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The influence of satisfaction on customer retention in mobile phone market

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ABSTRACT

This study examines the determinants of customer satisfaction and customer loyalty in the Peruvian mobile phone market. Based in a survey to 1259 customers, Multinomial Logit and GSEM estimations show how determinants of customer satisfaction can be assessed when satisfaction is measured through ordered categorical data. The results confirm that in mobile phone market Customer Satisfaction influences strongly on Customer Loyalty, and in turn Loyalty is an important determinant of Customer Retention. In contrast with previous literature, this study identified the differentiated influence of diverse factors on positive and negative customer satisfaction categories. Indeed while results show that quality of service assessments made by customers had a significant impact on both negative and positive customer satisfaction categories; assessments of other service attributes like customer care, information on tariffs and plans and billing clarity, only showed a significant statistical influence on positive categories of customer satisfaction. Similar asymmetrical results were found with regard to other economic, socioeconomic and geographical determinants of customer decisions. As well, an analog effect is also observed in the relationship between customer satisfaction and loyalty, where only positive satisfaction assessments helps to explain the loyalty of users. Finally, results show that while satisfaction can be identified as a powerful cause of CR, switching barriers did not deter more demanding customers to switch to alternative carriers, suggesting that recent pro-competition regulatory reforms implemented in Peru contributed to reduce these barriers to competition in mobile markets.

1. Introduction

There is a broad consensus in that the outstanding expansion of mobile services in emerging countries during the last decade, has delivered important benefits to their citizens in terms of improved connectivity, social integration, access to markets and public services, among many others.[2] This growing trend in mobile services, however, has been accompanied by an increase in the number of complaints as well as of public demands for a more active protection of customer rights in this sector.[3] This seemingly paradoxical result has raised concerns not only from mobile operators who seek to adequate their infrastructure, networks and services to these major demands but also from regulators who are interested to improve public perception on regulatory system. The relevance of these topics in a context of increasing competition, contribute to explain why customer satisfaction (CS), its determinants and their impact on customer retention (CR) rates of mobile operators have become an important topic in the current research agenda.

During the last years, a number of studies addressed the assessment of the determinants of CS in mobile services in emerging economies (see, for instance, Khan (2012), Leelakulthanit and Hongcharu (2011), Vranakis et al. (2012), Haider Ali Shah et al. (2013), Omotayo and Abolaji (2009)). These studies as well as others applied to developed countries (see, for example Turel and Serenko (2006), Martensen et al. (2000), Gerpot et al. (2001), Gijón et al. (2013)) have focused on the influence of different factors considered as determinants of CS. A common objective in these studies was not only to assess the determinants of CS but also to test the relative influence of CS compared to other factors like switching barriers, on loyalty and retention rates of mobile carriers. This topic is of special relevance in countries like Peru that recently adopted regulatory policies oriented to foster competition and to remove barriers to competition.

Despite this increasing interest CS in mobile phone markets, the discussion on how satisfaction and their determinants are measured has been relatively scarce. The widespread use of assessed categorical variables in the measurement of CS or other related variables requires to identify either the quantitative or qualitative nature of this variable and to define a proper statistical treatment. The aim of this study is to

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[2] For an illustrative analysis of the effects of growth of mobile services on poverty and inequality in developing countries, see James (2016).

[3] See, for instance, Consumers International (2014).

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assess the determinants of CS and their influence on customer switching decisions in Peru. However, in contrast with previous work, this study tests whether determinants of either positive or negative customer satisfaction assessments are the same, and if their impact is uniform or symmetric among different levels of satisfaction. At the same time, the relative impact of negative and positive satisfaction assessments on customer loyalty is assessed. It is important to note that while in developed countries, a strong and robust relationship between CS and CL in mobile phone market has been documented (Gerpot et al., 2001; Lee et al., 2001), in the case of developing world the evidence regarding this association is mixed (Morgeson et al., 2015; Omotayo and Abolaji, 2009; Lőrincz and Nagy, 2010). This study seeks to shed light on the nature of the relationship between CL and CS in a developing country like Peru. Furthermore, differentiating among positive and negative assessment of CS measured through categorical variables permits to provide a more precise picture on what are the factors that actually influence loyalty and CR. This analysis it is also important from a regulatory view whenever permits to assess the potential effectiveness of the recent pro-competition measures implemented in Peruvian market.

The following section presents a brief review on the literature on the determinants of CS and switching costs and their influence on CL and CR. The third section describes the recent evolution of Peruvian mobile phone market and the regulatory measures implemented for promoting competition. The fourth section presents the methodology and results including a brief discussion on the logit family of models and the results. Finally, we include some concluding remarks.

2. Determinants of customer satisfaction and retention

2.1. Determinants of CS

According to Anderson et al. (1994, p54), CS can be defined as an overall evaluation based in the purchase and consumption experience made by the customers of a good or service over time (for a conceptual review see Yi (1989)). CS has been considered by the literature as a result of diverse factors that arises from the consumption experience. For example, the American Customer Satisfaction Index (ACSI, see Fornell et al. (1996)) conceives CS as a consequence of the interaction of Perceived Quality (PQ), Perceived Value (PV) and Customer Expectations on the product or service purchased. PQ is considered an indicator which reflects the direct and immediate perception of customers of one or more key service characteristics perceived by customers and differ from CS which accounts of an overall assessment of consumption experience. PV measures the relationship between the price of the service and PQ. A variation of the ACSI model, consist of the European Customer Satisfaction Index (ECSI, see Eklof (2000)) which among other aspects, adds as a precedent of CS the variable Image (I) which represents the corporate image of the company. Both ACSI and ECSI models sustains that a positive relationship between CS with PV and PQ it is expected.

The above mentioned model has been tested and confirmed for the mobile phone market both in developed (Turel et al. (2006) presents results for Canada) and developing countries (Vranakis et al. (2012) for Greece, Leelakulthanit and Hongcharu (2011) for Tahiland and Kuo et al. (2009) for Taiwan). A comparative study of Morgeson et al. (2015) applied to Barbados, Singapore, Turkey, the United Kingdom, and the United States, finds that in the case of developing countries, PV is relatively more important than PQ in explaining CS while in the case of developed countries this result is inverted.

Other hypothesis regarding variables that determine CS in mobile phone services as customer care, network quality, assessment of prices, personal benefits, billing and informational quality, among others, have been tested by the literature. Table 1 summarizes the main findings from the most recent studies.

In all the studies described in Table 1, CS is considered as a one dimensional variable and no distinction is made among factors that can influence increases or decreases in CS. However, studies applied to other markets, have found evidence that satisfaction and dissatisfaction can be considered as two different constructs influenced by distinct factors (see for example earlier studies of Swan and Combs (1976) or Maddox (1981)). Indeed, the empirical relevance of some factors or attributes of the services in explaining CS may not be symmetrical in the sense that can influence in the same way either satisfaction or dissatisfaction. For example, customer care can be important for avoiding dissatisfaction but nor for influencing satisfaction. At the same time, quality of service could be important for explaining both satisfaction and dissatisfaction.

These considerations are even more important when the measurement of CS is based in assessed categorical variables, like Likert scales. Section 4 presents two different methodologies that permits to account for determinants of assessed categorical variables.

2.2. CS and the determinants of retention

Even when the relationship between CS and firm's profitability may not always be positive in the short term because of the existence of diminishing returns of improved quality on satisfaction (as argued by Anderson and Sullivan (1993)), studies have documented the existence of a long run positive relationship between CS and company's financial performance (see Anderson et al. (1994)). The central idea is that CS increases loyalty of customers, which reflects in their intention of repurchase or remain consuming the service provided by the same operator; i.e. Customer Retention (CR). This relationship between CS, CR and companies' profits explains the growing interest of marketing researchers on the determinants of CS. As well, CS has also became a key performance indicator for regulators whose policies have been oriented to the removal of switching barriers, the promotion of competition and the improvement of customer perception of the regulatory system.

However, in the short run, companies can find alternative ways to retaining customers. One of the most commonly discussed strategic conducts in telecom markets consist of the creation of switching barriers. For example Kim et al. (2004), finds evidence on the impact of switching barriers in retaining customers in the South Korean mobile market, even with low levels of satisfaction. Switching barriers can be either exogenously or endogenously determined. A notable example of exogenous switching barriers in mobile phone market is the cost of losing the phone number, under the absence of a portability regime (see for example Gerpot et al. (2001)). Endogenous switching barriers are those that can be implemented deliberately by operators through the use of technology (for example, the *sim lock* configuration of mobile terminals), or contracts (through high penalties imposed to contract termination), among others.

Some studies applied to mobile phone markets in developing countries (see Omotayo and Abolaji (2009) and Lőrincz and Nagy (2010)) confirm the importance of switching barriers as well as CS (through their impact on CL) as determinants of CR.[4] The main policy implication of these studies is that there exists a scope of fostering competition in mobile phone service market through the elimination or reduction of switching barriers. Peru recent experience shows a good example of such regulatory reforms.

3. Recent developments in the Peruvian mobile market

As in other emerging economies, Peruvian mobile market has experienced a drastic growth during the last decade, passing from 8.8

[4] These studies' conclusions differ from Morgeson et al. (2015) results who found a systematically lower relationship between CS and CL in developing as opposed to developed markets. They attributed it to an "income effect," where exogenous variables often impact the ability to remain loyal even in situations of high satisfaction.