

Association for Information Systems

AIS Electronic Library (AISeL)

ICEB 2015 Proceedings

International Conference on Electronic Business
(ICEB)

Winter 12-6-2015

Understanding Viral Advertising Pass-On Behavior On Facebook

Monica Law

Follow this and additional works at: <https://aisel.aisnet.org/iceb2015>

This material is brought to you by the International Conference on Electronic Business (ICEB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICEB 2015 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

UNDERSTANDING VIRAL ADVERTISING PASS-ON BEHAVIOR ON FACEBOOK

Monica Law, Hong Kong Shue Yan University, Hong Kong, cclaw@hksyu.edu

ABSTRACT

This study aims at investigating Facebook users' advertising pass-on behavior with self-disclosure and attitude toward online advertising. With about 350 undergraduate students' responses, the results indicate that self-disclosure relates to attitude toward online advertising but does not link with pass-on behavior; attitude is the key mediator in the whole advertising pass-on process. This study extends the viral advertising pass-on model proposed by Chu [1], which provides significant implications for online marketers who have major purposes for adopting social-media marketing.

Keywords: Facebook, self-disclosure, attitude toward online advertising and viral-advertising pass-on.

INTRODUCTION

Facebook was founded in 2004 and was the first social network that surpassed 1 billion registered accounts [2]. Upon the second quarter of 2015, it had 1.49 billion monthly active users [2]. It has attracted vast groups of users in the world. Several scholars (e.g., [3] [4]) have pointed out retaining social groups is related to social capital theory—the resources embedded in one's social networks and that can be achieved by information diffusion (e.g., [5] [6]). Particularly, Facebook groups provide a place for users to group together and share information secretly [1]. A lot of users perform personal updates and share information with others, such as news and advertisements, as parts of their daily lives. Hence, self-disclosure is a key means to cultivate and strengthen interpersonal relationships within social groups.

On the other hand, countless marketers have deemed Facebook as the most indispensable platform for social media marketing (SMM), which is “the umbrella term for the wide variety of tools and applications that give the Web its social capabilities” (p.75) [7]. Numerous studies have supported the benefits of adopting SMM to create more interaction, target communication, and spend fewer promotion costs (e.g., [8] [9]). Thus, many marketers integrate their current marketing plans with updates of their corporate Facebook pages and/or adopt Facebook's advertising system to send more focused messages to particular groups of customers. The Facebook group page is revealed as one of the key marketing tools for enhancing brand awareness and communicating with customers.

This study aims to investigate the relationships of self-disclosure, attitude, and online advertising responses for a group of college-aged Facebook users, with reference to the research of Chu [1]. However, this study is different from her research in three ways. First, this research will integrate other studies (e.g., [10] [11]) to measure self-disclosure and attitude as to examine whether different measures of the variables also have similar findings. Second, it will investigate all the variables in one structural model as to examine the viral advertising pass-on model further. Lastly, it will examine the mediation effect of attitude and then illustrate the impact of attitude.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Social Capital Theory

The dictionary definition of capital is “wealth in the form of money or property owned by a person or business and human resources of economic value” (Oxford, 2000). Several scholars have described social capital as relational resources embedded in relationships (e.g., [12] [13]); for example, Granovetter's [6] discussion of information diffusion as a kind of relational resource. People communicate with others and continue to disclose about themselves so as to convey meanings and concepts of “the self, of the family, of status, of nation, of world” (p.121) [14]. Those disclosures reflect the values and turn out to be social capital in maintaining people's social groups. Marketers' advertisements may be the contents to discuss online when they match with people's personal perspectives. Mick and Buhl [15] added that advertisements were subjectively experienced amid people's “history (past, current, and projected) and sociocultural milieu” (p.317). Taylor et al. [16] then reminded that practitioners should mindfully develop advertising to targeted viewers to express their identities, thoughts, and perspectives through forwarding behaviors.

Viral Advertising Pass-on Model

Online advertising allows viewers to have more control to access, like, comment, and share, thus changing the ways people respond to advertising [17]. Amongst different SNSs, Facebook is regarded as a favorite social media platform for online advertisements. Marketers spread messages and advertisements to potential consumers on Facebook, thereby aiming users to pass along advertisements to the others. Viral advertising is then created and regarded as “unpaid peer-to-peer communication of provocative content originating from an identified sponsor using the Internet to persuade or influence an audience to pass along the content to others” (p.33) [18]. Several researchers (e.g., [19] [20]) have investigated the ways to enhance Facebook users' passed-along behaviors. Chu [1] proposed to investigate viral advertising pass-on behavior with the psychological factors of self-disclosure and attitude. She explained that users, particularly those who were members of Facebook fan groups, had higher tendencies for self-disclosure and more favorable attitudes toward advertising; furthermore, they were more likely to pass along

advertising within their social groups. She remarked that Facebook's college-aged users were the largest growing group on Facebook, and they had greater tendencies to pass along online advertising. With reference to her research, this study examines the relationships of self-disclosure, attitude toward online advertising, and advertising pass-on behaviors. A proposed research model is suggested in Figure 1.

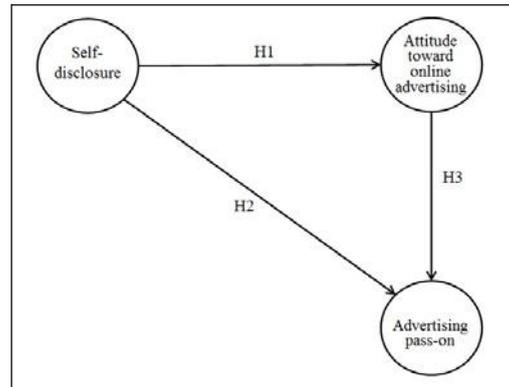


Figure 1. Proposed model

Self-disclosure. Self-disclosure refers to “any message about the self that a person communicates to another” (p.47) [21]. It also relates to voluntary and intentional expression of one's own thoughts, ideas, feelings, and experiences [10]. Mostly, Facebook users update their own information, such as hobbies and relationship status. They also share news and links to specific campaigns with others. These kinds of self-disclosure are important in an online context, as these are the ways to maintain relationships [22] and core social network behaviors [23] [24].

Chu [1] explained, “Facebook group members are more likely to disclose their personal data on Facebook than are nonmembers. This finding is not surprising; group participation and engagement in viral advertising necessitates high levels of self-disclosure, because users explicitly exhibit connections with groups and endorse brands when they pass on viral advertising to their contacts” (p.39) [1]. She also illustrated that college-age users were more likely to have positive attitudes toward online advertising and perform advertising pass-on behaviors when they tended to have higher levels of self-disclosure. Zeng et al. [25] gave an explanation that self-disclosure related to users' identities, and sharing advertising was a way to reflect their own perspectives, thereby enhancing their likelihood to accept viral advertising. Marketers' advertisements may turn out to be contents for communications based on users' personal perspectives. Hence, it is believed that those who are more willing to self-disclose may form more positive attitudes toward online advertising and/or have greater interest in forwarding particular online advertisements to others. Two hypotheses are set as follows:

H1: Those Facebook users who have higher tendencies for self-disclosure will form more positive attitudes toward online advertising.

H2: Those Facebook users who have higher tendencies for self-disclosure will perform more advertising pass-on behaviors.

Attitude toward online advertising

The theory of reasoned action (TRA) was proposed by Fishbein and Ajzen's study in 1975, which highlighted the importance of attitude toward a particular behavior. Attitude is described as “a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object” (p.6) [26]. It is widely used for predicting a person's adoption of innovative products [27]. With reference to TRA for online social-media marketing, attitude toward online advertising is treated as an important factor in affecting Facebook users' advertising pass-on behavior. Facebook users who have favorable attitudes toward advertisements will read, like, click and/or play, whereas those who have unfavorable attitudes will ignore and/or even dislike any online advertisements [28]. This study infers that attitude toward online advertising relates to advertising pass-on behavior and performs as a mediator in the research model. The proposed hypotheses are as follows:

H3: Those Facebook users who have more positive attitudes toward online advertising will perform more advertising pass-on behaviors.

H4: Those Facebook users' attitudes toward online advertising will mediate between self-disclosure and advertising pass-on behaviors.

RESEARCH METHODOLOGY

Sampling and Procedure

An English questionnaire was prepared with the purposes of the survey and was distributed during lesson breaks in different

courses at one university in Hong Kong. The undergraduate students filled in the questionnaire voluntarily. As a result, there were 356 returned questionnaires. Of the returned questionnaires, 345 sets of data were taken for this survey, as 11 questionnaires were more than 50% incomplete. Amongst the respondents, 111 (32%) were male and 234 (68%) were female. They were aged between 20 and 25. All of them had Facebook accounts.

Measures

All of the measurement items were based on the related literature studies. Four items for self-disclosure were taken from the study of Krasnova et al. [10]. The example is: "I keep my friends updated about what is going on in my life through Facebook." Regarding measuring attitude toward online advertising, three items were adopted from the research of Sun and Wong [11]; for instance, "I would describe my overall attitude toward online advertising very favorably." There were four items used to measure advertising pass-on with reference to the study of Chu [1]; for example, "I would consider passing along viral advertising to someone I know."

DATA ANALYSIS AND RESULTS

Two steps of structural equation modeling (SEM) with SmartPLS 3.0 were performed. The dataset was first evaluated with a measurement model investigating the relationships of variables to latent variables whereas the second assessment was tested with a structural model for exploring the proposed model and the research hypotheses.

Evaluation of Measurement Model (Outer Model)

There were three assessments in this part: reliability and convergent and discriminant validity. The findings are summarized in Tables 1 and 2. Regarding reliability, both composite reliabilities and Cronbach's alpha for the three constructs were all above 0.7, thus reaching the recommended criteria [29]. With regard to the assessment of validity, the factor loading of each item was above 0.70 and each construct's AVE was higher than 0.50, thereby indicating adequate convergent validity [30]. In addition, the square root of the AVE of each construct was greater than its inter-construct correlations, and this indicated the measurement model possessed discriminant validity.

Table 1. Quality criteria of the constructs

Latent Variable	Item	Mean	Standard Deviation	Standardized Outer loading	AVE	Composite reliability	Cronbach's alpha
Self-disclosure	SD1	2.53	0.905	0.718	0.615	0.864	0.791
	SD2	2.76	1.020	0.806			
	SD3	2.60	0.992	0.785			
	SD4	2.61	0.994	0.823			
Attitude toward online advertising	ATT1	2.45	0.961	0.808	0.641	0.842	0.717
	ATT2	2.40	0.913	0.858			
	ATT3	3.12	1.048	0.731			
Advertising pass-on	APO1	3.08	0.919	0.803	0.681	0.895	0.846
	APO2	3.33	0.883	0.817			
	APO3	3.25	0.860	0.821			
	APO4	3.06	0.916	0.858			

Table 2. Square root of AVE (diagonal elements) and inter-construct correlations

	<i>SD</i>	<i>ATT</i>	<i>APO</i>
Self-disclosure (SD)	0.784		
Attitude toward online advertising (ATT)	0.453	0.801	
Advertising pass-on (APO)	0.306	0.489	0.825

Evaluation of Structural Model (Inner Model)

Three processes recommended by Hair et al. [30] were used. The first step performed a collinearity assessment with a variance inflation factor (VIF). The VIF of self-disclosure and attitude toward online advertising to advertising pass-on were 1.259 and 1.258 respectively, which were below the threshold of 5. The second step was to adopt bootstrapping procedure (5,000 samples, no sign-changes option) to test the research hypotheses. The results are shown in Table 3 and Figure 2: Two proposed paths (H1 and H3) were supported (i.e., $SD \rightarrow ATT$ and $ATT \rightarrow APO$). One unsupported path (H2) was found (i.e., $SD \rightarrow APO$). The last process was to evaluate the predictive power of the model with R^2 , f^2 and Q^2 . The R^2 of two constructs—ATT and APO—were 0.206 and 0.248, which showed moderate predictive power [31]. As shown in Table 3, f^2 of three paths ranged from 0.012 to 0.259. Two paths (i.e., $SD \rightarrow APO$ and $ATT \rightarrow APO$) were with medium-effect sizes. For Q^2 , the model was evaluated with a blindfolding procedure [32]. The cross-validated redundancy values for the endogenous construct (VA: 0.155) illustrated that the model fulfilled medium predictive relevance.

Table 3. Significance testing results of the structural model path coefficients.

	<i>Path</i>	<i>Std. Beta</i>	<i>SE</i>	<i>t-value</i>	<i>p value</i>	<i>Sign.</i>	<i>f²</i>
H1	Self-disclosure → Attitude toward online advertising	0.453	0.049	9.196	0.000	***	0.259
H2	Self-disclosure → Advertising pass-on	0.107	0.059	1.813	0.070	n.s.	0.012
H3	Attitude toward online advertising → Advertising pass-on	0.440	0.055	8.014	0.000	***	0.204

Note: Std. Beta = Path Coefficient; SE = Standard Error; Sign. = Significance (** $p < .001$); n.s. = non significance

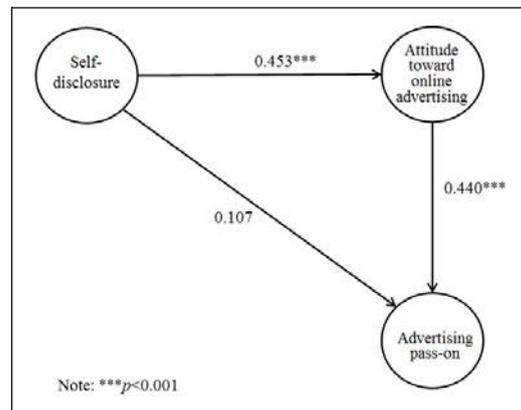


Figure 2. Results of the proposed model

Mediation Analysis

Attitude toward online advertising was the key mediator in this study and a mediation test was performed with bootstrapping for obtaining path coefficients between different constructs. With the Sobel Test, the estimate illustrated that attitude possessed full mediation effect between self-disclosure and advertising pass-on. The mediation test findings are depicted in Table 4. In summary, there are three supported hypotheses in this study (H1, H3, and H4) and one unsupported hypothesis (H2).

Table 4. Significance testing results of the mediation effect.

	<i>Path</i>	<i>Direct effect</i>	<i>Indirect effect</i>	<i>Total effect</i>	<i>Sobel Z</i>	<i>Remark</i>
H4	Self-disclosure → Attitude toward online advertising → Advertising pass-on behavior	0.107 (n.s.)	0.112***	0.306	6.102	Full effect

Note: *** $p < 0.001$; n.s. = non significance

DISCUSSION

This study illustrates that self-disclosure and attitude are the key factors in the advertising pass-on behavior process. First, this study adopts different measures of the constructs (i.e., self-disclosure and attitude) from other studies, and the research findings are similar to the study of Chu [1]. This shows that her viral advertising pass-on model is applicable. This provides a major contribution to advertising forwarding behavior study.

Moreover, before getting Facebook users' advertising pass-along response, marketers should formulate more strategies to induce users' self-disclosure (if possible on their fan pages) so as to formulate more positive attitudes toward their online advertisements. The more users disclose, the more likely they respond to online advertising. Hui et al. [33] recommended revealing more users' personal preferences and background information and then providing more extrinsic and intrinsic benefits to them (e.g., self-enhancement and pleasure feeling). In addition, Taylor et al. [16] recommended, "Practitioners should mindfully develop advertising messaging, themes, and value propositions that enable the targeted consumers to express their identities through forwarding behaviors" (p.24). This illustrates that viral advertising does not mean sending the ad to everyone, but marketers need to perform some analyses of their targets. More detailed users' analyses may assist the spread rate of advertising in specific social groups.

However, self-disclosure does not relate to advertising pass-along behavior directly. This may be because users still do not want to turn their Facebook pages into commercial pages. Marketers need to acknowledge that Facebook is for building and maintaining social relationships [34]; it is not primarily for receiving commercial messages. Users may have a particular sense of intrusion upon receipt of messages from marketers and in turn be reluctant to forward those messages to their social groups. Therefore, marketers need to pay attention to how to post related advertisements to users. Some users may not like to disclose their preferences and/or forward messages to others or receive commercial information. Marketers should then target those Facebook

users who have high levels of self-disclosure, but they should also notice whether users have positive attitudes toward online advertising, as attitudes also relate to their willingness to pass along viral advertising.

This study shows that attitude is a key mediator in the whole advertising pass-along process. Besides performing detailed users' analyses, when marketers send advertisements to users, they should be concerned with permission marketing, as this would eliminate users' negative feelings toward their e-messages/advertisings. In addition, marketers should use more specific encouragement and incentives, like tailor-made gifts and coupons, in order to cultivate positive attitudes toward their advertisements. This shows that although Facebook provides a unique platform to marketers for online advertisements, marketers should be aware that not all Facebook users conduct the same activities.

Limitations, Future Research, and Conclusions

Numerous limitations concerning this study need to be noted. First, the samples of this study only consist of undergraduate students from one university. The samples might not be representative of general Facebook users. More respondents from different walks of life are highly recommended. Second, this research design was cross-sectional and only showed one determinant for the attitude formulation process. More investigations with different factors are highly recommended (e.g., users' personal background, preferences, and other online behaviors). In addition, there are many factors leading to self-disclosure, attitude, and pass-on behaviors. For example, researchers may involve more factors related to personality and brand perception, to assist marketers in knowing the ways to form viral advertising. Lastly, the research design of this study does not involve any particular advertising, and respondents only answered questions based on their general perceptions/beliefs. Specific advertising may assist respondents in providing answers that are more accurate. Further studies may consider this arrangement.

REFERENCES

- [1] Chu, S.C. (2011) 'Viral advertising in social media: Participation in Facebook groups and responses among college-aged users', *Journal of Interactive Advertising*, Vol. 12, No. 1, pp. 30-43.
- [2] Chung, N., Nam, K., & Koo, C. (2015) 'Examining information sharing in social networking communities: Applying theories of social capital and attachment', *Telematics and Informatics*, Vol. 33, No.1, pp. 77-91.
- [3] Coleman, J.S. (1990) *Foundations of Social Theory*, Harvard University Press, Cambridge.
- [4] Derbaix, C., & Vanhamme, J. (2003) 'Inducing word-of mouth by eliciting surprise—Pilot investigation', *Journal of Economic Psychology*, Vol. 24, pp. 99-116.
- [5] Derlega, V.J., Metts, S., Petronio, S., & Margulus, S.T. (1993) *Self-Disclosure*, Sage Publications Newbury Park, CA.
- [6] Dobele, A., Lindgreen, A., Beverland, M., Vanhamme, J., & van Wijk, R. (2007) 'Why pass on viral messages? Because they connect emotionally', *Business Horizons*, Vol. 50, No. 4, pp.291-304.
- [7] Ellison, N.B., Steinfield, C., & Lampe, C. (2007) 'The benefits of Facebook "friends": social capital and college students' use of online social network sites', *Journal of Computer-Mediated Communication*, Vol. 12, No. 4, pp. 1143-1168.
- [8] Erevelles, S. (1998) 'The role of affect in marketing', *Journal of Business Research*, Vol. 42, pp. 199-215.
- [9] Escalas, J.E., & Rutgers, B.S. (2003) 'Antecedents and consequences of emotional responses to advertising', in Keller, P.A. & Rook, D.W. (Eds.), *Advances in Consumer Research*, Vol. 30, Association for Consumer Research, pp. 85-90.
- [10] Fishbein, M., & Ajzen, I. (1975) *Belief, attitude, intention, and behavior: An introduction to theory and research*, Addison-Wesley, Reading, Mass.
- [11] Granovetter, M.S. (1985) 'Economic action and social structure', *American Journal of Sociology*, Vol. 91, pp. 481-510.
- [12] Hair, J.F., Ringle, C.M., & Sarstedt, M. (2011) 'PLS-SEM: Indeed a silver bullet', *Journal of Marketing Theory and Practice*, Vol. 19, pp. 139-151.
- [13] Henseler, J., Ringle, C.M., & Sinkovics, R.R. (2009) 'The use of partial least squares path modeling in international marketing', *Advances in International Marketing*, Vol. 20, pp. 277-319.
- [14] Hui, K.L., Tan, B.C.Y., & Goh, C.Y. (2006) 'Online information disclosure: Motivators and measurements', *ACM Transactions on Internet Technology (TOIT)*, Vol. 6, No. 4, pp. 415-441.
- [15] Jacobs, J. (1961) *The life and death of great american cities*, Random House, New York.
- [16] Kozinets, R.V., Valck, K., Wojnicki, A.C., & Wilner, S.J. (2010) 'Networked narratives: Understanding word-of-mouth marketing in online communities', *Journal of Marketing*, Vol. 74, pp. 71-89.
- [17] Krasnova, H., Spiekermann, S., Koroleva, K., & Hildebrand, T. (2010) 'Online social networks: Why we disclose', *Journal of Information Technology*, Vol. 25, No. 2, pp. 109-125.
- [18] Lee, D.H., Im, S.H., & Taylor, C.R. (2008) 'Voluntary self-disclosure of information on the internet: A multimethod study of the motivations and consequences of disclosing information on blogs', *Psychology & Marketing*, Vol. 25, No. 7, pp. 692-710.
- [19] Loury, L.D. (1997) 'The gender earning gap among college-educated workers', *Industrial and Labor Relations Review*, Vol. 50, No. 4, pp. 580-593.
- [20] Marken, G.A. (2007) 'Social media ... The hunted can become the hunter', *Public Relations Quarterly*, Vol. 52, No. 4, pp. 9-12.
- [21] Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007) 'I'll see you on "Facebook": The effects of computer mediated teacher self-disclosure on student motivation, affective learning, and classroom climate', *Communication Education*, Vol.56, pp. 1-17.

- [22] McCracken, G. (1987) 'Advertising: Meaning or information?', *Advances in Consumer Research*, Vol. 14, No. 1, pp. 121-24.
- [23] Mick, D.G., & Buhl, C. (1992) 'A meaning-based model of advertising experiences', *Journal of Consumer Research*, Vol. 19, No. 3, pp. 317-338.
- [24] Miletsky, J. (2009) *Principles of internet marketing: New tools and methods for web developers*, Cengage learning, Boston.
- [25] Nunnally, J.C. (1978) *Psychometric theory*, McGraw-Hill, New York.
- [26] Okoli, C., & Oh, W. (2006) 'Investigating recognition-based performance in an bridge to knowledge transfer?', *Journal of Business Research*, Vol. 59, pp. 130-139.
- [27] Phelps, J.E., Lewis, R., Mobilio, L., Perry, D., & Raman, N. (2004) 'Viral marketing or electronic word-of-mouth advertising: Examining consumer responses and motivations to pass along email', *Journal of Advertising Research*, Vol. 44, No. 4, pp. 333-48.
- [28] Porter, L., & Golan, G. (2006) 'From subservient chickens to brawny men: A comparison of viral advertising to television advertising', *Journal of Interactive Advertising*, Vol. 6, No. 2, pp. 4-33.
- [29] Statista, (2015) 'Facebook: Number of monthly active users worldwide 2008-2015', available at <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/> (accessed 10 September 2015).
- [30] Sun, S., & Wang, Y. (2010) 'Familiarity, beliefs, attitudes, and consumer responses toward online advertising in China and the United States', *Journal of Global Marketing*, Vol. 23, No. 2, pp. 127-138.
- [31] Taylor, D.G., Strutton, D., & Thompson, K. (2012) 'Self-enhancement as a motivation for sharing online advertising', *Journal of Interactive Advertising*, Vol. 12, No. 2, pp. 13-28.
- [32] Wheelless, L.R., & Grotz, J. (1976) 'Conceptualization and measurement of reported self-disclosure', *Human Communication Research*, Vol. 2, No. 4, pp. 338-346.
- [33] Wold, H. (1982) 'Soft modeling: The basic design and some extensions', *Systems under Indirect Observation: Causality-structure-prediction*, North Holland Publishing Company, Amsterdam, pp. 1-54, Vol. 2.
- [34] Zeng, F., Li, H., & Dou, W.Y. (2009) 'Social factors in user perceptions and responses to advertising in online social networking communities', *Journal of Interactive Advertising*, Vol. 10, No. 1, pp. 1-13.