Exploring Chinese Users’ Acceptance of Social Commerce Sites

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Abstract – With its rapid economic growth and the largest number of Internet users worldwide, China and its vast online markets are of particular interests to companies globally. This paper describes a study of Chinese users’ acceptance of an emerging E-commerce technology: social commerce websites. Leveraging the power of social networking technologies with online shopping, social commerce sites have emerged in recent years to address the fundamental nature of shopping as a social experience. Despite tremendous business interest and anticipated potential benefits, some central issues remain such as whether Chinese Internet users will adopt such websites and the factors that affect the adoption. This study extends the Technology Acceptance Model (TAM) with social factors such as social comparison, social presence, and enjoyment in the acceptance of social commerce websites. Results provide significant support of the extended model.

Keywords: social commerce, social comparison, social presence, enjoyment, user acceptance

1 Introduction

As home to the world’s largest Internet population, China is rapidly developing e-commerce systems, and is catching the attention of companies with global ambitions. By 2012, China had 538 million Internet users (www.internetworldstats.com), and the number of e-commerce shoppers is projected to grow into 329 million by 2015 [1]. The vast online market and its cultural background draw attention to study Chinese online consumers for unique opportunities.

Meanwhile, online social networking and social media technologies continue to gain recognition in China and worldwide. Seeking to tap into the potentials of these technologies for E-commerce, businesses are exploring ways to combine the power of social networking with online shopping for better service and new business opportunities. For example, there is an upward trend of merchants creating ads and retails pages on Facebook, with the intention of attracting online social network users and their friends [2]. Additionally, a new wave of start-up firms are developing text mining algorithms to track "social relationship data" between online users, that can be used to target behavior-oriented ads. However the evidence is still inconclusive that these are the best online platforms to increase sales using social networking.

Social commerce sites have emerged as a strong potential platform to combine online social networking with online shopping. Gathering people in an online place to exchange shopping ideas, social commerce sites offer features similar to social networking sites such as personal blog and profile webpage, with the addition of E-commerce tools and software to allow users to easily copy product pictures and post them on their web pages. Users can also post product recommendations, create wish lists, comment on items, and make purchases. The result is the creation of online social commerce communities. Examples of social commerce sites include Kaboodle.com, ShopStyle.com, ThisNext.com, and Wists.com, all launched between 2006 and 2007. In China, similar social commerce sites emerged around 2009, such as Taobao’s Taojianghu (Tao World) section, Melishuo (Beauty Legend), and Moguie (Mushroom Street).

Social commerce aims at addressing the fundamental nature of shopping as a social experience. Despite tremendous business interest and anticipated potential benefits, some central questions remain. Will consumers adopt social commerce technology? What are the factors that lead to the adoption? Although technology adoption in general and e-commerce adoption in particular are both well studied, the specificity of social commerce clearly calls for further theoretical development. Such understanding will also better inform business managers who make strategic decisions regarding the integration of social networking and online
commerce. Additionally, system designers will have important insight that may lead to improved functionality, design, and use of such systems. With China being the home to the world’s largest online population and the second largest e-commerce shopper population (www.internetworldstats.com), the investigation of the social commerce platform in China bears more significance theoretically and practically.

2 Conceptual Background

To answer these questions, this research utilizes the Technology Acceptance Model (TAM) [3]. TAM has been recognized as one of the most powerful models in examining the acceptance of new IT. Adapted from the Theory of Reasoned Action (TRA) model, TAM posits that two beliefs – perceived ease of use (PEOU) and perceived usefulness (PU) - determine one’s behavioral intention to use a technology. While the parsimony of TAM makes it easy to apply to a variety of situations, the leanness of the model is also considered as its key limitation. The model lacks the ability to help business managers or system designers to understand the factors that contribute to the adoption or abandonment of new IT. As a result, a number of studies have been conducted to examine additional antecedents to IT use (e.g., cultural dimensions [4]).

This study proposes three additional constructs as key antecedents to the adoption of social commerce sites: Tendency to Social Comparison, Social Presence, and Perceived Enjoyment. Social comparison is an essential social phenomenon where human beings compare themselves with others for self-evaluation and information seeking. Rooted in social science, the original theory of social comparison treated social comparison as a secondary choice when objective information to evaluate oneself is not available [5]. Subsequent research suggests that social comparison is a central feature of human social life [6]. In this study, tendency to social comparison is defined as the degree to which an individual tends to compare his or her opinions with others, and be influenced by others. Recent studies have found that individuals differ quite a bit in their tendency to compare themselves with others [6].

The second construct, Social Presence is defined as the extent to which a medium allows a user to experience others as being psychologically present [7]. Research has shown that increased sense of social presence can be achieved through stimulating the imagination of interaction with other humans (e.g., through socially rich text and picture content, personalized greetings, human audio and video, intelligent agents), or by providing means for actual interaction with other humans [8]. Technologies such as personalization, recommendation, and consumer reviews can enable the feeling of a place where people interact, thus increasing the social presence of websites [9]. Increased social presence can in turn affect other factors such as perceived usefulness of the website [10].

The third construct which is likely to affect social commerce website adoption is perceived enjoyment. Online shopping is a voluntary and hedonic activity, and users participate because they are intrinsically motivated. In studies of technology adoption, the concept of Perceived Enjoyment has been defined and measured as the extent to which the activity of using a specific system is perceived to be enjoyable in it’s own right, aside from any performance consequences resulting from system use [11]. Studies have found perceived enjoyment to be a significant factor in adopting technologies for activities such as web browsing and instant messaging, including Chinese users [12].

3 Research Model and Hypotheses

Based on TAM and the three additional variables described above, a research model is proposed with five variables: Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Tendency to Social Comparison, Social Presence, Perceived Enjoyment, and Behavioral Intention (BI) to use social commerce sites. Figure 1 shows the research model.

![Figure 1: Research Model](image-url)
According to TAM, the hypothesized relationship among PEOU, PU, and BI are specified below:

• H1: Perceived Ease of Use will positively affect Perceived Usefulness of social commerce websites.

• H2: Perceived Usefulness will positively affect Behavioral Intention to use social commerce websites.

Incorporating flow theory and the results of subsequent studies of enjoyment and technology adoption [13], it is postulated that the more the users perceive the site to be enjoyable, the more likely they will adopt the site. Thus:

• H3. Perceived Enjoyment will positively affect Behavioral Intention to use social commerce websites.

Given the social nature of shopping, tendency to social comparison is postulated to have an impact in user’s adoption of social commerce sites. Empirical studies of online shopping suggest that the provision of recommendations and consumer reviews increase the perceived usefulness of the website [9]. These findings are consistent with marketing research indicating that consumers are influenced by other consumers in their decision making process, such as information seeking, alternative evaluation, and choice [14]. Given the social nature of shopping and the features specific to social commerce websites, it is postulated that people who are more likely to compare and be influenced by others are more likely to find the social commerce sites useful (H4), and enjoyable (H5). Thus:

• H4: Tendency to Social Comparison will positively affect Perceived Usefulness of social commerce websites.

• H5: Tendency to Social Comparison will positively affect Perceived Enjoyment of social commerce websites.

Finally, based on studies of social presence and the adoption of e-commerce systems [10, 15], it is hypothesized that the stronger the social presence of the shopping site, the more useful (H6) and enjoyable users (H7) will perceive it to be. Thus:

• H6. Social Presence will positively affect Perceived Usefulness of social commerce websites.

• H7. Social Presence will positively affect Perceived Enjoyment of social commerce websites.

4 Data Collection

Data were collected through a survey conducted in Fall 2010 in China. The survey was given to undergraduate and graduate business students at a university in northeastern China. Subjects were instructed to use Taojianhu (Tao World), a social commerce site for the users of Taobao (www.taobao.com) – the largest e-commerce website in China. Taojianhu was chosen for this study given it was the leading social commerce site in China at the time of the research, with many features supporting social commerce activities. The site was developed by Taobao in 2009 to provide social networking functions to Taobao users, and was offered as an affiliate site at the time of the study in fall 2010. In May 2011, the website was redesigned to be part of MyTaobao function on the Taobao website (http://tech.sina.com.cn/i/2011-05-24/11005563438.shtml). Features on the social commerce site include friend contacts, updates, product ratings, discussions, and direct shopper-to-shopper interactions such as polls, “Sharing of treasure”, “ask other shoppers”, “help-me-choose”, group shopping, as well as traditional E-commerce functions such as browsing by brand and searching. Subjects were asked to complete product search and shopping tasks by interacting with the site; then write up a short essay reflecting on the features provided on the website. The precise purpose of the study and the research model were neither discussed nor alluded to. Course credits were awarded for survey participation.

After completing the assignment, students were given the URL to participate in the online survey. In constructing the questionnaire, the PEOU, PU, and BI items were adapted from Davis [3]. Items for the Tendency to Social Comparison scale were adapted from Gibbons and Buunk [16] study. Perceived Enjoyment scale was adopted from Novak [13]. The Social Presence items were adapted from Gefen and Straub [10]. All items were measured on a seven-point scale ranging from strongly disagree (1) to strongly agree (7). All research documents were prepared in English and then translated into Chinese, and cross-examined to ensure consistency.

5 Data Analysis and Results

A total of 84 valid responses were collected from Chinese users. To examine the hypotheses and research model, the data were analyzed using Structural Equation Modeling (SEM) and SmartPLS.
software [17]. This approach allows simultaneous analysis of the measurement model (factors), and the structural model (path analysis), and has been widely used. In the measurement model, the reliability of the constructs as measured in the AVE and composite reliabilities of the different measures all exceed the recommended 0.70 level, indicating that the measures are robust. Tests on convergent validity and discriminant validity were conducted, and the results supported the measurement model. Analysis on the mean and standard deviation (SD) for each of the main constructs in the model reveal that subjects reported overall positive attitude towards the social commerce site, and found it easy to use, useful, enjoyable, and are likely to use it in their shopping tasks in the future. Details on the measurement model are not discussed due to space limitations.

Figure 2 shows the results of the structural model. The test yields results of path coefficients ($\beta$), which indicates the positive and negative relationships between the constructs, the strength of the relationships, and their statistical significance. The test also yields squared multiple correlations ($R^2$) values, which indicate the amount of variance of the dependent construct that can be explained by the independent constructs.

![Research Model Results](image)

Thus hypotheses H1, H2, H3, H6, and H7 were supported. H4 and H5 were not supported.

6 Discussions

This study examined factors associated with Chinese users’ intentions to use social commerce websites. The TAM antecedents are verified in the social commerce context: perceived ease of use and perceived usefulness are both significant factors affecting intentions to adopt social commerce websites. This study also reveals that perceived enjoyment is a significant antecedent to intentions. As the use of social media continues to grow among Internet users and consumers, our results strongly suggest that businesses should consider the potential power associated with integrating online social networking technologies with their e-commerce strategies in creating an easy-to-use, enjoyable, and useful shopping experience.

The results show that social presence significantly affects both perceived usefulness (with a coefficient of .34), and perceived enjoyment (with a coefficient of .56). This suggests that establishing the presence of other online shoppers and creating a sense of an online shopping community are critical in the adoption of such social commerce websites.

One interesting result is that tendency to social comparison does not affect perceived usefulness and perceived enjoyment directly. This result is worth further investigation in future studies from directions such as the impact of strength of social ties (weak ties vs. strong ties) as a moderating factor on the impact of tendency to social comparison.

In the open-ended questions, Chinese study participants reported that one of the main reasons they would adopt the website in future shopping activities was because of the social interactions with other shoppers online: “I would use it because it allows my friends to help me choose products and provide their inputs.” “When I can’t make up my mind, others can help me on this site.” “It enables sharing of shopping experiences.”

The social features of the website not only enable social interactions among web users, but can also serve other purposes such as making new discoveries of products online. “The most useful feature of the Taojianghua site is the ability to keep in touch with family and friends – so one’s aware of their latest updates and shopping ideas;” “It combines shopping with social networking on one site;” “The sharing-of-treasures function allows me to make new discoveries”; “It allows me to share my
shopping experiences with others; and vice versa – there are a lot of valuable advice offered on the site.”

When asked about concerns that prevent them from using the site in the future, privacy concerns topped the list. “The registration process was too complicated, and required too much personal information”. One unique feature in E-commerce website registration in China is the requirement to use a valid cell phone number for each account for verification purpose. Many felt it made the registration process long, and could lead to potential security breaches. “I am concerned about the information I provide may be used for other purposes.” Additionally, authenticity of products for sale on the websites was another issue that some were concerned about. “I did not trust the quality of products on the site.” This reflected a general concern of product quality which is a broader issue affecting commerce both online and offline in China in the rapid economic development stage.

7 Contributions and Future Research

This research is among the first to empirically examine the merging of social networking with E-commerce technologies for Chinese online consumers. Theoretically, this research contributes by extending the Technology Acceptance Model with factors extracted from social comparison theory, social presence, and enjoyment. The two additional factors: social presence and perceived enjoyment were significant in the model in addition to PEOU and PU.

Understanding consumer perceptions and intentions to use a social commerce website have direct management implications. A recent study on Chinese E-commerce development suggests that Chinese consumers are the most likely in the world to check for product recommendations on social networking sites [1]. Largely because of consumer wariness and distrust of merchants, forty percent of online consumers in China say they’ve read and posted reviews—more than double the rate in the United States. Conversely, only 19 percent of consumers in China go to official brand or manufacturer sites, compared with 41 to 60 percent in Japan, the United States, and the European Union [1]. This reinforces the findings in this study in terms of the potentials of social commerce sites in China.

From a practical perspective, the current research model suggests that in addition to focusing on ease of use and usefulness, the site should foster a sense of other online shoppers, and create enjoyment in the shopping process. The result can produce a greater likelihood that Chinese consumers will find the site useful, use the site, and increase product sales.

One possible direction for future research is to examine the type of online shopping tasks that are most suitable for social commerce websites. Will users prefer using social commerce sites than traditional E-commerce site for certain shopping activities, such as browsing or searching [18]? Will they prefer the site when they are more involved with the product, i.e., when the product is more relevant to them? Also, will the strength of the social ties affect users’ use of such shopping sites, such as family and friends vs. other online shoppers? With the growing popularity of social media and E-commerce technology integration, research in this area is timely and important.

8 References

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