

Mobile Instant Messaging Use and Organizational Communication Satisfaction

Erwin Yulianto and Irwansyah

Faculty of Social and Political Science, Universitas Indonesia, West Java, Indonesia

Abstract: The popularity of Mobile Instant Messaging (MIM) continues to rise nowadays. This causes a rise in its use in organization as well. This study aims to examine the psychological factors in the use of MIM in informal communication based on the Theory of Reasoned Action (TRA) and to observe the effect of MIM's use toward the organizational communication satisfaction. Using quantitative approach and survey, the data are collected through questionnaires and analyzed by Partial Least Square (PLS). With 89 respondents from Principal Inspectorate of BPK RI, the study shows that TRA is not fully applied in the use of MIM in informal communication. Subjective norm has no significant effect on intention and behavior. The result also shows that the use of MIM in informal communication has significant effect on organizational communication satisfaction.

Key words: Theory of reasoned action, mobile instant messaging, organizational communication satisfaction, structural equation model, partial least square

INTRODUCTION

Theory of Reasoned Action (TRA) of Ajzen and Fishbein (1980) is a popular behavioral theory that has strong predictive power and applicable in a wide range of topics (Nor *et al.*, 2008) including in the areas of communications, Information and Communication Technology (ICT), also in organizational context. Social change is caused by human behavior in the use of technology, not by the technology itself (Papa *et al.*, 2007), so, TRA is relevant in the study of ICT. Using TRA, previous study of (Peslak *et al.*, 2010) found a positive and significant impact of attitude toward Instant Messaging (IM) and subjective norm on intention to use IM, as well as the intention to use IM on IM use. However, in Indonesia, one study (Toban, 2011) actually found that attitude and in another study (Utami, 2011), 'compliance' which was close to the concept of subjective norm, had no influence on IM use.

Today, the popularity of IM has surpassed that of Short Message Service (SMS) and e-mail (Pi *et al.*, 2008) including in the context of the informal organization communication. Moreover, IM is now widely available in the mobile version (mobile instant messaging/MIM) which is more instant, more interactive, and accessible anytime anywhere. Previous study of Peslak *et al.* (2010) then is interesting to be replicated in other contexts, in this case, in the context of organization in Indonesia.

MIM was ranked first (39%) as a communication medium most preferred by Indonesian's mobile users. The 89% of Indonesian's MIM users access the applications everyday in high frequency and one of the main reasons

why is to stay connected with colleagues (32%). It's also interesting to know the extent of the effect of the MIM's use in organization. Previous study (Pi *et al.*, 2008) found a significant positive effect of IM use on organizational communication satisfaction.

This study aims to test: the effect of attitude towards MIM's use and subjective norms of MIM's use against Intention on MIM's use in informal communication; the effect of attitude, subjective norms and intention on MIM's use in informal communication and the effect of MIM's use in informal communication on organizational communication satisfaction.

Literature review and empirical predictions: Started from Theory of Propositional Control of Dulany (Ajzen, 2012), TRA was first proposed by Fishbein and later developed by Ajzen and Fishbein (1980). Four main concepts in TRA are behavior, intention, attitude and subjective norm. Behavior is a direct function of intention, while intention is a combined function of the factor of attitude and subjective norm (Boster *et al.*, 2014). In the field of communication technology, among others TRA has proven to be applicable in the study of online shopping (Lou *et al.*, 2005), online games (Wu and Liu, 2007), internet banking (Boster *et al.*, 2014), social networking sites (Sabir *et al.*, 2013) and mobile-commerce (Barnes, 2014). TRA has also been used in the study of communication technology in the context of the organizations such as internet-based patient-physician electronic communication (Klein, 2007), application on accountants' information technology (Ozer and Yilmaz, 2011) and electronic mail acceptance (Ergeneli and Mutlu,

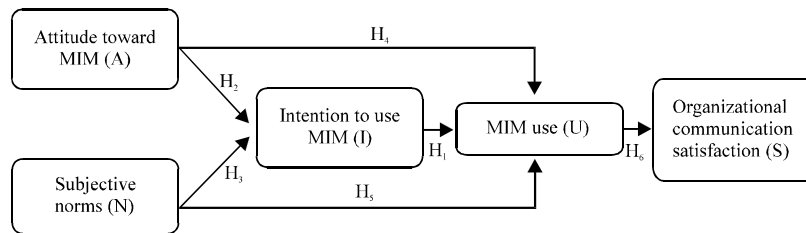


Fig. 1: Prosoped model with hypothese

2012). Theory of Planned Behavior (TPB), the continuation of TRA, adds a measure of volitional control which is not suggested in the case of instant messaging (Peslak *et al.*, 2010).

Research of the technology in the organization should not only stop at the behavior or the use but also to the impact of the use. The influences are not even only on efficiency and productivity but more importantly on the long-term social effect: how technology has changed the habits of work, structure and the quantity and quality of communication (Pace and Faules, 1993; Irwansyah, 2015).

Organizational communication satisfaction is the perceived level of satisfaction of employees in the overall communications environment (Redding, 1972). Downs and Hazen (1997) identified eight dimensions of organizational communication satisfaction: communication climate, communication with superior, organizational integration, media quality, horizontal and informal communication, general organizational perspective, personal feedback, and communication with subordinate.

The adoption of new communication technology that supports organization to achieve communication satisfaction is an important topic (Teeni, 2001). The use of communication media will affect organizational communication satisfaction (Pi *et al.*, 2008) also found a positive and significant correlation between IM use with organizational communication satisfaction.

There were six hypotheses which were tested in this study. Three of them were taken from TRA's Ajzen and Fishbein (Ajzen, 1991), two from the TRA development in IM use by Peslak *et al.* (2010) and one from the finding of Pi *et al.* (2008) which was related to the effect of IM use on organizational communication satisfaction (Fig. 1):

- H₁: intention to use MIM (I) significantly affects MIM's use in informal communication (U)
- H₂: attitude towards MIM's use (A) significantly affects the intention to use MIM in informal communication (I)

- H₃: subjective norm on the MIM's use (N) significantly affects the intention to use MIM in informal communication (I)
- H₄: attitude towards MIM's use (A) significantly affects MIM's use in informal communication (U)
- H₅: subjective norm on MIM (N) significantly affects MIM's use in informal communication (U)
- H₆: MIM's Use in informal communication (U) significantly affects organizational communication satisfaction (S)

MATERIALS AND METHODS

Partial least square-structural equation model: This research adheres to positivist paradigm, using quantitative approach and survey as research method. The object of this study is The Principal Inspectorate (Itama) of The Audit Board of The Republic of Indonesia (BPK RI), in which the employees as internal auditors have high mobility. With a total sample of all Itamas employees, the data are collected through an electronic questionnaire with 6 Likert scale. MIM in this study is devoted to a specific MIM application: WhatsApp. Based on a number of surveys, one by device research, WhatsApp has been the most popular instant messaging applications and widely used throughout the world and in Indonesia.

Compiled based on Peslak *et al.* (2010), the construct of attitude consists of five indicators: good, useful, worthwhile, helpful and valuable. Subjective norms consist of four indicators: most people, important people, people listened and close friend. Intention also consists of four indicators: predict, intend, expect and plan. The indicators of MIM's use are currently, previously and continually. Organizational communication satisfaction are compiled based on Crino and White (1981) and Harris (2014) of Down and Hazen and consist of seven dimensions (because the dimension of communication with subordinate are only for the superiors) with 35 indicators.

The data are analyzed by Variance Based Structural Equation Model (SEM) and Partial Least Square (PLS).

The evaluation is done on the measurement model and the structural model. The evaluation of the measurement model is done through validity test, both convergent and discriminant with a view factor loading, Average Variance Extracted (AVE) and cross loading; as well as the reliability test using Cronbach's alpha and composite reliability. Evaluation of the structural model is done by looking at R^2 to endogenous construct and path coefficients/t-values for each path (Latan and Ghozali, 2012; Jogiyanto, 2011).

The pretest on research instruments are conducted on 44 respondents. On organizational communication satisfaction multidimensional construct, there are problems related to convergent validity, either factor loading and its AVE. Four indicators are deleted because their loading factor are under 0.70. Six other indicators are also removed to raise organizational communication satisfactions AVE from the 0.450 (still below the minimum requirement of 0.50), to 0.504.

The number of respondents in the final test is 89 out of total 100 employees of Itama BPK RI. This amount is qualified to use PLS-SEM because it has reached the minimum threshold of samples required by ten times rule (of endogen constructs) (Hair *et al.*, 2012) and also formulas Slovin's with a significance level of 0.05 or 5%.

RESULTS AND DISCUSSION

From attitude towards MIM's use to organizational communication satisfaction: The testing of convergent validity is performed using a factor loading and AVE with the provisions of factor loading >0.70 and AVE >0.50 (Hair *et al.*, 2012). All of constructs including the dimensions of organizational communication satisfaction, are considered valid because all of factor loading of indicators are above 0.70 and AVE values are above 0.50. The testing of discriminant validity is performed using AVE and cross loading where the AVE value of a latent variable (including the dimensions) must be greater than the value of its correlation with other latent variables (Fornell Larcker Criterion) or cross loading in one variable is >0.70 (Hair *et al.*, 2012). As a result, all of the constructs and dimensions have met discriminant validity. Reliability test has also been carried out using Cronbach's Alpha of Nunnally and the Composite Reliability of Fornell and Larcker >0.70 (Ghozali and Latan, 2015; Jogiyanto, 2011) and lead to the conclusion that all the construct were reliable.

From the calculation of path coefficient with SmartPLS 3.0, it appears that the effect of subjective norms on the intention to use MIM produces t-Statistics

Table 1: Statistical results of hypotheses testing

Hypothesis	β	t-values	α -value (5%)
H ₁ : I-U	0.504	4.336	Supported
H ₂ : A-I	0.834	16.087	Supported
H ₃ : N-I	0.159	1.370	Not supported
H ₄ : A-U	0.354	2.590	Supported
H ₅ : N-U	0.112	0.812	Not supported
H ₆ : U-S	0.408	4.466	Supported

1.37 (under 1.96) and the effect of subjective norm on the MIM's use MIM also produces t-Statistics under 1.96 (0.81) which are not significant at the level 5% of significance. This means that H₃ and H₅ are not supported by the data (Table 1).

The results of retesting, by eliminating the subjective norm, indicate that all variables have significant influence. The values of t-Statistics produced are above 1.96 which is significant at the 5% significance level or in other words, at the 95% confidence level. It also means that the H₁, H₂, H₄ and H₆ are validated, so the structural model becomes as follows (Fig. 2).

R^2 generated for the intention is 0.692, indicating that the attitude variables can explain 69.2% variance of intention. R^2 for the use of MIM is 0.669 which means that the variable intention and attitude can explain 66.9% variance of use MIM. R^2 for organization communication satisfaction is 0.157 indicating that MIM's use can explain 15.7% variance of organizational communication satisfaction.

Fluctuation of tra factors on technology use and the effect of technology use on organizational communication satisfaction: road to a comprehensive model:

The results shows that TRA is not fully applied in the MIM's use in informal communication organization. It is proved that the intention is the best determining factor for the behavior. Attitude is a powerful factor which not only affects behavior through intention, but also can directly influence behavior. However, subjective norm on MIM's use has no significant effect on the intention to use the MIM in informal communication. These finding is in line with Barki and Hartwick (1994) and Taylor and Todd (1995) findings in Fawzy and Salam (2015) which found that subjective norm as a factor of the intentions works well in the early stages of technology development. It is also revealed by Venkatesh and Davis (2000) that the influence of subjective norm on behavior intention is only temporary, in the initial situation, then weakens as technology develops. Other studies even show that subjective norm have no significant effect on the intention, as stated by Shim *et al.* (2001) that it is not a factor that influences the intention to online shopping.

It can be said that 5-6 years ago, subjective norm functioned as a factor for the intentions of using MIM because those are times of early stage of development of

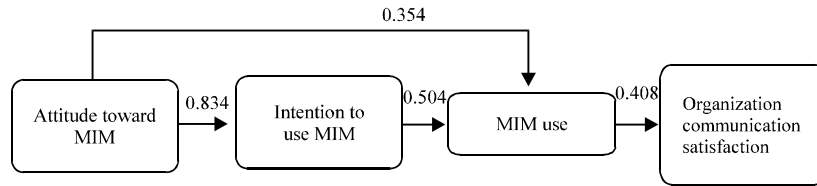


Fig. 2: The modified model

these technology. The influence of subjective norm on the intention weakens as MIM develops and finally fades.

The finding which shows that subjective norm does not affect the intention and behavior is opposite to attitude which strongly affects the intention and behavior. This strengthens the case that the subjective norm is conceptually separated from attitudes toward behavior. The results shows that TRA, even without subjective norm can explain 69.2% variance in intention and 66.9% in the behavior. The percentages are considerable. It shows the strong influence of attitude, especially to the intention.

The positive and significant impact of intention to use MIM on MIM's use in informal communication, also show that the intention to use MIM is under the control of the willingness of individuals. It also supports the statement that PBC in TPB is not a recommended factor in the context of the use of MIM.

MIM's use in informal communication proves to have positive and significant effect on organizational communication satisfaction. The result indicates that the level of satisfaction can be increased through the use of media-rich communication technology (Harris, 2014) and IM is only slightly below face to face communication in terms of media richness (Cameron and Webster, 2005). The unique characteristics of IM and a variety of this advantages as an organizational communication medium plus portability of MIM have positive impacts on organizational communication satisfaction. More specifically, these results suggest that the use of MIM in informal communication can influence organizational communication satisfaction. The presence of MIM as an informal medium of communication in workplace can reduce barriers to formal communication thus improves organizational communication satisfaction.

CONCLUSION

The finding which shows that subjective norm has no significant effect on intention to use MIM in informal communication is less supportive to TRA. Subjective norm as a factor for the intentions only works well in early

stages of technology development, yet weakens as technology develops and even fades. Meanwhile, 'attitudes toward MIM's use' which have directly or indirect influence to intentions to MIM's use in informal communication is found to be a strong factor on TRA. The next studies can see beyond the influence of these two factors in a longitudinal survey which hopefully can produce strong evidence and clear result.

The use of new communication technology such as MIM has positive and significant impact on organizational communication satisfaction. The use of new communication technologies will affect organizational communication satisfaction because it can reduce the communication barriers which have negative impact on employee's organizational communication satisfaction. Next research on information and communication technologies, especially within the scope of organization can try to connect the TRA with organizational communication satisfaction based on theory such as D&M IS Model (DeLone and McLean, 2003). It hopefully can produce a new comprehensive model which is able to explain the technical and individual's psychological factors in using ICT and how those factors affect the organization, especially in terms of communication satisfaction.

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