Review of Research on Online Users’ Switching Behavior

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Abstract. This paper reviews the researches of online users switching behavior and emphasizes the importance of online users’ switching behavior. By reviewing the literature, we find that satisfaction, alternatives attractiveness and switching costs are the main factors affecting the user switching intention, and we also analyze different theoretical models. Finally, this study summarizes the facilitation factors and inhibition factors, which are able to influence online users’ switching intention. Practical implications and theoretical contributions are given.

Introduction

With the rapid development of Internet, recent years have witnessed a dramatic increase of online services. For many online services, there are often multiple products that are similar in functionality, highly substitutable, and direct competition to each other [1]. A wide range of choices result in users’ freely switch between different IT products. Online services providers whose products are similar with other substitutes suffer a lot from this phenomenon. However, most studies in IS field investigate continuance usage, customers’ switching behavior has not been well investigated.

Users’ switching behavior involves a complete or partial replacement of the use of one online service with substitutes that can satisfy similar needs. In social networking service (SNS) context, people are likely to use multiple SNSs and gradually migrate to a particular site as their main preferable one [2]. The complete switching from one product to alternatives is an extreme case of switching behavior which can lead to the termination in usage of the original product and further cause the loss of users as well as the market share. Chinese online markets have seen lots of precedents like KaiXing and RenRen. It’s imperative to study the motivations behind customer churn from both practical and theoretical perspectives. Thus, this paper first distinguishes switching behavior from post-adoption behavior and subsequently reviews empirical researches. PPM model and switching barrier are emphasized in this work due to the importance in explaining users’ switching behavior.

Related Work

Post-adoption Behavior

How customer perceptions and attitudes affect their acceptance of technologies has been one of the main research areas in the IS literature, namely pre-adoption behavior. But successful adoption of a technology does not necessarily predict the success of this technology [3]. Recently, both practitioners and researchers have studied the factors that relate to users’ post-adoption behavior. It’s worthwhile to illustrate the distinction among switching behavior, continuance behavior and discontinuance behavior since prior studies sometimes interchange these terms.

Taking Sina Weibo as an example, when online users start to use Sina Weibo as their social networking service, which can be defined as initial adoption behavior. And then users gradually incorporate this technology into their daily routine activities, which is post-adoption behavior/continuance behavior. Later on, for some reasons users realize that WeChat is more convenient in terms of functionality and entertainment, so they opt for WeChat as their primary social
networking service and reduce or terminate their usage of Sina Weibo, which can be considered as switching behavior. If users dispense with any SNS, it would be regarded as discontinuance behavior.

User Switching

According to Ye’s definition, user switching refers to users’ partial reduction or full termination in usage of a specific technology product, and substituting it with usage of an alternative that can satisfy similar needs [4]. Acquiring new customers is more expensive for online service providers than retaining existing customers [5], so researches in this field have studied what factors can contribute to customer retention and negatively affect customers’ switching intention.

Generally, previous literature employed switching intention as indicator to predict switching behavior. They also proposed hypotheses and models to examine factors that either negatively or positively influence users’ switching intention. Extensive findings have proved that satisfaction, switching costs, and attractiveness of alternatives are most effective when explaining user switching [6,7,8,9,10]. Other factors that can affect user switching including service quality [7], perceived ease of use [3], and switching barrier [11,2].

PPM Framework

The PPM (push-pull-mooring) framework has been regarded as the most important theoretical foundation of migration literature. Push factors, pull factors and mooring factors are three components in the PPM framework which describes why people migrate from one geographical place to another for a certain period of time [9,2]. Push factors are negative factors that compel people away from the original place, while pull factors refer to the positive attributes that attract prospective migrants to the destination. Mooring factors represent constructs that either hinder or facilitate the migration decision, such as personal preference and switching costs. Figure 1 presents the PPM framework.

![Figure 1. PPM framework.](image)

In IS literature, Bansal [11] first applied this framework to explain service switching. Since then, numerous researchers in IS field have employed this model to study users’ switching intention between an incumbent and an alternative service provider. Generally, IS researchers describe attributes from incumbent service as push factors, and users’ perceptions of alternative service are categorized as pull factors. Regarding to the model, some researches regard the three effects as the second-order constructs which are the results of accumulation of their first-order subconstructs, others relate dimensions directly to switching intention. Although the structural models are vary depending on specific contexts, factors that can formulate push, pull and mooring effects have similarities. Table 1 summarizes the proposed elements of push, pull and mooring factors in previous PPM studies.
Table 1. Proposed elements of push factors, pull factors and mooring factors.

<table>
<thead>
<tr>
<th>Researcher (year)</th>
<th>Push factors</th>
<th>Pull factors</th>
<th>Mooring factors</th>
<th>Contexts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hsieh (2012)[2]</td>
<td>Weak connection (+)</td>
<td>Enjoyment (+)</td>
<td>Switching cost (-)</td>
<td>From blogs to social network sites</td>
</tr>
<tr>
<td></td>
<td>Writing anxiety (+)</td>
<td>Relative usefulness (+)</td>
<td>Past switching experience (+)</td>
<td></td>
</tr>
<tr>
<td>Hou (2011)[12]</td>
<td>Enjoyment (+)</td>
<td>Service satisfaction (+)</td>
<td>Switching costs (-)</td>
<td>Online games</td>
</tr>
<tr>
<td></td>
<td>Service satisfaction (+)</td>
<td>Perception of sufficient participants (-)</td>
<td>Social relationship (-)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enjoyment (+)</td>
<td>Alternative attractiveness (+)</td>
<td>Need for variety (+)</td>
<td></td>
</tr>
<tr>
<td>Ye (2011)[4]</td>
<td>Satisfaction (-)</td>
<td>Relative advantage (+)</td>
<td>Low subjective norm (-)</td>
<td>Browsers</td>
</tr>
<tr>
<td></td>
<td>Dissatisfaction with technical quality, information quality, entertainment value, socialization support, and member policy (+)</td>
<td>Perceived relative ease of use (+)</td>
<td>Perceived switching costs (-)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dissatisfaction with technical quality, information quality, entertainment value, socialization support, and member policy (+)</td>
<td>Perceived relative ease of use (+)</td>
<td>Peer influence (+)</td>
<td></td>
</tr>
<tr>
<td>Xu (2014)[13]</td>
<td>满意度与技术质量，信息质量，娱乐价值，社会化支持，以及会员政策 (+)</td>
<td>Attraction from alternative (+)</td>
<td>Switching costs which consist of setup cost and continuity cost (-)</td>
<td>Social networking services</td>
</tr>
<tr>
<td>Chang (2014)[7]</td>
<td>Regret, dissatisfaction (+)</td>
<td>Alternative attractiveness (+)</td>
<td>Switching costs which consist of setup cost, sunk cost and continuity cost (-)</td>
<td>Social networking sites</td>
</tr>
<tr>
<td>Bhattacherjee (2013)[14]</td>
<td>Dissatisfaction (+)</td>
<td>Relative usefulness (+)</td>
<td>Switching costs which include learning cost and setup cost (-)</td>
<td>Cloud computing</td>
</tr>
<tr>
<td>Zhang (2008)[15]</td>
<td>Satisfaction (-)</td>
<td>Attractive alternative (+)</td>
<td>Sunk costs (-)</td>
<td>Blog</td>
</tr>
</tbody>
</table>

Note: “(+)” denotes a positive relationship with switching intention, whereas “(-)” denotes a negative relationship.

From this table, we can conclude that some constructs in the PPM framework come from pre-adoption behavior literature, such as satisfaction and relative usefulness. Others are theories from psychology and marketing literature, such as habit and switching costs. Researchers also apply these constructs into a particular context for the purpose of comprehensive understanding of switching intention. For example, Hou [12] suggested that the power-enhancing items and game experience levels accumulated in the incumbent game cannot be transferred to another one, inhibiting users’ switching intention. Entertainment, free entry and better service are examples of alternative attractiveness of online games. Their empirical study showed that mooring factors and pull factors significantly influenced switching intention. Habit is another important factor that can moderate users’ switching intention as well as behavior, which has been examined in the contexts of Google docs, World Wide Web, and web browser [16,17,4].

Switching Barrier

Although PPM framework is a general guideline to explain switching intention, some researchers designed the model from satisfaction and switching barrier perspectives and posited the direct
influence among them. Figure 2 represents the structural model based on satisfaction and switching barrier theories.

IS researchers agree that satisfaction is negatively associated with switching intention, while switching barrier is positively associated with switching intention. Specifically, Wu [9] proved that the service quality can predict users’ satisfaction, and switching cost can formulate switching barrier in the SNS context. Shin [18] investigated the telecommunication market and found that price and service quality have great influence on satisfaction, whereas switching costs and customer lock-in are two components of switching barrier.

![Figure 2. Relationship among satisfaction, switching barrier and switching intention.](image)

**Conclusion**

By reviewing switching researches, we can find that users’ switching intention/behavior are affected by two opposite forces. The facilitation force facilitates users’ switching intention, for example, users are dissatisfied with the incumbent service in terms of functionality or service. When users possess high perception of alternative attractiveness, users are more likely to switch. Therefore, alternative attractiveness is another facilitator. Conversely, the inhibition force inhibits users’ switching. Costs invested into the present service are irreversible, and relationships usually take time to transfer to another platform. These factors serve as inhibitors that have negative influence on users’ switching. Besides, some factors may moderate or mediate the relationship between variables, academies need consider the specific context and tailor the model to service.

Advances in information technology and convenient networks have brought opportunities and challenges to online service providers. Users’ switching is more common as various services are provided, which means online service providers are facing fierce market competition. This study has both theoretical and practical contributions. From practical perspective, this paper helps online service providers' development and management personnel understand the motivation and reasons behind switching behavior. Thus, they take effective measures to maintain the original users and avoid the user's diversion in advance. From theoretical perspective, this work categorizes the models based on prior literature, and summarizes the main factors affecting the online users' switching behavior. The aim of this paper is to extend the knowledge in switching research, and provide reference for follow-up researchers when analyzing users' switching.

**References**


