Understanding Information Adoption in Online Review Communities: The Role of Herd Factors

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Abstract

Online consumer reviews have shown as an important source of information that affects individuals' purchase decision making. To understand the influence of massive online reviews in online communities, this study extends prior research on information adoption by incorporating the perspective of herd behavior. We develop and empirically test a research model using data collected in an existing book review site. Our results illustrate two major aspects of findings. First, informational factors, including argument quality and source credibility, predict the adoption of online reviews. Second, we find strong empirical support for the impacts of herd factors, that is, discounting own information and imitating others posit significant influences on the adoption of online reviews. Our findings suggest that herd behavior plays an important role in consumers' information adoption in online review communities. Discussions on both theoretical and practical implications are provided.

1. Introduction

The fast growth of Internet technologies has provided online users with great opportunity to share information with others. Online communities, including discussion forums, blogs, social networking sites, and microblogs, appear to be the most active places where users' information sharing behavior takes place. For some online communities, such as Tripadvisor.com, Goodreads.com, and Yelp.com, the focal information that people is interested in is online consumer reviews. These online reviews are also known as electronic word-of-mouth (eWOM). They contain consumers' evaluations and opinions of a wide range of products or services. Online reviews are mostly contributed and shared by consumers with prior purchase experience. Hence, more other people in online review communities can adopt this type of information to reduce product and purchase uncertainty. Some industrial survey studies have been conducted to address the influence of online reviews. For instance, ChannelAdvisor [10] pointed out that 90% of online shoppers read online reviews, whereas 83% of them believed that these reviews affect their purchase decision.

The business value of online reviews has been attracting growing interest from scholars [e.g., 14,19,38,53]. An important stream of research sheds light on consumers' information adoption of these online reviews [12]. Information adoption considers the information internalization process, in which individuals accept information from external sources to enhance their knowledge or improve their decision making [48]. The adoption of online reviews can be similarly defined as the extent to which consumers accept online reviews after purposely assessing review validity and use these reviews for further purchase decision [54]. Scholars postulate that information adoption may be viewed as a form of informational influence [48]. That is, individuals are influenced as they receive information from others and accept it as credible evidence of reality [21]. In this regard, previous studies posit that informational factors, including factors related to information itself and information sources, may have primary effects on individuals' assessment on the information [51]. For instance, Zhang & Watts [54] contended that argument quality (factor related to information itself) and source credibility (factor related to information sources) are two major determinants of consumers' information adoption in online communities.

Although prior research has shown the importance of informational factors in affecting consumers' adoption of online reviews, it does not rule out the possibility that there may be other important factors. Cheung et al. [13] pointed out that only considering the influence of informational factors may not be sufficient since online reviews are socially aggregated in online

communities. They added normative factors along with informational factors in their online review adoption model to highlight the influence of group opinions.

In this study, we expect that factors associated with consumers' herd behavior may also be an important concern in understanding consumers' information adoption process in online review communities. Herd behavior is defined as the extent to which "people will be doing what others are doing rather than using their information" [6:797]. Herding depicts a large number of social situations in our daily life where our decision making is often influenced considerably by others' decision [20]. For example, a bestseller in *New York Times* can keep selling well for some time even it has a few mediocre book reviews [9]. Herd behavior also often occurs in online review communities, where consumers can easily identify popular products based their numbers of reviews. Research shows that hit products are likely to attract many other consumers to purchase and post new reviews [22]. Moreover, the number of online reviews for these products tend to peak within a short time [19]. This positive feedback mechanism indicates that the current volume of online reviews affects many other consumers' purchase behavior, which in turn affects them to contribute postconsumption reviews [28]. Given the prevalence of online review communities, it remains unclear how consumers herd to adopt online reviews of popular products and then make purchase decision. It will be worthwhile to consider both salient informational and herd factors for filling this gap and better understanding the influence of online reviews in online communities. In this study, we thereafter ask the following research question: *What are the key informational and herd factors that affect consumers' information adoption in online review communities?*

We expect that the present study can contribute to the existing literature in several aspects. First, many previous studies have shed light on factors that drive consumers' information sharing behavior in online communities [e.g., 16,30,36]. However, much remains unknown regarding how consumers are influenced by receiving information in online communities [11]. From this perspective, the present study adds to existing studies by examining the influence of online reviews in online communities. Second, we extends prior research on information adoption by considering the role of herd factors. Merely considering informational factors may be insufficient to account for the influence of online reviews in online communities [13]. Finally, research on herd behavior in the information systems (IS) literature is still limited. A few recent IS studies show that herd theory can bring important insights to users' software download behavior [20] and technology adoption behavior [47].

In this regard, the present research study can also add to the existing IS literature by firstly examining herd behavior in online review communities. We expect that the findings of this research can further provide important implications to designers of these communities, who can leverage the influence of online reviews and affect consumers' decision making.

The rest of this paper is organized as follows. First, we present the theoretical background of this research by reviewing prior studies on information adoption model and herd behavior. Then, we build our research model and develop hypotheses to articulate how herd factors play roles in consumers' online review adoption process. Next, we empirically test the model using an online survey study, followed by analyzing the collected data with structural equation modelling approach. Finally, we discuss the findings of this research, point out limitation and future research opportunities, and summarize with implications for both researchers and practitioners.

2. Theoretical background

2.1. Information adoption model

The information adoption model was originally proposed by Sussman and Siegal [48]. They applied the model to explain what factors are important in driving individuals to adopt information in an organizational context. The model is built upon theories of adoption and theories of informational influence. Adoption theories, including theory of reasoned action [2] and technology acceptance model [18], suggest that beliefs are important determinants of individuals' intention to adopt certain behavior or information technologies. These beliefs may include perceived usefulness and perceived ease of use. In the context of information adoption, perceived usefulness of information is likely to be a salient belief that drives people to adopt the information.

The theories of informational influence explicate the process through which individuals are influenced by the information they received [48]. Elaboration likelihood model (ELM) is one of the most prominent theories of informational influence [41]. ELM posits that information will be processed through two routes in terms of individuals' cognitive elaboration level: the central and peripheral route. The central route indicates that individuals use high cognitive effort to elaborate information. By contrast, the peripheral route suggests that individuals adopt heuristic and simple decision rules to quickly form judgments. Prior research shows that argument quality and source credibility are the two major factors that manifest the central and peripheral

route respectively [48,54]. When individuals apply the central route to process information, they will develop perceptions regarding the content of the information. In this regards, argument quality refers to the extent to which individuals perceive the received information as complete, consistent, and accurate [3]. On the other hand, when individuals use the peripheral route to process information, they will develop perceptions toward the heuristic and non-content cues, such as the characteristics of information sources. In this case, source credibility is defined as individuals' perceptions regarding the credibility of information sources, rather than the content of the information [41].

Drawing upon the two bodies of theories, the information adoption model posits that argument quality and source credibility are the two key determinants of information usefulness, which further leads to information adoption [48]. It suggests that individuals will be more likely to identify received information as useful if the information has high argument quality and is provided by credible sources. Further, useful information will increase individuals' likelihood of adopting the information. The significance of the information adoption model has been validated in a number of previous studies. For instance, Cheung, Lee, & Rabjohn [11] applied the model to understand consumers' adoption of online reviews in online communities. Jin et al., [33] shed light on factors that can affect members' continuously information usage in online communities.

2.2. Herd behavior

Eric Hoffer stated that (1955), "when people are free to do as they please, they usually imitate each other." Prior research has shown that herd behavior occurs in a wide range of circumstances, including imitating others' behavior in financial markets [17,31,52], downloading popular software products [20], and herding to adopt wiki systems [47]. Prechter explicitly pointed out that "everyone herds somewhat, and most people herd a lot" [42:174].

Based on its definition [6], herd behavior can be described with two attributes, namely imitating others and discounting own information [47]. Imitating others denotes that individuals follow others' decision or behavior when herding. Discounting own information refers to the extent to which individuals disregard their own information or beliefs when making the decision. Research shows that herding is likely to occur if people have incomplete information or face with uncertain circumstances [24,50]. To imitate others' behavior, an individual will need to observe their actions. In this case, the number and identify of preceding others may be important issues. If many others are making the

same choice, especially when they are opinion leaders or believed to have made the right decision, then the individual tend to follow this choice [5,43].

To account for the inherent mechanism of herding, scholars propose several perspectives, including informational cascades, conformity preference, positive payoff externalities, and sanctions on deviants [8,20]. For instance, information cascade provides an information-based perspective to understand herd behavior [7]. It indicates that "when it is optimal for an individual, having observed the actions of those ahead of him, to follow the behavior of the preceding individual without regard to his own information" [8:994]. The information cascade theory postulates that an individual can make decision according to two sources of information: one from himself/herself and the other from other decision makers [47]. An information cascade occurs when the individual find the influence of others' information is stronger than the influence of his/her information. In this regard, the influence of preceding others' behavior may be remarkably strong, and the individual may completely rely on the herd's information rather than his/her own information. Information cascades are likely to be prominent in online environments, where 1) individuals' own information is often limited and inaccurate, 2) many alternative products can be chosen for consumption, and 3) it is easy to identify a vast amount of information about others' purchase decision and product evaluations on the Internet [4,20,34].

3. Research model and hypotheses development

Building upon prior research on information adoption model and herd behavior, we develop our research model as shown in Figure 1. In the context of online review communities, we hypothesize that argument quality and source credibility affect information adoption. Information adoption is also determined by two herd factors, namely imitating others and discounting own information.
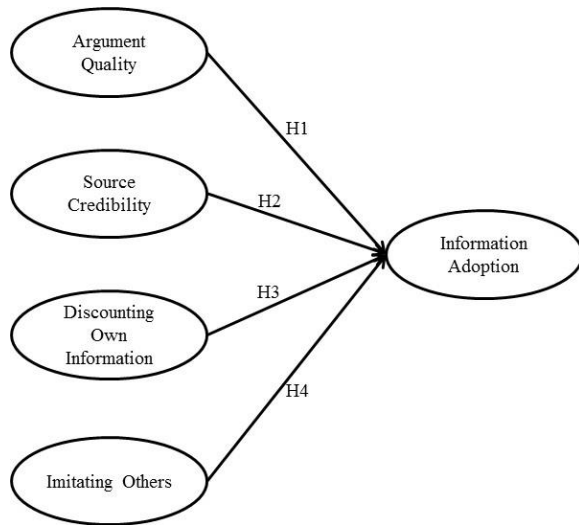
Figure 1. Research model

3.1. Informational factors and information adoption

Argument quality and source credibility are the informational factors that we consider in this study. According to the information adoption model, argument quality and source credibility have positive effects on information usefulness, which further affects information adoption [48]. For the purpose of parsimony and highlighting the influences of informational factors, we do not include the mediating role of information usefulness in this study. In contrast, we focus on the direct impacts of informational factors on information adoption. This approach is consistent with prior studies [e.g., 23,54].

In the context of online review communities, online reviews of high argument quality are beneficial to consumers as these reviews provide complete and accurate evaluations on products [11]. In this regard, consumers will employ the reviews to reduce uncertainty in their purchase process. In addition, online reviews from credible sources suggest that the review sources are experts, knowledgeable, reliable, and trustworthy [41]. Information from credible sources is expected to be conducive to information transfer [35]. Consumers are more likely to use information from credible sources and make informed purchase decision. Given that the relationship among the two informational factors and information adoption have been confirmed in many previous studies [e.g., 33,45,54], we accordingly propose the following hypotheses to articulate how informational factors positive impacts on consumers' adoption of online reviews.

H1: Argument quality is positively associated with information usefulness

H2: Source credibility is positively associated with information usefulness

3.2. Influences of herd factors

Huang & Chen [32] postulated that online reviews appear to be an important cue that is conducive to consumers' herd behavior in choosing online products. They further showed the herding effect will become stronger for online reviews from consumers than experts. Following this line of research, we intend to hypothesize that consumers' adoption of online reviews may be predicted by the two herd factors, namely imitating others and discounting own information. When the level of imitating others' behavior increases in online review communities, a consumer is likely to decide to use online reviews from others and follow their choice. The relationship between imitating others and behavioral adoption is also confirmed in the information technology adoption context [47]. Similarly, when the consumer discounts his/her own information, s/he will need to search for external information to improve the confidence of making right decision. We therefore expect that the consumer will refer to online reviews and decision from others in online review communities. In this case, the influence from external information may overweight that from his/her own information. Thus, the consumer will have a high tendency of accepting what others recommended in their online reviews. In sum, we provided the following two hypotheses.

H3: Discounting own information is positively associated with information adoption

H4: Imitating others is positively associated with information adoption

4. Research method

To empirically test the research model, we conduct an online survey in the present study. Detailed information about the research site, measures, and data collection is depicted as follows.

4.1. Research site

In this study, we chose Douban.com, a Chinese online review community, as the research site. Douban.com was established in 2005 and has become one of the most popular regional online review communities, where Chinese users can contribute and share online reviews about books. By August 2012, Douban.com had over 62 million registered users with more than 100 million unique visitors per month [39].

Millions of online reviews have been contributed on the website. Douban.com also offers various ranking lists to show highly popular items across different categories of books. For instance, popular books like The *Da Vinci Code* has over 102 thousand reviews, and *Le Petit Prince* has more than 146 thousand reviews. In summary, we believe that Douban.com enables online users to consider their information adoption decision of book reviews. The website can also stimulate users' herd behavior through allowing them to identify popular books. The website appears to be an appropriate research site for this study.

4.2. Data collection

Since no email list was available to reach the registered users of Douban.com, we randomly broadcasted the URL of our online questionnaire through the internal message system of the website. To maximize possible responses, we also posted invitation messages in popular "interest groups" on Douban.com, where many users can interact with others of similar interests. Finally, a total of 376 valid responses were collected for this study. To test possible non-response bias, we compared the compositions of the first 50 and last 50 respondents. The result showed that no significant differences were found, indicating that the non-response bias might not be a serious concern for this study. Table 1 depicts the demographic characteristics of the sample. It shows that 47.3% were males, whereas 52.7% were females. More than 50% of the respondents aged from 21 to 25. 61.6% were undergraduate students, and 81.1% had been using Douban.com for more than one year.

Table 1. Demographic characteristics

		Number
Gender	Male	178
	Female	198
Age	Below 15	1
	15-20	12
	21-25	214
	26-30	82
	31-35	40
	36-40	18
	Above 40	9
Education	Primary/elementary school	1
	High school	6
	Vocational/technical school diploma	32
	Undergraduate	232
	Master or above	105
Duration	Below 6 months	45
	6-12 months	26
	1-2 years	97
	3-4 years	96
	Above 4 years	112

4.3. Measure

In this study, we adapted validated measures from prior research. They were slightly modified to fit our research context. All measures used multiple items to operationalize the constructs in the research model. We applied seven-point Likert scales for the items, from 1=strongly disagree to 7=strongly agree. Table 2 illustrates the measures of the constructs.

Table 2. Measures of constructs

Construct	Item	Source
Argument Quality (AQ)	AQ1: The reviews in Douban are complete. AQ2: The reviews in Douban are accurate. AQ3: The reviews in Douban are objective.	[40,48]
Source Expertise (SE)	SE1: People who wrote comments were knowledgeable on this topic. SE2: People who wrote comments were an expert on this topic. SE3: People who wrote comments were trustworthy. SE4: People who wrote comments were reliable.	[48]
Discounting Own Information (DOI)	DOI1: I did not rely on my own information about the book in making the decision to buy. DOI2: I choose to buy the book, even though I might have preferred a different one. DOI3: If I didn't know the popularity of this book in Douban, I might have chosen a different book to read.	[32,46]
Imitating Others (IO)	IO1: I purchase the book because it appears to be on the list of best sellers. IO2: I choose to buy the book because it has already been read by a lot of people in Douban. IO3: I follow others in Douban in buying the book.	[32,46]
Information Adoption (IA)	IA1: I will consider the shopping experiences of other users on the Douban when I want to shop. IA2: I will ask other users on the Douban to provide me	[37,54]

		with their suggestions before I go shopping. IA3: I am willing to buy the products recommended by other users on the Douban.	

5. Data analysis and results

To analyze the data, we used Partial Least Squares (PLS) in this study. PLS is a widely adopted structural equation modelling approach in the IS literature [e.g., 1,26,49]. It requires a relatively small sample size and had no restriction on normal distribution of the sample [15]. In particular, we employed SmartPLS 2.0.M3 to test our research model [44]. The two-step procedure, including the measurement model and structural model, from Hair et al. [29] was adopted as follows.

5.1. Measurement model

In the measurement model, we examined the convergent validity and discriminant validity of the measures. Convergent validity assesses the extent to which items of a same construct are highly correlated as the items have the same conceptual domain. Composite reliability (CR) and average variance extracted (AVE) are two widely adopted indicators to evaluate convergent validity. It is deemed to be acceptable if CR values are greater than 0.7, and AVE values are higher than 0.5 [25]. As shown in Table 3, the CR and AVE values of all constructs met these requirements. Therefore, the convergent validity of the measures was sufficient in this study.

Table 3. Descriptive statistics of constructs

	Item	Loading	Mean	St.Dev
Argument Quality (AQ)	AQ1	0.891	4.82	1.39
	AQ2	0.899	4.84	1.29
CR=0.885; AVE=0.722	AQ3	0.750	5.11	1.27
Source Expertise (SE)	SE1	0.878	4.65	1.43
	SE2	0.897	4.71	1.34
CR=0.938;	SE3	0.924	4.42	1.32
AVE=0.792	SE4	0.858	4.22	1.39
Discounting Own Information (DOI)	DOI1	0.821	3.81	1.71
	DOI2	0.898	3.67	1.66
CR=0.902; AVE=0.755	DOI3	0.886	3.90	1.69
Imitating Others (IO)	IO1	0.911	3.63	1.64
	IO2	0.930	3.86	1.63
CR=0.936; AVE=0.830	IO3	0.892	3.61	1.66
Information Adoption (IA)	IA1	0.886	4.93	1.53
	IA2	0.872	4.28	1.67
CR=0.919; AVE=0.791	IA3	0.910	4.64	1.57

Discriminant validity examines the differences between constructs that are theoretically distinct. According to Gefen & Straub [27], we performed the confirmatory factor analysis with PLS (in Table 4) and the AVE test (in Table 5) for this study. As shown in Table 4, high loadings were identified on their corresponding constructs, indicating that items fell into their own constructs rather than other constructs. The AVE test examines the differences between the square root of AVE for each construct and the correlations between the construct and others. If the former is greater than the latter, then discriminant validity can be confirmed [25]. As shown in Table 5, the discriminant validity of the measures was also acceptable in this study.

Table 4. Confirmatory factory analysis with PLS

	AQ	SE	DOI	IO	IA
AQ1	**0.891**	0.579	0.271	0.342	0.417
AQ2	**0.899**	0.583	0.221	0.286	0.426
AQ3	**0.750**	0.450	0.150	0.150	0.350
SE1	0.538	**0.878**	0.288	0.232	0.422
SE2	0.563	**0.897**	0.344	0.321	0.489
SE3	0.615	**0.924**	0.373	0.387	0.507
SE4	0.545	**0.858**	0.402	0.428	0.452
DOI1	0.144	0.289	**0.821**	0.452	0.332
DOI2	0.223	0.371	**0.898**	0.554	0.476
DOI3	0.276	0.361	**0.886**	0.603	0.502
IO1	0.319	0.398	0.632	**0.911**	0.436
IO2	0.281	0.344	0.560	**0.930**	0.434
IO3	0.253	0.318	0.522	**0.892**	0.461
IA1	0.453	0.493	0.437	0.416	**0.886**
IA2	0.346	0.438	0.515	0.456	**0.872**
IA3	0.454	0.476	0.422	0.429	**0.910**

Table 5. Correlations of constructs

	AQ	SE	DOI	IO	IA
AQ	**0.849**				
SE	0.636	**0.890**			
DOI	0.255	0.396	**0.869**		
IO	0.312	0.387	0.626	**0.911**	
IA	0.470	0.528	0.514	0.488	**0.889**

Note: The bold diagonal values refer to the square roots of AVEs

5.2. Structural model

The result of the structural model is illustrated in Figure 2. We found that argument quality (β=0.205, t=3.194) and source credibility (β=0.226, t=3.308) are two important determinants of information adoption. H1 and H2 were supported. Information adoption was additionally predicted by discounting own information

(β=0.266, t=4.151) and imitating others (β=0.170, t=2.763), indicating that H3 and H4 were also supported. Finally, 43.5% of variances in information adoption were explained.
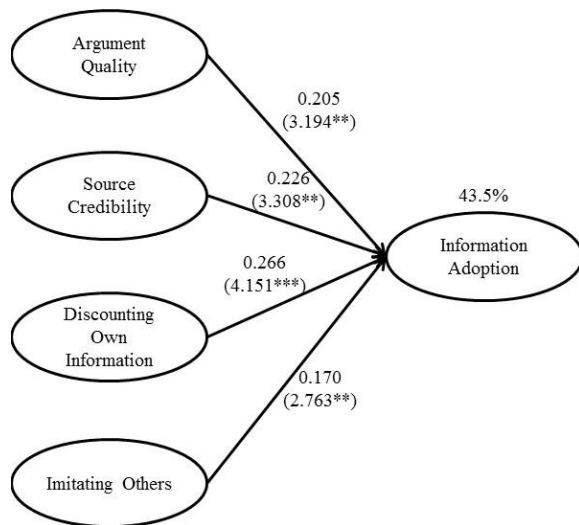

Figure 2. Structural model

6. Discussions and conclusion

To understand the influence of online reviews in online communities, this study extends prior research by incorporating the influence of herd behavior. Drawing upon prior research on information adoption model and herd behavior, we develop the research model to explicate consumers' adoption process of online reviews. Our findings show that informational factors, including argument quality and source credibility, play positive effects on information adoption. The results confirm the important role of informational factors in affecting consumers' information adoption decision. Consumers are likely to adopt online reviews that have high argument quality and come from credible sources. In addition, our findings provide strong empirical support regarding the influence of herd behavior. Both imitating others and discounting own information exert significant impacts on information adoption. Discounting own information places the most important impact among the four antecedents. These findings show that if consumers disregard their own information and imitate others' decision, such herding propensity will lead to consumers' adoption of online reviews in online communities.

6.1. Limitations and future research

Before addressing the implications of this research, we have to point out several limitations and future research opportunities. First, this study only examines consumers' online review adoption on an existing online review community of China. The culture difference, characteristics of the online review community, and type of products discussed in the community may have impacts on the results of the research model. Therefore, future research may replicate this research in other broader settings, where interesting and different results may be obtained. Second, compared to the number of users who adopt online reviews in online communities, the sample size of this study is relatively small. Thus, similar research may be conduct with increased sample size for improving the generalizability of the findings. Finally, the variances explained in information adoption were 43.5%. In this regard, there may be other important factors missing in the research model. Future research may consider the impacts of factors beyond the informational and herd perspectives in understanding consumers' online review adoption in online communities.

6.2. Implications for research and practice

We expect that the findings this research can provide important implications for theory and research. As far as we know, this study is one of the earliest ones that shed light on consumers' herding to adopt online reviews in online communities. We enrich the understanding about the influence of received information in online communities. Prior research shows that informational factors are important concerns to investigate why individuals adopt information or online reviews [e.g., 11,54]. Extending these studies, the findings of the present research show the significant influence of two herd factors, including imitating others and discounting own information. The importance of these factors also suggests that more work may be conducted to explore valid cues that can stimulate herding [47].

The findings of this research is also expected to provide insightful implications to practitioners. First, the important role of informational factors suggests that designers of online review communities should always keep in mind of providing high quality of online reviews. They may remove online reviews with inaccurate information, deliberate false comments, or explicate advertisements. Further, designers should promote credible review contributors to post comments on products. It will be beneficial if these review contributors can provide many more and high quality online reviews in online communities. Finally, designers should pay special attention to consumers'

herd behavior in online review communities. For instance, establishing ranking lists may be a possible cue that stimulates consumers' herd behavior. These lists allow consumers to easily identify the decision or behavior from a large number of individuals. It may therefore increase the likelihood of imitating others.

7. Acknowledgement

8. References

[1] Ahuja, M.K. and Thatcher, J.B. Moving Beyond Intentions and Toward the Theory of Trying: Effects of Work Environment and Gender on Post-Adoption Information Technology Use. *MIS Quarterly 29*, 3 (2005), 427–459.

[2] Ajzen, I. and Fishbein, M. *Understanding Attitudes and Predicting Social Behavior*. Prentice-Hall, Englewood Cliffs, N.J., 1980.

[3] Bailey, J.E. and Pearson, S.W. Development of a Tool for Measuring and Analyzing Computer User Satisfaction. *Management Science 29*, 5 (1983), 530–545.

[4] Bakos, J. A Strategic Analysis of Electronic Marketplaces. *MIS Quarterly 15*, 3 (1991), 295–310.

[5] Bandura, A. *Social Foundations of Thought and Action*. Prentice Hall, Englewood Cliffs, NJ, 1986.

[6] Banerjee, A.V. A Simple Model of Herd Behavior. *The Quarterly Journal of Economics 107*, 3 (1992), 797–817.

[7] Berndt, E.R., Pindyck, R.S., and Azoulay, P. Consumption Externalities and Diffusion in Pharmaceutical Markets: Antiulcer Drugs. *The Journal of Industrial Economics 51*, 2 (2003), 243–270.

[8] Bikhchandani, S., Hirshleifer, D., and Welch, I. A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades. *Journal of Political Economy 100*, 5 (1992), 992–1026.

[9] Bikhchandani, S., Hirshleifer, D., and Welch, I. Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades. *Journal of Economic Perspectives 12*, 3 (1998), 151–170.

[10] ChannelAdvisor. *2011 Consumer Survey: Global Consumer Shopping Habits*. , ChannelAdvisor, 2011.

[11] Cheung, C.M.K., Lee, M.K.O., and Rabjohn, N. The Impact of Electronic Word-of-Mouth: The Adoption of Online Opinions in Online Customer Communities. *Internet Research 18*, 3 (2008), 229–247.

[12] Cheung, C.M.K. and Thadani, D.R. The Impact of Electronic Word-of-Mouth Communication: A Literature Analysis and Integrative Model. *Decision Support Systems In Press*, (2012).

[13] Cheung, M.Y., Luo, C., Sia, C.L., and Chen, H. Credibility of Electronic Word-of-Mouth: Informational and Normative Determinants of On-line Consumer Recommendations. *International Journal of Electronic Commerce 13*, 4 (2009), 9–38.

[14] Chevalier, J.A. and Mayzlin, D. The Effect of Word of Mouth on Sales: Online Book Reviews. *Journal of Marketing Research 43*, 3 (2006), 345–354.

[15] Chin, W.W., Marcolin, B.L., and Newsted, P.R. A Partial Least Squares Latent Variable Modeling Approach for Measuring Interaction Effects: Results from a Monte Carlo Simulation Study and an Electronic-Mail Emotion/Adoption Study. *Information Systems Research 14*, 2 (2003), 189–217.

[16] Chiu, C.-M., Hsu, M.-H., and Wang, E.T.G. Understanding Knowledge Sharing in Virtual Communities: An Integration of Social Capital and Social Cognitive Theories. *Decision Support Systems 42*, 3 (2006), 1872–1888.

[17] Choi, J.J., Laibson, D., Madrian, B.C., and Metrick, A. Optimal Defaults. *American Economic Review Papers and Proceedings 93*, (2003), 180–185.

[18] Davis, F.D. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly 13*, 3 (1989), 319–340.

[19] Duan, W., Gu, B., and Whinston, A.B. Do Online Reviews Matter? — An Empirical Investigation of Panel Data. *Decision Support Systems 45*, 4 (2008), 1007–1016.

[20] Duan, W., Gu, B., and Whinston, A.B. Informational Cascades and Software Adoption on the Internet: An Empirical Investigation. *MIS Quarterly 33*, 1 (2009), 23–48.

[21] Eagly, A.H. and Chaiken, S. *The Psychology of Attitudes*. Harcourt Brace Jovanovich College Publishers, Fort Worth, TX, 1993.

[22] Escalas, J.E. and Bettman, J.R. You Are What They Eat: The Influence of Reference Groups on Consumers' Connections to Brands. *Journal of Consumer Psychology 13*, 3 (2003), 339–348.

[23] Ferran, C. and Watts, S. Videoconferencing in the Field: A Heuristic Processing Model. *Management Science 54*, 9 (2008), 1565–1578.

[24] Fiol, C.M. and O'Connor, E.J. Waking up! Mindfulness in the Face of Bandwagons. *The Academy of Management Review 28*, 1 (2003), 54–70.

[25] Fornell, C. and Larcker, D.F. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research 18*, 3 (1981), 382–388.

[26] Gefen, D. and Straub, D.W. Gender Differences in the Perception and Use of E-Mail: An Extension to the Technology Acceptance Model. *MIS Quarterly 21*, 4 (1997), 389–400.

[27] Gefen, D. and Straub, D.W. A Practical Guide to Factorial Validity Using PLS-Graph: Tutorial and Annotated Example. *Communications of the Association for Information Systems 16*, 5 (2005), 91–109.

[28] Godes, D. and Mayzlin, D. Using Online Conversations to Study Word-of-Mouth Communication. *Marketing Science 23*, 4 (2004), 545–560.

[29] Hair, J.F., Anderson, R.E., Tatham, R.L., and Black, W. *Multivariate Data Analysis*. Prentice Hall, Upper Saddle River, N.J., 1998.

[30] He, W. and Wei, K.-K. What Drives Continued Knowledge Sharing? An Investigation of Knowledge-Contribution and -Seeking Beliefs. *Decision Support Systems 46*, 4 (2009), 826–838.

[31] Hirshleifer, D., Subrahmanyam, A., and Titman, S. Security Analysis and Trading Patterns When Some Investors Receive Information before Others. *The Journal of Finance 49*, 5 (1994), 1665–1698.

[32] Huang, J.-H. and Chen, Y.-F. Herding in Online Product Choice. *Psychology and Marketing 23*, 5 (2006), 413–428.

[33] Jin, X.-L., Cheung, C.M.K., Lee, M.K.O., and Chen, H.-P. How to Keep Members Using the Information in a Computer-Supported Social Network. *Computers in Human Behavior 25*, 5 (2009), 1172–1181.

[34] Jones, Q., Ravid, G., and Rafaeli, S. Information Overload and the Message Dynamics of Online Interaction Spaces: A Theoretical Model and Empirical Exploration. *Information Systems Research 15*, 2 (2004), 194–210.

[35] Ko, D.G., Kirsch, L.J., and King, W.R. Antecedents of Knowledge Transfer from Consultants to Clients in Enterprise System Implementations. *MIS Quarterly 29*, (2005), 59–85.

[36] Lee, M.K.O., Cheung, C.M.K., Lim, K.H., and Sia, C.L. Understanding Customer Knowledge Sharing in Web-Based Discussion Boards: An Exploratory Study. *Internet Research 16*, 3 (2006), 289–303.

[37] Liang, T.-P., Ho, Y.-T., Li, Y.-W., and Turban, E. What Drives Social Commerce: The Role of Social Support and Relationship Quality. *International Journal of Electronic Commerce 16*, 2 (2011), 69–90.

[38] Mudambi, S. What Makes a Helpful Online Review? A Study of Customer Reviews on Amazon. Com. *MIS Quarterly 34*, 1 (2010), 185–200.

[39] Netease. Douban.com claims more than 100 million unique visitors and is close to make a profit (in Chinese). 2012. http://tech.163.com/12/0817/08/893L4F6N000915BF.html.

[40] Park, D.-H., Lee, J., and Han, I. The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. *International Journal of Electronic Commerce 11*, 4 (2007), 125–148.

[41] Petty, R.E. and Cacioppo, J.T. The Elaboration Likelihood Model of Persuasion. *Advances in Experimental Social Psychology 19*, (1986), 123–205.

[42] Prechter, R.R. *The Wave Principle of Human Social Behavior and the New Science of Socionomics*. New Classics Library, 1999.

[43] Rao, H., Greve, H.R., and Davis, G.F. Fool's Gold: Social Proof in the Initiation and Abandonment of Coverage by Wall Street Analysts. *Administrative Science Quarterly 46*, 3 (2001), 502–526.

[44] Ringle, C.M., Wende, S., and Will, S. *SmartPLS 2.0 (M3) Beta*. Hamburg, 2005.

[45] Shen, X.-L., Cheung, C.M.K., and Lee, M.K.O. What Leads Students to Adopt Information from Wikipedia? An Empirical Investigation into the Role of Trust and Information Usefulness. *British Journal of Educational Technology 44*, 3 (2013), 502–517.

[46] Sun, H. Understanding Herd Behavior in Technology Adoption and Continued Use: A Longitudinal Perspective. *Proceedings of Diffusion Interest Group in Information Technology*, (2009).

[47] Sun, H. A Longitudinal Study of Herd Behavior in the Adoption and Continued Use of Technology. *MIS Quarterly Forthcoming*, (2012).

[48] Sussman, S.W. and Siegal, W.S. Informational Influence in Organizations: An Integrated Approach to Knowledge Adoption. *Information Systems Research 14*, 1 (2003), 47–65.

[49] Venkatesh, V. and Morris, M.G. Why Don't Men Ever Stop to Ask for Directions? Gender, Social Influence, and Their Role in Technology Acceptance and Usage Behavior. *MIS Quarterly 24*, 1 (2000), 115–139.

[50] Walden, E.A. and Browne, G.J. Sequential Adoption Theory: A Theory for Understanding Herding Behavior in Early Adoption of Novel Technologies. *Journal of the Association for Information Systems 10*, 1 (2007), 31–62.

[51] Wathen, C.N. and Burkell, J. Believe It or Not: Factors Influencing Credibility on the Web. *Journal of the American Society for Information Science and Technology 53*, 2 (2002), 134–144.

[52] Welch, I. Sequential Sales, Learning, and Cascades. *The Journal of Finance 47*, 2 (1992), 695–732.

[53] Zhang, K.Z.K., Lee, M.K.O., and Zhao, S.J. Understanding the Informational Social Influence of Online Review Platforms. *Proceedings of the 31st International Conference on Information Systems*, (2010).

[54] Zhang, W. and Watts, S. Capitalizing on Content: Information Adoption in Two Online Communities. *Journal of the Association for Information Systems 9*, 2 (2008), 73–94.