



Understanding dark side of online community engagement: an innovation resistance theory perspective

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Abstract

This study examines the dark side of online communities, especially barriers to customer engagement in online communities. A total of 301 responses from online community members were collected to examine the proposed hypotheses based on the Innovation Resistance Theory (IRT). The study also examines the mediating effect of negative anticipated emotions and moderating effect of association tenure and customer prior attitude. The findings suggest that performance, information overload, and social recognition barriers positively impact the users' disengagement intention towards the online community. The negative anticipated emotions mediate the association between barriers and customer disengagement. Also, tenure was found to be a crucial moderator. The study contributes to the dark side of online community literature and suggests marketers how to reduce customer disengagement in online communities.

Keywords Online communities · Innovation resistance theory · Anticipated negative emotions · Tenure · Disengagement

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1 Introduction

The emergence of Web 2.0 has facilitated the creation of many online platforms where individuals with similar interests and beliefs share their ideas, opinions, experiences, and views on a specific topic and establish a sense of obligation towards the other group members (Luo et al. 2020; Anshu et al. 2022; Behl et al. 2022; Jain and Shankar 2022; Tseng et al. 2022). Moreover, digital technologies have brought up a new paradigm shift in every aspect of our society, transforming our lives, especially after the COVID-19 pandemic (Jebarajakirthy et al. 2021; Joshi et al. 2021; Khalil et al. 2022; Brem et al. 2021; Wang et al. 2021a, b; Shankar et al. 2022). Recent studies reveal that the pandemic has reshaped consumer behaviour dynamics with a significant shift toward using online mediums for most of the day-to-day activities (Shankar and Jain 2021; Shankar and Kumari 2019; Shankar et al. 2022). The internet has given individuals a new medium for social activity, bringing up unique aspects of social reality (Shankar et al. 2020; Shankar and Behl 2021; Kim et al. 2004; Wu et al. 2014; Zhao et al. 2015). As a result, companies have started to use online knowledge-sharing platforms to enhance expertise inside the company, decrease the costs related to recurring issues, promote innovation, and learn from failures to capitalise on the shift in consumer behaviour (He and Wei 2009; Li et al. 2022). An online community platform is one of the most used online knowledge-sharing networks (Preece 2000; Liou et al. 2016; Yu 2020). Online communities are platforms run by businesses or individuals to allow customers to engage in product development (Nambisan et al. 2017; Dost et al. 2020; Liao et al. 2021).

The COVID-19 pandemic has significantly contributed to the engagement rate of online communities, with an increase of about 81% since the start of the pandemic (PeerBoard 2022). The survey by PeerBoard (2022) also revealed that usage of online community platforms by a customer tends to improve his overall customer experience and hence increase brand loyalty. A study by The GovLab (2021) revealed that online community platforms are one of the most essential groups to most Facebook users in 11 out of 15 countries. About 59% of organisations worldwide adopted online community platforms for market research in 2018 (Statista 2022). Hence, due to the increasing importance of online communities, most businesses are trying to create an interactive online community to enable like-minded individuals to learn, discuss, and cooperate with each other, which may give them a competitive advantage by knowing their customers better (Mas-simi et al. 2014). The online community also helps the organisation in enhancing the brand engagement of different stakeholders (Cavusoglu et al. 2021). However, despite the high popularity of online communities, many online community platforms cannot continuously motivate their participants towards continuous knowledge contribution and hence fail to maintain long-term participation beyond a short initial engagement (Malinen 2015). Recently, a high user attrition rate has been observed on various online community platforms due to dabbling user behaviour (Ponciano and Brasileiro 2015). Therefore, marketers are facing challenges in keeping the online community active and interactive. Hence, it is

required to investigate crucial psychological and functional barriers that demotivate users from engaging in the online community. Further, online communities are designed to listen to customers' expectations and offer them the tools they need to effect change (Sharma 2015). Therefore, it becomes crucial for corporations to understand the essential factors that help them in reducing customer disengagement in the online community. However, in the existing literature, the majority of the studies emphasised the positive outcomes of using online communities like knowledge sharing (Ma and Agarwal 2007; Wang et al. 2021a, b; Safadi et al. 2021), brand commitment (Liao et al. 2019), loyalty intention (Porter and Donthu 2008; Wang et al. 2009), active participation (Kim et al. 2008), word of mouth (Kim et al. 2008) and continuous usage intention (Tsai and Hung 2019). Investigating the dark side of customer engagement becomes as important as investigating the positive side of online community engagement (Do et al. 2019). The negative notion has been proven to significantly influence individuals more than the positive notion, as individuals tend to focus more on negative stimuli than positive ones (Sinclair et al. 2015). But little effort was made to investigate disengagement intention in the context of online communities. This represents a literature gap. The present study fills this gap by investigating customers' disengagement on online community platforms employing the IRT framework as a theoretical foundation. Innovation resistance theory highlights the psychological and functional barriers, namely, usage barrier, value barrier, risk barrier, image barrier, and traditional barrier (Ram and Sheth 1989). Moreover, innovation challenges individuals to change their status quo, triggering resistance among individuals against the new technological product or service (Hew et al. 2019). Therefore, it becomes imperative to use the IRT framework, which helps companies understand why customers resist technology adoption, reducing new product or service failure (Kaur et al. 2020a, b). As IRT theory has been successfully employed in various contexts (Kaur et al. 2020a, b; van Klyton et al. 2021; Sadiq et al. 2021), we have used IRT as an underpinning theory to investigate customer disengagement intention toward the online community.

The present study aims to answer the following research questions (RQs): RQ1 why do customers represent disengagement intention towards online community platforms? RQ2 how anticipated negative emotions play a crucial role in framing customers' disengagement intention towards the online community? RQ3 does customers' disengagement intention towards online community platforms vary based on tenure and prior attitude towards online community platforms? To answer RQ1 study investigates how different barriers, such as performance, traditional, privacy risk, social recognition, and information overload, are used to frame customers' disengagement intention towards online community platforms. Moreover, we investigated the mediating effects of anticipated negative emotion and the moderating impact of tenure and prior attitude towards online community platforms on customer disengagement intention to answer RQ2 and RQ3, respectively.

This study carries several theoretical and practical contributions. Theoretically, this research enriches the literature on the dark side of online communities. The study investigates the customers' disengagement intention in an online community

context. The study further contributes to the existing research domain by investigating the mediation impact of anticipated negative emotions. Additionally, the present study also enriches the literature by examining the moderating effects of tenure and prior attitudes towards online communities. Moreover, this study also contributes to the IRT (innovation resistance theory) literature.

Practically, the study advises brands that use the online community platform to communicate with their customers about the significant barriers people face while engaging on an online community platform. Additionally, the study recommends what online community admins and brand owners should do to avoid customer disengagement intention.

2 Literature review and hypotheses

2.1 Online communities

Online communities are social platforms run by businesses or individuals to allow many customers to engage in product development and assist companies in optimising the innovation process (Nambisan et al. 2017; Liao et al. 2021). Individual decisions shape online communities, reflecting the accessibility of the internet and the individual need for connectivity, information, and knowledge (Li et al. 2022). Previous literature on online communities has examined different dimensions like loyalty (Kang et al. 2014), trust (Habibi et al. 2014), satisfaction (Oh et al. 2014), participation (Zhao et al. 2018), experience (Chen et al. 2014), word of mouth (Brown et al. 2007), engagement (Martínez-López et al. 2017) and usage intention (Akar et al. 2019). Moreover, Online communities have expanded to various contexts and industries like travel products (Kim et al. 2004), the automobile sector (Essamri et al. 2019), the healthcare industry (Sun et al. 2022), luxury products (Chapman and Dilmeri 2022), tourism industry (Lueg 2006), social media (Hajli 2018), mobile phone (Zhao et al. 2018), hospitality sector (Wong et al. 2016), and education (Kirchner and Lai 2007). However, scant efforts have been put in the past to explore the dark side of using online communities. Therefore, this study will significantly contribute to the literature.

2.2 Innovation resistance theory (IRT)

The innovation resistance theory (IRT) provides a comprehensive framework for understanding customers' resistance to innovations (Chakraborty et al. 2022; Friedman and Ormiston 2022; Ram and Sheth 1989). Also, resistance in the context of innovation can be explained as behavioural intention arising from logical reasoning and judgement towards adopting and applying new technology due to the potential changes caused by adjustments to the existing status quo and diversion from the current value system (Hew et al. 2019). Researchers have discovered that customer resistance is critical in determining whether new technological innovations will succeed or fail (Kaur et al. 2020a, b). According to IRT, innovation resistance could be active or passive (Kaul

Table 1 A literature review of innovation resistance

References	Context	Barriers	Findings
Chen et al. (2022)	Mobile ticketing application	Usage, value, risk, tradition, image	All barriers have a negative influence on willingness to use
Sadiq et al. (2021)	Eco-friendly cosmetics	Usage, value, risk, tradition, image	All barriers have a negative impact on purchase intention
Kaur et al. (2020a, b)	Food delivery applications	Usage, value, risk, tradition, image	Usage and tradition barriers have a negative association with intention to use food delivery applications. Also, value and image barriers have a negative association with word of mouth
Kaur et al. (2020a)	Mobile payments	Usage, value, risk, tradition, image	Usage, value and risk barrier have a negative correlation with usage intention. Also, Usage and value barriers have a negative correlation with intention to recommend
Ma and Lee (2019)	MOOCs (massive open online courses)	Usage, value, risk, tradition, image, individual level barrier, environmental level barrier	Usage, value and tradition barriers have a significant impact on resistance to MOOC learning
Matsuo et al. (2018)	Internet banking	Complexity, performance risk	Complexity and performance risk barriers have a significant impact on innovation resistance
Oktavianus et al. (2017)	Mobile gaming	Usage, value, risk (physical risk, economic risk, functional risk, time risk), psychological risk (social, tradition, image)	Usage barrier, time risk, functional risk, physical risk and social barrier have a significant impact on playing game intention
Jansukpum and Kettem (2015)	Online travel	Usage, value, risk, tradition, image	All barriers have a significant impact on consumer resistance
Lian and Yen (2014)	Online shopping	Usage, value, risk, tradition, image	Value, risk and tradition barriers have a negative impact on online shopping intention

et al. 2020a). Active resistance is investigated through functional barriers such as usage, value, and risk barriers. On the other hand, passive resistance is examined through psychological barriers such as tradition and image barriers (Dang et al. 2022; Purwanto et al. 2021; Yu and Chantatub 2016). The IRT framework has been used in various contexts (Refer to Table 1), such as internet banking services (Matsuo et al. 2018), e-shopping (Lian and Yen 2014), mobile banking (van Klyton et al. 2021), online food delivery (Kaur et al. 2020a, b), online gaming (Oktavianus et al. 2017), eco-friendly cosmetics (Sadiq et al. 2021). However, in many respects, online communities vary from the contexts stated above: Online communities feature relevant user-generated content, and online community members are often brand supporters. Moreover, there is a two-way interaction between brands and users, and users may suggest and discuss improvements to the company's products or services. As a result, the online community context is distinct and should be viewed through the lens of IRT. However, the impact of resistance barriers on disengagement intention in the context of online communities is not explored in the existing literature. Therefore, we have applied the IRT framework to investigate customer disengagement behaviour in the online community context.

2.3 Impact of resistance barriers on disengagement intention towards online communities

In this study, we have examined the effect of performance barrier, privacy risk barrier, traditional barrier, social recognition barrier, and information overload barrier on disengagement intention toward online community platforms. We have added the social recognition and information overload barriers to the IRT framework variables for a better understanding of the phenomenon (Fig. 1).

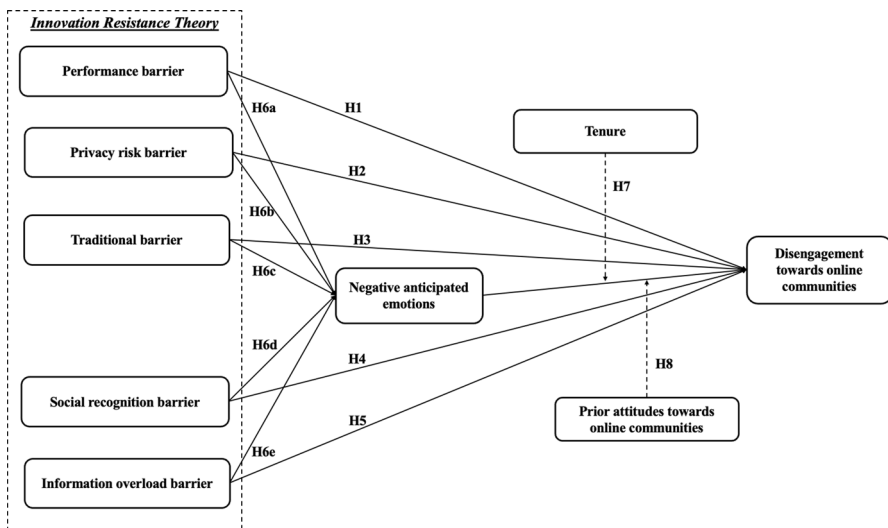


Fig. 1 Proposed framework

2.3.1 Performance barrier

Uncertainty in the decision-making situation is a significant component in an online setting. Uncertainty costs are defined as the psychological ambiguity or risk perception associated with the performance of a new alternative (Kim and Kankanhalli 2009). Performance barrier raises the expectation of adverse outcomes, resulting in an unfavorable attitude and negatively influencing the user's desire to use the new technology (Khanra et al. 2021; Polites and Karahanna 2012; Benlian and Hess 2011). Emotions and feelings such as anxiety have been associated with risk and ambiguity perceptions (Kaur et al. 2020a, b; Eriksson et al. 2021; Kummer et al. 2017; Inder and O'Brien 2003). Therefore, due to uncertainty regarding the performance of online social communities, customers tend to resist using an online community platform; instead, they prefer to use traditional offline community platforms. Therefore, we propose the following hypothesis:

H1 Performance barrier positively influences customer disengagement towards online communities.

2.3.2 Privacy risk barrier

The risk that online businesses would obtain and misuse personal information about individuals is a privacy risk barrier (Dimitrova et al. 2021). There is considerable anxiety about security concerns and internet information usage regarding personal information privacy and unintentional uses (Chen et al. 2022; Wong et al. 2021; Roca et al. 2009). Therefore, customers in an online setting are hesitant to provide their financial and personal information. They believe their data would be used without their permission and could be inappropriately leaked to other organisations (Lim 2003). Moreover, Privacy risk is crucial in adopting or continuing the usage of online services (Poon 2008; Roca et al. 2009; Shankar et al. 2021a, b, c). Therefore, we propose the following hypothesis:

H2 Privacy risk barrier positively influences customers' disengagement towards online communities.

2.3.3 Traditional barrier

Traditions influence the effectiveness of any product or service, and traditions are deeply established in society and people's lives (Ray et al. 2022; John and Klein 2003). Any potential conflict with them leads to a significant customer reaction in the form of negative word-of-mouth, negative publicity, and boycotting (Kaur et al. 2020a). Tradition barriers are also linked to lower innovation adoption intentions (Sadiq et al. 2021; Migliore et al. 2022; Antioco and Kleijnen 2010). Previous studies related to the usage of digital platforms have examined the impact of traditional barriers in various contexts, such as online shopping or e-shopping (Lian and Yen 2014), online gaming (Oktavianus et al. 2017), e-tourism (Jansukpum and Kettem

2015) and mobile commerce (Moorthy et al. 2017). However, the impact of traditional barriers in the online community is yet to be seen. Therefore, we propose the following hypothesis:

H3 Traditional barrier positively influences customers' disengagement towards online communities.

2.3.4 Social recognition barrier

Social recognition is an essential feature that explains why individuals share knowledge with their peer group (Nayak et al. 2020; Hossain et al. 2018). Social recognition, often known as reputation, is a social variable assessed and supported by others in a community (Balleys et al. 2020). In the present study, social recognition might be understood as to how the individual feels by active involvement on a social media community platform via content sharing would improve their social standing among other members of the online community (Hsu and Lin 2008). According to Maslow's hierarchy of needs theory, seeking admiration and seeking social recognition are significant inherent human needs (Hossain et al. 2018). Moreover, the lack of social recognition has negative effects on humans in terms of mental and physical well-being (Townsend and McWhirter 2005). Hence, social recognition is often considered an important social construct which has a direct impact on consumer behavior in an online setting (Helm et al. 2013; Kim et al. 2009). Therefore, we propose the following hypothesis:

H4 Social recognition barrier positively influences customers' disengagement towards online communities.

2.3.5 Information overload barrier

Information overload is a situation in which a person cannot comprehend and absorb all communication inputs (AlHeneidi and Smith 2021; Rogers and Agarwala-Rogers 1975). Information overload can happen in two situations; first, when there is too much information or messages given to the receiver at one time; second, when the information or message is not correctly organised (Jones et al. 2004). Also, information overload can lead to online fatigue, which increases the chances of mistakes, leading to disengagement from the social network community (Bock et al. 2010; Farhoomand and Drury 2002). Individuals must engage with one another for communities to operate, whether offline or online (Zhang et al. 2022). However, engagement entails the strain of interacting with other people, which sometimes becomes difficult to cope with all the communication inputs (Yu et al. 2018). The present study focuses on information overload as a significant barrier in online community platforms, influencing users' disengagement. Therefore, we propose the following hypothesis:

H5 The information overload barrier positively influences customers' disengagement towards online communities.

2.4 Mediating effects of negative anticipated emotions

Anticipated negative emotions are described as unpleasant feelings that may develop as a result of a particular action (Escadas et al. 2019; Wang 2011). Researchers have examined the impact of anticipated negative emotions in terms of products and services in the past (Romani et al. 2012; Dahl et al. 2001; Soscia 2007; Nyer 1997). Various emotions, such as sadness, anxiety, tension, guilt, worry, and shame, have been used to express negative emotions (Conner et al. 2006; Walsh 2005). Hence, negative anticipated emotion directly relates to customer intentions; however, it has no significant impact on customer behavioural outcomes (Escadas et al. 2019; Tangney et al. 2007; Abraham and Sheeran 2003). Considering the literature on anticipated negative emotions, an exhaustive examination of the online community behavioral response phenomenon is still lacking. Moreover, individuals with strong community attachment and awareness of consequences may anticipate experiencing negative emotions in response to various barriers in their online community (Rosenthal and Ho 2020; Landon et al. 2017). Therefore, we argue that in the context of functional and psychological barriers in the online community, anticipated negative emotions related to those barriers may drive disengagement intentions. Customer disengagement is a psychological phenomenon of detachment from an online community platform caused by the weakening or destruction of the emotional connection between the customer and the online community platform (Perrin-Martineng 2004). Extant literature is available to understand the customer engagement intention towards online communities, brands, mobile applications, and social media platforms (Shankar et al. 2021a, b, c; Chahal et al. 2019; Wang and Lee 2020; Marino and Lo Pesti 2018). However, very limited efforts have been made to study the factors influencing disengagement intention towards online community platforms. Therefore, we propose the following hypothesis:

H6 Negative anticipated emotions mediate the relationship among (a) Performance barrier (b) Privacy risk barrier (c) Traditional barrier (d) Social recognition barrier (e) Information overload barrier and customers' disengagement towards online communities.

2.5 Moderating effects of tenure and prior attitudes towards online communities

Tenure, also known as membership duration, refers to how much time individuals spend on online community platforms and how acquainted they grow with the community platform and other users (Kang et al. 2021). Tenure, in simple terms, is the duration of an individual's time as a particular online community platform member (Wang and Fesenmaier 2004). Users learn to adapt and engage more regularly with service providers and other users as their tenure and experience increase (Kang et al.

2021). Membership duration, i.e., tenure, positively correlates with deeper engagement on online community platforms (Kozinets 1999). Membership tenure on an online community platform determines an individual's attachment to the platform and other community members (Ma and Agarwal 2007; Wang and Fesenmaier 2004). Moreover, membership duration tends to enhance the social identity perception among online community members (Wang and Fesenmaier 2004). In general, tenure may foster a feeling of either trust or mistrust, depending on whether the individual has had a favourable or unfavourable experience on the online community platform (Luhmann 2018). As a result, we suggest that tenure moderates the association between anticipated negative emotions and disengagement intention.

A significant predictor of the variation in consumer behaviour is the prior attitudes of people, which moderate how they process new information and whether they accept or reject it (Burke et al. 2018). Individuals' prior attitudes are widely studied, and prior attitudes may be valuable information for future decision-making (Zhang et al. 2016). Prior attitudes and beliefs lead to more consistent information being presented to prevent the emotional stress that comes with tensions caused by contradicting thoughts (Li et al. 2021; Gasper et al. 2016). Research shows that people with a positive attitude towards online community platforms are more likely to continue their engagement on the platform (Corner et al. 2012; Nambisan and Watt 2008). In contrast, people with less established prior attitudes are more inclined toward disengaging from the online community platform (Langerak et al. 2003; Maio et al. 1996).

Therefore, we propose the following hypothesis:

H7 The influence of negative anticipated emotions towards disengagement from online communities is stronger for users who associated with the online community for longer tenure compared to users who associated for a short tenure.

H8 The influence of negative anticipated emotions towards disengagement from online communities is stronger for users having a prior attitude compared to users having no prior attitude towards online communities.

3 Methodology

3.1 Data collection

The data was collected from the users of online community platforms. A structured survey questionnaire was used to collect data, which comprised of questions adopted from previous literature in online communities. We have asked a screening question, "Are you an active member of any online community platform?" to ensure that the correct audience qualifies for the study. We employed a survey-based cross-sectional research design. A market research company named Prolific Academic was used to collect the data from online community members. It is considered one of the most reliable platforms for data collection where researchers can clearly define their target sample to get accurate and clean data (Bhutto

et al. 2021; Talwar et al. 2021). As this study aimed to make the results more generalisable, the survey questionnaire was circulated to respondents all over the globe using a simple random sampling approach. The survey was administered in the English language. The survey questionnaire was sent to 550 respondents, receiving about 337 responses, of which 36 responses were incomplete and irrelevant. Therefore, after deleting them, we were left with 301 responses for further analysis. Siddiqui (2013) suggested that a sample size of above 300 is considered a good sample size for conducting a structural equation modelling (SEM) based analysis. The data collected was free of outliers and normally distributed. The age distribution of respondents was from 20 to 48 years, having an average age of 25.35 years old (Female = 56.12%). It was found that 36% of the respondents had been members of at least one of the online community platforms for over one year. Finally, the collected data was analysed using SPSS AMOS software.

3.2 Survey development

The items measuring the construct in this study have been adopted from previously validated scales in the literature. However, specific changes were made to the phrasing of the items to make them more appropriate for the research. A group of subject experts, including professors and professional researchers in the marketing field, were selected to content test the survey instrument. In addition, a pilot study was carried out with 10 participants who represented the members of an online community platform. Minor changes to the survey items were made in response to comments from the expert group and the pilot study. All the constructs were operationalised using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Table 2 contains the scale items with their literature sources. Refer to Appendix 1 for survey questions.

4 Data analysis and results

4.1 Measurement model

We performed a Confirmatory Factor Analysis (CFA) using AMOS software to assess the reliability and validity of the measurement items used in the survey questionnaire (Hair et al. 2010). The findings of CFA presented in (Table 3) represent that Cronbach's alpha for all variables is above 0.7 to ensure consistency (Hair et al. 2010). We examined the convergent and discriminant validity to assess the validity of the measurement scale (Hair et al. 2010). The values of average variance extracted (AVE) and composite reliability (CR) for all the constructs are above 0.5 and 0.7, respectively, thereby confirming the convergent validity of the scale (Hair et al. 2010). The findings of discriminant validity (Table 3) show that the square root of AVE for each construct is greater than the correlation coefficients of the corresponding constructs, confirming the discriminant validity of

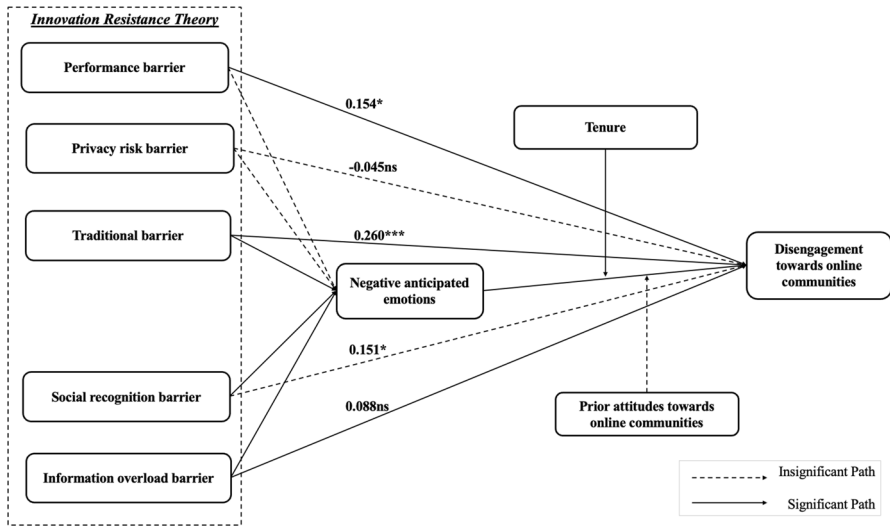


Fig. 2 Hypothesis results

the measurement constructs (Fornell and Larcker 1981). The variance inflation factors (VIF) for the study variables were calculated to check for multicollinearity. The VIF values ranged from 2.32 to 3.19, which were less than the threshold value of 5, suggesting that all the variables considered in the study were free from any issues related to multicollinearity (Hair et al. 2010).

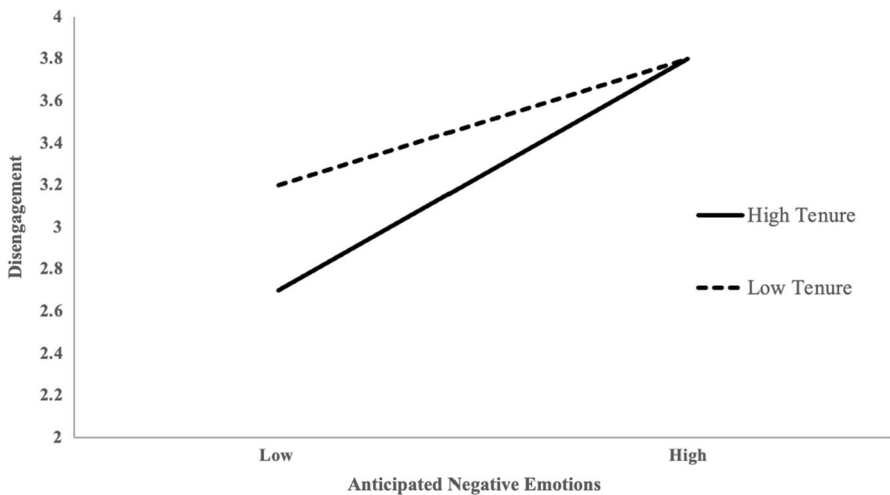


Fig. 3 Moderating impact of tenure between negative anticipated emotions and disengagement towards online communities

Table 2 Measurement model

Variables and items	FL
<i>Performance barrier (PB)</i> (Prakash and Das 2021)	
PB1	0.893
PB2	0.885
PB3	0.872
PB4	0.859
<i>Traditional barrier (TB)</i> (Kaur et al. 2020a, b)	
TB1	0.857
TB2	0.932
TB3	0.900
TB4	0.835
<i>Privacy risk barrier (PRB)</i> (Shankar et al. 2021a, b, c)	
PRB1	0.769
PRB2	0.849
PRB3	0.773
<i>Information overload barrier (IB)</i> (Bock et al. 2010)	
IB1	0.910
IB2	0.876
IB3	0.823
<i>Social recognition barrier (SB)</i> (Helm et al. 2013)	
SB1	0.887
SB2	0.927
SB3	0.921
SB4	0.887
<i>Consumer disengagement (CD)</i> (Shankar et al. 2021a, b, c)	
CD1	0.931
CD2	0.923
CD3	0.883
<i>Negative anticipated emotion (NE)</i> (Romani et al. 2012)	
NE1	0.925
NE2	0.927
NE3	0.919
NE4	0.921
<i>Prior attitudes (PA)</i> (Nambisan and Watt 2008)	
PA1	0.842
PA2	0.914
PA3	0.893
PA4	0.808

FL Factor loading

Table 3 Discriminant validity analysis

Variables	AVE	CR	α	PB	TB	PRB	IB	SB	NE	PA	CD
Performance barrier (PB)	0.77	0.93	0.93	0.88							
Traditional barrier (TB)	0.78	0.93	0.93	0.22	0.88						
Privacy risk barrier (PRB)	0.64	0.84	0.83	0.05	0.12	0.80					
Information overload barrier (IB)	0.76	0.90	0.90	0.14	0.13	0.24	0.87				
Social recognition barrier (SB)	0.82	0.95	0.94	0.18	0.21	0.17	0.12	0.91			
Negative anticipated emotion (NE)	0.85	0.96	0.92	0.17	0.33	0.02	0.24	0.20	0.92		
Prior attitudes (PA)	0.75	0.92	0.95	0.04	-0.14	-0.03	-0.05	-0.01	-0.15	0.86	
Customer disengagement (CD)	0.83	0.94	0.93	0.24	0.33	0.05	0.21	0.18	0.35	-0.22	0.91

AVE= Diagonal value shown in bold indicates the square root of AVE of the individual latent construct

Table 4 Path analysis

Path	Beta	Standard error
Social recognition barrier → customer disengagement	0.088 ns	0.07
Information overload barrier → customer disengagement	0.151*	0.075
Privacy risk barrier → customer disengagement	-0.045 ns	0.118
Traditional barrier → customer disengagement	0.26***	0.064
Performance barrier → customer disengagement	0.154*	0.07

ns implies that *p*-value is not significant

***Implies that *p*-value is < 0.001

*Implies that *p*-value is < 0.05

Table 5 Mediation analysis

Hypothesis	Indirect effects	Direct effect	Mediation
Performance barrier → NAE → CD	0.016 ns	0.138*	No mediation
Traditional barrier → NAE → CD	0.062***	0.199**	Partial mediation
Privacy risk barrier → NAE → CD	-0.019 ns	-0.025 ns	No mediation
Information overload barrier → NAE → CD	0.046***	0.105 ns	Full mediation
Social recognition barrier → NAE → CD	0.028*	0.06 ns	Full mediation

NAE Negative anticipated emotion, CD Customer disengagement, ns not significant

*** *p* < 0.001

** *p* < 0.01

* *p* < 0.05

4.2 Common method variance (CMV)

We employed several techniques to assess the presence of common method variance. As a non-statistical measure, the clarity of the survey items and the confidentiality of the respondents was ensured to confirm the absence of common method variance (Jebarajakirthy and Shankar 2021). As a statistical measure to assess the probability of CMV, Harman's one-factor test was performed. According to the analysis, one-factor items explained 18.28% of the variance, which is less than the suggested threshold value of 50%. This demonstrates that the study was free from the risk of CMV (Podsakoff 2003). CMV was also examined by including a marker variable in the survey questionnaire. The correlation between the marker variable and research variables was very low, indicating the non-occurrence of CMV.

4.3 Hypothesis testing

Our results shown in (Fig. 2 and Table 4) indicate that the performance barrier, traditional barrier and information overload barrier have significant positive impacts on customer disengagement intention towards online community platforms. Hence, H1,

H3, and H5 are supported. However, the results show that the privacy risk barrier and social recognition barrier did not have a significant effect on customer disengagement intention toward online community platforms, thereby indicating that H2 and H4 are not supported.

We used Model 4 in Process Macro (Hayes 2013) with a non-parametric bootstrapping method for 2000 resamples to examine the mediation effects of anticipated negative emotions between barriers and customer disengagement intention towards online community platforms. Results highlighted in Table 5 shows that anticipated negative emotions partially mediate the association between traditional barrier and customer disengagement intention towards online community platforms. Also, we can see from Table 5 that anticipated negative emotions fully mediate the association between the information overload barrier, social recognition barrier and customer disengagement intention toward online community platforms. Hence, H6c, H6d and H6e are supported. In comparison, anticipated negative emotions did not mediate the association among performance barriers, privacy risk barriers and customer disengagement intention towards online community platforms. Hence, H6a and H6b are not supported.

To test the moderation hypotheses, we used bootstrap estimates from 2000 samples using Model 1 in Process Macro (Hayes 2013). Table 6 and Fig. 3 shows that the influence of anticipated negative emotions towards disengagement from online communities (Effect=0.0026; LLCI=0.000, ULCI=0.0052) is stronger for customers with longer tenure compared to short tenure association, thereby supporting H7. However, the influence of anticipated negative emotions towards disengagement from online communities (Effect=0.0487; LLCI=-0.0707, ULCI=0.1681) is not stronger for customers with prior attitudes compared to no prior attitude towards online communities. Hence, H8 is not supported (Table 6).

5 Discussion

Consistent with previous findings in other contexts, the results indicated that performance, traditional, and information overload barriers are positively associated with customer disengagement (Kaur et al. 2020a, b; Kefi and Perez 2018). The results indicated

Table 6 Moderation analysis

Paths	Effects	Boot SE	Bootstrap 95%		Moderation
			Lower	Upper	
Tenure					
Negative anticipated emotion → customer disengagement	0.0026	0.0013	0.000	0.0052	Yes
Prior attitude					
Negative anticipated emotion → customer disengagement	0.0487	0.0607	-0.0707	0.1681	No

that performance barriers significantly positively affect disengagement behaviour. As online community as a concept is still in the nascent stage, customers are unaware of their characteristics and the usage of online community platforms. Customers are also unsure of what benefits they would get from being active members of online community platforms. Further, customers perceived that becoming an online community member might be complex and therefore represent disengagement intention towards it.

However, contrary to the previous findings (Kaur et al. 2020a), results indicated that traditional barriers significantly enhance customers' disengagement intention towards online communities in other contexts. Many users prefer to connect with other members in an offline setting as it gives them a feeling of belongingness and reality. Moreover, people believe that using the online medium to connect with other people could make them lose touch with reality; therefore, people still prefer traditional communities. Also, online communities require reading, writing, and typing skills, which many people still lack across the globe. Therefore, it becomes evident that they choose traditional communities over online communities.

The findings of our study also indicated that information overload positively impacts customer disengagement intention, which is consistent with Bock et al. (2010). The abundance of irrelevant information on an online community platform causes online fatigue, forcing users to disengage from the online community platform. Therefore, companies should filter the information a user gets to reduce information overload fatigue. Results also indicated that privacy risk barriers have no significant effect on customer disengagement intention. People tend to become a member of an online community only if the company is branded and well-renowned; hence, customers are sure of privacy concerns over community platforms. Hence, customers do not feel insecure about using online community platforms. Similarly, contrary to previous literature (Helm et al. 2013), in other contexts, social recognition barriers do not significantly impact customer disengagement intention. Studies have shown that rewards such as virtual badges (Wang et al. 2021a, b) can be seen as a social recognition for active participation, enhancing customers' satisfaction. However, our results show that it is not an essential parameter to enhance engagement among community members.

Consistent with the previous study (Hwang et al. 2019), in other contexts, results suggested that anticipated negative emotions play an essential role in framing customers' resistance intention. If customers perceive barriers to using online community platforms, then they tend to show negative emotions and ultimately represent resistance to the platform. Finally, results indicate that members with a long association with the online community have more impact on the disengagement intention of online communities for customers than members with a short tenure association. However, members with a prior attitude towards online communities have no significant impact on the disengagement intention of an online community for customers than members with no prior attitude. This is because people tend to develop a sense of belongingness if the association period is long. Also, because new people join online communities regularly, prior attitudes do not impact user behavioural outcomes.

6 Implications

6.1 Theoretical implication

The present study has several academic implications. We have proposed a framework with the underpinnings of IRT and empirically validated it in the online community context; hence, this study enriches online community literature. Online community platforms have received much attention from researchers in the last few years. However, most studies focus on the positive side of online community platforms (Kumar 2019; Vohra and Bharadwaj 2019; Makri and Turner 2020). Hence, little effort was made to examine customers' disengagement intention on an online community platform, especially scant efforts were made to investigate the dark side of customers' behavioural intention in different online community contexts. This study enriches the online community-related literature by investigating the effects of functional and psychological barriers on customers' disengagement intention towards using online community platforms. The findings of this study will illuminate the online community literature towards understanding the dark side of using online communities, and future researchers can use this paper as a foundation to build their framework.

The present study enriches the innovation resistance theory (IRT) literature by extending the framework to examine the disengagement intention in online communities' context. Moreover, we have added two new barriers, i.e., the information overload barrier and the social recognition barrier, to make it more suitable for the online community context, which can be used in related contexts for investigating disagreement behaviour.

This study extends the customers' emotions-related literature by investigating the mediating effects of anticipated negative emotions on the association between barriers and resistance intention. The present study also enriches the tenure and prior attitudes literature as we have used them as moderators in this study. The mediating and moderating variables used in the present study were rarely explored in the literature. However, due to the high contextual relevance of these variables, we have considered anticipated negative emotions, tenure and prior attitudes as mediators and moderators, respectively. Therefore, this study contributes significantly to the literature by providing new variables used as mediators and moderators in the online community context.

The study also examines how tenure and prior attitudes moderated the relationship between anticipated negative emotions and customer disengagement intention for a deeper understating of the phenomenon.

6.2 Managerial implication

Based on the findings of our study, we provide some insightful suggestions to online community admins and marketers. Because our studies reveal that performance, traditional, and information overload barriers contribute to customers' disengagement from online community platforms, companies and group admins

should keep these three hurdles in mind when operating online community platforms. More specifically, to reduce performance barriers, marketers should provide a solution that is easy to use and understand. The organisation should include gamification features on the community platforms to motivate customers to stay engaged in the online community platform. Marketers should also ensure that there is no cyberbullying on the online community platforms to reduce customers' traditional risk.

Marketers should also ensure the quality of the content shared on the online community platform, and it should encourage all its members to engage in knowledge sharing. It is also seen that customers tend to isolate themselves from the online community platform due to information overload. Therefore, companies should ensure that customers get notifications for relevant content only to keep them motivated to be active online community members. Most importantly, when it comes to social media online communities, it is seen that due to the abundance of information, the user faces social media fatigue; therefore, it is advised that organisations should filter the information or messages for users by using AI and machine learning techniques so that the user only gets content in which he or she is interested. Organisations should aim to create simple-to-use online community platforms so that new users can quickly adapt to the new system when they join the platform. Marketers can also aim to meet community user requirements so that their customers get value from the online community platform. Marketers can provide easy access to the brand representatives, where they respond to online community user queries within 24 h. The lack of these hurdles might encourage customers to utilise and suggest a particular online community platform to others. The study also suggested that anticipated negative emotions are crucial in framing customers' disengagement intention towards online community platforms. Hence, the organisation should provide utilitarian and hedonic values to reduce the negative emotions of online community users. Marketers can provide virtual badges to active users on online community platforms, motivating them to participate in community activities actively.

Moreover, organisations should enhance their online community visibility by engaging with celebrities and subject matter experts, which could help enhance user motivation to engage on the platform. Online community users tend to experience anticipated negative emotions when the platform's perceived performance does not match the user's expectations. Therefore, marketers should add a feedback form option on the platform where online community members can put their suggestions which could be implemented by the organisation if found to be a significant issue to several members. Moreover, the organisation should make its online community platform more interactive and user-friendly with minimal page loading speed. The activities mentioned above will significantly enhance the hedonic and utilitarian values of online community members.

Finally, results suggested that prior customer attitudes have significant moderating effects; hence, marketers should consider prior customer attitudes as an essential variable when providing online support to customers. Marketers should keep track of the online activities of their community members so that they can predict their behaviour. Moreover, brands can personalise content according to the preferences of the online community users.

7 Limitations and future research directions

Although this research has many implications, some research restrictions and suggestions were provided for future studies. First, our proposed model was confined to online community platforms. Future researchers could utilise the current framework in other contexts as well. Second, due to the limitation of time and resources, we have collected cross-sectional data. However, we suggest that future researchers test the current model using longitudinal data to understand the change in human behaviour over time. Third, the current study has used only a limited number of variables in the model. However, future researchers can add more variables like loneliness, social support, envy, and shyness to better understand the attributes of online communities. Also, the demographics of the online community users could limit the findings of this study as most of the respondents were young (average age = 25.35). Therefore, future studies could examine the disengagement intention of old-age online community members. Finally, we investigated customer disengagement intention only. Future studies can examine adoption and disengagement behaviour using the dual-factor model for a deeper understanding of the phenomenon.

Appendix 1

Survey questions

Scale items

Performance Barrier (PB) (Prakash and Das 2021)

PB1: I'm worried whether online community platform will really perform as well, as it is supposed to

PB2: The thought of using online community platform causes me to be concerned about how reliable its service will be

PB3: I am concerned that online community platform will not provide the level of benefits I would be expecting

PB4: I believe the online community platforms are not technically mature so far

Traditional Barrier (TB) (Kaur et al. 2020a, b)

TB1: I find it difficult to get my problem resolved from an online community platform

TB2: I find it difficult to get information about online community platform use

TB3: I find it difficult to contact group members at online community platform

TB4: I find that group interaction on an online community platform is not very pleasant

Privacy Risk Barrier (PRB) (Shankar et al. 2021a, b, c)

PRB1: I would not be comfortable sharing my information with the online community platform

PRB2: All things considered; the online community platform causes serious privacy problems

PRB3: I am sensitive about the way online community platform handles my personal information

Information Overload Barrier (IB) (Bock et al. 2010)

IB1: I cannot effectively process all the information I read on online community platform

IB2: I am overwhelmed with the information I read on online community platform

IB3: I might have missed an important piece of information I read on online community platform

Scale items

Social Recognition Barrier (SB) (Helm et al. 2013)

SB1: I experience that my contribution on online community platform is not appreciated although I do my best

SB2: I try in vain to be recognized at a online community platform for my good contribution

SB3: Sometimes I miss being appreciated and accepted by others at a online community platform

SB4: I think I deserve more respect at an online community platform

Consumer Disengagement (CD) (Shankar et al. 2021a, b, c)

CD1: I am not actively participating in the online community platforms

CD2: I no more enjoy interacting at online community platforms

CD3: I do not spend my time in exploring different online community platforms

Negative Anticipated Emotion (NE) (Romani et al. 2012)

NE1: While using online community platforms, I feel embarrassment

NE2: I dislike using online community platforms

NE3: While using online community platforms, I feel Anxious

NE4: While using online community platforms, I feel Frustrated

Prior Attitudes (PA) (Nambisan and Watt 2008)

PA1: Spending time on online communities was pleasurable

PA2: Spending time on online communities was worth my time

PA3: Spending time on online communities was valuable

PA4: Members in the online community platform was friendly

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