

The Impact of Online Review Community Characteristics on Users' eWOM Recommendation Intention: The Mediating Role of Flow Experience

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Abstract. The online review community connects the sender and receiver of electronic word-of-mouth (eWOM). The participation of new users in the online review community depends on the eWOM behavior of the community users. However, existing research needs a specific measurement of the influencing factors of user recommendation behavioral intentions in online review communities. This study develops a model to examine the mediating role of flow experience on community characteristics and eWOM recommendation intention, using self-congruity and rewards as two moderators. A questionnaire survey was conducted among users of a Chinese online review community, dianping, and OLS regression was performed using the Hayes' PROCESS program. This study finally confirmed that flow experience mediates the influence of community characteristics (Perceived Usefulness, Perceived Personalization, and Perceived Interactivity) on EWOM intention. The mediating effect is moderated by self-congruity.

Keywords: online review community, eWOM, perceived usefulness, perceived personality, perceived interactivity, self-congruity

1. Introduction

Web 2.0 applications have introduced consumer recommendations and ratings into the e-commerce process, providing other consumers with a source to collect information (Bao & Yang, 2022; Yuen et al., 2022). The online community plays an essential role in user communication and online transactions (Kalogiannidis et al., 2022). There are many types of online communities, including transaction-oriented online communities such as Amazon and eBay. Such online communities provide a marketplace and allow consumers to rate products and services they bought. It also includes online review communities focused on business services and crowd-sourced reviews, represented by Yelp and Tripadvisor (Salamanis et al., 2020). Chan et al. proposed in their research that online review platforms can be conceptualized as online communities that introduce consumer-generated content, namely, online review communities (Chan et al., 2022). Unlike brand communities initiated by specific companies or customers, the online review community provides information on various brands (Wang et al., 2021). Users can evaluate and recommend brands in the online review community and share their own consumption experiences by posting.

The user's sharing and recommendation behavior is the user's engagement at the behavioral level (Huang et al., 2021). Users who participate in online communities spread positive word-of-mouth by sharing their consumption experiences (Zhang & Benyoucef, 2016; Noh et al., 2021). In exploring the factors that influence the prosperity of online communities, Wang et al. identified the online review platform where consumers could share their experiences as a subtype of the online community (Wang et al., 2021). Previous research pointed out the need to study engagement motivations for different subtypes of online communities (Baldus et al., 2015). Electronic word-of-mouth (eWOM) is embodied in consumers who have already purchased, sharing their shopping experience with others and recommending products and services (Hajli, 2015). By encouraging consumers to spread and recommend used products or experienced services, companies can increase their sales exponentially (Kim et al., 2021). The e-WOM recommendation intention of community members is of great significance to the success and prosperity of the community (Yuan et al., 2021).

Previous studies have analyzed the relationship between user experience, user engagement, and eWOM intentions in online communities. However, existing research needs a specific measurement of the influencing factors of user recommendation behavioral intentions in online review communities. Research on factors influencing eWOM recommendation intention in online review communities needs to be further expanded (Meilatinova, 2021; Gharib et al., 2019). The intention of users is the determining factor for their behavior (Agag & El-Masry, 2016; Zhang & Kim, 2020). Some scholars proposed that psychological variables will impact user behavior intention in online communities (Gharib et al., 2019). As a sub-type of the online community, the online review community has no specific quantitative measurement of the antecedents that affect its users' EWOM communication intention; this study fills this gap and considers the mediating role of the flow experience according to the recommendations of related scholars for future EWOM intention studies. Besides, in order to make a comprehensive explanation of perceived interactivity, in addition to introducing the user-to-user interaction, which is mainly referred to in past research, the neglected user-to-system interaction is also considered.

Based on the importance of enhancing user eWOM intentions in online comment communities and the insufficiency of existing research, this study proposes the following research questions: How do the characteristics of online comment communities affect user eWOM intentions? How do variables closely related to user benefits (flow experience, self-congruity, hedonic rewards, and utilitarian rewards) affect these effects? This study develops a model to examine the mediating role of flow experience on community characteristics and eWOM recommendation intention, using self-congruity and rewards as two moderators. The eWOM intention in this paper refers to the user's intention to recommend online review communities to others positively.

2. Literature Review

2.1. Online review community characteristics

The online community is a social relationship based on members fond of a particular brand (Muñiz & O'Guinn, 2001). Unlike online brand community that was previously classified into consumer-initiated communities and company-initiated communities, online review community is generally initiated by third-party websites or platforms (Prentice & Loureiro, 2018). Since the online review community relies on digital platforms, this study combines the system quality evaluation indicators and its unique interpersonal interaction features (Islam & Rahman, 2017). Interaction with other community members can help members gain withdrawal support, intimacy, and friendship (Decker, 2004). The interactivity studied in this study includes user-to-system interactivity and interactions between consumers in online review communities (Wang et al., 2012). Brian et al. summarized the online community scale covering social status enhancement, social interaction, learning more about using the product and having fun. Previous studies have shown that perceived personalization as the characteristic of online communities impacts users' participation, and trust plays a role in intermediaries (Kang et al., 2016). The original intention of the online review community is to allow consumers to seek helpful information, so information usefulness is an essential feature of the online review community (Jang et al., 2008). This study selected perceived usefulness, perceived interactivity, and perceived personalization as the characteristics of online review community characteristics to discuss their impact on consumer recommendations intention under the intermediary of the flow experience.

2.2. Flow experience in online review community

Flow experience was established by Zhang et al. (2014) as one of the crucial categories to describe customer experience in online communities. In Csikszentmihalyi's book (1990), optimal experience is described as "in a system of action with clear goals and clear rules, the belief that one's skills are sufficient to meet the challenge, the timely feedback on one's performance, the concentration, the loss of self-awareness, the sense of time is distorted." The experience of flow has been widely used in website design and online interactive system design (Nah et al., 2010). The researchers also used the flow experience to explain consumer behavior in an online environment (Mahfouz et al., 2020; Zaman et al., 2010). Flow experience is a valuable theoretical framework when investigating user engagement behavior (Kaur et al., 2016). Trevino et al. (1992) defined flow as a linear combination of control, attention, curiosity, and intrinsic interest. Hsu (2010) defined flow as an experience that fully engages, enjoys, controls, concentrates, and satisfies the participants' inherent interests. Clarke and Haworth's (1994) research showed that flow represents satisfaction with the experience. Psychologists use flow to describe a state where a person participating in some activity or thing is completely immersed in it (LeFevre, 1988).

When the challenge of the application is not enough, the user's sense of boredom will follow; when the application is too cumbersome, the user's anxiety will follow; and when the application challenge is too low, the user will show apathy (Csikszentmihalyi, 1975).

2.3. EWOM recommendation in online review community

A brand community is a social relationship based on members fond of a particular brand (Muñiz & O'Guinn, 2001; Ozdemir et al., 2016). An online comment community gathers users who endorse the community (Salamanis et al., 2020). Since e-WOM marketing costs little and can spread quickly, the impact on the review community is significant. Within the service-dominant logic (S-D logic) paradigm, companies have transitioned from focusing on the product itself to focusing on customers' overall consumer experience. Consumers have transformed from passive audiences to active participation, creating personalized experiences and value through interactions with brands (Grönroos, 2006). Online review communities provide conditions for users to share product information and

recommend word-of-mouth behaviors, that is, to meet the triggering conditions of behaviors (Sloan et al., 2015). Consumers in online review communities who share their consumption experiences can act as advocates to defend their favorite community (Habibi et al., 2014).

3. Hypotheses Development

3.1. Perceived usefulness and eWOM intention

Perceived usefulness is defined as the degree of confidence that a particular system can be beneficially used to improve user performance (Davis, 1989). Perceived usefulness comes from Davis' technology acceptance model, which has been widely used to assess users' acceptance of specific information technologies (Davis, 1989). The study by Yu et al. validates the critical role of perceived usefulness in motivating users to engage in user-generated content in online communities (Wang et al., 2021). Liuliang et al. explained the role of perceived ease of use and perceived usefulness in stimulating passive community members to generate eWOM intentions. They pointed out that perceived usefulness plays a more prominent role (Yuan et al., 2021). Researchers also suggested that community managers ensure the information provided is valuable and credible (Hur et al., 2011). The study by Lingwei et al. concluded that perceived usefulness was significantly correlated with community members' attitudes and behavioral intentions, while perceived ease of use was not (Davis, 1989).

3.2. Perceived interactivity and eWOM intention

According to Novak, interactivity is divided into user-to-user interactions and responses triggered by interpersonal communication and user-to-system interactions emphasizing technical features (Wang et al., 2012; Hoffman & Novak, 1996). The interactivity studied in this study includes user-to-system interactivity and interactions between users in online review communities. Previous studies have verified the effect of the interactivity of enterprise e-commerce community websites on eWOM intentions (Jattamart et al., 2019). The study by Awan et al. also confirmed that website interactivity is an antecedent to eWOM intentions and generates high-quality user-generated content and pointed out that satisfaction with user experience plays a role in promoting this effect (Awan et al., 2022). Perceived interactivity as a factor mediated by flow experience to promote recommendation intention among consumers in online review communities corresponds to previous research on hedonic motivation for customer engagement (Holland et al., 2001). There are already brands (such as Starbucks and Dell) that enhance the user experience by providing rich interactions in online communities, increasing community members' intention to interact, contribute, and recommend (Baldus et al., 2015).

3.3. Perceived personality and eWOM recommendation intention

Personalization is the process of customization to meet user preferences based on collected user information (Kramer et al., 2007). Perceived personalization refers to the user's perception that the recommended content, products, services, and interactions through information technology are customized according to their preferences and needs (Komiak & Benbasat, 2006; Wattal et al., 2009). Kang et al. (2016) defined the perceived personalization of online communities as customers' perception of the online community and the degree to which customer needs are met. They verified that perceived personalization has a significant positive impact on consumer engagement. Personalization makes it easier for the brand's concept to align with the user's self-concept, and the user develops a stronger emotional connection with the community (Tran et al., 2020). Perceived personalization generates a more positive attitude toward the online review community by making users feel valued (Phan et al., 2020).

3.4. The mediating role of flow experience

Existing research has demonstrated the significant impact of the flow experience on customer

behavior. Wang et al. (2015) combined user experience to illustrate that flow acts on generating behavioral intentions and confirmed that flow experience is positively correlated with consumer behavioral intentions. Flow plays a vital role in the user experience and influences the interaction between the user and the application. Flow experience can be seen as a critical factor in enhancing user engagement and customer loyalty in online review communities (Kaur et al., 2016). A positive user experience with a community increases their propensity to make eWOM recommendations for the community (Chan et al., 2022). Novak et al. (2000) proposed that better interactivity measures are necessary to demonstrate the relationship between interactivity and flow experience. Well-designed interactions can create a flow experience for consumers while conducting online transactions (Koufaris, 2002). Skadberg and Kimmel's research also showed that interactivity in system design could lead to flow experiences (Skadberg & Kimmel, 2004).

According to Javornik's (2016) research, interactivity stimulates users to have a flow experience, developing user engagement intentions and behaviors. Human-computer interaction can improve users' efficiency in obtaining the information they are interested in (Huang et al., 2021). In addition, System interactions can help users achieve control over their content and form (Steuer, 1992). The user's customized engagement process will immerse the user better, resulting in a flow experience (Animesh et al., 2011). Phan et al.'s (2020) research confirmed that the online community's perceived personalization affects users' eWOM intentions under the mediation effect of customer participation. They proposed that it is necessary to verify the user experience mediation. Perceived usefulness as a factor mediated by flow experience to promote recommendation intent among consumers in online review communities corresponds to functional motivations for customer engagement in previous research (Holland et al., 2001).

Therefore, this study makes the following hypotheses:

H1: Perceived usefulness, mediated by flow experience, positively influences users' eWOM recommendation intentions toward the online review community.

H2: Perceived personalization, mediated by flow experience, positively influences users' eWOM recommendation intentions toward the online review community.

H3: Perceived user-to-system interactivity, mediated by flow experience, positively influences users' eWOM recommendation intentions toward the online review community.

H4: Perceived user-to-user interactivity, mediated by flow experience, positively influences users' eWOM recommendation intentions toward the online review community.

3.5. The moderating role of self-congruity

Previous studies have regarded the interaction between users and the system as one of the technical characteristics of the source of triggering the flow experience and suggested that psychological variables should be introduced as moderator variables in examining the relationship between interactivity, user experiences, and behavioral intentions (Gharib et al., 2019). "Self-image congruence," "self-congruence," and "self-congruity" can all refer to the match between a consumer's self-concept and the user image of a particular community in the consumer behavior research literature (Kressmann et al., 2006). Self-consistency is motivated by self-concept, and communities that help users reduce the difference between their ideal self and their actual self in terms of lifestyle, values, and preferences increase their self-esteem (Rosenberg, 1979). Self-congruity includes actual self-image and ideal self-image (Hollenbeck & Kaikati, 2012). Community engagement stems from the expression of consistent personal values and is the overlap between self-identity and group identity (Algesheime et al., 2005).

When online review community image is aligned with self-congruity, community attachment occurs, and community attachment generally enhances customer engagement and customer loyalty reflected in referral behavior (Cheng & Yu, 2021). Customers tend to like online review communities that align with their self-image, which helps them express themselves. Clarifying personal preferences,

forming values, and gaining identification from others through social interaction are antecedents of community engagement and can have consequences for recommendation intention (Madupu & Cooley, 2010). Consumers display and promote their self-image when making word-of-mouth recommendations by showing their professionalism and usefulness (Wenting et al., 2022). Consumers get satisfaction from an ideal self-imagination, and self-validation refers to self-enhancement, self-esteem enhancement, and self-identification through feedback in interpersonal interactions (Kuo, 2016). Online review communities that are in line with the customers' self-concept are more likely to be recommended by eWOM (Leckie, 2016).

Therefore, this study makes the following hypothesis:

H5: Self-consistency moderates the mediating effect of flow experience on users' eWOM recommendation intention in the online review community.

3.6. The moderating role of rewards

Previous research suggested that investments in engagement, customer experience, shared vision, and rewards can strengthen the connection between customers and the online review community (Leckie et al., 2016). In the study of Braun et al. (2016), they pointed out that users' motivation to interact and share the community may come from financial or non-financial rewards. Previous research showed that the monetary rewards obtained by members in the online review community, such as discounts, gifts, or coupons, will enhance their emotions, cognition, and behavior (Dholakia et al., 2004; Wiertz & Ruyter, 2007). According to social exchange theory, the reciprocal relationship between customers and the community is reflected in a series of benefits perceived by customers, providing returns including positive word-of-mouth. Brian et al. developed a measure of user motivation to interact with online communities, dividing rewards into utilitarian and hedonic rewards (Baldus et al., 2015). Hedonic rewards refer to the fun and friendly environment consumers get in online brand communities, while utilitarian rewards mainly refer to coupons, discounts, and material incentives such as money (Bilro & Loureiro, 2021).

Therefore, this study makes the following hypotheses:

H6: Hedonic rewards moderate the mediating effect of flow experience on users' eWOM recommendation intention in the online review community.

H7: Utilitarian rewards moderate the mediating effect of flow experience on users' eWOM recommendation intention in the online review community.

4. Research Methodology

4.1. Methodology

This study uses the Positivism research paradigm to quantitatively analyze the antecedents of users' eWOM intentions in the online review community using the survey research method. A questionnaire survey was conducted among users of a Chinese online review community, dianping, and OLS regression was performed using the Hayes' PROCESS program. In this study, AMOS software was used for model drawing and model estimation. When conducting model estimation, confirmatory factor analysis was performed by the maximum likelihood method using AMOS software. After completing the estimation of the model, the Hayes PROCESS program embedded in SPSS software was used to test the mediation and moderation effects. When conducting hypothesis testing, this study refers to model 4 proposed by Hayes.

4.2. Data collection and sample

This study used China's largest questionnaire survey platform (Questionnaire Star) to conduct online surveys. The survey was conducted among users of the online review community Dianping, resulting in 262 valid surveys. Dianping is China's leading online review community, with over 14 million merchants and over 200 million users.

As can be seen from Table 1, the respondents of this questionnaire are distributed in different age groups, and most of them are between 26 and 30 years old, accounting for 32.80% of the total. The gender distribution of the respondents was relatively uniform, with 51.90% for males and 48.10% for females. The main modules of popular reviews include food, performance, scenic spots, accommodation, and leisure entertainment; each module has a certain number of users to choose from, of which the most popular module is food and accommodation.

Table 1: Descriptive Statistics

Variable	Variable	Frequency	Percentage (%)	Cumulative percentage (%)
Gender	Male	136	51.90%	51.90%
	Female	126	48.10%	100.00%
		262	100.00%	
Age	Under 18	7	2.70%	2.70%
	18-25	50	19.10%	21.80%
	26-30	86	32.80%	54.60%
	31-40	68	26.00%	80.50%
	41-50	31	11.80%	92.40%
	51-60	17	6.50%	98.90%
	over 60	3	1.10%	100.00%
		262	100.00%	
Variable	Variable	Frequency	Response Rate (%)	Penetration rate (%)
The preferred module	Food	233	26.60%	88.90%
	Scenic Spots	155	17.70%	59.20%
	Accommodation	188	21.50%	71.80%
	Leisure Entertainment	176	20.10%	67.20%
	Performance	123	14.10%	46.90%
	Total	875	100.00%	334.00%

4.3.Measures

The study used 7-point Likert scales, allowing users to choose from 1 to 7 for each measurement item. The questionnaire was composed of nine dimensions: perceived usefulness, perceived personalization, perceived user-user interactivity, perceived user-to-system interactivity, flow experience, self-congruity, utilitarian rewards, hedonic rewards, and eWOM recommendation intention. Measures of perceived usefulness (PU) are adapted from Kim et al. (2008) and Perkowski et al. (1999). Measures of perceived personalization (PP) are adapted from Komiak and Benbasat (2006). Measures of perceived user-user interactivity (PUUI) are adapted from Bruhn et al. (2014). Measures of perceived user-to-system interactivity (PUSI) are adapted from Steuer (1992) and McMillan (2002). Measures of flow experience (FE) are adapted from Animesh and Pinsonneault (2011). Measures of self-congruity are adapted from Escalas and Bettman (2005). Measures of utilitarian rewards (UR) and hedonic rewards (HR) are adapted from Baldus et al. (2015). Measures of recommendation intention (EI) are adapted from Jones and Reynolds (Jones & Reynolds, 2006). The conceptual model of this study is shown in Fig.1.

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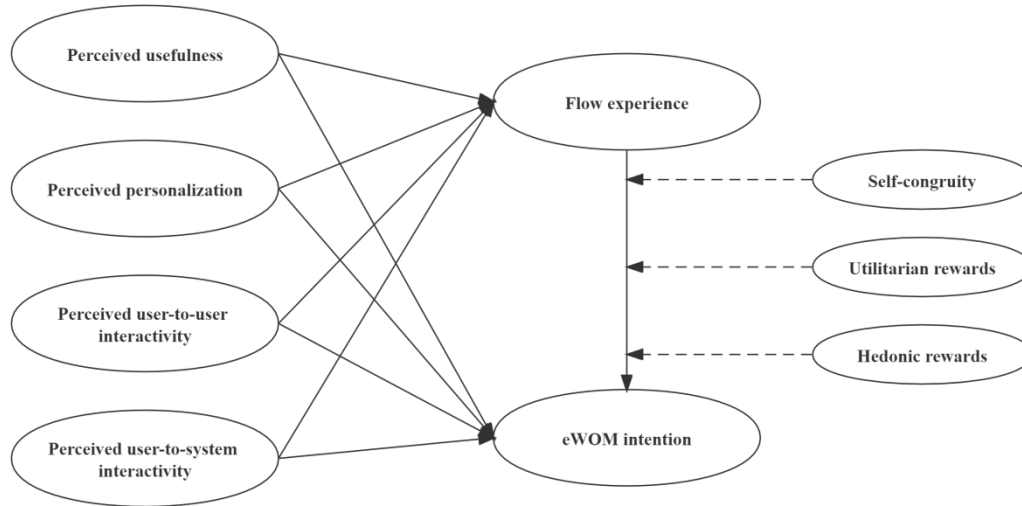


Fig. 1: Conceptual model

4.4. Common method bias

The marked variable method was used to test for common method bias. The preference for green was set as a marker variable and incorporated into the model (Miller & Simmering, 2022). Table 2 shows how the common method bias measuring model is built. The results in Table 3 show that there was no significant difference between the “Method-U” and “Method-R” ($P > 0.05$), so the conceptual model of this study was not affected by common method bias (Schwarz et al., 2017).

Table 2: Model Fit

model	χ^2	df	CFI
1.CFA	586.365	400	0.969
2.Baseline	514.743	389	0.979
3.Method-C	545.245	399	0.976
4.Method-U	488.408	372	0.981
5.Method-R	496.201	408	0.985

Table 3: Model Comparasion

Model Comparision	$\Delta \chi^2$	Δdf	P
Baseline VS. Method-C	30.502	10	0.001
Method-C VS. Method-U	56.837	27	0.001
Method-U VS. Method-R	7.793	36	1.000

4.5. Reliability and validity

In this study, confirmatory factor analysis was performed by the maximum likelihood method using Amos software. The CFA analysis of the conceptual model showed the goodness of fit: the chi-squared ($\chi^2/df = 2.425$; < 3) is below 3.0, as suggested ed by Schumacker and Lomax (Schumacker

& Lomax, 2004). The root-mean-square error of approximation is 0.074, and the comparative fit index is 0.943, which are both acceptable (Gaskin & Lim, 2016). As shown in Table 4 and Table 5, Cronbach' s α for each dimension is more significant than 0.7 (Hair, 2009), and a confirmatory factor molecule was used with Amos software to derive a factor load of 0.7 for each item, the Z value was more than 1.96 (statistically significant), the composite reliability for each dimension was more than 0.7, and the average variance extracted for each dimension was more than 0.5 (Hair et al., 2014).

Table 4: Factor loading, Cronbach' s α

Constructs		Items	Factor Loading	Cronbach' α
Flow experience (FE)	My imagination was piqued when I used the online review community.	FE1	0.874	.935
	When I use the online review community I am immersed in it.	FE2	0.893	
	I am curious about online review community.	FE3	0.892	
	I was preoccupied with using the online review community.	FE4	0.880	
Perceived usefulness (PU)	Using online review community improves my ability to effectively select businesses/products/services.	PU1	0.811	.917
	The information in the online review community is accurate.	PU2	0.833	
	The information in the online review community is up-to-date.	PU3	0.883	
Perceived personality (PP)	Online review community understands my needs.	PP1	0.858	.909
	The merchants/products/services that online review community pushed to me are what I need.	PP2	0.840	
	I can feel that the content offered by online review community has been adjusted to my preferences.	PP3	0.848	
Perceived user-to-user interactivity (PUUI)	The online review community fulfills my need to interact with other members of the community.	PCC1	0.866	.906
	My interactions with other members of the online review community are of high quality.	PCC2	0.902	
	I am satisfied with the quality of interaction with other members of the online review community.	PCC3	0.860	
Perceived user-to-system interactivity (PUSI)	The online review community provides tools that allow me to respond quickly to my needs.	PCS1	0.808	.899
	The online review community provides	PCS2	0.837	

	tools that allow me to find what I need.			
	The clear navigation of the online review community has helped me.	PCS3	0.809	
Utilitarian rewards (UR)	I got a coupon from the merchants in the process of using online review community.	UR1	0.872	.908
	I got a discount from the merchants when I was using online review community.	UR2	0.882	
	I got a free gift from the vendor in the process of using the online review community.	UR3	0.868	
Hedonic rewards (HR)	I thought it would be fun to use the community of online review community.	HR1	0.888	.879
	I was happy when I commented in the online review community.	HR2	0.876	
	Fun is my main reason for participating in the online review community.	HR3	0.895	
Self-congruity (SC)	The online review community reflects my personality.	SC1	0.894	.858
	The online review community helps me to express myself.	SC2	0.873	
	I agree with the brand image of the online review community.	SC3	0.866	
E-word-of-mouth intention (EI)	I recommend the online review community to my friends through social media and other channels.	EI1	0.919	.884
	I will share the content of the online review community with others through social media/other channels.	EI2	0.825	
	I will post a comment in the popular brand community to recommend the online review community.	EI3	0.766	

The results of discriminant validity in Table 5 are consistent with the "the variance extracted estimates should be greater than the equal correlation estimate" proposed in Hair's research (Hair et al., 2014).

Table 5: Composite reliability (CR), and AVE

Items	Z	P	CR	AVE	CR
FE1			0.935	0.783	0.935
FE2	20.367	***			
FE3	20.322	***			

FE4	19.754	***			
PU1			0.880	0.710	0.880
PU2	14.768	***			
PU3	15.527	***			
PP1			0.885	0.720	0.885
PP2	16.123	***			
PP3	16.319	***			
PUUI1			0.908	0.768	0.908
PUUI2	19.079	***			
PUUI3	17.838	***			
PUSI1			0.859	0.669	0.859
PUSI2	13.784	***			
PUSI3	13.450	***			
UR1			0.907	0.764	0.907
UR2	18.252	***			
UR3	17.882	***			
HR1			0.917	0.786	0.917
HR2	19.348	***			
HR3	19.999	***			
SC1			0.910	0.770	0.910
SC2	19.012	***			
SC3	18.771	***			
EI1			0.876	0.704	0.876
EI2	18.087	***			
EI3	15.812	***			

***p<=0.01

5. Results

5.1. Testing the main and mediating effects

OLS regression was performed using Hayes' PROCESS program (model 4) for hypothesis testing. This program was used to test the direct effects of independent variables on dependent variables, the mediating effects of mediating variables, and the total effects combined with bootstrap estimation (5,000). SPSS 22.0 was used to examine the mechanism of perceived usefulness, perceived personalization, and perceived interactivity on eWOM recommendation intention mediated by flow experience. As shown in Table 6 and Table 7, perceived usefulness directly affects eWOM recommendation intention ($\beta = 0.266$, $t = 5.373$, $p < 0.01$), and the mediation effect of flow experience is significant ($p < 0.01$), accounting for 17.6% of the total effect. Perceived personalization directly affects eWOM recommendation intention ($\beta = 0.259$, $t = 4.744$, $p < 0.01$), and the mediation effect of flow experience is significant ($p < 0.01$), accounting for 14.8% of the total effect. Perceived user-user interactivity directly affects eWOM recommendation intention ($\beta = 0.211$, $t = 4.280$, $p < 0.01$), and the mediation effect of flow experience is significant ($p < 0.01$), accounting for 23.8% of the total effect. Perceived user-system interactivity directly affects eWOM recommendation intention ($\beta = 0.150$, $t = 2.552$, $p < 0.01$), and the mediation effect of flow experience is significant (p

< 0.01), accounting for 25.7% of the total effect. Hypotheses H1, H2, H3 and H4 are supported. In the table, IE stands for direct effect, and DE stands for the indirect effect caused by the intermediary effect.

Table 6: Mediating Effects Coeff

Antecedent	EI			
	coeff	se	t	p
constant	-0.292	0.445	-0.657	0.512
m_PU	0.266	0.049	5.373	0.000
m_PP	0.259	0.055	4.744	0.000
m_PUUI	0.211	0.049	4.280	0.000
m_PUSI	0.150	0.059	2.552	0.011
m_FE	0.192	0.049	3.939	0.000
sex	-0.041	0.128	-0.325	0.745
age	-0.016	0.050	-0.323	0.747
R2	0.566			
F	F (7,254) =47.383			

Table 7: Mediating Effects

	Item	BootLLCI	BootULCI	Effect Percent
m_PU	total	0.193	0.392	
	DE	0.168	0.363	92.6%
	IE	0.001	0.069	17.6%
m_PP	total	0.196	0.412	
	DE	0.152	0.367	85.2%
	IE	0.009	0.096	14.8%
m_PUUI	total	0.183	0.371	
	DE	0.114	0.308	76.2%
	IE	0.022	0.119	23.8%
m_PUSI	total	0.086	0.318	
	DE	0.034	0.266	74.3%
	IE	0.016	0.094	25.7%

5.2. Testing the moderating effect

SPSS22.0 software was used to test the moderating effect of self-congruity, utilitarian rewards, and hedonic rewards. As Table 8 shows, the moderating effect of self-consistency on flow experience mediation was statistically significant ($p < 0.01$), but the moderating effect of utilitarian and hedonic rewards was not statistically significant. After introducing the self-congruity of the moderating variables, the model fit index R2 is improved, and the degree of improvement is statistically significant. H5 was supported, while H6 and H7 were not supported. The mediation of perceived usefulness, perceived personality, perceived customer-to-customer interactivity, and perceived customer-to-system interactivity' s effect on eWOM recommendation intention is moderated by self-congruity.

Table 8: Moderating Effects

Antecedent	Condequent					
	FE			EI		
	Coeff.	SE	P	Coeff.	SE	P
Constant	2.760	0.360	0.000	- 0.630	0.540	0.250
PU	0.420	0.070	0.000	0.330	0.050	0.000
FE				0.570	0.110	0.000
SC				0.540	0.120	0.000
FE×SC				- 0.050	0.020	0.020
	R ² =0.132			ΔR ² =0.011		
Constant	2.085	0.353	0.000	- 0.349	0.535	0.515
PP	0.541	0.065	0.000	0.339	0.054	0.000
FE				0.510	0.111	0.000
SC				0.481	0.118	0.000
FE×SC				- 0.046	0.023	0.043
	R ² = 0.210			ΔR ² =,008		
Constant	1.800	0.430	0.000	- 0.350	0.580	0.550
PUSI	0.570	0.080	0.000	0.240	0.060	0.000
FE				0.560	0.120	0.000
SC				0.540	0.120	0.000
FE×SC				- 0.050	0.020	0.045
	R ² =0.018			ΔR ² =0.008		
Constant	2.2628	0.2854	0.000	0.110	0.541	0.840
PUUI	0.544	0.0556	0.000	0.241	0.052	0.000
FE				0.526	0.115	0.000
SC				0.503	0.122	0.000
FE×SC				- 0.048	0.023	0.041
	R ² = 0.269			ΔR ² =0.008		

In addition, the moderating effect of utilitarian rewards on the direct effect path of perceived user-to-system interactivity in the mediation model and the moderating effect of hedonic reward on the effect of perceived user-to-user interaction on eWOM recommendation intention was found, as shown in Fig.2 and Fig.3.

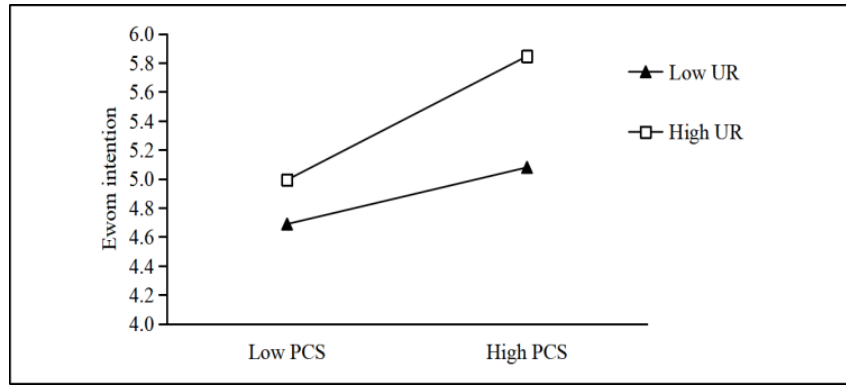


Fig. 2: Moderating effect (UR)

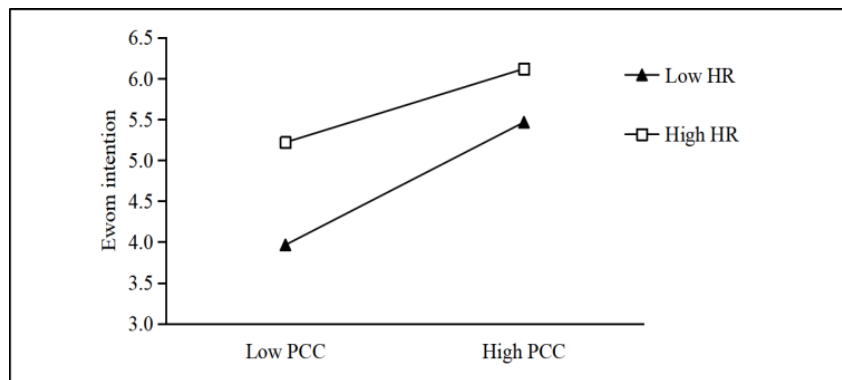


Fig. 3: Moderating effect (HR)

6. Conclusion and Limitations

6.1. Conclusion

This study focuses on the online review communities, a sub-type of the online community, combined with existing research on the online community. Based on the characteristics of online review communities, this study attempts to understand the mechanisms that influence the willingness of online review communities to make users more likely to recommend to others. The results show that the perceived usefulness, perceived personalization, and perceived interactivity (including user-to-user interactivity and user-to-system interactivity) of online review communities directly and positively impact users' willingness to make recommendations. These effects are mediated by whether or not a user-generated flow experience while using the online review community. Among them, flow experience plays the highest moderating role in perceived user-to-user interactivity and user eWOM intention, which shows that if the community wants to create a flow experience for users, improving the interaction design of the system is a priority consideration.

In addition, self-congruity moderates the moderating effect of the measured variables on the mediation model. This shows that the higher the consistency of brand image and user self-concept, the more significant the role of flow experience. On the contrary, utilitarian rewards and hedonic rewards only have some effect on the direct effect of perceived user-to-system interactivity on users, and this suggests that it is not feasible for communities to increase the impact of perceived information usefulness, perceived interactivity, and perceived personalization on users' EWOM intentions by providing them with utilitarian and hedonic rewards. This study also provides practical significance for the developers and managers of the online review community.

6.2.Theoretical implications

This study focuses on the online review communities, a sub-type of the online community, combined with existing research on the online community. The research on the online review community mainly focuses on high-quality review output, while more research on the eWOM recommendation intention of the online review community is needed. This study introduced the theory of flow experience in the context of the online review community and finally confirmed the mediating role of flow experience, expanding existing knowledge. In order to make a comprehensive explanation of perceived interactivity, in addition to introducing the user-to-user interaction, which is mainly referred to in past research, the neglected user-to-system interaction is also considered.

In addition, the moderating effect of self-congruity on the mediation of flow experience was found by examining the moderating variables. Utilitarian rewards moderate the effect of users' perceived interaction between user and system on user recommendation intention, and hedonic rewards moderate the effect of users' perceived interaction between user and system on user recommendation intention. These results contribute to a comprehensive understanding of the factors and mechanisms that influence users' intention to make recommendations for online review communities. Based on the characteristics of online review communities, this study attempts to understand the mechanisms that influence the willingness of online review communities to make users more likely to recommend to others. The results show that perceived usefulness, perceived personalization, and perceived interactivity (including user-to-user interactivity and user-to-system interactivity) of online review communities have a direct and positive impact on users' willingness to make recommendations. These effects are mediated by whether or not a user-generated a flow experience while using the online review community, which was moderated by self-congruity.

6.3.Practical implications

This study provides practical significance for the developers and managers of online review communities. The growth of online review communities depends on users' participation, and one aspect of this participation is the willingness of users to make word-of-mouth recommendations to the community. Understanding the antecedents that drive users' desire for electronic word-of-mouth recommendation intention about online review communities helps online review community managers conduct their day-to-day operations, as well as online review community developers, to understand how to design and iterate the community platform.

First of all, for the developers of online review communities, it is crucial to consider the relevant functions to support the community platform with a good user experience, such as the design of a beautiful and smooth interface, and to optimize the recommendation algorithm to meet the needs of user customization. Focusing on the individual needs of users to optimize the recommendation algorithm can not only make users feel that their needs have been valued but also enable users to obtain the information they need efficiently. A system that is interactive, personalized, and provides high-quality information is conducive to a flow experience, and users who experience flow have higher eWOM recommendation intention. For the managers of the online review community, the image and positioning of the online review community should be considered first. They should also conform to the self-image of the target customer group. The community manager should also enhance the usefulness and timeliness of the information in online review communities to meet the needs of the community users for information. Finally, community operators should plan related activities to encourage interaction between users and users and to increase user activity within the community.

6.4.Limitations and future research

Only users of Dianping were selected for this study, and future research could look at respondents from different online review communities when collecting data. In addition, this study did not distinguish between public self-congruity and private self-congruity when discussing the moderating role of self-congruity in the mediation model. Future research could discuss the role of both types of

self-congruity in online review communities separately. In addition, the role of utilitarian and hedonic rewards still need to be fully revealed in the conclusions of this study. Future research could examine how utilitarian and hedonic rewards affect users' intentions for eWOM recommendations.

References

- A. Animesh, A. Pinsonneault, S.-B. Yang, W. Oh, An odyssey into virtual worlds:exploring the impacts of technological and spatial environments on intention to purchase virtual products, *MIS Q.* 5 (3), 2011, 789 – A3.
- Agag, G., & El-Masry, A. A. (2016). Understanding consumer intention to participate in online travel community and effects on consumer intention to purchase travel online and WOM: An integration of innovation diffusion theory and TAM with trust. *Computers in human behavior*, 60, 97-111.
- Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: Evidence from European car clubs. *Journal of marketing*, 69(3), 19-34.
- Awan, T. M., Latif, T., Aslam, F., & Fatima, T. (2022). Interactive websites of e-malls instigate intentions to generate e-WoM. *International Journal of Electronic Marketing and Retailing*, 13(3), 319-333.
- Baldus, B. J., Voorhees, C., & Calantone, R. (2015). Online brand community engagement: Scale development and validation. *Journal of business research*, 68(5), 978-985.
- Baldus, B. J., Voorhees, C., & Calantone, R. (2015). Online brand community engagement: Scale development and validation. *Journal of business research*, 68(5), 978-985.
- Baldus, B.J., Voorhees, C. and Calantone, R. (2015), “Online brand community engagement: scale development and validation” , *Journal of Business Research*, Vol. 68 No. 5, pp. 978-985.
- Bao, Z., & Yang, J. (2022). Why online consumers have the urge to buy impulsively: roles of serendipity, trust and flow experience. *Management Decision*.
- Bilro, R. G., & Loureiro, S. M. C. (2021). I am feeling so good! Motivations for interacting in online brand communities. *Journal of Research in Interactive Marketing*.
- Braun, C., Batt, V., Bruhn, M., Hadwich, K., 2016. Differentiating customer engaging behavior by targeted benefits – an empirical study. *J. Consum. Marketing* 33 (7), 528 – 538.
- Bruhn, M., Schnebelen, S., & Schäfer, D. (2014). Antecedents and consequences of the quality of e-customer-to-customer interactions in B2B brand communities. *Industrial Marketing Management*, 43(1), 164-176.
- C. R. Hollenbeck and A. M. Kaikati, ‘ ‘Consumers’ use of brands to reflect their actual and ideal selves on Facebook,’ ’ *Int. J. Res. Marketing*, vol. 29, no. 4, pp. 395 – 405, 2012.
- C.Hsu, Exploring the player flow experience in e-game playing, *International Journal of Technology and Human Interaction*, vol.6, no.2, pp.47-64, 2010.
- Chan, H., Zeng, K. J., & Yang, M. X. (2022). Review platforms as prosumer communities: theory, practices and implications. *European Journal of Marketing*.
- Cheng, G., & Yu, W. (2021). Positive and Negative Behaviors of Oppositional Loyalty in Online Communities. *IEEE Access*, 10, 20948-20963.

- Clarke, S. G., & Haworth, J. T. (1994). 'Flow' experience in the daily lives of sixth - form college students. *British Journal of Psychology*, 85(4), 511-523.
- Csikszentmihalyi, M., & Csikszentmihaly, M. (1990). *Flow: The psychology of optimal experience* (Vol. 1990). New York: Harper & Row.
- D.L. Hoffman, T.P. Novak, Marketing in hypermedia computer-mediated environments conceptual foundations: conceptual foundations, *Journal of Marketing* 60(3)(1996) 50 - 68.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Decker, D. 2004. Brand liability: Oppositional brand loyalty in a brand community context. Master's thesis, University of Maastricht, Holland.
- Dholakia, U.M., Bagozzi, R.P. and Pearo, L.K. (2004), "A social influence model of consumer participation in network- and small-group-based virtual communities" ,*International Journal of Research in Marketing*, Vol. 21 No. 1,pp. 241-263.
- Escalas J E, Bettman J R. Self-construal, Reference Groups, and Brand Meaning [J] . *Journal of Consumer Research*, 2005, 32 (3) :378—389.
- Gaskin, J. & Lim, J. (2016), "Model Fit Measures", AMOS Plugin. Gaskination's StatWiki.
- Gharib, R. K., Garcia-Perez, A., Dibb, S., & Iskoujina, Z. (2019). Trust and reciprocity effect on electronic word-of-mouth in online review communities. *Journal of Enterprise Information Management*.
- Gharib, R. K., Garcia-Perez, A., Dibb, S., & Iskoujina, Z. (2019). Trust and reciprocity effect on electronic word-of-mouth in online review communities. *Journal of Enterprise Information Management*.
- Gharib, R. K., Garcia-Perez, A., Dibb, S., & Iskoujina, Z. (2019). Trust and reciprocity effect on electronic word-of-mouth in online review communities. *Journal of Enterprise Information Management*.
- Grönroos, C. (2006). Adopting a service logic for marketing. *Marketing theory*, 6(3), 317-333.
- Habibi, M.R., Laroche, M., Richard, M.O., 2014. The roles of brand community and community engagement in building brand trust on social media. *Comput. Hum. Behav.* 37 (1), 152 - 161.
- Hair J F . *Multivariate Data Analysis* (7th Edition). 2009.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (7nd Ed). Pearson. P619
- Hajli, N. (2015). Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*, 35, 183 - 191.
- Holland, J. and Baker, S.M. (2001), "Customer participation in creating site brand loyalty" ,*Journal of Interactive Marketing*, Vol. 15 No. 4, pp. 34-45.
- Holland, J. and Baker, S.M. (2001), "Customer participation in creating site brand loyalty" ,*Journal of Interactive Marketing*, Vol. 15 No. 4, pp. 34-45.
- Huang, T. K., Wang, Y. T., & Lin, K. Y. (2021). Enhancing brand loyalty through online brand communities: the role of community benefits. *Journal of Product & Brand Management*.

- Huang, T. K., Wang, Y. T., & Lin, K. Y. (2021). Enhancing brand loyalty through online brand communities: the role of community benefits. *Journal of Product & Brand Management*.
- Hur, W. M., Ahn, K. H., & Kim, M. (2011). Building brand loyalty through managing brand community commitment. *Management Decision*.
- Islam, J. U., & Rahman, Z. (2017). The impact of online brand community c-haracteristics on customer engagement: An application of Stimulus-Organism-Response paradigm. *Telematics and Informatics*, 34(4), 96-109.
- J. Steuer, Defining virtual reality: dimensions determining telepresence, *J. Commun.* 2 (4), 1992, pp. 73 – 93.
- Jang, H., Olfman, L., Ko, I., Koh, J., & Kim, K. (2008). The influence of on-line brand community characteristics on community commitment and brand loyalty. *International journal of electronic commerce*, 12(3), 57-80.
- Jattamart, A., Kwangsawad, A., & Boonkasem, K. (2019, December). Factors influencing the intentions of customer with regard to the use of E-WOM behavior to promote the use of E-commerce websites. In 2019 4th Technology Innovation Management and Engineering Science International Conference (TIMES-iCON) (pp. 1-5). IEEE.
- Javornik, A., 2016. ‘It’ s an illusion, but it looks real!’ Consumer affective, cognitive and behavioural responses to augmented reality applications. *J. Market. Manag.* 32 (9/10), 987 – 1011.
- Jones, M. A., & Reynolds, K. E. (2006). The role of retailer interest on shopping behavior. *Journal of Retailing*, 82(2), 115 – 126.
- Kalogiannidis, S., Chatzitheodoridis, F., Savvidou, S., Kagioglou, F., & Macedonia, W. (2022). The Impact of Online Communications on Different Users' Social, Emotional, and Moral Competence as a Potential Business Communication Tool. *Journal of System and Management Sciences*, 12(5), 359-373.
- Kang, M., Shin, D. H., & Gong, T. (2016). The role of personalization, engagement, and trust in online communities. *Information Technology & People*.
- Kang, M., Shin, D. H., & Gong, T. (2016). The role of personalization, engagement, and trust in online communities. *Information Technology & People*.
- Kaur, P., Dhir, A., & Rajala, R. (2016). Assessing flow experience in social networking site based brand communities. *Computers in Human Behavior*, 64, 217-225.
- Kim, H. C., Kim, S., & Zhu, Z. Y. (2021). Does foreign language proficiency help to enhance sustainable online brand community experiences? Modeling the predictors of movie information sharing behavior for young Chinese students staying in Korea. *Sustainability*, 13(11), 6113.
- Kim, J., Forsythe, S., 2008. Adoption of virtual try-on technology for online apparel shopping. *J. Interact. Market.* 22, 45 – 59.
- Komiak, S. Y., & Benbasat, I. (2006). The effects of personalization and familiarity on trust and adoption of recommendation agents. *MIS quarterly*, 941-960.
- Koufaris, M. (2002), “Applying the technology acceptance model and flow theory to on-line consumer behaviour” , *Information System Research*, Vol. 13 No. 2, pp. 205-223.
- Kramer, T., Spolter-Weisfeld, S. and Thakkar, M. (2007), “The effect of cultural orientation on consumer responses to personalization” , *Marketing Science*, Vol. 26 No. 2, pp. 246-258.

- Kressmann, F., Sirgy, M. J., Herrmann, A., Huber, F., Huber, S., & Lee, D. J. (2006). Direct and indirect effects of self-image congruence on brand loyalty. *Journal of Business research*, 59(9), 955-964.
- Kuo, Y. H. (2016). The retailer brand personality-behavioral outcomes framework: Applications to identity and social identity theories (Doctoral dissertation, The University of Arizona).
- Leckie, C., Nyadzayo, M. W., & Johnson, L. W. (2016). Antecedents of consumer brand engagement and brand loyalty. *Journal of Marketing Management*, 32(5-6), 558-578.
- LeFevre, Judith (1988), "Flow and the Quality of Experience During Work and Leisure." In M. Csikszentmihalyi and I. Csikszentmihalyi (Eds.), *Optimal Experience: Psychological Studies of Flow in Consciousness*, New York: Cambridge University Press.
- M.Zaman, M. Anandarajan, Q. Dai, Experiencing flow with instant messaging and its facilitating role on creative behaviors, *Comput. Hum. Behav.* 6 (5), 2010, pp. 1009 – 1018.
- Madupu, V., & Cooley, D. O. (2010). Antecedents and consequences of online brand community participation: A conceptual framework. *Journal of Internet Commerce*, 9(2), 127-147.
- Mahfouz A Y, Joonas K, Opara E U. An Overview of and Factor Analytic Approach to Flow Theory in Online Contexts [J] . *Technology in Society*, 2020, 61: 101228.
- McMillan, S. J. (2002). Exploring models of interactivity from multiple research traditions: Users, documents, and systems. *Handbook of new media*, 2, 163-182.
- Meilatinova, N. (2021). Social commerce: Factors affecting customer repurchase and word-of-mouth intentions. *International Journal of Information Management*, 57, 102300.
- Miller, B. K., & Simmering, M. J. (2022). Attitude toward the color blue: An ideal marker variable. *Organizational Research Methods*, 10944281221075361.
- Muñiz, A.M. and O' Guinn, T.C. (2001), "Brand community" , *Journal of Customer Research*, Vol. 27 No. 4, pp. 412-432.
- N.Csikszentmihalyi, *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play*, Jossey-Bass, San Francisco, 1975.
- Nah, B. Eschenbrenner, D. DeWester, S. Park, Impact of flow and brand equity in 3D virtual worlds, *J. Database Manag.* 21 (3) (2010) 69 – 89.
- Noh, J. S., Jang, H. Y., & Jeon, S. S. (2021). The Influence of e-WOM Information Characteristics on Learning Trust and e-WOM Intention Among Online Learning. *Journal of Logistics, Informatics and Service Science*, 8, 134-150.
- Novak, T. P., Hoffman, D. L., & Yung, Y. F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing science*, 19(1), 22-42.
- Ozdemir, A., Tozlu, E., S en, E., & Ates , o ̇ glu, H. (2016). Analyses of word-of-mouth communication and its effect on students' university preferences. *Procedia - Social and Behavioral Sciences*, 235, 22 – 35.
- Perkowitz, M. & Etzioni, O. (1999), Towards adaptive web sites: conceptual framework and effectiveness, *Computer Networks*, 31(11), 1245-58.
- Phan, Q., Pham, T. N., & Nguyen, L. H. L. (2020). How to drive brand engagement and EWOM intention in social commerce: A competitive strategy for the emerging market. *Journal of Competitiveness*.

- Prentice, C., & Loureiro, S. M. C. (2018). Consumer-based approach to customer engagement – The case of luxury brands. *Journal of Retailing and Consumer Services*, 43, 325-332.
- Rosenberg M. *Conceiving the self*. New York, NY: Basic Books; 1979
- S. Wattal, R. Telang, T. Mukhopadhyay, Information personalization in a twodimensional product differentiation model, *J. Manage. Inf. Syst.* 6 (2), 2009, pp. 69 – 95.
- S.Y.X. Komiak, I. Benbasat, The effects of personalization and familiarity on trust and adoption of recommendation agents, *MIS Q.* 0 (4), 2006, pp. 941 – 960.
- Salamanis, A., Christainas, G., Kehagias, D. D., & Tzovaras, D. (2020, December). A Graph-Based Reputation Assessment System for Online Review Communities. In *2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)* (pp. 375-380). IEEE.
- Schumacker, R.E., Lomax, R.G., 2004. *A Beginner' s Guide to Structural Equation Modeling*. psychology press.
- Skadberg, Y. X., & Kimmel, J. R. (2004). Visitors' flow experience while browsing a Web site: its measurement, contributing factors and consequences. *Computers in human behavior*, 20(3), 403-422.
- Sloan, S., Bodey, K., & Gyrd-Jones, R. (2015). Knowledge sharing in online brand communities. *Qualitative Market Research*, 18(3), 320 – 345.
- Tran, T.P., Lin, C.-W., Baalbaki, S. and Guzman, F. (2020), “How personalized advertising affects equity of brands advertised on Facebook: a mediation mechanism” , *Journal of Business Research*, Vol. 120.
- Trevino, Linda Klebe and Jane Webster (1992), "Flow in Computer-Mediated Communication," *Communication Research*, 19(5), 539-573.
- Wang, E.S.T., Chen, L.S.L. and Tsai, B.K. (2012), “Investigating member commitment to virtual communities using an integrated perspective” , *Internet Research*, Vol. 22 No. 2, pp. 199-210.
- Wang, E.S.T., Chen, L.S.L. and Tsai, B.K. (2012), “Investigating member commitment to virtual communities using an integrated perspective” , *Internet Research*, Vol. 22 No. 2, pp. 199-210.
- Wang, M. Wang, J. Wu, Empirical study on flow experience in China tourism ecommerce market, *J. Ind. Eng. Manag.* 8 (2) (2015) 349 – 364.
- Wang, Y., Zhang, M., Luo, N. and Guo, L. (2021), “Understanding how participating behaviours influenced by individual motives affect continued generating behaviours in product-experience-shared communities” , *Behaviour and Information Technology*.
- Wenting, F., Lijia, W., & Cuixin, G. (2022). The Influence of Social Exclusion Types on Individuals' Willingness to Word-of-Mouth Recommendation. *Frontiers in psychology*, 13, 862003-862003.
- Wiertz, C. and de Ruyter, K. (2007), “Beyond the call of duty: why consumers contributed to firm-hosted commercialonline communities” , *Organization Studies*, Vol. 28 No. 3, p. 347-376.
- Yuan, L., Deng, X., & Zhong, W. (2021). Encouraging Passive Members of Online Brand Communities to Generate eWOM Based on TAM and Social Capital Theory. *IEEE Access*, 9, 12840 – 12851.
- Yuen, Y. Y., Fong, Y. R., & Tan, K. S. (2022). Social Media Marketing Impact on Consumers' Online Purchase Intention. *Journal of Logistics, Informatics and Service Science*, 9(3), 45-52.

Zhang, H., Lu, Y., Gupta, S., & Zhao, L. (2014). What motivates customers to participate in social commerce? The impact of technological environments and virtual customer experiences. *Information & Management*, 51(8), 1017-1030.

Zhang, K. Z., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. *Decision Support Systems*, 86, 95 – 108.

Zhang, L. L., & Kim, H. (2020). The influence of financial service characteristics on use intention through customer satisfaction with mobile fintech. *Journal of System and Management Sciences*, 10(2), 82-94.