

Which Instant Messaging System Should I Choose: a Conceptual Model

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Abstract

Recent years, China has become one of the biggest market for International IT product giants have entered China market in recent years, such as MSN, Google, eBay, and Yahoo!. All of these products experience fierce competitions from indigenous IT products. Although indigenous IT products provide almost the same function as their international competitors, they dominate the market after passing the phase of imitation. What are the key reasons for their success? In this paper, we compare the detailed designs of MSN vs. QQ. By proposing a conceptual model, we investigate how the different functions of MSN and QQ lead to different users' adoption intention. The conceptual model is not only helpful for researchers who are keen to investigate the factors which affect IT adoption process, but also shed light on how to understand users behavior and grab the market share for practitioners in China.

1.Introduction

Instant messaging (IM) offers real-time communication between two or more people based on typed text. IM allows easy collaboration, which might be considered more akin to genuine conversation than email "letter" format (Wikipedia, 2007).

Recent years, China has become the largest IM market in the world. IM was introduced in China since 1997 by ICQ. In 1999, one senior engineer left ICQ and invented an indigenous IM named QQ. After that, QQ dominates China IM market. Until June 30th, 2007, QQ has more than 647 million user accounts in total. Active account number exceeds 273 million (Tencent, 2007).

Having seen the huge potential of IM market in China, MSN used various strategies to expand its market share in China, such as bundling with Windows operation system, establishing gateway website MSN China, and building partnership with Taobao, the largest C2C platform in China. However, according to the market reports by Analysys, an IT product market survey provider in China, MSN kept losing its market share in China since 2004. Its market share was 20% in 2004, 10.58% in 2005, 8.9% in 2006, and 7.72% in the first quarter of 2007.

This is not a single case. In the competition of search engine Google vs. Baidu, C2C platform eBay vs. Taobao, gateway website Yahoo! vs. Sina, we could easily observe that international IT giants lost the competition to indigenous IT product providers. In all of these battles, local IT product providers were inspired by international IT product providers. They modified the products according to local users' behavior, and then dominated the market.

Such phenomena solicit answers to the following research questions: Why these indigenous IT product providers win the competition in China? Or more precisely, which kind of users' behavior have they considered? How do they tailor the design of the products and cater to local users' need, want and demand?

In this paper, we devote to answering these research questions by investigating the competition between MSN and QQ. By comparing the differences between QQ and MSN, we suggest the main factors which make users prefer one IM system to another and propose a conceptual model of users' adoption intention. After that, we plan to send survey questionnaire to undergraduate and postgraduate students in information systems department. Currently, data collection is still in progress. Therefore, we propose the conceptual model and research hypotheses in the following paragraphs.

2. Conceptual Model and Research Hypotheses

TAM model proposed by Davis (1989) has been widely used to examine user adoption intention. However, QQ and MSN realize same function, communicating with other online users, which indicates that perceived usefulness of these two systems may not have much difference. Moreover, the interfaces of these two systems are both simple and clear. According to the interview results by Meng et al. (2007), none of the interviewees ever mentions that one IM system is significantly more difficult or easier to manipulate than another. The two main constructs of TAM model, perceived usefulness and ease of use, cannot explain why users prefer one IM to another. In the following conceptual model, we mainly focus on the constructs that reflect the key difference of QQ and MSN.

2.1 Hedonic nature

Consumer behavior literature indicates that the utilitarian or hedonic nature of the product determines users' intention to consume (Holt 1995). Heijden (2004) developed a parallel argument that utilitarian or hedonic nature of the information system shapes users' intention to use. By applying TAM model to a hedonic system, Heijden (2004) concluded that perceived enjoyment can play a pivotal role to achieve user acceptance.

Perceived enjoyment is defined as the extent to which the activity of using one piece of software is perceived to be enjoyable in its right, apart from any performance consequences that may be anticipated (Davis et al., 1992; Heijden, 2004). As an important addendum to the TAM model, perceived enjoyment is an indispensable factor in assessing users' adoption intention for IM systems.

Compared the design of QQ and MSN, we can find that one of the major differences of these two products is that QQ emphasizes hedonic features. QQ provides QQ games. Most of these games are the electronic version of conventional Chinese games, such as Mahjong and

some poker games. These games provide an effective platform where users with same interests could play and communicate together, and thus increase users' enjoyableness. These theoretical and empirical evidences lead to the following hypothesis:

H1: Different perceived enjoyment by using QQ and MSN drives users' different adopt intention.

2.2 Privacy concern

Smith et al. (1996) concluded several central dimensions of individuals' concerns about organizational information privacy practices: collection of personal information; internal unauthorized secondary use of personal information; external unauthorized secondary use; improper access; errors; reduced judgment; combining data.

Privacy concern is a main factor, which has an effect on users' adoption intention of IM systems (Meng et al. 2007). However, most privacy concern of IM users is towards individual rather than organizational privacy invasion behavior, such as unexpected visit by online strangers. Among the organizational information privacy dimensions proposed by Smith et al. (1996), two dimensions are applicable for individuals' concerns about personal information privacy intrusion, which are improper access and combining data. Here, the improper access focuses on the improper access by individuals. The combining data concern is raised with the development of IT. Online users usually register with same ID or email address in various websites. With the help of powerful searching engines, different user information scattered in different websites or online discussion forums could be easily combined together, creating what has been termed as a "mosaic effect".

Users in MSN need to get others' email address to initiate the first conversion with strangers. In contrast, QQ provides strong searching engine. Using this searching engine, any user could easily search others by ID, nickname, location or online status. By simply clicking the searching results, users could initiate a conversation with strangers. Obviously, QQ devotes to simplifying the first contact procedures between strangers by compromising users' privacy protection. Such strategy will affect users' intention to adopt. Building on these findings, the hypothesis to be tested is:

H2: Different privacy protection of QQ and MSN will lead to different users' adoption intention.

2.3 Position of control

Users' control of their information is important to users' privacy concern level. Privacy is defined as "the ability of the individual to control the terms under which personal information is acquired and used" (Westin, 1967). Information privacy, then, refers to "the ability of the individual to personally control information about one's self" (Stone et al., 1983; Awad and Krishnan, 2006). Meng et al. (2007) found that users of QQ emphasize that they do not mind their personal information are accessible to online strangers because they could easily control further moves by strangers. Building on these outcomes, the perception of control could moderate users' privacy concern level. Therefore, the next hypothesis is:

H3: Users' perception of control moderates the relationship between privacy concern and adoption intention.

Users' perception of control could increase their adoption intention. QQ provides users many tools to differentiate the information accessed by different friends on their contact list. Moreover, QQ develops powerful tools for users to control their QQ Space (the personal website and blog platform linked with each QQ ID). Meng et al. (2007) showed that such designs make users feel that they are in the position of control in their territory. Such designs increase users' intention to adopt. These findings suggest:

H4: Different perception of control leads to different adoption intention.

2.4 Social factors

Behavior is influenced by social factors, which depend on messages received from others and reflect what individual think they should do (Triandis, 1980; Thompson et al., 1991). IM systems show strong network effect. The value of certain IM not only depends on its quality or service but also depends on how many other users are adopting the same IM system (Kates and Shapiro, 1994). When choosing IM system, users will keep in line with their friends' choices and stay in the dominating IM system within their friend circles. Collectively, these outcomes suggest:

H5: For IM systems, social factors are strong predictor of users' adoption intention.

2.5 Conceptual Model

The research model is proposed in Figure 1:

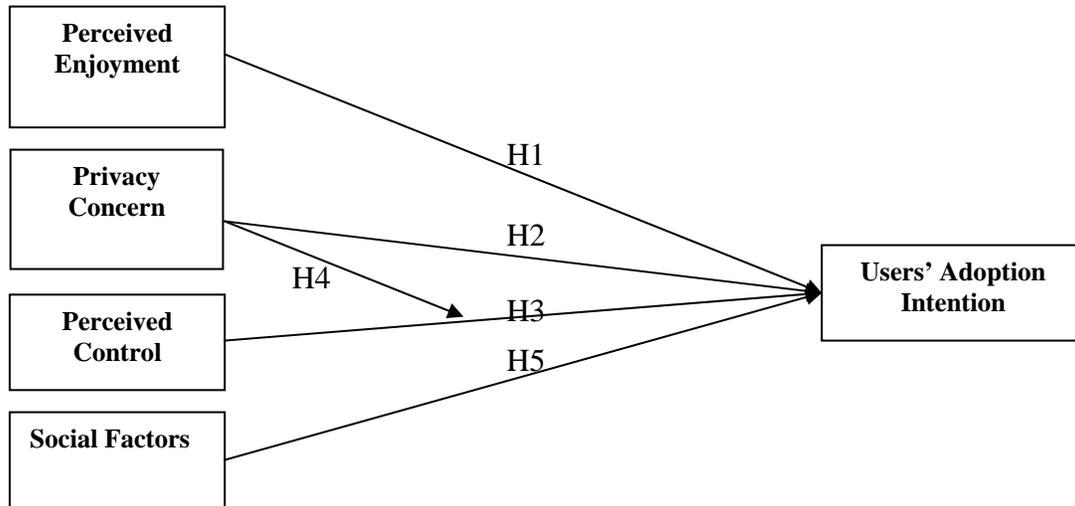


Figure1. Factors influencing users' adoption intention of IM systems

3. Methods

Data collection is still in progress, we list the operationalization of constructs in Table 1.

Table 1. The constructs and instruments for the model

| Construct and Items | Definitions | Source |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Perceived Enjoyment | The extent to which the activity of using one piece of software is perceived to be enjoyable in its right, apart from any performance consequences that may be anticipated. | Adapted from Holt (1995) Davis et al. (1992) Heijden (2004) |
| E1. Enjoyable-disgusting | | |
| E2. Exciting-dull | | |
| E3. Pleasant-unpleasant | | |
| E4. Interesting-boring | | |
| Privacy Concern | The ability of the individual to personally control information about one's self. | Adapted from Stone et al.(1983) Smith et al.(1996) Meng et al.(2007) |
| C1. Attitude towards privacy | | |
| C2. Experience with privacy invasion | | |
| C3. Peer influence | | |
| C4. Data combination | | |
| C5. System Reputation | | |
| Social Factors | The individual's internalization of the reference groups' subjective culture, and specific interpersonal agreements that the individual has made with others, in specific social situations. | Adapted from Triandis (1980) Thompson et al. (1991) Kates and Shpiro (1993) Venkatesh et al. (2003) |
| F1. People who influence my behavior think that I should use the system. | | |
| F2. The senior management of my organization is helpful in introducing the system. | | |
| F3. The organization has supported the use of the system. | | |
| F4. Culture affection | | |

4 Conclusion

MSN and QQ have intense competition in China IM market for years. Due to different functional designs, MSN lost around two thirds of its market share. In this paper, we compare the different design of MSN and QQ, aiming to find the key factors, which drive users' adoption preference.

The conceptual model is not only helpful for researchers who are keen to investigate the factors which will affect IT adoption process, but also shed light on how to understand users behaviour and grab the market share for practitioners in China. International IT producers should adapt their product to local users' behaviour. Precisely grasping users' psychological need could be the key to success.

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