

# **Decentralization Through Capabilities in Human-Centered Technology and Engaging Social Media Content: Implications for Social Inclusion**

## **Abstract**

Current academic understanding of the decentralization of social media content, which enables more democratic access and participation in content creation and sharing, and its effects on social inclusion in the creator economy is limited. This study addresses this gap by examining how decentralization develops through social media content creation practices and how it affects the social inclusion of creative individuals from marginalized communities. Drawing on social inclusion literature, social exchange theory, and recent sociological frameworks for decentralization, this mixed-methods study combines semi-structured interviews and structured surveys with marginalized creators. The findings show that engaging social media content, together with creators' ability to use human-centered technology, increases decentralization and, in turn, supports social inclusion. Analytics capabilities are a key predictor of the relationship between engaging content creation and decentralization.

**Keywords: Content creation; engagement; social media; decentralization; social inclusion; capabilities.**

## 1. Introduction

The widespread use of social media technology has fundamentally changed creative content distribution in areas such as education, entertainment, arts, and agriculture, and has created new opportunities for talented but previously unknown content creators to reach relevant audiences without socio-economic barriers (Lee, 2020; Hobbs, 2023). Research shows that human-centered technology (HCT) interfaces, especially social media platforms, allow creative individuals to achieve more meaningful audience engagement marked by deep empathy, while also providing opportunities for free expression in content creation (Luxomo, 2022; Nguyen Ngoc et al., 2022; Packer and Keates, 2024; Saunders, 2020).

The ongoing technological transformation has driven a shift toward decentralized models of entertainment production and distribution. In this context, decentralization means redistributing control from centralized institutions to distributed networks, which allows greater user autonomy, participatory governance, and resilience against single points of failure. Although decentralization in social media is often described in technical terms, such as federated architectures or blockchain infrastructures, it also involves significant institutional, entrepreneurial, and affective changes (Autio et al., 2018; Nambisan, 2016; Gbadagasin et al., 2021). Within social media environments, decentralization changes power relations by allowing creators to bypass traditional gatekeepers and participate in community-led governance processes (Oxford Martin School, 2024). However, this distribution of control is more than a technical change. Democratic decentralization intentionally moves authority from centralized institutions to local actors, creating new opportunities for marginalized groups to participate in policy development and resource allocation (Chhetri, 2013). In digital ecosystems, the redistribution of power enabled by platform architectures that support user-led governance, distributed infrastructure, and interoperable data environments takes new forms (EU Blockchain Observatory and Forum, 2023). Earlier research on decentralization often focused on state-led political or administrative devolution (Rondinelli and Cheema, 1984). Recent studies, however, show that decentralization is multidimensional, including technical configurations (e.g., blockchain and federated systems), participatory practices (such as community-led governance), and affective aspects of value co-creation and belonging (Autio et al., 2018; Gbadagasin et al., 2021).

The reconfiguration of control enabled by decentralization is not only technical but is also presented in the literature as a possible driver of social inclusion, especially when decentralization increases agency, visibility, and participation for historically marginalized actors (Autio et al., 2018; de Rosnay and Musiani, 2016; Khobzi et al., 2024). For creators on the margins, meaningful social inclusion involves more than access; it requires agency in shaping platform rules, influencing monetization models, and achieving algorithmic visibility (Khobzi et al., 2024). However, decentralized platforms often create new forms of exclusion through "platformization paradoxes," where power seems distributed but is re-centralized through infrastructural, economic, or algorithmic means (Nieborg and Poell, 2018). This paper examines that tension by analyzing how HCT capabilities shape the relationship between decentralization and inclusion for marginalized content creators, focusing on how participation is enacted, limited, and potentially changed.

HCT capabilities and social media technologies give marginalized groups significant opportunities to create more inclusive environments by using decentralized content and data distribution channels such as YouTube or Instagram, which support increased creativity and creative expression (Walter, 2024). These interfaces help content creators build a presence in industries that are traditionally shaped by gatekeeping and high entry barriers. As a result, creators gain greater control over content and intellectual property, as well as increased autonomy and opportunities for peer-level collaboration. These affordances together support the view of social media as a democratizing force, enabling more inclusive participation for

marginalized creators and changing access to cultural production (Liew et al., 2022; Tomazevic et al., 2023). However, there is still limited empirical evidence on how these decentralized structures lead to socially inclusive outcomes, especially through the daily content creation practices of marginalized individuals (Hoffman, 2023; Trujillo et al., 2023). Current academic literature does not sufficiently explain how decentralization develops through social media content creation or how it affects the social inclusion of creative individuals from marginalized communities.

While decentralization (Autio et al., 2018), social media engagement (Dolan et al., 2019), and social inclusion (Licsandru and Cui, 2018) have been studied in fields such as digital sociology (Couldry and Mejias, 2019), communications (Shahbaznezhad et al., 2021), and media studies (Nieborg and Poell, 2018), research on these topics often remains separate, lacking frameworks that address their interdependence in everyday content creation. Most literature focuses on either macro-level governance structures (Nieborg and Poell, 2018) or audience reception (Couldry and Mejias, 2019), without examining how decentralized participation occurs through creator-audience interactions and is shaped by individual characteristics. This study addresses this gap by presenting a model that views decentralization as a relational and socio-technical process, shaped by both platform design and creators' content strategies. It offers a multi-disciplinary perspective grounded in the experiences and capabilities of marginalized creators.

We use Social Exchange Theory (SET) to examine how engaging content and HCT deployment capabilities support decentralization and its effect on inclusion for marginalized creators. The ability to recognize interconnectivity in all areas of content management increases content creators' chances of providing cohesive audience experiences (Supiyandi et al. 2024; Nappi et al. 2024). When social media content offers strong usability, desirability, and empathy, audiences gain emotional value from relational entertaining content. At the same time, when content offers rewards (e.g., deals, perks, incentives), people are more likely to engage because they appreciate it. This higher engagement then helps the platform stay commercially sustainable (delValle, 2024; Samans, 2023).

This research examines how individuals from marginalized communities have used social media platforms to display their talents and achieve social inclusion, focusing on how creating engaging content with HCT capabilities supports content decentralization and helps bridge gaps between privileged and discriminated groups. The study addresses three main questions: RQ1: To what extent and in what ways do the creation of engaging social media content and content creators' capabilities in using social media-based HCT affect content decentralization? RQ2: To what extent and in what ways does the decentralization of social media content that engages audiences on HCT platforms influence the social inclusion of content creators from marginalized communities? RQ3: How do individual characteristics of marginalized content creators (such as analytics capabilities, social networking skills, and entrepreneurial orientation) affect their social media content's role in decentralizing content and achieving social inclusion?

This study makes two significant contributions. First, while existing research has mainly examined how content sharing affects viewer behavior, such as user engagement (Coelho et al., 2016; Dolan et al., 2019; Hussain et al., 2024; Shahbaznezhad et al., 2021; Tafesse and Dayan, 2023) and willingness to donate (Wan et al., 2017), or has focused on content creation and financial performance, including virality, authenticity, and monetization (Han et al., 2020; Hofstetter and Gollnhofer, 2024), few studies have investigated how content creators can decentralize content through sharing to support democratic access and participation, which benefit both creators and viewers. Although Khobzi et al.'s (2024) review analyze how technical, formal, and informal aspects of decentralized social media platforms present certain opportunities and challenges for content creators, the social inclusion effects of producing engaging and decentralized content are still underexplored in

social media marketing literature. This study addresses this gap by examining the missing link between creators' social media content decentralization and their social inclusion.

Second, SET research has primarily focused on factors influencing social exchange relationship outcomes, such as power dynamics and rewards, rather than situational factors, including individual attributes of exchange parties (Cropanzano et al., 2017). This study extends SET by including individual capabilities, such as analytics proficiency, social networking skills, and entrepreneurial orientation, as moderators of social inclusion outcomes. This approach provides a clearer understanding of how individual situational dynamics affect social exchange relationship processes and outcomes (Cropanzano et al., 2017; Redmond, 2015).

While SET has traditionally focused on relational outcomes such as satisfaction (Shiau and Luo, 2012), trust and commitment (Yang et al., 2019), and reciprocity (Paraskevaïdis and Andriotis, 2017), this study broadens SET's scope by examining social inclusion as a social exchange relationship outcome, thereby extending SET's relevance to marginalized social exchange actors. This is achieved by applying a six-dimensional decentralization scale (multi-platform autonomy, network fluidity, power equality, credit sharing, audience reciprocity, and participatory interaction) that which extends beyond technical definitions to include socio-technical affordances (de Rosnay and Musiani, 2016; Autio et al., 2018). The study uses a mixed-methods design, combining qualitative insights from marginalized creators with quantitative validation from 212 surveys. This approach addresses fragmentation in empirical measurement (Trujillo et al., 2024) and supports context-rich futures research (Amankwah-Amoah et al., 2024).

## 2. Literature Review

### 2.1 Social Inclusion in the Context of Human-Centered Technology and Decentralization

Social inclusion involves active participation in society, belonging to a supportive and welcoming community, and having control over one's own resources (Marino-Francis and Worrall-Davies 2010). The Council of the European Union (2003) defines social inclusion as a process aimed at ensuring that individuals at risk of poverty and social exclusion have equal access to the opportunities and resources needed to fully participate in economic, social, and cultural life, including active involvement in decision-making processes and access to fundamental human and citizenship rights. Social inclusion is the opposite of social exclusion, which involves denying or failing to achieve certain rights, including citizenship, civil, human, political, and social rights (Huxley, 2022). The implications of social inclusion and exclusion relate to *demos*, meaning the extent of equal access to rights provided by citizenship of a nation state, and *ethnos*, meaning the extent of equal access to rights for different ethnic and cultural groups (Huxley and Thornicroft, 2003). In business and management research, most studies on social inclusion focus on the ethnos perspective.

Social inclusion and exclusion are complex concepts because they occur at multiple levels, including individual, group (such as household or community), and institutional levels. They are also multidimensional, existing across social, economic, political, and historical aspects (Davey and Gordon, 2021). As a result, definitions of the social inclusion concept vary, with different emphases on levels and dimensions, which reduces consistency in its application. For instance, Cordier et al. (2017) state that social inclusion is sometimes used interchangeably with concepts such as social and cultural capital, which has reduced consensus about its definition, conceptualization, and operationalization. Licsandru and Cui (2018) add that, because research on social inclusion has mainly focused on economic, political, and social perspectives, there is limited understanding and agreement on its meaning from an individual perspective. The authors suggest that studying social inclusion at

the individual level can capture subjective evaluations and feelings of belonging, acceptance, empowerment, equality, and respect within society.

Social inclusion can be achieved by developing a social network, which helps increase a sense of belonging among members of a society or community (Davlembayeva et al., 2020). HCT (e.g., information and communication technology or ICT) that prioritize user needs, experiences, and values may create new digital divides and social exclusion for some groups. However, these technologies also offer important opportunities for disadvantaged groups by lowering barriers to communication with wider social groups and improving access to broader social networks (Lin and Kant, 2021). Although HCT can play an important role in promoting social inclusion, research on how it affects social inclusion remains limited. Among the few studies available, Díaz and Doolin (2016) found that human centered ICT use supports social inclusion for refugees by improving community participation, communication efficiency, social connection and understanding, and cultural identity expression. Alam and Imran (2014) showed that refugee migrants in Australia view human centered digital technology as essential for achieving social inclusion because it offers greater opportunities for learning, integrating with broader communities, accessing new education and employment options, and communicating with others. Similarly, Ye and Yang (2020) reported that a human centered mobile platform technology helps close the digital divide between advantaged groups and disadvantaged Chinese rural villagers, enabling the latter to achieve social inclusion.

Social media is a type of HCT that offers users significant opportunities to access social communities that would otherwise be unavailable. It has also created new revenue streams for individuals involved in e-commerce (or product and service sales) and content creation (or influencer marketing). Content creation activities have greater potential to promote social inclusion for creators than e-commerce because they require minimal investment to start. Through social media, content creators such as influencers can share unique content with a broad audience and reach individuals who cannot participate in community activities because of physical, social, or financial limitations (Lin and Kant, 2021). Furthermore, social media content creators can reduce knowledge gaps among underrepresented or marginalized groups by increasing their awareness and understanding of certain activities, which may improve their quality of life (Pereira et al., 2024). Regardless of social background or status, content creators can also improve their self-worth, image, and recognition through social media by gaining acceptance and appreciation from viewers in various cultures and societies. The literature shows that social media, as the most widely used HCT, has significant potential to enhance social inclusion. However, digital divides and unequal digital literacy among users may increase the risk of social exclusion (Reisdorf and Rhinesmith, 2020).

Despite these affordances, business and management literature gives limited attention to the relationship between content creation and creators' social inclusion. There is still little understanding of the conditions under which social media content creation either supports or restricts social inclusion. To address this gap, this paper highlights the structural and institutional features of social media platforms that influence inclusion outcomes.

Recent research on digital participation shows that social inclusion in digital contexts depends not only on individual access and motivation but also on platform governance, architecture, and design (Warschauer, 2003; van Dijck et al., 2018; Couldry and Mejias, 2019). Studies in digital governance highlight that decentralization, whether technical or social, is important for redistributing value and authority across digital ecosystems, especially in creative economies (Autio et al., 2018; Gegenhuber et al., 2019; Trujillo et al., 2024). The features of decentralized platforms provide new opportunities for inclusive engagement, such as user-led moderation, distributed ownership, and interoperable data flows (EU Blockchain Observatory and Forum, 2023).

For marginalized creators, inclusion requires more than access or visibility; it also depends on the ability to influence platform norms, policies, and value systems (Khobzi et al., 2024; Huang, 2024). Although social platforms claim to support democratic participation, new hierarchies and uneven governance can limit their inclusive potential (Trujillo et al., 2024). Features such as modularity, interoperability, and audience interactivity are often distributed unequally, leading to disparities in content discovery, engagement, and monetization (Earley, 2025). Addressing these structural inequalities is essential if decentralized, HCT platforms are to achieve their inclusion goals.

Yet decentralization does not automatically lead to inclusion. Studies show that exclusion can persist or even intensify through infrastructural inequality, algorithmic opacity, and uneven access to governance tools (Nieborg and Poell, 2018; Couldry and Mejias, 2019; Trujillo et al., 2024). This means the decentralization–inclusion link is conditional: outcomes depend on the interaction between platform design, creator capabilities, and institutional norms. This study adds to this discussion by examining how decentralization functions as a socio-technical process that supports, limits, or changes the inclusion paths of marginalized content creators. It treats decentralization not only as a technical feature but also as a structural condition that shapes participation, visibility, and value distribution. By focusing on how creators engage with these conditions in everyday content creation, the study provides a multidimensional view of how digital infrastructures mediate inclusion.

## *2.2 Empirical Measurement and Theoretical Foundations of Decentralization*

Recent research increasingly recognizes decentralization as a socio-technical construct shaped by both infrastructure and governance practices, as well as user participation (de Rosnay and Musiani, 2016; Autio et al., 2018). For example, Nieborg and Poell (2018) theorize that platformization transforms cultural production by encouraging iterative, data-driven content creation and changing power relations between creators and platforms. Couldry and Mejias (2019) argue that data colonialism can reinforce exclusion and power imbalances, even though decentralized platforms promise new forms of participation. These findings highlight the importance of decentralization not only as a technical or architectural decision, but also as a set of affordances that shape how users, especially marginalized creators, can engage, participate, and gain recognition on platforms.

EU Blockchain Observatory and Forum (2023) emphasize the need to distinguish between blockchain-based and federated models of decentralized social media, as each presents specific strengths and limitations in user autonomy, content moderation, and governance. Influence-based metrics (Trujillo et al., 2024) and multi-level governance frameworks (Jhaver et al., 2023) show that decentralization exists on a spectrum rather than as a binary, with user agency and governance autonomy essential for inclusion and democratization. These approaches demonstrate that decentralization allows varying degrees of agency and inclusion, depending on how governance, moderation, and resource control are distributed among actors.

Recent systematic reviews indicate that decentralized platforms such as Mastodon and Bluesky are growing quickly because users seek privacy, control, and community-driven engagement (Huang, 2024). These platforms also encounter challenges in content moderation, usability, and the rise of new forms of centralization through influential communities or technical bottlenecks. These issues show the need to assess decentralization empirically as a context-dependent affordance, where inclusive participation may develop alongside new risks of re-centralization. Although researchers have measured decentralization using proxies such as protocol design, governance distribution, or ownership models, these methods often lack consistency across empirical studies.

Aligned with recent work emphasizing decentralization as an affordance arising from the interaction between platform structures and user practices (Autio et al., 2018), this study uses de Rosnay and Musiani’s (2016) typology because it captures the relationship among architecture, governance, and participation. This approach is valuable because it views decentralization as a spectrum, which allows for the identification of complex organizational forms that include both centralized and decentralized elements. The framework provides a more detailed understanding of emancipation capabilities than traditional market-based qualifications, supporting the analysis of platforms where participation and collaboration result from various combinations of rules, governance, ownership, and architectural design.

By using this multidimensional perspective, the study more accurately captures the complex realities of peer production and how decentralization shapes user empowerment and governance within digital platforms (de Rosnay and Musiani, 2016). To translate this theoretical typology into empirical dimensions relevant for social media content creators, we define six key indicators that reflect both technical and social affordances of decentralized platforms (see Table 1):

1. **Multi-platform autonomy** (e.g., creating content across platforms without restrictions)
2. **Network fluidity** (connections to diverse, equally influential communities)
3. **Power equality** (no hierarchical dominance over peers)
4. **Credit sharing** (collaborative ownership of content)
5. **Audience reciprocity** (content resharing and engagement)
6. **Participatory interaction** (active commenting and collaboration).

This user-centered operationalization aligns with recent work on platformization (Nieborg and Poell, 2018), content co-creation (Khobzi et al., 2024), and decentralized governance (EU Blockchain Observatory and Forum, 2023). These dimensions represent both structural decentralization (technical and network aspects) and social decentralization (governance and agency), addressing gaps in previous operationalizations (Khobzi et al., 2024; Huang, 2024).

Together, these dimensions enable a more detailed examination of how decentralization influences the conditions of inclusion for social media content creators, especially those seeking visibility, autonomy, and collaborative value generation in fragmented digital spaces. Table 2 presents an overview of studies on decentralization, platformization, and social media use.

**Table 1. Technical and Social Decentralization Dimensions and Justifications**

| <b>Conceptual Dimension</b>                             | <b>Survey Item</b>   | <b>Supporting References</b>   | <b>Justification</b>  |
|---|--|--|---|
| 1. Multi-platform autonomy (Technical Decentralization) | I can freely create content on my own or with others and on several platforms. | de Rosnay & Musiani (2016); EU Blockchain Observatory and Forum (2023) | Captures technical freedom and user control over content distribution across platforms.         |
| 2. Network fluidity (Social Decentralization)           | I am connected to several equally important communities via my followers.      | de Rosnay & Musiani (2016); Khobzi et al. (2024); Autio et al. (2018)  | Reflects multiple influential, non-hierarchical community ties, essential for decentralization. |

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|--|--|--|--|
| 3. Power equality (Social Decentralization)            | I do not have more or less power than any other content creator in my network.           | de Rosnay & Musiani (2016); Trujillo et al. (2024)                         | Represents governance equality by emphasizing parity in content creation power.            |
| 4. Credit sharing (Social Decentralization)            | I do not take sole credit of the content I share; credit is shared across the community. | de Rosnay & Musiani (2016); Khobzi et al. (2024)                           | Addresses ownership decentralization by highlighting shared credit and authorship.         |
| 5. Audience reciprocity (Social Decentralization)      | My content is often reshared and/or commented by others.                                 | de Rosnay & Musiani (2016); Nieborg & Poell (2018); Autio et al. (2018)    | Indicates reciprocal content circulation, key to decentralized visibility and recognition. |
| 6. Participatory interaction (Social Decentralization) | I comment and reshare content from others in my network.                                 | de Rosnay & Musiani (2016); Nieborg & Poell (2018); Trujillo et al. (2024) | Captures participatory engagement, central to decentralized content ecosystems.            |

**Table 2. Overview of Key Studies on Decentralization, Platformization, and Social Media Use**

| Author(s)                | Focus  | Theory/Lens                                    | Method & Key Takeaway   |
|--------------------------|--|--|---|
| Davies (2023)            | Participatory budgeting in local governance    | Democratic innovation; collective intelligence | Mixed methods (32 Scottish local authorities). Participatory budgeting redistributes resources; institutions and digital tools shape democratic engagement. |
| Budak (2016)             | Web 2.0 creativity and participation barriers  | Everyday creativity; digital competency        | Survey, workshop, and interviews. Digital skills constrain participation; guided tools increase engagement and learning.                                    |
| Hutchinson (2013)        | Cultural intermediaries in participatory media | Creative destruction; cultural intermediation  | Ethnographic action research (ABC Pool). Intermediaries broker collaboration and translate norms, improving co-creation outcomes.                           |
| Jemmer & Ibrus (2023)    | Data-related innovation in legacy media        | Heterodox economics; data commons; blockchain  | Conceptual/theoretical framing. Heterodox approaches explain decentralization and collaboration as routes to data-driven competitiveness.                   |
| Zallio & Clarkson (2022) | Inclusive metaverse design                     | Inclusive design; HCI                          | Qualitative ethnographic approach with industry experts. Inclusive governance/design supports accessibility, safety, equity, and diversity.                 |

| <b>Author(s)</b>           | <b>Focus</b>  | <b>Theory/Lens</b>                              | <b>Method &amp; Key Takeaway</b>  |
|----------------------------|---|---|---|
| Rață et al. (2023)         | Decentralized branding across contexts                    | Commons; co-creation; resource allocation       | Comparative case synthesis. Decentralized brands can be resilient/sustainable but face governance and coordination trade-offs.                |
| Flores et al. (2020)       | Human capital for Industry 4.0                            | Human capital; workforce architecture           | Structured literature review. Identifies future competencies and proposes a typology for referencing required Industry 4.0 skills.            |
| Manuel et al. (2017)       | Participatory storytelling in neighbourhood planning      | Participatory media; community engagement       | Fieldwork with planning groups. Participatory media supports story creation/sharing; challenge is translating narratives into action.         |
| Galuten et al. (2023)      | Trusted rights framework for digital content              | Digital rights management; trusted data systems | Conceptual framework (distributed identifiers). Enables provenance/authenticity and multi-party rights/compensation via shared metadata.      |
| Moyo (2013)                | Pirate radio and civic empowerment                        | Media empowerment; citizenship; participation   | Case study (Radio Dialogue, Zimbabwe). Alternative media supports marginalized voices and encourages civic participation.                     |
| Khobzi et al. (2024)       | Decentralized social media and creator challenges         | Blockchain/federated platforms; governance      | Theoretical analysis. Decentralized platforms may address monetization/moderation/privacy; barriers include adoption and regulation.          |
| Khan (2024)                | Blockchain video streaming                                | Decentralized systems; adaptive streaming       | Conceptual analysis with examples. Potential gains in scalability/UX and creator power; constraints include technical and regulatory hurdles. |
| Nikseresht et al. (2024)   | Warranty-claim forecasting with social + operational data | ML analytics; Bayesian optimization             | Hybrid ML approach improves prediction; social media enables earlier defect detection and more responsive aftersales planning.                |
| Nikseresht et al. (2025)   | Forecasting consumer-initiated returns using social media | Fuzzy cognitive maps; optimization; deep RL     | Hybrid model improves forecast accuracy vs. operational-only models; supports issue detection, inventory planning, and resource management.   |
| Martín-Rojas et al. (2023) | Social media tools, entrepreneurship, and performance     | Dynamic capabilities; RBV; complexity           | SEM (259 Spanish SMEs). Social media use strengthens entrepreneurship; resilience mediates effects on firm performance.                       |
| Jabeen et al. (2023)       | Social media overload/addiction and attainment            | S-O-B-C framework                               | Mixed methods, PLS-SEM. Loneliness/self-presentation increase overload/addiction; demotivation  |

| Author(s)         | Focus   | Theory/Lens                                 | Method & Key Takeaway  |
|-------------------|---|---|--|
| Liu et al. (2023) | Social media use and organizational performance | Tech adoption; innovation; performance      | strengthens negative impacts on performance.<br>Meta-analysis. Social media use has positive average performance effects, contingent on context (usage, size, industry). |
| Cui et al. (2018) | Social media information in operations          | Data-driven decision-making; market signals | Retail dataset, and forecasting models. Social media improves forecast accuracy and responsiveness, especially under uncertainty/volatile demand.                        |

### 2.3. Human-Centered Technology and Decentralization in Social Media

Social media platforms are examples of HCT, enabling new forms of content creation, self-expression, and peer-to-peer interaction. These platforms have supported the growth of the creator economy by lowering barriers to participation in cultural production and providing tools for visibility, monetization, and community building (Nieborg and Poell, 2018; Khobzi et al., 2024). However, the claim that social media decentralizes content production is contested. Although infrastructural innovations, such as federated systems and blockchain-based architectures, are often presented as mechanisms for decentralization, their implementation often results in new forms of centralization through platform design, governance asymmetries, or algorithmic gatekeeping (Trujillo et al., 2024; EU Blockchain Observatory and Forum, 2023).

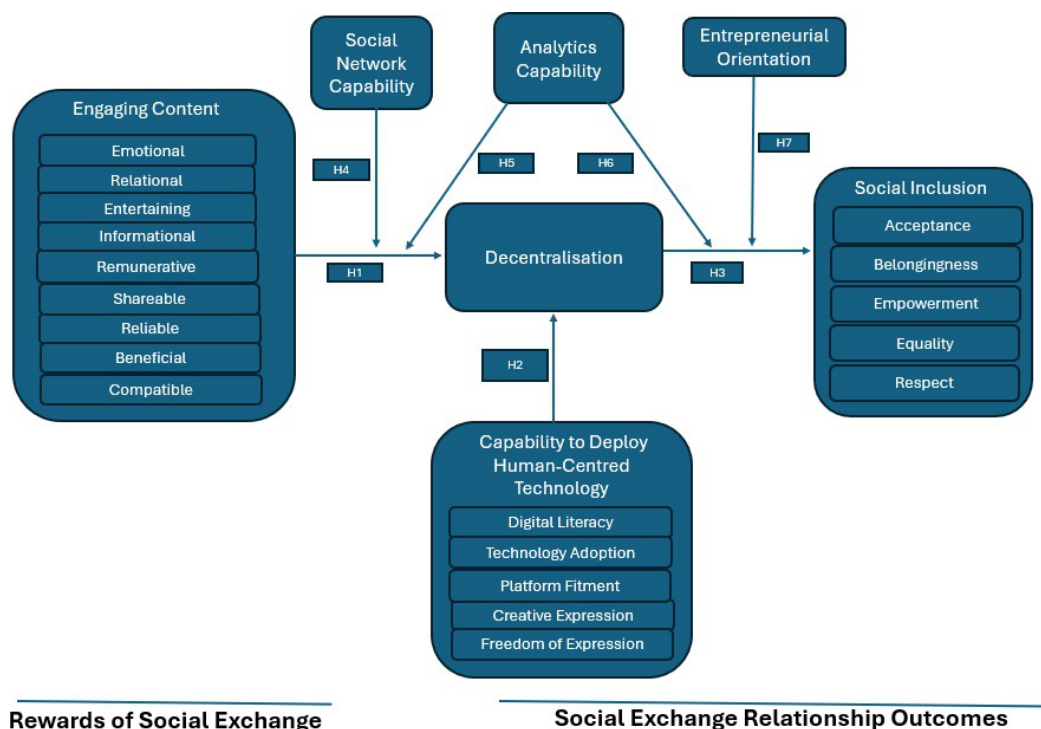
More broadly, digital infrastructures alter the conditions of cultural participation by embedding users in systems of data extraction, algorithmic visibility, and networked governance. These processes often reinforce hierarchies of influence rather than reduce them (Nieborg and Poell, 2018; Couldry and Mejias, 2019). Although blockchain-based and federated platforms promise to redistribute control, both face challenges in balancing user autonomy with content moderation and community standards (Earley, 2025). For example, Mastodon's federated structure enables localized, community-led governance, but uneven technical literacy and infrastructural capacity can create new forms of exclusion and fragmentation (Lai et al., 2025).

Scholars who support the decentralization enabled by social media argue that, even without more advanced decentralized human-centered digital technologies, Web 2.0-based social media platforms act as independent third-party endorsers. These platforms increase decentralization by enabling direct interaction and social exchange between humans and technology, bypassing traditional gatekeepers such as media authorities and sources (Coddington and Holton, 2014). Chen et al. (2021) state that online platforms with semi-decentralized governance structures often allow community members to participate more democratically in decision making. Social media platforms allow content creators to present their authentic selves through more decentralized content compared to other channels, which leads to stronger social exchange relationships between creators and their followers (Chen and Sriphon, 2022). This study uses SET to explain how social exchange relationships on social media may influence both the decentralization of creators' content and the social inclusion of content creators. Specifically, this study applies SET on the premise that the decentralization of creators' content and the resulting social inclusion of content creators likely occur as a consequence of their social exchange relationships.

SET proposes that individuals choose to engage in relationships based on a comparison level (CL), which reflects their expectations from an exchange relationship, and a

comparison level for alternatives (CLAlt), which involves assessing the costs and rewards of their current relationship against possible alternatives (Homans, 1961; Homans, 1958). In SET, information is considered a key resource exchanged, providing value in social interactions (Cheshire, 2007; Foa and Foa, 1974; Urbonavicius et al., 2021). For example, content creators in social exchange relationships may share valuable information and

**Figure 1. Hypothesized Moderating Effects**



knowledge to create engaging content, and in return, receive useful information and insights through feedback or reciprocated comments from viewers. In a social exchange relationship, an actor holds more power over another when they control or influence key resources and the fate of others, such as rewards and punishment contingencies, independently of others' behaviors (Shetzer, 1993). The theory states that individuals are expected to reciprocate the value they receive if they want the exchange relationship to continue (Blau, 1964). Reciprocity occurs when there is a give-and-take relationship between actors, for example, when one transfer is reciprocated by another in a specific way (Shetzer, 1993). Molm (1994) notes that interdependence in social exchange relationships reduces risks and supports cooperation among exchange parties.

In this study, social media content shared by a creator must offer viewers or followers specific rewards, such as valuable information, to justify their engagement. These rewards are expected to generate reciprocal benefits for the creator, including increased reach, engagement, retention rate, recognition, and respect from viewers or followers. Interdependent exchanges among actors, such as content creators, their viewers or followers, and other content creators, are also important for achieving favorable outcomes (Cropanzano and Mitchell, 2005; Thibaut and Kelley, 1978). For example, Rusbult's (1983) research showed that individuals in asymmetrical dependency relationships often stay in dissatisfying situations because they lack alternative options. From this perspective, greater interdependence between content creators and other exchange parties increases the likelihood that content creators will generate decentralized, democratized content. This content benefits

all interdependent exchange partners because it provides more democratic access and participation in the social exchange process.

However, a limitation of SET is its focus on elements influencing social exchange relationships, such as power dynamics and benefits received, rather than situational factors, including individual attributes of the exchange parties (Cropanzano et al., 2017). Including these factors would offer a more complete understanding of the dynamics within interpersonal social exchange processes (Cropanzano et al., 2017; Redmond, 2015). This study extends SET by proposing that decentralized platforms promote social inclusion by creating emotional experiences during interactions, such as feeling respected. This aligns with Lawler's (2001) argument in the Affect Theory of Social Exchange. Lawler (2001) states that emotional experiences strongly reinforce and sustain social ties, so repeated emotionally positive exchanges over time increase trust, loyalty, and group-oriented behavior in individuals. In decentralized digital environments, emotionally rewarding exchanges, such as receiving appreciation, visibility, or supportive feedback from others, help build trust and a sense of mutual recognition. In digital environments, content that evokes positive affect may reinforce engagement and commitment, strengthening decentralized participation beyond transactional utility. In this context, in addition to the rewards provided in an exchange relationship, such as creating and sharing engaging social media content, a content creator's individual capabilities (e.g., the ability to use social media effectively and develop social networks) and characteristics (e.g., entrepreneurial orientation) may influence the outcomes of their exchange relationships with social media viewers or followers (see Figure 1).

### **3. Hypothesis Development**

#### *3.1. The Impact of Engaging Social Media Content on the Decentralization of Content*

Social media content has been classified in various ways. Dolan et al. (2019) state that social media content includes rational appeals, which target viewers' utilitarian needs, and emotional appeals, which address psychological and social needs. Rational appeals provide informative and remunerative content, while emotional appeals offer entertaining and relational content. Shahbaznezhad et al. (2021) categorize social media content into three types: rational, interactional, and transactional. The authors state that rational content includes informational, functional, and educational elements; interactional content includes experiential and relationship elements; and transactional content includes remunerative elements or incentives that drive responsive actions. Other studies have classified social media content in similar ways, such as by examining content that provides promotions offering rewards (i.e., remunerative content) (Coelho et al., 2016), information about brands, products, events, places, and people (i.e., informational content) (Ashley and Tuten, 2015; Coelho et al., 2016; de Vries et al., 2012; Kim et al., 2015; Tafesse, 2015), vividness (i.e., emotional content) (de Vries et al., 2012), interactivity and interaction (i.e., relational content) (de Vries et al., 2012; Kim et al., 2015), and fun and entertainment (i.e., entertaining content) (de Vries et al., 2012). In line with these studies, this study examines engaging social media content by assessing the degree of its emotional, relational, entertaining, remunerative, and informative elements. Most studies focusing on informational content assess it based on the availability of certain information (e.g., Coelho et al., 2016; Kim et al., 2015), while a few consider the extent to which users receive resourceful and helpful information (Dolan et al., 2019). This study separates informational content from beneficial content because not all information provided through social media content is necessarily beneficial or valuable for the target viewer.

In addition, we consider shareability, reliability, and compatibility as content qualities that shape whether engaging content is exchanged and recirculated within social networks.

Reliability is also important because social exchange relationships depend primarily on trust between exchange partners (Nunkoo and Ramkissoon, 2012).

Most research on social media content has focused on its effect on generating engagement behavior (Dolan et al., 2019). This study extends previous work by examining the extent to which, and how, engaging social media content may influence the decentralization of content and the social inclusion of content creators. Decentralization refers to an arrangement in which resources are distributed at the periphery of the network (De Rosnay and Musiani, 2016). Greater decentralization means that control over resources is less concentrated at the center of the network and is instead more widely and equally distributed at the periphery. In more decentralized structures, actors are more interdependent within their social network (Kudaravalli et al., 2017).

More engaging content shared by content creators on social media (e.g., informative, compatible, reliable, emotional) is expected to lead to greater decentralization of their content. Engaging social media content offers rewards that outweigh the costs of engagement. Therefore, content creators who develop and share engaging content can enhance and strengthen their social exchange relationships with viewers and followers (Abid et al., 2023; Shahbaznezhad et al., 2021). Enhanced reach, visibility, and retention through engaging content empower social media content creators and increase their control over resources and decision-making related to their social media activities. Engaging content also promotes decentralization by creating interdependence between content creators and their followers through mutual value exchanges. For example, content creators gain value from followers by monetizing their content, while they reciprocate by providing useful and informative material. Mutual value appropriation in these social exchange relationships, such as monetization for creators and convenient access to valuable content for followers, is likely to empower all parties and support a more equitable distribution of power. Thus, we propose the following:

**H1:** The level of engagement generated by social media content has a positive and significant effect on its decentralization.

### *3.2. The Impact of Capability to Use Social Media as a Human-Centered Technology on the Decentralization of Content*

Capabilities that are valuable, rare, inimitable, and non-substitutable (VRIN) support the achievement of unique advantages (Barney, 1986). Some capabilities are specific to certain tasks and are often called task specific capabilities. These refer to "individual abilities that pertain to the focal task(s) that the user aims to accomplish when using an Information System (IS)" (Serrano and Karahanna, 2016, p. 598). Task specific capabilities are used to perform a particular task or activity, such as using a human-centered social media technology to create and share content (Yoon, 2009). Content creators can acquire, deploy, combine, and reconfigure supporting technological resources to help them perform their social media content creation activities effectively (Lu and Ramamurthy, 2011). As they become more skilled in using these resources, they can lower operational costs (e.g., by saving time and effort) and increase operational gains (e.g., greater creativity and performance).

In the context of software development teams, Kudravalli et al. (2017) found that decentralization, defined as the distribution of expertise within a network, increases when more team members possess the necessary technological expertise. Their results showed that distributing expertise among a larger number of team members leads to greater decentralization. Applied to social media, when content creators share more engaging content (e.g., informative, compatible, reliable, emotional) on a platform, the decentralization of their content also increases. Digital literacy is the core capability required to use social media

technology effectively and create engaging content. Digital literacy can create path dependency in learning new and related technologies, which provides increasing returns in future tasks performed by users (Roedenbeck, 2011). Through this dependency, even when new technologies emerge, digitally literate content creators can avoid the risk of the digital divide. Based on these views, the development of human-centered social media capabilities requires familiarity with previous information and communication technologies (ICTs). For example, individuals such as innovators and early adopters, who tend to adopt new technologies more extensively and quickly (Rogers, 2003), are more likely to benefit from these technologies in their content creation practices. Content creators with stronger skills in using human-centered social media technology can decentralize their social media content by effectively using these tools to produce independent (freely created and expressed), interdependent (created through interactive feedback loops), and creative (authentic and original) materials. Hence, we propose the following:

**H2:** A content creator's capability to deploy social media as a human-centered technology has a positive and significant impact on the decentralization of their content.

### *3.3. The Impact of Social Media Content Decentralization on the Social Inclusion of Content Creators*

Decentralization of social media content shifts power from a central authority to a network of interconnected content creators (Khobzi, 2024). This process provides more equal access to content creation, removing restrictions imposed by privileged gatekeepers who control viewer access. It can also reduce the digital divide among content creators by offering convenient access to social media content. For example, Choi and Behm-Morawitz (2017) found that watching a YouTube video created by a beauty guru allows viewers to participate in video production and improves their digital literacy. Decentralization of social media content can increase the influence and empowerment of a growing network of interconnected content creators. This process supports authentic and creative self-expression, as well as close social exchanges, which increase recognition and respect among viewers and content creators. A decentralized social media network with high interconnectedness and interdependency also builds a stronger sense of belonging and inclusion within the community. Therefore, we propose the following:

**H3:** The degree of decentralization of social media content has a positive and significant impact on a content creator's social inclusion.

### *3.4. The Moderating Effect of Social Networking Capability on the Relationship Between Engaging Social Media Content and its Decentralization*

Social networking capability is primarily defined as an individual's ability to use, integrate, and leverage resources within a social network to achieve a specific goal (Adomako et al., 2018). Social networks have been examined from both relational and network position perspectives. The relational perspective focuses on the intensity of relationships among actors, such as whether they are extensive, dense, or multiplex. The network position perspective centers on an actor's position, such as being central or prestigious, within a network of actors (Burt, 1980). Both perspectives are important for understanding how actors can access diverse network-based resources to support the implementation of their activities (Capaldo, 2007). Social networking capability allows actors, such as content creators, to

access complementary resources that help address their resource constraints (Kotabe et al., 2014). Burt (1992) states that actors in broker, dominant, or bridging positions—known as structural holes within networks—gain significant advantages by accessing a diverse range of non-redundant and difficult-to-obtain resources. For example, content creators who network with others in various fields can gain new ideas and unique recommendations, which may expand or improve their expertise and content creation practices. Reagans and Zuckerman (2001) found that network density, measured by the frequency of communication among actors, increases the productivity of networked actors. Therefore, social networking capability enables content creators to access resources necessary to improve their content creation. As the ability to build and develop social networks increases, interdependence and collaboration among content creators also grow. Through supportive relationships within the network, content creators share and distribute resources needed for content creation, which increases the influence of engaging social media content on the decentralization of content produced. Hence, we propose the following:

**H4:** A content creator's capability to develop their social network positively moderates the impact of engaging social media content on its decentralization.

### *3.5. The Moderating Effect of Analytics Capability on the Relationship Between Engaging Social Media Content and its Decentralization*

Analytics capability refers to the ability to analyze, internalize, and interpret customer sentiments and behavioral data from sources such as social media platforms (Wong and Ngai, 2023). Social media creators can examine viewer data, including comments, shares, likes, saves, viewing duration, and viewer retention rate. These data are necessary to generate insights about

viewers' interests, preferences, and behaviors, which help determine the type of content that increases engagement. Content creators use analytics tools for various purposes; some tools are freely available on different social media platforms (e.g., Instagram Analytics, Facebook Analytics, YouTube Analytics), while others require payment. For example, Buffer is a paid analytics tool for scheduling social media posts, Datasift is a paid multi-platform analytics tool for analyzing social conversations, and Crowdboost is paid analytics software that generates personalized dashboards with key information, such as the most valuable followers and the optimal time for posting messages (Nanda and Kumar, 2021). Analytics insights from both paid and unpaid, single- or multi-platform analytics tools help content creators develop engaging social media content and improve supporting activities, such as posting messages to advertise content at the most effective times.

Developing analytics capability allows content creators to interpret analytics outputs and make more informed decisions about their social media content. Analytics capability gives social media creators greater control over content engagement performance and provides equal opportunity to access and use analytics data and tools. Equal access to analytics data and insights offers similar opportunities for producing engaging content and supports the decentralization of content. As a result, we hypothesize the following:

**H5:** A content creator's capability to analyze social media data positively moderates the impact of engaging social media content on its decentralization.

### *3.6. The Moderating Effect of Analytics Capability on the Relationship Between*

## *Decentralized Social Media Content and Social Inclusion*

Analytics capability enables content creators to develop interesting, relevant, and engaging social media content, which strengthens the bonds and sense of belonging between content creators and their followers. Content creators can also gain greater recognition from their viewers by developing content on trending topics based on analytics insights. Analytics capabilities allow content creators to interpret viewer comments and feedback effectively, enabling them to improve their content continuously and increase its value and credibility. Deployment of analytics capability can help identify and address critical social problems (Choi and Pak, 2022). Content creators can promote equality by amplifying marginalized voices and addressing social issues they have experienced. When content creators use analytics effectively, they can decentralize their content by expanding relationships and connections with a wider range of stakeholders, such as viewers, followers, and other content creators. By using analytics capabilities, content creators can address the social media content needs of broader stakeholder groups, enhance recognition and inclusion within their community, and empower viewers and followers by providing content that meets their current and inherent needs. Therefore, content creators' analytics capabilities may strengthen the effect of social media content decentralization on achieving social inclusion. As a result, we hypothesize the following:

**H6:** A content creator's capability to analyze social media data positively moderates the impact of decentralized social media content on the creator's social inclusion.

### *3.7. The Moderating Effect of Entrepreneurial Orientation on the Relationship Between Decentralized Social Media Content and Social Inclusion*

Entrepreneurial orientation (EO) refers to an actor's innovativeness, proactiveness, and risk taking (Cools and Van den Broeck, 2007; Covin and Slevin, 1998). Previous research shows that EO supports micro-entrepreneurship among marginalized women in rural India (Chatterjee et al., 2020). In Ghana, marginalized women's EO improves their business performance (Adams et al., 2017). Khan et al. (2021) found that, in marginalized micro-enterprise contexts, EO partially influences the relationship between social resources and performance. In contrast, Kore et al. (2024) reported that EO significantly influences the social performance of micro-enterprises in Indonesia. A content creator's EO is expected to increase social inclusion because EO encourages content creation activities that are novel, creative, and original. EO was found to have a positive relationship with centralization regarding the concentration of decision-making at higher organizational levels (Yang et al., 2019). This result is likely because, in organizations, centralization can make it easier to mobilize resources and increase decision-making speed, both of which are necessary to improve organizational performance (Mintzberg, 1979; Yang et al., 2019). However, for individual decisions, centralization may limit resource use and sharing, and reduce decision-making speed and productivity (Ljungkvist et al., 2020). Therefore, an individual content creator's EO may have a stronger effect during decentralized activities and decisions. EO may motivate and empower content creators, including potential creators, by providing new ideas and knowledge on how to improve social inclusion in innovative, proactive, and risk-averse ways. Based on this perspective, this study assumes that higher levels of EO among individual content creators will strengthen the effect of their decentralized activities (i.e., content creation) on their social inclusion. Consequently, we suggest the following:

**H7:** A content creator's entrepreneurial orientation positively moderates the impact of

decentralized social media content on the creator's social inclusion.

## 4. Methodology

This study employs a mixed-methods approach, combining semi-structured qualitative interviews and structured quantitative surveys with social media content creators from marginalized communities. This approach is particularly well-suited to the study as the integration of qualitative and quantitative methods provides both deeper and broader insights into research problems and phenomena compared to relying on a single method (Creswell & Plano Clark, 2007; Venkatesh et al., 2013). An exploratory sequential design was adopted, consisting of two phases. The research began with the collection and analysis of qualitative data, followed by the collection and analysis of quantitative data. Interviews were conducted between August and September 2024, and quantitative survey was conducted during the month of October 2025. This sequence was chosen to allow the quantitative data to build on and extend the initial qualitative findings. Such a design is especially valuable when qualitative results require further testing or quantification (Stenz et al., 2012).

Data collection was conducted across two distinct yet complementary markets that are recognized as global leaders in influencer ecosystems: India and South Korea. These regions were chosen not only for their robust digital content economies but also for their diverse socio-cultural contexts, which enhance the generalizability and relevance of our findings. In India, the creator economy is the world's largest by base, offering a unique perspective on digital inclusion and marginalization (Bagchi, 2023; Oxford Economics, 2022). In South Korea, the rapid adoption of advanced digital technologies and the global reach of K-culture provide a valuable counterpoint, reflecting high levels of technological proficiency and international engagement (Hobbs, 2023; Sebastian, 2022).

### 4.1. Qualitative Research Method

#### 4.1.1. Data Collection and Sample

The qualitative phase of this study aimed to uncover nuanced perspectives and lived experiences of content creators from marginalized communities in India and Korea. Data collection relied on 20 semi-structured interviews with content creators ranging from 45 mins to 1 hr long interviews. The semi-structured interviews were carried out in English, with each interview lasting a maximum of one hour. We adopted a purposeful sampling strategy to select 20 content creators for in-depth interviews (Palinkas et al. 2015, Patton, 2002). Participants were selected based on several criteria: their platform standings -targeting the top 5% of creators by subscriber count in their respective markets (Ceci, 2023; Kemp, 2023), number of views, number of videos uploaded, duration of their presence or experience on social media, their average per month earnings, and content diversity, covering a range of domains such as education, arts, agriculture, and more. Recruitment was conducted through platform analytics tools, creator coalitions, and snowball referrals from initial participants. No interview dropouts occurred, as all participants confirmed their availability in advance. Selection of participants was decided by considering their number of subscribers. In this context, a purposeful sampling strategy was used to interview with the respondents who could provide us with insightful knowledge about the research problem and phenomenon of the study (Creswell, 2007, Glaser and Strauss, 1967). Hence, the sampling strategy was theory driven rather than representative (Öberseder et al., 2013). Interviews were held online through platforms such as Skype and Whatsapp. They were recorded after receiving verbal

consent from participants and transcribed verbatim for analysis.

#### *4.1.2. Measurement Instrument and Data Analysis*

A semi-structured interview guide was designed to explore themes related to content creation and engagement strategies, decentralization of social media content as well as content creators' technological (i.e. HCT and social media) and analytics capabilities, social networking practices and skills, entrepreneurial traits and endeavors, and challenges in achieving social inclusion. The interview protocol was pre-tested with two content creators from the target population. Questions were assessed on clarity, cultural sensitivity, and thematic flow around topics such as decentralized participation, platform affordances, and marginalization experiences. Feedback led to minor refinements in question wording and sequencing, consistent with guidance for qualitative instrument development in digital and affordance-based research (Treem & Leonardi, 2013). The interview data was analyzed using thematic analysis, guided by Clarke and Brown's (2017) framework. Thematic analysis facilitated the iterative identification of codes and themes, enabling the study to move between theoretical insights and raw data to refine and validate findings. Key themes such as HCT use, emotional engagement strategies, and decentralization were identified, synthesized, and interpreted. To complement the thematic analysis, visual representations such as word clouds were generated using Python. These visualizations distilled the frequency and prominence of key concepts, providing additional insights into the data.

To enhance the analysis, word clouds were employed as visual tools for summarizing and distilling key concepts. Using Python 3.8, the textual data was pre-processed to ensure clarity and focus. Non-essential words were removed, the text was standardized through stemming and lowercasing, and word frequencies were calculated. Words occurring below a set frequency threshold were excluded, and the geometric mean of word significance metrics was used to determine font sizes. The resulting visualizations highlighted prominent themes such as "authenticity," "engagement," "connection," and "diversity," providing additional context and aiding the thematic analysis. This structured approach to data collection and analysis ensured a rigorous exploration of the experiences of marginalized content creators, offering deep insights into their strategies, challenges, and interactions with digital platforms.

## *4.2. Quantitative Research Method*

### *4.2.1. Data Collection and Sample*

Building on the qualitative insights, the quantitative phase aimed to test the relationships between constructs and validate the hypotheses. This phase involved a structured online survey distributed to 212 content creators who have become globally influential and from marginalized communities in India and Korea. Indian content creators make a significant global impact through their vibrant culture, arts, music, and the widespread appeal of Bollywood, while Korean content creators capture international attention through the booming popularity of K-culture (Sebastian, 2022). Convenience sampling was used for this phase, as it provided efficient access to a population that is often difficult to reach through traditional sampling methods (Etikan et al., 2016). We also ensured representation across different platforms (e.g., YouTube, Instagram, Naver), follower tiers (nano, micro, and mid-tier), Recruitment channels included targeted social media ads, LinkedIn outreach, and community groups on WhatsApp. The survey dropout rate was 18.3% (53 out of 265 initial respondents), which is consistent with typical online survey attrition rates reported in the literature (Sax et al., 2003).

#### 4.2.2. Measurement Instrument and Data Analysis

A structured survey instrument was developed, grounded in a comprehensive review of the literature on social exchange relationships and social media marketing which has enabled us to identify the themes such as social media content creation and engagement, and decentralization of social media. The survey was also developed by considering the literature on social inclusion as well as technology use (or adoption) and entrepreneurial marketing. The survey included items to measure 7 constructs and test the hypothesized relationships. The constructs employed in this study were derived from established literature, ensuring theoretical robustness and contextual relevance. These constructs were adapted to the context of content creators from marginalized communities, emphasizing their role in decentralizing content creation and achieving social inclusion. A five-point Likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree") was employed to measure all responses.

The concept of 'engaging content' (or engaging social media content) was drawn from literature categorizing social media content into rational (i.e. informative, beneficial, compatible, reliable), emotional (i.e. entertaining, emotional), relational (i.e. shareable), and transactional (i.e. remunerative) elements (Dolan et al., 2019; Cartwright et al. 2021). Engaging content items, which were adapted from Dolan et. al, (2019) and Cartwright et al (2021) aimed to assess the extent to which these elements were present in a creator's social media content compared to alternative content offerings. In total, 9 items were used to measure the construct.

Capability to deploy HCT construct captures the technological proficiency of content creators in leveraging HCT via using social media technology. Studies by Serrano and Karahanna (2016) and Yoon (2009) were instrumental in defining social media capabilities as task-specific competencies enabling creators to utilize tools like editing software, analytics platforms, and interactive features effectively. These studies were utilized to develop the 5 items measuring this construct.

The decentralization construct was informed by theories of networked interdependence and resource distribution (De Rosnay & Musiani, 2016; Kudravalli et al., 2017). Decentralization was measured by the extent to which creators exerted control over their content and engaged directly with audiences, bypassing traditional gatekeepers. Indicators included monetization autonomy, creative freedom, and interconnectivity with viewers and peers. The construct was measured by using 6 items and were adapted from de Rosnay and Musiani (2016).

We have adapted the measure for social inclusion from the multidimensional definitions and measurements provided by Licsandru and Cui (2018) and Licsandru (2019). Social inclusion was measured by using 15 items and operationalized as the degree of creators' participation in digital economies and their perceptions of acceptance, belongingness, empowerment, equality and respect within their communities.

EO was conceptualized based on its established dimensions: innovativeness, proactiveness, and risk-taking (Covin & Slevin, 1998; Cools & Van den Broeck, 2007). EO of content creators were measured using 8 items which were adapted from Covin and Slevin (1989), Rank and Strenge (2018) and Zhang et al. (2020).

Analytics capability was derived from Wong and Ngai's (2023) framework for data-driven decision-making as well as Srinivasan and Swink's (2018) argumentations. This construct assessed creators' proficiency in interpreting audience metrics such as views, likes, and retention rates, as well as their ability to optimize content strategy using analytics tools like YouTube Studio and third-party software. The construct was measured using 5 items.

The items measuring social network capability or capabilities in social networking were derived from Batjargal et al. (2013), van Burg et al. (2021) and Shu et al. (2018). This construct attempted to understand content creator's network size, network centrality, network

diversity, frequency of interactions and tie strength within their social networks and was measured using 5 items. Our survey also measured socio-demographic characteristics of the participants as well as their content development area.

We followed guidance by Podsakoff et al., (2003) and Paulhus and Vazire, (2007) in adopting self-reported measures. Self-reported measures are widely recognized as appropriate and robust for exploratory research that investigates subjective constructs. In the context of our study, constructs such as social inclusion and content creation are inherently personal and experiential, making self-reports not only suitable but necessary for capturing the richness of individual perceptions. Self-reported measures for such subjective constructs are reported to demonstrate strong psychometric properties, including high stability and convergent validity (Hudson et al 2020). Furthermore, our construct content creation involves personal motivations, creative processes, and subjective evaluations that external observers cannot accurately assess which makes self-reporting is essential, as external observers may not have access to internal psychological states (Chan, 2009). Finally, decentralization also require understanding creators' own experiences of autonomy and control, which are again subjective evaluations of power distribution that vary based on individual experiences and interpretations. Therefore, we have chosen to use self-reported measures although longitudinal designs would strengthen causal inferences by providing richer context and insights into causal relationships over time.

We pilot-tested the survey instrument with a sample of 20 respondents from the targeted population. Based on pilot feedback and analysis, preliminary reliability (Cronbach's alpha) and validity indicators all met minimum thresholds, and thus we followed up with the full sample collection. This iterative refinement approach reflects recommended practice in empirical socio-technical and digital entrepreneurship research to ensure conceptual precision before full-scale deployment (Elia, Margherita, & Passiante, 2020). Quantitative data analyses were performed using the SmartPLS 4 package renowned for statistical computing and data analysis. Partial Least Squares Structural Equation Modeling (PLS-SEM) was deemed appropriate given the complexity of the model against the relatively small sample size. This combination ensures precise and reliable insights into complex relationships among variables.

## **5. Analysis of Qualitative Interviews**

We have a total of 20 semi-structured interviews conducted with content creators. Table 3 represents the demographics of our participants. Before moving on to conduct a thematic analysis (Clarke & Brown, 2017), we first wanted to get an overall understanding of what each topic could represent by visualizing through word clouds. In the next stage for exploring the thematic dimensions of content creation through interview data, word clouds will serve as a visual tool to represent the essence of various topics.

Using Python 3.8, we developed these representations through a structured process that prioritized clarity and significance. First, non-essential words like "the" and "and" were removed to refine the textual input. All remaining words were converted to lowercase to ensure uniformity, followed by stemming to distil root words (e.g., "create" instead of "creating"). Word frequencies were then calculated, and words occurring below a set threshold (in our case  $n < 3$ ) were filtered out. To reflect nuanced word significance, font sizes in the word clouds were determined using a geometric mean of word significance metrics, as suggested by Lim and Maglio (2018). Below we represent the word clouds for Engagement Strategies, Human Centered Technology, Entrepreneurial Orientation, and Social Inclusion. These word clouds provide a meaningful glimpse into interview themes, encapsulating the key ideas and recurring concepts.

The word cloud for "Engagement Strategies" (Figure 2) reveals a strong focus on

connecting with the "audience" through consistent, relatable, and visually appealing content. Central themes include "authenticity" and "relatability," emphasizing the importance of creating genuine and resonant interactions. Words like "visual" and "trend" highlight the role of appealing aesthetics and staying current with cultural moments, while "connection" and "engagement" underscore the value of emotional and interactive experiences. This visualization encapsulates the strategies content creators use to foster meaningful and lasting audience relationships.

The word cloud for "Entrepreneurial Orientation" (Figure 2) centers on themes of "innovation," "adaptability," and "strategic skills," emphasizing the importance of creativity and forward-thinking in entrepreneurial endeavors. Words such as "problem-solving," "networking," and "risk-taking" highlight the proactive and dynamic mindset required to navigate challenges and seize opportunities. The inclusion of "collaboration," "leadership," and "decision-making" underscores the critical role of teamwork and strategic planning in driving growth and sustainability. This visualization encapsulates the entrepreneurial spirit, characterized by resilience, resourcefulness, and an unwavering focus on innovation.

**Table 3. Demographic Profiles of Content Creators**

| No | Pseudonym      | Gender | Platform(s)           | Content Role                    |
|----|----------------|--------|-----------------------|---------------------------------|
| 1  | Participant 1  | Male   | YouTube, Instagram    | Content Creator                 |
| 2  | Participant 2  | Female | Instagram             | Influencer                      |
| 3  | Participant 3  | Female | YouTube               | Content Creator                 |
| 4  | Participant 4  | Female | Instagram, YouTube    | Digital Creator                 |
| 5  | Participant 5  | Female | Instagram             | Influencer                      |
| 6  | Participant 6  | Female | Instagram, YouTube    | Fashion & Lifestyle Creator     |
| 7  | Participant 7  | Female | Instagram             | Influencer                      |
| 8  | Participant 8  | Female | Instagram             | Beauty Content Creator          |
| 9  | Participant 9  | Female | Instagram             | Fashion Blogger                 |
| 10 | Participant 10 | Male   | YouTube               | Tech Reviewer                   |
| 11 | Participant 11 | Female | Instagram             | Content Creator                 |
| 12 | Participant 12 | Female | Instagram, YouTube    | Lifestyle Blogger               |
| 13 | Participant 13 | Female | Instagram             | Influencer                      |
| 14 | Participant 14 | Male   | YouTube               | Tech & Education Creator        |
| 15 | Participant 15 | Male   | YouTube               | Content Creator                 |
| 16 | Participant 16 | Female | Instagram             | Fashion & Beauty Influencer     |
| 17 | Participant 17 | Female | Instagram, YouTube    | Fashion & Lifestyle Creator     |
| 18 | Participant 18 | Female | YouTube, Instagram    | Entrepreneur / Content Creator  |
| 19 | Participant 19 | Male   | X, Telegram, WhatsApp | Web3 / Blockchain Influencer    |
| 20 | Participant 20 | Male   | LinkedIn, YouTube     | Tech Educator / Content Creator |

The word cloud for "Human-Centered Technology" (Figure 3) emphasizes the integration of empathy and creativity in leveraging technology to foster meaningful connections. Central themes include "expression," "connection," and "engaging," highlighting the role of technology in building relatable and emotionally resonant content. Words like "capacity," "outreach," and "interactive" reflect the potential of digital tools to enhance accessibility and inclusivity, while "authenticity" and "trustworthiness" underscore the

importance of maintaining genuine connections. This visualization showcases how human-centered approaches to technology prioritize emotional impact and societal relevance in digital interactions.

**Figure 2. Word Clouds for Engagement Strategies and Entrepreneurial Orientation**



The word cloud for "Social Inclusion" (Figure 3) highlights the key concepts at the heart of fostering an inclusive and equitable society through content creation. Central to the theme are terms like "social," "inclusion," and "empathy," reflecting a strong focus on shared understanding and reducing societal barriers. Words such as "diversity," "representation," and "accessibility" underscore the importance of amplifying marginalized voices and ensuring equitable opportunities for all, while "community" and "building" point to the collaborative efforts needed to create a sense of belonging. Additionally, the prominence of terms like "breaking barriers" and "transformative" suggests a commitment to challenging norms and advocating for meaningful change. This visualization encapsulates the essence of inclusivity as a dynamic, empathetic, and collaborative process.

Word Clouds gave us a basis of understanding what each theme or topic could include. Next, we have then conducted a thematic analysis. Following a similar approach to Jiang et al. (2024), the transcripts were analyzed in an iterative approach whereby common themes and patterns among the responses have been identified. Below we discuss our findings across 8 themes.

### *5.1. Platforms for Content Creation*

Instagram emerged as the dominant platform used by almost all creators due its visual nature, user-friendly interface, and ability to reach a wide audience. Participants noted that with variety of engagement forms it provides, Instagram is a popular platform to be able to reach



another major factor for developing engaging content. Participants particularly noted good colors, composition and interesting captions were instrumental in attaining audience's attention. Finally, participants mentioned *leveraging trends* to make their content more engaging. Many of our participants mentioned they followed trends, such as viral hashtags to increase visibility. Embedding trending music or audio were also instrumental in creating humorous or emotional content, as *Vardaan* discusses:

*"Sometimes, I add a caption that's so out of place it becomes funny, or I choose a random, unrelated song just to make people chuckle." — Participant 10.*

These strategies can be viewed as rewards of social exchange that foster reciprocity and trust between creators and their audiences. Emotional and informational value serve as core currencies that sustain ongoing engagement. Several participants also noted that alignment between audience interests and creator values, compatibility, increased engagement, while the perceived benefit of tips, humor, or personal support made the content more shareable and memorable.

### 5.3. Content type

Emotional content, such as sharing of personal challenges or family moments, was noted for fostering a deeper bond with audiences. Humor and light-hearted content were also frequently mentioned as effective strategies. Participants noted creating emotional content that resonates with their audience on special days such as Women's Day or Mothers' Day or opening about their own emotional challenges such as self-doubt, created a virtual a heat to heart like experience:

*"I shared a post about overcoming self-doubt, and many people reached out, saying it resonated with them." — Participant 8.*

However, while personal content often leads to stronger audience connections, it also exposes creators to scrutiny and judgment and puts creators into vulnerable situations. *Khushi* states how sharing content promotes feeling connected while at the same time *"it [...] makes me feel exposed."* —*Khosla*. This creates a cycle of pressure to produce content constantly, often at the expense of creativity or personal well-being.

Albeit less popular, informational content was another strategy our participants used to create more engaging content. For instance, some creators mentioned focusing on educational or practical posts, like tutorials, tips, and product reviews on topics such as women's empowerment, sustainable living, and financial independence. Participants highlighted this type of content to inspire and motivate their audience:

*"I share facts, tips, and advice that can help women make informed decisions. It's important for me to offer valuable information that can inspire and motivate my followers in meaningful ways." — Participant 9.*

Content types appeared to reflect both emotional and rational appeals. Participants described a clear intention to contribute positively to their audiences' lives, whether through encouragement, education, or empowerment. This echoes a broader aim of creating value that is emotionally resonant and socially beneficial, in line with the dynamics of social exchange and mutual benefit.

### 5.4. Use of HCT in Content Creation

HCTs play a pivotal role in shaping the modern content creation landscape, enabling creators to craft impactful and meaningful experiences for their audiences. *Digital skills* were mentioned as crucial factors in creating content among our participants. Knowledge of how

platforms function, including algorithms and analytics, were deemed critical for creating polished, engaging, impactful and relatable content, as well as making content ‘stand out’ and go ‘viral’:

*“Knowledge of analytics and tools is crucial. Instagram’s features, when used correctly, can make a reel go viral.” — Participant 4.*

Thus, many creators mentioned to rely on tools such as AI for editing, scripting, and analytics. Simple apps like Instagram’s in-built tools and external apps like Photoshop and Canva were frequently mentioned as more user-friendly options. The ability to personalize and creatively express through digital tools was not only seen as a technical skill, but as a relational and social affordance—one that enabled inclusion, agency, and personal connection. Such capabilities position creators as active agents in shaping decentralized and inclusive digital environments. Participants perceived platforms not just as tools but as adaptive spaces where creativity, autonomy, and audience responsiveness intersect, thus offering a sense of participatory control. Further, participants noted that the emotional and psychological needs in audience bring out the necessity to create content that resonate with users on a deeper level, thus creating an *empathetic* interaction with their audience.

*“I’ve noticed that when I share things that are personal or relatable, it can help others feel less alone or spark a connection. The benefit may not be huge, but I do see that it resonates in ways that matter.” — Participant 6.*

Features like comments, polls, and feedback loops were chosen tools by our participants in order to create that empathetic relationship, enabling creators to understand and address their audiences' emotional and social needs. This was seen as a way to create a lasting relationship with the audience. HCTs unrestricted self-expression through different tools and platforms. Almost all our participants mentioned ability to express personal creativity and individuality as an essential factor in creating engaging content. *Creative expression* was thus seen vital to be able to create authentic content without any requirement to fit into societal norms and was also seen as an empowering tool to voice unique perspectives:

*“Freedom of creative expression lets me share what feels true to me without worrying about fitting into a mold.” — Participant 5.*

Furthermore, social media was recognized for giving a platform to underrepresented voices and hence creating a considerable *outreach capacity*. Participants noted that by using HCTs, they are able to expand the reach of content through features that amplify visibility, such as algorithms, sharing tools, and accessibility options. Furthermore, content creation also gave voice to those otherwise unrecognized, and thus created inclusivity through enhanced representation:

*“Social media inherently promotes inclusivity. It connects people from diverse backgrounds and amplifies underrepresented voices.” — Participant 17.*

Participants believe that diversity represented via content created empathy among the audience and led to them to be more open minded. Yet some participants noted that outreach capacity cultivated by content creation was only partial. These responses highlighted limitations, such as unequal benefits, the need for adaptation, or the idea that content creation alone cannot fully address inclusion.

### 5.5. Challenges and Limitations

The digital space, particularly platforms like Instagram and YouTube, has become oversaturated with creators, making it challenging to stand out. Interviewees frequently noted the difficulty of differentiating their content amidst the sheer volume of material being posted. Furthermore, many creators highlighted the emotional toll of seeking validation through likes, comments, and shares, as well as dealing with negative feedback. The pressure

to meet audience expectations was a prominent challenge for participants leading to self-doubt and anxiety when content is criticized or ignored. *Participant 7* mentions:

“Sometimes, even though I put my heart into my posts, the lack of engagement feels like rejection.” — *Participant 7*.

The *algorithms* used by platforms like Instagram and YouTube were another major source of frustration for creators. Many felt the need to post frequently and adhere to platform-specific trends to remain visible:

“Even great content doesn’t get the reach it deserves because of how the algorithm works.” — *Participant 6*.

Furthermore, *monetising* content is a common goal for many creators, but it is not always guaranteed. Several interviewees mentioned that content creation might not provide consistent or reliable income, particularly in the early stages. For some creators, *societal or cultural norms* added another layer of challenge. Family expectations or traditional career paths sometimes conflicted with their aspirations to pursue content creation seriously:

“I come from a family of doctors, so convincing them that content creation is worthwhile was a challenge.” — *Participant 4*.

A final challenge mentioned was *balancing content* creation with other responsibilities. Many creators reported feeling overwhelmed by the time and effort required to consistently produce high-quality content.

## 5.6. Benefits of Content Creation

There were positive outcomes that creators experienced through their engagement in the digital content space. Participants noted content creation often served as a transformative experience, fostering *personal development* and boosting self-esteem. Many interviewees mentioned how expressing themselves online helped them grow as individuals, overcome insecurities, and connect with their authentic selves:

“When I started creating content, people praised my voice, which gave me the confidence to use it in my videos.” — *Participant 4*.

Content creation is often seen a gateway to *professional opportunities*, including collaborations with brands, partnerships with other creators, and access to new audiences. Many creators emphasized how their online presence led to unexpected chances for recognition and growth. For some, content creation offers a launchpad for entrepreneurial ventures or career advancements. By leveraging their platform, creators not only build personal brands but also gain insights into audience preferences and market trends, helping them plan future endeavors. Furthermore, content creation was seen to foster a *sense of community* by enabling creators to connect with their audiences and peers. Many noted that this interaction led to meaningful conversations, shared experiences, and emotional support: “Social media has allowed me to build a community where I feel recognized and valued for my perspectives.” — *Participant 12*.

The ability to *express oneself authentically and creatively* was cited as a major benefit. Freedom of expression allowed creators to explore new ideas, showcase their individuality, and experiment with different formats and styles.

Many participants described a shift from passive media consumption to active digital citizenship. Through content creation, they experienced empowerment, gained acceptance from niche communities, and expressed a sense of belonging—suggesting that inclusive identity formation is one of the emergent outcomes of their digital activity:

“[Digital] platforms empower creators in unique ways. [...] it’s amazing to see how creating and sharing content builds bonds within the community. It has deepened my sense of belonging and connection.” — *Participant 16*.

Thus, for some creators, content creation was not only a means of self-expression but a pathway to participate more fully in society—by being seen, heard, and valued for their unique voice.

### 5.7. Risk-Taking and Entrepreneurship

Many creators view their platforms as *entrepreneurial opportunities*. Participants discussed how they leverage their platforms not just for creative expression but as opportunities to innovate, build personal brands, and explore entrepreneurial ventures.

Entrepreneurial orientation was often described in terms of proactiveness, innovation, and calculated risk-taking. Creators adapted their content strategies in real time, responded to market signals (e.g., analytics), and viewed their creative work as both expressive and strategic. These traits supported autonomy and expanded the potential for social mobility and decentralized success through self-driven innovation. They noted that through content creation, they build better insights into digital trends, and develop business skills such as marketing, branding, and audience segmentation. Thus, in a way, entrepreneurship was seen as a natural extension to content creation:

*“I plan to start my own beauty company after reaching a certain level on social media.” — Participant 4.*

Such entrepreneurship, though, also comes with a susceptibility to *risk-taking*. Risk-taking meant pushing boundaries with unconventional content, exploring new formats, or experimenting with emerging trends for our participants, and mostly came with the possibility of failure. Some participants viewed content creation as a side pursuit or a steppingstone rather than a full-time career due to the uncertainties involved. For others, risk-taking and entrepreneurship are part of a larger vision. They view their platforms as steppingstones to long-term goals, such as launching a business or becoming recognized as thought leaders in their niches.

**Table 4. Gioia (2021) data structure for coding**

| Aggregate dimension                    | Second order concepts         | No of Resp. | First order concepts   |
|--|-------------------------------|-------------|--|
| <b>Platforms for Content Creation</b>  | Instagram                     | 16          | "Instagram is a powerful source of growth and success." — Participant 9    |
|  | YouTube                       | 6           | "YouTube is better for early monetization." — Participant 4                |
|  | Snapchat                      | 3           | "Snapchat offers short-lived personal updates." — Participant 5            |
|  | LinkedIn                      | 2           | "LinkedIn is great for professional updates." — Participant 5              |
| <b>Engagement Strategies</b>           | Relatability and authenticity | 14          | "I share behind-the-scenes glimpses and personal moments." — Participant 9 |
|  | Consistency                   | 10          | "Posting consistently keeps my audience engaged." — Participant 8          |
|  | Visual appeal                 | 11          | "I focus on making posts visually appealing." — Participant 6              |
|  | Leveraging trends             | 8           | "I use trending music or hashtags to connect." — Participant 10            |
| <b>Content type</b>                    | Emotional Content             | 13          | "I create posts about Women’s Day and family moments." — Participant 9     |
|  | Informational Content         | 9           | "I often post tips on self-care and beauty routines." — Participant 8      |
| <b>Use of human centric technology</b> | Digital skills                | 10          | "Knowing Instagram’s features helps performance." — Participant 4          |

|                                   |                             |    |   |
|-----------------------------------|-----------------------------|----|---|
|                                   | Creative expression         | 9  | "Authentic expression is vital to engaging content." — Participant 5  |
|                                   | Empathy                     | 12 | "Whether it's making them smile or helping them with something, I always try to add value." — Participant 16  |
|                                   | Out-reach capacity          | 10 | "Social media promotes equality by allowing people to gain recognition and acceptance without needing traditional credentials." — Participant 4               |
| <b>Challenges and Limitations</b> | Saturation and competition  | 11 | "Instagram is saturated, so I focus on my unique voice." — Participant 10   |
|                                   | Validation and criticism    | 8  | "Not everyone will like your content; you need to accept that." — Participant 3   |
|                                   | Algorithm pressures         | 7  | "Instagram's algorithm can make it feel like everything is about likes and views." — Participant 5  |
|                                   | Vulnerability               | 16 | "It's hard to share your story knowing that people might judge or misunderstand you." — Participant 4   |
|                                   | Monetizing content          | 6  | "Content creation is fun, but I don't see it as a full-time career because it's too risky. One day people like you, and the next they don't." — Participant 3 |
|                                   | Societal and cultural norms | 5  | "Older generations don't see social media as a 'real job.' It's hard to explain the opportunities it offers." — Participant 9                                 |

|   |                                |    |   |
|---|--------------------------------|----|---|
|   | Balancing content              | 7  | "The constant need to produce content takes a toll on my mental health." — Participant 7  |
| <b>Benefits of Content Creation</b>     | Personal growth                | 11 | "When I started creating content, people praised my voice, boosting my confidence." — Participant 4                                   |
|   | Professional opportunities     | 16 | "Collaborations opened doors I wouldn't have had." — Participant 8  |
|   | Sense of community             | 10 | "Sharing personal stories or speaking openly about my experiences helps me connect deeply with my followers." — Participant 8         |
|   | Freedom of creative expression | 16 | "Being authentic in my posts makes me feel more connected to my audience and gives me a sense of purpose." — Participant 7            |
| <b>Risk-Taking and Entrepreneurship</b> | Risk taking                    | 7  | "Content creation provides a platform to showcase talents and perspectives, leading to career growth and breaking barriers." - Guleen |
|   | Entrepreneurial opportunities  | 8  | "I plan to start my own beauty company after reaching a certain level on social media." — Participant 4                               |

## 6. Analysis of Quantitative Survey

### 6.1. Preliminary Statistical Tests

Following Talukder et al. (2020) before initiating the modelling process, preliminary statistical tests were conducted to ensure the appropriateness of the data for parametric analysis. Table 5 represents the demographic profile of the participants for the quantitative data. The hypothetical model is measured by using a variance-based approach called PLS-SEM via Smart PLS 4 software (Ringle et al., 2015). Research states that PLS-SEM is an acceptable method for many research scenarios and complex models (Chin, 1998) and especially for complex models with relatively smaller sample sizes. SmartPLS provides extensive capabilities for data manipulation, visualization, and modeling, making it suitable for a wide range of analytical tasks. We first assessed normality with Pearson's Skewness and Kurtosis parameters, which are critical for determining whether parametric tests can be employed (Hair et al., 2006). The acceptable range for these measures is between -2.58 and +2.58 (Azzalini et al., 2014). The results In Table 6 confirmed that all variables fell within this range, indicating that the data was normally distributed.

**Table 5. Demographics of the Data**

| Criterion  | Category     | India ( <i>n</i> = 112) | SK ( <i>n</i> = 100) |
|------------|--------------|-------------------------|----------------------|
| <b>Age</b> | 18–23        | 57                      | 43                   |
|            | 24–29        | 45                      | 48                   |
|            | 30–35        | 4                       | 5                    |
|            | 36–40        | 3                       | 3                    |
|            | 41 and above | 3                       | 1                    |

| Criterion           | Category                  | India ( <i>n</i> = 112) | SK ( <i>n</i> = 100) |
|---------------------|---------------------------|-------------------------|----------------------|
| <b>Content Area</b> | Art and Craft             | 16                      | 6                    |
|                     | Cooking                   | 3                       | 14                   |
|                     | Decoration                | 2                       | 16                   |
|                     | Education                 | 11                      | 8                    |
|                     | Entertainment             | 11                      | 12                   |
|                     | Fashion and Lifestyle     | 47                      | 16                   |
|                     | Music                     | 2                       | 14                   |
|                     | Spirituality and Religion | 2                       | 14                   |
|                     | Sports                    | 1                       | 12                   |
|                     | Technology                | 5                       | 22                   |
|                     | Vlogs                     | 2                       | 0                    |
|                     | Other                     | 11                      | 0                    |
| <b>Education</b>    | Bachelor's degree         | 46                      | 49                   |
|                     | Higher Secondary (12th)   | 2                       | 43                   |
|                     | Master's degree           | 63                      | 7                    |
|                     | Other                     | 1                       | 1                    |
| <b>Experience</b>   | 0–1 year                  | 72                      | 9                    |
|                     | 1–3 years                 | 26                      | 56                   |
|                     | 4–6 years                 | 11                      | 28                   |

|                                |                    |            |            |
|--------------------------------|--------------------|------------|------------|
|                                | 10–13 years        | 2          | 0          |
|                                | Misc               | 0          | 0          |
| <b>Gender</b>                  | Female             | 91         | 53         |
|                                | Male               | 21         | 47         |
|                                | Other              | 0          | 0          |
| <b>Income (USD Equivalent)</b> | Up to \$6,000      | 78         | 0          |
|                                | \$6,000–\$12,000   | 13         | 0          |
|                                | \$12,000–\$18,000  | 8          | 0          |
|                                | \$18,000–\$50,000  | 13         | 88         |
|                                | \$50,000–\$100,000 | 0          | 10         |
| <b>Platform</b>                | Canva              | 2          | 0          |
|                                | Facebook           | 20         | 50         |
|                                | Instagram          | 101        | 98         |
|                                | LinkedIn           | 28         | 0          |
|                                | Medium             | 3          | 0          |
|                                | Snapchat           | 33         | 0          |
|                                | Twitter (X)        | 9          | 28         |
|                                | Wordpress          | 9          | 0          |
|                                | YouTube            | 34         | 92         |
|                                | Other              | 7          | 0          |
| <b>Total</b>                   |                    | <b>112</b> | <b>100</b> |

### 6.2. Common Method Bias

Since this study utilized self-reported cross-sectional survey data, it was essential to examine the risk of common method bias (CMB), a potential concern in behavioral research (Podsakoff et al., 2003). Principal Axis Factor Analysis (PAF) was applied to identify whether a single factor could account for a significant portion of the variance in the data (Harman, 1976). The analysis revealed that a single construct explained 42% of the total variance, which is below the recommended threshold of 50% (Podsakoff et al., 2003). These results suggest that CMB was not a significant issue in this study.

### 6.3. Measurement Model

To assess the reliability and validity of the measurement model, internal consistency, convergent validity, and discriminant validity were examined (Hair et al., 2013). Reliability, as measured by Cronbach's Alpha and Dijkstra-Henseler's rho ( $\rho_A$ ), exceeded the recommended threshold of 0.70 for all constructs (Henseler et al., 2009). Convergent validity was evaluated using item loadings, composite reliability (CR), and average variance extracted (AVE). Most AVE values surpassed the threshold of 0.50 (Fornell and Larcker, 1981), except for two borderline cases; Engaging Content (EC) with 0.422 and Social Network Capability (SN) with 0.499. These values, combined with strong reliability metrics, were deemed sufficient for model continuation. Discriminant validity was further confirmed using the Heterotrait-Monotrait (HTMT) ratio (Table 5) and Fornell Larckner (Table 6). HTMT results showed all values falling below the acceptable limit of 0.85 (Henseler et al., 2014), and according to Fornell-Larckner results all variables AVE was greater than their shared variance meeting criteria for discriminant validity of constructs. Collinearity diagnostics

(VIF) and predictive relevance ( $Q^2$ ) were assessed using the standard model. VIF values for all constructs were below 5 (Hair and Alamer, 2022), and for the more conservative measure of 3.3 (Kock and Lynn, 2012) indicating no multicollinearity issues. Predictive relevance was confirmed with  $Q^2$  values above 0 for all endogenous constructs, indicating medium predictive power. Item-level predictive accuracy using PLS Predict further confirmed positive  $Q^2_{\text{predict}}$  and  $RMSE\_PLS < RMSE\_LM$  for all indicators (Ringle et al. 2023).

#### 6.4. Structural Model

The structural model was assessed to determine the relationships among constructs and the predictive power of the model. The variance explained ( $R^2$  values) in the endogenous constructs indicated that the model accounted for 71.7% of the variance in Decentralization (DC) and 53.5% of the variance in Social Inclusion (SI). These results far exceed the recommended minimum threshold of 30%, demonstrating the model's substantial predictive power (Falk and Miller, 1992). To further evaluate the hypotheses, bootstrapping with 5,000 repetitions was conducted. The findings indicate strong support for most of the hypothesized relationships. Engaging Content (EC), Human-Centered Technology (HCT), and Analytics Capability (AC) significantly predicted Decentralization (DC), with AC emerging as the strongest predictor. Additionally, Social Network Capability (SN) positively influenced DC. The relationship between DC and SI was highly significant, underscoring the critical role of Decentralization in fostering Social Inclusion. However, Entrepreneurial Orientation (EO) demonstrated only partial support as a predictor of DC due to its non-significant confidence interval.

In order to test the moderation effects, we have adopted a two-stage approach. The two-stage approach is widely regarded as the most robust method for moderation analysis within PLS-SEM (Hair et al., 2022; Sarstedt et al., 2019). Simulation studies have demonstrated that this approach outperforms alternative methods, such as the product indicator and orthogonalizing approaches, in terms of parameter recovery, particularly when models involve formatively measured constructs (Becker, Ringle, & Sarstedt, 2018). The two-stage approach is especially advantageous because it explicitly leverages PLS path modeling's ability to estimate latent variable scores, which are then used to create interaction terms that maintain optimal statistical properties (Henseler & Chin, 2010). This flexibility is crucial, as the two-stage approach remains applicable even when either the exogenous construct or the moderator is specified formatively, a situation in which other methods are not suitable (Fassott, Henseler, & Coelho, 2016). Furthermore, the two-stage approach consistently delivers robust results across various data treatment options, including unstandardized, mean-centered, and standardized data, making it the recommended standard for PLS-SEM moderation analysis (Becker et al., 2018).

The moderation analysis in this study explored the interaction effects of certain constructs on Decentralization (DC), aiming to understand how combinations of predictors influence the outcome. While the structural model demonstrated strong support for most direct relationships, the moderation effects revealed slightly weaker results.

For H4, which posited that a content creator's ability to develop their social network (SN) positively moderates the impact of engaging social media content (EC) on decentralization (DC), the results showed a negative coefficient (-0.101) with a p-value of 0.459, indicating a non-significant effect. This suggests that the interaction between EC and SN does not meaningfully influence decentralization. While the negative coefficient may point to contextual dynamics where the combined influence of EC and SN could potentially counteract rather than reinforce decentralization, the lack of statistical significance implies

that such effects are weak or inconsistent in this dataset.

The moderation effect of Analytics Capability (AC) on the relationship between Engaging Content (EC) and Decentralization (DC) (H5) revealed a positive coefficient (0.254) with a p-value of 0.052. Although slightly above the conventional 0.05 threshold, this result indicates marginal significance, lending partial support to the hypothesis that stronger analytics capabilities enhance the decentralizing effect of engaging content. This finding aligns with the theoretical expectation that AC, when paired with engaging content, may empower content creators to operate more autonomously within decentralized structures. However, the marginal significance suggests the strength of the moderation may be limited, potentially due to overlapping direct effects from AC on DC.

The interaction between Decentralization (DC) and Analytics Capability (AC) on Social Inclusion (SI) (H6) yielded a positive coefficient (0.263) and a p-value of 0.062, indicating marginal significance. While not statistically robust, this effect suggests a possible synergistic relationship, whereby high analytics capability in decentralized environments may modestly enhance social inclusion. This interpretation should be treated with caution given the confidence interval's proximity to zero and the absence of strong statistical support.

In contrast, the interaction between Decentralization (DC) and Entrepreneurial Orientation (EO) on Social Inclusion (SI) (H7) demonstrated a negative coefficient (-0.378) with a p-value of 0.016, indicating a statistically significant moderation effect. This finding suggests that as decentralization increases, the positive influence of EO on social inclusion diminishes. One possible explanation is that highly entrepreneurial users may operate more independently or competitively in decentralized settings, potentially reducing their contribution to inclusive digital environments. The significant negative interaction underscores the complexity of empowering individual agency in decentralized platforms while also promoting collective inclusion.

Together, these results reveal a mixed pattern of moderation effects, with one significant, two marginal, and one non-significant interaction. These findings point to specific boundary conditions under which engaging content, analytics, and orientation toward entrepreneurship interact with decentralization to shape social inclusion outcomes.

**Table 6. Skewness and Kurtosis of Measurement Items**

| Construct                       | Item | Skewness | Kurtosis |
|---------------------------------|------|----------|----------|
| <b>Engaging Content (EC)</b>    | EC1  | -0.12    | -0.78    |
|                                 | EC2  | -0.09    | -0.67    |
|                                 | EC3  | -0.15    | -0.82    |
|                                 | EC4  | -0.10    | -0.74    |
|                                 | EC5  | -0.18    | -0.87    |
|                                 | EC6  | -0.20    | -0.91    |
|                                 | EC7  | -0.14    | -0.80    |
|                                 | EC8  | -0.16    | -0.85    |
|                                 | EC9  | -0.22    | -0.95    |
| <b>Human-Centred Tech (HCT)</b> | CC1  | -0.11    | -0.71    |
|                                 | CC2  | -0.07    | -0.63    |
|                                 | CC3  | -0.10    | -0.70    |
|                                 | CC4  | -0.14    | -0.76    |
|                                 | CC5  | -0.18    | -0.82    |

|   |     |       |       |
|---|-----|-------|-------|
| <b>Analytics Capability (AC)</b>        | AC1 | -0.08 | -0.69 |
|   | AC2 | -0.09 | -0.68 |
|   | AC3 | -0.12 | -0.75 |
|   | AC4 | -0.14 | -0.78 |
|   | AC5 | -0.16 | -0.84 |
| <b>Entrepreneurial Orientation (EO)</b> | EO1 | -0.10 | -0.72 |
|   | EO2 | -0.12 | -0.75 |
|   | EO3 | -0.13 | -0.77 |
|   | EO4 | -0.15 | -0.80 |
|   | EO5 | -0.17 | -0.83 |
| <b>Decentralization (DC)</b>            | DC1 | -0.11 | -0.71 |
|   | DC2 | -0.13 | -0.74 |
|   | DC3 | -0.14 | -0.77 |
|   | DC4 | -0.16 | -0.80 |
|   | DC5 | -0.18 | -0.83 |
|   | DC6 | -0.12 | -0.73 |
| <b>Social Network (SN)</b>              | SN1 | -0.08 | -0.67 |
|   | SN2 | -0.10 | -0.70 |
|   | SN3 | -0.11 | -0.73 |

| <b>Construct</b>             | <b>Item</b> | <b>Skewness</b> | <b>Kurtosis</b> |
|------------------------------|-------------|-----------------|-----------------|
|                              | SN4         | -0.09           | -0.68           |
|                              | SN5         | -0.07           | -0.65           |
| <b>Social Inclusion (SI)</b> | SI1         | -0.10           | -0.70           |
|                              | SI2         | -0.12           | -0.75           |
|                              | SI3         | -0.14           | -0.78           |
|                              | SI4         | -0.09           | -0.69           |
|                              | SI5         | -0.11           | -0.72           |
|                              | SI6         | -0.15           | -0.81           |
|                              | SI7         | -0.13           | -0.77           |
|                              | SI8         | -0.08           | -0.67           |
|                              | SI9         | -0.07           | -0.65           |
|                              | SI10        | -0.11           | -0.73           |
|                              | SI11        | -0.18           | -0.43           |
|                              | SI12        | -0.72           | 0.02            |
|                              | SI13        | -0.58           | 0.82            |
|                              | SI14        | -0.64           | 0.63            |
|                              | SI15        | -0.45           | -0.44           |

**Table 7. Reliability, Convergent Validity of Constructs**

|            | <b>Cronbach's alpha</b> | <b>Composite reliability (rho_a)</b> | <b>Composite reliability (rho_c)</b> | <b>Average variance extracted (AVE)</b> |
|------------|-------------------------|--------------------------------------|--------------------------------------|---|
| <b>AC</b>  | 0.889                   | 0.896                                | 0.918                                | 0.692                                   |
| <b>DC</b>  | 0.871                   | 0.892                                | 0.904                                | 0.614                                   |
| <b>EC</b>  | 0.822                   | 0.844                                | 0.864                                | 0.422                                   |
| <b>EO</b>  | 0.878                   | 0.898                                | 0.901                                | 0.536                                   |
| <b>HCT</b> | 0.876                   | 0.908                                | 0.909                                | 0.668                                   |
| <b>SI</b>  | 0.935                   | 0.959                                | 0.948                                | 0.578                                   |
| <b>SN</b>  | 0.746                   | 0.754                                | 0.832                                | 0.499                                   |

**Table 8. Discriminant Validity (HTMT) for All Constructs**

| <b>Constructs</b> | <b>EC</b> | <b>HCT</b> | <b>AC</b> | <b>EO</b> | <b>SN</b> | <b>DC</b> | <b>SI</b> |
|-------------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|
| <b>EC</b>         | –         | 0.788      | 0.780     | 0.728     | 0.743     | 0.785     | 0.745     |
| <b>HCT</b>        |           | –          | 0.746     | 0.725     | 0.713     | 0.742     | 0.688     |
| <b>AC</b>         |           |            | –         | 0.771     | 0.754     | 0.765     | 0.692     |
| <b>EO</b>         |           |            |           | –         | 0.745     | 0.747     | 0.658     |
| <b>SN</b>         |           |            |           |           | –         | 0.707     | 0.789     |
| <b>DC</b>         |           |            |           |           |           | –         | 0.778     |
| <b>SI</b>         |           |            |           |           |           |           | –         |

**Table 9. Fornell-Larckner Criterion**

|            | <b>AC</b> | <b>DC</b> | <b>EC</b> | <b>EO</b> | <b>HCT</b> | <b>SI</b> | <b>SN</b> |
|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| <b>AC</b>  | 0.832     |           |           |           |            |           |           |
| <b>DC</b>  | 0.772     | 0.784     |           |           |            |           |           |
| <b>EC</b>  | 0.689     | 0.694     | 0.649     |           |            |           |           |
| <b>EO</b>  | 0.712     | 0.674     | 0.661     | 0.732     |            |           |           |
| <b>HCT</b> | 0.681     | 0.678     | 0.688     | 0.671     | 0.817      |           |           |
| <b>SI</b>  | 0.652     | 0.731     | 0.665     | 0.648     | 0.654      | 0.761     |           |
| <b>SN</b>  | 0.706     | 0.731     | 0.660     | 0.707     | 0.668      | 0.682     | 0.706     |

**Table 10. VIF statistics**

|            | <b>VIF</b> |
|------------|------------|
| <b>AC1</b> | 2.203      |
| <b>AC2</b> | 2.400      |
| <b>AC3</b> | 2.308      |
| <b>AC4</b> | 2.426      |
| <b>AC5</b> | 2.082      |
| <b>CC1</b> | 2.595      |
| <b>CC2</b> | 3.263      |
| <b>CC3</b> | 1.923      |
| <b>CC4</b> | 2.362      |
| <b>CC5</b> | 1.664      |
| <b>DC1</b> | 1.461      |
| <b>DC2</b> | 1.794      |
| <b>DC3</b> | 3.163      |

|             |       |
|-------------|-------|
| <b>DC4</b>  | 2.697 |
| <b>DC5</b>  | 3.227 |
| <b>DC6</b>  | 2.194 |
| <b>EC1</b>  | 1.200 |
| <b>EC2</b>  | 1.359 |
| <b>EC3</b>  | 1.249 |
| <b>EC4</b>  | 1.511 |
| <b>EC5</b>  | 1.905 |
| <b>EC6</b>  | 2.223 |
| <b>EC7</b>  | 1.532 |
| <b>EC8</b>  | 1.647 |
| <b>EC9</b>  | 2.137 |
| <b>EO1</b>  | 2.621 |
| <b>EO2</b>  | 3.202 |
| <b>EO3</b>  | 1.806 |
| <b>EO4</b>  | 2.358 |
| <b>EO5</b>  | 2.137 |
| <b>EO6</b>  | 1.991 |
| <b>EO7</b>  | 1.920 |
| <b>EO8</b>  | 1.992 |
| <b>SI1</b>  | 2.523 |
| <b>SI10</b> | 2.900 |
| <b>SI11</b> | 3.240 |
| <b>SI12</b> | 2.807 |
| <b>SI13</b> | 3.226 |

|             |       |
|-------------|-------|
| <b>SI14</b> | 2.997 |
| <b>SI15</b> | 2.736 |
| <b>SI2</b>  | 1.333 |
| <b>SI3</b>  | 2.367 |
| <b>SI4</b>  | 2.918 |
| <b>SI5</b>  | 2.864 |
| <b>SI6</b>  | 2.494 |
| <b>SI7</b>  | 3.189 |
| <b>SI8</b>  | 2.357 |
| <b>SI9</b>  | 3.207 |
| <b>SN1</b>  | 1.250 |
| <b>SN2</b>  | 1.380 |
| <b>SN3</b>  | 1.567 |
| <b>SN4</b>  | 1.483 |
| <b>SN5</b>  | 1.852 |

**Table 11. Q<sup>2</sup> Predict (Construct-Level)**

| <b>Endogenous Construct</b> | <b>Q<sup>2</sup> Predict</b> |
|-----------------------------|------------------------------|
| DC                          | 0.212                        |
| SI                          | 0.218                        |

**Table 12. Item-Level Predictive Fit (PLS Predict)**

| Indicator | PLS RMSE | LM RMSE | Q <sup>2</sup> _predict |
|-----------|----------|---------|-------------------------|
| DC_1      | 0.720    | 0.841   | 0.267                   |
| DC_2      | 0.706    | 0.818   | 0.253                   |
| DC_3      | 0.693    | 0.782   | 0.224                   |
| DC_4      | 0.745    | 0.792   | 0.150                   |
| DC_5      | 0.659    | 0.785   | 0.293                   |
| DC_6      | 0.705    | 0.803   | 0.234                   |
| SI_1      | 0.636    | 0.772   | 0.317                   |
| SI_2      | 0.649    | 0.789   | 0.295                   |
| SI_3      | 0.662    | 0.804   | 0.279                   |
| SI_4      | 0.678    | 0.811   | 0.266                   |
| SI_5      | 0.650    | 0.788   | 0.292                   |
| SI_6      | 0.663    | 0.782   | 0.250                   |
| SI_7      | 0.640    | 0.775   | 0.299                   |
| SI_8      | 0.658    | 0.793   | 0.287                   |
| SI_9      | 0.681    | 0.806   | 0.268                   |
| SI_10     | 0.699    | 0.823   | 0.254                   |
| SI_11     | 0.711    | 0.830   | 0.243                   |
| SI_12     | 0.723    | 0.838   | 0.230                   |
| SI_13     | 0.705    | 0.825   | 0.248                   |
| SI_14     | 0.688    | 0.812   | 0.259                   |
| SI_15     | 0.676    | 0.798   | 0.267                   |

**Table 13. Summary of Bootstrapped Path Coefficients and Hypotheses Testing**

| Hypothesis          | Path     | Original Coefficient | Bootstrap Mean | T-Stat | 95% CI (Lower) | 95% CI (Upper) | Significance | Support   |
|---------------------|----------|----------------------|----------------|--------|----------------|----------------|--------------|-----------|
| <b>H1: EC → DC</b>  | EC → DC  | 0.175                | 0.17           | 2.355  | 0.019          | 0.308          | Significant  | Supported |
| <b>H2: HCT → DC</b> | HCT → DC | 0.162                | 0.15           | 2.242  | 0.014          | 0.3            | Significant  | Supported |
| <b>H3: AC → DC</b>  | AC → DC  | 0.409                | 0.408          | 4.965  | 0.249          | 0.57           | Significant  | Supported |

**Table 14. Bootstrapped Moderation Effects**

| Moderation Path         | Coefficient | t-value | p-value | Significance | Hypothesis Outcome         |
|-------------------------|-------------|---------|---------|--------------|----------------------------|
| <b>H4: SN × EC → DC</b> | -0.101      | 0.742   | 0.459   | n.s.         | <b>Not Supported</b>       |
| <b>H5: AC × EC → DC</b> | 0.254       | 1.945   | 0.052   | † Marginal   | <b>Partially Supported</b> |
| <b>H6: AC × DC → SI</b> | 0.263       | 1.867   | 0.062   | † Marginal   | <b>Partially Supported</b> |

|                         |        |       |       |                    |                      |
|-------------------------|--------|-------|-------|--------------------|----------------------|
| <b>H7: EO × DC → SI</b> | -0.378 | 2.413 | 0.016 | <b>Significant</b> | <b>Not Supported</b> |
|-------------------------|--------|-------|-------|--------------------|----------------------|

The research underscores the transformative potential of decentralized content creation through HCT-based platforms like YouTube. These technologies democratize creative expression by removing traditional barriers associated with resources, capital, and gatekeeping, enabling individuals from marginalized communities to showcase their talents and achieve social inclusion.

Based on our findings, the creation of engaging content, characterized by its emotional, relational, informational, and remunerative dimensions, was found to significantly enhance the decentralization of content. By fostering meaningful social exchange relationships, content creators can achieve greater visibility and control over their creative outputs, bypassing traditional gatekeepers (e.g., Khobzi et al., 2024; Audrezet et al., 2020).

Furthermore, the capabilities of content creators to effectively use HCTs and analyze social media data play a crucial role in leveraging these platforms for decentralized content creation in our findings. AC emerged as a particularly strong predictor of decentralization, emphasizing the importance of informed decision-making and content strategy in achieving equitable access and impact (Wong and Ngai, 2023; Lu & Ramamurthy, 2011).

In our findings, the moderation hypotheses revealed mixed results. The interaction between engaging content (EC) and analytics capability (AC) significantly influenced decentralization (DC), albeit marginally, supporting the hypothesis that data-driven strategies can amplify the impact of engaging content on decentralization. However, the interactions involving decentralization (DC) and analytics capability (AC) on social inclusion (SI), as well as decentralization (DC) and entrepreneurial orientation (EO) on social inclusion, were not statistically significant. These findings suggest that while AC enhances decentralization as a main effect, its moderating role and that of EO on social inclusion are limited. Further research is necessary to explore these dynamics, particularly in varying contexts or with expanded sample sizes (Adomako et al., 2018; Cools & Van den Broeck, 2007). Decentralized content creation fosters social inclusion by empowering creators to engage in authentic self-expression, develop reciprocal exchanges with their audience, and build a sense of belonging and recognition within the digital community. This supports the idea that decentralization not only democratizes access to creative opportunities but also strengthens community bonds and social equity (Lin & Kant, 2021; Choi & Behm-Morawitz, 2017).

## 7. Discussions and Implications

### 7.1. Discussion of Findings

This study has initially examined how creation of engaging social media content and the capabilities of content creators in utilizing social media-based HCT influence the decentralization of creators' social media content. It then explored the role of decentralization of social media content in influencing the social inclusion of content creators from marginalized communities. The study also investigated how individual attributes of marginalized content creators (i.e. analytics capabilities, social networking skills, and entrepreneurial orientation) influence the role of their social media content in decentralization of content and attainment of social inclusion.

Our qualitative findings showed that engaging content includes several elements including consistent, relatable, and visually appealing content. The main focus of social

media content was to be able to generate authenticity and relatability by creating genuine and resonant interactions. The findings also pointed out the importance of both appealing aesthetics and staying current with cultural moments as well as the value of emotional and interactive experiences. In previous studies, social media content, which has been categorized in similar ways with rational and emotional aspects, have also been observed to generate user engagement (e.g. Dolan et al, 2019; Shahbaznezhad et al., 2021).

Our quantitative analysis further confirmed that the creation of engaging social media content, characterized by emotional, relational, informational, and remunerative dimensions, has a facilitating role in the decentralization of content. Although the role of social media content in the decentralization of content has not been tested in earlier studies, our finding is consistent with research demonstrating the positive effect of content creation practice on content creators' performance (Han et al., 2020; Hofstetter & Gollnhofer, 2024). Our study advances previous research by providing insights into the social implications of creating engaging social media content. This finding has demonstrated that creators' participation in the creation and sharing of engaging social media content enhances equal and democratic opportunities for everyone to contribute to its development. This way, it responds to concerns raised by studies regarding the restrictive influence of social media platform owners and authorities on the autonomous creation and distribution of social media content (Khobzi et al., 2024). Our qualitative findings about HCT pointed out the importance of having empathy and creativity in leveraging technology to foster meaningful connections and the role of technology in building relatable and emotionally resonant content. Our analysis also observed the potential of digital tools to enhance accessibility and inclusivity. Importantly, digital skills were mentioned as crucial factors in creating content among our participants. In line with these qualitative findings, our quantitative analysis also showed that a content creator's capability or skill in deploying social media as a human-centered technology positively impacts the decentralization of his or her content. This result is aligned with studies which have shown an individual's technological capabilities in improving their work performance (Wang & Haggerty, 2011). In addition, our study addresses to the concerns about how digital divides may disadvantage some people from vulnerable and marginalized groups (Lin & Kant, 2021). Although our participants were from marginalized communities, our finding has showed that capabilities in social media as a HCT still matter in the creation of more democratized content via its decentralization. Analytics capability also emerged as a strong predictor of decentralization, demonstrating the role of informed decision-making and content strategy in achieving equitable access and impact (Wong and Ngai, 2023; Lu & Ramamurthy, 2011). Though analytics capabilities have been widely examined in organizational contexts (Wang et al., 2019; Ozdemir et al., 2024), there has been limited insights into how such capabilities may impact the performance of individual influencers.

Furthermore, our qualitative findings revealed that social inclusion fosters an inclusive and equitable society through content creation. In line with Licsandru and Cui's (2018) and Licsandru's (2019) conceptualization of social inclusion, we observed that empathy, diversity, representation and accessibility underscore the importance of amplifying marginalized voices and ensuring equitable opportunities for all. Our quantitative findings have further observed a strong facilitating role of the decentralization of social media content in a content creator's attainment of social inclusion. Several scholars already suggest that even online platforms with semi-decentralized governance structures can offer their users with to opportunities to more democratically participate in decision making and thus engage with more democratized content (Chen et al., 2021). It was shown that more decentralized content developed through the social media platforms give the creators the freedom to display their authentic selves (Chen & Sriphon, 2022). However, our study builds on these studies by demonstrating a direct relationship between decentralization of a creator's content and improvement of his or her social inclusion. Our findings suggest that the decentralization of

content not only grants creators greater authority and freedom over their activities by reducing external control over their content but also offers opportunities for increased inclusion within their communities. This is achieved by fostering a sense of empowerment, respect, belonging, acceptance, and equality (Licsandrua and Cui, 2018; Licsandrua, 2019).

Furthermore, in our quantitative analysis, content creator's capability to develop their social network was not shown to have any significant moderation effect on the relationship between creation of an engaging social media content and the decentralization of the content. This finding implies that establishing and building social networks did not play a facilitating role in the development of an engaging and more democratized content. Decentralization of content seemed to be rather related to the task specific knowledge and capabilities of the content creators who needed to improve their content creation (i.e. by creating engaging social media content) and sharing (i.e. by effectively deploying their capabilities to use social media) practice. Our finding is consistent with the previous findings showing that task specific capabilities are deployed to effectively perform a specific task or activity (Yoon, 2009). In this context, rather than possessing general social networking skills, having task-specific expertise or capabilities in utilizing social media may be more effective for creating decentralized content.

Consistent with our previous quantitative finding, our quantitative analysis further showed that a task specific capability, a creator's capability to analyze social media data, positively moderates the impact of engaging social media content on its decentralization, albeit marginally significant. This confirms our earlier argument about the role of task specific capabilities in achieving certain performance goals. However, our quantitative analysis further observed that analytics capability or a content creator's capability to analyze social media data as a task specific capability does not have a significant moderating effect on the relationship between decentralized social media content and the creator's social inclusion. This may be due to the fact that in decentralization of content, there is more interdependence and democratic participation in content creation and sharing, which in turn does not necessitate the use of analytics capabilities to attain superior performance outcomes. Decentralization of content provides all inclusive opportunities for content creators including prospects for becoming more socially inclusive. Our findings imply that in individual content creator context, analytics capabilities play a supporting role in the creation of a more engaging and democratized social media content by providing in-depth insights into the user preferences, requirements and trends. Yet, once decentralization of content is achieved, analytics capabilities may not provide any additional value for the improvement of social inclusion. Indeed, data analytics may not provide extensive insights into highly complex social, cultural, economic and political dynamics, which are crucial to overcome the challenges of achieving social inclusion (Licsandru et al., 2024).

Finally, our quantitative analysis showed that entrepreneurship orientation had a significant but negative moderating effect on the relationship between the decentralization of social media content and social inclusion of creators. Previous research has reported that EO aids micro-entrepreneurship endeavors of marginalized communities (Adams et al., 2017; Chatterjee et al., 2020). However, in our study we examined how EO interacts with decentralization of social media content, which leads to more democratic and autonomous content creation and sharing opportunities for all content creators. This implies that when content creation and sharing are already more autonomous and democratized through decentralization, a stronger EO does not translate into greater social inclusion and may even dampen the inclusion benefits associated with decentralization. This can be explained by research in organizational contexts which shows EO's is likely to have a positive impact on centralization instead of decentralization, in the shape of concentration of decision-making at higher levels of an organization (Yang et al., 2019).

To support confidence in these moderation findings, we verified the psychometric and

multicollinearity properties of the model through VIF and Fornell-Larckner criteria and thus moderation patterns observed can be interpreted as robust and reflective of underlying theoretical mechanisms rather than methodological noise.

## *7.2. Theoretical Implications*

Our study has extended the application of SET by positioning it in the context of social inclusion, rather than by focusing on its role in some other widely examined concepts such as relationship commitment or satisfaction. In this way, we examined social inclusion as a distinct and underexplored outcome of social exchange relationships. Specifically, we investigated how social exchange mechanisms operate for marginalized actors within decentralized digital environments. Social exchange mechanisms (e.g. social media content) and processes (e.g. interactions with followers) are more important for marginalized groups in their efforts to achieve more equal access to opportunities and develop a sense of belongingness with other members of a society (or community) (Davlembayeva et al., 2020). As suggested in previous research, while social inclusion has been predominantly examined using the economic, political and social perspectives, there has been little understanding on the meaning of social inclusion from an individual view (Licsandru and Cui, 2018). In this sense, this study has built on previous studies on social inclusion by examining it as an outcome that can be achieved by individual social media content creators belonging to marginalized communities. Importantly, our study has advanced the discussions on whether human centered technology (e.g. information and communication technology or ICT) may generate new digital divides and social exclusion for marginalized groups. Our findings imply that social media, as a human centered technology, can empower content creators by facilitating the decentralization of their content, which in turn enables mutual value creation and appropriation with other stakeholders to overcome social inclusion challenges. Importantly, by examining experiences, practices, capabilities, traits and the broader context of HCT used by marginalized communities, our study adds to existing work on decentralization, platformization and social media use (see Table 2). Prior research predominantly focuses on broader community engagement or institutional frameworks rather than specific social media creators as research participants (e.g. Davies, 2023; Hutchinson, 2013; Maher et al., 2023). Our study offers a fresh perspective on groups that are often overlooked and complements earlier research that has mainly focused on general or organizational samples. Thus, the study provides insights directly from voices often underrepresented in research by focusing on social media content creators from marginalized groups. Methodologically, prior studies focusing on social media use and platformization mostly deploy machine learning, time-series decomposition, agent-based modelling and other advanced quantitative modeling techniques on social media data for prediction and behavioral purposes to achieve statistical accuracy and performance improvement (e.g. Nikseresht et al., 2025, 2024; Lui et al., 2023; Cui et al., 2018; Jemmer & Ibrus, 2023). In such studies, the analytical focus has largely been on quantitative data extracted from social media or organizational metrics, often based on deep learning, meta-analyses, or statistical modeling frameworks rather than human-centered qualitative insights. This study builds on these studies by using structured quantitative surveys with interpretive, semi-structured qualitative interviews, targeting the lived experience, practices, and social context of marginalized communities, aspects often overlooked in highly quantitative studies. While some studies particularly on decentralization use qualitative or mixed methods, because our approach combines semi-structured interviews and structured surveys (e.g. Davies, 2023; Budak, 2016), our mixed method approach focused on depth (qualitative) and breadth (quantitative) of insights into the experiences, practices, capabilities and social inclusion

achievements of content creators from marginalized communities.

Moreover, we advance SET by incorporating individual-level moderators (analytics capability, entrepreneurial orientation, and social networking skill) to reflect the situated agency of creators, addressing a long-standing critique that SET underemphasizes contextual and dispositional factors (Cropanzano et al., 2017). Existing literature in different disciplines typically focuses on either macro-level governance structures (Nieborg & Poell, 2018) or audience reception (Couldry & Mejias, 2019), without adequately examining how decentralized participation is enacted through creator-audience interactions and shaped by individual attributes. While a limited number of previous studies examine platform governance (Nieborg & Poell, 2018) or social inclusion (Licsandru & Cui, 2018) in isolation, our paper shows how HCT proficiency activates decentralization as a mechanism for social inclusion of individual content creators, a novel theoretical contribution to digital sociology. Finally, our findings show that the way SET explains social exchange in the context of individual content creators is different than the organizational settings. For example, while entrepreneurship orientation has been a significant predictor for improving social outcomes in organizational contexts (Akther et al., 2024), in this study we cannot confirm a similarly positive moderating effect of content decentralization on social inclusion.

### *7.3. Practical Implications*

This study offers several practical implications for content creators. First, content creators should focus on developing engaging content that incorporates impactful emotional, relational, entertaining, remunerative and informative elements, contributing to the decentralization of content on social media. For example, relational content, focusing on crafting narratives based on personal experiences and stories would enhance empathy, sense of shared identity, and emotional connection in the audience. Further, engaging content through remunerative elements that mobilize audiences toward specific actions and informative elements which provide useful knowledge on relevant topics, will both support wider participation and sharing across networks.

Second, it is crucial for content creators to continuously invest in enhancing their analytics skills, enabling them to extract and interpret user data effectively to inform their content creation practices. For example, they can investigate the comments, likes, shares and watch durations associated with their content. By looking into those metrics, they can develop an indepth understanding of the type of content which may be more desirable for their audience. Once they identify the content that is valued by their audience, they can encourage more democratic participation and engagement. However, content creators should avoid analyzing social media data for the purpose of improving their social inclusion, as this may lead to increased opportunity costs. Social media data typically offers limited insights into customer preferences and behaviors. Therefore, it may not effectively depict the deeper dynamics of how democratized content contributes to a creator's social inclusion.

Third, content creators should actively support the decentralization of social media content, as it promotes equal opportunities for themselves and others to participate in a more democratic and autonomous process of content creation and sharing. For instance, content creators can collaborate with others and engage in mutually beneficial relationships to co-create value. This collaboration can result in the creation of superior value, positive feedback from others, and a greater sense of respect, empowerment, and acceptance within their community. Through effective content creation on social media, as an HCT, content creators can initially enhance their opportunities for value creation by increasing their visibility, and subsequently appropriate that value by achieving greater social inclusion within the broader society. In this sense, content creators should invest in creating democratized content which

can enhance the empowerment of all stakeholders which can in turn provides wider recognition that supports long-term social inclusion.

Finally, content creators need to consistently enhance their capabilities in utilizing HCT, particularly social media technologies, to become more autonomous and empowered in their practice. They can participate in government sponsored digital literacy courses, engage with freely accessible digital technology training offered by other creators, and explore grant opportunities offered to enhance their digital competencies. By developing skills in effectively using social media, as an HCT, they can expand their opportunities to create innovative and meaningful content that not only empowers themselves but also has the potential to empower and liberate others.

#### *7.4. Future Research*

This study has several limitations that fruitful avenues for future research. First, data was collected only from individual content creators, not their network partners. This limited our study to the perspective of the content creators only. Future studies could include data from both content creators and their users or fellow creators to capture the dynamics of the social exchange relationship process.

Second, we used subjective measures of content decentralization and social inclusion. Future research could complement these with objective measures to offer a more robust analysis of how engaging social media content influences the decentralization of creators' content and, in turn, their social inclusion. While consumer research often distinguishes between objective and subjective data, this separation can disregard the complexity of social exchange relationships aiming at the attainment of decentralization of creators' content and their social inclusion. Use of subjective measures complementarily with objective metrics (e.g. growth in engagement rates, followers, and creators' network etc) would offer a richer and more accurate understanding, and cross validation of the role of democratized content on social inclusion of creators (Gardhouse & Anderson, 2013).

Third, this study did not examine platform related differences in understanding engaging social media content creation, decentralization of content and social inclusion relationships. Thus, future research can adopt a multi-level approach by examining which social media platforms (e.g. blockchain-based platforms and federated networks) may be more effective in enhancing the decentralization and social inclusion of individual content creators. For example, future research can explore top-down influences of social media platform policies on the creation of engaging content, decentralization of creators' content and social inclusion, or bottom-up influences of how creators and audiences shape platform rules and norms that enable more democratized ecosystems and greater social inclusion.

Furthermore, our research relied on cross-sectional data from content creators. Future studies could focus on the evolution of social media content by creators and explore how this evolution affects the decentralization of their content creation activities and their social inclusion over time. Thus, future studies could adopt longitudinal or experimental designs to explore causality with greater precision, particularly the dynamic relationships between content creation, decentralization affordances, and social inclusion outcomes. Thus, future researchers can build on our findings using temporal or intervention-based designs.

Finally, while our survey data includes Indian and Korean content creators, we did not examine the influence of cultural context on content creation practices and outcomes. Social media, however, offers significant opportunities for cultural power rebalancing by providing greater opportunities for achieving visibility and participation for creators from underrepresented cultures. This not only enhances the social inclusion of individual creators but also supports the emergence of more democratized forms of cultural representation.

Future research could therefore investigate how creators from marginalized or underrepresented cultural backgrounds contribute to the redistribution of cultural influence and the decentering of dominant narratives.

## 8. Conclusions

The research underscores the transformative potential of decentralized content creation through HCT-based platforms like YouTube. These technologies democratize creative expression by removing traditional barriers associated with resources, capital, and gatekeeping, enabling individuals from marginalized communities to showcase their talents and achieve social inclusion. Based on our findings, the creation of engaging content significantly enhances the decentralization of content, which in turn improves social inclusion of content creators. Similarly, the capabilities of content creators to effectively use HCTs such as social media technology play a crucial role in leveraging these platforms for decentralized content creation in our findings. Analytics capability is a strong predictor of the relationship between engaging content and decentralization and highlights the importance of informed decision-making and content strategy for equitable access and impact (Wong & Ngai, 2023; Lu & Ramamurthy, 2011). However, analytics capability showed no moderating effects in this relationship, and EO was found to have a negative influence on the role of decentralization of content creators' social media content in their social inclusion.

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