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Decoding online brand-related activities: unveiling motivations, experiences, and personality factors in social commerce

Hamed Azad Moghddam[1,2] · **Hormoz Ahmadi[3]** · **Mojtaba Barari[1]**

Abstract

This study explores factors shaping consumer online brand-related activities (COBRAs) in social commerce, comprising consumption, contribution, and creation behaviours. Study 1, using netnography, analysed 578,235 comments on 10 social media brand pages, aiming to establish a theoretical framework for understanding consumer motivations and resulting COBRA behaviours. Study 2, a survey involving 574 consumers, identified that extrinsic and intrinsic motives directly influence COBRA behaviours, independently or through web-based experiences, specifically absorption and overall satisfaction. Consumers' personality traits, particularly their perception of social risk, act as boundary constraints. The findings contribute to marketing communications and segmentation and provide insights for social commerce content marketing and brand management.

Keywords COBRA behaviours · Netnography · Social commerce · Social presence · Instagram

✉ Hamed Azad Moghddam
Hamed.AzadMoghddam@newcastle.edu.au

Hormoz Ahmadi
H.Ahmadi@latrobe.edu.au

Mojtaba Barari
Moji.Barari@newcastle.edu.au

1   Newcastle Business School, University of Newcastle, Newcastle, Australia

2   Peter Faber Business School, Australian Catholic University, New South Wales, Australia

3   La Trobe Business School, La Trobe University, Melbourne, Australia

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1 Introduction

Social commerce (SC) has emerged as a vital marketing channel, integral to extensive consumer engagement [49, 52]. As online commerce facilitated through social media, SC has evolved beyond static brand pages on platforms like Facebook, Instagram, and TikTok [35, 67, 74]. These dynamic shopping hubs actively promote consumer interaction, social connections, and entertainment [86]. The global adoption of SC brand pages has surged, particularly during and after the COVID-19 pandemic, with projections indicating that over 2 billion people were expected to have shopped on these pages in 2023 [25, 92]). The SC market, valued at USD89.4 billion in 2020, is forecast to reach USD6.2 trillion by 2030 [78]. In the sales funnel, SC brand pages play a pivotal role in converting potential customers into active consumers, leading brands to invest substantially in consumer engagement strategies [57]. These pages facilitate transactions and serve as powerful sources of inspiration and discovery, helping consumers to find new products and brands before making a purchase [15]. Leveraging features like carousels, live videos, and hashtags, these pages communicate, run campaigns, generate leads, and enhance brand visibility [90]. Notably, Nike strategically utilises multiple social media platforms to establish brand pages and amass followers [41]. While previous studies have explored consumer motives on various platforms, there's a gap in understanding nuanced motivations for SC brand page consumption, particularly in the evolving transaction-oriented landscape [38, 43, 58]. The US market's emphasis on Instagram posts as purchase influencers [35] highlights the need to explore consumer motives in SC brand page consumption.

Researchers have coined the term consumer online brand-related activities (COBRAs), encompassing consumer behaviours directly linked to a brand on social media platforms, such as liking, sharing, commenting, or making purchase decisions influenced by brand-related content [9]. These activities, considered "top-of-the-funnel" (TOFU) objectives, aim to stabilise SC brand pages and improve sales outcomes [10]. The technological capabilities of distinct SC platforms, detailed in the Appendix 1, shape each stage, emphasising nonpurchase behaviours that influence and cocreate experiences with brands. Despite this, there is a persistent gap in understanding the impact of consumer motives on COBRA behaviours with SC brand pages, which warrants further investigation.

Scholars have extensively studied consumer motives driving COBRA behaviours, focusing on direct effects within specific frameworks. However, this approach may overlook individual consumer characteristics and diverse reactions to SC technologies [79]. This study proposes that consumer perceptions of absorption and overall satisfaction with SC brand pages are web-based experiential evaluations influencing the interplay between motives and behavioural outcomes. Engaging with brand-related information online influences consumers' behavioural outcomes towards the brand [13]. In social media brand community contexts, highly engaged consumers reciprocate by actively sharing and creating brand-related content [60]. However, there is a need to explore how consumer perceptions of absorption and overall satisfaction with SC brand pages impact COBRA behaviours. Existing SC research has

mainly focused on direct relationships to understand how consumer motives drive COBRA behaviour [9], potentially obscuring individual characteristics and nuanced reactions to SC technologies [79]. Limited attention has been given to understanding consumer heterogeneity in this context. Recent SC research highlights varying levels of consumer concern about third-party evaluations on SC brand pages, leading to comfort or discomfort, gain or loss of social status, and positive or negative consequences [61]. This perceived social risk (PSR) hinges on individuals' apprehensions about third-party evaluations based on their posted ideas and opinions, which has an impact on their self-concept [63]. Consumers with high PSR may perceive uncertainty and potentially unfavourable feedback, leading to a reluctance to contribute comments or share ideas to mitigate the perceived risk [6, 61]. The level of PSR influences consumer participation and engagement on social media pages in SC consumption, shaping how they gratify motives and having an impact on subsequent COBRA behaviours on SC brand pages. This study identifies an unexplored area regarding the moderating role of PSR in the relationships between consumer motives and COBRA behaviours on SC brand pages within the current literature.

While there is considerable research into consumer motives in social commerce, the nuanced impact of consumer perceptions, such as absorption and satisfaction, remains underexplored, especially concerning their influence on COBRA behaviours [9]. Previous studies have often neglected individual differences in consumer reactions to SC platforms, which can vary significantly based on personal characteristics and social context [79]. Additionally, while PSR has gained attention in other social media contexts, its role in moderating consumer motives and COBRA behaviours on SC brand pages remains unexamined [61]. The current literature does not sufficiently address how these individual-level factors, such as PSR, interact with overarching consumer motives to shape engagement on SC brand pages, which is essential to understanding the full complexity of consumer behaviours in this domain. This gap is critical as SC continues to evolve, with dynamic technological features and new consumer interaction patterns emerging that could significantly alter the landscape of consumer engagement and motivation.

These gaps in existing research provide a strong foundation for the four research questions posed in this study. By examining consumer perceptions, satisfaction, and perceived social risk, this study aims to offer a more comprehensive understanding of consumer behaviour in the context of SC brand pages and their influence on COBRA activities.

This study sets out to address four research questions:

RQ1:   What critical consumer motives drive customer participation in SC brand pages?

RQ2:   To what extent do these consumer motives influence COBRAs with SC brand pages?

RQ3:   How do consumer perceptions of absorption and overall satisfaction with SC brand pages mediate the relationship between consumer motives and COBRA behaviours in SC brand pages?

RQ4:   To what extent does PSR moderate the relationships between consumer motives and COBRA behaviours in SC brand pages?

This study delves into nuanced aspects of consumer engagement in the evolving SC landscape, contributing to the social media and branding literature on consumer motivation and behaviour. Utilising a mixed-methods approach [36], our research identifies key dimensions of consumer motives for SC participation. Integrating usage and gratification theory (U&G) and the stimulus–organism–response (SOR) paradigm, our model illustrates how consumer motives influence web-based experiential evaluations, including absorption and overall satisfaction, impacting subsequent COBRA behaviours. Emphasising the moderating role of PSR, our insights provide valuable guidance for SC brand page managers in allocating resources for COBRA behaviour development. Furthermore, the findings inform managers about compelling value propositions for attracting and converting consumers through social media and online channels.

2 Contextualising the research landscape

2.1 Overview of COBRA behaviours in the SC brand page

The Appendix 1 outlines COBRA behaviours, encompassing a spectrum from passive consumption to active contribution and creation [66]. Passive engagement involves consumers consuming brand-related content, contributing to TOFU objectives such as brand awareness [52]. Contribution entails moderate interactivity, including brand-related conversations and product ratings. Creation represents the highest level of engagement, whereby consumers actively generate and share cocreated brand-related content, fostering user interaction. [72].

2.2 Consumer motivation and COBRAs

Motivation, the driving force behind individual behaviour, originates from an individual's needs, generating a response tendency [8, 97]. Deci [22] categorises motives into intrinsic and extrinsic, with intrinsic motives driven by interest and enjoyment in the behaviour, while extrinsic motives compel individuals to participate with the expectation of compensation. Both intrinsic and extrinsic motives concurrently shape the behavioural intentions of individuals [58].

Table 1 summarises research on consumers' intrinsic and extrinsic motives for engaging with brand pages on social networking sites (SNSs). Previous studies employing the COBRA behaviours framework [66, 88] have examined motivations and their impact on brand-related behaviours such as trust [60], attachment [53], identification, likeability [77], and relationship quality [66].

Table 1 highlights diverse consumer motivations impacting various COBRA behaviours in social commerce brand pages [14]. The satisfaction of these motives leads to brand-related attitudes, perceptions, and behaviours, strengthening

Table 1 Studies on the role of consumer motivations in influencing COBRA behaviours

Study	Motivations	Moderator/mediator	Sample and research context
Muntinga et al. [72]	Entertainment, remuneration, personal identity (self-presentation, self-expression, and self-assurance), integration and social interaction	–	Interviews ($n = 20$) from both consumer-initiated and company-initiated platforms, such asNintendofacts.nl and Adidas's fan page on Hyves as social media venues in the Netherlands
Schivinski et al. [85]	Brand awareness, brand associations, perceived quality, and brand loyalty were loaded onto a single higher-order factor named CBBE	–	489 social media users (general), 51 product categories (e.g., Zara, Chanel, and Apple) in Poland
Simon and Tossan [76]	Media gratifications (brand–consumer social sharing value: brand intimacy, brand individual recognition, brand influence, brand community belonging)	Satisfaction and brand gratitude	294 undergraduate students who follow brands' Facebook pages in the US
Vale and Fernandes [82]	Information, entertainment, personal identity, integration and social interaction, empowerment, remuneration, brand love	–	562 Facebook fans of professional clubs (European football leagues)
Piehler et al. [79]	Information, entertainment, social interaction, and remuneration	–	359 Facebook users who follow ("like") at least one of 55 brands, across three industries in Germany
Buzeta et al. [9]	Social interaction, entertainment, personal identity, information, remuneration, empowerment	–	939 US-based users of one of the four focal social media platforms (i.e., Facebook, Instagram, Reddit, YouTube) (Note: Brand category is not reported.)
Cheung et al. [17]	Entertainment, customisation, interaction, trendiness	–	433 WeChat users who follow their most familiar luxury cosmetic brand (e.g., Dior, Chanel) in China
Wang and Lee [88]	Advice-seeking, self-image expression, fashion involvement	–	431 Instagram fashion brands' users

Table 1 (continued)

Study	Motivations	Moderator/mediator	Sample and research context
Kitirattarkarn et al. [51]	Information-seeking, intention to try or purchase, personal identity and presentation, remuneration, social integration	–	Interviews ($n=40$), Facebook users from individualistic (the Netherlands, the US) and collectivistic (South Korea, Thailand) cultures engage with brand-related content
Mishra [60]	Entertainment, interaction, trendiness, customisation and eWOM	Customer–brand relationship length	552 follower of the bank brand's fan pages on Facebook in India
Cheung et al. [13]	Information quality, design quality, creativity, technology quality	Parasocial relationship and wishful identification	263 social media users in Malaysia
Nusair et al. [66]	Involvement and perceived anonymity	–	Sample of US and Chinese tourists who used social media networks to find a new destination

brand–consumer relationships. While recent research has advanced understanding of consumer motivation outcomes, there is still notable room for exploration. The table outlines studies investigating consumer motives as determinants for various social media brand pages, revealing a gap in research on consumer motives and COBRA behaviours, especially on Instagram. The current multidimensional approach in conceptualising consumer motives presented limited territory that has been already explored concerning mediating and moderating variables in SC settings and their interactions with COBRA behaviours.

3 Research methodology

To elucidate the crucial consumer motives steering customer engagement with SC brand pages (RQ1), this research employed a two-staged mixed-method sequential approach, commencing with an initiation design that integrated netnography (Study 1) and, subsequently, an online survey (Study 2) [3]. This methodology affords a comprehensive investigation, fosters in-depth insights, and permits the triangulation of findings—a synergy unattainable through singular methodological approaches [17].

3.1 Study 1 (netnography): qualitative insights from SC brand pages

3.1.1 Study context

Following the five-stage netnography approach [47], this study begins by establishing the research focus, elucidating what and why of the phenomenon under investigation, and crafting a precise research question. The subsequent steps involve community identification and selection, specifying the sources and scope of online data, data collection based on established criteria from prior studies [54], and analysis with interactive interpretation of themes and quotes observed in SC brand pages [81]. Finally, the study presents its findings to contribute to the evolving body of knowledge [47]. We gathered data from Instagram, recognising it as the primary platform for user connections with brands, celebrities, influencers, and communities [4, 80]. Instagram's unique features, such as product tagging in posts, allow consumers to access details, prices, and direct purchase links [56]. Notably, 83% of consumers use Instagram to discover new products or services, with 87% acting after encountering a product on the platform [4]. This underscores Instagram's central role in facilitating consumer–brand interactions and its relevance for understanding COBRA behaviours. Ten Instagram brand pages (e.g., Adidas, Canon, Cartier, Gillette, H&M, Honda, IKEA, Intel, Lego, and Louis Vuitton) were selected based on their high consumer engagement rates (average comments > 10,000 per post) and international consumer base. Brand pages were chosen to represent diverse industries, including sportswear and apparel, electronics and technology, luxury goods, personal care, retail and apparel, automotive, furniture and home goods, toys and entertainment.

3.1.2 Sampling and data analysis

We utilised NVivo 12, facilitating the discovery of significant insights ([19]. Using a traditional human interpretative method, the data analysis process required manually extracting information from 10 international SC brand pages on Instagram. These pages included Adidas, Canon, Cartier, Gillette, H&M, Honda, IKEA, Intel, Lego, and Louis Vuitton. This process encompassed 2292 brand posts and 578,235 comments, with a quantitative evaluation of user engagement metrics, including posts, likes, and comment counts [31, 87]. The outcomes were categorised into two domains: (1) post types and associated engagement metrics, and (2) qualitative comment data and word weights, as summarised in Table 2. The coding scheme emerged through inductive analysis of raw data, drawing on insights from the literature review [37] and deductive reasoning. Peer member checking was implemented through regular debriefing meetings to ensure intercoder reliability.

Engagement metrics (likes, shares, comment counts) were quantified, while qualitative data were analysed inductively to identify themes. The coding framework included four primary themes: remuneration, shopping planning, entertainment, and social presence. Two independent coders achieved an intercoder reliability score of 0.85, ensuring consistency in thematic categorisation [48].

The findings reveal prominent consumer motives, such as remuneration, shopping planning, entertainment, and social presence. The subsequent sections discuss these themes, accompanied by selected quotations, in alignment with the relevant literature. Additionally, the motivational cues identified on SC's Instagram brand pages are consolidated based on the results of Study 1. Valuable insights from interpreting qualitative comments are expounded in the following sections, contributing to a comprehensive understanding of consumer motivations in the context of SC brand pages.

3.2 Study 2: survey

Study 2 was undertaken to corroborate and extend the insights obtained from Study 1, explicitly delving into exploring research questions RQ2 and RQ3. The subsequent sections elucidate the theoretical foundations of the nomological network and the hypothesised relationships, providing a comprehensive understanding of the research framework.

4 Theoretical foundation of the research model and hypotheses

4.1 Underpinning theories

This study leverages U&G theory and the SOR framework, as depicted in Fig. 1, to elucidate the intricate relationship between consumer motivations, web-based experiences (absorption and satisfaction), and COBRA behaviours on SC brand pages. U&G theory emphasises active media selection to fulfil individual needs and

Table 2 Results of thematic analysis

Motives	Themes	Selected quotation
Remuneration	Coupon, discount, offer, prize, win, voucher, promotion, sale, gift, code, luck, promo	"Any coupon codes?!"; "@hm is student discount available in india too?"; "I got it, and i won the prize, but apparently this is only in US. My luck is on [emoji] [emoji] [emoji]"; "extra 15% code"; "any egift Voucher?"; "Invite a friend and get 15% DISCOUNT on any offer!"; "faces_by_pm: @ikeausa Do you have a coupon code for May? Ikeausa replied: @faces_by_pm hey, thanks for reaching out. Currently we have 20% off appliances, with the purchase of a kitchen. The promo code is May20OffAppliances"
Shopping Planning	When, where, events, price, purchase, buy, available, size, dimension, weekdays, city, time, product information, address, location	"Will you be having a Black Friday sale online or in store? Also will you be having a cyber Monday sale?!"; "Is that glass divider for sale at @ikeausa ?"; "Malaysia available for all of this collection? Or i can purchase by online only? Thanks [emoji]"; "So ready for the next limited edition speedy, hopping it comes in the size 25 and has some pink on it @louisvuitton"; "@hm is this collection released in LA if so what stores and time ? Thanks"; "When is this available US"; "As if I needed anymore reason to go get the 15–35 mm lol I got the 50 mm 1.2 and the 70–200 2.8 now I'll need this lens [emoji] never stops lol"
Entertainment	Fun, funny, hilarious, joy, entertaining, fab, cool, ha, lol, laugh, play, cute, omg	"That's pretty funny"; "lol"; "Lol" [emoji]; "LooL" [emoji] [emoji]; Wow, this post is so entertaining! I could watch this all day!" "This video had me laughing so hard!"; "I can't wait for this movie to come out!; "that's hilarious"; "Ahahahahahaha"; "CRYING OMG AW"; Cuteeeeeee [emojis]; "Omg [emoji]; "Looks fab! I actually included this product in a new in ikea kids video I made [emoji]; "Fun"; "Cool"; "Ha ha!"
Social Presence	Love, follow, friend, thank, compliment, @brand, @user, cheer, congratulate, support, encourage, community, love, hello, sorry, thanks	"@canonusa I love how you give all photographers, big and small a platform. I love how supportive of your community you are. Keep it up guys!"; "@hm i follow u"; @nicbphotog Thank you so much friend [emoji]; "I am not the first to congratulate, but I give you a word and believe with pleasant feelings and phrases. I tell you a merry Christmas."; "Hi @canonusa [emoji]; "Thank you so much for all the love [emoji] [emoji]

Data were extracted from 10 international SC brand pages on Instagram, resulting in the collation of 2292 brand posts and 578,235 comments within the 6-month data collection periods (1 October 2019 to 1 January 2020; 1 October 2020 to 1 January 2021)

underpins our exploration, asserting that consumers actively use media for specific purposes [89, 97]. In the context of SC brand page consumption, our conceptualisation, identified in Study 1, categorises motivations into remuneration, shopping planning, entertainment, and social presence.

Expanding on the SOR framework, this study clarifies how external stimuli from brands and social media content prompt internal responses, satisfying various motives and needs. These internal responses manifest in observable organism states, including emotional and cognitive reactions, ultimately shaping behavioural outcomes such as liking, sharing, and purchasing. Figure 1 posits that the gratification of consumer motives—remuneration, shopping planning, entertainment, and social presence—stimulates cognitive and affective responses, specifically, absorption and overall satisfaction with the SC brand page. These, in turn, shape subsequent COBRA behaviours.

4.2 Consumer motivations to use SC brand page (motivational cues)

As outlined by Davis et al. [24], motivation theory discerns two stimuli—intrinsic and extrinsic motivations—that propel consumer behaviours. Intrinsic motivations involve activities pursued for internal fulfilment or positive emotions, stemming from self-interest and enjoyment [95]. On the other hand, extrinsic motivations drive actions for external rewards, such as money or praise Ryan & Deci, [83]. Extrinsic motivations, as identified in Study 1, entail individuals engaging in activities primarily for instrumental value rather than intrinsic enjoyment Kim et al., [50]. Building on this framework, our study introduces the four consumer motives—remuneration, shopping planning, entertainment, and social presence—as integral factors in the realm of SC.

4.2.1 Remuneration motive

Remuneration as a motive epitomises a desire for future advantages or featuring some kind of reward or tangible benefits, such as free samples, coupons, giveaways, or prizes through a contest, discount, or special offer [2, 9]. Grounded in motivation theory, which underscores the role of rewards in influencing behaviour, individuals are stimulated to actively participate in brand-related activities when anticipating such extrinsic benefits [96]. On SC platforms, remuneration operates as "remunerative contents" [49] and unfolds through strategic brand campaigns and loyalty programs, employing actionable posts like "click to access reward" or "join now" to swiftly communicate benefits to both new and returning consumers [71]. Drawing on motivation theory and U&G, this anticipatory reward-driven engagement is expected to spur brand-related activities and foster increased sales and consumer loyalty, driven by the influential mechanism of word-of-mouth. Consequently, we hypothesise:

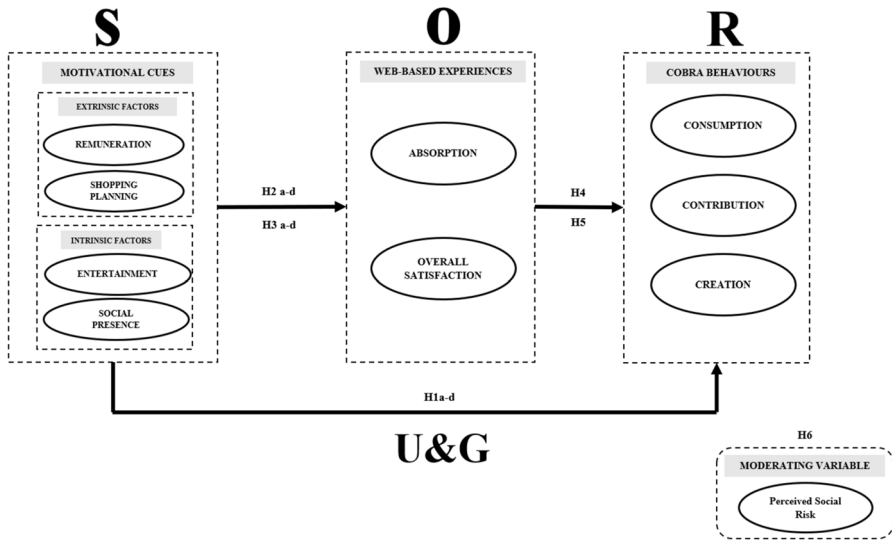**H1a:** Remuneration positively impacts COBRA behaviours.

Fig. 1 Conceptual framework. Note: PSR, proposed as a moderating factor, will examine the systemic relationships between motivational factors, Web-based Experiences, and COBRA behaviours

4.2.2 Shopping planning motive

As a motive, shopping planning reflects an intrinsic desire for detailed product or service planning before purchasing [28]. According to motivation theory, intrinsic motivations are self-driven behaviours seeking internal satisfaction or positive feelings [95]. In the context of SC brand pages, this motive taps into consumers' inherent need for information-gathering and planning, emphasising satisfaction derived from making well-informed choices [28]. SC brand pages, including the online shopping feature of the checkout button, facilitate this motive by serving as valuable information hubs, allowing users to follow trends, find new products, review items via multiple photos and videos (carousels), and purchase items without leaving the platform [35, 83] or saving to a "wishlist" [39] to purchase later. Drawing on U&G theory, which underscores individuals' active selection of media for needs satisfaction, the shopping planning motive facilitates information-processing brand involvement, attracts and retains consumers, and fosters brand loyalty by satisfying their need for well-planned purchases [23, 94]. In essence, the shopping planning motive becomes critical for consumers seeking information in alignment with their preferences and needs. Thus, this study posits the following hypothesis:

H1b: Shopping planning positively impacts COBRA behaviours.

4.2.3 Entertainment motive

Entertainment as a motive encapsulates the consumer's intrinsic desire for an enjoyable and entertaining experience [21]. Intrinsic motivations, as highlighted

by motivation theory, are grounded in self-driven behaviours, emphasising internal satisfaction and positive feelings [95]. In SC brand pages, the entertainment motive aligns with consumers' inherent hedonic aspects, seeking enjoyment, fun, and relaxation while interacting with the platform. Setyani et al. [73] emphasise that these hedonic aspects significantly influence users' attitudes towards advertising messages, establishing entertainment as a key predictor. Drawing on U&G theory, which emphasises individuals' active selection and use of media for needs satisfaction, the entertainment motive reflects consumers' intentional pursuit of enjoyable experiences [89]. On SC platforms, entertainment unfolds through diverse post ideas, including stories, reels, memes, showcases, carousels, action shots, and games [30]. Since entertainment facilitates active, positively valanced social media engagement [31] and contributes to the positive attitudes and behaviours associated with COBRA [73], this research therefore proposes the following hypothesis:

H1c: Entertainment positively impacts COBRA behaviours.

4.2.4 Social presence

Social presence as a motive refers to the consumer's psychological need or desire to be seen and acknowledged by others [29, 80] and the extent to which an individual feels perceived as a "real person", resulting from their need for interpersonal warmth, social connections, and involvement in the community [75, 91]. According to Lu et al. [101], the motive of social presence influences buying decisions. It elucidates the ability to convey social messages within the context of SC and its connection to consumer behaviour, including purchasing intentions, using vivid imagery, collecting information, observing others' actions, and interacting with online sellers [44]. As reflected in U&G theory, this intrinsic motive underscores individuals' active media selection to fulfil their needs and desires [89]. This motive creates positive and happy emotional experiences, fostering consumer loyalty and the likelihood of returning to the brand page for future purchases (Lu et al., 2016). Consequently, this study proposes the following hypothesis:

H1d: Social presence positively impacts COBRA behaviours.

4.2.5 Motivational factors and web-based experiences

4.2.6 Remuneration and absorption

Absorption is a pleasant state in which the customer is entirely concentrated on, immersed in, and engrossed with the firm [12, 62]. In the online environment, absorption (i.e., cognitive absorption) can result in consumers' "deep attention" and complete immersion and engagement with an activity [5]. Drawing on the perspective of U&G theory, individuals seek media experiences that fulfil their needs and desires. The expectation of receiving a distinct benefit motivates individuals to delve

deeper into the SC experience, leading to a higher level of absorption. Furthermore, remuneration may fuel a sense of anticipation and novelty among consumers. The promise of future rewards creates a psychological drive to seek information, engage with the brand's offerings, and actively participate in SC activities [62]. This interactive process, as explained by the SOR framework Mehrabian & Russell, [66], illustrates that those external stimuli (remuneration motives) lead to internal organism states (absorption), influencing observable responses (COBRA behaviours). Thus, this research hypothesises:

H2a: Remuneration positively impacts absorption.

4.2.7 Remuneration and overall satisfaction

Satisfaction, a critical aspect of the SOR framework within the SC context, is intricately linked to stimuli such as remuneration motives. As individuals anticipate future advantages or rewards such as discounts, coupons, and freebies, their motivation to engage with SC brand pages and make purchases is heightened, creating an internal state of heightened satisfaction [9, 82]. This aligns with the extrinsic nature of remuneration motives, emphasising the tangible benefits that SC platforms offer [9]. In the SOR framework, these external stimuli (here, motives) lead to internal organism states (heightened satisfaction), influencing observable responses (COBRA behaviours). By providing rewards or incentives, brands fulfil consumers' needs for external validation and recognition and contribute significantly to an overall satisfying SC experience. Thus, this research hypothesises:

H3a: Remuneration positively impacts overall satisfaction.

4.2.8 Shopping planning and absorption

The imperative for shopping planning propels a structured and goal-directed approach to the SC shopping process [94]. This sense of structure and direction aligns with the principles of the SOR framework, wherein the need for shopping planning serves as a stimulus. It triggers internal organism states, enhancing absorption levels as individuals become more focused, purposeful, and immersed in their activities on SC brand pages. This dual alignment of extrinsic motives and the SOR framework underscores the interconnected roles of internal states and external stimuli in shaping consumer behaviours. Thus, this research hypothesises:

H2b: Shopping planning positively impacts absorption.

4.2.9 Shopping planning and overall satisfaction

Shopping planning is pivotal in fostering a sense of control and informed decision-making within the context of SC brand pages [35]. Individuals plan and strategise their shopping journey, emphasising internal satisfaction and positive feelings

derived from the SC shopping experience. This alignment is crucial within the SOR model, where shopping planning motives act as stimuli, triggering internal organism states. This process allows individuals to make more informed choices that align with their preferences and needs, reducing uncertainty and leading to a higher likelihood of satisfactory outcomes. Further, shopping planning gives individuals a sense of empowerment and confidence in their shopping experience [94]. Additionally, the strategic use of shopping planning motives, in coherence with external stimuli presented by SC brand pages, creates a synergistic effect, contributing to the direction of consumer behaviours and augmenting overall satisfaction through a perceived sense of control and self-efficacy. Therefore, this study hypothesises:

H3b: Shopping planning positively impacts overall satisfaction.

4.2.10 Entertainment and absorption

Motivation theory suggests that intrinsic motivations, such as entertainment, drive individuals to engage in activities for the inherent enjoyment and satisfaction they provide rather than for motivation by external rewards or incentives [61, 95]. In the context of SC, the entertainment motive represents a desire for an entertaining and enjoyable experience on the brand page. Research has consistently shown that entertainment is a recognised and influential motive for consumer engagement on SC platforms [21]. Consumers actively seek entertaining content, such as engaging videos, interactive posts, or creative campaigns, that align with their intrinsic enjoyment and enhance their overall social media experience. These entertaining elements in SC can capture consumers' attention and immerse them in the brand's content, fostering a deeper level of engagement. Thus, this research hypothesises:

H2c: Entertainment positively impacts absorption.

4.2.11 Entertainment and overall satisfaction

Motivation theory posits that individuals actively seek hedonic value, representing the subjective pleasure or enjoyment derived from a product or experience [61]. Within the context of SC brand pages, entertainment fulfils this need for hedonic value by providing consumers with enjoyable and engaging content. Consumers derive pleasure from entertaining content, significantly contributing to their overall satisfaction with the SC experience. Moreover, entertainment is pivotal to facilitating flow experiences on SC brand pages. When consumers become immersed in entertaining content, they are more likely to enter a flow state, characterised by complete engagement, loss of temporal awareness, and a heightened sense of fulfilment. Flow experiences are inherently satisfying, increasing overall satisfaction with SC. Thus, this study hypothesises:

H3c: Entertainment positively impacts overall satisfaction.

4.2.12 Social presence and absorption

Social presence fulfils inherent needs for social validation by providing consumers with opportunities to be acknowledged and recognised by others on SC brand pages [24]. As users receive social cues such as likes, comments, or shares on their interactions, their absorption in the SC experience is likely to be heightened. Motivation theory emphasises the role of self-presentation in driving behaviour and engagement [16]. Social presence on the SC brand page enables consumers to showcase their identity, express opinions, and convey their preferences to others. This avenue for self-expression allows consumers to participate in and contribute to the platform actively. It fosters a sense of absorption in the SC environment. As individuals express themselves and receive acknowledgement, it creates psychological engagement that engenders a sense of immersion and involvement. Consumers become more absorbed in the discussions, content, and activities, feeling connected and invested in the platform. Thus, this research hypothesises:

H2d: Social presence positively impacts absorption.

4.2.13 Social presence and overall satisfaction

The fulfilment of the social presence motive within SC is anticipated to positively contribute to overall satisfaction, aligning with the principles of the U&G lens. Social presence within SC platforms is pivotal in fostering a sense of connectedness among users [44]. Engaging with others on these platforms gives individuals a perception of increased interaction, feedback, and mutual understanding, culminating in a sense of community. This sense of connectedness significantly influences overall satisfaction as users develop a stronger bond with the brand and fellow users, enhancing their overall experience within the SC environment. Additionally, the social presence motive addresses individuals' innate desire for validation and recognition from others [29]. Thus, this study hypothesises:

H3d: Social presence positively impacts overall satisfaction.

4.2.14 Consequences of absorption and overall satisfaction

4.2.15 Absorption and COBRA behaviours

Research in social media brand community settings highlights a positive correlation between consumer concentration and brand page immersion, fostering favourable behaviours [11]. This holds significance in SC consumption, where users contend with distinct goals and technological complexities Hsu & Lin, [40]. Applying the U&G lens, we recognise that users actively choose media to fulfil specific needs [89]. On the SC brand page, customers effectively absorb and are encouraged by multiple types of brand community engagement, including brand- or user-generated

content, which drive their evaluation and decision-making [1]. This study argues that active content selection, whether motivated by extrinsic factors like remuneration or intrinsic factors like entertainment, impacts an individual's concentration level and engagement in brand-related activities such as liking or commenting. Accordingly, this study hypothesises:

H4: Higher levels of the consumers' absorption experience positively influence their COBRA behaviours on the SC brand page.

4.2.16 Overall satisfaction and COBRA

According to Kumar et al. [51], satisfaction has been identified as a significant factor influencing the intention to continue using a product or service. The literature also acknowledges that satisfaction is a more robust predictor of customer engagement on social media than positive emotions and trust [20]. In this context, this research draws on the insights of U&G theory, which suggests that individuals actively choose media to fulfil specific needs and desires. U&G theory argues that content selection by satisfied customers on SC brand pages, whether driven by external factors such as compensation or internal factors such as social presence, improves overall satisfaction perceptions. These customers also tend to exhibit high levels of engagement, showing enthusiasm and pleasure, as seen in previous studies [7, 32], and contribute to brand promotion [51]. Therefore, this study anticipates that satisfaction positively impacts COBRA behaviours. Therefore, this research presents the following hypothesis:

H5: Higher levels of the consumers' overall satisfaction experience positively influence their COBRA behaviours on the SC brand page.

4.2.17 Moderating role of PSR

4.2.18 PSR

The social environment designates the connection as well as commitment between an individual and their community [63],hence, PSR may involve consumers' greater perceptions of potential negative consequences arising from online transactions on a specific SC brand page [27]. Existing research has primarily focused on comprehensive risk assessment, encompassing various dimensions such as financial, performance, physical, psychological, social, time, and opportunity costs. This broader evaluation of risk has been identified as a crucial factor influencing deliberation and it has been suggested that it acts as a deterrent to approach-oriented behaviours [26]. Given the inherently social nature of SC, where interactions are integral, consumers may also perceive social risk in the form of adverse social situations, such as negative feedback or disapproval from the online community Rahman et al., [80]. Particularly in situations of heightened uncertainty, this social risk may have a more

pronounced impact on individuals' behaviours. This study contends that, for certain consumers, the influence of PSR in the SC environment is intensified due to increased uncertainty [26]. Consequently, this study posits that consumers with elevated levels of PSR are less likely to fulfil their needs on the SC brand page, anticipating potential adverse consequences. This, in turn, weakens the overall impact on COBRA behaviours on the SC brand page. Thus, our expectation is expressed as follows:

H6: PSR will have a negative moderating effect between consumer motives (remuneration, shopping planning, entertainment, and social presence) and COBRA behaviours.

5 Hypothesis testing

5.1 Data collection

The theoretical framework was validated through an online survey using Qualtrics, involving a cohort of 574 US consumers engaged with brand pages on the SC platform Instagram. Leveraging Qualtrics survey tools and consumer panels aligns with prior research methodologies within social media and consumer behaviour [13, 33]. Participants provided informed consent and were compensated for their time. To ensure eligibility, participants were screened based on their age (at least 18 years) and required to nominate a brand they follow on Instagram over the previous 12 months. Among the valid samples ($n = 574$), 52.09% were female and 47.56% were male, while most respondents were aged between 25 and 55 years (62.54%). The distribution of gender and age roughly follows prior studies e.g., Hu et al., [38]. In addition, in this study, we considered the distribution of technographic segmentation as a marketing strategy that involves dividing customers into groups based on their technology usage and preferences. This segmentation type can offer valuable insights into customers' interests and needs, informing marketing and sales efforts. In this regard, 75.09% of respondents reported using smartphones to interact with the brand page on Instagram. Further, 53.31% had followed their favourite brand on Instagram for over 2 years. A total of 69.62% had visited Instagram brand pages more than two to three times a month, and 83.45% had reacted to brand posts frequently and very frequently.

5.2 Measurement items and model testing

The survey included 26 items measuring four consumer motivations (remuneration, shopping planning, entertainment, and social presence), two web-based experiences (absorption and satisfaction), COBRA behaviours (consumption, contribution, and creation), and perceived social risk (Appendix 2). The measurement items used a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). These items were selected from the existing literature and are listed in the Appendix 2. Following

studies in SC [42, 94], pilot testing was conducted ($n = 76$) to ensure the items' reliability for measuring antecedent and outcome conditions. Specifically, measures for remuneration, shopping planning, entertainment, and social presence were adapted from Buzeta et al. [9], Françoise and Andrews [28], de Vries et al. [21], and Gao et al. [29], respectively. Three items were adapted from Molinillo et al. [62] to gauge absorption, and an additional three items from Oliver [76] were employed to measure overall satisfaction. The assessment of COBRAs was conducted by adapting the existing scale from Schivinski et al. (85) to align with the context of the Instagram SC brand page. Furthermore, PSR was measured using three items adapted from Farivar et al. [27].

The study employed partial least squares structural equation modelling (PLS-SEM) [34]. This approach underscores the meticulousness of assessing the adequacy of the measurement instruments and conducting a rigorous analysis of the proposed hypotheses within the context of the SC brand page on Instagram. A bootstrapping procedure with 5000 resamples was applied to evaluate path coefficients and mediation effects. The model's reliability and validity were assessed through average variance extracted (AVE), composite reliability (CR), and heterotrait–monotrait (HTMT) ratios, all of which met acceptable thresholds (AVE > 0.5; CR > 0.7; HTMT < 0.90).

6 Results

6.1 Common method bias

The result of Harman's single-factor test [46] for common method bias (CMB) indicates that there are seven factors with eigenvalues greater than 1, collectively elucidating 65.55% of the total variance. The primary factor accounted for 43.49% of the overall variance, while the remaining factors individually contributed less than 10%, confirming the absence of a singular dominant factor. Also, the collinearity test of latent variables shows that all constructs have acceptable levels of tolerance and variance inflation factor (VIF) (VIF < 3, tolerance > 0.1) [22]. Therefore, CMB is not a significant concern, affirming the measurement instrument's robustness and reinforcing result credibility (see Appendix 2).

6.2 Measurement (outer) model results

The results confirmed the internal consistency of the measurement (outer) model (see Appendix 2). The results indicated that the minimum values of Cronbach's alpha were ≥ 0.771, suggesting that the level of internal consistency was satisfied as the loadings of all measurement items were ≥ 0.7. The AVE values exceeded 0.69, and each construct's CR was greater than 0.77, indicating good reliability and convergent validity. Further, to evaluate discriminant validity, the square root of the AVE of each construct was compared with its interconstruct correlations. As per

Appendix 2, the square root of each construct's AVE surpasses its respective correlations, affirming strong discriminant validity [34].

In addition, as shown in Table 3, the study employed the HTMT ratio to assess discriminant validity, and all constructs showed values below the recommended threshold of 0.90 [34]. Moreover, the model fit indicates that both standardised root mean square residual (SRMR < 0.08) and the normed fit index (NFI < 0.09) [34].

6.3 Structural (inner) model results

6.3.1 Assessment of the model

As seen in Fig. 2, the relationship between all dimensions of consumer motivations to follow an SC brand page on COBRA behaviours was significant and positive, providing support for H1a–d. Regarding the relationship between intrinsic and extrinsic motivations and absorption, as shown in Fig. 2, all relationships, except for the relationship between remuneration and absorption, were positive and significant. This supports H2b–d. Additionally, the result of testing H3a–c indicates that, except for H3a (remuneration and satisfaction), the remaining hypothesis was supported (H3b–c). As presented in Fig. 2, the general impact of all web-based consumption experiences on COBRA (H4 and H5) was supported.

6.3.2 Moderation effect hypothesis testing

The analysis confirms the negative moderating role of PSR between remuneration and COBRA behaviour (PSR×REM → COBRA; $\beta = -0.07$, $p < 0.05$; $t = 2.35$), shopping planning and COBRA behaviour (PSR×SHM → COBRA; $\beta = -0.103$, $p < 0.05$; $t = 3.35$), entertainment and absorption (PSR×ENM → ABX; $\beta = -0.078$, $p < 0.05$; $t = 2.29$), social presence and absorption (PSR×SPM → ABX; $\beta = -0.108$, $p < 0.05$; $t = 3.09$), absorption and COBRA behaviours (PSR×ABX → COBRA; $\beta = -0.067$, $p < 0.05$; $t = 2.58$) and overall satisfaction and COBRA behaviours (PSR×OSX → COBRA; $\beta = -0.159$, $p < 0.05$; $t = 5.06$) were significant, and therefore were supported.

The strength of mediation was determined using the value of variance accounted for (VAF), which represents the ratio of the beta coefficient of the indirect effect to the total effect. A VAF value of greater than 80% signifies full mediation, while a VAF of between 20 and 80% signifies partial mediation. A bootstrapping procedure was performed with 5000 resamples to test the mediating effect of web-based experiences (absorption and overall satisfaction) between consumer motives and COBRA behaviours. The study also reported the partial mediation role of COBRA behaviours between absorptive and overall satisfying behaviours as a post hoc analysis.

6.3.3 Model robustness check

The coefficients of determination (R2 value) were used to determine the model's predictive power, with R2 values of 0.75, 0.50, and 0.25 indicating substantial,

moderate, and weak predictive power. According to Fig. 2, the R2 analysis showed moderate performance for endogenous variables absorption (0.53), overall satisfaction (0.57), and COBRA behaviours (0.69). Blindfolding was calculated to determine model predictive relevance beyond R2, obtaining a Q2 score to indicate how well the observed variables predict endogenous variables. All Q2_predict values for items were positive, confirming predictive relevance regarding the model's endogenous recognizability. The fact that all values exceeded zero establishes predictive relevance for the model's endogenous recognisability.

7 General discussion

7.1 Key findings

The study's findings reinforce the significant role of intrinsic and extrinsic consumer motivations and web-based experiences such as absorption and satisfaction in shaping COBRA behaviours. These findings align with prior research (e.g., [60, 66]), emphasising the importance of engagement and satisfaction in driving consumer behaviours. However, our study makes a unique contribution by highlighting the moderating role of PSR, particularly in the context of Instagram brand pages. This finding provides a nuanced understanding of how psychological factors influence consumer engagement, diverging from the more generalised insights in the existing literature. While previous studies often focused on single-platform or nontransactional contexts, our results underscore the transactional nuances of social commerce brand pages.

Several key findings were disclosed from the quantitative analysis results of this study. First, this study reveals that extrinsic and intrinsic motives, such as remuneration and shopping planning, positively influence COBRA behaviours (consumption, contribution, and creation). Key factors influencing COBRA behaviours include fostering psychological and motivational connections with brands on SC platforms. The study highlights the significance of creating an environment where customers

Table 3 Discriminant validity: HTMT ratio

Reflectively measured constructs	ABX	COBRA	ENM	OSX	REM	SHM	SPM
Absorption (ABX*)							
COBRA behaviours	0.723						
Entertainment (ENM*)	0.881	0.741					
Overall satisfaction (OSX*)	0.725	0.712	0.706				
Remuneration (REM*)	0.568	0.665	0.657	0.575			
Shopping planning (SHM*)	0.598	0.638	0.648	0.810	0.595		
Social presence (SPM*)	0.678	0.759	0.790	0.785	0.680	0.747	

*Represents acronyms for each construct in the proposed model used in the analysis section. ENT = entertainment motive; REM = remuneration motive; SHM = shopping planning motive; SPM = social presence; ABX = absorption experience; and OSX = overall satisfaction experience in this study
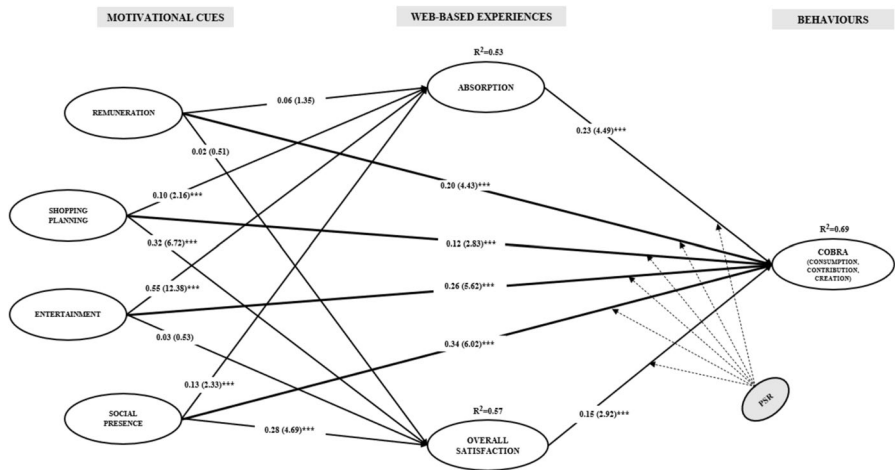
Fig. 2 Assessment of the Model. Notes: $*p < 0.05$; $**p < 0.01$; $***p < 0.001$; $ns =$ not significant

feel seen and acknowledged, enjoy entertainment, avail themselves of rewards, and can plan their purchase decisions. Integrating entertaining content boosts absorption, while timely and informative content has a great impact on customers' overall satisfaction with the social commerce platform.

Second, this study reveals that web-based experiences, including absorption and overall satisfaction, are crucial and significant predictors of COBRA behaviours on SC brand pages. Higher levels of consumer absorption experience positively influence their COBRA behaviours on the SC brand page, indicating its relevance in social media brand community settings [11]. Similarly, higher overall satisfaction levels positively influence their COBRA behaviours on the SC brand page. This aligns with some researchers' belief that service delivery evaluation is a cognition-based phenomenon, while others argue that it is affect-based [69]. In comparison, Simon and Tossan [76] argue that satisfaction is a media-driven variable and mediates the impact of brand–consumer social sharing value on Facebook brand pages.

Finally, this study reveals the negative impact of PSR on system relationships, particularly in the context of SC. PSR encompasses the perceived risk of participating in activities and the potential negative consequences associated with such activities. A strong presence of PSR significantly impacts factors such as compensation, shopping preparation, engagement, overall contentment, consumer behaviour, entertainment, and social interaction. The study highlights the importance of considering the impact of receiving immoral comments or encountering disapproval in the form of "dislikes" on individuals' willingness to comment or share ideas. This assessment may decrease their interaction with the brand page on the SC platforms, potentially decreasing their inclination to engage in COBRA behaviours. The study underscores the significance of PSR, as consumers with high levels of PSR express apprehensions that may attenuate their desire for gratification from the SC brand page.

7.2 Theoretical implications

This study addresses key gaps in the literature by demonstrating how intrinsic and extrinsic consumer motives, mediated by web-based experiences such as absorption and satisfaction, shape COBRA behaviours in social commerce. The findings extend theoretical understanding by integrating the U&G and SOR frameworks while offering actionable insights for SC brand managers. Notably, the moderating role of perceived social risk highlights a critical area for future research, emphasising the need to address consumer apprehensions in highly interactive and transactional online environments.

This research extends the application of the U&G and SOR paradigms, offering significant insights into the SC domain's marketing theory and branding practices. It introduces a new construct of consumer motivation in the SC context, supported by evidence from netnography and the existing literature. The study identifies and operationalises key factors influencing COBRA behaviours on SC brand pages, including two extrinsic dimensions (remuneration and shopping planning), two intrinsic dimensions (entertainment and social presence), and two web-based consumption experiences (absorption and overall satisfaction). The model expands on research in social media brand community contexts [14] by exploring consumer motives tied to experiencing absorption and satisfaction with favourite brands, influencing COBRA behaviours. Addressing the first research question involves clarifying the nature of the consumer motivation construct and web-based consumption experiences among Instagram users in the US. Second, the study contributes new knowledge by leveraging theories to justify the transition between extrinsic and intrinsic motivations towards COBRA behaviours. Underpinning the two paradigms highlights the role of web-based experiences towards COBRA behaviours, which affirms its underlying meaning on the SC brand page. RQ2 is tackled by empirically examining the mediating role of consumers' absorption and overall satisfaction experiences in the relationship between their extrinsic and intrinsic motivations and COBRA behaviours on the social commerce brand page. The results show that overall satisfaction mediates the link between absorption and COBRA behaviours, suggesting that it can also be viewed as an outcome of COBRA behaviours in the SC brand page setting.

Third, this study is the first to explore how consumers' personality traits, particularly PSR, moderate the relationship between the model and COBRA behaviours. The findings confirm the negative impact of PSR in this connection. Post hoc analysis also affirms PSR's moderating role in influencing COBRA behaviours influencing entertainment, social presence, absorption, and overall satisfaction. The results of moderating effects demonstrate that PSR has a significant positive moderating impact on the relationship between remuneration and overall satisfaction (PSR×REM → OSX) and entertainment and overall satisfaction (PSR×ENM → OSX), which provides an avenue for a deeper understanding of PSR and its implications in consumer behaviour theory. These findings provide insights into PSR's role in shaping consumer behaviour and inform the development of effective marketing and information management strategies in SC settings.

7.3 Practical implications

This study offers practical insights for SC and online brand management. To empower consumers effectively, practitioners should grasp their motivations for engaging with SC brand pages, applying strategies ranging from "empowerment-to-select" [40] to product and service choices. Understanding gratifications from interactions on platforms like Instagram informs strategies for enhancing COBRA. Reinforcing extrinsic and intrinsic motivations, such as remuneration, shopping planning, entertainment, and social pressures, is essential. Utilising SC features like IGTV, reels, stories, live streaming, augmented reality (AR), virtual reality (VR), artificial intelligence (AI) and action buttons aids in delivering informative content, maximising the potential of SC platforms. Regular engagement and responsiveness enhance brand social responsibility perceptions [98], emulate the shopping experience, and optimise SC platforms.

This study advises brands on strategies for improving consumer absorption on SC brand pages. Positive absorption correlates with increased purchases, positive word-of-mouth, and sharing behaviours. Effective virtual conversation management, emphasised for brand satisfaction, necessitates its integration into SC experiences. By communicating narratives or hashtags, brands demonstrate their commitment to meeting follower expectations for content quality, interactivity, privacy, and shopping convenience. This approach, supported by Wallace et al. [85], boosts perceived satisfaction, contributing to value cocreation, long-term relationships, and user-generated content. This, in turn, reduces marketing costs and fosters organic engagement with the SC brand page. Finally, brand managers should foster positive aspects of their social communities by creating community-based events and cultivating an entertaining and immersive environment. This approach supports sociability, a sense of belonging, and purposeful connections among like-minded consumers. As consumers see the SC brand page actively moderating interactions and supporting the brand experience, perceived risk decreases, fostering positive brand attitudes and purchase intentions on the platform. This study offers practical guidance to SC practitioners for optimising consumer engagement and satisfaction on brand pages.

7.4 Limitations and avenues for future research

While contributing valuable insights, this study has certain limitations that pave the way for future research endeavours. Its primary limitation lies in the methodological approach, wherein social media data from Instagram were collected following netnography guidelines Kozinets, [46]. However, future research might benefit from incorporating field or laboratory experiments to corroborate the current findings, particularly emphasising the establishment of standardised approaches for capturing data from Instagram brand pages. In addition, the study's reliance on self-reported survey data introduces the potential for bias. Future research could incorporate experimental designs or behavioural data to triangulate these findings. Finally, exploring the long-term impact of COBRA behaviours on brand loyalty and revenue could provide a more comprehensive view of social commerce dynamics.

Furthermore, the data collection process focused on US respondents with a 12-month consumer–brand SC experience, which indicates the potential for future cross-sectional studies [11, 66]. The focus on Instagram users in the US may limit the generalisability of the findings to other cultural or geographic contexts. Cross-cultural or cross-platform comparisons could further validate the proposed framework.

Understanding the role of time in technology-related behaviours [84] and incorporating different timeframes can significantly enrich the conceptualisation of the phenomenon. However, this study does not fully explore the temporal dynamics of consumer engagement with social commerce platforms, particularly how long-term interactions versus short-term, real-time behaviours may influence the outcomes. This limitation highlights the need for future research to examine how time-related factors, such as the duration of consumers' engagement or the evolving nature of their interactions with technology over time affect behaviours and perceptions in social commerce environments.

Appendix 1: COBRA behaviours: consumption, contribution, and creation stages on SC brand page

COBRAs	Examples
Creation	▪ Writing brand-related content, e.g., blogs ▪ Creating and uploading brand-related images, videos, audio, and/or graphics (i.e., UGC) ▪ Writing a product/brand review ▪ Providing Hashtag brand (e.g., #Canon, #LV)
Contribution	▪ Sending brand-related content via social media ▪ Rating products/brands ▪ Following a brand page on a social commerce platform ▪ Engaging in branded conversations (e.g., on SC brand pages) ▪ Commenting or liking on brand-related content on SC brand pages (e.g. posts including textual and visual such as IGTV, Reels, stories)
Consumption	▪ Viewing brand-related content ▪ Listening to brand-related audio ▪ Watching brand-related videos (e.g. IGTV, Stories, Highlights) ▪ Following Hashtags ▪ Following trends on online brand community forums ▪ Reading brand comments on-brand social media pages ▪ Reading product/brand reviews

Brand Related Activity Spectrums (vertical axis label with upward arrow)

Adapted from Muntinga, Moorman & Smit, 2011) and contributed examples that were observed during netnography process (study one) in this research.

Appendix 2: Results of standardised item loadings, cronbach's alphas, CRs, and AVEs

Dimension*	Item ID	Item: I am motivated to follow XYZ** Brand on Instagram because	Loadings	t-values	AVE	Cronbach's alpha	CR	VIFs
Remuneration (REM)	REM1	I can receive gifts such as free samples and coupons	0.90	62.68	0.817	0.776	0.777	1.67
	REM2	I can receive rewards	0.91	101.13				1.67
Shopping Planning (SHM)	SHM1	I can effectively plan my purchases based on its content	0.90	74.63	0.814	0.772	0.772	1.65
	SHM2	I can easily select to buy the products/services	0.90	85.13				1.65
Entertainment Motive (ETM)	ETM1	I have fun when viewing content	0.89	66.48	0.813	0.771	0.774	1.65
	ETM2	I enjoy viewing content	0.91	110.55				2.08
Social Presence (SPM)	SPM1	I feel close to people who share the same views about this brand	0.93	99.41	0.871	0.852	0.853	2.23
	SPM2	There is a sense of sociability with the brand's followers	0.94	104.63				2.23
Absorption (ABX)	ABX1	I lose track of time	0.87	61.59	0.770	0.851	0.851	1.99
	ABX2	I forget everything else around me	0.88	57.33				2.10
	ABX3	I find it hard to stop viewing	0.89	75.16				2.18
Overall Satisfaction (OSX)	OSX1	I'm very attached to this brand	0.87	59.89	0.745	0.829	0.832	1.90
	OSX2	I am satisfied with the experience provided by the brand	0.85	60.06				1.84
	OSX3	It is always a good experience	0.86	60.91				1.95

Dimension*	Item ID	Item: I am motivated to follow XYZ** Brand on Instagram because	Loadings	t-values	AVE	Cronbach's alpha	CR	VIFs
COBRA Behaviours (COBRA)	CONS1	I follow hashtags (#) that I see communicated by the brand	0.80	43.74	0.700	0.946	0.954	2.50
	CONS2	I watch any kind of video content (story, IGTV, live stream, and reels)	0.85	49.65				2.90
	CONS3	I follow @people or @brand mentioned by my favourite brand	0.83	36.52				2.08
	CONT1	I share brand-generated posts	0.86	63.01				3.18
	CONT2	I bookmark brand-generated posts	0.85	56.80				2.94
	CONT3	I comment on brand-generated posts	0.86	57.85				3.35
	CREA1	When I initiate brand-related content (e.g., make a post, create a video, write a review), I use brand-related hashtags (#)	0.86	66.36				3.58
	CREA2	I write reviews about the brand's products I try or use on its posts	0.84	49.00				3.23
	CREA3	When I initiate brand-related content (e.g., make a post, create a video, write a review), I tag the brand (i.e. @)	0.86	49.58				2.95

Dimension*	Item ID	Item: I am motivated to follow XYZ** Brand on Instagram because	Loadings	t-values	AVE	Cronbach's alpha	CR	VIFs
Perceived Social Risk (PSR)	PSR1	Writing comments on my favourite Instagram brand page will negatively affect the way others think of me	0.91	99.73	0.854	0.914	0.915	2.89
	PSR2	Writing comments on my favourite Instagram brand page will lead to a social loss for me because other followers would think less highly of me	0.94	142.45				3.89
	PSR3	Writing comments on my favourite Instagram brand page will unfavourably affect how others view me	0.92	101.99				3.15

*The source of adaption of each dimension is in the Sect. 5.2 measurement items and model testing.
**XYZ Brand refers to the specific brand page that was followed by participants in the survey.

Declarations

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