



Virtual human influencers in live streaming commerce on social media platforms: Exploring parasocial interactions with consumers in China

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ABSTRACT

The research explores the expanding role of virtual human influencers (VHIs) in digital marketing via parasocial interactions (PSIs) in live streaming commerce, with a focus on Chinese consumers. Grounded in the theoretical framework of the parasocial interaction theory, this study examines how VHIs attract viewers, engage with the material, and influence purchase decisions. Our study comprised two phases. Firstly, we conducted an extensive search across different scholarly databases and digital libraries using the keywords VHIs, PSIs, and live streaming commerce, which produced 35 relevant studies with matching content to the context of the present research. Then, we conducted a focus group discussion. Thematic analysis involved familiarisation with the data, coding, and theme development, ensuring an in-depth understanding of the participants' views. Important findings indicate that VHIs leverage advanced technologies such as NLP (natural language processing) and AI (artificial intelligence) to establish a sense of familiarity and connection with viewers via personalisation, and interactive narrative. These strategies play an important part in enhancing customers' parasocial interactions, which increases their trust, loyalty, and purchasing habits. Our study highlights the need for technological innovation and cultural atonement in order to enhance the effectiveness of VHIs. Our findings would assist digital marketing, consumer behaviour, and technology-human interaction by offering insights into the intricacies of parasocial interactions in the digital age.

Keywords: *Virtual human influencers, parasocial interactions, live streaming commerce, cultural customisation, and Chinese market*

INTRODUCTION

Virtual human influencers (VHIs) are changing the way brands interact with consumers on social media platforms. These digitally created characters have emerged at the intersection of high-tech computer graphics, artificial intelligence (AI), and social media, and are threatening the traditional market of influencers (Da Silva Oliveira & Chimenti, 2021). VHIs do not have the same physical, ethical, or even practical limitations as real human influencers. This frees them up and empowers them in a way that marketers can manage their identities, narratives, and appearances to a greater degree than actual people. This trend could also be attributed to the fact that more people are becoming comfortable with digital and virtual experiences, there is always a need for new and creative advertising, and technology is constantly evolving to make these types of productions more realistic and relevant (Moustakas et al., 2020). As VHIs, they can cover multiple time zones, will not be involved in any scandals that can tarnish reputations, unlike human influencers, and can be completely tailored to reflect the image and values of the organisation they are representing. As stated by Sands et al. (2022), it is not just the newness of VHIs that makes them promising. They are also able to engage with people on an emotional level and are fast becoming a vital part of today's marketing plans. These connections are important as at the moment, classical marketing tools are often met with scepticism or indifference. VHIs have the potential of reaching the digital audience and seizing them because they are unique, have well-defined brand personalities and can fit seamlessly into the parasocial interaction (PSI).

Although first recognised in the context of conventional media, the idea of parasocial interactions (PSIs) has gained new importance in the era of live streaming commerce (Gleason et al., 2017). Since live streaming allows for real-time engagement, it is capable of fostering stronger parochial relationships than other conventional media. Nonetheless, the audience engages with content on the live streaming app and feels like they are interacting with real people, which is a crucial aspect of the live streaming business model (Yang et al., 2019).

Farivar et al. (2021) explained that VHIs on live streaming platforms are specifically admired for doing this well to create parasocial relationships. In addition, given the current consumers' inclination towards live streaming commerce, the application of VHIs is especially compelling. According to Zafar et al. (2020), VHIs are perfect for the millennial audience in the era of the digital world where individuals are forever on the lookout for novel activities to engage in online. Moreover, the combination of the recognisable and the exotic, the real and the imaginary, makes these digital entities so fascinating. As pointed out by Li et al. (2022), this is especially the case in China given that it has the largest and most diverse digital consumer population and is a market that is always on the lookout for new technological trends, and where live streaming commerce has grown rapidly.

Analysing this phenomenon in China is particularly relevant because it is one of the global leaders in digital commerce and technology (Shen et al., 2022). For instance, the expanding network literature that reflects the growth of the country towards a digital and virtual society. According to Zhen and Mansor (2022), a story presented in literary form and animation-comic format might enhance the audience's experience by making it more exciting, sensual, healthy, and enjoyable as a type of transmedia storytelling. The rapid growth of live streaming commerce in the Chinese market has created a chance to explore the impact of VHIs on marketing strategies and consumers' behaviour.

The present study is set in China, the country of great cultural significance, which has elements of traditional culture and modern development. This is because Chinese

consumers are known to be quick to embrace new technologies and digital platforms, which makes it even more important to establish how they perceive and engage with VHIs (Kim, 2022). While both VHIs and PSIs are widely discussed in academic literature, their combined impact on live streaming commerce and especially in non-Western countries like China, has not been explored sufficiently (Hsu, 2020). There is a lack of research on the use of VHIs in live streaming and its effects on consumer behaviour thus, future studies should be conducted to better understand VHIs' characteristics and their potential impact on digital marketing strategies (Deng et al., 2023). This study is an attempt to add to the existing knowledge on this emerging concept through a theoretical analysis of the topic.

LITERATURE REVIEW

Theoretical foundations of parasocial interaction (PSI)

Origins and mechanism of the parasocial interaction (PSI) theory

Parasocial interaction (PSI) was first conceptualised by Donald Horton and R. Richard Wohl in 1956 (McLaughlin & Wohn, 2021). Horton and Wohl opined that PSI is an illusion that makes consumers believe they are interacting with media personalities in real time. This revolutionary concept was first employed in television broadcasting where the audience was able to form bonds with hosts or other on-screen personalities, even though they were not actually communicating with them back and forth (Chen et al., 2021). Originally, the concept was limited to actors and actresses, then it included television and radio personalities, and the latest additions are social media and live streaming stars. As described by Li et al. (2023), one of the core aspects of the PSI concept is the ability to suspend disbelief. The fans mimic a two-way communication process with the media persona, even though the media persona remains unaware of the existence of the fan as an individual (Xu et al., 2020).

Importance of media characters' responsiveness

PSI is greatly influenced by the media character's ability to emulate speech interactions. This is particularly important in the context of live streaming since the persona's responsiveness to viewer comments and the immediacy of the connection may substantially improve the parasocial experience. According to EY (2022), virtual human influencers take this experience to the next level with their pre-programmed responses and engaging talents. They want people to feel linked to the characters, which makes them look more human. PSI develops from social involvement and friendship, which are intrinsic to human psychology (Kim et al., 2022).

Impact on consumer behaviour and the role of attachment theory

The attachment theory, which tries to explain why humans need to form emotional bonds, is one of several psychological frameworks with which the PSI theory is compatible (Li & Cheng, 2023). To some degree, media celebrities may assist in easing the loss of face-to-face connection. This aspect of PSI is more crucial than ever in the contemporary world of omnipresent digital gadgets and dwindling face-to-face social ties. Furthermore, people nowadays see PSI as more than simply a made-up connection; they regard it as a genuine psychological link that may have a significant impact on how a person feels and behaves (Scheibe et al., 2022). This is exemplified by the way viewers may feel joyful, sad, or even devastated for their favourite media characters.

Similarly, Tanha (2020) emphasised that respondents feel motivated by the micro-celebrities' online self-presentation. Raba, a micro-celebrity, built a joyful character for herself on Instagram, while Shoumik embraced the image of a fitness junkie (Tanha, 2020). The audience looks forward to postings on topics of interest to them and prefers to buy things that are consistent with their online identity. It is also important to understand changes in audience behaviours and attitudes as influenced by PSI. Readers who are not related may even start emulating the media figures appearing on TV. As contended by Zhou et al. (2023), media celebrities, especially VHIs, are increasingly becoming more important in the realm of advertising and marketing as they can change consumer preferences and spending power. The PSI theory too has become even more relevant in the recent past with the presence of social media and other social interactive platforms (Xu et al., 2022).

Virtual influencers in marketing: A global perspective

Rise and adaptability of virtual influencers

Virtual influencers are a relatively new concept that has emerged in the field of marketing communications; they are artificial digital personalities, instead of real individuals used to sell goods and services (Chopra et al., 2021). This growing trend is a good example of how marketing and technology are working hand in hand to signal a much broader transmutation in how consumers interact and process information (Mai et al., 2023). Virtual influencers, crafted by modern technologies in computer-generated imagery (CGI) and artificial intelligence (AI), do not have the same ethical and physical limitations as traditional influencers. As highlighted by Trivedi & Sama (2020), for the same reason, they may be featured in any story, represent any style, and be located anywhere.

Global reach and industry applications

The widespread use of virtual influencer (VI) in various platforms and industries proves that they exist worldwide. VI advertising is being implemented across all platforms, including social media and television commercials as well as various industries such as fashion and IT (Wielki, 2020). They have become emblematic of the modern society connected through the internet because they are everywhere, and can communicate in different languages. AlFarraj et al. (2021) found that the glamorous fashion industry has engaged virtual influencers in sophisticated advertising and even on virtual catwalks.

Factors influencing commercial success and challenges

There are several factors that affect the business viability of VIs. As pointed out by Appel et al. (2020), VIs possess the potential to be unique in a specific location and even in today's congested digital environment. Second, VIs do not have personal lives or personas; thus, their marketing message is steadfast, and there are fewer opportunities for public relations disasters. However, as Hou et al. (2022) cautioned, the prevalence of VIs generates issues about authenticity and trust of consumers. Cultural, societal, and technological factors affect customer response to VIs across the world. For instance, virtual influencers (VIs) are more likely to be well-received and popular in places where technology and digital experiences are more appreciated like in many Asian countries (Van Dam & Van Reijmersdal, 2019). However, VIs may be met with more suspicion in markets where people seek interpersonal relationships and genuine communication. As technology progresses, Vrontis et al. (2021) asserted that there will be no sharp distinction between the real and virtual worlds of advertising.

METHODOLOGY

Research design

This study comprised two phases. Firstly, we collected secondary data from a wide array of research papers produced in the past. The content analysis technique was applied to gain an in-depth and structured understanding of the chosen publications and the conclusions made therein (Sileyew, 2020). Then, we conducted a focus group discussion (FGD) that is more fluid in its structure, but at the same time, can focus on specific themes and subtopics when the researcher deems it necessary. A specific concern was understanding the nature of PSIs with VHIs within the setting of live streaming commerce, especially in the growing Chinese market.

Sample selection

The sampling technique used in this research was a careful selection of peer-reviewed articles, papers, and extensive case studies focusing on these keywords: (a) parasocial interaction (PSIs), (b) live streaming commerce, and (c) virtual human influencers (VHIs) (Alpi & Evans, 2019). The inclusion criteria included the ability of the publication to offer detailed information on the multifaceted processes involved in PSIs in the digital context, the decade of publication, and the reliability and academic credibility of the publication, as well as each source's relevance to the problem under investigation.

First, electronic databases and digital libraries were searched for the keywords concerning VHIs, PSIs, and live streaming commerce which provided 35 articles containing material matching the context of the study. Next, by applying PRISMA-Screening (Page et al., 2021), the relevance of the shortlisted studies was evaluated against the objectives of the present study. All the selected articles were identified using the inclusion and exclusion criteria and each paper was reviewed in accordance with PRISMA-Screening. In scrutinising and evaluating the shortlisted publications, a final sample of eight articles was chosen as the basis of this analysis, with the topics ranging from theoretical discourses on PSIs to empirical studies on VHIs in marketing and live streaming services in China.

Meanwhile, the purposive sampling technique was used to recruit our participants for FGD. In total, six participants took part in the FGD. The key criteria for participant selection were their experience and background knowledge in the subject area, gender and age differences, and their availability for an interview.

Data collection

One of the aspects of the data collection strategy involved a critical review and content analysis of the selected articles. In this manner, all the key factors of VHIs, PSIs, and their integration in live streaming marketing were explored and illustrated in detail during this process. Another essential aspect of this step was the thorough assessment of the contents of the selected publications (Mishra & Alok, 2022). The purpose was to identify patterns and themes about the use and effectiveness of VHIs in live streaming, the way they interact with viewers, and the consequent effects on marketing communication and consumer behaviour.

For FGD, our participants were interviewed using an interview protocol that provided the researcher with the opportunity to delve deeper into the participants' opinions and encounters (Page et al., 2021). The interview protocol was developed in a way that allowed the researcher to guide participants in responding to specific questions to confirm the findings from the literature review. Additionally, the FGD enabled participants to express opposing or collective agreements on issues related to VHIs (Bulchand-Gidumal

et al., 2024; Mishra & Alok, 2022). For credibility, participants' permission to record the discussion was sought first before they were recorded. These recordings were then transcribed in detail to ensure that the focus group discussion was documented textually as closely as possible to the original discussion. To protect the identity of the participants, some measures were employed. The participants' identity numbers were removed from the transcriptions and data was kept secure to ensure participant confidentiality.

Table 1. Profiles of study participants

Participant	Age	Gender	Occupation	Nationality
Participant1	32	Male	Advertising agency owner	China
Participant2	30	Female	Freelancer	China
Participant3	34	Female	Operations manager in state-owned tourism investment group	China
Participant4	31	Female	Piano teacher in music education studio	China
Participant5	33	Female	Planner in music radio	China
Participant6	22	Female	Undergraduate student majoring in art design	China

Data analysis procedure

The collected data was analysed using a multi-step analysis method grounded on qualitative content analysis. The first step was to sort all the received information. In the current study, the data was categorised according to strategies employed by VHIs, the way that viewers were engaged, types and effects of PSIs, and subsequent adjustments in consumer behaviour. Based on the arrangement of the data, thematic analysis was then done, and coding scheme was employed. In this stage, the study looked at the relationships between the emerging codes from the first step in order to understand what they signify and how they relate to the characteristics of PSIs within the domain of live streaming marketing. The key concerns were the efforts made by VHIs to cultivate and sustain parasocial interactions, the level of audience interaction with these digital personalities, and the impact on their psychological state and behaviour. Through this synthesis, attention was paid to the role of PSIs in shaping consumers' attitudes and behaviours with the help of new technologies, which has implications for the further development of digital marketing concepts and practices in future (Kim et al., 2022).

The results of the FGD were analysed using thematic analysis. It is a data analysis technique that involves looking for, analysing, and writing down patterns or themes in data that has been gathered. The steps in thematic analysis comprised data familiarisation whereby the researcher went through the transcriptions several times (Kim et al. 2022). After that, an exhaustive coding of collected data was done using a qualitative data analysis tool, which involved assigning of significant phrases, sentences or paragraphs to respective codes. Lastly, these codes were subjected to pattern matching and linking before arriving at themes. The presented themes were explained, modified if required and explained again until the members were convinced that one theme was different from the other. Finally, the themes were explored and discussed in connection to the research questions and objectives which assisted in evaluating the participation of the participants.

RESULTS

Establishing parasocial relationships while broadcasting live is one of the most effective strategies employed by VHIs. This is achieved through personalisation, participatory

storytelling, and ensuring that the characters are portrayed consistently to give the viewers a close and familiar feeling. This strategy increases the level of audience engagement since it mimics real-life interactions.

Meanwhile, the thematic analysis of the focus group discussion conducted with participants regarding their interactions with VHIs revealed several significant themes. These themes include: (a) VHI strategies that facilitate viewing, (b) viewer engagement and interaction patterns, and (c) parasocial interactions that nurture consumerism. The variety of viewer responses towards VHIs, ranging from passive to active interactions, underscores the diverse experiences and their subsequent effects on consumer trust and purchasing behaviour.

Analysis of virtual human influencers' strategies

Use of parasocial relationships in live broadcasts: Establishing parasocial relationships during live broadcasts is one of the most effective strategies employed by VHIs. This is achieved through personalisation, participatory storytelling, and ensuring that characters are portrayed consistently to give viewers a close and familiar feeling. This strategy increases the level of audience engagement by mimicking real-life interactions. As Participant 4 described, *“First, VH is good looking, and the second point is that he/she might have a good voice. He is singing some songs (because I am more sensitive to the voice) may pay attention.”*

Personalisation and interactive storytelling: Participants highlighted the importance of enhancing VHI interactions through AI and natural language processing (NLP) to make the interactions seem more human. Participant 1 emphasised the need for trained language models, saying, *“I would have a greater concern, for example, let's say I go to sports or games that's something that guys pay more attention to, then he first trained his model in that context. Can answer some of them very well with me. Corresponding knowledge content I may be interested.”*

Targeted content creation: VHIs attract specific audiences by creating content that resonates with their interests. This aspect was notably discussed by Participant 2, who found VHIs appealing when they exhibit unique or absurd behaviours: *“I think what appeals to me is the behaviour of this VH influencer like he'll do something anti-human... For example, if I see that it's a cat's head and then it's probably put into the body of one of those watermelon and then it just keeps folding over.”*

Integration in marketing strategies: VHIs are now incorporated into various communication and marketing approaches. Participant 5 noted the advantage of dynamic scene changes and the integration of storytelling in virtual live streams, stating, *“Traditional live [streams] have a fixed lens... Virtual live... will sometimes do a field space switching, scene switching, and then the anchor can also disguise and then according to the product it will do some changes.”*

Viewer engagement and interaction patterns

Nature of viewer engagement: The nature of viewer engagement with VHIs varies from simple expressions of liking and commenting to more sustained interactions. Participant 3 shared, *“I'm the kind of user who actually buys... It has to be something that I find particularly useful... If the virtual person in the process of live broadcast... make people have this sense of contrast so that the efficacy of the product to achieve the maximum, I think I will be interested in the products it promotes.”*

Deeper engagements: Engagements can be enhanced through games, specific calls, and engaging narratives. Participant 5 emphasised the importance of positive feedback and timely responses from VHIs: *“Virtual anchors give me more good interaction than real*

anchors because they give me positive feedback on all my needs... your questions he will answer you in time and he will give you the most positive answer in a relatively gentle, emotional stability, and the most comfortable state.”

Cross-platform presence: The presence of VHIs on social media platforms such as TikTok and Instagram is critical for building an audience and community around their identity. Participant 2 mentioned, *“Even though he’s an avatar, I expect him to respond to me instantly, and that’s what I expect.”*

Impact of parasocial interactions on consumer behaviour

Trust and loyalty: Parasocial interactions with VHIs significantly influence consumer attitudes and behaviours. Participant 6 highlighted the role of trust built through continuous interactions: *“I think the main attraction of virtual human influencer for me is the virtuality such as purchasing some of the more private products. Building trust is also important.”*

Authenticity and reliability: For VHIs to have a greater impact, they must be considered realistic and topical. Participant 4 expressed scepticism about purchasing from VHIs without a period of trust-building: *“I may not make a purchase until I have paid attention to him for a long period of time... the practicality will also be considered.”*

Long-term brand impressions: These interactions can influence long-term brand perceptions. Participant 1 noted, *“I need to understand the virtual person’s design first and build an image in my mind which can be an advertisement or his online activities or his live broadcast. I become his fan first and then I will consider buying something he recommends.”*

Comparison of virtual and real human influencers

Cultural sensitivity and localisation: Cultural sensitivity and localisation are essential for effective VHI usage. As Chiu and Ho (2023) noted, Chinese VHIs, as a rule, reflect the interests and the habits of the local population. Chan et al. (2021) also pointed out that variations in cultural context determine the results of similar studies. But according to existing literature, culture aside, everyone places their faith more in brand image and product quality than in celebrity endorsement (Chan et al., 2021; Sharipudin et al., 2023). For example, Participant 3 compared the influence of VHIs in different cultural contexts, saying, *“For me personally it’s definitely still real people live streaming that is more attractive to me... Maybe for some people in the Zero Years or for these people who are extremely fond of this manga or the secondary world, the answers and results are different from ours.”*

Technological innovation: Technological advancements in AI and VR enhance the realism and interactivity of VHIs. Participant 6 highlighted the initial novelty and potential sensory fatigue of VHIs: *“I think the novelty and freshness for virtual anchors will be stronger at the beginning but after a short period of attraction if there is no more novelty in the follow-up, I feel that there will be sensory fatigue.”*

Effectiveness and engagement: Participants generally preferred real human influencers for their authenticity and emotional appeal. However, VHIs tied to popular IPs or offering unique digital experiences can be effective in niche markets. Participant 5 stated, *“If it’s just an ordinary AI-generated new virtual anchor, there’s still a big gap between his influence and that of a real anchor”*.

DISCUSSION

Our research examined parasocial interactions within the context of virtual human influencer advertisements. As the research illustrates, the meaning of parasocial interactions

has evolved due to technological advancements and the use of VHIs. These antecedents indicate that VHIs can replicate, if not surpass, the parasocial relationships seen in real stories. This development calls into question the utility of current theories for capturing the specific features and shortcomings of VHIs, as well as the need for a more extensive framework to address the digital nature of contemporary PSI relationships. However, for someone in the marketing field, the implications are complex and vast. Brands and marketers must see VHIs for what they are: engagement tools which are quite innovative and hold great potential.

Zhang et al. (2022) also stressed the importance of knowing the demographics and interests of the target population and the available technical equipment for effective usage of VHIs. The application of these insights is most pertinent in the actual implementation of strategic marketing that may have to be adapted across various cultural contexts. This is why every multinational firm needs to understand not only the technological landscape, but also the culture of each particular market (Rafaeli, 2019). Findings concerning efficiency of VHI use in China may be helpful for other organisations to understand how they can implement changes in different cultural contexts. One way of making VHIs more engaging and effective in carrying out their intended role is by incorporating cultural characteristics in avatars, stories, and interaction modalities (Kumar & Benbasat, 2002).

Implications for theoretical contribution and managerial contribution

Our findings contribute to the literature of PSIs and VHIs. The results support past literature's claim that personalisation and interactive storytelling are effective techniques for building parasocial ties. Leung et al. (2022), and Appel et al. (2020) have demonstrated the importance of AI and natural language processing in boosting the realism and appeal of VHIs. Nonetheless, current findings add to this knowledge by demonstrating how comparable strategies may be utilised discretely in live streaming contexts, particularly in the Chinese market. Amidst numerous studies that have examined VHIs' role in digital marketing (Deng et al., 2022; Fu & Hsu, 2023; Stock et al., 2022), the present study contributes new insights into the specific dynamics of live streaming and the interaction patterns it supports, especially in relationship to VHIs.

The research also advances the understanding of PSIs by exploring their evolution in the digital age, particularly through the lens of VHIs. The traditional concept of PSIs, rooted in interactions with real individuals, is challenged by the capabilities of VHIs, which can replicate or even surpass these relationships. This necessitates a re-evaluation of existing theories to capture the specific features and limitations of VHIs, emphasising the need for a more comprehensive framework that addresses the digital nature of contemporary PSB relationships.

From a managerial standpoint, the implications of this research are extensive for brands and marketers. VHIs represent innovative engagement tools with significant potential. Marketers must appreciate the importance of understanding the demographics, interests, and technological capabilities of their target audiences, as highlighted by Zhang et al. (2022). Strategic marketing efforts must be adaptable to various cultural contexts, necessitating a deep understanding of both the technological landscape and cultural nuances of each market, as emphasised by Rafaeli (2019). Insights from the successful use of VHIs in China, for instance, can guide other businesses in implementing similar strategies in diverse cultural settings. Moreover, incorporating cultural characteristics into VHIs—through avatars, stories, and interaction modalities—can enhance their engagement and effectiveness, as suggested by Kumar and Benbasat (2002).

Limitations and future research directions

Despite the strengths of this study, it is not without limitations that are worthy of highlighting. The use of secondary data may reduce the extent of understanding first-hand client experiences and their opinions. Furthermore, the concentration on the Chinese market limits the applicability of the findings to other cultures; however, the insights provided are rich in cultural context. Future research could improve the results of the study by conducting a survey that can explore the experiences of customers with VHIs. Real-life studies of VHIs across various cultural backgrounds may help in obtaining a better understanding of the overall effects of VHIs. It is also recommended to explore the effects of other modern technologies like artificial intelligence and virtual reality on VHIs and online advertising since technology keeps evolving at a very fast rate.

CONCLUSION

Focusing on VHIs and PSIs, this paper investigated the dynamic function of VHIs in digital marketing, especially for live streaming platforms. The success of VHIs in capturing the attention of viewers can be attributed to customisation, the use of narratives and the use of technology. Through these strategies, VHIs may foster an illusion of a relationship between them and their customers, thus enhancing their loyalty. The role of VHIs in influencing consumer behaviour is also demonstrated — trust, loyalty and purchase intentions. Additionally, there is a need for cultural sensitivity and technology integration in VHIs to enhance their efficacy in the Chinese context. This article looked deeper into how digital personas may shape consumer attitude and behaviour in real time in the context of live streaming as well as the higher level of engagement that live streaming affords VHIs and viewers.

Furthermore, the current study has contributed to several fields such as digital marketing, consumer behaviour, and human-technology interactions. It contributes to the knowledge of parasocial interactions in the contemporary world concerning virtual human influencers (VHIs). We believe that the focus on the Chinese market increases the value of the study because it considers how cultural and technological differences affect the effectiveness of digital marketing strategies. The research outcomes underline the necessity of adapting marketing strategies to the cultural and technological context of any specific country by employing the comparative approach. These insights will be of tremendous value to multinational firms that are seeking to harness digital identities in multiple locations because they provide a blueprint of marketing strategies that are culturally and technologically appropriate.

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