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What Drives Participation Behaviour in Interest-Based Online Communities? An Empirical Assessment from the Indian Context

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ABSTRACT

Purpose: Interest-based online communities (IBOCs) have emerged as the new digital hubs for knowledge sharing and socializing, yet member retention and active participation remain a struggle for many such communities. This study proposes and empirically tests a dual pathway model explaining drivers of participation behaviour (PA) through the lens of social and utilitarian factors, while also investigating the relative influence of each driving factor on PA.

Methods: A structured questionnaire was used to collect data from 266 IBOC members in India, and the data were analysed using partial least squares structural equation modelling (PLS-SEM).

Findings: The findings highlight that both social drivers (SD) and functional drivers (FD) exert a significant and positive influence on PA. However, FD emerged as the stronger predictor among the two drivers, exerting nearly twice the influence of SD. Both drivers jointly explained 55.4% of the variance in PA.

Implications: This study shows that users are inclined towards heightened participation in IBOCs due to the deeper influence of pragmatic information-seeking and problem-solving motives, while social factors also remain valid. These insights offer direct implications for IBOC managers, platform architects, and interface designers seeking to encourage user participation and ensure community sustenance in these interest-based digital contexts.

Originality: This study enriches the literature in the context of IBOCs by extending social identity theory and the uses-and-gratifications perspective, distinguishing and examining both the impact and relative influence of relational and utilitarian motivations on PA in non-commercial and interest-based settings. It develops and validates a dual pathway framework explaining the influence of motivating factors on PA in IBOCs, thereby providing community managers, platform designers, and other stakeholders with useful insights.

1. Introduction

A significant proportion of socialization today has moved online because of increased access to the internet and digital communities. With the expansion of internet infrastructure, there is no longer any limitation of proximity or geographical location for individuals, as they can now form groups online to share knowledge, find solutions, and pursue common hobbies and passions (Ancillai *et al.*, 2025; Priharsari & Abedin, 2021). While the early internet era saw these communities being hosted in the form of forums and bulletin boards, today the same motivation drives participation across WhatsApp groups, Reddit threads, Q&A platforms, gaming communities, travel communities, fan communities, and peer health networks (Ayoub & Wani, 2025; Binsuhaim, 2025; Morini *et al.*, 2025; Xu *et al.*, 2026). Despite the diverse formats, they all share one common structural dependency: they only survive if members keep showing up and contributing (Liu *et al.*, 2024; Zhu & Dawson, 2023).

This has attracted the interest of marketers and academicians alike in the field of online communities in recent years. However, a noticeable skew is observed across these studies, as much of the marketing and management research is concentrated on commercially oriented communities, such as brand communities and firm-sponsored communities (Dessart *et al.*, 2015; Hook *et al.*, 2018; Matthes *et al.*, 2025; Yoon *et al.*, 2025). In contrast, non-commercial online communities, which are primarily interest-driven ecosystems governed by voluntary user

participation, are found to be relatively less theorized and under-researched (Chen & Ku, 2013; Lai & Chen, 2014; Lundgren & Crippen, 2024). Within the broader landscape of online communities (OCs), the distinction between these two types of OCs is important when examining the motivational factors driving long-term participation and the desired sustenance of these OCs. Interest-based online communities (IBOCs) are voluntary, non-hierarchical online spaces that are organized around shared hobbies and leisure interests or, in some cases, around thematic concerns such as health information, online gaming, travelling, competitive examination preparation, spirituality, etc. (Chen & Ku, 2013; Khambatti *et al.*, 2004; Malinen, 2015). On the other hand, commercially managed OCs have formal role structures, incentive-driven participation, and a heavy influence of brand love as the central theme connecting the members (Brodie *et al.*, 2013; Dessart *et al.*, 2015). Due to these fundamental differences in the underlying structure and operations, the present study attempts to examine the participation dynamics unique to the context of IBOCs from both theoretical and practical perspectives.

Furthermore, extant literature on commercial communities has often explored participation in relation to customer engagement, brand loyalty, purchase intentions, or firm-centered value co-creation (Dessart *et al.*, 2015; Hollebeek *et al.*, 2014). In contrast, participation in IBOCs is directly related to community members' desire to solve their problems, acquire new information, and share their experiences with others who have similar interests. As the continued relevance of an IBOC heavily depends on whether community members choose to contribute actively without any external prompting or reward, this study fulfills the need to explore the motivating factors that inspire that choice (Lai & Chen, 2014; Priharsari & Abedin, 2021).

An important challenge faced by many IBOCs is the imbalance between passive and active members. It is observed that, among the large pool of community members, only a small proportion actively contributes, while the others remain passive observers or lurkers (Amichai-Hamburger *et al.*, 2016; Lai & Chen, 2014). The absence of a professional moderator or commercial infrastructure in IBOCs poses a further challenge in regulating and encouraging ongoing participation. A weak sense of community and lower intention to participate are reported to be major issues that pose a threat to the vitality of an OC (Zhu & Dawson, 2023). Moreover, existing literature on OC participation has predominantly approached it through volume-based metrics, such as counting the number of posts, visits, or frequency of logins, while largely neglecting the quality of contribution. Therefore, exploring the behavioural aspects of participation is necessary to understand the difference between active and passive members in a non-commercial digital environment.

While a substantial volume of empirical work on online communities exists, no unified framework explains the drivers of participation across different types of IBOCs (Malinen, 2015). Studies have been conducted in niche contexts such as knowledge-sharing and Q&A communities; however, a comparative analysis of different participation antecedents spanning several types of IBOCs remains unexplored (Wang *et al.*, 2022; Wen *et al.*, 2022; Zhou *et al.*, 2025). This raises an important question, particularly relevant to IBOCs: Are members more motivated by the sense of belonging they experience in their OC, or are the practical information and solutions they obtain there the primary drivers?

The present study addresses this question by proposing and testing a dual-pathway model (Figure 1), in which Participation Behaviour (PA) is explained through two higher-order constructs: social drivers and functional drivers. While social drivers (SD) capture user motivations grounded in identity and social benefits, functional drivers (FD) capture utilitarian motivations related to information access and problem resolution. The theoretical framework draws on Social Identity Theory and uses-and-gratifications logic (Anderson *et al.*, 2024; Bagozzi & Dholakia, 2002; Daugherty *et al.*, 2008; Kalmus *et al.*, 2011).

2. Review of Literature

2.1. Online Communities and Participation Behaviour

Online communities (OCs) serve as an alternative to real-life socialisation and information sharing among individuals who may be spread geographically across the globe and may or may not be directly familiar with each other (Faraj *et al.*, 2011; Seraj, 2012). Recent studies continue to emphasize the increasing relevance of OCs as a source of real-world benefits to their members in the form of social support, work-related outcomes, and psychological outcomes. Also, in welcoming and tolerant settings, these digital spaces have been shown to foster feelings of better mental health and reduced isolation (Marshall *et al.*, 2024; Oksanen *et al.*, 2024). Further, OCs have been studied across a large range of contexts, varying from brand communities to travel platforms, video game spaces, health forums, support groups, and learning forums, etc. (Anderson *et al.*, 2024; Dessart *et al.*, 2015; Malinen, 2015). Nevertheless, it is important to note that, while the purpose and governance may vary across different types of OCs, the one common factor that describes the basic operational reality is that, in the absence of member contribution, they can neither sustain their functional value nor their social continuity and, as a result, eventually diminish.

In this context, the concept of participation has not been defined consistently in previous literature. A significant

portion of empirical studies operationalizes participation in quantitative terms, such as frequency of commenting, login, or time spent on the platform (Malinen, 2015). While these measures are practical, they essentially describe a frequency metric and fail to describe what the activity actually looks like (Gutiérrez-Páez *et al.*, 2023). In other words, a member might log in daily but read passively without making any contribution (Zhu & Dawson, 2023). On the other hand, this point of view is contrasted by recent empirical studies that describe OC participation as knowledge-sharing and co-governance activities of members, rather than as a simple measure of frequent platform usage (Budrytė & Vainauskienė, 2023; Bulat, 2025). Additionally, other researchers have endorsed a broader conceptualization that describes participation as a set of behaviours comprising helping, sharing experiences, responding to other members, encouraging discussion, and engaging in collaborative problem solving (Koh & Kim, 2004; Vohra & Bhardwaj, 2019). The present study takes a similar behavioural approach to OC participation. Therefore, participation behaviour (PA) is explored here as active behavioural involvement of users in the OC, instead of a mere count of activity.

Moreover, this distinction in approaching PA is notably relevant in the context of interest-based spaces. Given that members of such communities often derive value from back-and-forth discussions, help-seeking queries, and mutual support within the discussion threads, considering such varied forms of involvement equivalent to a passive login can potentially distort the examination of factors driving community vitality. Therefore, participation behaviour in the present study is operationalized through items capturing actions such as encouraging discussions, sharing beneficial content, replying to help seekers, and supporting fellow members. This is consistent with the recent literature indicating that online contribution should be understood as a purposeful behavioural process shaped by motives, norms, and perceived value, and not by how often a user visits an online forum (Liu *et al.*, 2024).

2.2. Social Drivers of Participation Behaviour

Previous research on participation in online communities has focused on the role of social-relational motivations. Earlier studies on technology acceptance and virtual communities have highlighted the impact of social influence while identifying compliance, identification, and internalization as the three key social influence processes. These are often represented by three norms—subjective, social identity, and group norms, respectively (Davis, 1989; Dholakia *et al.*, 2004; Kelman, 2017). According to Social Identity Theory, when people become members of a group, it becomes a part of how they define themselves. Consequently, this group-based self-perception becomes a guiding influence behind their individual behaviour within that collective (Tajfel & Turner, 1979). In online communities, this translates into more enthusiastic participation by community members when they feel significant as group members. In relation to this view, empirical research on online communities has consistently shown that a perceived sense of belongingness, shared identity, and attachment within a group positively shape contribution behaviour and engagement outcomes (Bagozzi & Dholakia, 2002; Zhang *et al.*, 2017).

Apart from social identity, social benefits are another important factor associated with membership in an OC. Such benefits strengthen interpersonal ties and may create reciprocal expectations that encourage continued interaction and contribution (Dholakia *et al.*, 2004; Zhao *et al.*, 2012). This line of reasoning is also consistent with recent evidence that reciprocity, cohesion, and a supportive communication climate stimulate information-sharing behaviour in online networks, suggesting that social benefits create the relational conditions under which users become more willing to contribute (Jamil *et al.*, 2026). Moreover, recent research on peer and social media-based communities highlights the importance of social verification, relational connection, and interactional support in sustaining online engagement (Anderson *et al.*, 2024). In addition to a sense of basic membership, users also expect to create more meaningful connections within the community, indicating a strong sense of identification with the group and a willingness to contribute (Pendry & Salvatore, 2015).

A recent study on interest-based networks suggests that participation in IBOCs is usually voluntary and self-directed. In this context, relational benefits play a particularly important role, as they help narrow the psychological distance among members and strengthen their attachment to the OC (Chen & Li, 2024; Zhao *et al.*, 2012).

Based on this, the present study takes social drivers (SD), in the form of their two dimensions, social identity and social benefits, as antecedents of participation behaviour (PA) in IBOCs. Together, these dimensions reflect how psychologically connected users feel to their community and the social value they derive from participating in it.

H1: Social drivers significantly and positively influence participation behaviour in interest-based online communities.

2.3. Functional Drivers of Participation Behaviour

In the context of solving problems and finding solutions in online communities, participation, as stated by Bone *et al.* (2015), is "the degree to which the customer is involved

in taking actions to both solve their own service support needs and offer support solutions to peer customers." This utilitarian aspect of OCs aligns closely with the uses-and-gratifications theory, a framework that proposes that individuals intentionally engage with media platforms based on the exact gratifications those systems supply. These mainly consist of motivational categories such as information-seeking, social interaction, and entertainment (Daugherty *et al*., 2008; Gupta *et al*., 2024; Kalmus *et al*., 2011). Further, recent research in the context of societal transformation and innovation underscores the role of OCs as essential infrastructures for knowledge generation and exchange mechanisms, thereby positioning these digital spaces as central actors in emerging paradigms such as Society 5.0 (Ancillai *et al*., 2025; Konno & Schillaci, 2021). Therefore, users are inclined to join and revisit these digital groups to improve their decision-making through novel ideas and solutions pertaining to their areas of shared interest. While this can hold true for all kinds of OCs, this utilitarian orientation is more prominent in inherently information-oriented communities such as Q&A communities, travel communities, peer support groups, and learning and knowledge communities (Priharsari & Abedin, 2021; Wang *et al*., 2022).

While social interaction is indeed important, recent literature suggests that participation is sustained when there is some functional value offered as well. This is especially prominent in non-commercial environments, where quality of information, actionable advice, and access to a wide range of expertise can emerge as key reasons for continuous engagement (Gutiérrez-Páez *et al*., 2023; Zhou *et al*., 2025). Similarly, studies in adjacent contexts, such as value co-creation communities and online travel communities, also indicate the same inclination to contribute more when the platform proves to be useful in solving practical issues through the availability of genuine knowledge and fellow members' support (Ancillai *et al*., 2025; Xu *et al*., 2026). Therefore, the sense of informational self-efficacy in these interest-based networks operates as a significant predictor of active knowledge sharing by users (Hsu *et al*., 2007; Lai & Chen, 2014).

In light of this, the present study conceptualizes functional drivers (FD) in terms of their two dimensions, Information and Problem Solving, as an essential pathway to participation behaviour. This relationship represents the extent to which IBOC members perceive their community as a practically valuable environment that supports their learning and need for solutions. Thus, the following hypothesis is proposed:

H2: Functional drivers significantly and positively influence participation behaviour in interest-based online communities.

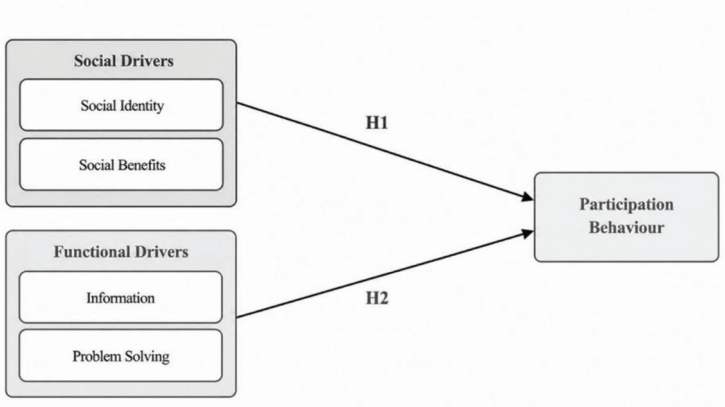

Figure 1: Proposed Conceptual Framework

3. Methodology

3.1. Research Design

The present research adopted a quantitative and cross-sectional research design to systematically examine the drivers of participation behaviour in interest-based online communities (IBOCs). Using a structured questionnaire, we collected data from members of various IBOCs. For further analysis, we chose PLS-SEM as our analytical framework due to its capacity for predictive research and its ability to model second-order constructs. Also, this method effectively handles non-normal data conditions, which are highly common throughout management and social science research (Hair *et al*., 2019b; Sarstedt *et al*., 2022).

3.2. Sampling Design

The present study focused on members of IBOCs used by Indian participants across diverse domains. These domains

encompassed a wide array of digital environments, including social-media-based communities, Q&A forums, messaging-based groups, and independently hosted platforms centered on shared interests such as gaming, travel, automobiles, competitive examination preparation, spirituality, and other domains. The research strictly required respondents who were current members of online communities and were familiar with the operational dynamics of such platforms. Therefore, a non-probability purposive and snowball sampling approach was utilized.

Data were gathered through an online survey link that was circulated via email, WhatsApp groups, and various social media channels. Initially, we personally contacted respondents who fulfilled the eligibility criteria, and then we asked these respondents to share the online questionnaire with their contacts whom they thought would also share similar attributes. This yielded an initial pool of 315 responses. After screening for incomplete surveys and eliminating cases that failed the required membership criterion, along with other extreme outlier cases, we retained 266 usable responses for the final analysis. To mathematically support the adequacy of the sample size, an a priori power analysis was conducted using G*Power. In order to provide a very thorough, conservative test of the model that minimizes the probability of overlooking true effects (Type II errors), the statistical power level ($1 - \beta$) was set at 0.95 instead of the conventional 0.80. The input parameters included a standard alpha level ($\alpha = 0.05$), a medium effect size ($f^2 = 0.15$), and two predictor variables leading to the endogenous construct. This yielded the minimum required sample threshold of 89 respondents to detect a single regression coefficient (Cohen, 1988; Hair *et al*., 2019a). Thus, our final data set of 266 exceeded both the mathematical requirement and the standard PLS-SEM 10-times rule for model complexity (Hair *et al*., 2019a), ensuring sufficient statistical power to evaluate the proposed structural relationships.

Regarding the demographic profile of the sample, 51.5% of the respondents were male and 48.5% were female. When classified by community type, the largest share of the sample belonged to independently hosted online communities (27.8%), followed closely by social-media-based communities (26.3%), Q&A communities (17.3%), and messaging app-based groups (15.4%). The remaining 9.8% belonged to education and learning communities. Next, the largest age-group representation comprised the 25–34 age group (51.1%), followed by the 18–24 age group (18.4%) and the 35–44 age group (14.3%), while participants above 45 years represented 16.2% of the total sample. In terms of education, postgraduates formed the dominant group (55.6%), followed by undergraduates (28.6%), doctorate holders (14.3%), and those holding only a high school qualification (1.5%). Therefore, the sample was highly educated. Finally, membership duration within these communities was reported as predominantly long-term. The largest share of respondents reported over five years of membership (32.7%), followed by those who had held membership for three to five years (29.3%) and one to three years (26.3%). Lastly, only 11.7% of the respondents reported having joined their respective IBOC within the past year.

3.3. Instrument Design

To construct the survey instrument, we used existing scales from the literature. A structured questionnaire comprising 21 measurement items related to the study constructs was adopted. A five-point Likert scale ranging from strong disagreement to strong agreement was used to measure all the items. This particular format was chosen over other scale alternatives, such as Semantic Differential or Visual Analog scales, because it directly measures agreement intensity (DeVellis, 2017) and preserves the established reliability of the original source scales (Hair *et al*., 2019a; Hinkin, 1998).

In order to ensure content validity, the study employed previously validated scales adapted to the context of online communities. The questionnaire drew upon multiple established frameworks, as there was no single existing scale that comprehensively covered all the distinct social, functional, and behavioural constructs proposed in our model. Therefore, five items measuring the construct social identity (SI) were adapted from Chen *et al*. (2021), and four items related to social benefits were drawn from Mathwick *et al*. (2008). Further, six items were drawn from Dholakia *et al*. (2004) for measuring the constructs information and problem solving. Finally, the construct of participation behaviour was evaluated using six items adapted from the study on virtual communities by Koh and Kim (2004).

3.4. Data Collection Procedure

Data collection was administered digitally through Google Forms. Prior to the main launch, the draft questionnaire was reviewed by academic experts and pre-tested with 15 respondents to ensure that the items were clear and unambiguous; these respondents did not contribute to the final survey. Thereafter, to rigorously capture the target population, the instrument remained open for a period of three months. The questionnaire contained a mandatory screening question at the beginning to confirm whether the respondent held membership in any online community of interest, followed by general information about their OC and years of membership. Only respondents who

confirmed their membership were permitted to proceed to the subsequent survey sections. This was followed by a brief introduction describing the purpose of the study, alongside explicit assurances of participant anonymity. Further, responses were collected electronically and exported to SPSS and SmartPLS 4.3 for analysis.

3.5. Data Analysis Tools

In order to test the proposed conceptual framework, the data were evaluated using SmartPLS 4.3. PLS-SEM was selected exclusively to serve the primary predictive goals of the participation behaviour framework. In the present study, it allows researchers to rigorously test the theoretically derived relationships among latent constructs and predict how functional and social drivers influence participation behaviour within IBOCs. The analysis then proceeded in two sequential stages. First, an assessment of the measurement model was conducted to establish reliability and validity. This was followed directly by the evaluation of the structural model (inner model) to test the hypothesized path relationships.

4. Results

4.1. Measurement Model Assessment

In order to carry out the assessment of the measurement model, a confirmatory factor analysis was performed in line with the guidelines of Hair *et al*. (2019a). In this analysis, the model was evaluated based on (1) indicator reliability, (2) internal consistency, (3) convergent validity, and (4) discriminant validity. For the first-order reflective constructs, Table 1 shows that most factor loadings are above 0.70, depicting good indicator reliability. Cronbach's alpha and composite reliability values exceeded the acceptable threshold value of 0.70, indicating satisfactory internal consistency. Moreover, AVE values ranged from 0.547 to 0.666. Since these values exceed the recommended threshold of 0.50, convergent validity was thus established (Hair *et al*., 2019a).

Thereafter, both the Fornell-Larcker criterion (Fornell & Larcker, 1981) and the Heterotrait-Monotrait ratio (HTMT) were used to examine discriminant validity. First, in Table 2, the square root of the AVE values for each of the first-order constructs exceeded their correlations with other constructs; hence, the Fornell-Larcker criterion was met. Next, as shown in Table 3, all correlation values remained below the conservative threshold of 0.85 (Henseler *et al*., 2015). Hence, the HTMT criterion was established. Together, these results confirmed that the first-order constructs were empirically distinct.

Table 1: Measurement Model Assessment (First-order Construct)

Constructs	**Item Code**	**FL**	α	**CR**	**AVE***
Social Identity (SI)	SID1 SID2 SID3 SID4 SID5	0.650 0.589 0.752 0.851 0.821	0.793	0.856	0.547
Social Benefits (SB)	SB1 SB2 SB3 SB4	0.775 0.851 0.775 0.687	0.776	0.856	0.599
Information (IN)	INFO1 INFO2 INFO3	0.784 0.845 0.818	0.751	0.857	0.666
Problem Solving (PS)	PSOL1 PSOL2 PSOL3	0.772 0.780 0.870	0.733	0.849	0.654
Participation Behaviour (PA)	PA1 PA2 PA3 PA4 PA5 PA6	0.807 0.807 0.786 0.789 0.610 0.720	0.849	0.888	0.572

Note: FL: factor Loadings; α: Cronbach's alpha, AVE: Average variance extracted; CR: Composite reliability

Table 2: Discriminant Validity: Fornell–Larcker Criterion (First-Order Construct)

Constructs	**IN**	**PA**	**PS**	**SB**	**SI**
IN	0.816				
PA	0.632	0.756			
PS	0.625	0.649	0.808		
SB	0.542	0.602	0.594	0.774	
SI	0.430	0.522	0.505	0.640	0.739

Note: Diagonal values (bold) signify the square root of the AVE. IN: Information, PA: Participation, PS: Problem Solving, SB: Social Benefits, SI: Social Identity

Table 3: Discriminant Validity: Heterotrait–Monotrait (HTMT) Ratio (First-Order Construct)

Constructs	IN	PA	PS	SB	SI
IN					
PA	0.772				
PS	0.836	0.818			
SB	0.682	0.723	0.778		
SI	0.569	0.604	0.652	0.798	

Note: IN: Information, PA: Participation, PS: Problem Solving, SB: Social Benefits, SI: Social Identity

In the next step, we assessed the reliability parameters and AVE for the second-order constructs SD and FD. As shown in table 4, the factor loadings ranged from 0.891 to 0.919. In addition, the AVE values for SD and FD were 0.819 and 0.812 respectively, thereby supporting higher-order convergent validity, as shown by the output in Table 4 below. The discriminant validity for SD & FD, both was established as well by Fornell and Larcker criterion and HTMT ratio, as shown in Table 5 and Table 6 below.

Table 4: Second-Order Construct Assessment: Reliability and Convergent Validity

Second-order Construct	**First-order Construct**	**FL**	α	**CR**	**AVE***
Social Drivers (SD)	SI	0.891	0.781	0.901	0.819
	SB	0.919			
Functional Drivers (FD)	IN	0.899	0.769	0.896	0.812
	PS	0.904			

Note: α: Cronbach's alpha, AVE: Average variance extracted; CR: Composite reliability, FL: Factor loadings. IN: Information, PA: Participation, PS: Problem Solving, SB: Social Benefits, SI: Social Identity

Table 5: Discriminant Validity: Fornell–Larcker Criterion (Second-Order Construct)

Constructs	**FD**	**PA**	**SD**
FD	0.901		
PA	0.711	0.756	
SD	0.639	0.624	0.905

Note: Diagonal values (bold) signify the square root of the AVE. PA: Participation, FD: Functional Drivers, SD: Social Drivers

Table 6: Discriminant Validity: Heterotrait-Monotrait (HTMT) Ratio (Second-order Construct)

Constructs	FD	PA	SD
FD			
PA	0.871		
SD	0.819	0.755	

Note: PA: Participation, FD: Functional Drivers, SD: Social Drivers

4.2. Structural Model Assessment

Prior to the testing of hypotheses, we assessed multicollinearity using variance inflation factor (VIF) values. The highest reported VIF value was 2.355. This is below the recommended threshold of 3, thereby indicating the absence of any multicollinearity concerns (Hair *et al.*, 2019b). Further, common method bias was examined using Harman's single-factor test, wherein the single largest factor accounted for 39.605% of the variance, which is well below the 50% threshold, thereby indicating that common method bias was not a major concern (Podsakoff *et al.*, 2003). Therefore, this study has no multicollinearity or common method bias issues.

Next, the evaluation of the structural model was conducted, wherein a satisfactory model fit was established. The standardized root mean square residual (SRMR) was 0.074. Henseler *et al.* (2015) advocate that an SRMR value below 0.08 for a sample greater than 100 is acceptable. Therefore, the present model achieved an optimal fit parameter. Further, the model explained 55.4% of the variance in Participation Behaviour (R^2 = 0.554), thereby establishing substantial explanatory power. Next, the effect sizes were evaluated, wherein the f^2 value for FD was 0.369, indicative of a large effect, whereas that for SD was 0.109, indicative of a small-to-medium effect, as per Cohen's (1988) benchmarks. The Q^2 value of 0.542 indicated strong predictive relevance.

To determine the significance of the hypothesized relationships, a bootstrapping procedure (5,000 resamples) was conducted. The analysis revealed that Social Drivers have a positive and significant effect on Participation Behaviour (β = 0.287, t = 4.282, p < .001). Thus, H1 was supported. In addition to social motivations, the results show that, as expected, Functional Drivers have a positive and highly significant effect on Participation Behaviour (β = 0.527, t = 7.501, p < .001). Therefore, H2 was supported. The structural path analysis revealed the utilitarian reality of the data set. Consequently, the difference in path coefficients demonstrates that Functional Drivers exert a substantially stronger influence on Participation Behaviour than Social Drivers. The structural analysis is jointly summarized and represented on the next page in Figure 2 and Table 7.

5. Discussion

This study investigates the dual pathways of SD and FD influencing participation behaviour (PA) in interest-based online communities. As indicated by the findings in Table 7 above, both H1 and H2 have been accepted; therefore, the assertion that PA in IBOCs is shaped by both Social Drivers and Functional Drivers has been substantially supported. However, the relatively stronger effect of Functional Drivers (β = 0.527) indicates that users in non-commercial OC settings are influenced more heavily by the practical value of the community than by social attachment alone.

Table 7: Structural Model Results: Path Coefficients and Hypothesis Testing

Hypothesis	Path	Path Coefficients (β)	t-statistics	p-Values	Results
H1	SD → PA	0.287	4.282	0.000	Accepted
H2	FD → PA	0.527	7.501	0.000	Accepted

Note: PA: Participation, FD: Functional Drivers, SD: Social Drivers

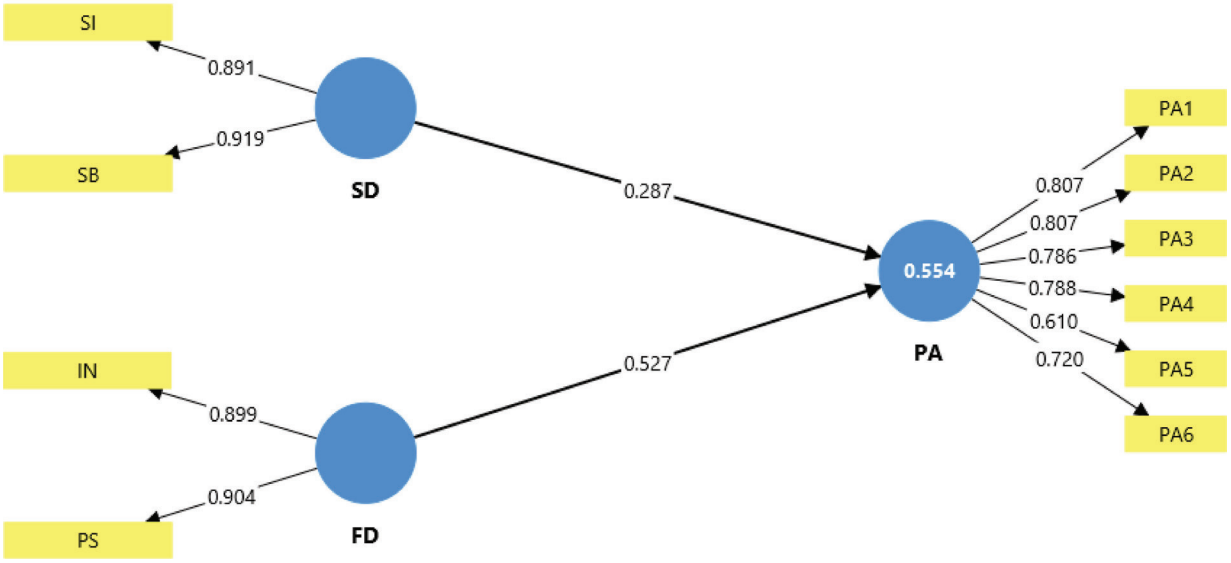

Figure 2: Structural Model (Second-order constructs)

These results are consistent with prior work showing that online contribution in knowledge-sharing and Q&A communities is strongly associated with information seeking, problem resolution, and perceived usefulness (Hsu *et al.*, 2007; Wang *et al.*, 2022; Zhu & Dawson, 2023). Additionally, they align with recent work positioning practical support and collaborative problem solving as central motives for sustained interaction in OCs (Gutiérrez-Páez *et al.*, 2023).

Nevertheless, social drivers continue to exert a positive and significant effect on PA. With this in mind, we can confidently establish that community members are more likely to stay associated with and participate within their OC when they feel psychologically connected to it. Further to this, the findings indicate that they are likely to contribute much more to the collective if they feel like valued members of the group. This is in line with broader principles of Social Identity Theory. Thus, the significant impact of positive and strong interpersonal connections continues to matter for online engagement even when utilitarian motivations are highly pronounced (Anderson *et al.*, 2024; Matthes *et al.*, 2025).

In this study, we attempted to unveil the underlying mechanisms that might help an IBOC transition user participation activity from a passive to an active form. In this regard, the analysis revealed that a relatively smaller fraction of members contributed actively to the community, while the larger majority exhibited passive consumption, in line with past studies on active versus passive users (Amichai-Hamburger *et al.*, 2016). This imbalance is rooted in weaker community identification and lower perceived contribution value among members (Zhu & Dawson, 2023). The present study results suggest that the activation of both pathways can be highly relevant in correcting this imbalance in community interaction. While social drivers can reduce the psychological distance responsible for keeping members passive, functional drivers can efficiently and effectively provide the practical reasons that make contributing to the community feel worthwhile. Thus, IBOCs that address both these dimensions simultaneously are better placed to convert persistent lurkers into active contributors.

A notable contribution of the study lies in drawing a sharper distinction between IBOCs and commercially mediated community types. Participation in brand

communities is typically framed around customer engagement, loyalty, and firm-centred co-creation (Brodie *et al*., 2013; Dessart *et al*., 2015; Hollebeek *et al*., 2014). However, in IBOCs, there are key differences in the relative importance of motivational factors. As shown by the findings of the present study, contrary to brand attachment or incentive-based engagement, practical information and problem-solving utility are indicated as the dominant driving forces propelling participation (Dessart *et al*., 2015; Matthes *et al*., 2025). Therefore, it is not advisable to implement findings from the literature on brand OCs directly in IBOCs, which are not only structurally different but are also mostly sustained by users' voluntary contributions.

Lastly, the measurement model results also reinforce the conceptual clarity of the model. As indicated by the higher-order loadings, social identity and social benefits form a coherent social-relational pathway, while information and problem solving form a distinct functional pathway. This structure is useful because prior work has often examined antecedents such as reciprocity, trust, self-efficacy, and belonging in isolated or fragmented ways (Malinen, 2015). By integrating related motivations into two higher-order explanatory domains, the study offers a more parsimonious framework for examining participation in non-commercial online communities.

6. Implications of the Study

6.1. Theoretical Implications

The present study makes several contributions to the current body of knowledge on participation in IBOCs. Firstly, it organizes participation behaviour (PA) antecedents that prior work has examined separately into two higher-order constructs, namely Social Drivers and Functional Drivers, thereby providing a more consolidated framework for studying PA in non-commercial online community settings. Secondly, it extends the understanding of both Social Identity Theory and uses-and-gratifications logic within a single predictive model and explores the relative weight of these theoretical frameworks in the highly context-dependent environment of IBOCs. Third, the present research reconceptualizes participation as active, contribution-centred behaviour rather than a simple frequency count. Consequently, the study offers a more behaviourally grounded measurement approach that future research can readily extend to evaluate these relationships across a wide variety of other online community contexts.

6.2. Practical Implications

This study provides usable findings and suggestions for online community governance and marketing managers, particularly in interest-centred online environments. As per the findings of this study, community managers are suggested to optimize the functional value of their IBOCs. They should organize and design the OCs in such a manner that users find it easier to reach discussions and topic threads relevant to them. Further, platform architects should ensure that users get hassle-free access to verified knowledge and ideas discussed in the community. Also, to nurture a sense of belonging and being valuable members of the community, community administrators should ensure that a supportive environment is maintained by keeping a check on disruptive elements in the IBOC. Overall, the findings of this study provide substantial support for an approach in which practical utility anchors the community experience. By combining strong problem-solving support with strong social identity benefits, practitioners can not only cultivate active participation within these digital spaces but also ensure the long-term vitality of these IBOCs.

6.3. Social Implications

The present study also has broader social relevance when it comes to supporting equitable access to learning and opportunities within an evolving economy. The study findings support the idea of employing interest-based online communities as informal learning ecosystems and, in turn, generating substantial value for the population. This is especially relevant in the context of developing nations such as India, where achieving homogeneous access to formal advisory services, professional knowledge, and specialized knowledge can often be difficult. Communities that successfully deliver high-quality information and strong problem-solving support can contribute to broader developmental benchmarks, such as Sustainable Development Goal 4 (Quality Education) and Sustainable Development Goal 10 (Reduced Inequalities). Therefore, these interest-based platforms can achieve the dual benefit of enhancing digital inclusion and facilitating a large network of peer-based access to knowledge.

7. Limitations and Future Scope

This study indicates certain limitations that can be improved upon by future research on IBOCs. Firstly, the generalizability of the findings should be considered in light of the study's limitations. The present study represents a single snapshot of Indian internet users engaging in non-commercial online communities. Therefore, the unique cultural norms that govern how Indian members of IBOCs interact, share knowledge, and display social attachment limit the direct observation of causal mechanisms. Future research should track this exact demographic over time to systematically evaluate how functional and social motivations adapt as members integrate more deeply into these specialized digital spaces.

Although this study used purposive and snowball sampling techniques to identify respondents, these approaches restrict the generalizability of the findings due to self-selection bias and subjective inclusion criteria (Robinson, 2023). To overcome these shortcomings, future scholars should employ probability sampling techniques, such as simple random sampling and stratified sampling, to improve population representation.

Furthermore, the findings may not automatically generalize to other cultural or platform contexts. Thus, subsequent studies may replicate and extend this model across different countries and diverse types of online communities. Finally, future scholars can undertake studies to determine how factors such as tenure, perceived usefulness, trust, and architectural features of the OC hosting platform moderate each of the motivational pathways.

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Authorship Contribution

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Ethical Approval

The authors declare that no formal ethical approval was required for this study. Participation in the survey was voluntary, and respondent anonymity was assured throughout the data collection process.

Conflict of Interest

The authors affirm that there is no conflict of interest in relation to this research or its publication.

Declaration

The authors confirm that the manuscript is original, has not been published previously, and is not under consideration for publication elsewhere. All authors have reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

AI Disclosure Statement

Artificial intelligence tools were used to assist with language editing, grammar refinement, and academic tone improvement during the preparation of this manuscript. All research ideas, data analysis, interpretations, and conclusions are solely the work of the authors.

Data Availability Statement

The data that supports the findings of this study is available from the corresponding author on a reasonable request.

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