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Understanding customers' intention to use social network sites as complaint channel: an analysis of young customers' perspectives

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Abstract. Social network sites (SNSs) have grown rapidly in recent years. More and more companies have used SNSs as part of their business strategy. SNSs offer numerous advantages, especially in enhancing communication. SNSs have a potential as a new complaint channel for young customers to file their complaints to companies. The objective of this study is to investigate the acceptance of SNSs as complaint channel based on TAM. A structured questionnaire was distributed to young participants, which collected 222 valid questionnaires. Furthermore, structural equation modeling was utilized to investigate the structural model. The results revealed that perceived ease of use and perceived usefulness have a positive correlation on the attitude towards SNSs. While the attitude plays an important role in understanding customers' intention to use SNSs to voice complaints. However perceived usefulness has no significant impact on intention to use. Limitations and further research were also discussed.

1 Introduction

Technology acceptance model (TAM) suggested by Davis [1], is an effort to explain the adoption process of any technology within organization. TAM has been extensively utilized to explain the determinants influencing users' acceptance of the technology [2]. TAM suggests that users' perceptions about usefulness and ease of use are two key elements that determine the adoption of various technologies. Conforming to Davis et al [3], the attitudes toward using technology can be described by perceived ease of use and usefulness, while attitudes will influence behavioral intention and usage behavior.

TAM is an essential model for understanding an individuals' attitude and trustworthy of use technology through the individuals' beliefs about a technology is useful and effortless [4]. When users are introduced with a new technology, perceived ease of use and usefulness are two significant determinants that affect their decision to use it. TAM has been examined with kind of technologies and populations and has been confirmed to be an important and effective model in predicting the acceptance of technologies [5].

In recent years, technology has grown rapidly, particularly social network sites (SNSs). The use of SNSs has increased and SNSs have grown very popular among internet users. As of January 2016, more than 79 million people in Indonesia use SNSs, accounting for 89% of its internet population [6]. In addition, Facebook has almost 12 million active users, Google+ has 9 million active users, and more than 170 minutes are spent on SNSs per day. There is no doubt that SNSs offer many advantages for its users. SNSs provide a huge amount of data [7]. SNSs may allow quick access to a huge audience and almost no cost [8]. Furthermore, SNSs also provide a broad way to communicate with anyone anywhere with no geographical limitations.

More and more companies have used SNSs as part of business strategy. In order to obtain the advantages of SNSs, companies need to understand the nature of SNSs and how it is used [5]. Generally, TAM is frequently utilized to understand the use of new technology. Few studies have successfully used TAM to explain the factors that affect the acceptance of SNSs [5][9][10]. Furthermore, in light of business tools, SNSs can be used as tools for customer engagement. According to Garding & Bruns [11], SNSs have the potential as a new complaint channel to accommodate any complaints voiced by customers. Customers may use SNSs to file their complaints to companies.

Mattila & Wirtz [12] defined complaint channel as the tool that allows customers to address their complaints about the products or services related to the company. Complaints are derived from customers provide an overview to analyze about issues and make the right decisions to make sure that issues do not occur again [13]. The adequacy of complaint channels is essential towards realizing a successful complaint management [14]. However, it should be noted that these channels are not all suitable from a customer's point of view. Thus, companies should think deeply in determining communication channels.

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Mattila & Wirtz [12] examined the possibility of communication channels for customer to file complaints. They examined the traditional communication channels telephone, face to face, mail, and email. Generally, these communication channels are suitable for making a complaint [15]. Mattila & Wirtz [12] revealed that the choice of communication channels depends on customers' motivation when voicing a complaint. However, not all customer groups are willing to voice their complaints to companies. When customer groups "young non-complainers" decide to complain, they would choose SNSs to voice their complaints to companies [16]. SNSs can be implemented as complaint channel to motivate younger customer to voice their complaints.

Based on the above brief background of the problem, this study examined the acceptance of social network sites as complaint channel. This study aims to examine whether TAM can predict the use of SNSs in the context of complaint channel, especially from a younger customers' perspectives. Several studies have found that TAM is useful to explain SNSs adoption [5][9]. Therefore, this study used the basic framework of TAM to explain the acceptance of SNSs as complaint channel.

2 Literature review

2.1 Complaint management

In business activities, not all business deals lead to customer satisfaction [14]. Dissatisfaction may come with some reasons. For example, there is a difference between customers' expectations towards a product or service. When this happens, customers may voice their complaints to companies. Customer complaints provide an occasion to analyze about issues and take possible reaction to resolve service failures [13]. Companies can collect information from all complainants into account as sources of meaningful knowledge that can be used to improve their performance. A good quality of complaint handling can generate satisfied and loyal customers. Furthermore, a successful complaint management can provide myriad of benefits for companies.

The accessibility of complaint channels is a key determinant for realizing a successful complaint management. Mattila & Wirtz [12] defined complaint channel as the medium that customers use to file a complaint to companies. Companies also use these channel to respond to customer complaints. There are several popular communication channels like telephone, face to face, mail, and email, which commonly used for making a complaint. In addition, SNSs emerged as a modern communication channel which increasingly important [17]. SNSs may have capability as new complaint channel based on their unique characteristics.

Finally, complaint management is necessary for company's strategies. A successful complaint management may help companies to keep their market by maintain customer satisfaction. Furthermore, the success of complaint handling provides customer satisfaction and prevents negative behavior from customers [12]. A good complaint management can help to enhance the relation between companies and customers.

2.2 Technology acceptance model and social network sites

Introduced by Davis, technology acceptance model (TAM) was adapted from theory of planned behavior (TPB) by Ajzen [18] and theory of reasoned (TRA) by Fishbein & Ajzen [19]. TAM is a model that developed to predict and analyze the adoption of technology. Within TAM there are two main factors, perceived ease of use and perceived usefulness, which influence the adoption of technology. Perceived ease of use is defined as "the extent to which individuals believe that using a specific system will be effortless". Meanwhile, perceived usefulness is defined as "the extent to which individuals believe that using a specific system will enhance their work performance" [1]. Furthermore, Davis et al [3] argued that both variables may influence user attitude towards using a technology and then affect users' intention to use. TAM has grown into a major model in explaining the predictions of individuals' behavior towards the adoption or rejection of technology. The effectiveness of this model is verified by various researches that apply it extensively to numerous technologies [2].

In general, TAM has been commonly utilized and consistently explains the adoption of various technologies. Several researches have effectively utilized TAM to evaluate the adoption of numerous technologies, including Tablet PCs [20], Cloud Computing [21], Instant messaging [22], and Social network sites [5][10] [23][24][25]. Willis [5] investigated whether TAM is feasible to be utilized to explain the acceptance of SNSs technology which has a relationship-oriented. The results indicated that TAM deserves to be utilized to explain the acceptance of SNS technology. Furthermore, this results have been confirmed by Constantinides et al [9], which revealed that TAM can explain and predict the usage of SNSs.

Willis [5] applied TAM to explain the determinants influencing the acceptance of SNSs by presenting a new model that contains the influences of past experience. The results indicated that prior experience significantly correlated to intention to use, perceived ease of use, and perceived usefulness. However, the results revealed the negative effects of prior experience on subjective norm.

Pinho & Soares [23] identified the determinants that affecting the adoption of SNSs among students. The results demonstrated that perceived ease of use and usefulness positively influence individuals' intention to use SNSs. They believe that SNSs is easy to use, they quickly become expert at using SNSs. In addition, the attitude toward using SNSs significantly correlated to individuals' intention to use, as respondents who believe that SNSs are quite fun to use are willing to use these technologies. However, the results do not support the influences of perceived usefulness on intention to use.

Due to the fact that businesses are continuously interested in SNSs as a source of valuable data, Constantinides et al [9] identified the determinants that affecting the acceptance and use of SNSs as a business tool in marketing strategy. They revealed that ease of use significantly affects perceived usefulness of SNSs, both variables have an indirect influence on individuals' intention through the attitude and a direct and significant influence on intention to use. In addition, intention to use has a positive correlation on the level of use SNSs.

Chiu and Huang [24] attempted to identify the determinants that may influence individuals participation in SNSs. The results indicated that the attitudes towards SNSs have a positive influence on individual intention. Perceived ease of use and usefulness significantly affect behavior and attitude. In addition, it was shown that there is a significant correlation among use behavior and behavioral intention. However, the results noted that perceived usefulness has no significant influence on individual intention.

Yeh et al [10] applied TAM to investigate the adoption of SNSs in the context of human resource, with a particular focus on staffing activities within the organization. Subjective norm has been added to the research model with a belief that SNSs have a social aspect that may affect the adoption of these technologies. The results demonstrated that subjective norm, perceived ease of use and usefulness have a positive correlation on human resource practitioners' intentions to use SNSs in organizational staffing activities.

Furthermore, Yoon et al [22] identified online communication technology that have similar characteristics as SNSs. They identified the influence of social aspects on the adoption of new technologies. In addition to social aspects, the results indicated that perceived usefulness positively correlated to intention to use. However, the results additionally indicated that perceived ease of use has no significant correlation on perceived usefulness.

3 Research model and hypotheses

In this study, technology acceptance model was utilized as the major model to explain the adoption of SNSs in the context of complaint channel. The research model contains perceived ease of use, perceived usefulness, attitude, and intention to use.

3.1 Perceived usefulness, perceived ease of use, and attitude

Davis et al. [3] argue that individuals' motivation can be interpreted by three factors; attitude, perceived usefulness, and perceived ease of use. Perceived usefulness and perceived ease of use are key determinants affecting attitude, where perceived ease of use has a direct influence on perceived usefulness. In the context of SNSs, prior study has confirmed these relationships [9]. They revealed that ease of use and usefulness significantly correlated with user perceptions

and attitude toward SNSs. Thus, this study suggests the following hypotheses:

H1: Perceived usefulness of SNSs as complaint channel has a positive and significant influence on the attitude toward using them.

H2: Perceived ease of use of SNSs as complaint channel has a positive and significant influence on the attitude toward using them

H3: Perceived ease of use of SNSs as complaint channel has a positive and significant influence on perceived usefulness of using them

3.2 Attitude and intention to use

The correlation among attitude and intention to use is essential and popular in behavioral models. Individuals' attitudes towards technology have a significant correlation on intention to use [9]. This correlation has been confirmed by several studies. They found a strong influence of attitude on individuals' intention to use SNSs [25]. Moreover, the following hypothesis is suggested:

H4: Attitude toward using SNSs as complaint channel has a positive and significant influence on intention to use them.

3.3 Perceived usefulness and intention to use

The findings have consistently shown that perceived usefulness is the key determinant that affect users' intention to use technology [2]. Previous researches have revealed that there is a significant correlation among perceived usefulness and intention to use [5] [9]. Furthermore, Constantinides et al [9] revealed that perceived usefulness positively affected intention to use. Then, the following hypothesis is proposed in this study:

H5: Perceived usefulness of SNSs as complaint channel has a positive and significant influence on intention to use them

4 Research methodology

This study used SPSS to analyze the data and applied structural equation modeling to investigate the hypothesized correlations in the research model using AMOS.

4.1 Sample and data collection

To achieve the goal of this study, a survey method was applied to gather data from participants. This study selected participants who have an active SNSs account. The target participants for this study were young consumers aged 18 and 30 years old. At first, this study organized a pre-test survey on 30 SNSs users to test the consistency of measurement items. In addition, this pre-test was conducted to ensure unambiguousness of each question and to calculate the time participants required to

complete the questionnaire. Furthermore the questionnaire was distributed in two ways, paper and electronic questionnaire. 79 paper questionnaires and 196 electronic questionnaires were distributed. Overall, 275 questionnaires were collected. However, only 222 were included in the sample for analysis, 53 responses were deleted because of incompleteness and contained the same values for all questions. The profiles of participants are listed in Table 1.

Table 1. Demographic profile of participants (N=222)

	Frequency	Percentage
Gender		
Male	121	54.5
Female	101	45.5
Age		
18 – 24	181	81.5
25 – 30	41	18.5
Educational level		
Senior high school	92	41.4
3-year diploma	14	6.3
Bachelor	113	50.9
Postgraduate	3	1.4
Occupation		
Students	129	58.1
Private employees	50	22.5
Public servants	4	1.8
Others	39	17.6
Subscription period of the SNS		
< 6 months	1	0.5
6 months – 1 year	4	1.8
1 – 3 years	20	9.0
More than 3 years	197	88.7
Frequency of using SNS		
Few/barely	22	9.9
Frequently	64	28.8
Every day	136	61.3

4.2 Measurement items

This study adapted questionnaire items from prior researches and were all checked by 5-points Likert scale from strongly disagree (1) to strongly agree (5). Items of perceived usefulness were adapted from Davis [1], Constantinides et al [9], Kwon et al [25], Hung et al [26], Seol et al [27], Ernst [28], and Mouakket [29]. Items of perceived ease of use were adapted from Davis [1], Willis [5], Constantinides et al [9], Hung et al [26], Ernst [28], and Hsu et al [30]. Items of attitude were adapted from Constantinides et al [9], Kwon et al [25], Hung et al [26], and Hsu et al [30]. While items of intention to use were adapted from studies organized by Constantinides et al [9], Kwon et al [25], Hung et al [26], and Balakrishnan [31].

5 Data analysis and results

5.1 Measurement model

This study applied a confirmatory factor analysis (CFA) to examine the measurement model. AMOS software was utilized to perform the analysis. The results indicated that several model fit indices did not meet the standard basically. Thus, the model was optimized and several responses were deleted according to modification indices. As a result, all fit indices have better values. The *p-value* was 0.088 (χ^2 = 58.325, df = 45), which greater than 0.05, indicating a good fit. The normed chi-square (χ^2/df) was 1.296, while the normed chi-square value should be less than 5 [32]. The GFI and AGFI were 0.941 and 0.898, respectively, showing a good fit [33]. Then, the RMSEA was 0.044, which is below the maximum value of 0.08 [34]. The other fit indices NFI, TLI, and CFI were 0.960, 0.990, and 0.986, respectively, all exceed the suggested value of 0.9 [35][36]. Therefore, the overall fit indices indicate an acceptable model fit.

Furthermore, this study investigated the reliability and validity of the measurement model. All the average variance extracted (AVE) and factor loadings must be exceed 0.5 [37]. As shown in Table 2, most loadings loaded highly above 0.70. The value of AVE for various construct is larger than 0.50. Then, the composite reliability (CR) must be larger than the AVE. The CR values for each construct varied between 0.802 and 0.917, which above the recommended value of 0.70 [37]. These results indicate good validity of all measurement items. Furthermore, the cronbach's alpha for various construct exceeded Nunnaly's [38] recommendation of 0.70, indicating internal consistency and good reliability.

Table 2. Factor loadings, AVE, CR, and Alpha values

Items	Factor loadings	AVE	CR	Alpha
Perceived usefulness				
PU1	0.81	0.79	0.92	0.91
PU2	0.96			
PU3	0.89			
Perceived ease of use				
PEOU2	0.75	0.67	0.86	0.88
PEOU3	0.80			
PEOU4	0.89			
Attitude				
AT1	0.67	0.68	0.86	0.84
AT2	0.86			
AT3	0.93			
Intention to use				
IU1	0.88	0.58	0.80	0.85
IU2	0.70			
IU3	0.69			

Source: Author calculations

Table 3. Structural model results

| Fit indices	Measurement model	Structural model	Recommended values
Chi square/degrees freedom (χ^2/df)	1.296	1.270	<5.00 Hair et al [32]
Goodness-of-fit index (GFI)	0.941	0.941	>0.90 Baumgartner & Homburg [33]
Adjusted goodness-of-fit (AGFI)	0.898	0.900	>0.80 Baumgartner & Homburg [33]
Root mean square error of approximation (RMSEA)	0.044	0.042	<0.08 Hair et al [34]
Normalized fit index (NFI)	0.960	0.960	>0.90 Hu & Bentler [36]
Comparative fit index (CFI)	0.990	0.991	>0.90 Hu & Bentler [36]
Tucker Lewis index (TLI)	0.986	0.987	>0.90 Bagozzi & Yi [35]

Source: Author calculations

5.2 Structural model

This study also conducted a structural equation modeling to explain the hypothesized correlations among various constructs. As Table 3 shown, the overall fit indices for the research model suggest a very good model fit (*p-value*=0.104, χ^2/df=1.270, GFI=0.941, AGFI=0.900, RMSEA=0.042, NFI=0.960, CFI=0.991, and TLI=0.987).

Since the research model demonstrated a good fitness, this study examined the causal relationships between constructs. As Fig. 1 shown, the results indicate that perceived usefulness (β=0.260, *t*-value=1.972, $p<0.05$) and perceived ease of use (β=0.515, *t*-value=3.685, $p<0.001$) have a positive related to the attitude, confirming hypothesis H1 and H2. Then, perceived ease of use has a significant influence on perceived usefulness (β=0.810, *t*-value=10.148, $p<0.001$), supporting hypothesis H3. The results also found support for hypothesis H4, the attitude toward using SNSs has a strong correlation with intention to use (β=0.960, *t*-value=8.460, $p<0.001$). However, the perceived usefulness of SNSs is found to have no significant impact on intention to use (β=0.34, *t*-value=0.473, $p<0.05$). Thus, hypothesis H5 is not supported. In addition, based on squared multiple correlations (R^2), perceived ease of use explains about 65.6% of variance in perceived usefulness. Perceived usefulness and ease of use together explain 54.9% of variance in the attitude toward SNSs. Meanwhile, perceived usefulness and attitude jointly explain 96.7% variance in intention to use.
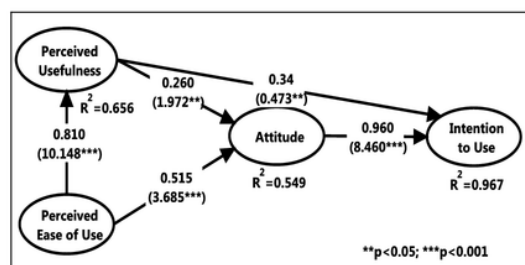
Fig. 1. Structural model results.

6 Discussions and conclusions

The use of SNSs has grown rapidly and very popular among young users. In addition, SNSs have been widely used by companies because of their clear benefits from a business point of view. SNSs offer two-way communication among the companies and customers. Customers may file their complaints to the company through SNSs quickly. Moreover, companies can easily gain feedback from customers. These possibilities have led to interest in evaluating the adoption of SNSs as complaint channel, particularly for young customers. Furthermore, this study confirms the explanatory power of technology acceptance model in the adoption of SNSs.

As listed in Table 4, most hypotheses were supported except the relationship among perceived usefulness and intention to use. The results indicate that ease of use positively influences perceived usefulness and both variables have an indirect influence on intention to use through the attitude toward SNSs. However, perceived usefulness of SNSs as complaint channel has no significant influence on intention to use them.

Table 4. Hypothesis testing results

Hypothesis	Std. Coefficient	t-value	Supported
H1: PU → AT	0.260	1.972**	Yes
H2: PEOU → AT	0.515	3.685***	Yes
H3: PEOU → PU	0.810	10.148***	Yes
H4: AT → IU	0.960	8.460***	Yes
H5: PU → IU	0.340	0.473**	No

Source: Author calculations
Notes: **p<0.05; ***p<0.001
Perceived usefulness (PU); Perceived ease of use (PEOU); Attitude (AT); Intention to use (IU).

The results indicate that perceived ease of use and perceived usefulness significantly and positively correlated with attitude, which is consistent with prior studies [9][10][23]. They revealed that perceived usefulness and ease of use positively correlated with attitude. Furthermore, perceived ease of use (β=0.515) has a greater effect on attitude than perceived usefulness (β=0.260). Similar to a prior study by Constantinides et al [9], the results show that perceived ease of use of SNSs has a direct impact on perceived usefulness of using them.

Perceived ease of use reflects the consumers believe that contacting the company will be effortless. They have no difficulty completing a complaint procedure. Furthermore, some participants believe that using SNSs will enhance their effectiveness in voicing their complaints to companies. SNSs allow the consumers to file their complaints quickly. The results suggest that maintaining easy and useful policies and procedures are essential prerequisites for delivering positive attitudes.

In light of attitudes, the attitude toward SNSs as complaint channel is a major determinant in understanding customers' intention to use them, as shown by the huge value of path coefficient for itself. This result is consistent with prior studies, which verified the role of attitude in user adoption [9][23][24]. Furthermore, Balakrishnan [31] stated that user who feels positive in using the tools for working may literally use them for working. Similarly, consumers who feel positively about using SNSs as complaint channel may actually take the initiative to use them for delivering complaints to companies.

However, it should be noted that individual attitudes may change immediately. Therefore, continuous supports should be granted to preserve the attitude. User-friendly, low-time consumption *(the time consumers needed to complete a complaint procedure)*, and fast response should be given to maintain the positive attitudes. Furthermore, in the initial stage, complaints that are delivered through SNSs must be managed properly in order to eliminate prejudgments. In addition, companies must have the ability to adapt the procedures to fit the consumer needs. In the end, the results reject the hypothesis perceived usefulness significantly correlated to intention to use. The rejection of this correlation is consistent with prior study by Pinho & Soares [23], perceived usefulness does not have positive correlation with intention to use.

This study, however, has some limitations. First, this study was established in single country, Indonesia. The majority of the participants were from special region of Yogyakarta, where it is known as a centre of education and culture. Accordingly, the results of this study should be generalized carefully. Second, the present study focuses only on young adults who are member of social network sites as a target population. Participants in this age segment may be more active in using social network sites. Third, the influence of demographic factors such as gender, and occupation were not considered in this study. Thus, these factors should be examined in further research. Lastly, this study not focused on particular social network sites. Future studies could examine the particular SNSs such as Twitter and Facebook as complaint channel.

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