Dual process theory for information credibility in Instagram account

A APinem, S R C Anwar, P W Handayani and Q Munajat
Faculty of Computer Science Universitas Indonesia, Depok, Indonesia
E-mail: ave.pinem@cs.ui.ac.id

Abstract. This study aims to analyse the factors to use GO-JEK’s Instagram account and how it would affect the credibility of information. First, we defined the motivational factors for using Instagram. Then, we analysed the effect of informational and normative influence from dual process theory. After that, dual process theory was confirmed to see the effect of informational and normative influence to information credibility. This study uses the quantitative approach with 341 respondents of Instagram users who have used GO-JEK’s Instagram. Data analysis was done using PLS-SEM method. The result found that passing time and showing affection affects the informational and normative influence. However, sharing problem does not do so. Additionally, Informational and normative influence also affects the credibility of information on Instagram.

Keywords—dual process theory, information credibility, pls, motivation, Instagram

1. Introduction

Social media is a group of applications based on Web 2.0 technology that enables the creation and exchange of user generated content. Social media can be an online communication channel to form communities to interact, share content and collaborate. With social features, social media allows real-time exchange of information and interaction between its users.

In the business world, social media platforms are part of a strategy that individuals or companies use to develop and improve their communication with customers. Social media is a valuable resource because it contains detailed information on various aspects of the service/product and spread information quickly to various recipients [1]. Information provided on social media is not only information from corporate social media account managers, but also comes from information sharing activities from customers on social media. Customers are more actively seeking information from other customers than the information provided by the company [2]. This condition and the connectivity features in social media make it easier for companies to communicate with customers and facilitate the occurrence of electronic-word of mouth (e-WOM).

One company that uses social media is GO-JEK. GO-JEK is a technology company engaged in transportation with a social mission to improve the welfare and livelihood of workers in various informal sectors in Indonesia. Currently GO-JEK makes social media as the main promotional tool that gives effects to the company's revenue. One of the social medias that used by GO-JEK is Instagram and by 2018, it has 396,000 followers and 2,243 posts. Through Instagram4, users can get up-to-date activities and latest information provided by the company and user can find out comments from other users regarding services received from GO-JEK. Various types of comments are present in every post, such as questions, reports of an issues, stories of personal experience and others.
not all the comments posted by user are valid or based on real events. For example, there is information of job vacancy in the comment section which is not listed in the official website of GO-JEK. There are also negative comments from Instagram users on the GO-JEK posts which can be an indication of user complaint or a form of image defamation of GO-JEK [3]. The existence of the latter comments will certainly form various perceptions of others depending on how trustworthy they perceived the information. With many perceptions that exist, this research will analyse how the perception of the information credibility is formed by others on the social media especially Instagram. Therefore, this research will analyse the factors that affect the behavior of social media users in achieving the credibility of information contained in social media especially Instagram using dual process theory.

2. Literature Study

2.1. Dual Process Theory

This theory examines two types of influence and how they affect the persuasive review from customer. The two types of influence are informational influence and normative influence. The information influence is the effect of receiving information obtained from others as evidence of a reality. The impact of information based on the content contained in the review based on the recipient's assessment. Meanwhile, the normative influence is an influence of adjusting the positive expectations of others or to avoid sanctions from others. Normative influence emerges from social norm or expectation implicitly or explicitly in order to match a group preference. This influence arises when information which is favored by other members available during communication. This theory focuses on the communication model effects based on the information by the recipient as well as the normative power of other listeners [4]. Informative and normative influences can form an assessment of the credibility of information from reviewers. This theory is effective for assessing the effectiveness of communication in a discussion environment (e-WOM).

2.2. Information Credibility

The credibility of information can be defined as the degree to which a person perceives information that becomes trustworthy and becomes a strong predictor of his/her subsequent action. Credibility is always the most considered for e-WOM recipients. The credibility of information has three dimensions, namely media credibility, message credibility, and source credibility.

2.3. Previous Study and Research Gap

A study has been conducted to evaluate user motivation for using social media account of certain brand [5]. The study also compared the motivations for various social media platform. Six motivations were analysed such as passing time, showing affection, following fashion, sharing problems, demonstrating sociability, and improving social knowledge. The results of this study indicated that Instagram users mostly follow a certain brand account for showing affection, following fashion and demonstrating sociability. Thus, our study will adopt the motivations used by this previous research. However, the motivation in the form of following fashion and improving social knowledge that is not relevant to the object of study will be omitted in this study.

The study of product recommendations credibility in Indonesia was previously done to understand what factors affect consumers to make recommendations online and the relationship between consumers and sellers on the assessment of the credibility of the seller and their promoted products using dual process theory [6]. Dual process theory can measure credibility and trust in an e-WOM. On the GO-JEK Instagram account, there is a lot of information available such as from photos, videos, Insta-story, comment fields, and more. Many information from account managers and other users, make it necessary to ensure how the user's behavior in achieving the credibility of information contained in GO-JEK Instagram account. Therefore, in this study, the authors chose to use dual process theory because it can assess the effectiveness of communication in e-WOM activity.
3. Hypothesis Development

3.1. Motivation to Use and Follow the Social Media Platform

Passing time is a form motivation of spending time [7]. This motivation is a hobby that conducted to fill the busy routine. In previous research, passing time was used as a variable to find out the motivation of social media use of Facebook, Twitter, Snapchat, and Instagram [5]. This study was also conducted to describe the e-WOM activity through Instagram. Therefore, we formulate hypothesis to know whether passing time positively impacts informational influence and normative influence on social media Instagram GO-JEK.

\[ H1: \text{Passing Time (PT)} \text{ has positive influence towards Informational influence} \]
\[ H2: \text{Passing Time (PT)} \text{ has positive influence towards Normative influence} \]

Showing affection as motivation means expressing concern and friendship towards others [7]. In previous research, showing affection was used as a motivation variable to use of social media such as Facebook, Twitter, Snapchat, and Instagram [5]. This study also mentioned that the Instagram as the media of e-WOM activity. Therefore, we formulate hypothesis to know whether showing affection positively affect informational influence and normative influence on social media Instagram GO-JEK.

\[ H3: \text{Showing Affection (SA)} \text{ has positive influence towards Informational influence} \]
\[ H4: \text{Showing Affection (SA)} \text{ has positive influence towards normative influence} \]

Sharing problem as motivation means a user needs to share with others about his/her own issues [7]. Therefore, we formulate hypothesis to know whether the sharing problem positively affect informational influence and normative influence on social media Instagram GO-JEK.

\[ H5: \text{Sharing problem (SP)} \text{ has positive influence towards Informational influence} \]
\[ H6: \text{Sharing problem (SP)} \text{ has positive influence towards normative influence} \]

Demonstrating sociability as a motivation means that using technology to socialize with new people and overcome social barriers [7]. Therefore, we formulate hypothesis to know whether demonstrating sociability positively impacts informational influence and normative influence on social media Instagram GO-JEK.

\[ H7: \text{Demonstrating sociability (DS)} \text{ has positive influence towards Informational influence} \]
\[ H8: \text{Demonstrating sociability (DS)} \text{ has positive influence towards normative influence} \]

3.2. The relation of Informational and Normative Influence with Information Credibility

In previous research, credibility analysis of information from e-WOM activities using dual process theory has been done [5]. Dual process theory is divided into two influences namely informational influence and normative influence. This theory has been used previously to conduct analysis of the credibility of product recommendations by consumers in Indonesia [6]. Therefore, this research will be analysed the relationship of informational influence and normative influence towards information credibility. Thus, we formulate hypothesis whether the informational influence and normative influence positively affect information credibility on social media Instagram GO-JEK.

\[ H9: \text{Informational influence} \text{ has positive influence towards Credibility information (CI)} \]
\[ H10: \text{Normative influence} \text{ has positive influence towards Credibility information (CI)} \]

4. Methodology

The object of this study is GOJEK Instagram account. It is an active in online transportation service. The population is the followers of the account. Data collection conducted to Instagram users who have used or follow GO-JEK’s Instagram account. Questionnaires are made online in kuesioner.cs.ui.ac.id website. We construct the questionnaire from previous studies [7][5][8]. Section one of the questionnaire is statements of respondents' demographic data. The questions in the second section are answered with a 5 level Likert scale. Level 1 is "strongly disagree" and up to level 5 which is "strongly agree". Before issuing the questionnaire, we conducted readability testing with seven respondents. After the data collecting process, we analysed the data using structural equation modelling. Particularly, we used PLS-SEM to make predictions of relationships between constructs in this study. SmartPLS 3.0 was chosen as the tool for this purpose.
5. Result and Analysis

5.1. Respondent Demography

The respondent demography is presented in Table I. Most respondents use the internet for entertainment purposes more than one hour, allowing them to engage in social media activities. Most of the respondents is also in 18-29 age range. The internet can provide entertainment in various ways such as social media, videos or online movies, music and game. These activities are very close to the lifestyle of this age group [9]. Thus, the respondent is suitable for this study.

| Gender | Time spending on the internet for entertainment purpose | Average number of new information acquired or collected in the past month through GO-JEK Instagram account |
|--------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Male   | 39.88%  
        < 1 hours | 4.99%  
        1 - 2 hours | 21.99%  
        3 - 5 hours | 36.95%  
        > 5 hours | 36.95%  
| Female | 60.12%  
        3 - 5 hours | 66.86%  
        > 40 years | 31.38%  
| Age    |                                                        |                                                                                                     |
| <18 years | 5.57%  
         < 5 | 10.26%  
         6 - 10 | 85.92%  
         > 11 | 1.17%  
| 18 - 29 years | 88.27%  
             > 40 years | 2.64%  
| 30 - 39 years | 4.69%  
                > 11 | 1.76%  
| > 40 years | 1.47%  
             > 11 | 1.76%  

5.2. Reflective Measurement Model Evaluation

Reliability Testing was done, and the variable proves to be reliable if its Composite Reliability value is more than 0.7 [10]. The convergence validity test is satisfied if each loading factor value is above 0.7 and the AVE value is 0.5 or more [10]. Discriminant validity test is a test done to find out the distance between constructs where the cross-loading value of each indicator on its construct that have to be higher than cross loading on another construct [10]. These values are presented in Table 2.

| S4 | SP | DS | CI | CR | AVE |
|----|----|----|----|----|-----|
| PT | 0.365 | 0.214 | 0.122 | 0.38 | 0.881 | 0.788 |
| SA | 0.810 | 0.433 | 0.239 | 0.897 | 0.637 |
| SP | 0.746 | 0.111 | 0.845 | 0.646 |
| DS | 0.132 | 0.926 | 0.863 |
| CI | 0.921 | 0.797 |

5.3. Formative Measurement Model Evaluation

Convergent Validity Testing is achieved by examining the correlation between construct that should be 0.80 or higher [10]. Collinearity Testing can be observed by its VIF value that should be lower than 5 [10]. Significance of Indicator Weight (T value) with bootstrapping was conducted with 5000 subsamples with significant level of 0.05. The t-value must be higher than 1.64 since it’s a one tailed test [10]. All this value was satisfied, and the analysis can be continued.

5.4. Structural Measurement Evaluation

The coefficient of determination ($R^2$) and Predictive relevance ($Q^2$) test was conducting and statistically describe that the model has medium ability in predicting. Three variables such as Credibility Information, Informational Influence and Normative Influence have $R^2$ of 0.459, 0.212, and 0.298 subsequently. The $Q^2$ value of Credibility Information is 0.3
5.5. Hypothesis Testing
This test is done to evaluate the proposed hypothesis. The hypothesis is accepted if t-statistic values is higher than 1.64 and p-value is higher than 0.05. Table 3 shows the results of the hypothesis testing.

Table 3. Hypothesis Testing.

| Hypothesis | T Statistics | P Values | Note   |
|------------|-------------|----------|--------|
| H1         | 5.5,51731   | 0.00000001487714 | Accepted |
| H2         | 3.053919    | 0.00135   | Accepted |
| H3         | 3.320913    | 0.000452  | Accepted |
| H4         | 5.583688    | 0.0000001239917 | Accepted |
| H5         | 0.897081    | 0.1846    | Rejected |

6. Discussion and Implication

6.1. Motivation in Following Instagram Account for Informational influence and Normative influence
User motivation in using Instagram for Passing Time positively impacts the effect of receiving information from others as evidence of a reality (informational influence) and for approval or avoiding criticism from others (normative influence). This is consistent with some previous studies. Instagram ranks second for passing time motivation after Snapchat [5]. This is because Snapchat and Instagram are applications that are currently popular among millennials. Social networks such as Instagram is the type of user-generated content (UGC) applications which is closely related to e-WOM.

User's motivation in using Instagram to show affection positively impacts the effect of receiving information from others as evidence of a reality or to get approval and avoid criticism from others. Instagram was first ranked for the motivation of Showing Affection [5]. This is because Instagram meets the needs of users to thank others, tell others they care, offer help, and show encouragement and attention. With such participation, it can enhance personal branding and trigger other users as well to believe in something. Therefore, by showing concern using social media can affect the impact of receiving information from a reality and receiving information to gain consent and avoid criticism from others.

User motivation in using Instagram for Sharing Problem does not positively impact the effect of receiving information from others as evidence of a reality nor to get approval and avoid criticism from others. In this case, Instagram is not very often used by users to share the problem. In addition, this has something to do with the responsive level of GO-JEK Instagram account. Some problems asked by Instagram users was not given an answer from the GO-JEK Instagram admin.

User motivation in using Instagram for demonstrating sociability impacts positively and significantly on informational influence. However, it does not have a positive and significant impact on normative influence. Socializing by using social media is an activity that is often done by the user. Through socializing, many users are becoming to know each other or simply being known. Therefore, socializing using social media can impact on the effect of receiving information. In the other hand, behavioral motivation that shows socialization can be done freely like giving comment or opinion without fear and worry gets disapproval from others because on the Internet, the identity is very easy to forget. Also, the emerged of fake account supported this result. This account was createdto gain freedom in expressing ones’ self and protecting him/her from the criticisms of others in social media.

6.2. Informational Influence and Normative Influence for Information Credibility
Informational Influence and normative influence positively and significantly impact the credibility of the information. This is in line with some previous research [6][4]. Information of a known and trusted person is the best way to promote a product because it is considered more convincing. This is because the information provided by a known or trusted person usually comes from personal experience or knowledge held. Therefore, the effect of receiving information based on experiences has a positive impact on the credibility of information.
Normative influence also affects the information credibility. For example, when a police beating GO-JEK drivers video got a lot of negative responses from social media users. Social media users shared the information through various social media, so that many people who support it can be followed up. With so much support, the truth of that information can increase. Hence, the effect of receiving information to gain approval and to avoid criticism from others has a positive impact on the credibility of the information.

7. Conclusion
This study was conducted to analyse the factors that motivate users in follow GO-JEK Instagram account and analyse how the credibility of information attained in GO-JEK Instagram account. The result shows that motivating factors that influence the informational influence are passing time, showing affection, and demonstrating sociability. And the motivational factors that affect the normative influence are passing time and showing affection. However, sharing problem was not proved to be the factor that affected information influence nor normative influence. Based on data analysis and research model, it is found that informational influence and normative influence affect the credibility of GO-JEK Instagram information. This result confirmed the dual process theory for information credibility for GO-JEK Instagram account.

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