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Determining Factors in the Acceptance of Social Shopping Websites

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ABSTRACT
While many businesses seek to seize the momentum of social networking sites, the combination of technology-enabled social networks and e-commerce may offer significant opportunities for retailers. Social shopping sites emerged as the latest developments to leverage the power of social networking with online shopping. Despite enormous business interests and potentials, little is known about whether users will adopt such systems. This paper extended the Technology Acceptance Model (TAM) to understand the adoption of social shopping sites. Besides perceived ease of use and perceived usefulness as proposed in TAM, this study explores three additional constructs: an online shopper’s tendency to social comparison, social presence, and perceived enjoyment in using the website. Results suggest that perceived usefulness and perceived enjoyment both affect behavioral intention to adopt social shopping sites. Users’ tendency to social comparison and perception of social presence are also significant antecedents in the model. Directions for future research are discussed.

Keywords
Social shopping, social comparison, social presence, enjoyment, TAM

INTRODUCTION
Social networking and Web 2.0 technologies continue to gain popularity under the media spotlight. Seeking to tap into the potentials of such technologies for E-commerce, business managers begin to explore ways to combine the power of social networking with online shopping for better service and new business opportunities. For example, companies such as the Procter & Gamble are creating websites that allow consumers to share their experiences of products with other consumers online, and to create online shopping communities (Vranica, 2008). The popular social network website Facebook introduced a feature that allowed a user’s purchases on a participating website, such as overstock.com, to show up as news feeds on the user’s friends’ Facebook pages, yet this feature was later modified due to privacy concerns (Vara, 2007). In three-dimensional virtual environments such as Second Life, an avatar (virtual representation of oneself) can shop together with other avatars for virtual or real goods (Hemp, 2006).

Social shopping emerges as the latest innovation in E-commerce by combining social networking with online shopping. Gathering people in an online place to exchange shopping ideas, social shopping sites offer features similar to social networking sites such as personal blog and profile webpage, and also E-commerce tools such as 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 emergence of social shopping communities. Examples of social shopping sites include Kaboodle.com, ShopStyle.com, ThisNext.com, and Wists.com, all launched between 2006 and 2007 (Tedeschi, 2006; Steel, 2007).

Social shopping addresses the fundamental nature of shopping as a social experience. In this study, social shopping is defined an extension of Business-to-Consumer E-commerce where consumers interact with each other as a main mechanism in conducting online shopping activities, such as discovering products, aggregating and sharing product information, and collaboratively making shopping decisions. Different from traditional e-commerce technology, social shopping emphasizes on providing a rich social context to encourage consumers to have an ongoing dialog with fellow consumers. Social shopping sites offer many unique features that make them distinctive from traditional E-commerce sites. For example, the prominent method of product organization is by site users, in contrast to product categorization as used by traditional websites (e.g., shopping.com). Users on social shopping sites can easily create rich profiles of themselves with pictures and
personal information, and have a number of ways to easily review other users’ wish list and to interact with each other. Despite tremendous business interests and potentials, some central questions remain. Will users adopt social shopping technology? What are the factors that lead to the adoption? Such understanding will not only inform business managers in making strategic decisions regarding the integration of social networking and online commerce, but also system designers on the functionality, design, and use of such systems.

CONCEPTUAL BACKGROUND

To answer these central questions, this research adopts the Technology Acceptance Model (TAM) (Davis, 1989). 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. Subsequent studies have applied TAM to a wide range of IT (Davis and Venkatesh, 1996; Fang, Chan et al., 2006), including E-commerce (Gefen and Straub, 2003). Given social shopping site is an emerging technology in E-commerce, the study adopts TAM as the base model to investigate the factors attribute to the adoption of such websites.

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 limitations. 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. A number of studies have been conducted to examine additional antecedents to IT use, such as positive image (Moore and Benbasat, 1996), cultural dimensions (Straub, Keil et al., 1997; Mao and Palvia, 2006), and computer playfulness (Venkatesh, 2000).

Three additional constructs are proposed as key antecedents to the adoption of social shopping sites in this study. The first construct is termed perceived enjoyment (PE). Given online shopping is often a voluntary and hedonic activity, we postulated that the experience of being engaged or simply having fun would have an impact on intentions to adopt social shopping sites. Developed in psychology, the flow theory describes a state in which people are so involved in an activity that nothing else seems to matter (Csikszentmihalyi, 1990). Adapted into studies of technology adoption, the concept of perceived enjoyment is proposed and defined as the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from system use (Davis, Bagozzi et al., 1992). Studies have found perceived enjoyment as a significant antecedents to users’ intentions to adopt technologies such as web browsing (Novak, Hoffman et al., 2000), and instant messaging (Lu, Zhou et al., 2008). While PU captures the extrinsic motivation, PE can be considered as capturing the intrinsic motivation aspect. In this study PE is examined as an additional predictor to BI.

The second construct is termed tendency to social comparison (TSC). Social comparison is an essential social phenomenon where human beings compare themselves with others for self evaluation and information seeking. While the original theory of social comparison (Festinger, 1954) treated social comparison as a secondary choice when objective information to evaluate oneself is not available, subsequent research suggests that social comparison is a central feature of human social life (Buunk and Gibbons, 2007). The theory has also been extended into different types of opinion comparison, including preference assessment, belief assessment, and preference prediction (Suls, Martin et al., 2000). The realm of social comparison theory is continuously expanding, such as into studying economic behavior (Karlsson, Dellgran et al., 2004).

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 (Gibbons and Buunk, 1999; Buunk and Gibbons, 2007). A related yet different construct that has been studied in extended TAM research is social influence, which is defined as the degree to which an individual perceives that important others believe he or she should use the new system. Kelman (1961) suggests that social influence operates through three processes: internalization, identification, and compliance. While social influence measures individual’s compliance with social norms under pressure, the tendency to social comparison factor operates through the internalization and identification mechanisms, which focus on accepting information and integrating it into one’s own cognitive system, and feeling some bond with likeable sources. Few studies have examined technology acceptance from the social comparison perspective, yet the increasing interests in systems for voluntary use and social interactions warrant such an investigation.

The third construct investigated is termed social presence (SP). Social Presence is defined as the extent to which a medium allows a user to experience others as being psychologically present (Fulk, Steinfield et al., 1987). This factor is closely related to the information richness theory (Daft and Lengel, 1984), which argues that some media can convey more information than others and are a better fit for certain tasks based on different levels of equivocality and ambiguity. In E-commerce, websites are considered information-lean in their barest form, and added features such as personalized greetings.
or picture and text content can increase the sense of social presence. Previous studies have shown that the use of technology-enabled recommender systems improved both the PU and the SP of a consumer-oriented Web site (Kumar and Benbasat, 2006), and SP was a significant antecedent of PU (Gefen and Straub, 2003). In this study, the effect of SP on PU and PE are postulated and examined.

**RESEARCH MODEL AND HYPOTHESES**

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

![Figure 1. Research Model](image)

According to TAM, the hypothesized relationship among PEOU, PU, and BI are specified in H1-H2:

- **H1.** PEOU will positively affect PU of social shopping websites.
- **H2.** PU will positively affect BI to use social shopping websites.

Based on the flow theory and subsequent studies of enjoyment and technology adoption (Novak, Hoffman et al., 2000), it is postulated that the more the users perceive the site to be enjoyable, the more likely they will adopt the website. Thus **H3** is:

- **H3.** Perceived Enjoyment (PE) will positively affect BI to use social shopping websites.

Given the social nature of shopping, tendency to social comparison is postulated to have an impact in user’s adoption of social shopping sites. Empirical studies of online shopping revealed that the provision of recommendations and consumer reviews increase the perceived usefulness of the website (Kumar and Benbasat, 2006). 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 (Friedman and Fireworker, 1977; Duhan, Johnson et al., 1997). In technology adoption, one study found that the users’ tendency to compare their avatars with users’ is an significant antecedent to users’ adoption of the avatar-based virtual community system (Song and Kim, 2006). Given the social nature of shopping and the features on social shopping websites, it is postulated that people who are more likely to compare and be influenced by others are more likely to find the social shopping sites useful (H4), and find the sites enjoyable (H5). Thus the hypotheses are:

- **H4.** Tendency to Social Comparison (TSC) will positively affect PU of social shopping websites.
- **H5.** Tendency to Social Comparison (TSC) will positively affect PE of social shopping websites.

Finally, based on studies on social presence and the adoption of E-commerce systems (Gefen, Karahanna et al., 2002; Suh and Han, 2002), it is hypothesized that the stronger the social presence of the shopping site, the more useful and enjoyable users will think it is. Thus:
• H6. Social Presence (SP) will positively affect PU of social shopping websites.
• H7. Social Presence (SP) will positively affect PE of social shopping websites.

DATA COLLECTION

Data were collected through a survey in Fall 2008. The survey was given to undergraduate business students at a university in the north-eastern region of United States. The participating students were from one junior-level E-commerce classes and two senior-level Management Information Systems classes.

Subjects were asked to think that they have some extra money, and they want to spend it by buying something online for themselves. They were instructed to use a specific social shopping site, Kaboodle.com, and to explore its various features. Kaboodle.com was chosen for this study given it is the leading social shopping site at the time of the research, with many features supporting social shopping activities. The features subjects were instructed to explore include both traditional E-commerce functions, such as browsing by brands and searching, and features unique on social shopping sites such as shopping soul mates and compatibility tests, shopping groups, and featured shoppers. Subjects were then asked to write up and submit 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.

After completing the assignment, students were given the URL to participate in the online survey. The survey was available online for one week. Students provided their names at the end of the survey for the sole purpose of obtaining extra credits, which were incentives for survey participation. Students’ names were deleted from the survey database as soon as extra credits were awarded.

In constructing the questionnaire, the PEOU, PU, and BI items were adapted from Davis (1989). Items for the Tendency to Social Comparison scale were adapted from Gibbons and Buunk (1999) study. While some previous studies have treated Perceived Enjoyment as a multi-dimensional concept, the three-item scale of PE is considered to be most robust and widely used, and thus adopted in our study (Novak, Hoffman et al., 2000). The Social Presence items were adapted from Gefen and Straub (2003). All items were measured on a seven-point scale ranging from strongly disagree (1) to strongly agree (7). The questionnaire also collected user information such as demographics, current use of online shopping and social networking websites, and previous knowledge of social shopping sites.

DATA ANALYSIS AND RESULTS

The data were analyzed using Structural Equation Modeling (SEM) and SmartPLS software (Ringle, Wende et al., 2005). This approach allows simultaneous analysis of the measurement model (factors), and the structural model (path analysis), and have been widely used. The sections below provide the results of respondents’ demographics, measurement model, and structural model.

Demographic Statistics

Among a total of 64 students, 46 valid responses were collected, resulting in the response rate of 72%. Exactly half were male and the other half female. The majority of the respondents were between 20-24 years old. The respondents reported very experienced in using a PC (Mean=6.37, SD=.90), and very experienced in using the Internet (Mean=6.87, SD=.40).

When asked about their online shopping frequency, the majority (69.6%) reported that they shop online from time to time (every few months), followed by 26.1% who shop online regularly (every month), and 4.3% who had never shopped online before. Table 1 lists respondents’ current use of some of the popular social networking sites.

<table>
<thead>
<tr>
<th>Web 2.0 Sites</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>41</td>
<td>89.1%</td>
</tr>
<tr>
<td>MySpace</td>
<td>13</td>
<td>28.3%</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>7</td>
<td>15.2%</td>
</tr>
<tr>
<td>Flickr</td>
<td>3</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Table 1. Use of Web 2.0 Sites
Respondents were also asked about their use of the social shopping site Kaboodle before the study. The great majority had never heard about Kaboodle before (91.3%), or had heard about Kaboodle but do not have an account (8.7%).

The Measurement Model and Means of the Constructs

The reliability of the constructs is reported in Table 2. As shown, the composite reliabilities of the different measures all exceed the recommended 0.70 level, and the AVE for each measure all exceed 0.70, as well as the Chronbach’s Alpha. The results indicate that the measures are robust in terms of their internal consistency reliability.

<table>
<thead>
<tr>
<th>Construct</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Intention</td>
<td>0.86</td>
<td>0.93</td>
<td>0.84</td>
</tr>
<tr>
<td>Perceived Enjoyment</td>
<td>0.80</td>
<td>0.89</td>
<td>0.76</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>0.77</td>
<td>0.93</td>
<td>0.90</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>0.87</td>
<td>0.95</td>
<td>0.93</td>
</tr>
<tr>
<td>Social Presence</td>
<td>0.74</td>
<td>0.89</td>
<td>0.82</td>
</tr>
<tr>
<td>Tendency to Social Comparison</td>
<td>0.70</td>
<td>0.90</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Table 2: PLS Results of the Measurement Model

Table 3 lists the number of items, means, and standard deviations for each of the main constructs in the model. As shown, overall subjects reported positive attitude towards the social shopping site, and found it easy to use, useful, enjoyable, and are likely to use it in their shopping tasks in the future. Convergent validity was examined using the factor loadings and cross loadings of the items to all the constructs. All items loaded on their respective constructs from a lower bound of .76 to a higher bound of .96, and they loaded more highly on their respective constructs than others. In addition, all of the items’ loadings onto their respective constructs are significant at the .001 level, as indicated by the T-statistics of the outer model loadings ranging from 31.99 to 303.32. The result confirms the convergent validity of the indicators as representing distinct latent constructs. (Note: Details of the Items are not included in this paper due to word limit, and are available upon request.)

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of Items</th>
<th>Mean</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Ease of Use</td>
<td>4</td>
<td>5.36</td>
<td>1.06</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>3</td>
<td>5.41</td>
<td>1.27</td>
</tr>
<tr>
<td>Perceived Enjoyment</td>
<td>2</td>
<td>5.41</td>
<td>1.23</td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>2</td>
<td>4.93</td>
<td>1.49</td>
</tr>
<tr>
<td>Social Presence</td>
<td>3</td>
<td>5.36</td>
<td>1.07</td>
</tr>
<tr>
<td>Tendency to Social Comparison</td>
<td>4</td>
<td>5.28</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Table 3. Means and Standard Deviations of the Constructs

Table 4 reports the discriminant validity of the measurement model. The elements in the matrix diagonals represent the square roots of the AVEs, and they are all greater than the off-diagonal elements in the corresponding rows and columns. This supports the discriminant validity of the scales.
Table 5: Discriminant Validity of Measurement Model

<table>
<thead>
<tr>
<th></th>
<th>BI</th>
<th>PE</th>
<th>PEOU</th>
<th>PU</th>
<th>SP</th>
<th>TSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.93</td>
</tr>
<tr>
<td>Perceived Enjoyment (PE)</td>
<td>0.73</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEOU</td>
<td>0.54</td>
<td>0.64</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU</td>
<td>0.82</td>
<td>0.75</td>
<td>0.53</td>
<td>0.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Presence (SP)</td>
<td>0.67</td>
<td>0.64</td>
<td>0.43</td>
<td>0.68</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>Tendency to Social Comparison (TSC)</td>
<td>0.27</td>
<td>0.39</td>
<td>0.34</td>
<td>0.23</td>
<td>0.25</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Structural Model and Hypothesis Testing

Figure 2 shows the results of the structural model. The test yields results of path coefficients (β), 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 (R²) values, which indicate the amount of variance of the dependent construct that can be explained by the independent constructs.

Overall the model accounts for 71% of variance in behavioral intention, 54% in PU, and 47% in PE. PEOU is an antecedent to PU (β=.30, p<.001). PU has a strong effect on BI (β=.62, p<.001). PE also affects BI significantly (β=.27, p<.001). Tendency to Social Comparison has an effect on PE (β=.24, p<.001), but not on PU. Social Presence strongly affects both PU (β=.56, p<.001) and PE (β=.58, p<.001).

Thus the hypotheses testing results are:

- H1. PEOU will positively affect PU of social shopping websites. **Supported**
- H2. PU will positively affect BI to use social shopping websites. **Supported**
- H3. Perceived Enjoyment (PE) will positively affect BI to use social shopping websites. **Supported**
- H4. Tendency to Social Comparison (TSC) will positively affect PU of social shopping websites. **Not Supported**
- H5. Tendency to Social Comparison (TSC) will positively affect PE of social shopping websites. **Supported**
DISCUSSIONS
This study examined factors associated with one’s intention to use social shopping site. A research model with six factors was proposed and analyzed. Using PLS, the results supported the causal path from PEOU to PU (with a coefficient of .30), and from PU to BI (with a coefficient of .62), as suggested in the TAM. The study revealed that perceived enjoyment affects BI (with a coefficient of .27), suggesting the importance of engaging users and providing an enjoyable experience in designing such website. Social presence conveyed through the website also affected both PU (with a coefficient of .56) and PE (with a coefficient of .58). Individual user’s tendency to social comparison affected how much they enjoyed using the website (with a coefficient of .24).

One interesting result is that TSC was not a significant antecedent to PU, as hypothesized. One possible explanation was that the items adopted to measure TSC were developed in social psychology, and the items are generalized statements about overall attitude, which may not be suitable for specific activities such as online shopping. In future studies, these items need to be revised to fit the E-commerce context.

These results suggest that features that promote the sense of personal presence on social shopping sites are critical to the adoption of such technology. In the open-ended questions, students reported that one of the main reasons they would adopt the website in future shopping activities is because of the sense of having other shoppers online: “I would use Kaboodle over other online shopping sites because it has a more personable feel and the recommendations for other products come from people instead of computer generated outputs.” “What I liked best is the ability to meet people. It allows for a more personal connection and a more trusted opinion.” “Amazon is also more of an individual experience while shopping online. Kaboodle being a social shopping website makes shopping a little bit more fun.”

The social features of the website not only make online shopping more enjoyable, but can also serve other purposes such as making new discoveries of products online. “I find the people functions of Kaboodle the most useful. The shopping souls-mates and compatibility test really helped me discover new gift ideas and it was neat to see other people's profile lists and similar tastes that they had to me.” Students also compared the experience of social shopping sites with traditional site, and indicated "other sites such as BlueFly.com and Overstock.com allow you to narrow your search according to category, price range, and gender, but Kaboodle.com made searching more enjoyable". "Amazon appears to be masculine while Kaboodle appears to be a bit more feminine”.

When asked about concerns that prevent them from using the site in the future, privacy concerns topped the list. “I may have privacy issues because it is very interactive with others, which I believe could create easier access for other to hack into my account and learn about my information.” “I am not able to limit what others see on my profile.” Some also mentioned that while social shopping can be fun and helpful in discovering new products, it can be more time consuming too. “If I don't have a lot of time to look around online then this may not be the ideal way to go.” Another issue that was pointed out was the trust in other shoppers. “For me, shopping has always been a social activity. I go with my family or my friends to get their input on certain items. I found it difficult to trust the opinions of the other online shoppers at Kaboodle.com simply because I did not know them.” This suggests that for social shopping sites to be truly useful, the credibility of the website and its users are critical.

While the generalizability of the study is limited by the sample size, this exploratory research provides a starting point for future investigations in this important area of the intersection between social networking and E-commerce technologies. This research is among the very first to empirically examine the merge of social networking with E-commerce technologies. One possible direction for future research is to examine the type of online shopping tasks that are most suitable for social shopping websites. Will users prefer using social shopping sites than traditional E-commerce site for certain shopping activities, such as browsing or searching? Will social shopping sites be a better fit when shopping for particular types of products? Another direction worth future investigation is the issue of privacy and trust in the acceptance and use of such sites. Will the strength of the social ties affect users' trust of such shopping sites? With the increasing importance of Web 2.0 to E-commerce, research in this area is timely and important.

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