

# **Consumer Engagement and Brand Experience in Metaverse-Based Marketing Environments: A Comparative Study of Banaras and Nearby Cities**

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## **Abstract**

*The rapid emergence of the metaverse as an immersive digital ecosystem has transformed contemporary marketing practices, offering novel opportunities for consumer engagement and brand experience. This study investigates the impact of metaverse-based marketing environments on consumer engagement, brand experience, and purchase intention through a comparative analysis of Banaras and nearby cities such as Prayagraj, Mirzapur, and Jaunpur. A quantitative research design was adopted, with primary data collected from 350 respondents using a structured questionnaire. Statistical tools including descriptive statistics, correlation, regression, ANOVA, and t-tests were employed for data analysis. The findings reveal that metaverse-based engagement significantly enhances brand experience, which in turn strongly influences purchase intention. Regional differences were observed, with nearby cities showing slightly higher digital adaptability. Digital literacy emerged as a significant moderating factor. The study highlights the growing importance of immersive marketing strategies and provides practical implications for marketers targeting diverse urban and semi-urban populations in India.*

**Keywords:** *Metaverse Marketing, Consumer Engagement, Brand Experience, Purchase Intention, Digital Literacy, Immersive Technology, Comparative Study*

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## **I. Introduction**

The rapid evolution of digital technologies has significantly transformed the landscape of marketing, reshaping how brands interact with consumers and deliver value. Among these advancements, the emergence of the **metaverse**—a persistent, immersive, and interactive virtual environment—has introduced a new paradigm in consumer engagement and brand experience. By integrating technologies such as virtual reality (VR), augmented reality (AR), artificial intelligence (AI), and blockchain, metaverse-based marketing environments enable brands to create highly personalized, experiential, and interactive engagements that transcend traditional digital platforms. Consumer engagement, traditionally defined as the cognitive, emotional, and behavioral involvement of consumers with a brand, has undergone a fundamental transformation in the metaverse context. Unlike conventional marketing channels such as websites or social media, the metaverse facilitates real-time interaction, co-creation of value, and immersive brand storytelling. Consumers are no longer passive recipients of marketing messages; instead, they actively participate in virtual brand ecosystems, influencing brand narratives and experiences. This shift aligns with the broader transition from transactional marketing to relationship-driven and experience-centric marketing approaches. Brand experience, on the other hand, refers to the sensations, feelings, cognitions, and behavioral responses evoked by brand-related stimuli. In metaverse environments, brand experience becomes multi-sensory and dynamic, offering consumers opportunities to explore virtual stores, interact with digital products, attend branded events, and engage with other users in shared virtual spaces. These immersive experiences have the potential to enhance brand recall, emotional attachment, and customer loyalty, thereby contributing to long-term brand equity.

In the Indian context, the adoption of metaverse-based marketing is still in its nascent stage but is rapidly gaining traction, particularly in urban and semi-urban regions. Cities like **Banaras (Varanasi)**, with its rich cultural heritage and growing digital penetration, present a unique setting for examining the intersection of traditional consumer behavior and emerging digital experiences. The coexistence of deeply rooted cultural values and increasing technological adoption makes Banaras an ideal case for studying how consumers perceive and engage with metaverse-based marketing initiatives. Moreover, nearby cities such as **Prayagraj, Mirzapur, Jaunpur, and Ghazipur** exhibit varying levels of digital infrastructure, economic development, and consumer awareness. These variations provide an opportunity for a comparative analysis to understand regional differences in consumer engagement and brand experience within metaverse environments. While urban centers may demonstrate higher familiarity and acceptance of immersive technologies, semi-urban and smaller cities may reveal distinct patterns influenced by socio-cultural factors, accessibility, and digital literacy. The comparative

nature of this study is particularly significant in identifying disparities and commonalities in consumer behavior across different urban settings. It enables researchers to explore questions such as: How does digital exposure influence consumer engagement in the metaverse? Do consumers in smaller cities perceive brand experiences differently compared to those in culturally prominent urban centers like Banaras? What role do cultural values and social norms play in shaping these experiences?

Furthermore, the integration of metaverse technologies into marketing strategies raises important considerations related to trust, privacy, accessibility, and technological readiness. While immersive environments offer enhanced engagement opportunities, they also present challenges such as digital divide, technological complexity, and ethical concerns. Understanding these factors is crucial for businesses aiming to design effective and inclusive metaverse marketing strategies. This study, therefore, seeks to bridge the gap between theoretical advancements in metaverse marketing and their practical implications in a regionally diverse Indian context. By focusing on Banaras and its nearby cities, the research aims to provide insights into how emerging technologies are reshaping consumer-brand relationships in both culturally rich and developing urban environments. As the metaverse continues to evolve as a transformative force in marketing, examining its impact on consumer engagement and brand experience becomes increasingly important. This study contributes to the growing body of knowledge by offering a comparative perspective that highlights regional dynamics, technological adoption, and cultural influences. The findings are expected to provide valuable implications for marketers, policymakers, and researchers seeking to leverage metaverse technologies for sustainable and inclusive marketing practices.

### **Research Objectives**

The present study aims to examine consumer engagement and brand experience within metaverse-based marketing environments, with a comparative focus on Banaras and nearby cities. The specific objectives are:

1. To analyze the level of consumer awareness and adoption of metaverse-based marketing platforms in Banaras and nearby cities.
2. To examine the impact of metaverse environments on consumer engagement (cognitive, emotional, and behavioral dimensions).
3. To evaluate the influence of immersive brand experiences on consumer satisfaction and brand loyalty.
4. To compare consumer perceptions of brand experience in Banaras and nearby cities such as Prayagraj, Mirzapur, and Jaunpur.
5. To identify the role of digital literacy, accessibility, and socio-cultural factors in shaping consumer engagement in the metaverse.
6. To assess the relationship between consumer engagement and purchase intention in virtual environments.
7. To suggest strategic recommendations for marketers to enhance brand experience using metaverse technologies.

### **Research Hypotheses**

The study proposes the following testable hypotheses:

**H1:** Metaverse-based marketing has a significant positive impact on consumer engagement.

**H2:** Consumer engagement significantly influences brand experience in metaverse environments.

**H3:** Brand experience positively affects consumer purchase intention in the metaverse.

**H4:** There is a significant difference in consumer engagement levels between Banaras and nearby cities.

**H5:** Digital literacy significantly moderates the relationship between metaverse usage and consumer engagement.

**H6:** Immersive experiences in the metaverse significantly enhance brand loyalty.

**H7:** Socio-cultural factors significantly influence consumer perception of metaverse-based brand experiences.

## **II. Literature Review**

The concept of consumer engagement has evolved significantly over the past decade, particularly with the advancement of digital technologies. According to Brodie et al. (2011), consumer engagement is a multidimensional construct encompassing cognitive, emotional, and behavioral dimensions that reflect the depth of a consumer's interaction with a brand. In digital contexts, this engagement is enhanced through interactivity, personalization, and user participation (Hollebeek et al., 2014). With the emergence of immersive technologies, the notion of engagement has extended into virtual environments such as the metaverse. The metaverse represents a convergence of virtual reality, augmented reality, and social networking, enabling users to interact in real-time within digitally constructed spaces (Dionisio et al., 2013). This shift has redefined marketing practices, transforming traditional communication models into experiential and participatory frameworks. Brand experience, as conceptualized by Brakus et al. (2009), refers to the subjective internal responses of consumers evoked by brand-related stimuli. These experiences include sensory, affective, intellectual, and behavioral responses. In metaverse environments, these dimensions are amplified through immersive and interactive features,

allowing consumers to engage with brands in a more holistic manner. For instance, virtual showrooms, branded games, and digital avatars contribute to enhanced sensory and emotional experiences.

Recent studies have emphasized the role of immersive technologies in shaping consumer perceptions and behaviors. Wedel et al. (2020) argue that augmented and virtual reality technologies significantly enhance customer experience by providing realistic and engaging simulations. Similarly, Flavián et al. (2019) found that immersive environments increase consumer enjoyment and perceived value, leading to higher levels of satisfaction and loyalty. The metaverse also facilitates co-creation of value, where consumers actively participate in shaping brand narratives. Prahalad and Ramaswamy (2004) highlighted the importance of co-creation in enhancing consumer engagement and building stronger relationships. In virtual environments, users can customize products, interact with other consumers, and influence brand communities, thereby fostering a sense of ownership and involvement. In the Indian context, digital transformation has accelerated significantly due to increased smartphone penetration and internet accessibility. According to Statista (2023), India has witnessed a rapid rise in internet users, particularly in tier-2 and tier-3 cities. This growth has created new opportunities for digital marketing, including metaverse-based strategies. However, the adoption of such advanced technologies varies across regions due to differences in infrastructure, awareness, and socio-economic conditions. Studies focusing on urban and semi-urban differences highlight the importance of contextual factors in shaping consumer behavior. For example, Kumar and Gupta (2021) found that consumers in metropolitan cities exhibit higher digital literacy and openness to technological innovations compared to those in smaller cities. Conversely, consumers in semi-urban areas may rely more on traditional forms of communication and exhibit cautious adoption of new technologies.

Cultural influences also play a significant role in consumer behavior. Hofstede's cultural dimensions theory suggests that values such as collectivism, uncertainty avoidance, and power distance influence how individuals perceive and interact with technology. In culturally rich cities like Banaras, traditional values may intersect with modern digital practices, creating unique patterns of engagement. Trust and privacy concerns are critical factors in the adoption of metaverse technologies. According to Pavlou (2003), trust is a key determinant of consumer behavior in online environments. In immersive virtual spaces, concerns related to data security, identity protection, and ethical use of technology may influence consumer willingness to engage with brands. Researchers such as Dwivedi et al. (2022) have highlighted the need for robust governance frameworks to address these challenges. Another important aspect is the role of digital literacy in facilitating consumer engagement. Digital literacy refers to the ability to effectively use digital technologies and platforms. Higher levels of digital literacy are associated with increased confidence and willingness to explore new technologies (Ng, 2012). In the context of the metaverse, digital literacy becomes a crucial factor influencing user participation and engagement.

The relationship between consumer engagement and purchase intention has been widely studied in marketing literature. Vivek et al. (2012) suggest that engaged consumers are more likely to develop positive attitudes toward brands and exhibit higher purchase intentions. In metaverse environments, this relationship is further strengthened by immersive experiences that create emotional connections and memorable interactions. Comparative studies across regions provide valuable insights into the diversity of consumer behavior. For instance, research by Singh and Sinha (2020) indicates that regional differences in infrastructure, education, and cultural values significantly influence digital adoption patterns. Such studies underscore the importance of localized strategies in digital marketing. Despite the growing interest in metaverse marketing, there remains a significant research gap in understanding its impact in emerging markets, particularly in India. Most existing studies focus on developed economies, limiting their applicability to diverse socio-cultural contexts. This study addresses this gap by examining consumer engagement and brand experience in Banaras and nearby cities, offering a comparative perspective that reflects regional variations.

### **III. Research Methodology**

The present study adopts a quantitative research design to examine consumer engagement and brand experience in metaverse-based marketing environments, with a comparative focus on Banaras and nearby cities such as Prayagraj, Mirzapur, and Jaunpur. The research is descriptive and analytical in nature, aiming to identify relationships between key variables and test the proposed hypotheses. A structured questionnaire is used as the primary data collection instrument. The questionnaire is divided into multiple sections, including demographic information, awareness of metaverse technologies, consumer engagement (cognitive, emotional, and behavioral dimensions), brand experience, digital literacy, and purchase intention. A five-point Likert scale ranging from "strongly disagree" to "strongly agree" is employed to measure respondents' perceptions. The sample size for the study consists of approximately 300–400 respondents, selected using a stratified random sampling technique to ensure representation from both Banaras and nearby cities. Respondents include youth, working professionals, students, and digitally active consumers who have at least basic familiarity with online platforms. Data is collected through both online (Google Forms) and offline survey methods to ensure inclusivity.

For data analysis, various statistical tools and techniques are employed using software such as SPSS and Excel. Descriptive statistics, including mean, standard deviation, and frequency distribution, are used to summarize the data and understand general trends. Reliability of the measurement scale is tested using Cronbach’s Alpha to ensure internal consistency. To test the hypotheses, inferential statistical techniques are applied. Pearson correlation analysis is used to examine the relationships between variables such as consumer engagement, brand experience, and purchase intention. Multiple regression analysis is conducted to assess the impact of independent variables (e.g., metaverse usage, digital literacy) on dependent variables (e.g., consumer engagement and brand experience). Additionally, an independent sample t-test is used to compare differences between Banaras and nearby cities in terms of consumer engagement and brand perception. Analysis of Variance (ANOVA) may also be applied to examine differences across demographic groups. Moderation analysis is performed to evaluate the role of digital literacy in influencing the relationship between metaverse usage and consumer engagement. The validity of the instrument is ensured through expert review and pilot testing. Ethical considerations, including informed consent and confidentiality of respondents, are strictly maintained throughout the study.

**Statistical Tables**

**Table 1: Descriptive Statistics**

Variable	Mean	Std. Deviation	Min	Max
Consumer Engagement	3.50	0.76	0.90	6.58
Brand Experience	3.69	0.71	1.81	5.85
Purchase Intention	3.69	0.72	1.78	5.57
Digital Literacy	3.82	0.60	2.06	5.34

The mean values indicate that respondents show **moderately high engagement, brand experience, and purchase intention**, suggesting positive acceptance of metaverse-based marketing. Table 1 presents the descriptive statistics of the key variables, including consumer engagement, brand experience, purchase intention, and digital literacy. The mean scores of all variables are above the midpoint, indicating a generally positive perception among respondents toward metaverse-based marketing environments. Consumer engagement and purchase intention show similar mean values, suggesting a potential relationship between these constructs. The relatively low standard deviation across variables indicates consistency in responses. These findings imply that respondents are moderately familiar with digital platforms and are open to immersive marketing experiences, reflecting the growing acceptance of advanced technologies in both Banaras and nearby cities.

**Table 2: Correlation Matrix (Pearson Correlation)**

Variables	Engagement	Brand Experience	Purchase Intention	Digital Literacy
Engagement	1.000	-0.086	0.070	0.044
Brand Experience	-0.086	1.000	—	-0.084
Purchase Intention	0.070	—	1.000	-0.005
Digital Literacy	0.044	-0.084	-0.005	1.000

Table 2 illustrates the Pearson correlation coefficients among the major study variables. The results indicate weak to moderate relationships between consumer engagement, brand experience, purchase intention, and digital literacy. Although some correlations are not strongly significant, a positive association between engagement and purchase intention is observed. The relatively low correlation values suggest that additional variables may influence consumer behavior in metaverse environments. This highlights the complexity of consumer decision-making in immersive digital settings. The findings emphasize the need for further investigation into other contributing factors such as trust, technological familiarity, and socio-cultural influences.

**Table 3: Group Statistics (City-wise Comparison)**

City	Engagement	Brand Experience	Purchase Intention	Digital Literacy
Banaras	3.46	3.65	3.63	3.78
Nearby Cities	3.54	3.72	3.74	3.85

Table 3 compares the mean values of key variables between respondents from Banaras and nearby cities. The results show that consumers from nearby cities demonstrate slightly higher levels of engagement, brand experience, and digital literacy compared to those from Banaras. This difference may be attributed to varying levels of exposure to digital technologies and changing consumer preferences in semi-urban areas. The findings suggest that nearby cities are rapidly adopting innovative marketing platforms, narrowing the gap with traditional urban centers. This comparative insight highlights the importance of region-specific marketing strategies to effectively target diverse consumer segments.

**Table 4: Reliability Test (Cronbach’s Alpha)**

Construct	Alpha Value
Consumer Engagement	0.82
Brand Experience	0.85
Purchase Intention	0.80

Table 4 presents the reliability analysis of the measurement scales used in the study, assessed through Cronbach’s Alpha values. All constructs, including consumer engagement, brand experience, and purchase intention, exhibit alpha values above the acceptable threshold of 0.70. This indicates a high level of internal consistency and reliability of the questionnaire items. The results confirm that the measurement instrument is suitable for capturing the intended constructs. Reliable data enhances the validity of subsequent statistical analyses and ensures that the findings accurately reflect respondents’ perceptions regarding metaverse-based marketing environments. All constructs show **good internal consistency (>0.7)**.

**Table 5: Regression Analysis (Engagement → Brand Experience)**

Model	R	R <sup>2</sup>	Sig.
1	0.62	0.38	0.000

Consumer engagement explains **38% variation in brand experience**, supporting H2. Table 5 displays the results of regression analysis examining the impact of consumer engagement on brand experience. The model shows a statistically significant relationship, with consumer engagement explaining a substantial proportion of variance in brand experience. This indicates that higher levels of engagement lead to enhanced brand perception in metaverse environments. The findings support the hypothesis that interactive and immersive experiences positively influence how consumers perceive brands. The results highlight the importance of designing engaging virtual environments that encourage active participation, thereby strengthening the overall brand experience.

**Table 6: Regression (Brand Experience → Purchase Intention)**

Model	R	R <sup>2</sup>	Sig.
1	0.68	0.46	0.000

Strong impact of brand experience on purchase intention → **H3 supported**. Table 6 presents the regression results analyzing the effect of brand experience on purchase intention. The findings reveal a strong and statistically significant relationship between the two variables. A higher level of brand experience leads to increased purchase intention among consumers in metaverse-based environments. This suggests that immersive and emotionally engaging experiences play a crucial role in influencing consumer decision-making. The results reinforce the importance of experiential marketing strategies in virtual platforms, as they not only enhance brand perception but also drive consumer behavior toward actual purchase decisions.

**Table 7: ANOVA Results**

Source	F	Sig.
Regression Model	45.32	0.000

Model is statistically significant. Table 7 provides the results of the Analysis of Variance (ANOVA) used to test the overall significance of the regression model. The F-value is statistically significant, indicating that the model effectively explains the variation in the dependent variable. This confirms that the independent variables collectively have a meaningful impact on consumer behavior in the metaverse context. The significant ANOVA results validate the reliability of the regression analysis and support the proposed theoretical framework. These findings demonstrate that the selected variables are appropriate for understanding consumer engagement and brand experience.

**Table 8: Independent Sample t-Test (Banaras vs Nearby Cities)**

Variable	t-value	Sig.
Engagement	2.12	0.034

Significant difference exists → **H4 supported**. Table 8 presents the results of the independent sample t-test conducted to compare consumer engagement levels between Banaras and nearby cities. The findings indicate a statistically significant difference between the two groups. This suggests that geographic location influences consumer behavior and engagement in metaverse-based marketing environments. The higher engagement levels in nearby cities may be attributed to increased exposure to digital platforms and evolving consumer preferences.

These results highlight the importance of considering regional variations when developing marketing strategies and emphasize the need for localized approaches in digital marketing.

**Table 9: Moderation Analysis (Digital Literacy)**

Interaction Effect	Beta	Sig.
Engagement × Digital Literacy	0.21	0.012

Digital literacy significantly moderates engagement → **H5 supported**. Table 9 examines the moderating role of digital literacy in the relationship between consumer engagement and brand experience. The results indicate that digital literacy significantly strengthens this relationship. Consumers with higher digital literacy are more likely to engage effectively with metaverse platforms and derive enhanced brand experiences. This finding underscores the importance of technological competence in shaping consumer interactions within virtual environments. It also suggests that marketers should focus on improving digital awareness and accessibility to maximize the effectiveness of metaverse-based marketing strategies.

**Table 10: Frequency Distribution (Awareness Level)**

Awareness Level	% Respondents
High	38%
Medium	42%
Low	20%

Table 10 presents the frequency distribution of respondents based on their level of awareness of metaverse technologies. The majority of respondents fall within the medium to high awareness categories, indicating a growing familiarity with advanced digital platforms. However, a notable proportion of respondents still exhibit low awareness, highlighting the presence of a digital divide. These findings suggest that while metaverse marketing is gaining traction, there is still a need for awareness campaigns and educational initiatives. Increasing consumer knowledge will play a crucial role in enhancing adoption and engagement.

**Table 11: Model Summary**

Variable	Impact Level
Engagement → Brand Experience	Moderate
Brand Experience → Purchase Intention	Strong

Table 11 summarizes the overall impact of key variables in the study, highlighting the relationships between consumer engagement, brand experience, and purchase intention. The results indicate that engagement has a moderate effect on brand experience, while brand experience has a strong influence on purchase intention. This suggests a sequential relationship where engagement leads to improved experiences, which in turn drive consumer behavior. The model provides a comprehensive understanding of how metaverse-based marketing influences consumer decision-making. These insights are valuable for marketers aiming to design effective digital strategies.

**Table 12: Hypothesis Testing Summary**

Hypothesis	Result
H1	Supported
H2	Supported
H3	Supported
H4	Supported
H5	Supported
H6	Supported
H7	Partially Supported

Table 12 provides a summary of the hypothesis testing results. Most of the proposed hypotheses are supported, indicating strong empirical evidence for the relationships among consumer engagement, brand experience, and purchase intention. The findings confirm the significance of metaverse-based marketing in influencing consumer behavior. However, some hypotheses are only partially supported, suggesting the presence of additional influencing factors not included in the study. This highlights the complexity of consumer interactions in virtual environments and the need for further research to explore other variables such as trust, privacy, and technological barriers.

#### **IV. Results and Discussion**

The present study aimed to analyze the influence of metaverse-based marketing environments on consumer engagement and brand experience, with a comparative focus on Banaras and nearby cities. The statistical analysis provides significant insights into evolving consumer behavior in immersive digital ecosystems. The descriptive statistics indicate that respondents exhibit moderate to high levels of consumer engagement, brand experience, and purchase intention. This suggests that consumers are increasingly receptive to metaverse-based marketing initiatives. The relatively high mean values across variables reflect a positive inclination toward immersive digital experiences, even in semi-urban regions. These findings align with previous research suggesting that digital transformation is rapidly expanding beyond metropolitan areas into smaller cities. The correlation analysis reveals a positive relationship between consumer engagement and purchase intention, although the strength of the relationship is moderate. This indicates that while engagement plays a role in influencing purchasing behavior, other factors such as trust, perceived usefulness, and technological accessibility may also contribute significantly. The weak correlation between digital literacy and other variables suggests that while digital competence is important, it may not be the sole determinant of engagement or brand perception.

Regression analysis provides deeper insights into causal relationships. The results confirm that consumer engagement has a significant impact on brand experience. This finding supports the theoretical framework that interactive and immersive environments enhance consumers' emotional and cognitive connections with brands. In metaverse environments, engagement is not limited to passive interaction; instead, it involves active participation, customization, and co-creation of experiences. This heightened level of involvement leads to more memorable and meaningful brand interactions. Further analysis reveals that brand experience has a strong and statistically significant effect on purchase intention. This indicates that consumers who have positive and immersive brand experiences are more likely to develop favorable attitudes toward brands and exhibit higher purchase intentions. The findings highlight the importance of experiential marketing in the metaverse, where sensory and emotional engagement play a crucial role in influencing consumer decisions. The ANOVA results confirm the overall significance of the regression model, indicating that the selected variables collectively explain variations in consumer behavior. This strengthens the validity of the study and supports the proposed conceptual framework. The model demonstrates that engagement and experience are key drivers of consumer behavior in metaverse-based marketing environments.

The independent sample t-test reveals a significant difference between Banaras and nearby cities in terms of consumer engagement. Interestingly, respondents from nearby cities show slightly higher engagement levels compared to those from Banaras. This finding challenges the conventional assumption that urban centers are always more digitally advanced. It suggests that consumers in smaller cities are rapidly adopting new technologies and may even be more enthusiastic about innovative digital experiences due to their novelty. The moderation analysis highlights the critical role of digital literacy in shaping consumer engagement. Consumers with higher digital literacy are better able to navigate and interact with metaverse platforms, leading to enhanced engagement and more positive brand experiences. This finding underscores the importance of digital education and accessibility in promoting the adoption of advanced technologies.

The frequency distribution analysis indicates that a majority of respondents possess moderate to high awareness of metaverse technologies. However, a significant portion still exhibits low awareness, pointing to the existence of a digital divide. This suggests that while metaverse marketing has substantial potential, its adoption may be uneven across different demographic groups. The findings of this study have important theoretical and practical implications. From a theoretical perspective, the study contributes to the growing body of literature on immersive marketing by providing empirical evidence from an emerging market context. It highlights the interconnectedness of engagement, experience, and behavioral outcomes in virtual environments. From a practical standpoint, the study offers valuable insights for marketers. Businesses should focus on creating interactive and personalized experiences that enhance consumer engagement. Additionally, efforts should be made to improve digital literacy and awareness, particularly in semi-urban areas, to maximize the effectiveness of metaverse marketing strategies.

The study also highlights the importance of cultural and regional factors in shaping consumer behavior. In culturally rich regions like Banaras, traditional values may influence the acceptance and perception of new technologies. Marketers must therefore adopt culturally sensitive approaches when designing metaverse experiences. Despite its contributions, the study has certain limitations. The use of cross-sectional data limits the ability to establish long-term causal relationships. Additionally, the study focuses on a specific geographic region, which may limit the generalizability of the findings. Future research can explore longitudinal designs and include a broader range of cities to enhance the robustness of results. The results demonstrate that metaverse-based marketing environments have a significant impact on consumer engagement and brand experience. The findings underscore the transformative potential of immersive technologies in redefining consumer-brand interactions and highlight the need for strategic adaptation by marketers.

## V. Conclusion

The study concludes that metaverse-based marketing environments play a significant role in shaping consumer engagement and brand experience. The findings indicate that immersive and interactive digital platforms enhance consumer involvement, leading to improved brand perception and increased purchase intention. The comparative analysis reveals that nearby cities are rapidly catching up with Banaras in terms of digital adoption, highlighting the expanding reach of advanced technologies. Digital literacy emerges as a key factor influencing consumer engagement, emphasizing the need for awareness and skill development. Overall, the study underscores the importance of adopting innovative and inclusive marketing strategies to effectively engage consumers in evolving virtual environments.

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