; and
- Yate's Chi-square, $\lambda^2 = 548.525$ with p-value = 0.

The critical value at the significance of 0.01 (from Tables) is 3.571. Now, since $\lambda_{990}^2 \square 3.571$, it is inferred that the findings were not due to chance and are therefore statistically significant.

V. CONCLUSION

The findings of the research show that switching barriers have a negative effect on subscriber retention in developing economies, especially in the Ghanaian mobile telecommunications industry. In other words, subscribers can switch from one mobile network to another without incurring any high costs. This effect can be explained by the fact that first, the introduction of mobile number portability (MNP), which allows mobile phone users to change their mobile network while keeping their same mobile numbers, has reduced consumers switching cost to some great extent. Secondly, the three switching costs studied in the research, namely search cost, learning cost and uncertainty cost, were not perceived as such by subscribers in Ghana. Thirdly, due to the fierce competition among mobile network operators, subscribers perceive rival mobile networks as attractive, and therefore, poses high threats of substitutes to each other. In other words, their estimate of the likely satisfaction available from other mobile networks is high. All these factors together strongly and negatively influence the development of loyal subscribers.

Further research work will be focused on post-paid subscribers and also the effect of mobile number portability on the viability and profitability of mobile network operators in Ghana.

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