

Understanding online community participation behavior and perceived benefits: a social exchange theory perspective

Online
community
participation
behavior

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Abstract

Purpose – Online communities (OCs) are the popular social environments in which people interact by sharing resources such as information, advice and thoughts on their mutual interests. Existing research lacks an explanation of the reasons of participation behavior in OCs and how such participation behavior provides members with perceived benefits. This study aims to observe how social exchange theory constructs (perceived members' support and exchange ideology) affect online community participation behavior (OCPB), and moderated by exchange ideology (EI) and perceived ties, which in turn brings perceived benefits to its participants.

Design/methodology/approach – A survey method was followed to collect data, and structural equation modeling is used with 305 valid samples.

Findings – The results highlight the significant effects of perceived members' support on OCPB. Participation behavior in OCs has critical effect on perceived benefits. The results also identify the moderating effects of EI and perceived tie, where perceived tie was insignificant.

Originality/value – The findings from this study bridge the literature gaps in the context of OCPB by demonstrating how practitioners and OC managers can enhance perceived members' support, which result in OCPB, and thus provide the OC users with several perceived benefits.

Keywords Perceived benefits, Social exchange theory (SET), Exchange ideology (EI), Online community participation behavior (OCPB), Perceived members' support, Perceived ties

Paper type Research paper

1. Introduction

As the perception of the value of information or knowledge exchange increases, participation in online communities (OCs) is gradually becoming an attractive and integral part of internet users' lives, serving to accomplish their desire to cooperate with and serve



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others. These communities take many forms, from websites that provide the means to discuss topics or special interests to groups of people who communicate using instant messaging tools (Bishop, 2003). OC members can easily share their interests, experiences and interact with each other, and such participation behavior is vital for the proliferation of virtual community.

Despite the prominence of such participation behavior in OCs, it appears that no research has been reported on what exactly online community participation behavior (OCPB) means and what are the antecedents of OCPB in general OC context (Zhou, 2011). Researchers observed the participation behavior in several ways, such as online knowledge sharing communities (Ray *et al.*, 2014), social media (Zhang, 2015), online travel communities (Wang and Fesenmaier, 2004), online innovation communities (Zhang *et al.*, 2013), business-to-business e-commerce (Casaló *et al.*, 2007) and customer-to-customer OC (Sun *et al.*, 2014). However, extant literature studies disclose that there is still lack on what may impact OCPB in general OCs. Considering the growing importance of general OCs for both researchers and practitioners, this study aims to bridge this research gap.

Drawing upon social exchange theory (SET), this study developed and validated a research model that provides better understanding of the factors, which influence OCPB in general OCs. The existence of OC is often caused by people who share similar goals, beliefs or values, and these commonalities form the basis of an agreement to create and support a virtual community existence (Figallo, 1998). Bock *et al.* (2005) believed that such sharing can be considered as a social exchange. People who share ideas with others are likely to expect others to do the same, leading reciprocity as an inevitable construct in OC participation. In addition, exchange ideology (EI); is a pre-existing general belief system that the individuals bring to the exchange relationship with the entire community or organization (Sinclair and Tetrick, 1995), and perceived ties; is the amalgamation of the amount of time, the intimacy, and emotional intensity and the mutual services (Granovetter, 1973), both are the important variables in the context of social interactions (Witt, 1991) and OCPB (Lin, 2010). EI also has moderating effect in the relationship between reciprocity and knowledge sharing in OCs (Zhang *et al.*, 2009). Therefore, this study assessed EI and perceived ties as critical moderators in OCPB.

Nowadays, OCs are committed to achieve their business goals, and as a result, many of them have failed to understand how to satisfy members' individual and social needs (Kuo and Feng, 2013). The recognition and loyalty of members to an OC largely depends on whether or not the community can meet their needs. Preceding studies on OCs focused mainly on the benefits of different OCs from a brand community, travel community and business perspective (Wang and Fesenmaier, 2004; Dholakia *et al.*, 2004). Particularly, what benefits members can gain from participation behavior in a general OC is yet a neglected topic. Therefore, this study seeks to fill the aforementioned research gaps and offers several practical guidelines which can aid community providers to improve and sustain successful communities. This study advances aiming to satisfy the following questions. First, what are the reasons of stimulating individuals to create participation behavior in OCs? Second, do EI and perceived tie moderate the relationship between perceived members' support and OCPB? Finally, what are the benefits members can gain from participating in OCs?

2. Theoretical background and hypotheses development

SET is one of the most influential theories that have been successfully used to investigate the participation behavior phenomenon in various forms of OCs, as participation in OCs has been recognized as social exchange (Gharib *et al.*, 2017). This theory defines how social interactions are determined by the benefits attained from service exchange. For our study

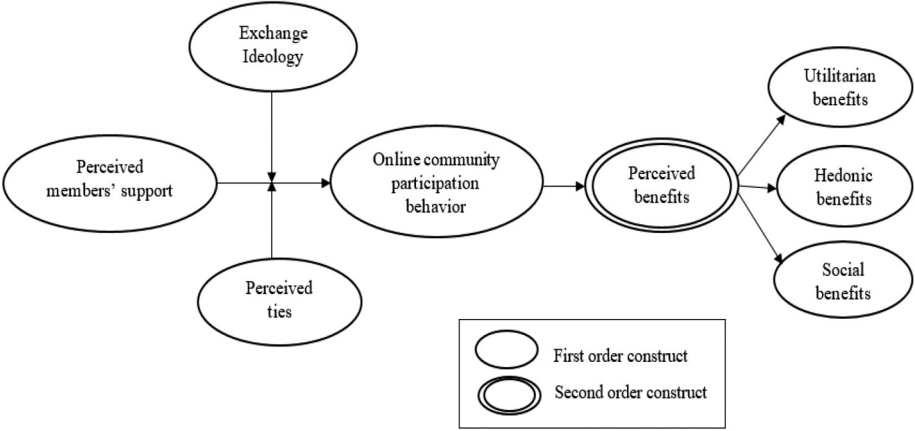
purpose, we have selected theory of social exchange as it can provide a proper theoretical lens for understanding the members' participation behavior in OCs compared to other theories (Gharib *et al.*, 2017). SET posits the interaction of people with others based on a self-interested assessment of the costs and benefits of such interactions (Blau, 1964). People search for maximizing their benefits and minimizing their costs when exchanging resources with others. The theory regards an OC as a place for the exchange of resources (e.g. information and knowledge) between its participants (e.g. individuals or groups). The theory suggests that the participants of OCs use a cost–benefit approach in the interaction. From that perspective, in a general OC, a member may decide to assist other members (e.g. by responding to their messages posted) if they have already received help (e.g. received answer to their posted messages) in the past or expect to receive help later. For the contributor, the time consumed replying to other people's messages may be considered as cost and the responses received (i.e. advice received) may be considered as benefits. Hence, reciprocity is a crucial factor to participation behavior in general OC context.

Moreover, SET proposed that individual exchange orientation is an influential factor in social exchange relationship. Among several variables assessing individual exchange orientation, EI is considered as an essential moderator. As a result, this study considered EI as moderator. In the study of Lin (2010), people with EI can be sensitive and disclose their participation behavior in OCs only when mutual benefits are achieved between them and their community, implying the important impact of EI on OC participation. Besides, this study also assessed perceived ties as a critical moderator, as ties among members impact during OCPB. In this regard, the study results of Chu and Kim (2011) indicated that tie strength, which is measured by the overall importance and closeness of all contacts on SNS users' friends lists, is positively related with SNS users' participation behavior, such as opinion seeking and opinion passing. Similarly, Shan and King (2015) mentioned that individuals with strong perceived ties tend to interact and exchange more information frequently as compared to those in weak perceived tie relationship. Thus, it seems that people would generate more OCPB to whom they have frequent interactions than that of others with less communication. Numerous studies have mentioned that OCPB brings several perceived benefits to the participants from various OC perspective (Jin *et al.*, 2010; Kuo and Feng, 2013). The study of Jin *et al.* (2010) postulates that active OC participation can accrue two types of perceived benefits: social benefits and functional benefits. On the other hand, the study of Kuo and Feng (2013) mentioned learning, social, self-esteem and hedonic benefits as perceived benefits of online brand community commitment.

On the basis of SET, this study proposed a research model which is shown in Figure 1. Perceived members' support has influence on OCPB, and the relationship is moderated by EI and perceived ties. Furthermore, participation behavior in OCs can provide several perceived benefits such as utilitarian, hedonic and social benefits.

SET suggests that OCPB depends on perceived members' support. Gharib *et al.* (2017) mentioned that generalized reciprocity has a significant positive effect on OCPB. Furthermore, Casalo *et al.* (2013) demonstrated that perceived reciprocity positively contributes to increasing individual participation in the online travel communities, as other members provide valuable and prompt answers to individuals' posts, messages and questions. Similarly, Ray *et al.* (2014) stated that reciprocity promotes the intent to knowledge contribution in OCs. According to SET (Blue, 1964), individual will exert reciprocity toward the area or source from which they received benefits. Similarly, OC members who perceive that participation in the community is providing valuable information and trying to build a strong relationship with them will reciprocate such efforts by forming highly positive attitudes toward the community and showing positive behaviors

Figure 1.
The conceptual
framework



for the community (Ladd and Henry, 2000). As a result, this study considers reciprocity as perceived members' support, and the following hypothesis is proposed:

H1. There is a positive relationship between perceived members' support and OCPB.

EI is considered as a dispositional orientation which refers to the association between what individuals get from a community and what they provide the community in return (Witt and Wilson, 1990). In perspective of OCPB, individuals having high EI will reveal their participation behavior only if they gain mutual advantages between themselves and their community (Lin, 2010), which implies the important influence of the EI between perceived members' support and OCPB. Even though there is no empirical confirmation in preceding research regarding the moderating effect of EI between perceived members' support and OCPB, the potential effect should be examined in this study, as the increase in work effort and the positive attitudes resulting from increased effort-outcome expectancy will depend heavily on an EI that promotes trade of work efforts for material and symbolic benefits (Eisenberger *et al.*, 1986). Therefore, we propose the following hypothesis:

H2. The relationship between perceived members' support and OCPB is positively moderated by EI.

Perceived tie denotes the strength of interpersonal relationships in the aspects of intimacy, closeness and support, with a deliberate investment in the social relationships and camaraderie with other members (Granovetter, 1973). Phua *et al.* (2017) noted that tie strength has significant moderating effect in the OC participation context. A person who has frequent communication and intimacy with other members will reciprocate more support than others to whom with little or no ties (Granovetter, 1973). In OC perspective, when a member has spent lots of time with other members and has much communication by solving problems or answering any queries, he/she will expect more from those persons to whom he/she supports and has more ties. Based on this, the following hypothesis is proposed:

H3. The relationship between perceived members' support and OCPB is positively moderated by perceived ties.

In OC contexts, by increasing the intrinsic benefits [i.e. self-esteem and social benefits, utilitarian benefits and hedonic benefits (i.e. fun)], the community participation should increase as the community acts as a means of fulfillment and serves personal and associative needs and is a place to enjoy. Adopting the above logic, this study postulates that once OC members have active and frequent participation in an OC, it will increase the chances for the members to get more utilitarian, hedonic and social interaction with other members. Hedonic benefits relate to the multiple pleasures that members of the OC find and motivate to spend more time on this activity (Dholakia *et al.*, 2004; Nambisan and Baron, 2009).

Blue (1964) mentioned that through the activities of social exchange, one can obtain intangible benefits comprising friendships, concern and respect from others. Previous studies also found participation in OCs generates social benefits and has significant positive impact on participating behavior (Kuo and Feng, 2013; Xu and Li, 2015). The study of Jin *et al.* (2010) stated that a participant who wants social support and friendship visits an OC more often than one who expects less social support and friendship, and found a significant positive relationship between OC participation and perceived social benefits. Members participate in OCs not only to address social and hedonic benefits but also to achieve utilitarian benefits such as rewards, reputation or status and self-development (Xu and Li, 2015). As a result, this study proposes the following hypothesis:

- H4. There is a positive relationship between participation behavior in OCs and perceived benefits.

3. Research methodology

3.1 Instrument development

All of the measurement items were adopted from preceding literature to confirm the content validity of the scales (Straub *et al.*, 2004). Items measuring perceived members' support were adopted from Gharib *et al.* (2017). Items measuring EI were taken from Ladd and Henry (2000). Items measuring perceived ties were adopted from Phua *et al.* (2017). Items of OCPB were adopted from Gharib *et al.* (2017). Items of hedonic and social benefits were adopted from Nambisan and Baron (2009) and Dholakia *et al.* (2004). The scale items for utilitarian benefits were adopted from Xu and Li (2015). Measurement instruments are included in Appendix 1.

The questionnaire of the study was developed in English and experts' opinion were taken to evaluate the suitability of the format and wording of items. Then, based on their remarks, we revised some items to ensure better understandability and clarity. A total of 40 graduate students, who have rich OC user experience, were used as the sample for the pilot study. The results of the pilot study exhibited that Cronbach's alpha value of each construct was 0.80, which exceeded the standard value of 0.70 suggested by Hair *et al.* (2010). All the items of the questionnaire were measured using a seven-point Likert scale, where 1 represents "strongly disagree" and 7 represents "strongly agree."

3.2 Data collection

Data were collected from Bangladesh through online and manual survey. Respondents were asked to fill the questionnaire on the basis of their favorite OC usage experience. Initially, 360 complete samples were collected; after data cleaning (eliminating responses with same and missing values, duplicates, outliers, and normality test), a total of 305 individuals were valid. With regard to demographic distribution, 47% were male and 43% were female (see Table 1), 1.6% of the respondents were below 20 years of age, 62.3% were between 20 and

Table 1.
Demographic profile
of participants
(sample size = 305)

Measure	Items	Frequency	(%)
Gender	Male	174	57
	Female	131	43
Age group	Below 20	5	1.6
	20–25	190	62.3
	26–30	94	30.8
	31–35	12	3.9
	36–40	2	0.7
	Above 40	2	0.7
Educational level	High school	2	0.7
	College	5	1.6
	Undergraduate	126	41.3
	Graduate	163	53.4
	PhD or more	9	3
Employment	Student	225	76.8
	Govt. employee	19	6.2
	Private employee	14	4.6
	Business	17	5.6
	Others	30	9.8
Online community name	School and campus (student) community	92	30.2
	Educational community	80	26.2
	Business community	17	5.6
	Health community	14	4.6
	Games and sports	23	7.5
	Brand and electronic products	29	9.5
	Movies and entertainment	35	11.5
	Others	15	4.9
Tenure of participation	Less than 6 months	11	3.6
	6 months–1 year	63	20.7
	1–3 years	105	34.5
	3–5 years	68	22.3
	More than 5 years	58	19

Source: Survey data

25 years and 30.8% respondents were 26–30 years old. Around half of the participants (53.4%) were graduated and most of the respondents are students (76.8%). With respect to the usage experience, 3.6%, 20.7%, 34.5%, 22.3% and 19% had used the community for less than 6 months, 6 months–1 year, 1–3 years, 3–5 years and over 5 years, respectively. The top five types of OCs are school and campus students’ community 30.2%, educational community 26.2%, movies and entertainment 11.5%, brand and electronic products 9.5%, and games and sports 7.5%.

3.3 Evaluation of common method bias

In this study, we conducted common method variance (CMV) of the collected data to confirm the validity. Problems with CMV could be the cause of either under- or over-estimation of the antecedents between explanatory and regressive variables. This study conducted Harman’s single-factor test for the measurement of CMV problems (Podsakoff *et al.*, 2003). CMV issues can arouse if all indicators are fell in a single construct, or if the first construct explained the majority of the variance in the data. However, the test results showed that 25.24% of the

variance was explained by the first factor, and a number of factors exhibited eigenvalues more than one, representing the eradication of any CMV issues from the data.

4. Empirical results

4.1 Measurement model assessment

Following a two-step approach suggested by [Anderson and Gerbing \(1988\)](#), in the first step, we assessed the measurement model for reliability and validity testing. Then, the second-step examined the structural model to test the research hypotheses and fitness indices. First, we conducted a confirmatory factor analysis to assess the validity. As represented in [Table 2](#), all measurement items strongly replicated their convergent validity. Results confirmed that the standardized factor loadings are more than or equal to 0.70 (with few exceptions), which shows the recommended critical value ([Carmines and Zeller, 1979](#)). Additionally, AVE values ranged from 0.513 to 0.600, which confirm the recommended critical value of 0.50 ([Hair et al., 2010](#)). Construct reliability can be measured by CR and Cronbach's alpha. The values of CR range from 0.756 to 0.817, which are higher than the benchmark value of 0.70. Cronbach's alpha values range from 0.735 to 0.816, which support the threshold value of 0.70. These results supported the reliability of the measurement model ([Hair et al., 2010](#)).

Items	Stand. loadings	<i>t</i> -value	Composite reliability (CR)	Average variance extracted (AVE)	Cronbach's alpha (α)
Perceived members' support			0.786	0.551	0.783
PMS1	0.753				
PMS2	0.765	10.49*			
PMS3	0.708	10.25*			
Exchange ideology			0.817	0.600	0.812
EI1	0.764	11.95*			
EI2	0.860				
EI3	0.691	11.24*			
Perceived ties			0.768	0.527	0.760
PT1	0.814				
PT2	0.699	10.46*			
PT3	0.656	9.99*			
Online community participation behavior			0.782	0.546	0.778
OCPB1	0.689	10.90*			
OCPB2	0.817				
OCPB3	0.705	11.09*			
<i>Perceived benefits</i>					
Utilitarian benefits			0.779	0.551	0.727
UB1	0.924				
UB2	0.551	5.77*			
Social benefits			0.761	0.519	0.772
SB1	0.626	7.87*			
SB2	0.821				
Hedonic benefits			0.799	0.572	0.721
HB1	0.817				
HB2	0.746	9.65*			

Note: * $p < 0.001$

Table 2.
Standardized
estimates and
reliability statistics

To measure the discriminant validity, we compare the square root of AVE and the factor correlation coefficients. Table 3 presents discriminant validity of the statistics. Discriminant validity explains that the measurement model is not a reflection of other variables that should not be related. Results showed that the square roots of AVE for all constructs in the diagonal row are greater than correlations between the constructs. Thus, it can be confirmed that the measurement model has accepted discriminant validity.

Furthermore, in this study, perceived benefits are modeled as second-order reflective–reflective approach construct. Table 4 shows the factor loadings of its first-order constructs. All the values were significant at 0.001 level, which verify the proposed relationships between first- and second-order constructs.

To assess the overall fit of the measurement and second-order model, the following analyses were included: Chi-square and degrees of freedom (χ^2/df), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), root mean square error of approximation (RMSEA), incremental fit index (IFI) and Tucker–Lewis index (TLI). χ^2/df , CFI, GFI, adjusted GFI, NFI, TLI, IFI and RMSEA, where GFI, AGFI, CFI, NFI, TLI and IFI are greater than or equal to 0.90 (Hair *et al.*, 2010), χ^2/df should be less than 3 (Hair *et al.*, 2010), and RMSEA is less than or equal to 0.08 (Hair *et al.*, 2010). As shown in Table 5, for measurement and second-order model, $\chi^2 = 147.415$, $\text{df} = 114$, $p = 0.019$ and $\chi^2 = 12.938$, $\text{df} = 114$, $p = 0.044$, respectively, and all of the estimates satisfied their respective threshold value, representing a good model fit as a whole.

4.2 Structural model assessment

The quality of association among constructs was assessed by inspecting their respective standardized path coefficients (β values) and significance values (p values). Table 6 shows that OCPB is significantly predicted by perceived members’ support ($\beta = 0.328$, $p < 0.001$), which supports the *H1*. OCPB also has significant positive impacts on use of perceived

Constructs	Mean	SD	HB	PMS	PT	EI	OCPB	UB	SB
HB	5.559	1.026	<i>0.782</i>						
PMS	5.766	0.882	0.328	<i>0.742</i>					
PT	5.571	1.169	0.445	0.197	<i>0.726</i>				
EI	4.236	1.541	−0.251	−0.087	−0.202	<i>0.775</i>			
OCPB	5.694	1.048	0.446	0.304	0.529	−0.114	<i>0.739</i>		
UB	5.534	1.001	0.395	0.191	0.386	−0.222	0.454	<i>0.761</i>	
SB	5.782	1.001	0.614	0.249	0.450	−0.168	0.507	0.448	<i>0.730</i>

Table 3. Discriminant validity **Notes:** Italic diagonal values are square roots of AVEs and off-diagonal elements are the correlations between constructs

Second-order construct	First-order constructs	Factor loadings
Perceived benefits	Utilitarian benefits	0.578***
	Hedonic benefits	0.814***
	Social benefits	0.757***

Table 4. Assessment of a second-order reflective construct **Note:** *** $p < 0.001$

benefits ($\beta = 0.673, p < 0.001$), which supports *H4*. The structural model explained 11% of the variance in OCPB, and 46% in the variance of perceived benefits. Table 5 shows the overall model fit indices with a good structural model fit ($\chi^2 = 78.292, df = 49, CMIN/df = 1.598, p = 0.005, CFI = 0.973, GFI = 0.958, AGFI = 0.932, NFI = 0.932, IFI = 0.973, TLI = 0.964$ and $RMSEA = 0.044$).

4.3 Moderating effects

Furthermore, this study examines the moderating effects of EI and perceived ties on the relationship between perceived members' support and OCPB. The study performs interaction moderation in AMOS. One of the main reasons of using interaction moderation in AMOS instead of a simple regression and sum index is the likelihood to control for different types of random and nonrandom measurement errors (Bollen, 1989). Table 7 presents the moderation results, which show that EI ($\beta = 0.11, p < 0.05$) has significant moderating effect in the relationship between perceived members' support and OCPB, supporting *H2*. However, the second moderating variable, perceived ties ($\beta = 0.046, p > 0.05$), does not show significant effect, rejecting *H3*. In addition, the interaction moderation effect of EI is plotted in Figure A1 (see Appendix 2). Figure A1 shows that when perceived members' support is low, OCPB is lower in valence to high EI than to low EI. Conversely, when perceived members' support is high, the OCPB generated to high EI is more favorable than that for low EI, which additionally explains the direction and significance of moderating variable.

5. Discussion

This study attempts to understand the forces that encourage the participation behavior of users in the general OC and to discover the perceived benefits derived from participation behavior. The results of the study find that perceived members' support is positively associated with OCPB, which is consistent with Gharib *et al.* (2017) and Ray *et al.* (2014), who noted that perceived members' support could still stimulate users' attitude toward

Fit indices	Chi ² /df	GFI	AGFI	CFI	NFI	TLI	IFI	RMSEA
Recommended value	<3	≥0.90	≥0.90	≥0.90	≥0.90	≥0.90	≥0.90	≤0.08
Measurement model	1.293	0.948	0.923	0.981	0.922	0.974	0.981	0.031
Second-order model	2.156	0.986	0.952	0.985	0.952	0.973	0.985	0.062

Source: AMOS output

Table 5.
Model fit indices

Hypothesized paths	Estimate	p-value
Perceived members' support → OCPB	0.328	***
OCPB → Perceived benefit	0.677	***
Variance explained:	<i>R</i> ²	
OCPB	11%	
Perceived benefits	46%	

Note: ****p* < 0.001

Table 6.
Results of
hypotheses

Table 7.
Results of
moderation effects

Hypothesized paths	Estimate	p-Value
Perceived members' support → OCPB	0.210	***
Perceived ties → OCPB	0.375	***
EI → Online community participation behavior	0.060	n.s.
Perceived members' support × EI → OCPB	0.110	**
Perceived members' support × Perceived ties → OCPB	0.046	n.s.
OCPB → Perceived benefits	0.469	***
Variance explained:	<i>R</i> ²	
OCPB	19%	
Perceived benefits	22%	

Notes: ****p* < 0.001; ***p* < 0.05, n.s., not significant

OCPB. The study confirms the findings that people who believe in the mutual benefits of the OC are more willing to participate in OCs. More specifically, if OC members get prompt and valuable response from other members, value and frequency in online environments and satisfy members' needs, this will stimulate participation behavior in the OC.

Contrary to our anticipation and the conclusions drawn from past research of [Shan and King \(2015\)](#) and [Phua et al. \(2017\)](#), this study shows the insignificant moderating effect of perceived ties between perceived members' support and OCPB. This might be the cause of less attentiveness of the respondents at the time of answering. Another explanation could be that OCs allow users to participate and provide information easily and quickly without thinking. As a result, perceived tie has no significant influence between community members' support and OCPB. Moreover, when members reciprocate and participate through providing valuable comments and suggestions in OCs, they tend to share their experiences with contacts they have, and add to a great number of acquaintances without simply sharing the information with close friends. However, the construct is still perceived as vital for the accomplishment of OCPB because members who have recurrent communications, intimacy, breadth of topics and mutual confiding are more likely to reciprocate and expect help and suggestions from them and this creates participation behavior in OCs. Furthermore, with diverse levels of social relationship intensity among OC members, how much a member feels close and important to the source of information can have a considerable influence on the participation behavior of that member to search and express opinions on that community.

Moreover, the results confirm that EI was found to be significant and has moderating effect in the relationship between perceived members' support and OCPB, which is consistent with the findings of [Zhang et al. \(2009\)](#), demonstrating that members who believe that reciprocal relationship was essential were more likely to give back to the community and create such participation behavior. The persons who have low EI will reciprocate their efforts toward the area in which they get little or no benefits. Some people give back to other members without regard to what they receive from them, whereas others may be sensitive with the EI and give in return to other members no more than what they do for them. Therefore, this is clear that the respondents have high EI.

The results reveal that perceived benefits such as utilitarian, social and hedonic benefits all are positively and significantly related to OCPB, which is similar to the study of [Kuo and Feng \(2013\)](#). This finding suggests that members who take part in the community will perceive the above benefits from participation behavior in OCs that represents an intention to sustain a long-term participation behavior with the community. If members participate

and respond to others' posts, share, comment or provide suggestions to the members, this creates fun and enjoyment, because OC members want to have amusement and the participation behavior offers them joy and fulfillment. On the other hand, perceived social benefits can be obtained through OCPB, as in general types of OCs, users interact with other unknown and sometimes known users. For this reason, new relationships have been created to strengthen the existing relationships. Moreover, utilitarian benefits can also be achieved through participation behavior because of individual's belief about reputation and status enhancement results from OCPB.

6. Implications

6.1 Theoretical implications

This research is one of the limited studies that have examined OCPB in the context of general OC. As a result, it has advanced the theoretical development in the field and added to the prevailing literature through further enhancing the understanding of the key factors affecting OCPB and showed how perceived benefits are obtained through such participation behavior in general OCs. This study also makes a number of noteworthy contributions to OC research.

First, it contributes to the OC participation literature by theorizing the OCPB phenomenon in general OCs. A validated theoretical framework on the factors influencing members' participation behavior in general OCs is suggested. As noted earlier, multiple studies have observed the antecedents of participation in several OC types (Kuo and Feng, 2013; Ray *et al.*, 2014; Gharib *et al.*, 2017), but few have paid attention on general OCs, which are distinct from other OC categories because the members are mostly related to life or interests categories. Therefore, the model shows how SET-related factors affect OCPB, as most of the existing research focused on the impacts of user motivations (e.g. perceived usefulness, trust and commitment) to OC user participation behavior, and rarely considered the effects of social exchange on user behavior. Thus, this research provides valuable insights to fulfill this gap. The results exhibit the suitability and robustness of our recommended model, which can provide a basis and guidance for upcoming studies by emphasizing the necessity of social theoretical approaches while proposing the model factors for further consideration.

Second, this study provides an insight into OC research by showing the moderating effect of EI between perceived members' support and OCPB. Prior studies mainly focused on moderating effects of EI in perspective of different work groups and co-workers in an organization (Lin, 2010; Ladd and Henry, 2000). To the best of the authors' knowledge, this is the first study where the moderating effect of EI in the context of OCPB in general perspective is shown.

Third, our findings contribute the existing literature by presenting the moderating effect of perceived ties between perceived members' support and OCPB in general OC context. Our attempt is to explain perceived tie variable in perspective of participation behavior in OCs, which is comparatively new in OC research area. Preceding studies explained perceived ties from different perspectives, such as knowledge sharing in OCs (Tseng and Kuo, 2014), electronic word-of-mouth behavior (Chu and Kim, 2011) and online brand community commitment (Phua *et al.*, 2017). More specifically, this study explains that if OC members have frequent communications, interactions and intimacy, they will reciprocate their effort to that area and will expect such reciprocal behavior from them in OCPB context.

Fourth, this study extends previous literature by demonstrating that participation behavior in general OCs can provide several perceived benefits such as utilitarian, hedonic and social benefits to the participants. Many prior studies have empirically investigated

perceived benefits, but they were reluctant to design and find perceived benefits as antecedents of OC participation and commitment (Nambisan and Baron, 2009; Dholakia *et al.*, 2004; Jin *et al.*, 2010; Kuo and Feng, 2013) from different OC contexts. Our research thus enriches the previous findings by providing a new direction regarding the perceived benefits phenomenon on participation behavior in general OCs.

6.2 Managerial implications

The outcomes of our research could provide valuable practical guidelines to assist OC practitioners and managers. In our study, the OC participants who have high beliefs in perceived members' support are more likely to participate in general OCs. Hence, they were more willing to provide support and help to other members if they thought they would be helped in the future. The members were willing to return the value obtained from the community to other members, which was considered crucial for a continual affective relationship. Thus, it is essential that OC leaders and managers should develop strategies to improve members' perceptions of the benefits they derive from the community. Therefore, we suggest that community managers must encourage mutual participation by regularly reminding members of the help they have received from other members and by continually inspiring them to offer help and support to other members when in need. Developing such reciprocal awareness among community members can therefore be an essential step that not only strengthens OCPB in the community but also confirms a long-term relationship among members.

Furthermore, OC service providers must strive to elicit the perceived hedonic benefits to users by creating a pleasant atmosphere for the OCPB process. Developing a feedback mechanism is one way to users' participation behavior. Giving recipients the opportunity to thank people who share and help with an "acknowledgement" button is a simple way to allow users to easily experience the feelings of helping others. However, some would say that the OC is not a true community. The interaction among members is not the similar to real life, particularly for the general type of OC that lacks common goals and practices among members. To strengthen links between members, service providers could organize periodical physical meetings. Users can meet and develop their personal relationships with others who share common interests. The face-to-face meeting can enhance the reality of the OC. It is essential to enable users to help others and to offer users the opportunity to expand their personal relationships to provide hedonic feeling through OCPB.

Moreover, the service providers should specify utilitarian benefits by improving honor and reward systems. The study found that OCPB can provide perceived utilitarian benefits and found significant positive relationships between them. Service providers are recommended to create a hierarchy mechanism of membership in the community. Members could access the higher levels of a ranking system or be granted expert status after bringing valuable knowledge recognized by the recipients. The hierarchical participation mechanism can be used as an honor system and a benefit mechanism gained through participation behavior.

Furthermore, the results of the study confirm that OCPB could offer social benefits such as maintaining interpersonal connectivity and social enhancement to its members. Because it is recommended that many participants in the general OCs wish to participate in social interactions together, and as a group, the objective of managers can be defined in terms of matching the preferences of group members to interact together.

7. Limitations and future research directions

This study has found some limitations. First, sample bias might have occurred because of the fact that the participants were randomly selected. All participants were active participants in OCs. People who are not interested in sharing knowledge or have already left the OC may not have participated in the study. However, active participants may be better suited to the sample because the concentration of this article is on the OCPB. Future research could be undertaken to examine OCPB from the perspective of non-contributors or ex-contributors. On the other hand, this study examined OCPB from the perspective of the contributor. To get a holistic view of the OCPB, the different perspectives of contributors and collectors should be examined. Future research could be directed to examine the diverse roles of both types of participants.

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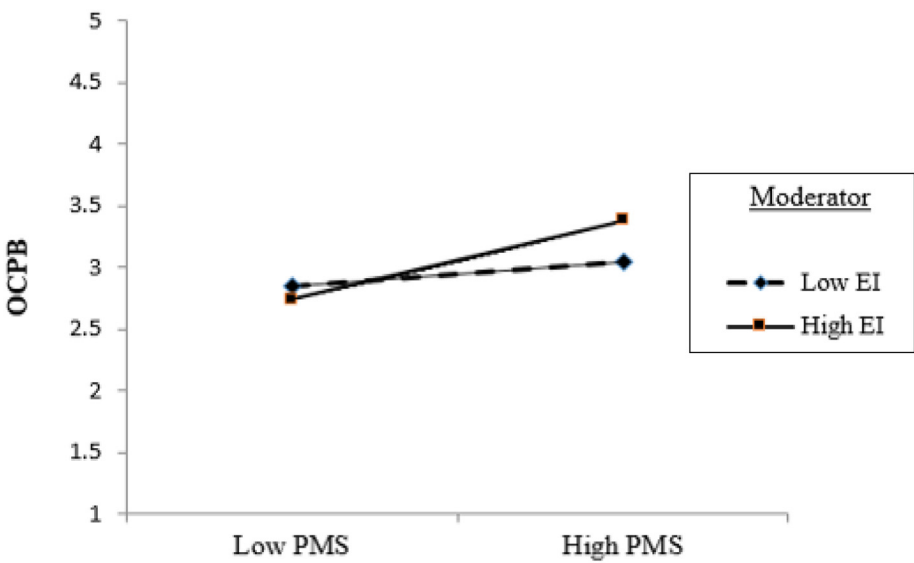
Constructs	Measures	Sources
Perceived members' support	<ol style="list-style-type: none"> 1. When I reply to other members' questions, I believe that I will get an answer for giving an answer 2. When I help others through the SNS community, I expect somebody to respond when I am in need 3. When I respond to other members' questions, I expect that my queries to be answered in future 	Gharib <i>et al.</i> (2017)
Exchange ideology	<ol style="list-style-type: none"> 1. I should not care about the community members if they have no care for me^R 2. How much I help other members should not depend on how they treat me^R 3. My effort to assist others should not depend on how much others assist me^R 	Ladd and Henry (2000)
Perceived tie	<ol style="list-style-type: none"> 1. I engage in a high level of interaction with other SNS community members 2. I spend considerable time interacting with other SNS community members 3. I have frequent communication with other SNS community members 	Phua <i>et al.</i> (2017)
Online community participation behavior	<ol style="list-style-type: none"> 1. I regularly login to the SNS community and read posted discussions 2. I always keep my profile up-to-date on the SNS community 3. I post relevant and useful information to the SNS community that engenders discussions 	Gharib <i>et al.</i> (2017)
<i>Perceived benefits</i>		
Hedonic benefits	<ol style="list-style-type: none"> 1. I feel pleased and relaxed in this community 2. I gain joy and happiness in this community 	Nambisan and Baron (2009)
Social benefit	<ol style="list-style-type: none"> 1. I can expand my social network through participation in this community 2. The community helps strengthen my connections with other members 	Dholakia <i>et al.</i> (2004)
Utilitarian benefits	<ol style="list-style-type: none"> 1. My participation in the community would create strong relationships with members who have common interests 2. Participation in the community would enhance cooperation by remaining members in the future 	Xu and Li (2015)

Notes: ^Rreverse coded

Table A1.
Measurement
instruments

Figure A1.
Plot of significant
moderator EI

Appendix 2



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