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Abstract of Doctoral Dissertation

The Antecedents of Customers' Switching Behavior in Telecommunications Markets

情報通信市場における顧客の選択行動の
要因に関する研究

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Economics and Social Impact Analysis of Telecommunications II

The sharp increase in telecommunication services in the past decade has led many researchers to investigate the trends of adoptions of these services by customers since telecommunications has been thought of as a major driver for economic growth. Therefore, consumer adoption of telecommunication services has received considerable attention. With the sector becoming more mature and with more suppliers and services available for consumers, several issues beyond typical adoption behavior become of major concern. In particular, it was recognized that in the telecommunication services sector consumers have displayed a strong tendency to remain with the status quo service provider for extended period of time even when switching can increase economic efficiency in the market. In spite of the richness of literature that has been written on this phenomenon from perspectives of various research fields, the study of switching behavior in the telecommunications industry has received limited attention from researchers, partly because studies in telecommunications have been focused on adoption behavior in the pre-saturated phase and also because the social welfare benefit of switching were not apparent in the initial stage of diffusion of these services. This in turn means that there was major deficiency in the theoretical framework for evaluating switching behavior and decision making process in the case of switching between services or services providers in telecommunications markets.

The aim of this thesis is to investigate the reasons behind the lack of switching behavior in the telecommunications industry. Consumers' switching to more efficient services, increases the total welfare and can lead to higher economic efficiency in the market. The thesis will underline the economic and non-economic psychological antecedents of switching where there is an evident potential benefit of switching in the telecommunication markets. The thesis emphasizes the prospect of psychological barriers which results from, familiarity of consumers with their current service and the lack of familiarity with the alternatives in explaining the lack of switching behavior. The empirical studies performed, estimate relations between antecedents of switching behavior. The goal of the studies performed within this thesis is to propose significant factors which influence switching behavior.

As hypotheses and models proposed in this study integrate constructs from consumer behavior models with constructs that are brought from recent studies in behavioral sciences, this thesis is advancement in consumer behavior research. The results provide a clearer understanding of consumers' switching behavior; this is mainly due to the additional insight acquired from applying the combination of classical and behavioral approaches. More specifically, in addition to well investigated economic determinants, this study has found that the 'psychological factors' that were introduced from the precepts of behavioral economics play a significant role in consumers' behavior in the telecommunication markets. In addition to better understanding of poor switching behavior among users of telecommunication services, the output of this thesis suggests major implications on managerial levels for regulators and suppliers alike. The thesis diagnoses factors that limit transition between services or suppliers. Therefore, the results will be valuable input for marketing and strategic approaches followed by managers in telecommunication sector on how to promote their services. The studies within this thesis propose "do's" and "don'ts" for managerial decision making and suggest, where applicable, some recommendations for regulatory bodies based on the tendencies of customers to switch or remain with the incumbent service or operator.

The first case study in the thesis elaborated on the antecedents evident in classical theories of consumer behavior. In particular, this case intended to confirm that customer value, satisfaction and switching costs are major constructs in switching behavior. The study was performed in the context of users switching to alternative mobile service provider called

mobile virtual network operator (MVNO). The virtual operators do not own license or full telecommunication infrastructure but they buy, at whole sale discount price network capacity from Mobile Network Operators (MNO) and resell it to end users after adding value such as brand appeal, packaging or other extra services on the top of the traditional service. Incumbent operators viewed these new operators with different perspectives. Some viewed these new services as a potential way for the incumbent to participate in unattended markets or promote 3G services using the MVNO's strong brand name; while others perceived MVNOs as a threat that may compete over the same segment of customers. A considerable number of studies have investigated the relationship between incumbent operators and these new type of operators; on the contrary, little has been done to understand users' views and their movement from using incumbent's services to MNVOs'. Therefore it was important to study the customers' perception of these services. In other words, the aim of the study in this chapter was to analyze what are the important factors that determine the attitude of consumer toward MVNO services. The study confirmed that lack of customer value with the incumbent operator (MNO) is a main reason to potential adoption of MVNO services; furthermore, switching facilitators such as lack of switching costs has also significant relation toward the potential adoption of MVNO services.

Classical theories explaining behavioral intentions have limitations, because they do not account for the psychological barriers facing customers. The aim of the second case study is to elaborate on the importance of the psychological factors influencing switching behavior due to the commitment of customer to his/her incumbent service, or a particular mode of service provision. To illustrate the significance of these antecedents of consumers' switching behavior this study proposes a model of switching behavior of customers from flat-rate to metered rate payment of internet broadband service. Switching to a metered type pricing system promises significant reduction in economic inefficiency of broadband industry. The model is based on theories of switching behavior in service industries and includes factors that represent psychological inclination of consumers toward flat-rate (such as risk aversion and loss aversion). The result of this research shows that even when consumer is presented with an economic incentive for switching, psychological barriers will limit his/her switching process. As a conclusion, this study confirms that in the context of switching to a discount service, psychological barriers resulting from familiarity and assurance of incumbent service are significant in explaining lack of switching behavior of customers.

The aim of the third case study is to investigate the antecedents of switching behavior in the context of customer's perception of available alternatives. This study therefore addresses a stressing issue in today's information era that is caused by an overload in the amount of information regarding the alternative services and products often leading to confusion and decision avoidance. This study acknowledge that availability of information on alternative packages is important in switching behavior, however it stresses that fact that exposure of customer to wide assortment of alternatives will create psychological barriers that limits the switching process. In particular, anticipated regret and decision avoidance are consequences for such a scenario and they are significant antecedents for lack of switching. The empirical study in this third case was performed to understand the lack of switching behavior in the broadband telecommunication industry. Reports suggest that few customers undergo switching of broadband services after adoption even when better alternatives become available in the market for cheaper prices. Economic constrains and benefits play an important role in such behavior, however this study suggest that, psychological barriers (e.g. anticipated regret) resulting from confusion among available market products and intrinsic desire to avoid decision, drift consumer decision towards lack of switching.

This thesis illustrates major antecedents for the lack of switching behavior in the telecommunication markets. The thesis does not nullify existing consumer behavioral models which focus on the economic benefit of switching in determining consumer intention. However the models in this thesis extend upon previous models to include psychological constructs that play a significant role as antecedents of switching behavior. Economic considerations (including financial switching costs) were found to be consumer's biggest concern in developing an attitude toward an alternative service provider. These concerns were less evident when faced with a decision to change the service with which he/she developed strong psychological bias. Therefore, this thesis demonstrates and reveals how the psychological factors constrain the economic incentive of switching. Furthermore it concluded that the perception of the overall assortment of choices by customers is significant in determining switching behavior. As a result, future research should consider the context of switching and include both economic and psychological antecedents, as an integral approach in modeling switching behavior. Hence, researchers should understand the type of psychological commitment between the consumer and his/her incumbent service to better predict the consumer switching behavior.

A remarkable finding in this research indicates that psychological bias may significantly influence decision making and could subdue the impact of economic benefit for switching (as shown in the preference of flat rate pricing over metered rate). This type of bias leads to congestion and overall welfare loss. Therefore internet providers may need to be involved in the network management and reduce loss through distinguishing services to consumers as to rationalize demand by customers. This research also showed that economic switching costs is an amplifying factor for lack of switching since it directly impacts the psychological barriers of switching such as selection difficulty and anticipated regret. Selection difficulty among a variety of different choices is a consequence of over-customizations among services which makes it harder for the consumer to select the optimal service for him/her. This implies that companies may be required to improve their presentation of prices and services in such a manner to make it easily comparable to facilitate switching. Furthermore, this research confirmed the role of educating consumers of the opportunities for switching and their psychological biases. This will contribute toward overcoming the tendency of consumer to elongate incumbent state when better alternatives are available in the market.

List of academic achievements

Category (Subheadings)	
Articles in refereed journals	<p>○ Hussein Nassar and Hitoshi Mitomo, “The Impact of Psychological and Economical Factors on Switching Behavior of Internet Subscribers from Flat-Rate to Metered Rate Payment System”, <i>Journal of Information and Communication Research</i>, published by the Japan Society of Information and Communication Research, Vol. 29, No. 3, December 2011, pp. 61- 72.</p> <p>○ Hussein Nassar and Hitoshi Mitomo, “Empirical Analysis of User Adoption of Mobile Virtual Network Operator Service: A Case Study in Saudi Arabia”, <i>Studies in Regional Science</i>, published by the Japan Section of the Regional Science Association International, Vol. 40, No. 4, 2010, pp. 1049-1060.</p>
Presentations at Refereed International Conferences	<p>○ Hussein Nassar and Hitoshi Mitomo, “Analysis of Choice Paralysis within Switching Behavior Theory in the Broadband Telecommunication Industry”, International Telecommunication Society Asia-Pacific Regional Conference, Taipei, Taiwan, 26-28 June, 2011.</p> <p>○ Hussein Nassar and Hitoshi Mitomo, “Empirical Analysis of Switching Behavior of Broadband Subscribers from Flat Rate to Metered Rate Payment System”, 18th Biennial Conference of the International Telecommunications Society, Tokyo, Japan, 27-30 June, 2010.</p>
Presentations at International conferences	<p>Hussein Nassar and Hitoshi Mitomo, “Empirical analysis of User adoption of Mobile Virtual Network Operator Service: A Case Study in Saudi Arabia”, Fifth Annual Conference of the Taiwan Academy for Information Society, Taipei, Taiwan, 22 November, 2008.</p>
Presentations at domestic conferences	<p>Hussein Nassar and Hitoshi Mitomo, “A Model of Switching Intention in Broadband Telecommunication Industry Based on Cost-benefit Analysis in the Presence of Status Quo Bias”, 48th Annual Conference of the Japan Section of the Regional Science Association, Wakayama, Japan, 8-10 October, 2011.</p> <p>Hussein Nassar and Hitoshi Mitomo, “Empirical Analysis of User Adoption of Mobile Virtual Network Operator Service: A Case Study in Saudi Arabia”, 45th Annual Conference of Japan Section of the Regional Science Association, Hakodate, Japan, 25-27 October, 2008.</p>
Presentations at domestic academic meetings held by study groups	<p>Hussein Nassar and Hitoshi Mitomo, “Analysis of User adoption of Mobile Virtual Network Operators and Its Managerial and Legal Implications: A Case Study in Saudi Arabia”, Workshop on Globalization and Social Change in Asia: Waseda University, Tokyo Japan, 5-6 December, 2009.</p>
Awards	<p>Award of excellence for best student paper for: Hussein Nassar and Hitoshi Mitomo, “Empirical Analysis of Switching Behavior of Broadband Subscribers from Flat Rate to Metered Rate Payment System”, by the International Telecommunication Society, June, 2010.</p> <p>Best student paper award for: Hussein Nassar and Hitoshi Mitomo, “Empirical analysis of User Adoption of Mobile Virtual Network Operator Service: A Case Study in Saudi Arabia”, by Japan Section of the Regional Science Association International, October 2008.</p>

Other achievements:

Sarah Edwards and Hussein Nassar, "E-support for Foreign Residents in Japan - Role of the Government", International Conference on Higher Education Research and Development, Bangkok, Thailand, 9-12 July, 2009.

Hussein Nassar and Prakrit Srinon, (presentation), "Comparisons of Growth of Basic ICT Sectors Between Developed and Developing Countries", Workshop on ICT Development in Developing Countries and Rural Area, IUJ- Waseda Workshop, Niigata, Japan, March 2008.