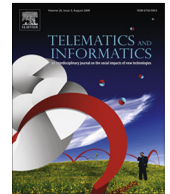




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# Involuntary migration in cyberspaces: The case of MSN messenger discontinuation

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## ABSTRACT

Instant messaging (IM) is one of the most popular Web 2.0 tools for the facilitation of synchronous communication, collaboration, and social interaction among users. The chances that incumbent instant messaging (IM) users will suffer from involuntary switching have increased because competition can eliminate their service/technology providers. This concern leads to our research question: what factors influence IM users' decision-making in involuntary switching? In light of the above concerns, this study aims to extend the push–pull–mooring (PPM) framework and the migration theory to the context of service involuntary switching by incorporating the notions of network effects and regret. Our model theorizes that four constructs of network effects (referent network size, future expectation, perceived complementary, and perceived compatibility), similarity and innovativeness (pull factors), switching cost (mooring factors), and three push factors regarding migration plan and outcome (dissatisfaction with technical quality and information quality of the migration plan and regret) can affect users' intention to migrate to other IM services and subsequently alter their migration behaviors. This hypothetical model used in this study has been empirically validated using data collected from 381 IM users. Implications for theory and practice are also discussed.

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## 1. Introduction

Instant messaging (IM) is one of the most popular Web 2.0 tools for the facilitation of synchronous communication, collaboration, and social interaction among users via the use of computers and communication networks (Lin and Bhattacharjee, 2008). A survey report by Forrester Research (Young et al., 2007) states that IM is the most valuable Web 2.0 tool for enterprises: 37% of respondents perceived substantial business value from IM compared to an average of 16% for other Web 2.0 tools. Similarly, the technology market research firm, the Radicati Group, predicts that worldwide IM accounts will grow from over 3.4 billion in 2013 to over 4.4 billion by the end of 2017, indicating an average growth rate of around 7%.<sup>1</sup> In addition, according to the data collected by Informa, by year-end 2012, approximately 19.1 billion IM messages were sent every day and each IM user sent more than 32 messages per day.<sup>2</sup> Such evidence suggests that IM has become a

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primary way in which people stay connected with existing friends, family, and coworkers, as well as to expand their network of contacts.

The popularity of IM has motivated researchers to explore the issue of IM continuance. In the process of this exploration, however, they have learned that the intense competition among IM service providers involves two more issues of concern: IM discontinuance and the migration of IM users. Take MSN messenger for example. With its inception in 1999, Microsoft's Windows Live Messenger (formerly MSN Messenger) became a leading IM service. In June of 2009, Microsoft reported that Windows Live Messenger had attracted over 330 million users each month, making MSN one of the most widely used IM services in the world.<sup>3</sup> The social chat habit has grown up since then, however. Now most users rely on Facebook messenger, text messaging and even video conferencing. Despite its notable 14-year history, in the first quarter of 2013 MSN was phased out completely for all users. In February 2013, Microsoft announced the retirement of the existing MSN global service in favor of Skype, which Microsoft had acquired in October 2011.<sup>4</sup> Skype has a massive membership base (663 million registered users) and more features than MSN such as video calling, voice chat, group chats, etc.<sup>5</sup> In order to compete against other services such as WhatsApp, iMessage, and Google Talk, Microsoft began the migration of 100 million MSN users to Skype in early April. Meanwhile, Skype released a quick help guide to smooth the migration path for these MSN users. Skype version 6.0 enables users to login using a Microsoft Account (with the same MSN ID). MSN contacts can be brought over as well. Since then, MSN users have been restricted from signing onto the service gradually. These migrations were enacted language by language and ended in April, 2013.

Microsoft's migrations have instigated what has become known as involuntary switching, where users (termed refugees) have no choice but to migrate when their incumbent service provider closes up (Bansal et al., 2005). An abundance of literature on service switching is available, with the overwhelming majority of studies focusing on voluntary migrants, those who can freely choose to migrate (switch) between service providers. To date, little is known about the refugee side of involuntary switching (Keaveney, 1995). From a practical perspective, this lack of awareness and knowledge is surprising. The explosive growth of technology and its services to support online communication has been intensified by the ethic that "today's technology is tomorrow's legacy." Incumbent IM users have a greater chance of suffering from involuntary switching than ever before because intense market competition can unexpectedly eliminate their technology service providers. However, given that existing theoretical models (e.g. expectation–confirmation model, technology acceptance model with media choice factors, c.f. Chang and Yang (2013)) have largely focused on continuance and its determinants, current considerations are not sufficient to clearly explain the reasons for discontinuance.

Hence, a need exists for research that explores users' decision-making in involuntary switching in closer detail, for academics as well as practitioners. The competition between Skype and other IM services (as earlier described) offers excellent records for an empirical investigation of MSN users' migration/switching decisions. Although the majority of MSN users simply followed Microsoft's migration plans and migrated to the connected service (Skype), some nevertheless took the opportunity to switch to a new provider (i.e., Microsoft's competitors). The question of interest here is: What factors influenced IM users to migrate (switch) to other competing services?

Prior studies on migration have indicated the push–pull–mooring (PPM) framework as a dominant paradigm in interpreting human migration decisions (Bansal et al., 2005; Lee, 1966). This paradigm, in essence, recognizes that underlying negative factors at the origin push people away, while positive factors at the destination pull people in (Bansal et al. (2005)). The PPM paradigm also emphasizes the value of mooring factors as predictors of migration: personal and social factors that can either inhibit or facilitate a migration decision. The PPM logic stands as a widely accepted paradigm of current management wisdom, particularly in contexts that foster voluntary switching. However, when applied to involuntary switching of IM services, some of the crucial factors relating to the context may be missing. In this regard, we propose the need to go beyond the existing PPM framework by involving the actual features of IM services themselves.

Note that IM services allow users to see whether or not a defined group of others (called buddies) are logged in on their networks and are sending each other messages in real time (Alvestrand, 2002). IM services fit the definition of a network effect business, in that the value to an individual user relies on how many other users can be reached (Faulhaber, 2005). As O'Reilly (2006) concludes, a primary advisory for success on Web 2.0 platforms explains how to "harness network effects to get better the more people use them." Surprisingly, previous IM literature has given scant attention to network effects despite the growth of user networks. This network growth has interesting implications for the continued increase in shaping IM usage and switching decisions, as well as the development of complementary services, coordination of technical standards among providers, and interconnectivity and interoperability considerations (Lin and Bhattacharjee, 2008). In this study, we address this question by looking at these network effects. Thus, the goal of this article is to extend the current understanding of PPM frameworks to include the involuntary switching of service by incorporating network effects and applying them to the pull factors of intention to migrate. Specifically, the research questions of interest to this study are: How do network effects influence individual migration of other competing services? What are the key sources of network effects within the context of IM service migration? What are specific sources of pull, push, and mooring factors in the context of our research?

<sup>3</sup> [http://en.wikipedia.org/wiki/MSN\\_messenger](http://en.wikipedia.org/wiki/MSN_messenger), accessed by June 24, 2013.

<sup>4</sup> [http://news.cnet.com/8301-10805\\_3-57562929-75/microsoft-to-kill-the-messenger-on-March-15/](http://news.cnet.com/8301-10805_3-57562929-75/microsoft-to-kill-the-messenger-on-March-15/), accessed by June 24, 2013.

<sup>5</sup> <http://en.wikipedia.org/wiki/Skype>, accessed by June 24, 2014.

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