

Antecedents of Information Seeking and Sharing on Social Networking Sites: An Empirical Study of Facebook Users

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This study proposes an integrated research model to validate the antecedents of Facebook users' information-seeking and information-sharing behaviors. We conducted an online survey to investigate the effects of affective-/cognitive-based trust on social capital, which subsequently influences information seeking and information sharing from the perspective of uses and gratifications theory. This study collected 665 valid samples and indicates that cognitive-/affective-based trust significantly and positively influences social capital (e.g., structural, cognitive, and relational), which has a significant and positive effect on information seeking and sharing. This study contributes to the research on uses and gratifications theory in three ways. First, it indicates that trust influences social capital (structural, cognitive, and relational). Second, it confirms the effect of social capital on information seeking and sharing. Third, it validates the mediating roles of social capital in the relationship between affective-/cognitive-based trust and information seeking and sharing.

Keywords: trust, social capital, information seeking, information sharing

In contemporary times, social networking sites (SNSs; e.g., Facebook, Instagram, and Twitter) have developed into multifunctional tools for their users. Facebook is a cheap, easy, and fast vehicle for frequent communications and conveys interactions, opinions, and social values among users in ways that create reciprocal relationships. It provides a digital support network (Udwan, Leurs, & Alencar, 2020). The current COVID-19 pandemic is having a global effect. People are forced to stay home and conduct social interaction via SNSs to seek information regarding community-level policies or personal health strategies (Bento et al.,

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2020) and share information (Engelmann, Kloss, Neuberger, & Brockmann, 2019). Facebook is the most popular SNS worldwide (Basak & Calisir, 2015) and is the primary source of information for millennials (Bene, 2017; Russmann & Hess, 2020) to build their social capital (Docherty, 2020; Kent, Rechavi, & Rafaeli, 2019). For example, Indonesia ranks third in the world in terms of Facebook users with 130 million users (Statista, 2020), most of whom (49.52%) are young people (Detik, 2018). These facts gave us the motivation to examine the relationships among trust, social capital, and information-seeking and information-sharing behaviors of Indonesian Facebook users from various sociodemographic backgrounds.

Previous studies have applied uses and gratifications (U&G) theory to understand the dynamics of social activities (Ferris & Hollenbaugh, 2018) in relation to information seeking (Basak & Calisir, 2015; Yi & Gong, 2013), information sharing (Su & Chan, 2017), and the management of social capital (Docherty, 2020). Trust is a crucial variable of social capital (Fu, 2004; Russmann & Hess, 2020), which means that people expect that other users will behave in a certain way. However, no study has examined the role of U&G theory on the relationships among trust, social capital, and information seeking and sharing.

There are two main classifications of social capital: the network perspective (e.g., bonding, bridging, and linking) and social structure (e.g., structural, cognitive, and relational; Claridge, 2018). Bonding social capital does not provide useful network assets in some situations and bridging social capital does not involve many shared norms. However, structural, cognitive, and relational social capitals are commonly connected and they mutually reinforce each other. They facilitate collective action through making peoples' behavior more beneficial and predictable, as well as encouraging collaboration, exchange, and interaction. The World Bank has recognized and adopts this concept (Krishna & Shrader, 2002) because of more visibility in a digital era in which social media account for a huge amount of communication and interaction in the virtual community context.

This interactive approach emphasizes the important roles played by exchange information. SNSs users mutually influence each other, playing dual roles as information providers and seekers in online discussion forums (Jackson, Stromer-Galley, & Hemsley, 2020). Therefore, it is necessary to simultaneously examine information seeking and sharing (Savolainen, 2019) as key issues of online community success (Kent et al., 2019; J. Li & Su, 2020). Information seeking and sharing can alter and enhance the nature of social media effects (Docherty, 2020; Engelmann et al., 2019).

Previous research has not investigated the relationships between cognitive-/affective-based trust and structural, cognitive, and relational social capital, but not those relationships between information-seeking and information-sharing behaviors (Lefebvre, Sorenson, Henschion, & Gellynck, 2016). Therefore, two research questions remain regarding these interactions: (1) What are the relationships between cognitive-/affective-based trust and social capital (e.g., structural, cognitive, and relational)? (2) What are the relationships between social capital and information seeking/sharing among Indonesian Facebook users? To close this gap, this study addresses the different dimensions of trust and social capital to investigate these relationships. In doing so, it makes two fundamental contributions to the existing body of literature. First, it validates the different effects of cognitive-/affective-based trust and social capital (e.g., structural, cognitive, and relational). Second, it empirically examines the various effects of social capital and information seeking and sharing.

Literature Review

Uses and Gratifications Theory

U&G theory refers to new information and communication technologies with different patterns of Internet-based media adoption, and broadens individuals' communication channels, especially in terms of their social, hedonic, and cognitive needs (Hossain, 2019; Papacharissi & Mendelson, 2011). The need to exchange information has been applied in recent studies, particularly among Facebook users regarding accessing, building, and seeking/sharing information produced by other users (Ferris & Hollenbaugh, 2018). U&G theory can clarify social media users' goals and can therefore help us understand their behaviors and perceptions toward two distinct needs: how needs are gratified and how gratifications reconstruct needs (Savolainen, 2019). Several researchers have examined the motivation for effectively accessing the Internet through U&G theory because it explains the behavioral and psychological dimensions of mediating communication (Ferris & Hollenbaugh, 2018; Papacharissi & Mendelson, 2011). It also explains the motives of Facebook users toward fulfilling their needs for information seeking/sharing and developing or maintaining new friendships (Hossain, 2019). U&G theory can help us understand Facebook users' motives and relationships to help predict the frequency of their visits through photographs, social interaction (e.g., seek or share information about specific issue and news), and status updates.

Trust

Trust is the expectation of cooperative, honest, and regular behavior based on commonly shared norms within a community. These norms may be related to religion or the perception of justice, as well as the secular norms of behavioral codes or professional standards (Fukuyama, 1995). There are two types of trust: cognitive-based trust and affective-based trust (McAllister, 1995). Cognitive-based trust refers to individuals' beliefs about dependability and reliability. It includes three elements: competency, integrity, and goodwill trust (Yeh & Choi, 2011). However, affective-based trust refers to trustees' emotional elements, reciprocity, and social skills regarding interpersonal care and concern. It has two elements: relational and intuitive trust. This study applies intuitive trust to avoid confusion with relational social capital. This study adopts both cognitive-based trust and affective-based trust because both are commonly used in social interaction and have been validated in prior studies (Newman, Kiazad, Miao, & Copper, 2014). On the other hand, cognitive-based trust includes calculative and rational characteristics such as benevolence, competence, integrity, reliability, and responsibility of trustees (Yeh & Choi, 2011). It also increases their willingness to use information from the perspectives of affective-/cognitive-based trust (McAllister, 1995).

Members of virtual communities increase their information-exchange activities as a result of trust, which is a crucial factor in information seeking and sharing on social media (Lefebvre et al., 2016; Udwan et al., 2020). Hence, social media users must apply several types of trust in their activities. The transformation of trust can influence social capital in a virtual community. Although prior studies have acknowledged the importance of trust, they have rarely validated it. In addition, it has been identified that it is important to investigate the relationship between trust and social capital (Fu, 2004).

Social Capital

From a theoretical perspective, there are three different conceptualizations of the relationship between trust and social capital. First, trust is a component of social capital and refers to “obligations and expectations, which depend on trustworthiness of the social environment and information-flow capacity of the social structure, and norms accompanied by sanctions” (Coleman, 1988, p. S119). Second, trust is synonymous with social capital and enables the engagement among people for social capital (Fukuyama, 1995). Third, trust is independent from social capital. The three theoretical approaches advanced by Burt (2000), Granovetter (1973, 1985), and Lin (1999, 2001) form a perspective and propose a mutual independency between trust and social capital because of their weak ties as channels of information flow. This study proposes that trust and social capital are not mutually independent. Conversely, we suggest that there is a relationship between these two constructs because social media users rely on social capital to build their relationships with others based on trust.

Culture is a critical issue greater than technology and encourages people to actively use information-exchange processes (Wasko & Faraj, 2000), especially for interpersonal collaboration among social media users under science and technology studies. Prior studies have focused more on complexity theory. However, interaction norms among users are essential engagement mechanisms in the “technocultural construct” on social media platforms (Crawford & Gillespie, 2016; Gillespie, Boczkowski, & Foot, 2014; van Dijck, 2013) and have become guidelines for users to express their concerns and exchange information. For example, some scholars have confirmed that culture is not an obstacle to social capital in China (Mou & Lin, 2017; Wang, McNally, & Lenihan, 2019) or the United States (Son & Feng, 2019). Thus, technology such as social media can reach the same level of information exchange across countries and cultures.

The rapid changes in the economic, organizations, social, and technological worlds make an understanding of social capital more essential specifically in the social media field (Cohen & Prusak, 2001; Kent et al., 2019). The actual and potential resources of exchanging or sharing information for individuals within virtual communities are intellectual capital or social capital, which includes structural, cognitive, and relational social capital (Ghahtarani, Sheikhmohammady, & Rostami, 2019; Y. Li, Ye, & Sheu, 2014). This framework is mostly widely accepted and used (Claridge, 2018). People contribute with their resources for exchanging or sharing information and collectively resolve problems to maintain quality social relations for mutual benefit.

Social media users share a language and vision with cognitive social capital, which is related to attitudes and beliefs that facilitate mutual understanding among people (Docherty, 2020; Nahapiet & Ghoshal, 1998). People build relationships, spend time interacting socially, and maintain their social ties through the shared language of cognitive social capital (Son, Lee, Cho, & Kim, 2016). They ask questions and exchange information using a common language to gain accurate, adequate, credible, and timely information (Engelmann et al., 2019; Jackson et al., 2020).

Information Seeking and Sharing

In general, information seeking and sharing on social media is defined as how users need, seek, give, share, and use information (Bento et al., 2020). Many studies have investigated information seeking,

whereas few have focused on information sharing (Wilson, 2010). The concept of seeking information has changed dramatically with advancements in technology, especially in social media contexts. Information seeking refers to information acquisition, opinions, or suggestions from credible source such as news, SNS communities, and websites, which provide users with relevant and timely information related to topics. It involves meaningful content of application, recognition, and retrieval. SNSs are useful platforms for users to seek and share information about their daily lives (Engelmann et al., 2019). Facebook users ask for information or support to maintain weak ties with others via sharing their interests, mutual friends, or relational goals (Jackson et al., 2020).

Information Seeking

Connections among users in different communities are weak ties on Facebook, and these are powerful ways to transfer information across social distances and segments of the population (De Meo, Ferrara, Fiumara, & Provetti, 2014). Larger networks tend to be more diverse and link people together for the purpose of information exchange. For instance, social media (e.g., Facebook) is used to circulate information on the COVID-19 pandemic outbreak in some countries (Bento et al., 2020). People seek and share information to rapidly diffuse messages through users who may not know each other personally but become connected through weaker ties by trust and social capital (Engelmann et al., 2019). The interaction among social media users encourages them to seek and share information in the communities (Russmann & Hess, 2020; Savolainen, 2019). Thus, social capital is an essential component for SNS users' information seeking and sharing under weak ties.

Information Sharing

Information sharing is a set of activities through which SNSs users provide information either proactively or on request (Engelmann et al., 2019). They provide others with appropriate and collaborative information (Choo, Bergeron, Detlor, & Heaton, 2008; Docherty, 2020). There are two major perspectives of information sharing. It can be a one-way communication process in which information is disseminated or transferred from a sender to recipients or a two-way communication process in terms of mutual information exchange within small groups or online communities (Savolainen, 2019). However, the gratification of Indonesian social media users is relatively unexplored, particularly regarding its economic and social value.

Research Model and Hypotheses

The Relationship Between Cognitive-/Affective-Based Trust and Social Capital

Past studies have revealed that an essential factor of building cooperation, relations, and positive outcome at interpersonal and team levels depends on trustworthiness. People are more willing to interact and contribute to others when mutual trust occurs (Kent et al., 2019; Udwan et al., 2020). Cognitive and affective trust is the foundation that triggers social interactions and improves efficiency among people (Jackson et al., 2020). With similar characteristics or common goals on SNSs, users' endorsements of trust increase their potential social capitals toward sharing common viewpoints and positive views. Thus, social media communities' members create communication and interaction frequency through endorsements of

trust because of shared language and vision. Moreover, trust strengthens social capital through facilitating access to resources and encouraging engagement in social exchanges and cooperative interaction. Higher trust levels often typify strong ties between individuals and communities in social capital. An alteration in trust and shared value triggers changes in the amount of social capital that exists in interactions. Trust strengthens norms of reciprocity (Fu, 2004). It also reduces the time spent in the expensive and slow process of defining, monitoring, and guaranteeing compliance with the detailed process of enforcement (Nahapiet & Ghoshal, 1998; Russmann & Hess, 2020).

Structural social capital refers to contact connectivity among people that occurs through interaction ties (Nahapiet & Ghoshal, 1998). It portrays the nature and quality of relationships among users (Claridge, 2018). Reciprocity occurs when people trust each other in an interpersonal domain (Kent et al., 2019; Udwan et al., 2020). The norm of reciprocity, as relational social capital (Nahapiet & Ghoshal, 1998), refers to a sense of mutual indebtedness that ensures that community members reciprocate the benefits they receive from others (Wasko & Faraj, 2000). People build their social relationships and enhance their sharing experiences or values to establish interpersonal relationships (cognitive social capital) based on interaction and trust. Shared language and vision are two dimensions of cognitive social capital, which also includes the dimensions of attitudes, beliefs, and perceptions of support (Claridge, 2018; Lefebvre et al., 2016). In the SNS context, trust is an important factor of motivating virtual community members to use social technologies (J. Li & Su, 2020; Russmann & Hess, 2020). SNSs' members believe that they can obtain help from others if they help others solve their problems. This relationship is based on trust. In addition, relational social capital exists when group members trust others in the group (Huang, Kim, & Kim, 2013). Hence, we proposed the following hypotheses:

H1: Cognitive-based trust has significant and positive effects on (a) structural social capital, (b) cognitive social capital, and (c) relational social capital.

H2: Affective-based trust has significant and positive effects on (a) structural social capital, (b) cognitive social capital, and (c) relational social capital.

The Relationship Between Structural Social Capital and Cognitive Social Capital

Social structure is the most important factor of social interaction. Social network ties facilitate social interaction, which in turn stimulates cognitive social capital (Claridge, 2018). Structural social capital exists in the relationships among SNS members. It becomes the antecedent of cognitive social capital and develops a shared language and vision (Lefebvre et al., 2016) among SNS members. Thus, cognitive social capital relies on the premise that social interaction plays an important role in sharing a common set of goals and values among Facebook users to learn about values and visions of others (Lu & Yang, 2011). Moreover, social interaction enhances SNS members' feelings of belonging, social connections, and a sense of shared beliefs, codes, languages, and visions (Lefebvre et al., 2016). Thus, Facebook users share common goals and values with others through their social interaction. We therefore proposed the following hypothesis:

H3: Structural social capital has a significant and positive effect on cognitive social capital on Facebook users.

The Relationship Between Structural Social Capital and Relational Social Capital

Social structure is the most important element in the nature and quality of social relationships (Claridge, 2018). Interaction leads to positive affect, then to interpersonal affection, followed by shared norms of reciprocity, and finally the development of mutual relationships in the SNS context (Lefebvre et al., 2016). Alternatively, it has been suggested that frequent social interaction strengthens users' feelings of connectedness and therefore creates more relationships on Facebook. Moreover, it facilitates the exchange of resources among users (Nahapiet & Ghoshal, 1998) within the group so that they are more willing to reciprocate favors or other social resources in the interaction process (Wasko & Faraj, 2000). Frequent communication and interaction among Facebook users allow them to easily access more information and to evaluate their abilities and behavior. Structural social capital influences SNS members' benefits and triggers sharing more information with others to create more reciprocal relationships. Thus, we proposed the following hypothesis:

H4: Structural social capital has a significant and positive effect on relational social capital on Facebook users.

The Relationship Between Cognitive Social Capital and Relational Social Capital

Shared vision and shared language, as the primary manifestation of cognitive social capital, lead to a harmony of interests and eliminate opportunistic behavior. Social media support the development of trusting relationships and shared visions. People build trusting relationships toward a shared vision to create awareness of how others react in a given situation on social media. It benefits SNS users through the production of intellectual capital, including expectations, norms, obligations, and trust (Engelmann et al., 2019; Kent et al., 2019). Moreover, shared language and a vision encourage the development of reciprocal relationships among social media members. Shared language facilitates people asking questions and doing business together, whereas a shared vision binds community members together and creates the opportunity of benefiting from others or returning benefits to others. Members tend to respect each other and have more mutual reciprocity when they share a language and a vision (Lu & Yang, 2011). A low level of cognitive social capital leads to a low level of relational social capital (Tsai & Ghoshal, 1998). Hence, we proposed the following hypothesis:

H5: Cognitive social capital has a significant and positive effect on relational social capital on Facebook users.

The Relationship Between Structural Social Capital and Information Seeking/Sharing

Individuals search for and gather information from virtual learning communities to gain insights regarding information sharing and to optimize the support of a social network with social capital (Huang et al., 2013; J. Li & Su, 2020). This is highly related to social exchange behavior such as information seeking and sharing where people interact with others (Jackson et al., 2019; Savolainen, 2019). People are willing to share information when structural social capital occurs (Nahapiet & Ghoshal, 1998). Structural social capital is the social interaction regarding the configuration and pattern of connection among SNS members

and the process of building and forming social ties, which is the beneficial propensity of connections with others (Tsai & Ghoshal, 1998).

During an interaction, social structure plays an important role in the users' willingness to engage in seeking and sharing information. It erases users' concerns about whether others are allies or are merely acting opportunistically. Social interaction is a channel for information flow and sharing behavior. Information-seeking and information-sharing behaviors often occur in collaborative settings, which are supported by connectivity and contact among users to exchange information and are highly dependent on social relationships in online environments. Close and frequent interaction among them creates common goals and enables the reciprocal exchange of information (Lefebvre et al., 2016).

Structural social capital plays a significant role in facilitating collaboration and information sharing in SNSs, which allows users to share information, participate in community activities, and form relationships with others (Ghahtarani et al., 2019). As part of information-seeking and information-sharing behaviors, users exchange their resources and create reciprocal relationships through frequent social interaction. This plays a crucial role in the shaping of a set of common goals and values in virtual communities. Individuals' social interaction influences information exchange in a virtual community (Huang et al., 2013). The exchange of information is a type of social interaction that enhances the relationships between social capital and information seeking (Bento et al., 2020; Docherty, 2020)/information sharing (Engelmann et al., 2019; Y. Li, Ye, & Sheu, 2014). Thus, we proposed the following hypothesis:

H6: Structural social capital has significant and positive effects on (a) information seeking and (b) information sharing.

The Relationship Between Cognitive Social Capital and Information Seeking/Sharing

Social capital provides a framework to explain information-seeking and information-sharing mechanisms through the dimensions of structures, contents, and relations (Docherty, 2020; Savolainen, 2019). Some degree of mutual understanding regarding shared language and vision among members affects their engagement in a community (Engelmann et al., 2019; Lu & Yang, 2011). Furthermore, it provides collaboration and information exchanges among SNS members through their shared values or visions for interpersonal relationships (Ghahtarani et al., 2019; Jackson et al., 2020). Individuals understand others and build common jargon through similar goals and the use of a shared vocabulary in their domains. Therefore, the use of a shared language motivates participants to become more proactive in information seeking and sharing, which subsequently enhances the quality and quantity of the information exchange. Shared values encourage members to get together, make cooperative actions possible, and eventually benefit communities (Cohen & Prusak, 2001).

Users who have a common vision become partners to exchange information, which plays an important role in social media communities (Y. Li et al., 2014; Russmann & Hess, 2020). Social network users browse the Internet to seek information (Bento et al., 2020; Son et al., 2016) and to share information (Engelmann et al., 2019; Y. Li et al., 2014), both of which are influenced by social capital (Ghahtarani et al., 2019). It facilitates the establishment of common goals and appropriate ways of communicating within

a social system on social media (Lu & Yang, 2011). The presence of a shared language and vision for information exchange enhances Facebook users' communications given that cognitive social capital emphasizes the availability of common beliefs, experiences, and information. Thus, we proposed the following hypothesis:

H7: Cognitive social capital has significant and positive effects on (a) information seeking and (b) information sharing.

The Relationship Between Relational Social Capital and Information Seeking/Sharing

The normative conditions of expectation, identification, obligation, and trust are reasons for exchanging information among social media members. Relational social capital influences the willingness of users to share information with others and to reduce their communication barriers (Ghahtarani et al., 2019). It is an essential mechanism for reciprocal exchange (Fukuyama, 1995). Thus, relational social capital has an effect on information seeking and sharing (Bento et al., 2020) as a benefit for individuals to engage in social exchange (Engelmann et al., 2019; Russmann & Hess, 2020). They participate in SNS communities to keep abreast of the most up-to-date ideas and innovations. The success of a virtual community depends on available information and knowledge that is helpful, useful, and timely (Son et al., 2016; Wasko & Faraj, 2000).

In the SNS context, relational social capital motivates members searching for information to gain insights of knowledge in virtual communities (Huang et al., 2013). People gather information for community interest, moral obligation, and self-interest when they interact with families, friends, and others for information exchange. Social media interaction fosters the exchange of information and prosperous interaction among users (Jackson et al., 2020). Information sharing refers to behavior including downloading, following, and liking information, news, and problem solving within the social interaction of a computer-mediated community. Relational social capital influences information-sharing behavior (Ghahtarani et al., 2019; Y. Li et al., 2014). Thus, we proposed the following hypothesis:

H8: Relational social capital has significant and positive effects on (a) information seeking and (b) information sharing.

The proposed relationships and hypotheses are illustrated in Figure 1.

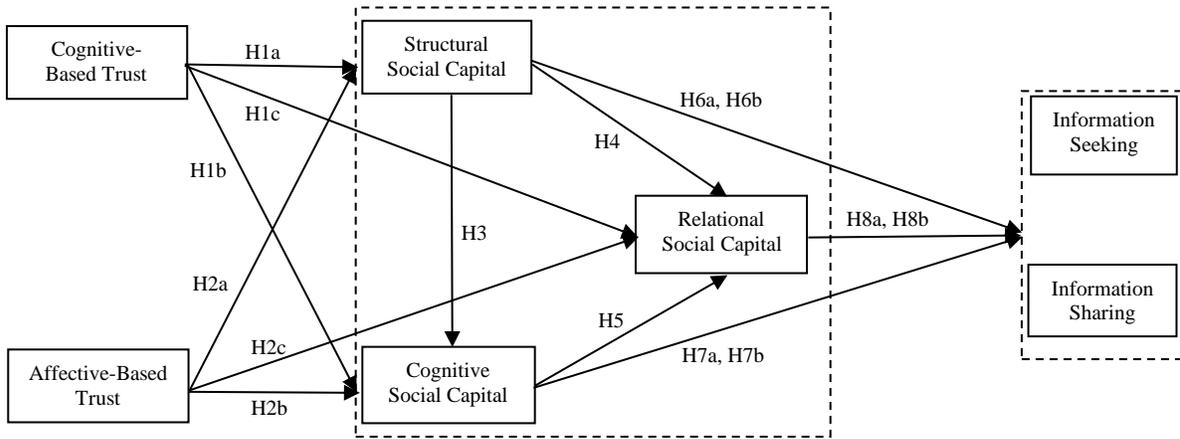


Figure 1. Proposed research model.

Method

Questionnaire Design, Pretest, and Pilot Study

We adopted the high reliability and validity of the scales for all multi-items of the constructs from prior studies. We used the technique of back-translation and invited a professional translator to translate the English questionnaire into the Indonesian language to make sure that the meaning of the measurement items remained the same for each construct. We then tried a pretest and these wordings were revised during the face-to-face interaction to ensure that they were fully embedded within the Indonesian context. Subsequently, we conducted a pilot test of the measurement items and constructs to examine the reliability analysis, convergent validity, and discriminant validity with the suggested criteria before conducting the formal survey.

Sample and Data Collection

This study invited Indonesian Facebook users to fill out the online survey by offering a random prize draw of 50,000 Indonesia rupiahs from a convenience store as an incentive to increase their response rate. This online survey was conducted through Google Forms from February 1 to March 31, 2020. There were 665 valid responses from a total of 697 collected samples, indicating a completion rate of 95.41%. Table 1 shows the respondent demographics.

Table 1. Respondent Demographics (N = 665).

| Demographics | <i>n</i> | Percentage (%) | Accumulated Percentage (%) |
|-----------------------------|----------|----------------|----------------------------|
| Gender | | | |
| Male | 315 | 47.4 | 47.4 |
| Female | 350 | 52.6 | 100.0 |
| Age (years) | | | |
| <26 | 480 | 72.2 | 72.2 |
| 26–40 | 129 | 19.4 | 91.6 |
| 41–55 | 56 | 8.4 | 100.0 |
| Education | | | |
| Bachelor's degree | 428 | 64.4 | 64.4 |
| Master's and PhD degrees | 237 | 35.6 | 100.0 |
| Time using Facebook (years) | | | |
| <5 | 157 | 23.6 | 23.6 |
| 6–10 | 367 | 55.2 | 78.8 |
| >10 years | 141 | 21.2 | 100.0 |

Measures

The items used to measure each of the constructs are presented in the Appendix. A 7-point Likert scale was used for all scale items. Cognitive-based trust refers to calculative and rational characteristics such as competence, reliability, and responsibility of trustees. Affective-based trust refers to the emotional elements and social skills of the trustees. Both constructs were adapted from Yeh and Choi (2011). Structural social capital refers to communication, social interaction, and relationships among Facebook users. Cognitive social capital refers to the extent to which resources provide a common understanding among users. Relational social capital refers to property embedded in interpersonal relationships, such as reciprocity and respect. These constructs were adapted from Lu and Yang (2011). Information seeking refers to browsing product information in a Facebook context and includes individual searching as well as interactive searching adapted from Basak and Calisir (2015) and Yi and Gong (2013). Information sharing refers to the Facebook users who visually share both form and content on Facebook. Measurement of information sharing was adapted from Choo and colleagues (2008) and Yi and Gong (2013).

Common Method Variance

We asked respondents to complete the questionnaire anonymously, and randomly arranged measurement items and hid the label of constructs to reduce respondents' concerns when completing the questionnaire (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). As for postdetection, we applied Harman's single-factor test proposed by Eichhorn (2014), and the common latent factor to conduct postdetection is the inherent weakness of the Harman's single-factor test to detect the common method variance. The explained variance of the first factor was 20.87%. In addition, the factor loading of common latent factor was .65, which indicated 42.65% of common method variance. The exploratory factor analysis result showed no significant problem of common method variance in the data.

Results

Structural equation modeling was used to test the proposed model and the research hypotheses. We used the two-stage approach suggested by Anderson and Gerbing (1988), namely confirmatory factor analysis, to test reliabilities and validities of the research constructs. Then, we used the structural model to test the strength and direction of the proposed relationships among research constructs.

Measurement Model

We conducted the measurement model by adopting the AMOS software with maximum likelihood estimation. Table 2 shows that the confirmatory factor analysis model reproduced the covariance matrix of the observed variables with an adequate fit (Anderson & Gerbing, 1988; Gefen, Straub, & Boudreau, 2000): $\chi^2/df = 4.676$, goodness-of-fit index (GFI) = 0.801, nonnormed fit index (NFI) = 0.863, comparative fit index (CFI) = 0.889, incremental fit index (IFI) = 0.889, and root mean square error of approximation (RMSEA) = 0.074.

Table 2. Analysis of Measurement Model.

| Construct | Maximum likelihood estimation | | Squared multiple correlation | Composite reliability | Average variance extracted | Cronbach's α |
|-----------|-------------------------------|-------------------|------------------------------|-----------------------|----------------------------|---------------------|
| | Factor loading | Measurement error | | | | |
| CBT | | | | 0.915 | 0.641 | 0.914 |
| CBT1 | 0.766 | 0.413 | 0.587 | | | |
| CBT2 | 0.820 | 0.328 | 0.672 | | | |
| CBT3 | 0.815 | 0.336 | 0.664 | | | |
| CBT4 | 0.779 | 0.393 | 0.607 | | | |
| CBT5 | 0.820 | 0.328 | 0.672 | | | |
| CBT6 | 0.803 | 0.355 | 0.645 | | | |
| ABT | | | | 0.914 | 0.638 | 0.912 |
| ABT1 | 0.848 | 0.281 | 0.719 | | | |
| ABT2 | 0.789 | 0.377 | 0.623 | | | |
| ABT3 | 0.817 | 0.333 | 0.667 | | | |
| ABT4 | 0.802 | 0.357 | 0.643 | | | |
| ABT5 | 0.751 | 0.436 | 0.564 | | | |
| ABT6 | 0.783 | 0.387 | 0.613 | | | |
| SSC | | | | 0.905 | 0.706 | 0.905 |
| SSC1 | 0.798 | 0.363 | 0.637 | | | |
| SSC2 | 0.835 | 0.303 | 0.697 | | | |
| SSC3 | 0.882 | 0.222 | 0.778 | | | |

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|--|--|--|
| SSC4 | 0.843 | 0.289 | 0.711 | | | | | | |
| CSC | | | | 0.907 | 0.618 | 0.906 | | | |
| CSC1 | 0.743 | 0.448 | 0.552 | | | | | | |
| CSC2 | 0.807 | 0.349 | 0.651 | | | | | | |
| CSC3 | 0.800 | 0.360 | 0.640 | | | | | | |
| CSC4 | 0.790 | 0.376 | 0.624 | | | | | | |
| CSC5 | 0.770 | 0.407 | 0.593 | | | | | | |
| CSC6 | 0.805 | 0.352 | 0.648 | | | | | | |
| RSC | | | | 0.836 | 0.630 | 0.834 | | | |
| RSC1 | 0.779 | 0.393 | 0.607 | | | | | | |
| RSC2 | 0.832 | 0.308 | 0.692 | | | | | | |
| RSC3 | 0.768 | 0.410 | 0.590 | | | | | | |
| ISE | | | | 0.925 | 0.638 | 0.925 | | | |
| ISE1 | 0.745 | 0.445 | 0.555 | | | | | | |
| ISE2 | 0.809 | 0.346 | 0.654 | | | | | | |
| ISE3 | 0.775 | 0.399 | 0.601 | | | | | | |
| ISE4 | 0.826 | 0.318 | 0.682 | | | | | | |
| ISE5 | 0.818 | 0.331 | 0.669 | | | | | | |
| ISE6 | 0.817 | 0.333 | 0.667 | | | | | | |
| ISE7 | 0.800 | 0.360 | 0.640 | | | | | | |
| ISH | | | | 0.946 | 0.713 | 0.945 | | | |
| ISH1 | 0.847 | 0.283 | 0.717 | | | | | | |
| ISH2 | 0.855 | 0.269 | 0.731 | | | | | | |
| ISH3 | 0.848 | 0.281 | 0.719 | | | | | | |
| ISH4 | 0.820 | 0.328 | 0.672 | | | | | | |
| ISH5 | 0.870 | 0.243 | 0.757 | | | | | | |
| ISH6 | 0.848 | 0.281 | 0.719 | | | | | | |
| ISH7 | 0.821 | 0.326 | 0.674 | | | | | | |

Note. CBT = cognitive-based trust; ABT = affective-based trust; SSC = structural social capital; CSC = cognitive social capital; RSC = relational social capital; ISE = information seeking; ISH = information sharing. Fit statistics ($N = 665$): $\chi^2/df = 4.676$, goodness-of-fit index = 0.801, nonnormed fit index = 0.863, comparative fit index = 0.889, incremental fit index = 0.889, root mean square error of approximation = 0.074.

Table 3. Correlation Matrix for Measurement Scales.

| Construct | Mean | SD | CBT | ABT | SSC | CSC | RSC | ISE | ISH |
|-----------|------|------|-------|-----|-----|-----|-----|-----|-----|
| CBT | 4.96 | 1.02 | 0.800 | | | | | | |

| | | | | | | | | | |
|-----|------|------|---------|---------|---------|---------|---------|---------|-------|
| ABT | 5.21 | 1.05 | 0.669** | 0.799 | | | | | |
| SSC | 5.43 | 1.04 | 0.516** | 0.635** | 0.840 | | | | |
| CSC | 5.20 | 1.06 | 0.615** | 0.723** | 0.624** | 0.786 | | | |
| RSC | 5.29 | 1.16 | 0.623** | 0.673** | 0.593** | 0.668** | 0.793 | | |
| ISE | 5.18 | 1.07 | 0.662** | 0.758** | 0.690** | 0.818** | 0.676** | 0.799 | |
| ISH | 5.07 | 1.16 | 0.545** | 0.653** | 0.729** | 0.717** | 0.633** | 0.647** | 0.844 |

Note. CBT = cognitive-based trust; ABT = affective-based trust; SSC = structural social capital; CSC = cognitive social capital; RSC = relational social capital; ISE = information seeking; ISH = information sharing. Diagonal elements are the square roots of the average variance extracted for each construct. Pearson correlations are shown below the diagonal. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Structural Model

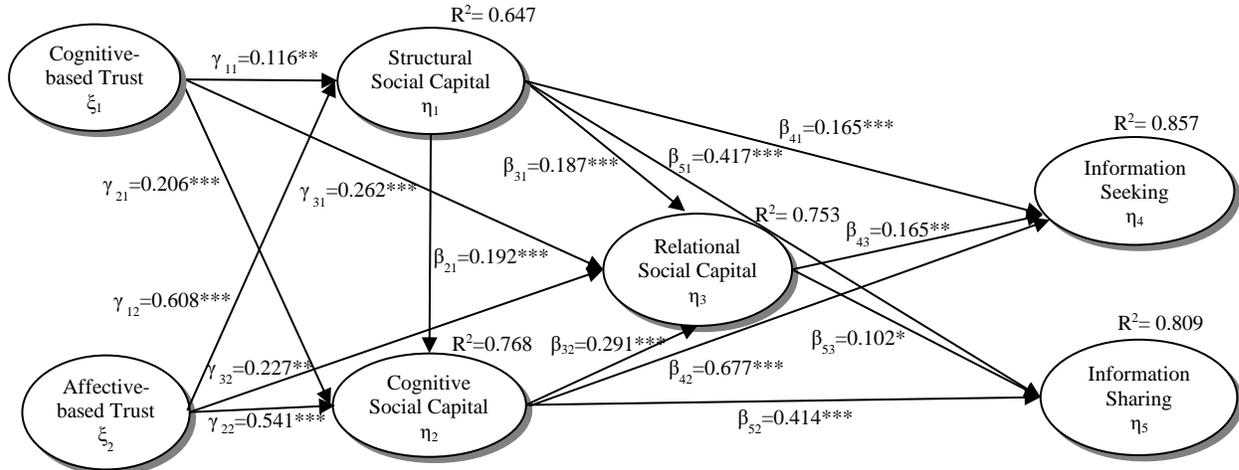
The model fit of data was adequate: $\chi^2 = 2559.35$, $df = 661$, $\chi^2/df = 3.872$, GFI = 0.837, NFI = 0.890, CFI = 0.916, IFI = 0.916, and RMSEA = 0.066. The results supported all research hypotheses, as shown in Table 4.

Table 4. Proposed Model Results.

| Symbol | Path | Coefficient | Hypothesis | Test results |
|-----------------|-----------|-------------|------------|--------------|
| Y ₁₁ | CBT → SSC | 0.116** | H1a | Supported |
| Y ₂₁ | CBT → CSC | 0.206*** | H1b | Supported |
| Y ₃₁ | CBT → RSC | 0.262*** | H1c | Supported |
| Y ₁₂ | ABT → SSC | 0.608*** | H2a | Supported |
| Y ₂₂ | ABT → CSC | 0.541*** | H2b | Supported |
| Y ₃₂ | ABT → RSC | 0.227** | H2c | Supported |
| β ₂₁ | SSC → CSC | 0.192*** | H3 | Supported |
| β ₃₁ | SSC → RSC | 0.187*** | H4 | Supported |
| β ₃₂ | CSC → RSC | 0.291*** | H5 | Supported |
| β ₄₁ | SSC → ISE | 0.165*** | H6a | Supported |
| β ₅₁ | SSC → ISH | 0.417*** | H6b | Supported |
| β ₄₂ | CSC → ISE | 0.677*** | H7a | Supported |
| β ₅₂ | CSC → ISH | 0.414*** | H7b | Supported |
| β ₄₃ | RSC → ISE | 0.165** | H8a | Supported |
| β ₅₃ | RSC → ISH | 0.102* | H8b | Supported |

Note. CBT = cognitive-based trust; ABT = affective-based trust; SSC = structural social capital; CSC = cognitive social capital; RSC = relational social capital; ISE = information seeking; ISH = information sharing. Model fit: $\chi^2 = 2559.35$, $df = 661$, $\chi^2/df = 3.872$, goodness-of-fit index = 0.837, nonnormed fit index = 0.890, comparative fit index = 0.916, incremental fit index = 0.916, root mean square error of approximation = 0.066. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

This study empirically validated that trust (cognitive-/affective-based trust) has a significant and positive effect on social capital (cognitive, relational, and structural) and then a significant and positive effect on information seeking and sharing. Figure 2 shows the structural model of this research.



Notes. Model fit: $\chi^2 = 2559.35$, $df = 661$, $\chi^2/df = 3.872$, $GFI = 0.837$, $NFI = 0.890$, $CFI = 0.916$, $IFI = 0.916$, and $RMSEA = 0.066$
 $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

Figure 2. Structural model.

Mediating Effect

We tested a range of mediating effects for the bootstrapping method with 5,000 simulations. Bootstrapping is a nonparametric statistical procedure in which the data set is repeatedly sampled and indirect effects are calculated using such a nonparametric statistical procedure (Hayes, 2018). Table 5 shows that all ranges of both the percentile method confidence intervals and bias-corrected confidence intervals excluded zero, indicating that all mediating effects were significant. The regression results indicate that all mediating effects were partial mediators.

Table 5. Mediation Effects.

| IV → DV (c) | IV → M (a) | IV + M → DV | Bootstrapping 95% CI |
|-------------|------------|-------------|----------------------|
|-------------|------------|-------------|----------------------|

| Independent variable (IV) | Mediator (M) | Dependent variable (DV) | | | | | | |
|---------------------------|--------------|-------------------------|----------|----------|-------------------|----------|----------------|----------------|
| | | | IV (c') | M (b) | Percentile method | | Bias-corrected | |
| CBT | SSC | CSC | 0.528*** | 0.414*** | 0.422** | 0.638*** | [0.036, 0.144] | [0.037, 0.146] |
| | SE | | 0.034 | 0.033 | 0.032 | 0.032 | | |
| CBT | SSC | RSC | 0.528*** | 0.490*** | 0.409** | 0.705*** | [0.334, 0.611] | [0.341, 0.623] |
| | SE | | 0.034 | 0.037 | 0.036 | 0.034 | | |
| CBT | CSC | RSC | 0.637*** | 0.387*** | 0.501** | 0.705*** | [0.334, 0.611] | [0.341, 0.623] |
| | SE | | 0.032 | 0.039 | 0.038 | 0.034 | | |
| ABT | SSC | CSC | 0.633*** | 0.553*** | 0.279** | 0.729*** | [0.487, 0.676] | [0.618, 0.782] |
| | SE | | 0.030 | 0.033 | 0.033 | 0.027 | | |
| ABT | SSC | RSC | 0.633*** | 0.547*** | 0.307** | 0.740*** | [0.473, 0.641] | [0.496, 0.673] |
| | SE | | 0.030 | 0.039 | 0.039 | 0.032 | | |
| ABT | CSC | RSC | 0.729*** | 0.437*** | 0.416** | 0.741*** | [0.379, 0.641] | [0.397, 0.673] |
| | SE | | 0.027 | 0.043 | 0.043 | 0.032 | | |
| SSC | CSC | ISE | 0.631*** | 0.301*** | 0.645** | 0.708*** | [0.281, 0.660] | [0.293, 0.690] |
| | SE | | 0.031 | 0.027 | 0.027 | 0.029 | | |
| SSC | CSC | ISH | 0.631*** | 0.513*** | 0.472** | 0.812*** | [0.442, 0.698] | [0.462, 0.729] |
| | SE | | 0.031 | 0.033 | 0.033 | 0.030 | | |
| SSC | RSC | ISE | 0.655*** | 0.458*** | 0.382** | 0.708*** | [0.427, 0.660] | [0.446, 0.690] |
| | SE | | 0.035 | 0.032 | 0.030 | 0.029 | | |
| SSC | RSC | ISH | 0.655*** | 0.608*** | 0.311** | 0.812*** | [0.522, 0.698] | [0.545, 0.729] |
| | SE | | 0.035 | 0.034 | 0.031 | 0.029 | | |
| CSC | RSC | ISE | 0.730*** | 0.673*** | 0.216** | 0.831*** | [0.628, 0.775] | [0.663, 0.819] |
| | SE | | 0.031 | 0.029 | 0.027 | 0.022 | | |
| CSC | RSC | ISH | 0.730*** | 0.584*** | 0.280** | 0.789*** | [0.502, 0.678] | [0.530, 0.717] |
| | SE | | 0.031 | 0.038 | 0.035 | 0.030 | | |

Note. CBT = cognitive-based trust; ABT = affective-based trust; SSC = structural social capital; CSC = cognitive social capital; RSC = relational social capital; ISE = information seeking; ISH = information sharing. SE = Standard Error.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Discussion

Key Findings

The results of this study confirm that cognitive-/affective-based trust significantly and positively influences social capital (e.g., structural, cognitive, and relational), which has a significant and positive effect on information seeking and sharing. These are innovative findings that, to our knowledge, have not been revealed by prior studies. This study also confirms that structural social capital has significant and positive effects on both cognitive and relational social capital (Docherty, 2020; Kent et al., 2019). Both structural social capital and cognitive social capital are mediators between trust (e.g., cognitive-/affective-based trust) and relational social capital as well as information seeking/sharing in the social

media context (e.g., Facebook). Specifically, the findings show that Indonesian Facebook users' trust is high when they have higher levels of communication and interaction as well as shared language, reciprocity, respect, and vision over their activities. It also corroborates that Facebook provides an effective two-way communication platform.

Moreover, the findings confirm the research hypotheses that U&G theory can explain the motives of Facebook users toward fulfilling their needs for information seeking and sharing (Ferris & Hollenbaugh, 2018; Hossain, 2019). Both cognitive-based trust and affective-based trust are antecedents of social capital (Fu, 2004; Newman et al., 2014; Yeh & Choi, 2011), which subsequently influences information seeking (Basak & Calisir, 2015; Son et al., 2016) and information sharing (Choo et al., 2008; Engelmann et al., 2019).

The obtained results based on U&G theory suggest that Facebook users, specifically Indonesian young people, exchange information through their social interactions to meet their social needs. This study strengthens the work of Hossain (2019) and Savolainen (2019). Furthermore, these results indicate that trust influences SNS users' social capital based on their social needs. These factors contribute to the formation and maintenance of virtual communities' relationships through trust, shared interests, language, vision, reciprocity, sense of community, and sociability, all of which subsequently influence information seeking and sharing. The social motivation of SNSs can be used as a predictor of general use of Facebook as a medium to seek and share information. This study investigated social media usage using U&G theory in the SNS context (e.g., Facebook). The results indicate that the primary motivators of U&G theory in this context are the seeking and sharing of information. Information seekers and sharers specifically engage in virtual communities to communicate and interact with others. Consequently, this behavior paves the way for the ultimate success of virtual communities in the maintenance of close relationships among SNS users.

Academic Implications

The findings contribute to the literature on Facebook subscribers, U&G theory, and social connection. First, this study proposed and tested a model that illustrates the formation of information seeking and sharing for Indonesian Facebook users. It provides an appropriate theoretical background. The study of information exchange on social media is a trendy issue (Bento et al., 2020; Engelmann et al., 2019). Past studies have seldom established a model that simultaneously explains the antecedents of Facebook users' information-seeking and information-sharing behaviors. On the other hand, this study extends U&G theory to explain Facebook users' behaviors of communication and interaction and provides theoretical contributions to the literature on the virtual community in two ways. First, the findings of this research demonstrate the effects of cognitive-based trust and affective-based trust on three dimensions of social capital, which subsequently influence information seeking and sharing on Facebook. Second, this research demonstrates that U&G theory can explain the mediating effects of structural, cognitive, and relational social capital to information seeking and sharing for SNS users' social media usages. It provides a theoretical ground for future research.

Practical Implications

Facebook is an effective platform by which users can exchange information and express their opinions to develop social interaction through trust and social capital. Facebook must be aware of and endeavor to identify objective and rational characteristics that encourage users to discuss topics regarding trust and social capital, and to exchange information, as well as address members' concerns for their welfare to improve their affective- and cognitive-based trust. In addition, Facebook should invite everyone to participate in the interaction activities and include a great deal of control for and among users and timely responses to their questions, as well as users' interaction content and processes to foster long-term relationships, create value propositions, and use innovative online platforms to maintain communication and interaction. This will provide cognitive- and affective-based trust among users as well as enhance members' connections.

Our research provides practical implications for virtual community management. Furthermore, SNSs replace the role of conventional media such as TV and newspapers and provide appropriate platforms for users to seek and share information. SNS managers and practitioners should focus on the major dimensions of U&G theory to maximize their users' interactions on social media. They should investigate what prompts users to create interesting posts or to discuss social issues so that reliable information is provided to users. In addition, Facebook managers should pay particular attention to their reference groups, especially the active virtual communities' members, to broaden their users' bases.

Limitations and Future Research

There are some limitations in this research. First, this study examined only Indonesian Facebook users' behaviors. A longitudinal study could help researchers observe Facebook users' interactions under dynamic conditions to elaborate the content and impact of users' interaction based on social context and economic perspective. Second, we only considered the social capital factors on information exchange. Third, this study looked at the relationships between cognitive-/affective-based trust and three dimensions of social capital from a beneficial perspective on Facebook. Last, the majority of participants were Indonesian young people with bachelor's degrees, so they cannot be considered representative of Indonesian Facebook users as a whole. Future research should also investigate internal factors (e.g., institution authority, economic cost, and information security), external factors (e.g., operation ability, interorganization relationship, and organizational comparability), and individual factors (e.g., age, education, and income) from an information-seeking and information-sharing perspective.

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Appendix

Scale Items

Cognitive-based trust (Yeh & Choi, 2011)

1. Facebook users have relevant skills when discussing particular topics.
2. Facebook users have relevant knowledge when discussing particular topics.
3. Facebook users provide professional knowledge when discussing major topics.
4. Facebook users have the expertise to advance the community discussions.
5. Facebook users provide feedback after discussions.
6. Facebook users possess the capability to accomplish tasks (e.g., suggestions).

Affective-based trust (Yeh & Choi, 2011)

1. Facebook users increase the interaction among users.
2. Facebook users do not intentionally interfere in discussions with malevolence.
3. Facebook users promote understanding among users.
4. Facebook users help other members within their capabilities.
5. Facebook users treat other members fairly (honestly).
6. Facebook users do not behave in a consistent manner (reversed scored)

Structural social capital (Lu & Yang, 2011)

1. Facebook users and I maintain close social relationships.
2. Facebook users and I spend a lot of time interacting with each other.
3. Facebook users and I have frequent communication with each other.
4. Facebook users know me at a personal level.

Cognitive social capital (Lu & Yang, 2011)

1. When interacting, Facebook users and I use common terms or jargon.
2. During the discussion, Facebook users and I use mutually understandable communication patterns.
3. When communicating, Facebook users and I use mutually understandable narrative forms.
4. Facebook users care about the same issues.
5. Facebook users have common goals toward the social media.
6. Facebook users understand each other

Relational social capital (Lu & Yang, 2011)

1. The relationship among Facebook users and me is characterized by mutual respect.
2. The relationship among Facebook users and me is characterized by high reciprocity.
3. The relationship among Facebook users and me is characterized by personal friendship.

Information seeking (Basak & Calisir, 2015; Yi & Gong, 2013)

1. I use Facebook because it gives quick and easy access to large amounts of information.
2. I use Facebook because I learn a lot from using it.
3. I use Facebook to find out useful knowledge and new information.
4. I use Facebook to obtain useful knowledge and new information.
5. I use Facebook so I can learn about things happening in the world.
6. I use Facebook because it makes acquiring information inexpensive.
7. Facebook makes it easy for me to retrieve information and knowledge when I need to.

Information sharing (Choo et al., 2008; Yi & Gong, 2013)

1. I clearly explain the information I need on Facebook.
2. I give Facebook users proper information.
3. I provide necessary information so that Facebook users can perform their duty.
4. I answer related questions for Facebook users.
5. I expect to share information contributed by other Facebook users.
6. I intend to share information on Facebook in the future.
7. I plan to share information on Facebook regularly.