The Role of Social Capital on Social Commerce: An Empirical Study of Facebook Users

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This study proposes an integrated research model to validate the effects of social capital (e.g., cognitive, relational and structural) on social commerce among Facebook users' from the perspective of the uses and gratifications (U&G) theory. This study collects 525 valid samples and indicates that social capital significantly and positively influences on social commerce. This study contributes to the research on uses and gratifications (U&G) theory in two different ways. Firstly, it indicates that social capital influences social commerce activities. Secondly, it validates the roles of social capital in the relationship between social interaction and commerce in Facebook.

Keywords*:* social capital, social commerce, uses and gratification theory

1. Introduction

In digital era, the social network sites (SNSs) have become multi-function for the users' namely commerce and social interaction due to the largest category of consumers and economics in this field. They have influenced behaviors like business, learning and shopping to shift from traditional marketing channels to new social media platforms. Firms use Facebook as a means to promote products to millennials (Moraes, Michaelidou, & Meneses, 2014) and social commerce sites (SCSs) among the consumers to interact and exchange information of products or services information (Hajli, 2015; Kim & Park, 2013). Social commerce facilitates consumers' information seeking (Hajli *et al*., 2017; Mikalef *et al*., 2020) and sharing (Bugshan & Attar, 2020; Liu *et al*., 2016; Tajvidi *et al*., 2018). Thus, social commerce is a combination of e-commerce and SNSs that intends to enhance shoppers' experience online (Algharabat & Rana, 2020).

As one of the important activities in e-commerce, social commerce has altered the social interactions, information accessibility, and the business context (Leung *et al*., 2019; Lin *et al*., 2019). It refers to social media and networking technologies applied to increase the connections among users and consumers in online platform. The difference between social commerce and e-commerce is involves communities and conversation among users on individuals and one-to-one interactions to create value (Huang & Benyoucef, 2013). Social media (e.g., LinkedIn, Facebook, and Twitter), facilitates the acquisition of products through supporting users' interactions and

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contributions (Liang & Turban, 2011). With the increasing research and adoption of Social commerce is gaining popularity in the recent years, as it enables collaborative and cooperative approaches in online commerce activities. However, those studies unclear due to validated the social commerce in field information seeking and sharing separately, as well as in Western context. It is therefore worth exploring the interaction between users in different cultures and socio-economies, such as in Asian countries (Christodoulides, Michaelidou & Siamagka, 2013), if any, indicate whether social capital in SNSs influences users' purchase intentions from Facebook? Moreover, if there is any relationship, which mechanism carries the effects of social capital (e.g., cognitive, structural and relational) on social commerce?

In answering these questions, this research provides several theoretical, methodological, and practical contributions. First, this research links social capital (e.g., cognitive, structural and relational) by personal and social benefits based on social capital theory. Second, with the exception the literature and study of social commerce information seeking and sharing (i.e. acquiring and share information from the information channels in a social commerce platform) are few on information seeking and sharing simultaneously. Specifically, prime to firms on competition, as well as provide the bright of manager decision making process. The channels of information exchange have evolved through the emergence of SNSs. Given the context of social commerce, users may seek and share information about a product and services through various channels, including peer recommendations, reviews and ratings, and forums and communities (Hajli & Sims, 2015). Moreover, information seeking and sharing, together with the social presence in SNSs – the feeling of 'warmth' and 'being there' – could increase users' purchase intentions.

2. Theoretical Background and Literature Review

2.1 Social capital theory

Social capital, including not only social relationships but also associated values which concerned with the aspect of social structure that creates value and facilitates actions of individuals (Coleman & Coleman, 1994). Nahapiet and Ghoshal (1998) defined social capital as "the sum of the actual and potential resources embedded within, and derived from the network relationships possessed by an individual or social unit". It is the best source created through exchanges. This type of source is related to different types of relationships, which includes interpersonal network and relationships in both individually and organizational fields to clarified the resources that can bring together in the social network (Ghahtarani *et al*., 2019; Lin, 2017). Commonly, this concept comprises of three dimensions namely, structural, cognitive, and relational, and more famous used and accepted framework. Prior studies proven that the three dimensions of social capital is highly interrelated (Lefebvre et al., 2016; Tsai and Ghoshal, 1998). The investigation of the links between them is essential for understanding social capital as a whole and the effects it can have in a given context (Lefebvre et al. 2016).

2.1.1 Structural Social capital

Structural social capital is the network of people who an individual knows and upon whom she can draw for benefits such as information and assistance (Claridge, 2018). Bourdieu (1986) referred to the superior resources that could be gained by the elite classes because of the structure

of the networks they had access to; Burt (1992) found that those actors able to broker across structural holes in networks achieved greater success; Coleman (1988) argued that the structure of networks shaped an actor's options, modifying the rational action paradigm; Putnam (1993) saw membership in cross-cutting associations facilitating action for the benefit of society; while Nahapiet and Ghoshal (1998) suggested that the networks formed in organizations provided them with an advantage in producing intellectual capital.

Structural social capital is a dimension of social capital that relates to the properties of the social system and of the network of relations as a whole (Nahapiet and Ghoshal, 1998). It designates the impersonal relationship among the users or members (Claridge, 2018). The configuration includes the roles, rules, precedents, and procedures. It is typically considered the density, connectivity, hierarchy and appropriability of the network of relationships in any given context such as a group, organisation, or community (Davenport & Daellenbach, 2011). The crucial aspects of structural social capital are the number of ties a person has, with whom and how strong the tie is. It has been analysed from different perspectives that include tie strength and centrality, network stability and size (Lefebvre et al. 2016). It facilitates conditions of accessibility to various parties for exchanging and transferring knowledge, and for increasing the exchange opportunity (Ansari, Munir, and Gregg, 2012). It provides opportunities for people to gain access to relevant peers with desired sets of knowledge or expertise to engage in mutually beneficial collective action by lowering transaction costs and improving social learning. It is clear that the structural dimension is an antecedent to both cognitive and relational dimensions (Tsai & Ghoshal, 1998) since social relationships and structures are essential for social exchange.

2.1.2 Relational Social capital

Relational represent the quality of relationships within a network affects social capital outcomes (Claridge, 2018). Fukuyama (1995) argued high levels of trust is fared better economically. The rate of trust is norms-created through the existence of membership (Putnam, 1993). These arguments supported by Nahapiet and Ghoshal (1998) which demonstrated the importance of relational factors such as trust, norms, obligations, expectations, and identification for building intellectual capital in organizations. It refers to the nature and quality of the relationships that have developed through a history of interaction (Lefebvre et al., 2016). Nahapiet and Ghoshal (1998) identified that the key aspects of relational social capital are trust and trustworthiness (Fukuyama 1995; Putnam 1995), norms and sanctions (Putnam 1995), obligations and expectations (Burt, 2000; Granovetter, 1973). It directly encourages normative behavior based on trust, reciprocity, obligations and expectations (Claridge, 2018).

2.1.3 Cognitive social capital

The cognitive social capital consisting of shared systems of meaning which make communication and interpretation possible among a community members. It is essential to identify for facilitating communication and create intellectual capital (Nahapiet & Ghoshal, 1998). Putnam (1995) revealed the value is not only as concerning the creation of trust but also for shared systems of meaning, thereby making communication and interpretation among them easier. Cognitive social capital is a dimension of social capital that relates resources providing shared representations, interpretations, and systems of meaning among parties (Inkpen & Tsang, 2005; ; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998) which related cognitive social capital to shared language and shared narratives, shared goals or vision, and shared culture.

2.3 Social commerce

Social commerce is well-established in the extant marketing literature (Huang & Benyoucef 2013; Liang & Turban, 2011). It refers to "the delivery of e-commerce activities and transactions via the social media environment, mostly in social networks. Hence, social commerce can be considered a subset of e-commerce that involves using social media to assist in e-commerce transactions and activities" (Liang & Turban, 2011, p. 6). Social commerce has three main characteristics, including social media technology, interactions in the community level, and commercial activities. Social media refers to "Internet-based applications (Huang & Benyoucef, 2013, p. 246). Social media, such as Facebook, Twitter, and LinkedIn, provide people with a pervasive network connectivity, which enables their active participation in online marketing and sales activities. In social commerce value is mainly originated from the network of interactions among actors, while the facilitation of buyer-seller connections is central to value co-creation in e-commerce.

In social commerce, a network of interactions among actors is the main source of value then facilitates the exchange of operant resources (i.e. nonphysical; information, idea, knowledge, etc.) among multiple actors outside the market, leading to the integration of operand resources (i.e. physical, money, product, etc.) between the buyer and seller. Social commerce adopts an interactive approach toward the commerce, since it involves a network of customer-customer and customer-firm interactions. Facebook and Twitter, provide various channels of C2C and B2C connections and enable the co-creation of contents in multiple forms by both e-vendors and customers in social commerce.

3. Conceptual Model and Hypothesis Development

3.1 Relationship between structural social capital and information seeking/sharing social commerce

Individuals who are centrally embedded in a collective are more likely to have a developed habit for cooperation and thus have positive effect to social commerce information seeking and sharing in SNSs (Lee & Ha, 2017; Tajvidi *et al*., 2018; Wasko & Faraj, 2005). The higher level of centrality within an identity confirmation network is positively related to cooperation and performance. Network centrality is related to the individual's degree of involvement in assisting others with exchanges. Nahapiet and Ghoshal (1998) argued that network ties provide access to resources. Lu and Yang (2011) provided empirical support for the influence of social interaction ties on information seeking/sharing. Based on the social exchange theory, an individual who obtains more information from a social network is more likely to benefit from other individuals in that network. Prior studies demonstrated that the more social interactions undertaken by exchange partners, the greater the intensity, frequency, and breadth of information exchanged (Huang, Kim & Kim, 2013; Lefebre et al., 2016). Customers can easily observe what out-degrees have posted on Facebook by seek and share information. The following relationship indicates that consumers prefer to read and share information from out-degrees' posts. Hence, customers are more likely to cognitively absorb the information from out-degrees' posts. Thus, their level of engagement in Facebook increases, resulting in seek/sharing more information. In addition, based on social capital theory, consumers are more likely to seek/share information when they notice that the users they like seek and share information. Therefore, we posits:

H1: Structural social capital have a positive effect to seek and share information on Facebook.

3.2 Relationship between relational social capital and information seeking/sharing social commerce

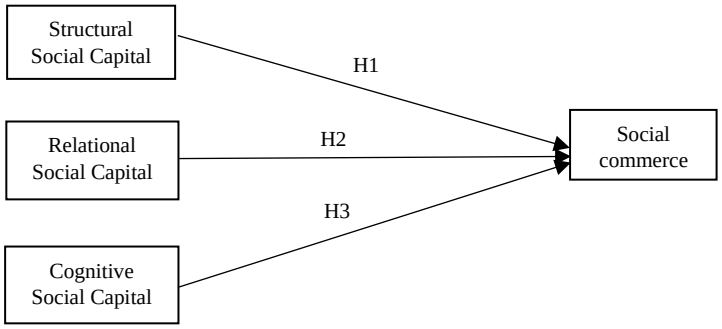
Relational capital exists when among the users have a strong relationship due to more enthusiastic to help each other (Hajli & Sims, 2015). Some earlier studies proven relational capital have a strong relationship with social commerce toward commitment, reciprocity and trust (Huang, Kim, & Kim, 2013; Wasko & Faraj, 2005). Reciprocity refers to knowledge exchanges that are mutual and perceived as fair. Reciprocity is an internalized social norm that is conceived as a benefit to individuals engaging in social exchanges. Earlier studies have found that seek/share information in online communities' value reciprocity (Wasko & Faraj, 2005) that drives them to participate and share. The Facebook users who have received the appreciation from other member for his/her valuable contribution, becomes even more motivated to continue contributing within the community and which usually reciprocate the benefits they receive from others, which spurs ongoing supportive exchanges. Therefore, relational capital based on reciprocity and trust leads to more open and honest mutual information seeking/sharing among Facebook users' (Lee & Ha, 2017). Hence the following hypotheses:

H2: Relational social capital have a positive effect to seek and share information on Facebook

3.3 Relationship between cognitive social capital and information seeking/sharing social commerce.

The cognitive dimension of social capital develops through existence of shared language and vocabulary, and exchange of collective narratives that facilitate social interaction processes (Nahapiet & Ghoshal, 1998). Wasko & Faraj (2005) further suggested that language is the means individuals engage in communication and provides a frame of reference for interpreting the environment. Shared language mastery is typically indicated by an individual's level of expertise. Members who share common language better understand each other, avoid misunderstanding in communication, and readily anticipate similar values or visions. Prior studies prove that share vision, language set of common values facilitate the SNSs user wide benefits. In online communities, language indicates the user level of expertise. The users with a higher level of skill may have a better understanding of the context in which their knowledge is relevant. Hence the following hypotheses:

H3: Cognitive social capital have a positive effect to seek and share information on Facebook



4. Methodology

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 Indonesian language to make sure the meaning of the measurement items remained the same for each construct. We then tried a pretest and these wording were revised during the face-to-face interaction to ensure 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.

5. Sample and Data Collection

This study invited Indonesian's Facebook users to fill out the online survey by offering a random prize draw of 50,000 Indonesia rupiahs (IDR) 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 525 valid responses from a total of 550 collected samples, indicating a completion rate of 95.41 %. Table 1 shows the respondent demographics.

6. Results

Structural Equation Modeling (SEM) was used to test the proposed model and the research hypotheses. This study employed the two-stage approach suggested by Anderson and Gerbing (1988), namely CFA to test reliabilities and validities of the research constructs. Then, the structural model to test the strength and direction of the proposed relationships among research constructs including the hypothesized model. The results showed evidence of convergent validity and discriminant validity.

Table 1. Analysis of measurement model.

Constructs	MLE estimates factor loading/ measurement error		Squared multiple correlation (SMC)	Composite reliability (CR)	Average of variance extracted (AVE)	Cronbach's α
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			
SC				0.925	0.638	0.925
SC1	0.745	0.445	0.555			
SC2	0.809	0.346	0.654			
SC3	0.775	0.399	0.601			

SC4	0.826	0.318	0.682
SC5	0.818	0.331	0.669
SC6	0.817	0.333	0.667
SC7	0.800	0.360	0.640
SC8	0.847	0.283	0.717

Fit statistics (N = 525)

χ^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

SSC: Structural social capital, CSC: Cognitive social capital, RSC: Relational social capital, SC: Social commerce.

Table 2. Correlation matrix for measurement scales.

Constructs	Mean	SD	SSC	CSC	RSC	SC
SSC	5.43	1.04	0.840			
CSC	5.20	1.06	0.624**	0.786		
RSC	5.29	1.16	0.593**	0.668**	0.793	
SC	5.07	1.16	0.729**	0.717**	0.633**	0.844

Notes: SD: Standard Deviation

Diagonal elements are the square roots of the AVE for each construct

Pearson correlations are shown below the diagonal

*p<0.05, **p<0.01, ***p<0.001

7. Structural Model

The model fit of data was adequate: χ^2 = 2559.35, df =661, χ^2/df = 3.872, GFI = 0.837, NFI = 0.890, CFI = 0.916, IFI = 0.916, and RMSEA= 0.066. The results support all research hypotheses. This study empirically validates social capital (cognitive, relational and structural) have a positive and significant on social commerce information seeking/sharing.

Table 3. Proposed model results.

Paths				Coefficients	Hypotheses	Test results
γ_{11}	SSC	→	SC	0.116**	H1	Supported
γ_{21}	RSC	→	CSC	0.206***	H2	Supported
γ_{31}	CSC	→	RSC	0.262***	H3	Supported

Notes: *p < 0.05; **p < 0.01; ***p < 0.001

8. Discussions

4.1. Key Findings

The results of this study confirm that social capital (e.g., structural, cognitive, and relational) significantly and positively influences social commerce of information seeking/sharing. These are

innovative findings that, to the authors' knowledge, have not been revealed by prior studies. This study also confirms that structural social capital has significant and positive effects on both social commerce information seeking and sharing (BuhShan & Attar, 2020; Huang, Kim, & Kim, 2013; Lee & Ha, 2017). 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.

9. Conclusion

The obtained results based on social capital theory, suggest that Facebook users, specifically Indonesian young people, exchange information through their social interaction in order to meet their social needs. Furthermore, these results indicate that social capital influences SNSs users' social commerce information seeking/sharing based on their social needs. These factors contribute to the formation and maintenance of virtual communities' relationships through trust, shared interests, language and 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 media to seek and share information. This study investigated social media usage using social capital theory in the SNSs context (e.g., Facebook). Consequently, this behavior paves the way for the ultimate success of virtual communities in the maintenance of close relationships between SNSs users.

References

Algharabat, R.S. and Rana, N.P. (2020). Social commerce in emerging markets and its impact on online community engagement. *Information System Frontier*, (July), pp. 1-22.

Anderson, J. C. and Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411–425.

Ansari, S., Munir, K. and Gregg. (2012). Impact at the "Bottom of the Pyramid": The role of social capital in capability development and community empowerment. *Journal of Management Studies, 49*(4), pp. 813-842.

Buhshan, H. and Attar, R. W. (2020). Social commerce information sharing and their impact on consumers. *Technological Forecasting and Social Change*, *153*(April), pp. 1-8.

Burt, R. S. (2000). The network structure of social capital. *Research in Organizational Behavior*, *22*, 345–423.

Christodoulides, G., Michaelidou, N. and Siamagka, N. T. (2013). A typology of internet users based on comparative affective states: Evidence from eight countries. *European Journal of Marketing*, *47*(1/2), pp. 153-173.

Claridge, T. (2018). Dimensions of social capital-structural, cognitive, and relational. Retrieved from https://www.socialcapitalresearch.com/explanation-types-social-capital/ (accessed on 15 April 2020).

Coleman, J. S. & Coleman, J. S. (1994). Foundations of social theory. Harvard University Press.

Davenport, S. & Daellenbach, U. (2011). Belonging to a virtual research centre: Exploring the influence of social capital formation processes on member identification in a virtual organization. *British Journal of Management, 22*(1), 54–76.

Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. New York, NY: The Free Press.

Ghahtarani, A., Sheikhmohammady, M., & Rostami, M. (2019). The impact of social capital and social interaction on customers' purchase intention, considering knowledge sharing in social commerce context. *Journal of Innovation and Knowledge, 5*(3), 191–199.

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology, 78*(6), 1360–1380.

Hajli, N. (2015). Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*, 35 (2), 183–191.

Hajli, N. and Sims, J. (2015). Social commerce: The transfer of power from sellers to buyers. *Technological Forecasting and Social Change*, *94*(May), 350–358.

Hajli, N., Sims, J., Zadeh, A. H. and Richard, M. O. (2017). A social commerce investigation of the role of trust in a social networking site on purchase intentions. *Journal of Business Research*, *71*(February), pp. 133-141.

Huang, Z. and Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, *12*(4), pp. 246-259.

Huang, R., Kim, H. J. and Kim, J. (2013). Social capital in qq China: Impacts on virtual engagement of information seeking interaction sharing, knowledge creating, and purchasing intention. *Journal of Marketing Management, 29*(3/4), 292–316.

Kim, S. and Park, H. (2013). Effects of various characteristics of social commerce (S-commerce) on consumers' trust and trust performance. *International Journal of Information Management*, *33*(2), pp. 318-332.

Lee, C. H. and Ha, B, C. (2017). The impact of buyer-supplier relationships' social capital on bi-directional information sharing in the supply chain. *Journal of Business & Industrial Marketing, 33*(3), 325–336.

Lefebvre, V. M., Sorenson, D., Henchion, M. and Gellynck, X. (2016). Social capital and knowledge sharing performance of learning networks. *International Journal of Information Management*, *36*(4), 570–579.

Leung, W., Shi, S. and Chow, W. (2019). Impacts of user interactions on trust development in C2C social commerce. *Internet Research*, *30*(1), pp. 335-356.

Liang, T. P. and Turban, E. (2011). Introduction to the special issue, social commerce: A research framework for social commerce. *International Journal of Electronic Commerce*, *16*(2), pp. 5-14.

Lin, N. (2017). Building a network theory of social capital. In Social capital. pp. 3–28. Routledge.

Lin, X., Wang, X. and Hajli, N. (2019). Building E-commerce satisfaction and boosting sales: The role of social commerce trust and its antecedents. *International Journal of Electronic Commerce*, *23* (3), pp. 328-363.

Liu, L., Cheung, C. K. K. and Lee, M. K. O. (2016). An empirical investigation of information sharing behavior on social commerce sites. *International Journal of Information Management*, *36*(5), pp. 686-699.

Lu, Y. and Yang, D. (2011). Information exchange in virtual communities under extreme disaster conditions. *Decision Support Systems*, *50*(2), 529–538.

Mikalef, P., Sharma, K., Pappas, I. O. and Giannakos, M. (2020). Seeking Information on Social Commerce: An Examination of the Impact of User- and Marketer-generated Content Through an Eye-tracking Study, *Information Systems Frontiers*, June, pp. 1-14.

Moraes, C., Michaelidou, N., & Meneses, R. W. (2014). The use of Facebook to promote drinking among young consumers. *Journal of Marketing Management*, *30*(13/14), 1377–1401.

Nahapiet, J. and Ghoshal, S. (1998). Social capital, intelectual capital, and the organizational advantage. *Academic of Management Review*, *23*(2), 242–266.

Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *Political Science and Politics*, 28, 664–683

Tajvidi, M., Richard, M. O., Wang, Y. C. and Hajli, N. (2018). Brand co-creation through social commerce information sharing: The role of social media. *Journal of Business Research*, June, pp. 1-11.

Tsai, W. and Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *The Academy of Management Journal*, *41*(4), 464–476.