Encouraging Passive Members of Online Brand Communities to Generate eWOM Based on TAM and Social Capital Theory

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ABSTRACT Online brand communities have become a strong marketing tool for companies. However, passive members form the majority of these communities, and although it is recognized that passive members' electronic word-of-mouth (eWOM) has a powerful impact on success and prosperity of online brand communities, little research has been devoted so far to the factors influencing their eWOM. To improve our understanding of how to encourage passive members of online brand communities to generate eWOM, this study incorporates the technology acceptance model (TAM) and social capital theory to examine the influence of the factors in the TAM (perceived ease-of-use and perceived usefulness) on the different types of eWOM behaviors (opinion seeking and passing), while looking at bonding and bridging social capital as mediating factors. An internet questionnaire survey, in which 600 passive users of an online brand community were recruited in China, was conducted to validate hypothetical model with structural equation modeling using AMOS 24. The findings confirm that bonding and bridging social capital have significant, positive, direct effects on passive users' opinion seeking and passing. Perceived usefulness and perceived ease-of-use are indirect positively related to opinion seeking and passing through the mediating roles of passive members' bonding and bridging social capital. Finally, we propose specific recommendations for online brand community operators and members.

INDEX TERMS Electronic word-of-mouth, technology acceptance model, social capital theory, online brand communities, passive members.

I. INTRODUCTION

An online brand community is "a specialized, non-geographically bound community based on a structured set of social relationships among followers of a brand" [1]. Online brand communities have become an attractive place for consumers to obtain valuable information from companies and other individuals [2]–[4]. Online brand communities provide opportunities for individuals to browse product-related information, share experiences, and read other consumers' reviews. There are numerous online brand communities with different themes that individuals can join to gain expertise related to a certain brand or keep in touch with different members [4], [5]. Previous research shows that online brand communities have powerful influences

on individuals' perceptions and behaviors, such as brand satisfaction [6]–[9]; brand trust, commitment, and engagement [3], [10], [11]; brand loyalty [9], [12], [13]; and repurchase intention [9], [14]. Many companies have recognized the importance of online brand communities in attracting and cultivating loyal customers. To improve their brand image, remain competitive, promote new products, understand the needs of their users in time, and increase customer loyalty and ongoing purchase intention, many companies have built online brand communities to maintain and strengthen the consumer–brand relationships [4], [15].

Online brand communities have great value in the development of a brand. However, previous research shows that about 68% of members leave online brand communities after they join them [3], [16]; of those that remain, only 1% of members become regular users and 90% are passive users who read discussions, reviews, and feedback, but rarely or never post

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a message themselves or participate in direct interactions with others [2], [17], [18]. If the community loses too many members and the community operators do not tap the potential value of passive members, its healthy and sustainable development will be blocked. Therefore, to build up a vibrant virtual community, operators should constantly attract new members, retain members, and motivate members, especially passive members, to participate on an ongoing basis.

Previous research has shown that passive members, as the majority of virtual brand community users, have significant value for the sustainability of online brand communities [4]. Although passive members rarely participate in interactions in the virtual community, they may continue to browse the information in the community and recommend this information and the community to others [2], [3], [9], [19]–[22]. Opinion seeking and passing are important factors of individuals' electronic word-of-mouth (eWOM) behavior. In other words, passive users may still generate eWOM behaviors. Existing studies have found that eWOM is an important form of brand equity for online brand communities and plays a crucial role in guaranteeing the survival of virtual communities in the long term [23]. eWOM has important resource value in terms of building credibility and shaping consumers' attitudes and behaviors [24]. The eWOM behaviors of passive users may not only enhance the loyalty and participation of passive members [3], [17] but also promote the widespread dissemination of information in the virtual community, thereby attracting new members on an ongoing basis [4] and promoting the prosperity and development of the virtual community. Community managers should actively encourage the passive members' eWOM behavior to promote the success and prosperity of the community.

Social capital is the resource produced among people through relationships or social networks [25]–[27]. This kind of resource can allow individuals to gain benefits or contribute their abilities [25], [28]. Existing studies have found that social capital is crucial to encouraging eWOM behaviors [20], [21], [29]–[32]. Individuals join a community due to similar interests or information needs. After a period of engaging in different types of interpersonal communication, they will accumulate different interpersonal relationships [20], [33], [34]: bonding relationships (i.e., the dense network or strong ties between acquaintances) and bridging relationships (i.e., the loose or weak ties between strangers). These relationships can help individuals accumulate bonding and bridging social capital.

Previous studies have also found that the factors in the technology acceptance model (TAM) not only promote the accumulation of social capital [4], [35]–[37], but may also stimulate individuals' eWOM behavior [38]–[43]. The TAM has been widely adopted in exploring and predicting individuals' continuing intentions and behaviors toward a system [44]. Passive users' continuous eWOM behavior is important for the success and prosperity of online brand communities and the company. Thus, in order to motivate continuous eWOM behavior by passive users, this study

integrates TAM with social capital theory to develop a new model for exploring the influencing factors of passive users' eWOM in terms of technical factors and sociability.

Compared with the existing studies, this article makes two main contributions. First, we distinguish between the different eWOM behaviors of passive members of online brand communities (opinion seeking and opinion passing) and compare the factors that affect them. Although limited research has been done on passive users' eWOM in online brand communities and the factors influencing it [2], [45], the few studies that have been conducted have taken eWOM behaviors of passive members as a whole or merely studied a certain kind of eWOM. The eWOM behavior of passive members includes opinion passing and opinion passing, which have different effects on the community and there are also influenced by different factors. Second, this article incorporates the TAM and social capital theory to encourage individuals to generate eWOM. Although previous studies have separately studied the effects of the factors in TAM [38]–[43] and social capital [20], [21], [29]–[32], [46], [47] on eWOM, and have also studied the different structural relationships between the factors in TAM and social capital, no research has been conducted on how the structural relationships between the factors in TAM and social capital influence eWOM.

After reviewing the literature and observing the eWOM of passive users, we realized that the factors in the TAM (perceived usefulness and ease-of-use) may affect passive users' eWOM behavior through bridging and bonding social capital. Therefore, in order to facilitate passive users to contribute eWOM continuously, we first investigated how bridging and bonding social capital affect passive users' eWOM, and assess and compare their influence. Second, we analyzed the relationship among the factors in the TAM and bridging and bonding social capital, and then discussed how perceived ease-of-use and perceived usefulness promote passive users to generate bridging and bonding social capital. Finally, we explored the relationship between the factors in the TAM and passive users' eWOM.

II. THEORETICAL BACKGROUND AND LITERATURE REVIEW

A. ELECTRONIC WORD-OF-MOUTH

Previous studies have defined eWOM as "the exchange of product or service evaluations among people who meet, talk, and text each other in the virtual world" [48]–[50]. Compared with traditional word-of-mouth, eWOM spreads faster and more widely and is more persistent and measurable [48]. In the network environment, eWOM is often evaluated by numerous individual customers and is always seen as more credible and reliable than offline equivalents. Previous research has found that eWOM positively affects individuals' perceptions and behaviors, such as attitude and loyalty toward brands and websites [51], purchase intention [52], the decision-making process [53], psychological well-being [19], and community promotion [54]. With the continuous development of internet technology, people spend more

time online, and eWOM has become a crucial source of information. Many brand companies treat eWOM as an important basis for organizational quality evaluation, management improvement, and marketing strategy formulation.

Yeh and Choi categorized eWOM into three dimensions: opinion seeking, opinion passing, and opinion giving [55]. Opinion giving refers to individuals responding to other members' problems or offering comments to the online community. Opinion passing refers to recommending the community or the information in the community to others who are not in the community and who are considered as needing the information. Opinion seeking refers to asking for information or advice from other members or searching for interesting topics in community members' conversations. Previous research found that community members can play the three roles of opinion seekers, opinion passers, and opinion givers simultaneously [3], [56]. Although passive members rarely communicate with other in the community and rarely actively contribute their opinions, they may often acquire information in the community through browsing and also recommend the information outside the group. Therefore, opinion seeking and opinion passing may be the most important word-of-mouth behaviors of passive members.

B. SOCIAL CAPITAL

Social capital has been widely adopted in many social science disciplines to study a variety of types of behaviors [57]. Due to the different focus of the research questions investigators have brought to this topic, there are multiple definitions of social capital. Researchers have found that Nahapiet and Ghoshal's research on social capital is very useful in exploring individuals' information behaviors [57]. To study people's eWOM behavior, we adopted Nahapiet and Ghoshal's definition of social capital as "the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" [26]. Social capital is formed through different types of interpersonal relationships, which can be divided into those involving weak ties and strong ties, respectively. According to different relationship strengths, social capital was divided into bridging and bonding social capital [58]. Members join the online brand community to obtain product information or solve problems. An online brand community can provide members who have similar feelings about the brand with opportunities to maintain their existing personal networks and establish new interpersonal relationships, thus allowing them to accumulate bridging and bonding social capital simultaneously.

Bonding social capital refers to stronger relationships, which represent tight-knit, deeply trusting, mutually dependent, emotionally close, and significant ties with like-minded people, including these people who often have similar backgrounds and overlapping information resources. The maintenance cost of stronger relationships may be high, as they require frequent interactions between members in groups or in private, thus consuming much time and attention.

Bonding social capital helps individuals to gain social and emotional assistance and scarce resources. In other words, bonding social capital reinforces the relationships among individuals as well as helping to access personal resources.

Bridging social capital refers to weak relationships, which include loose interpersonal relationships, such as casual acquaintances or complete strangers (people from different backgrounds can give important complementary non-overlapping information to each other). Weak relationships can be less costly to maintain and can broaden one's abilities or social resources, as what they lack in depth, they make up for in breadth. Bridging social capital is generated when individuals from different backgrounds make connections in an online brand community [20]. Bridging social capital provides individuals with the possibility of gaining exposure to new perspectives and more varied and useful resources.

C. TECHNOLOGY ACCEPTANCE MODEL (TAM)

Davis' TAM has been widely used in order to explore and predict individuals' acceptance and usage of a particular information technology [59]. Perceived usefulness and perceived ease-of-use are at the core of TAM. Previous studies have recognized the importance of perceived ease-of-use and perceived usefulness in influencing the adoption of an information technology [60]–[64]. Perceived usefulness is "the degree to which a person believes that using a particular system will enhance his/her job performance" [59]. Due to the continuous emergence of alternatives and new technologies, customers' expectations of technological systems are constantly rising, and they pay more and more attention to the usefulness of the system. Perceived ease-of-use refers to "the degree to which a person believes that using a particular system would be free of effort" [59]. The ease-of-use of information technology is very important to users, that can improve individuals' productivity, performance, and efficiency.

D. THE ROLE OF TAM AND SOCIAL CAPITAL IN eWOM

Research on the impact of the factors in TAM and social capital on individuals' eWOM is mainly divided into two categories. First, some scholars have examined the impacts of social capital on eWOM based on different social capital theories. (1) Some researchers have studied the effect of structural, relational and cognitive capital on eWOM. Chu and Kim confirmed that tie strength, trust, and homophily are significantly associated with users' overall eWOM behavior in social networking sites (SNSs) (opinion seeking, giving, and passing) [65]. Hossain *et al.* asserted that reciprocity, tie strength, and trust significantly and positively influence eWOM communication (opinion giving and passing) on Facebook [66]. Hansen and Lee indicated that tie strength, trust, and homophily may positively impact eWOM behaviors (opinion passing and giving) in Social Network Games [67]. Mahmood *et al.* found that tie strength, shared language, and trust have a positive impact on engagement in

eWOM on social media websites (opinion seeking, giving, and passing) in social media in Pakistan [68]. Wang *et al.* proposed that tie strength directly influences eWOM (opinion seeking, giving, and passing) on social networking sites [48]. (2) Some researchers have proved the effects of bonding and bridging social capital on eWOM. González-Soriano *et al.* confirmed that bonding and bridging social capital have a positive influence on the generation of eWOM (opinion seeking) on Facebook [69]. Levy and Gvili found that bonding social capital positively influences eWOM credibility [47]. Abou-Warda asserted that bonding and bridging social capital have a positive effect on online WOM (consumer attitude toward eWOM) in SNSs [29]. Gvili and Levy indicated that bonding and bridging social capital significantly affect consumer attitudes toward eWOM on social media [21]. Horng and Wu proposed that bridging and bonding social capital have a stronger influence on the giving and receiving intentions of social commerce on SNS [20]. Nam *et al.* confirmed that bridging and bonding social capital positively influence sustained WOM (opinion seeking and passing) on SNS [30]. Zhang found that bridging social capital positively influences eWOM adoption on WeChat [32]. The other type of research explores the effect of perceived usefulness and perceived ease-of-use on eWOM. Zhang *et al.* found that perceived usefulness and perceived ease-of-use indirectly affect eWOM [38], [40], [42], [43]. Liu *et al.* confirmed that perceived usefulness and perceived ease-of-use directly and significantly influence eWOM (adoption intention) [39], [54].

III. RESEARCH MODEL AND HYPOTHESES
A. RELATIONSHIP BETWEEN SOCIAL CAPITAL AND eWOM
Previous research has shown that bonding social capital influences individuals' opinion seeking and passing on SNS [30]. In online communities, the bonding social capital of passive members comes mainly from two kinds of interpersonal relationships. One is the type of interpersonal relationship in which members often interact with each other within or outside the community. The other is the collective interpersonal relationships of the community, that is, the interpersonal relationships between individuals and the core community members. Core members have a certain status in the community, often participate in interactions, and are enthusiastic about helping other members. Although individual members may not interact much with core members, they are likely to be familiar with them and even trust them. Passive members are familiar with core members and have bonding interpersonal relationships with them; therefore, they have more trust in the resources brought by bonding social capital, that can decrease their uncertainty and stimulate their risk-taking behaviors, thus increasing their dependence on core members or acquaintances for gathering information about the brands. Bonding social capital can also bring individuals emotional support, which may improve the interest of community members in contacting with each other and improve

individuals' attitudes toward the eWOM messages they receive.

At the same time, close and tight bonding interpersonal relationships can bring individuals scarce resources. The substantive and emotional support brought by bonding social capital can enhance the loyalty of members to the community. It can encourage members to promote the community and information about the community actively outside it and attract more users to join. At the same time, sharing precious and credible resources in other places can bring many benefits to members in terms of reputation, reciprocity, and making more new friends. Therefore, we hypothesize:

H1a: *In online brand communities, bonding social capital positively affects passive users' opinion passing.*

H1b: *In online brand communities, bonding social capital positively affects passive users' opinion seeking.*

Previous research has shown that bridging social capital influences individuals' opinion seeking and passing on SNS [30]. In online brand communities, the bridging social capital of passive members comes mainly from the collective interpersonal relationships of the community. As a powerful social platform which increases bridging among individuals, the virtual community has great potential. The members have similar interests and similar feelings about the brand in the virtual brand community. Although many members come from different backgrounds and have never communicated with each other, their complementary resources and experience are likely to be shared with each other through the bridging interpersonal relationships in the community, and information exchange in online brand communities often produces positive emotions and trust.

Compared with bonding social capital, which can offer emotional support, bridging social capital can offer informational support. Loose interpersonal relationships often contain a variety of new, complementary information sources. Bridging social capital can often bring a more important and broader range of information to individuals than bonding social capital. Research shows that higher quality and more useful information with an important influence on people's decision-making often comes from bridging social capital. Therefore, in virtual communities, members are willing to use bridging social capital to obtain information.

The resources provided by bonding social capital are often cross-validated by members from different backgrounds. The credibility and value of these resources can always be guaranteed. Sharing trusted and credible resources in other places can also bring many benefits to members, such as reputation, reciprocity, and more new friends. At the same time, sharing these resources, which are useful but not scarce or precious, will not harm the interests of the sharers. Therefore, members are willing to share the opinion provided by bonding social capital in the community to gain more benefits and maintain and expand existing personal networks.

Therefore, we hypothesize:

H2a: *In online brand communities, bridging social capital positively affects passive users' opinion passing.*

H2b: In online brand communities, bridging social capital positively affects passive users' opinion seeking.

B. RELATIONSHIP BETWEEN TAM AND SOCIAL CAPITAL

Due to their different research objects and research areas, Some studies have explored the relationships among different social capital and the factors in TAM. (1) Some scholars have identified the influence of social capital on the factors in TAM. Hyun *et al.* found that bonding and bridging social capital influence consumers' perceptions of the usefulness and ease-of-use of the information provided by SNSs [70]. Waleed found that perceived social capital has a notable impact on perceived usefulness in SNS [71]. Choi and Chung found that perceived social capital has robust effects on perceived usefulness and perceived ease-of-use in SNS [72]. (2) Some researchers have studied the impact of the factors in TAM on social capital. Deng and Yuan found that perceived usefulness and perceived ease-of-use have significant positive direct effects on passive users' relational and cognitive social capital in online brand communities [4]. Jin found that perceived usefulness and perceived ease-of-use may indirectly affect relational social capital building on Facebook [35]. Crittenden *et al.* found that perceived usefulness and perceived ease-of-use may indirectly affect the bonding and bridging social capital of women micro-entrepreneurs [36]. Raza *et al.* found that perceived usefulness and perceived ease-of-use may have a positive and significant impact on bonding and bridging social capital on Facebook [37].

Passive members are mainly those who have solved their problems or have no urgent needs for information related to the community theme. They choose to still stay in an online brand community to obtain useful new information or solve problems they may encounter in the future. With the development of time and technology, the problems individuals encounter will be complex and changing. Passive users can perceive whether the community is still useful or easy to use by browsing or asking for help directly in the community. If not, they will stop using the community or even quit. Only if they have perceived the community as being characterized by usefulness and ease-of-use will they choose to continue browsing for information or participating in community activities. Researchers have found that people's passive browsing and participation behaviors can increase social connections, thereby promoting the generation of passive members' bonding and bridging social capital [20]. As stated in the study by Chen, passive browsing allows users to discover the importance and usefulness of virtual communities and encourages members to stay in virtual communities and accumulate more social capital [34].

Hence, we propose that:

H3a: In online brand communities, perceived usefulness positively affects passive users' bonding social capital.

H3b: In online brand communities, perceived usefulness positively affects passive users' bridging social capital.

H4a: In online brand communities, perceived ease-of-use positively affects passive users' bonding social capital.

H4b: In online brand communities, perceived ease-of-use positively affects passive users' bridging social capital.

C. MEDIATION EFFECT

Previous research has found that perceived usefulness and perceived ease-of-use can indirectly affect eWOM through different mediating factors [38], [40]–[43]. Deng and Yuan found that social capital (shared vision, trust and reciprocity) has mediation effect between perceived usefulness and ease-of-use and passive users' continuance Intention [4]. In this study, therefore, we assume that bonding and bridging social capital have mediation effect between perceived usefulness and ease-of-use and eWOM. There are eight mediation effects in this framework. (1) The mediation effect of bonding social capital between perceived usefulness and eWOM (opinion passing and seeking). (2) The mediation effect of bridging social capital between perceived usefulness and eWOM (opinion passing and seeking). (3) The mediation effect of bonding social capital between perceived ease of use and eWOM (opinion passing and seeking). (4) The mediation effect of bridging social capital between perceived ease-of-use and eWOM (opinion passing and seeking).

In sum, we constructed a research model of factors influencing the eWOM of passive members of online brand communities integrating TAM and social capital theory. Figure 1 shows the theoretical research model.

IV. RESEARCH METHOD
A. DATA COLLECTION

To test our research model, we adopted an online survey to collect data from an online brand community in China from June to July 2020. The online brand community was established in 2012 and now have over 200 thousand members from various backgrounds who are fans of a certain brand of mobile phone. Based on records of users participating in online brand community interaction, this study recruited 600 members as subjects. These subjects had not engaged in online community interaction for over a year but had, however, truly browse the information propagated in the online brand community over the last year.

Altogether, 498 questionnaires were collected. Among them 59 questionnaires were deleted due to incomplete or invalid data. Thus, 439 questionnaires were adopted in our research. The demographic information was presented in Table 1. There were 243 males (55.35%) and 196 females (44.65%). In terms of age, 178 were 18–22 years old (40.55%), 163 were 23–28 years old (37.13%), 67 were 29 years old or older (15.26%), and 31 were 17 years old or younger (7.06%). In terms of level of education, 45.1% held a bachelor's degree and 24.37% held a graduate degree. Over 87.47% of subjects used the community at least once a month, and about 74.26% had a membership history over 2 years.
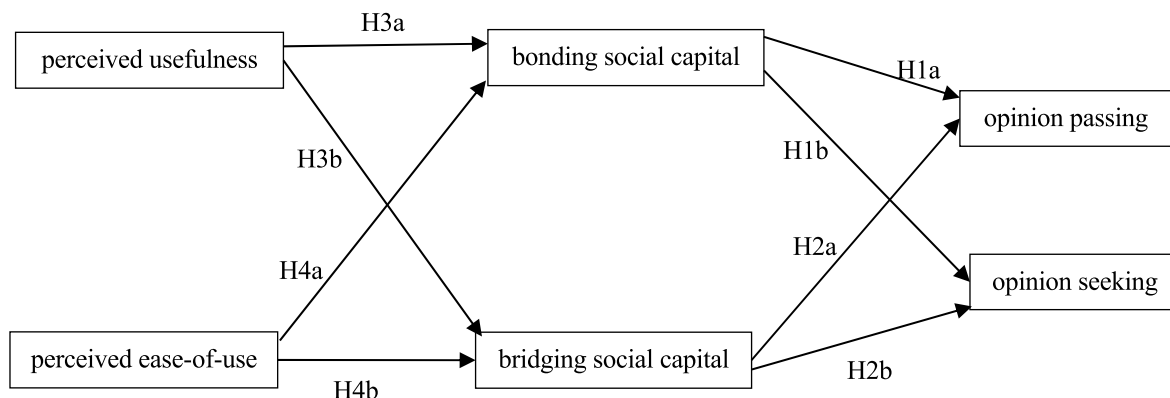
FIGURE 1. Theoretical research model.

TABLE 1. Demographic Data of Respondents

Demographic variable	Categories	Frequency	Percent
Gender	Male	243	55.35
	Female	196	44.65
Age	17 and below	31	7.06
	18-22	178	40.55
	23-28	163	37.13
	29 and above	67	15.26
Level of Education	Secondary school	43	9.8
	Vocational degree	91	20.73
	Bachelor's degree	198	45.1
	Graduate degree	107	24.37
Usage Frequency	At least once a day	18	4.1
	At least once a week	89	20.27
	At least once a month	277	63.1
	At least once a half year	55	12.53
Length of community membership history	>1 year and ⩽2 years	113	25.74
	>2 years and ⩽3 years	274	62.41
	Over 3 years	52	11.85

B. MEASUREMENTS

To better measure relationship among the factors in the TAM, social capital and eWOM, this study adopted 18 items were adapted from prior studies. All the items used a 7-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree). Perceived usefulness and perceived ease-of-use were measured by six items that were adapted from Davis [59]; bonding social capital and bridging social capital were measured by six items that were adapted from Qiao *et al.* 3]; the items for opinion passing were adapted from Hsu [56]; and opinion seeking was measured by three items that were adapted Chen and Qi [21]. All the items are shown in Table 2.

V. DATA ANALYSIS AND RESULTS

On the basis of previous research [2], [4], [73], [74], three steps were included in data analysis by the use of the SPSS 24 and AMOS 24 programs. A Harman's single-factor test was performed to test for common method biases in the first stage; the reliability and validity of the research model were

evaluated in the second stage; and the structural model was tested in the third stage.

A. COMMON METHOD BIAS

We followed prior research to evaluate the risk of common method bias by conducting Harman's single-factor test [75]. The results indicated that the first factor explained by an individual factor is 38.49%, does not exceed 40%. Therefore, the questionnaires used in this study is free from common method biases.

B. MEASUREMENT MODEL

In the second stage, this study assess the reliability and validity of our measurement scales. Composite reliability (CR) and Cronbach's alpha were used to examine reliability. Table 2 lists the results, in which all the CR scores are above the benchmark value of 0.70, confirming a good reliability of constructs [76], and all the Cronbach's alpha values are above the cutoff value of 0.70 (see Table 2), representing good internal consistency [76]. Average variance extracted (AVE)

TABLE 2. Measurement Model

Construct	Items	Mean	S.D.	Loading	α
perceived usefulness	1. Using the online brand community in my life can effectively meet my information needs about a product.	5.86	1.17	0.769	
	2. Using the online brand community in my life allows me to find information about a product quickly.	6.09	1.04	0.849	0.858
	3. I find the online brand community useful in my life.	6.01	1.01	0.827	
perceived ease-of-use	1. I find it easy to get the online brand community to do what I want it to do.	6.19	1.09	0.818	
	2. My interaction with the online brand community is clear and understandable.	5.62	1.40	0.701	0.777
	3. It is easy for me to become skillful at using the online brand community.	5.36	1.44	0.608	
bonding social capital	1. There are several friends in the community I trust to help me solve my problems.	5.99	1.11	0.916	
	2. There is someone in the community I can turn to for advice about making very important decisions.	5.94	1.10	0.894	0.914
	3. There is someone in the community who could provide a good job reference for me.	6.04	1.00	0.845	
bridging social capital	1. The information or opinions in the community make me want to try new things.	5.54	1.20	0.731	
	2. The information or opinions in the community make me interested in what people unlike me are thinking.	5.37	1.25	0.746	0.873
	3. The community gives me new people to talk to.	6.00	1.14	0.840	
opinion passing	1. I will seek information from the brand community when I consider purchasing a new product.	5.76	1.20	0.878	
	2. I browse the brand community when I want to acquire new information about the brand.	5.78	1.17	0.933	0.924
	3. I browse the brand community when I want to obtain information about the use of the brand.	5.78	1.20	0.878	
opinion seeking	1. I will post the valuable information or opinions I received in the community on my other social media accounts.	6.03	1.06	0.914	
	2. I like to pass interesting product information to my friends outside of the community.	6.12	1.01	0.930	0.939
	3. I will pass product information and opinions I perceive as useful to others outside of the community.	6.08	1.06	0.902	

TABLE 3. Correlation Matrix

Variables	AVE	CR	α	1	2	3	4	5	6
1. perceived usefulness	0.665	0.856	0.858	**0.815**					
2. perceived ease of use	0.554	0.788	0.777	0.461***	**0.714**				
3. bonding social capital	0.784	0.916	0.914	0.707***	0.509***	**0.885**			
4. bridging social capital	0.599	0.817	0.873	0.682***	0.501***	0.718***	**0.774**		
5. opinion seeking	0.804	0.925	0.924	0.550***	0.484***	0.668***	0.614***	**0.897**	
6. opinion passing	0.838	0.939	0.939	0.594***	0.539***	0.705***	0.611***	0.647***	**0.915**

and Confirmatory factor analysis (CFI) were used to access convergent validity. As Table 2 shows, all the AVE values are above the threshold value of 0.50 and all the factor loadings are above the threshold value of 0.70 (with few exceptions), and thus represent good convergent validity [77]. The square root of AVE was used to access discriminant validity. As Table 3 shows, all the square root of AVE exceeded the correlations between the constructs, confirming the discriminant validity [78].

C. STRUCTURAL MODEL
This study test the hypothetical model with structural equation modeling using AMOS 24. As table 4 shows that all hypotheses were confirmed. Additionally, all the fit indices of our measurement model met the recommended values that indicate acceptable good model fit (see table 5) [79]. The fit indices are $\chi^2/df = 2.145$ (the recommended value < 3); GFI = 0.938 (the recommended value > 0.9); AGFI = 0.914 (the recommended value > 0.9); CFI = 0.978
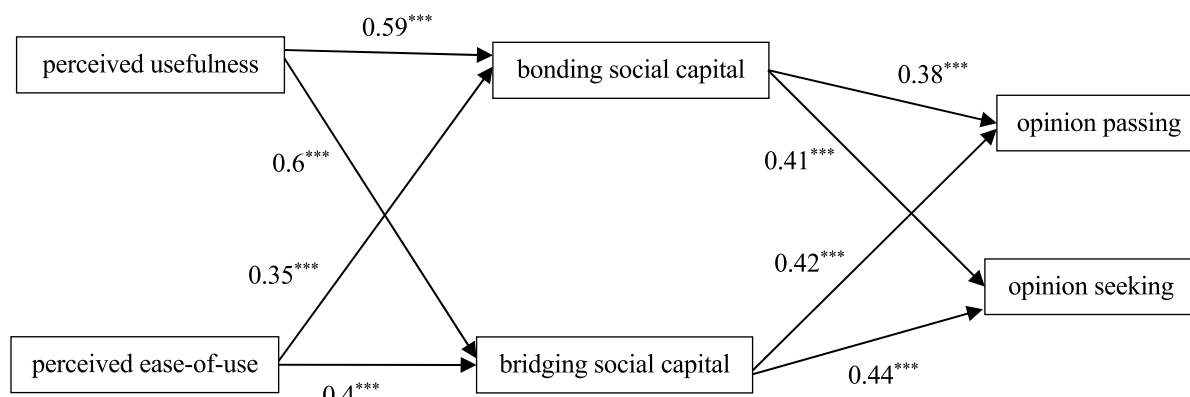
FIGURE 2. Structural equation model test results. Note: *** represents significance levels of 0.01.

TABLE 4. Standardized Structural Estimates and Tests of the Hypotheses

Hypothesis	Path	Path coefficient	Estimate (t-value)	Test result
H1a	bonding social capital→opinion passing	0.38	5.305	Supported
H1b	bonding social capital→opinion seeking	0.41	5.963	Supported
H2a	bridging social capital→opinion passing	0.42	5.488	Supported
H2b	bridging social capital→opinion seeking	0.44	6.07	Supported
H3a	Perceived usefulness→bonding social capital	0.59	10.399	Supported
H3b	Perceived usefulness→bridging social capital	0.6	9.345	Supported
H4a	perceived ease-of-use→bonding social capital	0.35	6.094	Supported
H4b	perceived ease-of-use→bridging social capital	0.4	5.872	Supported

TABLE 5. The Recommended and Actual Values of Fit Indices

Fit indices	chi^2/df	GFI	AGFI	CFI	NFI	IFI	RMSEA
Recommended value	<3	>0.90	>0.80	>0.90	>0.90	>0.90	<0.08
Actual value	2.145	0.938	0.914	0.978	0.96	0.978	0.051

TABLE 6. The Mediating Effects

Path	Unstandardized path coefficient	95% confidence interval	
		Lower	Upper
perceived usefulness→bonding social capital→opinion passing	0.297	0.057	0.614
perceived usefulness→bonding social capital→opinion seeking	0.279	0.037	0.547
perceived usefulness→bridging social capital→opinion passing	0.328	0.066	0.665
perceived usefulness→bridging social capital→opinion seeking	0.305	0.082	0.562
perceived ease-of-use→bonding social capital→opinion passing	0.164	0.034	0.513
perceived ease-of-use→bonding social capital→opinion seeking	0.154	0.036	0.477
perceived ease-of-use→bridging social capital→opinion passing	0.206	0.037	1.211
perceived ease-of-use→bridging social capital→opinion seeking	0.191	0.036	1.242

(the recommended value > 0.9); NFI = 0.96 (the recommended value > 0.9); IFI = 0.978 (the recommended value > 0.9); RMSEA = 0.051 (the recommended value < 0.08).

D. MEDIATING EFFECT ANALYSIS

Following previous studies [80], [81], we verified the mediation effect of bonding and bridging social capital between perceived usefulness and ease-of-use and opinion passing and seeking performing bootstrapping. To establish confidence intervals for estimated the significance of the mediating effect of our research model, the bootstrap analysis was conducted with 2000 resamples and bias-corrected confidence intervals of 95% [82], [83]. As shown in Table 6, all the confidence intervals of the mediating effect did not

include 0, that shows that the mediating effect is significant [82], [83].

VI. DISCUSSION AND IMPLICATIONS

A. DISCUSSION

Online brand communities are important marketing tools for companies. Passive members constitute the majority of members of virtual brand communities, and their eWOM has a powerful effect on success and prosperity of online brand communities. To stimulate passive users to generate eWOM, this study integrates social capital theory with TAM to develop a new model for exploring the influencing factors of passive users' eWOM. Perceived ease-of-use and usefulness were chosen to represent the elements of TAM, and bonding and bridging social capital were chosen to represent social capital. Finally, we revealed the impacts of perceived ease-of-use and usefulness, bonding and bridging social capital on passive users' opinion seeking and passing.

First, we revealed that eWOM behaviors such as opinion seeking and opinion passing by passive members still exist in the virtual brand community. This shows that, although passive members do not actively participate in the online brand community, they not only continue to browse and use the information in the community but also pass the information found within the community to others outside of it. This conclusion is similar to those of previous studies. Kumar and Nayak found that passive members of online brand communities tend to be willing to recommend it to others [2]. Lee *et al.* found that passive social media users often recommend their university and share positive reviews about it on social media [19]. Mousavi *et al.* found that passive members of online brand communities often recommend the brand to other people [45].

Second, we revealed the effects of bonding and bridging social capital on passive users' eWOM. Hypotheses H1a, H1b, H2a, and H2b, which tested the influence of social capital on eWOM, were accepted (see Table 4). The bonding and bridging social capital were positively and significantly related to opinion passing and seeking. This shows that the passive members' bonding and bridging social capital can affect their opinion passing and seeking. As Figure 2 shows, bonding and bridging social capital show different results when testing their impacts on opinion seeking and passing. Bridging social capital has a greater impact than bonding social capital on opinion seeking and passing. This conclusion is similar to previous studies that confirmed that SNS users' bridging social capital has a stronger influence than bonding social capital on the giving intention of social commerce [20]. Compared with opinion passing, opinion seeking has stronger relationships with bridging and bonding social capital (see Figure 2). This shows that, passive members' opinion seeking is more affected by bonding and bridging social capital.

Third, we revealed the relationship among perceived ease-of-use, perceived usefulness, and bonding and bridging social capital. Hypotheses H3a, H3b, H4a, and H4b, which

identified the impacts of perceived usefulness and perceived ease-of-use on bonding and bridging social capital, were accepted (see Table 4). Perceived usefulness and perceived ease-of-use have direct effects on passive users' bonding and bridging social capital. This shows that perceived usefulness and perceived ease-of-use can promote passive users to generate bonding and bridging social capital. As Figure 2 shows, perceived usefulness has a greater impact than perceived ease-of-use on opinion seeking and passing. This shows that, compared with perceived ease-of-use, passive members' bridging social capital is more affected by perceived usefulness. Perceived usefulness and perceived ease-of-use have stronger relationships with bridging social capital than bonding social capital (see Figure 2). This shows that, compared with bonding social capital, passive members' bridging social capital is more affected by perceived usefulness and perceived ease-of-use.

Finally, we revealed the role of perceived usefulness and perceived ease-of-use in stimulating passive members to generate eWOM. As Figure 2 and Table 6 show, perceived ease-of-use and usefulness have indirect effects on passive users' opinion seeking and passing through the mediating roles of bonding and bridging social capital. This shows that perceived usefulness and perceived ease-of-use can stimulate eWOM through passive members' bridging and bonding social capital. This finding is similar to earlier studies by Deng and Yuan, who found that perceived usefulness and perceived ease-of-use indirectly affect passive users' intention of continuing to participate in an online community through the mediating roles of social capital.

B. THEORETICAL IMPLICATIONS

First, we demonstrated the existence of passive members' two types of eWOM behaviors which are independent of each other in online brand communities, revealed that passive members can simultaneously participate in both opinion seeking and opinion passing, and found that, compared with opinion passing, opinion seeking is more likely to be affected by bonding and bridging social capital. Previous studies have not distinguished the different eWOM behaviors of passive members of online brand communities. Passive users' opinion seeking and passing behavior have different values to virtual communities and have different influencing factors. Therefore, the eWOM behavior of passive members needs to be evaluated more comprehensively and systematically. Our research results provide a reference for researchers to further study the eWOM behavior of passive members.

Second, we constructed a structural equation model of the factors influencing the eWOM behavior of passive members of online brand communities based on social capital theory and TAM. We combined and examined the social capital theory and TAM with regard to the eWOM of passive members in online brand communities. Our study is the first to demonstrate that perceived ease-of-use and perceived usefulness influence the opinion seeking and passing behavior of passive users through the mediating roles of bridging and

bonding social capital. Previous research had not examined the relationships among the factors in TAM, social capital, and eWOM. Research on the influences of the factors in TAM and social capital on eWOM still needs attention.

C. PRACTICAL IMPLICATIONS

First, our empirical results indicate that although passive members rarely participate in interactions in the virtual community, they still have the behaviors of opinion seeking and passing that have high potential value for the success and prosperity of the online brand community. The operators should actively tap the potential value of passive users of online brand communities. Compared with opinion passing, we find that passive members' opinion seeking is more affected by bridging and bonding social capital, and we also find that the mean value of opinion seeking is greater than that of opinion passing (see Table 2). This finding indicates that passive members may choose to stay in online brand communities mainly to be able to continue to get help in the future. The reason they promote the community is probably that they have received help first. Our study suggests that online brand community operators should not only encourage users to actively participate in the information communication to ensure passive users can browse more new information, and examine the information of online brand communities and eliminate false information in time to ensure the quality of community information, but also frequently investigate the information needs of passive members and post more original information to promote the opinion passing of passive members.

Second, we find that bonding and bridging social capital have significant positive impacts on passive members' opinion seeking and passing. This shows that bonding and bridging social capital can not only help passive members obtain information in the community but also encourage them to promote the information actively. For both opinion seeking and passing, bridging social capital has a greater influence than bonding social capital. These findings can serve as guidance for online brand community operators and passive members. To better obtain information, passive members should actively participate in interactions in the community or pay more attention to the interactions in the community, and accumulate more bonding and bridging social capital. In particular, they should get to know more people from different backgrounds to accumulate more bridging capital. To stimulate passive members to generate eWOM, online brand community operators should actively recruit more users with different backgrounds to create more opportunities for users to meet more people. This will stimulate passive members to accumulate or perceive more social capital, especially the important bridging social capital.

Finally, we find that perceived usefulness and perceived ease-of-use can stimulate passive members' eWOM through the mediating effect of bonding and bridging social capital, and for both bonding and bridging social capital, perceived usefulness has a greater influence than perceived ease-of-use.

These findings have guidance for online brand community operators. In order to stimulate passive users' eWOM behavior, online brand community operators should not only adopt new technologies in time that can promote easier communication among members in online brand communities, but also create a trusted, safe and friendly environment in which users can find useful resources by browsing and establish various social relationships that can bring them social and emotional assistance, as well as resources.

D. LIMITATIONS AND FUTURE RESEARCH

This study has several limitations. First, The source of our research subjects is just a brand community of a mobile phone, that cannot be as representative of all online brand communities. The influencing factors of passive members' eWOM in communities of different brands may be different. Thus, in future studies, We should recruit more passive members from communities of different brands for the survey. Moreover, this study did not explore the influence of the factors in TAM, social capital, and eWOM on purchase intention or behavior. Further studies can focus on the relationship between the factors in TAM, social capital, eWOM and passive members' purchase behavior, and the results could be of great theoretical as well as practical value.

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