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The impact of metaverse marketing on purchase intention

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Abstract*:* Despite the growing interest in metaverse as a promising three-dimensional digital environment in marketing, capable of transforming the entire marketing landscape through immersive and engaging experiences, the literature still suffers from a clear lack of empirical studies explaining the mechanisms by which metaverse marketing influences consumer purchasing intention, particularly among online platform users. Addressing this research gap, this study aims to analyze the impact of metaverse marketing on purchasing intention within a theoretical framework based on consumer behavior in immersive digital environments. This framework explains the relationship through innovative marketing dimensions that reflect interaction and immersion. The study employed a quantitative approach using an online questionnaire distributed to 200 online platform users, representing the youth demographic. The data were analyzed using SmartPLS. The study offers a scientific contribution by testing an empirical explanatory model that elucidates the role of metaverse marketing in shaping purchasing intention. The results demonstrated a significant positive impact of all metaverse marketing dimensions on purchasing intention, providing important theoretical and practical implications.

Keywords: Perception, Interactivity, Interest, Consumer purchase intention

1. Introduction: The rapid development of interactive digital technologies has led to the emergence of metaverse as one of the most influential conceptual shifts in modern marketing, and revolutionized the world of marketing. It offers immersive virtual environments that reshape the relationship and communication between brands and consumers comprehensively. (Mohammad et al., 2024:12). Some researchers view metaverse as an advanced extension of digital marketing, enabling the creation of virtual characters (avatars) capable of interacting with customers in real time within an interactive 3D environment and engaging them in unprecedented marketing experiences, this enhances the institution's reputation (Dahane et al., 2022:1). Conversely, there is a need for a deeper understanding of the impact of metaphysical environments on purchasing behavior compared to traditional environments. Despite their partially positive results, the theoretical understanding of metaphysical influence remains limited in the literature. (Wang and Cao, 2023:108).

The debate surrounding the impact of metaverse marketing on consumer behavior stems from differing perspectives on its mechanisms. Some researchers suggest that the positive perception of metaverse's realism, ease of use, and perceived value fosters an immersive experience and supports positive brand attitudes, thus increasing purchase intention (Kim, 2021:142). Others argue that perception alone is insufficient, requiring high levels of interactivity that enable control and active participation, thereby enhancing engagement and emotional connection (Dahane et al., 2022:4).

Similarly, another research trend emphasizes the role of attention as a crucial variable in metaverse environments. To achieve effective metaverse marketing, it must be linked to the application of appropriate information systems capable of strategically collecting, storing, and evaluating the data it generates (Reibstein and Iyengar, 2023). The ability of marketing content to capture and retain user attention is essential for converting virtual interaction into actual behavioral responses. This makes it easier for marketers across various sectors to track consumer behavior, and identify key trends, Similarly, digital content marketing (DCM), which aims to enhance consumer engagement with the brand. (Hollebeek and Macky, 2019:27).

Despite the increasing number of studies on metaverse from both technical and conceptual perspectives, applied research examining the impact of metaverse marketing dimensions (perception, interactivity, and interest) on purchase intention within an integrated model remains limited, particularly in the Arab context, where models explaining the mechanisms by which these dimensions influence purchasing behavior are scarce. Addressing this gap, the current study aims to analyze the impact of these dimensions on purchase intention, contributing to the enrichment of marketing literature and providing a practical framework that enables marketers to utilize metaverse to enhance purchasing decisions and build long-term relationships with consumers.

2. Problem of research:

The problem with this research lies in the lack of a comprehensive scientific understanding of the impact of meta-marketing dimensions (perception, interactivity, and interest) on consumer purchasing intention. This stems from the inconsistency in previous literature on the subject, with these studies relying on traditional models that fail to reflect the unique characteristics of immersive virtual environments. This reveals a knowledge gap and a theoretical deficiency that necessitates studying this impact within a practical framework. Such a framework would enable marketers to design more effective marketing strategies in meta-marketing environments.

3. Study objects

This study aims to study the impact of metaverse marketing on customer purchase intention. Specific objectives include:

1. Determining the impact of metaverse marketing on customer purchase intention.
2. Understanding the impact of perception on purchase intention.
3. Determining the impact of interaction on purchase intention.
4. Understanding the impact of interest on purchase intention.

4. Study Model

Figure (1) represents the conceptual framework of the study and depicts the effect of metaverse marketing on customers' purchase intention, based on the literature that was reviewed.

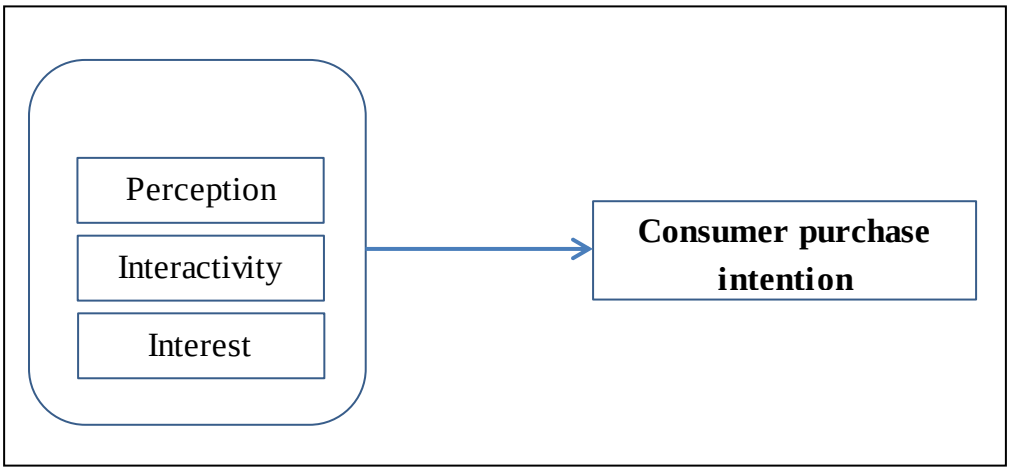

Figure (1) Study Model

5. Measurement

The study adopted established instruments from previous studies to measure Metaverse marketing and Purchase intention. This study evaluates how marketing tools used in the Metaverse influence a consumer's intent to make a purchase. As opposed to traditional e-marketing, metaverse marketing enables consumers to engage with each other and their products through immersive virtual environments while providing a platform for creating personalized digital avatars. So, the three dimensions of metaverse marketing which were selected (perception, Interactivity and Interest) help attract customers' attention and keep them engaged, which ultimately results in increased likelihood of purchasing products offered through Metaverse Marketing (Hussain and Chimhundu, 2023: 18). Table (1) provides used measures.

Table 1. Measurement of variables

Variable's code	Items	source
MM - IV	**3**	(Steuer, 1992) (Chen et. al., 2009)
• **Perception**	**3**	
• **Interactivity**	**3**	
• **Interest**	**3**	
CPI- DV	**6**	(Pavlou & Fygonson, 2006) (Mujtaba & Mubarik, 2022)

Source: By authors based on literature

6. Study dimensions and hypothesis

The impact of marketing metaverse on Purchase Intention: Compared to traditional e-marketing, metaverse marketing shows a more immersive and interactive consumer experience. In Metaverse, users can make personal digital avatars and interact in real time with other users (Hussain and Chimhundu, 2023: 23). Metaverse marketing, with its characteristics, can better attract consumers' attention and interest, thus increasing their purchase intention (Alharthey, 2021: 16). The first hypothesis was formulated based on this as follows:

H1: Metaverse marketing has a significant impact on consumers' purchase intention.

The impact of perception on purchase intention: Perception is the clear and rich environmental information presented to the human sense. Data offers that the information individuals receive in their environment comes primarily through the five senses; therefore, perception is of main importance (Wang et al., 2023: 111). Based on the above, the second hypothesis was formulated as follows:

H2: Perception has a significant impact on consumers' purchase intention.

The influence of interactivity on purchase intention: The ability of consumers to interact with the product may directly impact on the consumers' purchasing intent. Product interaction includes all interactions between a consumer and the product or service offered by a business; this includes the medium (e.g. computer, mobile phone, etc.), as well as, both the quantity and quality of consumers' product interactions, which collectively will lead to greater consumer trust in the merchant and/or online business (Liu Shrum, 2002: 53). The third hypothesis was formulated as follows:

H3: Interactivity has a significant impact on consumers' purchase intention.

The impact of interest on purchase intention: When consumers are using metaverse marketing to determine their purchase intention, the interest generated from the virtual environment is an important consumer experience because it enhances the consumer's enjoyment factor. According to (Chen et al., 2023: 4), the enjoyment generated from online purchasing will have a large and positive influence on purchase intention. Based on the above analysis, the fourth hypothesis was:

H4: Interest has a significant impact on consumers' purchase intention.

7. Literature review

7.1. Metaverse (evaluation and concept)

The word "metaverse" was first used by Neal Stephenson in his 1992 novel *Snow Crash*, where he used it to refer to a virtual world that includes 3D avatars and allows for various forms of interaction, including social interaction, commercial shopping, and work (Mclaughkin, 2022: 8). Today, the metaverse is generally understood to be a futuristic version of the internet that combines and unites many different 3D virtual worlds into one single space that is constantly evolving and can be accessed and shared with anyone across multiple devices (Bala et al., 2023: 276). Modern metaverses are a combination of interconnected virtual spaces that users can explore with an avatar, using either augmented or virtual reality (Hollensen et al., 2022, p. 121).

Metaverse marketing pushes businesses to innovate and employ immersive experiences in an attempt to connect with their target customers. To ensure substantive engagement in an evolving context, marketers will need to remain abreast and update their communication (Kumar et al., 2025). Metaverse marketing is a proactive way of engaging with consumers that can provide businesses a competitive advantage in the fast-evolving marketplace of today (Reibstein and Lyengar, 2023). For many reasons, marketers are embracing metaverse marketing one of the most prominent of the new marketing opportunities that appeared as a result of the COVID-19 pandemic.

Some firms are utilizing the metaverse as a marketing tool, even though it is a near overblown concept. It relies on immersive technologies, which are forecasted across a spectrum of technologies that will grow according to (Chinie et al., 2022: 329).

According to (Narin,2021: 17), the term "metaverse" refers to a virtual space where users feel as though they are fully engrossed with the augmented virtual computer gadgets they are currently using. This virtual device depends on the convergence of technologies, augmented reality (AR), and virtual reality (VR), to allow multi-sensory experiences with digital objects, people, and virtual environments (Mystakidis, 2022:

487). (Narin, 2021: 19) also reveals that the term "metaverse" also characterizes a virtual environment, where users experience the feeling they're entirely engaging with the augmented virtual reality device being used

In the coming years, virtual worlds are expected to attract Millennials and Generation Z, two large and lucrative markets, compelling organizations and marketers to adopt multi-channel marketing practices (Hazan et al., 2022). This revolution includes technologies that will shape the future of marketing, like cryptocurrencies, non-fungible tokens (NFTs), virtual reality (VR), and augmented reality (AR) (Mimoune et al., 2025: 7). The projected total global size of the metaverse market, from 2020-2030, is illustrated in Figure 1 below:

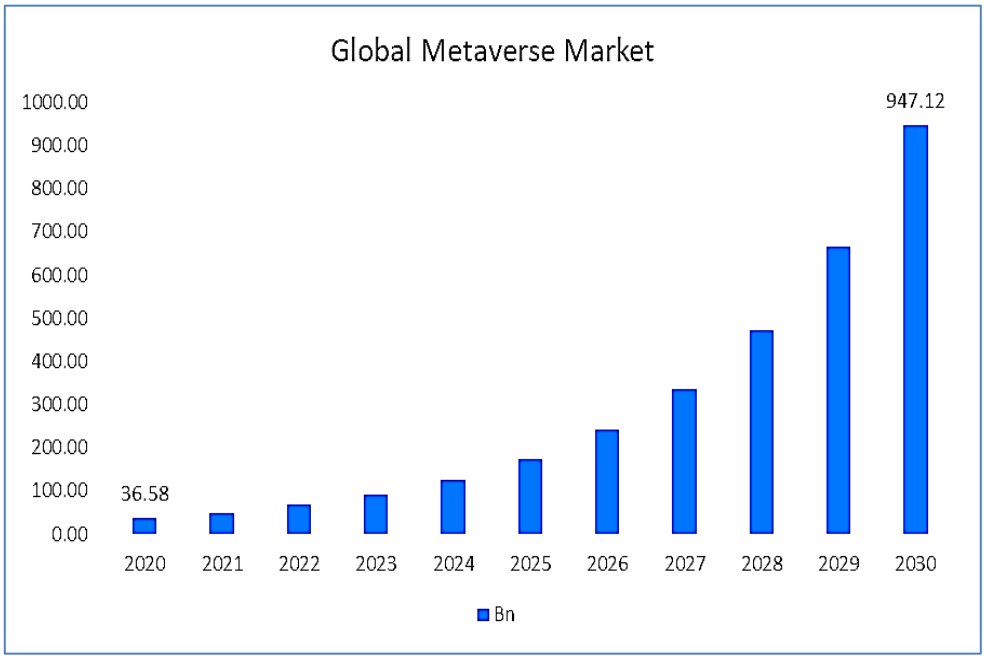

Figure (2) Projected Global Market Size of the Metaverse (2020–2030) / Source: (Bump, 2023)

7.1.1. Core technologies of the metaverse

The quick evolution of the metaverse is mainly the result of technological advancements, particularly the development of augmented reality (AR) and virtual reality (VR) technologies that are very much at the forefront of metaverse marketing (Popescu et al., 2022: 68). Today, the terms "metaverse" and "cyberspace" are often used synonymously and generally reference the same concept. The term "metaverse" suggests an overall shift in how people interact with technologies rather than any specific technology (Xu et al., 2022: 10).

The Boston Consulting Group (BCG) defines the metaverse as the following three types of technologies in its "Metaverse Mobile Guide for Businesses":

- **The first category** is metaverse worlds (M-World) (Hayashi et al., 2023).
- **The second category** is augmented reality (AR) (Koumpouros, 2024: 2), virtual reality (VR), and mixed reality (MR) (Campbell et al., 2016: 1090).
- **The third category** is Web3 (WEB), and virtual assets (Zhang et al., 2022: 320).

Augmented reality (Shen et al., 2021: 2) is defined as computer-generated information that is presented on an actual environment. As a result, augmented reality marketing (ARM) has become the preferred terminology in the marketing field for this application. There is still research being conducted on this new idea. Customers experiences, according to (Chylinski et al., 2020: 374), are not identical to traditional

marketing. Mixed reality is a blend of virtual and augmented reality (ŞİRİN et al., 2022: 2). It can be defined as the merging point of the real and no real facets of mixed reality (Park and Kim, 2021: 4216). Augmented and virtual reality applications would likely be the most common way to access the metaverse world, if not the only way (Ball, 2022). Alternatively, the term extended reality (XR) describes technologies, such as virtual reality, augmented reality, and mixed reality, that mark the beginning of human-machine interactions (Shen et al., 2021: 3).

Extended reality allows for the installation of wearable multisensory technologies (Mystakidis, 2022: 488). Recently, deploying 5G technology to transmit extended reality experiences has become increasingly popular (Mozumder, et. al., 2022: 4). The metaverse also utilizes blockchain to provide user safety, privacy, and reputation and to report users' content and transactions (Gadekallu et al., 2022: 2). Blockchain offers additional value beyond financial transactions, and can be used in a variety of areas to record everything including medical records, birth and marriage records, and educational records (Kahraman, 2022: 155).

7.1.2. Metaverse as an interactive extension of (AR), (VR), and Social Media

With Augmented Reality (AR) and Virtual Reality (VR) marketing, digital content integrates with the physical world (AR) or creates a purely digital environment (VR), enabling an immersive user experience (Hung and Jin, 2022:199). These experiences can promote a user's chances of engaging with a firm or product and can lead to increased sales. By providing potential customers with an experiential understanding of products through advertisements that immerse them in the product and allow for interaction with products, companies can ultimately boost their sales (Rane et al., 2023:1).

Marketing in the Metaverse is a three-dimensional digital realm that combines various types of telecommunications technology (e.g., voice over internet protocol), augmented reality (AR), virtual reality (VR), and a variety of other data-driven digital technologies (e.g., block chain, artificial intelligence, etc.) and allows multiple users to connect and share value simultaneously (Xu et al., 2022:9). The distinguishing characteristic of the Metaverse versus the most common examples of wired or wireless networks is the fact that the key to the Metaverse is a collection of connected networks of virtual worlds and the metaverse represents the entire collection of interconnected networks of virtual worlds and experiences created by these technological platforms. The Metaverse provides an attractive experience, allowing users to make new income opportunities through engagement with other users; so, bringing together younger audiences (namely Gen Alpha and Gen Z) who are more inclined to engage (Hollensen et al., 2023:122).

7.1.3. Metaverse requirements

The creation of a metaverse necessitates the fundamental conditions depicted in Figure (2), which have been covered in numerous reviewed works and are thought to be crucial for establishing a successful metaverse ecosystem, the following are among these prerequisites (Sharma and Bansal, 2023: 169):

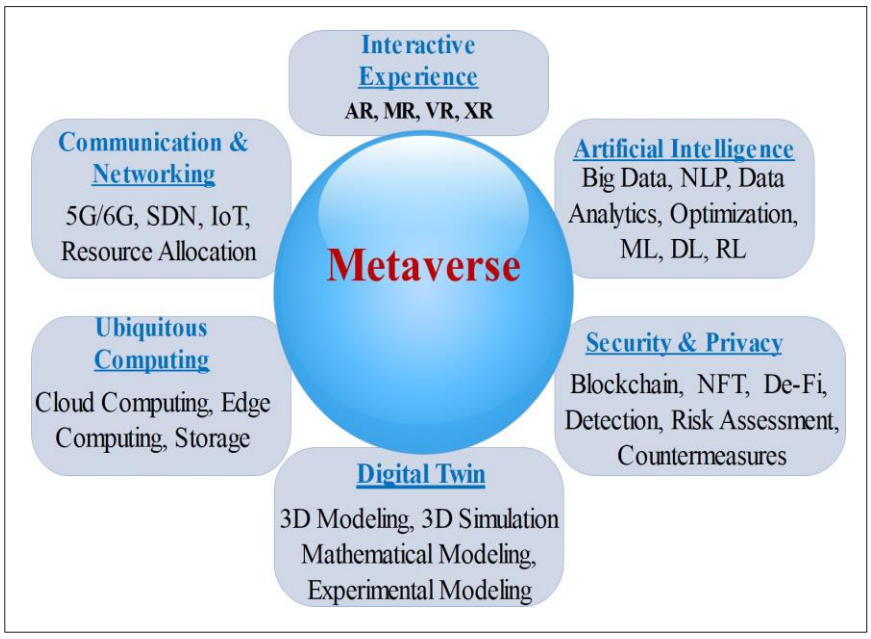

Figure 2. Key requirements and their function in the Metaverse are illustrated.

Source: (Rawat and Alami, 2023: 16)

7.1.3.1. Communication and networking

The metaverse demands advanced networking and communication technologies that are built to specific standards and 5G technology plays a pivotal role since it provides significantly increased data transmission speeds, lower latency, and greater bandwidth than previous technologies (Huang et al., 2023).

7.1.3.2. Ubiquitous Computing

Ubiquitous computing is a new realm in computing where a computer exists in every facet of a person's life. The primary goal of ubiquitous computing is to construct computers that are so integrated, convenient, and intuitive, that we use them without even being aware (Beigl et al., 2001: 402). Ubiquitous computing is central to delivering an enticing metaverse experience that can be acquired from virtually any location, at any time, and is characterized by the seamless embedding of technology into our everyday lives (Monteiro et al., 2018: 53).

7.1.3.3. Digital twin

A digital twin is a powerful resource in the metaverse. A digital twin is a virtual counterpart of a system, process, or object in the real world and exhibits a high degree of precision in representing the real world (Wu et al., 2021: 2). Both the digital twin and avatar provide an immersion and sense of membership for users in the metaverse (El Saddik, 2018: 88).

7.1.3.4. Interactive experience

In the metaverse, augmented reality technology (AR) allows for immersive and enhanced experiences while interacting with people, avatars, and the environment in real-time through large-scale 3D modeling, human-computer interaction, and front-facing 3D images (Park and Kim, 2022: 9).

7.1.3.5. Artificial intelligent:

The metaverse has a wide range of applications in artificial intelligence (AI) by leveraging AI models, technologies, and techniques across all applications, including big data analytics, optimization, and natural language processing (NLP) (Zhang et al. 2022: 10). To achieve the secure and functional potential of the metaverse, AI technology requires incorporation in some form (Huynh-The et al. 2023: 2).

7.1.3.6. Security and privacy:

One important principle that shows an unwavering commitment to the protection of user data and creation of a safe online atmosphere is the metaverse rules related to security and privacy (Kang et al., 2023: 150). Strong security and privacy protection based on the metaverse context is a

pressing priority given the emergence of the metaverse and the growth of user transactions and interactions (Oh et al., 2023: 2).

7.2. Consumer Purchase Intention

Is a dynamic decision-making process that includes activities such as demand motive formation and pre-consumption decisions, and is influenced by multiple factors (Cui et al., 2020: 1068). Purchase intention represents an individual's inclination to engage in a specific behavior. This behavior reflects the customer's internal desire for that behavior (Camila cozer, 2018). Many factors influence customer purchase intention, such as cultural and social factors, reputation, gender, and customer engagement, as demonstrated by numerous previous studies and research (Wang and Guo, 2020: 5).

Previous studies have shown that consumers are influenced by factors such as reputation and gender, along with other factors such as socio-cultural factors and consumer engagement (Wang et al., 2023: 107). In this paper, consumer purchase intention refers to the likelihood of a consumer purchasing an item during online shopping after experiencing Metaverse marketing.

7.3. Company challenges and solutions:

Based on the reviewed literature, several challenges facing companies and marketers and ways address them have been identified, as follows:

- With metaverse marketing, companies may find it difficult to rely solely on their presence in this new digital realm to expand their audience base. They must intensify market research to understand customer reactions, desires, and preferences in order to design metaverse marketing that align with their aspirations, especially those of younger consumers (Mckinsey and Company, 2022a).
- With metaverse receiving large amounts of user data, privacy and security issues arise; therefore, marketers must ensure the development of robust data protection methods to maintain customer trust (Wang et al., 2022: 5). As metaverse experiences become increasingly personalized, it is essential to balance privacy and personalization (Kang et al., 2023).
- Regarding user interaction and engaging content, creating compelling and interactive content for the metaverse is likely to be more challenging (Marabelli and Newell, 2023: 30). Therefore, given the limitations of traditional marketing methods in virtual environments, marketers should master the creation of innovative content that captures and maintains user attention in immersive environments (Kalyvaki, 2023: 90).
- Another challenge associated with the development of metaverse technologies is the ethical implications of identity theft, misinformation, and deep fakes (Fernandez and Hui, 2022: 275). To build and maintain consumer trust, and ensure their interaction with Metaverse is genuine, transparent, and secure, marketers must address this challenge with more than just treatment (Meepung and Kannikar, 2022: 281).
- Other important challenges include addressing important issues related to Metaverse, such as (Lu and Mintz, 2023: 152): (1) ensuring customer privacy, (2) enforcing ethical behavior, (3) not marketing to children, (4) managing customer information, (5) prohibiting illegal materials, communications, and behaviors, (6) protecting the mental and physical health of the user, and (7) addressing new and unacceptable behaviors in the virtual world that might otherwise be tolerated.

8. Methodology

8.1. Study methods:

This study adopted a descriptive-analytical approach for data collection and analysis. A questionnaire was used as the primary data collection tool, designed based on previous studies to ensure its suitability to the study's content and variables. The **SmartPLS** statistical software was used to analyze the questionnaire data and identify relationships between the underlying variables.

8.2. Justification for Using PLS-SEM

This study uses partial least squares structural equation modeling (PLS-SEM) as the primary data analysis technique, as opposed to covariance-based SEM (CB-SEM). This choice is theoretically and methodologically justified based on study objectives, model properties and data properties. The primary rationale for choosing PLS-SEM is its prediction-oriented nature and its suitability for exploratory research aimed at theory development and elaboration. Given that research on the impact of metaverse marketing on purchase intention is still evolving, PLS-SEM is suitable for identifying key driver constructs and predicting the target construct (purchase intention). .

In summary, PLS-SEM (analyzed using software such as SmartPLS) was chosen for its ability to maximize the explained variance of the dependent variable (purchase intention), its flexibility with model specification and data requirements, and its strength in predictive application – all of which align perfectly with the explanatory and predictive goals of this study.

8.3. Data collection

The questionnaire was distributed using a random sampling method to a sample of social media platforms users from different age groups ranging from (18- over 45 years old), including video games, in collaboration with Tourist Perspectives in the UAE, between September 1, 2025 - December 15, 2025. (220) questionnaires were sent to study sample. (200) valid responses were collected and deemed suitable for statistical analysis after excluding incomplete responses, representing a response rate of 91%.

9. Data Analysis

9.1. Demographic Analysis and Discussion

Table 2. Demographic Profile of the Study Sample (N = 200)

Percentage (%)	Frequency	Category	Variable
26	52	18–24 years	Age
39	78	25–34 years	
23	46	35–44 years	
12	24	45 years and above	
100	200	Total	
59	118	Male	Gender
41	82	Female	
100	200	Total	

32	**64**	**Beginner**	**Experience with the Metaverse**
43	**86**	**Intermediate**	
25	**50**	**Advanced**	
100	**200**	**Total**	

Source: By authors based on the results of the statistical analysis

The demographic characteristics of the study sample represent a diverse and relevant group of respondents who are suitable for examining the effect of metaverse's marketing on purchase intention. The table (2) above shows, with regard to age, most of the respondents fall into the 25-34 age category (39%), followed by those aged 18-24 (26%). This reflects a relatively young sample, which is appropriate since younger age groups are generally more engaged in digital technologies and immersive virtual environments such as the metaverse. When it comes to gender distribution, the sample consists of 59% men, while 41% are women.

This distribution suggests a reasonably balanced representation, which provides meaningful insight into purchase intent between genders in the context of metaverse marketing. In terms of experience with the metaverse, most respondents reported an intermediate level of experience (43%), followed by novices (32%) and advanced users (25%). This indicates that the sample includes participants with varying degrees of familiarity with metaverse platforms, which increases the reliability of the findings and enables a holistic assessment of how different levels of experience affect purchase intention. Overall, the demographic profile of the respondents supports the suitability of the sample to achieve the research objectives and provides a solid basis for analyzing consumer behavior in a metaverse-based marketing environment.

9.2. Descriptive Analysis

Descriptive analysis goals to summarize the collected items. As proven in Table 2, Mean and standard deviations for variables. All variables have crossed the approximate average of three on the 5-factor like the scale, indicating variability in the studied pattern.

Table 3. Descriptive analysis results

Variable	Mean	Standard Deviation
MM - IV		
• **P**	**4.028**	**0.583**
• **I**	**4.043**	**0.494**
• **IN**	**4.090**	**0.609**
• **CPI- DV**	**4.006**	**0.575**

Source: By authors based on SmartPLS software outputs

15.2. Measurement model

According to (Sarstedt et al., 2021: 16), the measurement model should meet three key criteria:

- Internal consistency reliability, with composite reliability values of at least 0.60 and Cronbach's Alpha of 0.70 or higher.
- Indicator reliability, where standardized loadings should reach a minimum of 0.70.

- Convergent validity, indicated by an average variance extracted (AVE) value of 0.50 or above.

A dimension model became evolved using SmartPLS V.4 software, and the outcomes—provided in Table (3)—met all the required assessment criteria.

Table 4. Measurement model

items	Factor loading	Cronbach Alpha	composite reliability	AVE
P1	0.793	0.77	0.85	0.58
P2	0.801			
P3	0.822			
I1	0.721	0.79	0.86	0.59
I2	0.770			
I3	0.807			
In1	0.819	0.77	0.84	0.61
In2	0.763			
In3	0.792			
CPI	0.839	0.74	0.83	0.55
CPI	0.770			
CPI	0.748			
CPI	0.705			
CPI	0.733			
CPI	0.799			

Source: By authors based on SmartPLS software outputs

9.3. Structural Model

To test the ratio of the studied variables became a path model designed using SmartPLS V.4, where each path (ratio) is important when T-Value> 1.96 and P-Value <0.05. Table 4 shows results.

Table 5. Path Analysis

Hypothesis	path	path coefficient	t-Value	P-value	Result	R^2
H1	MM →CPI	0.775	9.023	0.000	Accepted	0.600
H1a	P→ CPI	0.569	5.190	0.000	Accepted	0.813
H1b	I→ CPI	0.548	4.696	0.000	Accepted	
H1d	IN→ CPI	0.603	5.980	0.000	Accepted	

Source: By authors based on SmartPLS software outputs

Table (4) presents the path coefficients; based on the required criteria outlined by (Sarstedt et al., 2021: 3), all the hypotheses were accepted. The coefficient of determination (R^2) for the main hypothesis was found to be 0.600. This indicates that Metaverse marketing explains 60% of the

variance in the Purchase intention variable, while the remaining percentage is attributed to factors not addressed in the current study.

10.Conclusion

According to the results of the statistical analysis that was performed on the study data, it was determined that all of the hypotheses were accepted. This indicates that there is an effect of metaverse marketing and its three components (perception, engagement, and interest) upon consumers' purchase intentions. The most significant factor for increasing a consumer's purchase intention was their perception of metaverse marketing. This can be explained as follows:

Marketing Interpretation: The strong and significant effect of metaverse marketing on consumer purchase intention indicates that immersive virtual environments are highly effective in influencing consumer decision making. From a marketing perspective, the metaverse enables brands to move beyond traditional promotional messages towards experiential marketing, where consumers can interact with products in realistic, engaging and emotionally rich environments. This interaction increases perceived value, trust and product understanding, ultimately translating into higher purchase intent. The relatively high R^2 value (60%) suggests that metaverse marketing activities explain a large part of consumers' purchase intentions, highlighting its strategic importance as a powerful digital marketing channel capable of shaping consumer behavior more effectively than traditional online platforms.

Theoretical Interpretation: Theoretically, this result agrees with experiential marketing theory and stimulus-organism-response (S-O-R) theory. Metaver's marketing acts as a stimulus that affects consumers' internal states (cognitive and emotional responses) (Vinoi et al., 2025 :6) which in turn lead to behavioral outcomes such as purchase intention. The immersive and interactive nature of the metaverse increases sensory stimulation, cognitive engagement and emotional engagement, thereby strengthening consumers' purchase intentions.

Therefore, the findings confirm that metaverse marketing works by combining cognitive evaluation (perception), active engagement (interactivity) and emotional appeal (interest) to influence consumer behavior.

11. Recommendations

The study provides the following recommendations:

1. Based on the findings of the study, the authors propose using metaverse marketing in conjunction with other marketing strategies, as there is evidence of its success when it comes to driving customer purchase intent.
2. The study emphasized that in order to increase purchase intent, it is important to create a good perception of the customer by providing clear, interactive marketing content in metaverse environments.
3. The study found that improving the interaction between the customer and brand in the metaverse is important for increasing purchase intent.
4. It is recommended that businesses create innovative experiences for customers in the metaverse to generate interest in their products and encourage customers to make purchases.
5. By combining metaverse marketing with other digital marketing tools, the study recommends that marketers will be able to leverage the power of each of these marketing channels to create more effective marketing strategies.
6. Finally, the study recommends that future research be conducted on additional variables, including the concepts of trust, perceived value, and brand loyalty, in a metaverse context.

References:

- Ahn, S. J., Kim, J., & Kim, J. (2022). The bifold triadic relationships framework: A theoretical primer for advertising research in the metaverse. *Journal of Advertising,* 51(5), 592-607.
- Alharthey, B. K. (2021). How online video marketing can lead to consumer online purchase intention of beauty and healthcare products in KSA. *International Journal of Online Marketing (IJOM)*, *11*(1), 14-38.
- Bala, P., Khepar, J., Tripathi, V., 4Siranjeevi, Mehra, S., & Roy, S. (2023). Awareness And Perception Of Youth Towards Metaverse Marketing. Creative Research Thoughts (IJCRT), 276-286.
- Ball, M. (2022). The metaverse and how it will revolutionize everything. Liveright Publishing.
- Beigl, M., Gellersen, H. W., & Schmidt, A. (2001). Mediacups: experience with design and use of computer-augmented everyday artefacts. *Computer Networks*, *35*(4), 401-409.doi.org/10.1016/S1389-1286(00)00180-8
- Bump, P. What Is the Metaverse: What Marketers Need to Know. HubSpot. Available at: https://blog.hubspot.com/marketing/metaverse (accessed 21.03.2023).
- Cahier-de-tendances-medias. (2021). dumetavers-aux-metamedias-tentative-de-decodage-dunbuzz.html
- Camila Cozer . (2018) . Consumer's Perception and Purchase Intentions - A Qualitative Study on Second-Hand Clothing Stores: A Qualitative Study on Second-Hand Clothing Stores , *Master Agree* , Jönköping University.
- Campbell, A. G., Santiago, K., Hoo, D., & Mangina, E. (2016, December). Future mixed reality educational spaces. In *2016 future technologies Conference (FTC)* (pp. 1088-1093). IEEE. DOI**:** 10.1109/FTC.2016.7821738
- Chen J,Cong F,Kang F.(2009). Influential Factor Analysis of Consumers' Online Purchase Behavior:A Flow Experience Approach. Nankai Business Review, 12(2):132-140.
- Chen, Y., Ding, D., Meng, L., Li, X., & Zhang, S. (2023). Understanding consumers' purchase intention towards online paid courses. *Information Development*, *39*(1), 19-35.
- Chinie, C., Oancea, M., & Todea, S. (2022). The adoption of the metaverse concepts in Romania. *Management & Marketing*, *17*(3), 328-340.
- Chylinski, M., Heller, J., Hilken, T., Keeling, D. I., Mahr, D., & de Ruyter, K. (2020). Augmented reality marketing: A technology-enabled approach to situated customer experience. [AMJ]. Australasian Marketing Journal, 28(4), 374–384. doi:10.1016/j.ausmj.2020.04.004
- Cui C Q,Liao C L, Yao Q, Li Ming.(2020). Mechanism Research on the Effect of Sense of Power on Consumer' s Service Evaluation. Chinese Journal of Management. (7): 1067-1076
- Dahane, A., Bourhim, E. M., Benrahal, M., Labti, O., & Akhiate, A. (2022, October). How can the marketing sector benefit from virtual reality? A SWOT analysis. In 2022 *13th International Conference on Computing Communication and Networking Technologies(ICCCNT)* (pp.1-6). IEEE.https://doi.org/10.1109/ICCCNT54827.2022.9984532
- El Saddik, A. (2018). Digital twins: The convergence of multimedia technologies. *IEEE multimedia*, *25*(2), 87-92. DOI**:** 10.1109/MMUL.2018.023121167
- Ferebee, S. S. (2022). Metaverse: The Ethical Dilemma. In *Exploring Ethical Problems in Today's Technological World* (pp. 315-330). IGI Global Scientific Publishing.
- Fernandez, C. B., & Hui, P. (2022, July). Life, the metaverse and everything: An overview of privacy, ethics, and governance in metaverse. In *2022 IEEE 42nd international conference on distributed computing systems workshops (ICDCSW)* (pp. 272-277). IEEE.
- Gadekallu, T. R., Huynh-The, T., Wang, W., Yenduri, G., Ranaweera, P., Pham, Q. V., . . Liyanage, M. (2022). Blockchain for the Metaverse: A Review. *arXiv preprint arXiv:2203.09738*. doi:10.48550/ arXiv.2203.09738
- Hadi, R., Melumad, S., & Park, E. S. (2024). The Metaverse: A new digital frontier for consumer behavior. *Journal of Consumer Psychology*, *34*(1), 142-166. https://doi.org/10.1002/jcpy.1356

- HAYASHI, M., SUZUKI, T., KAWATA, Y., & GOTO, K. (2023, December). The Impact of Metaverse Worlds on International Collaborative Learning for Cross-Cultural Understanding. In *International Conference on Computers in Education*.
- Hazan, E., Kelly, G., Khan, H., Spillecke, D., & Yee, L. (2022). Marketing in the metaverse: An opportunity for innovation and experimentation. *The McKinsey Quarterly*.
- Hennig-Thurau, T., Aliman, D. N., Herting, A. M., Cziehso, G. P., Linder, M., & Kübler, R. V. (2023). Social interactions in the metaverse: Framework, initial evidence, and research roadmap. *Journal of the academy of marketing science*, *51*(4), 889-913. doi.org/10.1007/s11747-022-00908-0
- Hollensen, S., Kotler, P., & Opresnik, M. O. (2023). Metaverse–the new marketing universe. *Journal of business strategy*, *44*(3), 119-125. https://doi.org/10.1108/JBS-01-2022-0014
- Huang, Y., & Jin, Y. (2022). Research on the Impact of the Metaverse on the Future of Social Networking. *Journal of Education, Humanities and Social Sciences*, *5*, 198-204.
- Huang, Z., Xiong, C., Ni, H., Wang, D., Tao, Y., & Sun, T. (2023). Standard evolution of 5G-advanced and future mobile network for extended reality and metaverse. *IEEE Internet of Things Magazine*, *6*(1), 20-25.
- Hussain, S. I., & Chimhundu, R. (2023). Effects on consumer purchase intentions through online marketing activities: Evidence from Australian retail sector consumers. *International Journal of Arts and Humanities Studies*, *3*(1), 16-25.
- Huynh-The, T., Pham, Q. V., Pham, X. Q., Nguyen, T. T., Han, Z., & Kim, D. S. (2023). Artificial intelligence for the metaverse: A survey. *Engineering Applications of Artificial Intelligence*, *117*, 105581. doi.org/10.1016/j.engappai.2022.105581
- Ji, Z., & Hanna, R. C. (2020). Gamers first–how consumer preferences impact eSports media offerings. *International journal on media management*, *22*(1), 13-29. https://doi.org/10.1080/14241277.2020.1731514
- Kahraman, M. E. (2022). Blok zincir, Deepfake, Avatar, Kripto para, NFT ve Metaverse ile Yaygınlaşan Sanal Yaşam. [UKSAD]. *Uluslararası Kültürel ve Sosyal Araştırmalar Dergisi,* 8(1), 149–162. doi:10.46442/intjcss.1106228
- Kalyvaki, M. (2023). Navigating the metaverse business and legal challenges: Intellectual property, privacy, and jurisdiction. *Journal of Metaverse*, *3*(1), 87-92. doi.org/10.57019/jmv.1238344
- Kang, G., Koo, J., & Kim, Y. G. (2023). Security and privacy requirements for the metaverse: A metaverse applications perspective. IEEE Communications Magazine, 62(1), 148-154. DOI**:** 10.1109/MCOM.014.2200620
- Kim, J. (2021). Advertising in the metaverse: Research agenda. *Journal of interactive advertising*, 21(3), 141-144.
- Koumpouros, Y. (2024). Revealing the true potential and prospects of augmented reality in education. Smart Learning Environments, 11(1), 1-62. http://doi.org/10.1186/s40561-023- 00288-0
- Kozinets, R. V. (2023). Immersive netnography: a novel method for service experience research in virtual reality, augmented reality and metaverse contexts. *Journal of Service Management*, *34*(1), 100-125. doi.org/10.1108/JOSM-12-2021-0481
- Kumar, R., Aneja, P., Jadaun, R., Kiran, P. N., Saxena, N., Saxena, S., ... & Painoli, A. K. (2025). Metaverse marketing: a review and future research agenda. *Information Discovery and Delivery*.https://doi.org/10.1108/IDD-05-2024-0066
- Liu, Y., & Shrum, L. J. (2002). What is interactivity and is it always such a good thing? Implications of definition, person, and situation for the influence of interactivity on advertising effectiveness. *Journal of advertising*, *31*(4), 53-64.
- Lu, S., & Mintz, O. (2023). Marketing on the metaverse: Research opportunities and challenges. *AMS Review*, *13*(1), 151-166. DOI: 10.1007/s13162-023-00255-5

- Marabelli, M., & Newell, S. (2023). Responsibly strategizing with the metaverse: Business implications and DEI opportunities and challenges. *The Journal of Strategic Information Systems*, *32*(2), 101774. doi.org/10.1016/j.jsis.2023.101774
- McCarthy, E. J., Shapiro, S. J., & Perreault, W. D. (1979). Basic marketing (pp. 29-33). *Ontario: Irwin-Dorsey*.
- McKinsey & Company. (2022a). Meet the metaverse: Creating real value in a virtual world. https://www.mckinsey.com/about-us/ new-at-mckinsey-blog/meet-the-metaverse-creating-real-valuein-a-virtual-world. Accessed 23 March 2023.
- McLaughlin, J. (2022). Marketing in the Metaverse: a Guide to the Metaverse and Web 3.0 for Marketers and Brands,(NP). *United Kingdoms*.
- Meepung, T., & Kannikar, P. (2022). Metaverse; virtual world challenges and opportunities for digital business. *world*, *15*(18).
- Mehra, V., Singh, P., Mehra, M., Albanna, H., & Dwivedi, Y. K. (2023, December). Exploring the fusion of metaverse and sports: Current trends and future directions. In *International Working Conference on Transfer and Diffusion of IT* (pp. 258-268). Cham: Springer Nature Switzerland. https://doi.org/10.1007/9
- Mimoune, M., Bentayeb, A., & Khoualed, A. (2025). The impact of metaverse on modern marketing trends: showcase global experiences of fashion brands. *МАРКЕТИНГ І ЦИФРОВІ ТЕХНОЛОГІЇ*, *9*(1), 6-19.
- Mohammad W., Abu Bashar, Brighton N., & Amar J. (2024). Deciphering the evolution of metaverse-A techno-functional perspective in digital marketing. *International Journal of Information Management Data Insights* 4 (1), 1-16. https://doi.org/10.1016/j.jjimei.2024.100296
- Monteiro, D., Liang, H. N., Abel, A., Bahaei, N., & de Cassia Monteiro, R. (2018, December). Evaluating engagement of virtual reality games based on first and third person perspective using EEG and subjective metrics. In *2018 IEEE international conference on artificial intelligence and virtual reality (AIVR)* (pp. 53-60). Ieee. DOI**:** 10.1109/AIVR.2018.00015
- Mozumder, M. A. I., Sheeraz, M. M., Athar, A., Aich, S., & Kim, H. C. (2022). Overview: Technology roadmap of the future trend of metaverse based on IoT, blockchain, AI technique, and medical domain metaverse activity. In *2022 24th International Conference on Advanced Communication Technology* (ICACT) (pp. 256-261). IEEE.
- Mujtaba, M., & Mubarik, M. S. (2022). Talent management and organizational sustainability: role of sustainable behaviour. International Journal of Organizational Analysis, 30(2), 389-407.
- Mystakidis, S. (2022). Metaverse. Encyclopedia, 2(1), 486–497. doi:10.3390/encyclopedia2010031
- Narin, N. G. (2021). A content analysis of the metaverse articles. *Journal of metaverse*, 1(1), 17-24.
- Oh, J., Kim, M., Park, Y., & Park, Y. (2023). A secure content trading for cross-platform in the metaverse with blockchain and searchable encryption. *Ieee Access*, *11*, 120680-120693. DOI**:** 10.1109/ACCESS.2023.3328232
- Park, S. M., & Kim, Y. G. (2022). A metaverse: Taxonomy, components, applications, and open challenges. *IEEE access*, *10*, 4209-4251. doi: 10.1109/ACCESS.2021.3140175
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. MIS quarterly, 115-143.
- Popescu, G. H., Valaskova, K., & Horak, J. (2022). Augmented reality shopping experiences, retail business analytics, and machine vision algorithms in the virtual economy of the metaverse. *Journal of Self-Governance and Management Economics*, *10*(2), 67-81.
- Rauschnabel, P. A., Babin, B. J., tom Dieck, M. C., Krey, N., & Jung, T. (2022). What is augmented reality marketing? Its definition, complexity, and future. Journal of Business Research, 142, 1140–1150. doi:10.1016/j.jbusres.2021.12.084

- Rane, N., Choudhary, S., & Rane, J. (2023). Metaverse marketing strategies: enhancing customer experience and analysing consumer behaviour through leading-edge Metaverse technologies, platforms, and models. *Platforms, and Models (November 3, 2023)*.
- Rawat, D. B., & El Alami, H. (2023). *Metaverse: Requirements, architecture, standards, status, challenges, and perspectives. IEEE Internet of Things Magazine, 6 (1), 14–18*.
- Reibstein, D. J., & Iyengar, R. (2023). Metaverse—will it change the world or be a whole new world in and of itself?. *AMS Review*, *13*(1), 144-150. https://doi.org/10.1007/s13162-023-00258-2
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of market research* (pp. 587-632). Cham: Springer International Publishing.
- Sharma, A., & Bansal, A. (2023). Digital marketing in the metaverse: Beginning of a new era in product promotion. In *Applications of Neuromarketing in the Metaverse* (pp. 163-175). IGI Global.
- Shen, B., Tan, W., Guo, J., Zhao, L., & Qin, P. (2021). How to promote user purchase in metaverse? A systematic literature review on consumer behavior research and virtual commerce application design. Applied Sciences (Basel, Switzerland), 11(23), 11087. doi:10.3390/app112311087
- ŞİRİN, T., ERATLI ŞİRİN, Y., Can, B., & URUÇ, O. (2022). Digital burnout and perceptive failure: The example of physical education teachers during the COVID-19 pandemic. *Baltic Journal of Health and Physical Activity*, *14*(1), 2.
- Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. Journal of communication, 42(4), 73-93.
- Vinoi, N., Shankar, A., Abdullah Alzeiby, E., Gupta, P., & Agarwal, V. (2025). Unveiling customer intentions: exploring factors driving engagement with hospitality virtual influencers. *Journal of Hospitality Marketing & Management*, *34*(3), 325-354.
- Wang, J., Du, B., & Cao, X. (2023). A study of the impact of metaverse marketing characteristics on consumers' purchase intention. In *Digitalization and management innovation II* (pp. 106-119). IOS Press.
- Wang, X H, Guo Y F. (2020). How does Online Reputation Inconsistency Between Product and Seller Influence Consumers' Purchase Intention? Business and Management Journal. Nov; (11): 125-140.
- Wang, M., Yu, H., Bell, Z., & Chu, X. (2022). Constructing an edu-metaverse ecosystem: A new and innovative framework. *IEEE Transactions on Learning Technologies*, *15*(6), 685-696. DOI**:** 10.1109/TLT.2022.3210828
- Wang, Y., Su, Z., Zhang, N., Xing, R., Liu, D., Luan, T. H., & Shen, X. (2022). A survey on metaverse: Fundamentals, security, and privacy. *IEEE communications surveys & tutorials*, *25*(1), 319-352.
- Wu, Y., Zhang, K., & Zhang, Y. (2021). Digital twin networks: A survey. *IEEE Internet of Things Journal*, *8*(18), 13789-13804. DOI**:** 10.1109/JIOT.2021.3079510
- Xu, M., Ng, W. C., Lim, W. Y. B., Kang, J., Xiong, Z., Niyato, D., ... & Miao, C. (2022). A full dive into realizing the edge-enabled metaverse: Visions, enabling technologies, and challenges. *IEEE Communications Surveys & Tutorials*, *25*(1), 656-700.
- Zhang, H., Cui, W., Sun, Y., Liu, L., & Zhou, K. (2022, February). Distributed management of virtual reality digital assets for online experimental education. In *Thirteenth International Conference on Graphics and Image Processing (ICGIP 2021)* (Vol. 12083, pp. 730-737). SPIE.
- Zhang, H., Lee, S., Lu, Y., Yu, X., & Lu, H. (2022). A survey on big data technologies and their applications to the metaverse: Past, current and future. *Mathematics*, *11*(1), 96. https://doi.org/10.3390/math11010096
- Zhang, Q.: Rule of the Metaverse. *Metaverse* 3(1), 23 (2022). https://doi.org/10.54517/met.v3i1. 1812