

ADVANCING EXCHANGES OF INFORMATION IN SOCIAL FRIENDSHIP NETWORKS THROUGH MOTIVATION, OPPORTUNITY, AND ABILITY

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Abstract: This article examines the impact of motivation, opportunity, and ability as antecedents of exchanges of information among members of social friendship networks and also the impact on creating membership value and members' loyalty including the influence of the system characteristics. The research method employed descriptive multiple cross-sectional designs which yielded 256 responses. The Structured Equation Modelling was used to test the hypotheses. The findings of the research reveal that motivation and ability provide the impetus to exchanges of information whereas opportunity does not. Furthermore, exchanges of information impact members' loyalty through the mediation of membership value and finally the exchanges of information evoke members' loyalty directly. However, only information quality impacts membership value and members' loyalty. The rigor of the research concept will result in better insight to future researchers particularly in designing and implementing members' loyalty program in social friendship networks.

Keywords: MOA concept, exchanges of information, membership value, members' loyalty.



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The dawn of e-marketing has brought about fundamental changes in the domain of marketing (Zinkhan, 2005). In this era, the application of internet and digital technology including traditional communication to attain marketing objectives has come in vogue (Chaffey, et al., 2006). The internet as a communication and exchange medium has facilitated and simultaneously expedited the exchange process – as the sub-

ject matter of marketing – in the virtual world also known as cyberspace (Shih, 1998). Exchanges are not restricted to goods and services but also include information and knowledge (Gruen, et al., 2005). Flows of information become the paramount means of exchange where activities are designated as interactions among members of the e-communities. In addition, the internet enables the emergence of e-communities that is virtual/online communities (Rheingold, 1991), where members interact in sharing information within social networks (Boyd and Ellison, 2007). In turn, social network services are either trust-based or friendship-based (Rosen, 2007). The latter has further developed into social friendship networks such as Friendster and Facebook

where users invite friends or clients to participate in the exchanges of information.

An internet marketing perspective refers to the use of internet applications and other digital technologies with traditional communication to achieve marketing goals (Chaffey, et al., 2006). Regarding this perspective, the application of internet technology is also used in social networking sites that allow individuals to connect/make friends with others so that they can form a particular community within the site. Members of this social networking site do marketing functions, namely value creation, value communication, and value delivery of information.

Previous researches on social friendship networks practiced one-sided approach, inside-out or outside-in to explain the creation of membership value and members' loyalty (Gruen, et al., 2006, Bagozzi and Dholakia, 2002; Bickart and Schlinder 2001, and Lin 2006). In addition, researches were partially conducted and neglected the entire antecedent – process – outcome continuum. In this respect, investigating interactions of members in social friendship networks and the impact of motivation, opportunity, and ability (MOA) as antecedents become a necessity for research. Researches on the pattern of interactions in social friendship networks particularly the antecedent, process and outcome continuum remain fragmented and scarce. Therefore, the research purpose can be articulated as an attempt to address the existing void by investigating the impact of motivation, opportunity and ability as antecedents of exchanges of information among members of Friendster and Facebook and also the impact on creating membership value and members' loyalty including the influence of system quality and information quality of the system characteristics.

According to the purpose of the study, this study has four objectives. The first objective is to empirically show the impact of motivation, opportunity, and ability to join the social friendship networks and to get involved in exchanges of information. The second objective is to analyze and to show the direct impact of exchanges of information on members' loyalty and its indirect impact through the mediation of membership value of the social friendship net-

works. The third objective is to test the impact of each system quality and information quality on membership value. The last objective is to investigate the impact of membership value on members' loyalty and its dependence on system quality and information quality respectively of the system characteristics.

LITERATURE REVIEW

In recent years, researchers have been increasingly interested in investigating motivation, opportunity, and ability (MOA) as antecedents of the exchanges of information among members of e-communities. The MOA concept was initially introduced by McInnes, et al. (1991), where MOA was regarded as antecedents of the ability of someone to processing information. Later, Gruen, et al. (2005), introduced the MOA framework for the C2C relationship in virtual communities. Researches were more focused on exchanges of information in conferences (Gruen, et al., 2007), exchanges of knowledge among employees (Siemsen, et al., 2008), and creation of e-WOM in brand communities in the virtual world (Gruen, et al., 2006). The implications to creating membership value and members' loyalty and the influence of the system characteristics in social friendship networks had also received much attention (Gruen, et al., 2006 and Bickart and Schlinder 2001). The MOA framework postulated that the degree of receiving information increases proportionally with increases of opportunity and ability (MacInnes, et al., 1991). Chaffey, et al. (2006), offer a more comprehensive approach where antecedent, process, and outcome were taken into account in their research on social friendship networks. In addition, empirical research conducted by Gruen, et al. (2006) disclosed that the MOA framework could also be applied in a trust-based virtual community. The result of their research also revealed that members of networks had a pivotal role in creating value and loyalty in social friendship networks. DeLone and McLean (2003) and Cao and Zhang (2005), explored the success of a system. Later, Lin (2008) and Algesheimer, et al. (2005), conducted empirical research where the success of the social friendship network was measured with the loyalty

of its members. As such, members' loyalty was impacted by system characteristics comprising of information and system quality (DeLone and McLean, 2003).

CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

A conceptual framework is developed and depicted in Figure 1, through a literature review which

appears above. The framework represents a synthesis of MOA approach developed by Gruen, et al. (2005, 2006) and the approach introduced by DeLone and McLean (2003), related to the success of information systems. Therefore, the framework is more comprehensive since C2C exchange has been extended to include also the exchange of information and it is further analyzed from both perspectives that are inside-out and outside-in in social friendship networks.

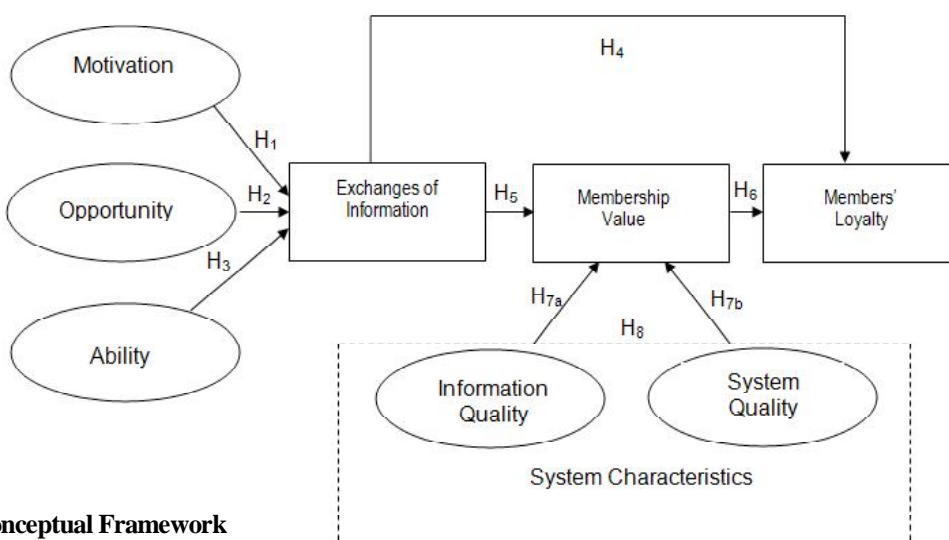


Figure 1 Conceptual Framework

In addition, the framework as the building block to address the objective of the research is construed to covering the entire antecedent-process-outcome continuum. It consists of antecedents (motivation, ability, and opportunity as independent variables) – process (exchanges of information, membership value, information quality and system quality as independent mediating variables) – outcome (members' loyalty as a dependent variable). The framework ramifies the proposed relationships between the eight variables. Firstly, MOA affects exchanges of information. Secondly, we consider the relationship between exchanges of information and members' loyalty along two approaches:

- (1) The inside-out or indirect approach stipulates that exchanges of information will create membership value and ultimately affect members' loyalty.

The rationale of this approach can be explained as follows: exchanges create value and value enhances loyalty.

- (2) The outside-in or direct approach stipulates that exchanges of information will develop members' loyalty. This approach is based on the reasoning that members gain positive perceptions of social friendship networks due to favourable information conveyed by friends or clients. So, members' loyalty can also be attained without first acquiring value from the networks.

Thirdly, system quality and information quality influence membership value and finally members' loyalty affect membership value depending on the system quality and information quality. Hence, we hypothesize the proposed relationships of the pertinent variables:

Impact of Motivation on Exchanges of Information in Social Friendship Networks.

Motivation is a goal directed behavior (Luthans, 2002, James, 2008, and Ridings and Gefen, 2004). In this study, motivation is defined as readiness, willingness, and wish of someone to get involved in C2C exchange (Gruen, et al., 2005, 2006, 2007). Motivations stimulate the mutually sharing of personal information in social friendship networks with the aim to sustain the social friendship in the network (Ghaisani, et al., 2017). The study conducted by Lewis (2010), affirms this customary behavior of members of social media. We argue, only members with strong motivation get involved in exchanging information. Therefore, we advance the following hypothesis:

H₁ : The higher the motivation of members of social friendship networks, the higher the exchanges of information.

Impact of Opportunity on Exchanges of Information in Social Friendship Networks.

Opportunity reflects a situation that is conducive to achieve a certain outcome. It can also be viewed as a lack of obstacles to attain the desired outcome (Gruen, et al., 2006, McInnes, et al. 1991, and Batra and Ray, 1986). This negative perspective will be more appropriate because Friendster and Facebook websites are available online around the clock, with the result that exchanges are solely determined by the absence of obstacle such as the availability of time. Sander and Sloka (2015), state that the presence of social network sites opens the opportunity for members to exchange resources and information. Therefore, social media extend an opportunity for their members to perform the exchange of resources and contents as well. In this regard, social friendship networks also open the opportunity for their members to stay connected through exchanges of information (Lewis, 2010). We reason that members who have ample opportunity to perform more frequent exchanges of information compared to those who have less opportunity. We propose the following hypothesis:

H₂ : The greater the opportunity available for members of social friendship networks, the higher the exchanges of information.

Impact of Ability on Exchanges of Information in Social Friendship Networks.

Ability is related to resources to produce a certain outcome (Hoyer and McInnes, 1997). Accordingly, Gruen, et al. (2006), refer to ability as a competence that stimulates the occurrence of exchanges of information. The greater the ability owned by someone, the greater his / her involvement in the exchanges of information (Gruen, et al., 2005). Expertise and skill to communicate are required in order someone can understand the message sent and to respond (McInnes, et al., 1991). Communications in Friendster and Facebook networks require skill to use computer and knowledge to develop personal websites which in turn will impact exchanges of information. We raise the following hypothesis:

H₃ : The greater the ability owned by members of social friendship networks, the higher the exchanges of information.

Impact of Exchanges of Information in Social Friendship Networks on Members' Loyalty.

Members feel like a community when mutual exchanges of information take place. As a result, they feel obliged to perform exchanges of information. Hence, exchanges of information are designated as interactions among members of social friendship networks who act as a source of information for other members (Gruen, et al., 2006, 2007). They further argue that every member perceived that he/she has a moral obligation to develop relationships and to share it constantly. The moral awareness as an element of the social friendship networks encourages members to stay in the network (Muniz and O'Guinn, 2001 and McAlexander, et al., 2002). Additionally, the moral aspect generates personal relationship cost (Burnham, et al., 2003) which represents a specific switching cost that discourages members to leave the website. We argue that exchanges of information strengthen the bond among members and ultimately loyalty toward the social friendship networks. One of the factors that create loyalty is the network itself where the exchanges of information occur (Srinivasan, et al., 2002). Therefore, we advance the following hypothesis:

H₄ : The higher the exchanges of information performed by members of social friendship networks, the higher the members' loyalty likewise.

Impact of Exchanges of Information on Membership Value.

Exchanges of information cause members to feel that their memberships in the networks deliver high value. Membership in the networks creates the perceived value of communication if received benefits exceed sacrifices of using resources (Akkinen, 2005). It is a trade-off between perceived benefits and sacrifices made as members of social friendship networks (Butler, 2001 and Sirdeshmukh, et al., 2002). The objective of the exchange is to acquire benefits from information so that everybody involved will be better off. In this study, exchanges of resources have the form of exchanges of information activities. Misra, et al. (2008), find out that exchanges of information in social friendship networks create value for members. Therefore, we propose the following hypothesis:

H₅ : The higher exchanges of information performed by members of the social friendship networks the higher the membership value.

Impact of Membership Value on Members' Loyalty.

The main functions of e-marketing are to create, to communicate and to deliver the value of personalized information to members in C2C virtual communities through exchanges. Value refers to perceived benefits as a trade-off of sacrifices made (Zeithaml, 1988), and it is the cardinal aspect of customers' objective (Sirdeshmukh, et al. 2002). It directs customers' action toward loyalty. Members' loyalty is defined as positive attitude and supportive behavior to participate in social friendship networks which are Friendster and Facebook (Lin, 2008, Dick and Basu, 1994, and Algesheimer, et al., 2005). It represents a repeat patronage behavior of members. The exchanges of information yield superior value and consecutively satisfaction to parties involved. We argue that building and maintaining win-win personal relationships in the networks assure

satisfaction and loyalty. Loyalty is a crucial issue because members have complete freedom to join or to leave the networks any time whatsoever. They are induced to remain in the networks if they received added value from their membership. Accordingly, we propose the following hypothesis:

H₆ : The higher the membership value in social friendship networks, the higher members' loyalty.

Impact of System Characteristics on Membership Value.

Social interaction in social friendship networks continually applies information system technology as media. System characteristics came from "Information System Success (ISS)" model introduced by DeLone and McLean, (1992, 2003). In the ISS model, the system characteristics consist of two elements that are information quality and system quality. In this study, information quality is tantamount to accuracy, comprehensiveness, and presence of information provided by other members in the network (Lin, 2008). While system quality refers to the perception of members of social friendship networks pertaining to reliability, convenience, speed and flexibility of information (Lin, 2008). The better the system characteristics, the more users utilize it and the more satisfied they will be. (DeLone and McLean, 2003, Ojo, 2017, and Rizal et al., 2018). At the moment, the system website utilizes WEB 2.0 that emphasize user centered design. In WEB 2.0 customers acquire perceived value when exchanges of information take place. Consequently, system quality and information quality are important constructs for determining a value (Huang and Benyoucef, 2013). We argue that social friendship networks require good information quality as well as reliable system quality to support social interactions among members to render higher perceived value to members. Hence, we advance the following hypothesis:

H_{7a} : The higher the system quality, the higher the membership value as well of members of the social friendship networks.

H_{7b} : The higher the information quality, the higher the membership value as well.

Impact of Membership Value and System Characteristics on Members' Loyalty.

This study focuses on the creation of membership value supported by information quality and system quality of the idiosyncrasies of the system characteristics. The argument puts forward is that in general, a successful information system results in satisfaction on the part of members as users and causes repeat usages. In the context of social friendship networks, an effective system characteristic influences members' loyalty (Lin, 2007) by the mediation of membership value. The creation of benefits to members of the networks is imperative. Higher membership value impacts members' loyalty. Membership value mediates the influence of information quality and system quality. Thus, we propose the following hypothesis:

H₈ : Members' loyalty impact membership value depending on the relationship of each (a) information quality and (b) system quality of the system characteristics.

METHOD

Research Design

This study uses descriptive multiple cross-sectional designs which are categorized under conclusive research. The objective of such design is to test a specific hypothesis and examines relationships (Malhotra, 2007), which is in line with the purpose of the study. The design of the study is within the subject (not comparing the two network).

Data Collection, Unit of Analysis and Sampling

Data were collected on two different population of the social media from 2008-2010. The social media were registered a stellar performance in 2009, and sharp competition ensued between the two websites. Members of those websites in Indonesia are the target population and concomitantly are the main units of analysis of this study. The characteristics of the population were, possess an account with Friendster and Facebook, originate from backbone server in Indonesia, own 20 friends at a minimum, carry out login once a week at a minimum, and duration of once login is half an hour at a minimum. A

survey is conducted where a predesigned questionnaire is used to collect the required data. Questionnaires are disseminated online (using e-mail) and offline.

The snowball sampling respectively its variant the respondent drove sampling is used (Heckathorn, 2002). This sampling technique is chosen because of the limited number of users of Facebook by the end of 2008 (322.000 users). It is appropriate to use this sampling when a survey is conducted on the internet (Heckathorn, 2002) because members act as a source of information for other subsequent members. Following the procedure of this technique, the first author uses his account in Friendster and Facebook as the starting point to identify and to select friends as respondents who fulfill the above mentioned characteristics, and they act as "seeds". Furthermore, they are asked to identify others who are also elected members of Friendster and Facebook but from a different background such as age and education with the aim to forestall the concentration of members in one group or generation as a community. Subsequently, they are asked to disseminate the questionnaires to their friends in the same targeted population. The number of respondents totaled 256. this sample number has fulfilled the conditions stated by Hair, et al. (2007), which is five times the indicators (30).

Variables Operationalization

The eight variables are operationalized by questionnaires. The items of the questionnaire as indicators are all adopted and used in previous researches. Translation into the Indonesian language follows the parallel translator's rule (Usunier, 2000), where two translators simultaneously perform the translation. All indicators are measured with a 7 - item Likert Scale from agreeing to disagree. The measurement of items can be briefly found as follow.

Motivation measured by the following indicators: readiness (X₁), wish (X₂), passion (X₃) and attraction (X₄) of members to always use the website (McInnes, et al., 1991 and Gruen, et al., 2006, 2007).

Opportunity measured by the following indicators: limitedness of time (X₅), limitedness of access (X₆), slowness of access (X₇) and overall evalua-

tion of impediment to being active (Y_{11}) (Gruen, et al., 2006, 2007). Ability measured by the following indicators: ease to exchange idea (X_8), ability to communicate based on the text (X_9), ability to use web facilities (X_{10}) and ability to develop friendship network (X_{11}) (Gruen, et al., 2006, 2007). Exchanges of Information measured by the following indicators: acquainted with several new friends (Y_1), always exchanges of information with friends (Y_2) and mutual attention about asking information (Y_3) (Gruen, et al., 2006, 2007). Membership Value measured by the following indicators: membership renders high benefits compared to sacrificed time (Y_4), high benefits compared to sacrificed skill (Y_5), high benefits compared to sacrificed knowledge (Y_6) and high benefits compared to sacrificed attention (Y_7) (Butler, 2001, Sirdeshmukh and Sabol, 2002).

Members' Loyalty measured by the following indicators: wish to maintain membership (Y_8), contentedness to make friendship (Y_9) and desire to invite others to join (Y_{10}) (Lin 2008, Dick and Basu, 1994, and Algesheimer, et al., 2005). Information Quality measured by the following indicators: are possession of original membership profile (X_{12}), members give honest comments (X_{13}), possess complete membership profile (X_{14}), members always update their profile (X_{15}) and acquire information needed via other members (X_{16}) (Lin, 2007, 2008).

System Quality measured by the following indicators: is the reliability of the website (X_{17}), the website convenient performance in supporting exchanges of information (X_{18}), and flexibility of performance change (X_{19}) (Lin, 2007, 2008).

Data Analysis

Data are analyzed using the Structural Equation Modelling (SEM) with LISREL 8.8 program. Validity will be evaluated based on Confirmatory Factor Analysis (Average Variance Extracted-AVE). Reliability will be tested with construct reliability. The latent variable opportunity that has a formative indicator, the Multiple Indicator Multiple Cause (MIMIC) model will be applied to measure

validity. The reliability of latent variables will be measured by Cronbach Alpha.

RESULTS

The result of the suitability test of the measurement model indicated an acceptable model with RMSEA = 0.053, Normed Chi Square = 1.72, TLI = 0.99, RFI = 0.97, GFI = 0.87. The factor loading of these indicators was acceptable because these were ≥ 0.5 (Hair, et al., 2007).

We proceed with testing the validity and reliability of each variable of the measurement model. The validity test using confirmatory factor analysis (Average Variant Extract – AVE) revealed that all indicators of the variables showed a value of above 0.5 which disclosed that the indicators shaped the constructs studied. Likewise, the construct reliability (CR) of the test exhibited a value of above 0.5 which was very significant (Hair, et al., 2007).

All variables show good results of validity and reliability. Motivational variables have Critical Ratio (CR) 0.85 and Average Variance Extracted (AVE) 0.59. The ability has a CR of 0, 85 and AVE 0.58. The exchange has a CR of 0.79 and an AVE of 0.56. Other variables also show good CR and AVE values, such as Membership Value Perception (CR: 0.87; AVE: 0.63); Information Quality (CR: 0.83; AVE: 0.5); System Quality (CR: 0.80; AVE: 0.57); Member Loyalty (CR: 0.90; AVE: 0.75). The opportunity variable measured its reliability with cronbach alpha (0.805). It could be summarized from the tests that all variables were eligible for use in this study.

After determining the validity and reliability, we continue testing the suitability of the respecification structural model. The result showed a well-fitted model. From the 14 items checked, 12 items produced goodness of fit, while 2 things were not fit, to mention p-value and RMR. Hereinafter, the eight hypotheses were tested using a significant value (α) 0.1 (10%) and t-value $\geq 1,65$. The result of testing hypotheses is summarized in Table 3.

Table 3 Testing Hypotheses

No.	Hypotheses	tvalue	Coef.	Conclusion
1	The higher motivation of members of social friendship networks, the higher the exchanges of information.	4,15	0,37	Supported
2	The greater the opportunity available for members of social friendship networks, the higher the exchanges of information.	1,24	0,04	Rejected
3	The greater the ability owned by members of social friendship networks, the higher the exchanges of information.	6,68	0,62	Supported
4	The higher the exchanges of information performed by members of social friendship networks, the higher members' loyalty likewise.	6,83	0,57	Supported
5	The higher exchange of information performed by members of social friendship networks the higher the membership value.	4,94	0,44	Supported
6	The higher the membership value in social friendship networks, the higher members' loyalty.	3,49	0,27	Supported
7	The higher the system quality, the higher the membership value as well of members of the social friendship networks.	0,73	0,10	Rejected
8	The higher the information quality, the higher the membership value as well. Members' loyalty impact membership value depends on the relationship of each	2,04	0,27	Supported
	(a) information quality and	1,76	0,075	Partially
	(b) system quality of the system characteristics.	0,71	0,028	Supported

DISCUSSION

The results of the statistical test indicated that motivation and ability significantly impacted exchanges of information, whereas opportunity did not. These findings confirm the findings of the research conducted by Gruen, et al. (2006). Motivation fosters members of social friendship networks to exchanging information, the higher the exchanges of information, the greater the ability possessed by members, the more frequent they perform exchanges of information. The existence of social friendship networks demands the ability of members to perform text-based communication effectively. Hypothesis 2 was rejected which substantiated that opportunity did not influence on the exchanges of information in social friendship networks.

This result conforms to the research finding of Gruen, et al. (2006). Opportunity refers to a conducive condition where someone processes information. In the virtual world, the opportunity is a variable that influences C₂C exchanges directly. Therefore, in this world, someone who has no access to a website will not involve in C₂C exchanges (Gruen, et al., 2005). In this instance, the opportunity is attributed to the non-existence of obstacles to access Facebook and Friendster. The hurdle decreases proportionally with the ease of access. Both websites were always accessible around the clock which opened the opportunity for members to access the websites at all times through the use of smartphones. Gruen, et al. (2005), argue that opportunity is required within certain limits. When someone has

ample opportunity, a further increase will not enhance his/her involvement in the exchanges of information. The descriptive data pertaining to frequency of access showed that the majority of respondents (59,4%) accessed four times a week. In fact, 45,3% access the social friendship networks every day. It implies that respondents perceive no differences concerning time and access to the networks.

The result of the test also disclosed that the higher the exchanges of information, the higher members' loyalty likewise. It contrasts the findings of Gruen, et al. (2006). The cause can be attributed to different research context. Gruen, et al. (2006), emphasize personal relationship among users of the certain product instead of existing friendship among them. It implies that the stronger the awareness to be part of a social friendship network the stronger the desire to exchanges of information and to maintain membership in the network. Furthermore, loyal members invite others to join the social friendship networks.

It was also confirmed that the higher exchanges of information, the higher the membership value. Value is co-created when the exchanges of information yield benefits for members that outweigh their sacrifices. The higher the membership value, the more loyal members will be. It was substantiated that the mediating role of exchanges of information and membership value had made a positive contribution towards members' loyalty to the social friendship network.

The outcome of the research indicated that only information quality significantly affected membership value, whereas system quality did not. System characteristics consist of information quality and system quality. Based on this taxonomy, information quality is the product of the system. In a social friendship network, the system acts as a means of delivering information. Evaluation of benefits obtained from customers is more focused on the benefits of exchanges of information. Therefore, membership value is more linked to information quality instead of system quality.

It further connotes that members of social friendship networks are responsible for the quality

of information in the exchange because information is created, shared and evaluated by them. Facebook and Friendster are responsible for supplying the system quality.

It was discernible from the test of H_8 that information quality had a significant indirect effect on members' loyalty while system quality did not. It can also be asserted that the impact of membership value depends merely on information quality. In the context of social friendship networks, members choose information quality to evaluate the success of the system instead of system quality.

CONCLUSION

The objective of this study is to investigate and to test the relationships of pertinent variables that contribute in the involvement of members in exchanges of information, the creation of membership value and ultimately members' loyalty at Friendster and Facebook in Indonesia.

The results of the research expose an unequivocal understanding that only motivation and ability to communicate provide the impetus to exchanges of information in the social friendship networks, whereas opportunity to attain the desired outcome does not.

Furthermore, exchanges of information in the social friendship networks impact members' loyalty directly and also indirectly via the mediation of membership value. In this case, membership value is the precursor to members' loyalty, because it finally evokes members' loyalty. It is also discovered that social friendship networks such as Friendster and Facebook, members' loyalty will significantly influence membership value if information quality meets the requirement such as possession of complete membership profile, members always update their profile, members give an honest opinion and acquiring information needed via other members.

Contribution and Future Research

This study contributes to theory and research practice in e-marketing. The first contribution relates to the comprehensiveness of the research concept where variables representing antecedent, process, and outcome are taken holistically into account

in explaining interactions in the social friendship networks. The conceptual framework is not only theoretical rigorous but also more expository. The second contribution refers to the procedure adopted in this research where the inside-out and outside-in viewpoints are synthesized. As such, it is substantiated that membership value is not merely attributed to internal factors such as motivation and members' ability but also to the information quality. Although the finding of the research indicates that system quality does not influence members' loyalty, however, the contribution of inside-out and outside-in viewpoints is still valid because of the influence of information quality towards membership value is supported. It simultaneously addresses the gap in the current research stream that usually practiced a one-sided approach. Lastly, this research contributes to the virtual exchange theory in e-marketing where it is extended to include also the exchange of information and knowledge of members of the social friendship networks. Exchange activities in Friendster and Facebook presuppose expertise and skill of participants to understand the message sent and to make the necessary response. It is also imperative that participating members possess the required skill to use the computer. If these prerequisites are negated, the respective members are deprived of reaping the benefits of their interactions in the exchange process. Hence, membership value perception will be negatively affected, and the subsequent members' loyalty will not be attained.

The future research direction can be summarized in two sections. As explained this study uses cross-sectional design where the obtained result refers solely to a certain moment of time. It is suggested that future research should consider using the longitudinal approach to acquire an insight pertaining to enduring changes in relationships among the variables studied. For the second suggestion, Friendster and Facebook were once popular social friendship networks in Indonesia. As time elapsed, it is suggested to include other social friendship networks as well as other non-friendship social media to anticipate an eventual future shift of usages. This signifies an extension of the scope of the research where the role of MOA is also investigated in other

virtual communities. It is expected that it will create a new horizon in the realm of theory development and testing in e-marketing.

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