



## Metaverse Marketing: Avatars as the Future of Brand Engagement

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### Abstract

The Metaverse, a virtual space where users interact via avatars, presents a burgeoning platform for marketing endeavors. Unlike traditional social media marketing, which broadcasts to a passive audience, Metaverse marketing facilitates two-way engagement in immersive settings. This is especially relevant for brands aiming to connect with digitally savvy generations, such as Gen X, Millennials, and Gen Z, whose expectations for interactivity and personalization continue to grow. While previous studies have assessed the broader pros and cons of Metaverse marketing, this study examines the avatar as a catalyst for consumer interaction and brand loyalty. The central question was to investigate how avatars influence brand engagement, with a focus on emotional connection and self-expression within the virtual environment. This study explores consumer perceptions, attitudes, and behaviors towards avatars among 398 Malaysian adults. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to analyze the data. Findings reveal that avatars are effective in enhancing brand recall, trust, and emotional connection. The results also indicate that metaverse brand awareness, customer awareness, trust, and credibility, as well as emotional connection, serve as mediators in the relationship between avatar usage and Metaverse brand engagement. Implications for marketers and future study directions are discussed, highlighting the significance of avatar-based marketing in the evolving digital commerce landscape.

### Keywords:

Metaverse;  
Brand Awareness;  
Consumer Engagement;  
Trust and Credibility;  
Brand Engagement;  
Malaysia.

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## 1- Introduction

The Metaverse originated from the merging of "meta" and "universe" and signifies the joining of different online worlds built with virtual reality (VR) and augmented reality (AR) technologies. It was a term first used in Neal Stephenson's cyberpunk novel, "Snow Crash" published in 1992. The more it was defined as a virtual, interactive world accessible to users via their avatars [1], the more it was accepted, leading to the further development of platforms such as Second Life, which launched in 2003. It was a place where users had the chance to become more of their digital selves and not only to take part in activities through their cartoon-like representations. Currently, in a science-fiction context, the metaverse has taken another turn, becoming a platform accessible via the internet [2]. The three-dimensional digital world is inhabited by the users who have their avatars customized using AR and VR, or possibly the internet, among other technologies [3]. This suite of technologies is usually branded as extended reality (XR), which is an umbrella term for the three realities: AR, VR, and mixed reality MR [2, 3].

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Digital personas mean a lot more to us in this virtual environment than just avatars. They serve as a means of enhancing our self-expression and as a tool for making non-verbal emotional communication [4]. The ability to make each avatar look distinctive contributes to a more realistic and, hence, more emotional communication environment, which, in its turn, results in a more comfortable and thus more engaging atmosphere for users. For this reason, the trend of influencer marketing, live content, and troll marketing replaces traditional marketing, and Metaverse comes as a new playground with it. It is the place where brands and consumers are allowed to engage more deeply due to the immersive experiences provided. Yet not only are these experiences new; they are also efficient. For instance, companies like Louis Vuitton, Gucci (Roblox), and Balenciaga (Fortnite) have already decided to apply metaverse marketing techniques to interact with their audience in a new sense [5].

Metaverse marketing is forecasted to hit \$507.8 billion by the year 2030, according to the Beam Foundation [6]. As for Malaysia itself, the Metaverse eCommerce sector is expected to touch US\$740.8 million by 2030, and it would have a CAGR of 43.62% and a user base of 6.3 million, which would mean a 7.1% user penetration [7]. One of the reasons for this is that it is one of only a few sectors where the software can ensure the console is not claimed as its home, and it is even possible to withdraw from the original installed software period and still retain the license. Data security and digital privacy are the main problems of these markets, which make it impossible to use this information more widely [8]. As people become more familiar with the brand, the possibilities of using very effective marketing strategies for local markets are also growing.

Besides, Metaverse marketing typically involves a combination of VR, AR, and data-powered interaction that results in an even higher level of brand engagement beyond traditional marketing [8]. Metaverse avatars are like video game avatars, being digital representations of the user, which may include changeable body types, outfits, and facial expressions [9]. The past findings show that on the Metaverse platforms, one can find a brand representation that is quite amazing, as it will attract attention to the brand, be relatable to the customer, and cause customer satisfaction [10]. But it seems that out of all the enthusiasm in thinking about brands, very few studies have investigated the connection between avatars and the level of brand awareness and customer engagement in Metaverse marketing [11]. In contrast to earlier efforts that aimed at scanning the wider-scope advantages and disadvantages of metaverse marketing [12, 13], the focus of this study is on the avatar as a major means of stimulating consumer interaction and brand loyalty.

The study also focuses on the influence of avatars in Metaverse marketing on the online consumers of Malaysia. More specifically, the main issue analyzes (i) the role of avatars in creating a positive brand image and engaging the customers, (ii) the effects of avatars on consumers, which in turn are a way to engage with the brand through emotions, and (iii) the impact of avatars on the indication of interest towards Metaverse marketing by the consumers. This is particularly important for companies that aim to reach out to the youngest and already digitally savvy generations, who are not only millennials but also Gen Z and still counting on the interactive and personalized factors to be satisfied accordingly. There was no other article tackling Metaverse marketing, especially in relation to Gen Z, by the time of this study. Thus, the main objective of this study is to give more attention to the subject of Metaverse marketing and thus contribute to brand engagement.

As companies in Malaysia and elsewhere shift their promotional strategies from traditional to Metaverse-based approaches, the role of avatars in their campaigns is becoming increasingly crucial. The difference between the Metaverse and the traditional social media marketing approach is that the former one contributes to the audience's passive engagement while the latter one only communicates the messages [14]. Therefore, the main focus of this study is the interaction of the brands with the Malaysian online users through the avatars' presence in the Metaverse, thus creating a new digital experience. Furthermore, it is aimed at finding the impact of such virtual interactions on the behaviors of the subjects among whom the sphere of shopping and entertainment, as well as that of work and healthcare, is the prime field of study. Eventually, the research will contribute to the extensive study of digital marketing and provide practical insights for marketers, developers, and researchers involved in avatar technology and consumer engagement in Malaysia's digital economy.

The rest of the paper is arranged in the following sections: 'Literature review' is where the theoretical foundations are described as well as the development of concepts and hypotheses. Under the title 'Methodology,' the research methodology is sketched out. In the 'Findings' area, an account of data analysis and results is provided. 'Discussion' is where the major study findings and theoretical and managerial implications are sketched out. Finally, 'Conclusion' finishes the paper.

## 2- Literature Review

This study's theoretical concept has strong and sturdy roots in the Theory of Planned Behavior (TPB). It offers a well-grounded and empirically tested theory in deciphering how consumers' intentions lead to their activity [15]. TPB attempts to advance the perception of behavior more realistically, including the concept of a perceived behavioral control [16]. In this model, Metaverse brand engagement is the behavior of interest, and it is directly foreseen by the consumer's intention to engage in Metaverse brand engagement. It is, in turn, influenced by three fundamental antecedents congruent with the study's variables. First, the attitude of consumer engagement is filled in with the affective and cognitive assessments

based directly on cognitive and emotional awareness of the metaverse and cognitive and emotional awareness of trust, respectively. Positive emotions and a sense of trust foster a favorable attitude. Second, subjective norms, or the perceived necessity of engagement, mobilize based on Metaverse brand awareness (perceived popular brand/popularity of the brand) and Metaverse customer awareness (monitoring other avatars' activity). Lastly, the perceived behavioral control is the ease of locating the way around the branded virtual experience.

TPB is based on a central premise: participation in the Metaverse is a rational and considered behavior and, hence, a well-suited theoretical framework. The framework's credibility is underscored by the volume of empirical evidence, highlighting its usefulness for understanding consumer behavior in similar digital contexts, including social commerce and technology adoption [17, 18]. This research will be able to model the formation process of the combination of awareness, trust, and emotion systematically into forming the intention of a consumer to connect with a brand via their avatar using TPB, and therefore add weight to the rationale behind the concept of avatars as the future of brand experience.

### *2-1- Use of Avatars in Metaverse*

Avatar's involvement in Metaverse marketing is a paradigm shift in the advertising sector that marks the active role of consumers in the way they relate to brands. The emergence of the Metaverse was made possible by a new era and fast-developing virtual reality (VR) features and computing power, whereby a virtual environment is defined as interactive, immersive, collaborative, and, at the same time, one that is shared by online crowds [19]. By contrast, the Metaverse enables customers to use customized avatars to ensure the virtual use of products instead of using photos of standard models [20].

The concept here is that avatars are kind of a virtual self, in the sense that the users can make and depict themselves through their digital worlds [21]. This introduces a completely new aspect to branding and adding value to the brand; if an avatar connects with a brand's virtual products, it is not only buying a product but also integrating fully into its online self. This type of brand identity co-creation has been known to cause a very high emotional connection, a necessity for authentic brand engagement [22]. The situation is even more interesting considering that Metaverse is a social environment, and this kind of dialog is continuously going on between the consumers and the brands. Thus, the use of avatars gives a stronger impression of social presence, the bonding of communities, and the chance to watch peers' responses to the brand or their interaction with it, and the finding of this information to be an effective normative force behind the participation [23]. Instead of the usual form drive, brands in this case could make a common consumer experience; thus, they are turned from being passive listeners to being members of active communities. The conversion of a one-way brand communication to a two-way brand-consumer conversation through the easy access to and use of customized avatars sets this method as the future of institutions that create a close, continuous, and conversational relation to the brand [24].

### *2-2- Use of Avatars in Metaverse and Metaverse Brand Awareness*

The presence of avatars has gained a lot of attention, as it is identified as a central element of the customers' experiences in shopping through their digital selves and that behaving like their real-life selves. Not only the development of new technologies and more sophisticated marketing strategies have contributed to brands connecting with their consumers in a more interactive and engaging way. The psychological readiness of consumers to such a great extent that they prefer a direct human-touch-like conversation is notably building the association of positive feelings towards the brand, which ultimately leads to the purchase of the product [24]. Brand avatars are not only a customer-friendly front but also more interactive and realistic marketing, which is at the level of an indoor sales assistant but beyond [25].

A previous study has shown that the bond between a customer and their avatar is a crucial factor influencing the customer's readiness to buy virtual items [26]. It is therefore clear that the relationship between the digital self and the behavior of the consumer exists. Moreover, in community environments, avatars engage in peer interaction, which shapes impactful social norms [23]. The convergence of all these viewpoints implies that avatars are a game-changing strategic element due to offering an elevated brand recognition that may lead to better market penetration and more significant connections with consumers in cyberspace. It is because avatars are key in promoting brand awareness online and engaging users to interact with the brand. Nonetheless, studies also observed that change of awareness towards avatars might not be substantial in Southeast Asia (SEA), where infrastructure barriers and cultural orientations toward real-life triggers prevail [27]. So, the following hypothesis is developed:

**H1:** Using avatars in Metaverse marketing positively influences brand awareness among consumers.

### *2-3- Use of Avatars in Metaverse and Metaverse Customer Awareness*

Customer awareness is understood as a mental condition that includes cognitive, emotional, and behavioral investments in a brand, which is the most important way to increase loyalty and perception of a brand [22]. Avatars are one of the most important ways to enhance this engagement in the innovative and immersive platforms of the Metaverse. They facilitate an individual, personal level of communication that shifts the consumer to the position of a participant in the co-creation of the brand experience [25].

Research emphasizes that the perceptions of social presence, with the presence of avatars creating the experience of being in the situation in the common virtual space with others, matter in a big way in increasing consumer engagement and developing intentions to visit the virtual place of brands repeatedly [23]. Besides, with the help of avatars, users feel more attached to the content by letting them adopt a digital identity, which is a strong factor in producing high-quality, long-term engagement [24]. These insights allude to the fact that the engagement with the brands and products can be significantly enhanced by using avatars because they provide an exciting interactive experience that attracts attention and, by engaging it, influences the user into more immersive interactions.

**H2:** Use of avatars in metaverse marketing enhances consumer awareness of brands and products.

#### ***2-4- Use of Avatars in Metaverse and Metaverse Trust and Credibility***

Consumer-brand relationships rely on trust and credibility to be established and sustained; without them, the relationship is less likely to be established. In the era of digital marketing, and especially in the new virtual world such as Metaverse, the establishment of trust is the first and foremost task due to the consumers' fear of the security of their personal information and the certainty of the transactions [28]. Having avatars is a very good way to get over these obstacles and to humanize the brand; as a matter of fact, they are the ones responsible for building an unbreakable bond with the consumers. The basic premise of Commitment-Trust Theory is the trust between the parties, which plays a vital role in the relationship marketing from a practical results point of view, as it reduces the uncertainty and encourages both sides to carry out the win-win profitable activities [29].

Metaverse avatars can function as social actors, and the events that happen there can be experienced as more intimate and direct than those in traditional computer interfaces. Consequently, stronger social presence may mitigate the feelings of anonymity and distance and consequently result in greater consumer trust. Several e-commerce studies have repeatedly demonstrated that customer trust is an essential precursor to customer involvement and technology acceptance; consumers feel freer than ever to take part in sites they consider legitimate and safe [30-32]. Avatars enable a brand to be consistent, interactive, and relatable, thereby reinforcing brand reliability. This is hypothesized to increase consumer trust and credibility in the Metaverse, an immersive and often unfamiliar landscape. Following this idea of trust and credibility is essential to constructing a relationship between a consumer and a brand in a digital environment. Hence, the following hypothesis is developed:

**H3:** Using avatars in Metaverse marketing increases trust and credibility in brands among consumers.

#### ***2-5- Use of Avatars in Metaverse and Metaverse Emotional Connection***

When it can be easy to feel impersonal in a digital world, emotional connections to the consumers are essential in developing enduring brand relationships. Digital avatars in the Metaverse will fill this emotional divide because they are a brand's expressive and relatable touch points. It has always been investigated that emotions are at the core of marketing and can affect the attitude of consumers, their choice, and their loyalty [33]. Avatars open a new communication channel to express emotion and personality, whereas the change in avatars goes beyond static advertising, creating a dynamic and emotional interaction.

The primary concept of the extended self is especially topical, since consumers frequently perceive their avatars as a virtual mirror of their personality [21]. As a result of letting users personalize their avatars with products they may use, a strong and personal connection develops when brands enable a process of self-expression. Such identification and social presence when communicating with other avatars can cause significant positive emotions projected onto the brand [23]. The move toward a more connected and emotional marketing process confirms the effectiveness of avatars in supporting the development of relationships between brands and consumers because the interaction of people using digital media has been enriched with humanity. Bearing in mind the opportunity of the avatar to develop neutral interaction towards humans, but with human-like communication and dotted with emotional meaning, the hypothesis is stated as follows:

**H4:** The use of avatars in Metaverse marketing leads to greater emotional connections between consumers and brands.

#### ***2-6- Use of Avatars in the Metaverse and Their Impact on Brand Engagement***

Purchase intention is one of the most widely regarded predictors of consumer behavior and is the best predictor of sales outcomes in the future. In digital environments such as the Metaverse, where consumers hardly ever receive traditional sensory and physical buying cues, avatars become powerful substitutes that lend meaning to the perceptions and interactions of consumers. The Theory of Planned Behavior (TPB) supports this idea, which states that intentions are the immediate precursors of behavior and are influenced by three factors: attitude toward the behavior, subjective norms, and perceived behavioral control [15].

When the avatar is implemented correctly, it can have a positive impact on all four precursors. A good avatar can, for instance, foster more favorable shopping attitudes and brand perceptions by providing pleasurable, fully engaging, and game-like shopping experiences [34]. The subjective norms might also get boosted by socializing and the constant presence of oneself in the metaverse; by that, the customers get to share and demonstrate their sponsorship with branded virtual experiences. At last, the avatars can improve perceived behavioral control by making the navigation and interaction in the virtual space more simplified; in that way, the shopping experience will be a little more orderly and credible.

According to the research of Park & Kim [26], there is a connection that captures warm and strong identification of users with their avatars and their willingness to buy virtual goods at the same time. Hence, this result not only filled the gap but also expanded the range of influence that digital self-presentation could have on consumer decisions. Pavlou [32], on the other hand, placed the main contribution of interactive digital environments in the reduction of perceived risk and in the intention to transact, and this would be more valid if trust were developed through such avatars as well as other interfaces.

Avatars, therefore, uphold interactivity, personalization, and trust, key elements on which modern consumers expect seamless and engaging digital experiences, which positively influence purchase intention and actual purchase behavior. Given the role avatars play in shaping consumer attitudes, reducing uncertainty, and facilitating more meaningful engagement with brands, the following hypothesis is proposed:

**H5:** The use of avatars in Metaverse marketing positively affects Metaverse brand engagement among consumers.

### ***2-7-Metaverse Brand Awareness and Metaverse Brand Engagement***

The recommended positive correlation between Metaverse brand awareness and Metaverse brand engagement is based on the fundamental premises of marketing [35]. Brand awareness is the starting point and the most essential phase of the consumer decision process because it is the cognitive passage to the next point of interaction [36]. In customer-based brand equity models, customers can only advance more intricate attitudes or behavioral activity toward a brand once they know brand salience: the capability to understand and recollect a brand in a given situation [37]. The first step in creating this basic awareness is essential in the novel environment of the Metaverse, where the sheer number of stimuli seeking attention may become overwhelming [38]. A brand that effectively establishes its presence can be included in the consumer consideration set to interact. Engagement cannot occur without awareness because consumers cannot engage with a brand if they are unaware of its occupying that space [39]. Thus, Metaverse brand awareness is assumed to have a direct and necessary antecedent that predicts active brand engagement.

**H6:** Metaverse brand awareness positively influences Metaverse brand engagement among consumers.

### ***2-8-Metaverse Customer Awareness and Metaverse Brand Engagement***

Customer awareness, such as familiarity with use in a shared digital world, may be an effective driver of brand engagement through proven processes of social influence, as in MBE [40]. Theoretically, this is based on the TPB whereby the strength of subjective norms, which is the perceived social pressure to engage in a particular behavior, is one of the significant predictors of intention [15]. The social norm generated by seeing other avatars being active in interacting with a brand in the Metaverse is strong enough to give the cue that interaction is an appropriate and popular activity in that community, which, in this case, can be empirically observed in a social commerce context scenario as well [41]. Such an effect is enhanced in immersive settings with the phenomenon of social presence, a sense of presence with others such that one feels as though he or she is present in the location. Having a social presence further enriches the experience. It creates a sense of belonging to a group, which has been empirically demonstrated to motivate consumers and influence their desire to participate in a virtual environment [23]. Hence, the hypothesis developed is as follows:

**H7:** Metaverse customer awareness positively influences Metaverse brand engagement among consumers.

### ***2-9-Metaverse Trust & Credibility and Metaverse Brand Engagement***

Metaverse trust & credibility can positively influence MBE, which is fundamental to relationship marketing and technology acceptance literature [42]. Trust is the partner's expectation in an exchange to be reliable and to possess integrity, and it minimizes the uncertainty and supposed risk [29]. Trust is a valuable improvement in the Metaverse, where data privacy, transactional security, and the integrity of digital property are critical concerns; trust is also essential to the experience [43]. People are most unlikely to dedicate their time, data, or digital currency to a brand or platform they do not view as a brand they can confide in. A constant finding in e-commerce research has been that trust is a decisive factor in antecedent participation in user participation and transaction intentions [44]. Thus, the engagement blockade can be reduced by establishing credibility and establishing a safe environment that would push consumers beyond passive entertainment to active participatory confidence and, ultimately, trust and credibility in the Metaverse have positively impacted brand engagement among consumers.

**H8:** Metaverse trust & credibility positively influence Metaverse brand engagement among consumers.

### 2-10-Metaverse Emotional Connection and Metaverse Brand Engagement

The correlation between Metaverse emotional connection and Metaverse brand engagement signifies the importance of considering affective marketing, deeming it hard to underrate. Although cognitive aspects, such as awareness and trust, form the basis, emotional connections create a more intrinsic value to the interaction [45, 46]. Marketing research has also established that emotion is essential in decision-making and developing lasting and strong ties between customers and businesses [47, 48]. Another way to build an effective connection is when the appearance of a brand in the Metaverse arouses positive emotions, e.g., happiness, excitement, or even a feeling of belonging [23]. This relationship changes the transactional relationship of the consumer with the brand to the relationship between the consumer and the brand. Consumer brand engagement itself is described as a psychological condition with a cognitive, emotional, and behavioral side; thus, a high emotional attachment is a direct and potent element driving engaged product use over the long term, on voluntary and passionate terms, no longer only on utility [49].

**H9:** Metaverse emotional connection positively influences Metaverse brand engagement among Malaysian consumers.

### 2-11-Mediator Between the Use of Avatars and Metaverse Brand Engagement

Avatar use for brand management is essential, and this mechanism demands a deeper understanding. Apart from the direct impact of avatars on brand engagement, it is crucial to recognize the social-psychological mechanisms that facilitate this relationship. Hence, indirect effect measurement is necessary for understanding how avatars function as strategic marketing tools. A mediation model suggests that an initial variable influences a second variable, which influences a third, explaining the relationship between the initial and final variables [50]. This study proposes the mediating role of Metaverse brand awareness, customer awareness, trust and credibility, and emotional connection between avatar use and Metaverse brand engagement. Hence, the following hypotheses are developed:

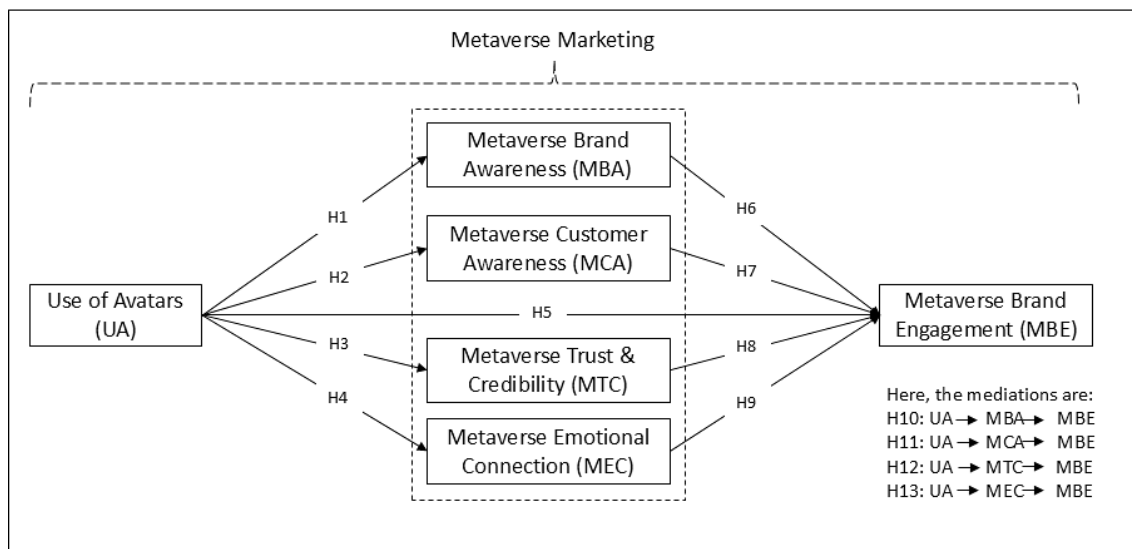
**H10:** Metaverse brand awareness mediate the relationship between the use of avatars and Metaverse brand engagement among Malaysian consumers.

**H11:** Metaverse customer awareness mediates the relationship between the use of avatars and Metaverse brand engagement among consumers.

**H12:** Metaverse trust and credibility mediates the relationship between the use of avatars and Metaverse brand engagement among consumers.

**H13:** Metaverse emotional connection mediates the relationship between the use of avatars and Metaverse brand engagement among consumers.

Figure 1 presents the conceptual framework of the study.



**Figure 1. Conceptual Model of the Study**

## 3- Methodology

The study's participants were made up of Malaysian individuals from three different generations, which were Gen Z (the people born between 1997 to 2012), Millennials (the people born between 1981 to 1996), and Gen X (the people born between 1965 to 1980). Google Forms was chosen as the data collection system of the study because of its convenience and efficiency.

The participants were chosen through a nonprobability convenience sampling process that is frequently used in the inquiries whose aim is to get a varied sample but in a quick and efficient way [51]. This technique facilitated the collection of data from a broad spectrum of participants very fast while considering that it is difficult to generalize the results [52]. To obtain the data, questionnaires were disseminated through the internet to the people who were in the age group. Only those who met the generational criteria could take the survey, and it was entirely up to them if they wanted to participate.

The survey was administered from January to April 2025, with the survey getting performed in this entire period. Throughout this time, the survey participants were asked to fill the survey according to their preference, which meant having a very extensive sample of respondents from various parts and social strata of Malaysia. We set a screening question to determine the respondent's eligibility for the study. "Are you familiar with or have you heard about Metaverse?" This study used an established scale to measure the constructs, and the contents of the scale were slightly changed to be consistent with the current issue of Metaverse brand engagement [53, 54]. Table 1 presents the sources of the constructs developed in this study. The items measuring the independent and dependent variables were ordinal scales based on the 5-point Likert Scale [55]. It permits the respondents to express varying degrees of agreement/ disagreement with the statement. Appendix I presents the measurement items of the constructs.

The demographic section of the questionnaire includes questions relating to gender, age, and education. The second part consists of questions related to the use of avatars and reactions. A pretest was conducted among 40 respondents to identify any potential problems, the flow and structure of the instrument, and to check the reliability and validity of the questionnaire [56, 57]. Of those surveyed, 61.6% are male and 38.4% are female. Most respondents are aged 21-25, followed by those under 20. In terms of education, most respondents have attained a bachelor's degree [58].

This study is based on quantitative analysis of cross-sectional data collected by surveys. The present study employed the PLS-SEM method to investigate the brand engagement in Metaverse. The method was opted for several reasons: it can handle various kinds of constructs very well [59], it gives the possibility to analyze sequential mediation [60], and it gives a thorough analysis of the interaction effect [61].

**Table 1. Sources of the questionnaire**

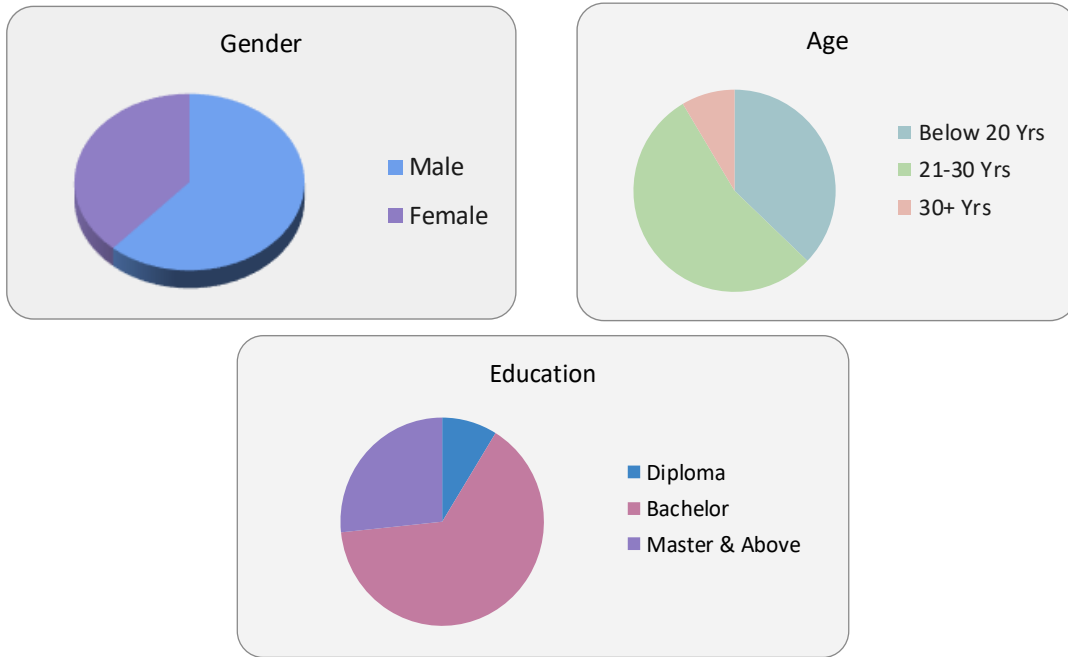
Construct	No. of Questions	Sources
Demographic profiles	3	Tarmidi et al. (2014) [62], Bacher (2022) [63]
Use of Avatars	4	Kalyvaki et al. (2023) [64], Barta et al. (2024) [65]
Metaverse Brand Awareness	5	Bacher (2022) [63]
Metaverse Customer Awareness	3	Simonetti et al. (2025) [66]
Metaverse Trust & Credibility	3	Dang et al. (2025) [67]
Metaverse Emotional Connection	3	Kim et al. (2025) [68]
Metaverse Brand Engagement	4	Simonetti et al. (2025) [66]

Additionally, PLS-SEM is highly suitable for handling complex models with a small sample size and non-normal data [69], making it an ideal choice for this study's objectives. Furthermore, PLS-SEM enables the estimation of both measurement and structural models simultaneously, ensuring a more accurate representation of the relationships between constructs [70].

Besides, in self-reported questionnaire surveys, CMB issues can arise that falsify and affect the structural relationships [71, 72]. Hence, Harman's single-factor test was used to check if there was any common method bias. The test result explains 33.2% of the variance, which is below the cut-off value of 50% ensuring that CMB is not a problem in the current study. In addition, all collinearity VIF values were tested as recommended by Kock [73]. All VIF values were between 1.05 and 1.27, much lower than 3.3, indicating no CMB. Moreover, the instrument was developed in such a manner to ensure anonymity, and the construct items were given randomly, so as not to have CMB.

## 4- Results

Figure 2 displays the demographic profile of the respondents. Of those surveyed, 61.6% are male, and 38.4% are female. Most respondents are in the 21-30 age group, followed by those under 20. In terms of education, most respondents have attained a bachelor's degree.



**Figure 2. Demographic profile of the respondents**

**4-1- Assessment of Measurement Model**

To test the validity and reliability of the measurement model, we have evaluated the factor loadings, CR, AVE, and discriminant validity. Cronbach's alpha and CR measure the construct's internal consistency, indicating the model's overall reliability and validity [69]. Table 2 shows that all of the constructs meet the benchmark of 0.70, ensuring sufficient internal consistency of data.

**Table 2. Internal consistency, convergent, and discriminant validity**

Constructs	Items	FL	CA	CR	AVE	DV
Use of Avatars (UA)	UA1	0.798	0.788	0.862	0.611	Yes
	UA2	0.769				
	UA3	0.795				
	UA4	0.763				
Metaverse Brand Awareness (MBA)	MBA1	0.897	0.909	0.932	0.733	Yes
	MBA2	0.864				
	MBA3	0.821				
	MBA4	0.898				
	MBA5	0.795				
Metaverse Customer Awareness (MCA)	MCA1	0.859	0.816	0.890	0.730	Yes
	MCA2	0.857				
	MCA3	0.847				
Metaverse Trust & Credibility (MTC)	MTC1	0.897	0.881	0.926	0.807	Yes
	MTC2	0.918				
	MTC3	0.880				
Metaverse Emotional Connection (MEC)	MEC1	0.723	0.641	0.804	0.578	Yes
	MEC2	0.809				
	MEC3	0.747				
Metaverse Brand Engagement (MBE)	MBE1	0.758	0.805	0.872	0.631	Yes
	MBE2	0.827				
	MBE3	0.798				
	MBE4	0.793				

Note: FL: Factor Loading; CA: Cronbach's Alpha; CR: Composite Reliability; AVE: Average Variance Extracted; DV: Discriminant Validity.

The factor loadings must be  $\geq 0.70$  to assess the convergent validity of the model. The present study shows loadings ranging from 0.723 to 0.898, which is in line with the standard. Furthermore, the AVE values are also within the limit, establishing the constructs' convergent validity. To ascertain the discriminant validity, the Fornell-Larcker and HTMT tests have been applied. The HTMT result showed that all the values do not exceed the threshold (less than 0.85) [71], and thus, this also fulfills the condition set for discriminant validity. It was only a bit later during the planning phase that the AVE values were calculated, and it was found that all of them were larger than the threshold value of 0.50. This properly validates the convergent validity of the constructs within the model. This means that the factors are well defined and the measurement model is reliable and valid for further analysis.

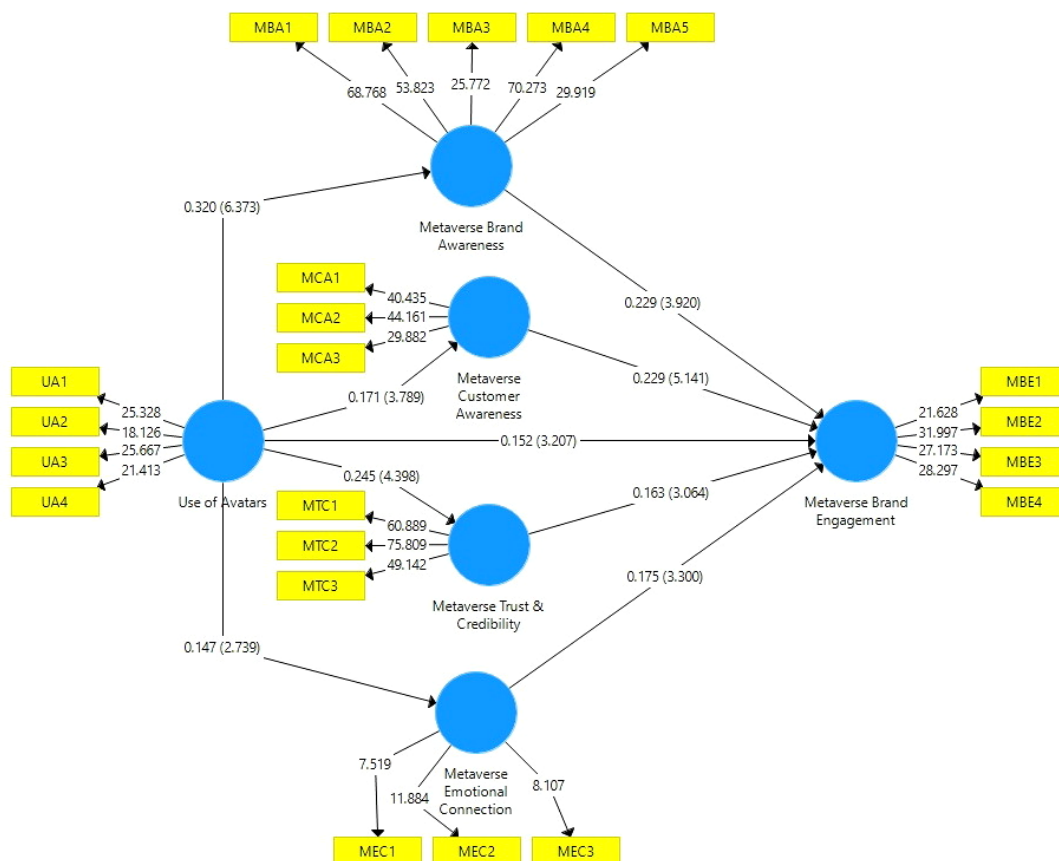
**4-2-Assessment of Structural Model**

After studying the measurement model, we went on analyzing the structural model to examine the hypotheses developed. The model's predictive accuracy is shown in Table 3, where VIF and R<sup>2</sup> scores are also available. According to [74], we examined the key factors that should be met for the robustness of the structural model: VIF, explanatory power (R<sup>2</sup> and Q<sup>2</sup>), and significance of the path coefficients.

**Table 3. VIF, R<sup>2</sup>, and Q<sup>2</sup>**

Constructs	VIF	R <sup>2</sup>	R <sup>2</sup> Adjusted
MBA	1.276	0.102	0.1
MCA	1.110	0.029	0.027
MEC	1.050	0.022	0.019
MTC	1.147	0.06	0.057
UA	1.165	-	-
MBE	-	0.316	0.307

The VIF score indicates no multicollinearity issue in the model, as the scores remain well below the critical VIF threshold of 5. The coefficient of the determinant (R<sup>2</sup>) was determined to evaluate the structured model. The table shows that the exogenous variables explain 30.7% of the variance of Metaverse brand engagement, indicating a moderate predictive accuracy level [74]. Figure 3 presents the study's structured model.



**Figure 3. Structured Model**

Table 4 presents the significance of path coefficients. From the path coefficient result, it is observed that there is a significant positive relationship between the use of an avatar (UA) and Metaverse brand awareness ( $\beta=0.32$ ,  $t=6.129$ ,  $p<0.01$ ), customer awareness ( $\beta=0.171$ ,  $t=3.388$ ,  $p<0.001$ ), trust and credibility ( $\beta=0.245$ ,  $t=4.49$ ,  $p<0.01$ ), emotional connection ( $\beta=0.147$ ,  $t=2.816$ ,  $p<0.01$ ). Hence, H1, H2, H3, and H4 are supported. H5 states that the relationship between avatar use and Metaverse brand engagement is also statistically significant and positive ( $\beta=0.152$ ,  $t=3.397$ ,  $p<0.01$ ). Furthermore, these results are in line with prior evidence that avatar-centric gamified experiences in virtual environments increase brand awareness and engagement [75]; that Metaverse interactivity enhances brand knowledge, trust, and attachment that in turn drive active engagement and purchase intentions [76]; and that avatar identification/self-presence nurtures emotional closeness toward brands [77]. On the one hand, social identity in Metaverse communities is also shown to promote user engagement and purchase intention [64], whereas, on the other hand, broader research on Metaverse brand choice highlights the importance of personal and social factors in willingness to pay [78]. Evidence for the translation of avatar attachment into consumption habits also points to support for the pathway from UA to emotional connection [79]. The low  $\beta$  value for emotional connection among Malaysians may be attributed to the great variety of cultures and collective nature of the society [32]. Since the different ethnicities have their own unique emotional and communication boundaries, feelings of shared emotions may not be heartfelt [64]. Furthermore, the collective preference for social harmony over expressing one's personal feelings could lead to a lower level of emotional bonding than, for example, trust or satisfaction.

From the direct relationship, it is also observed that there is a significant positive relationship between Metaverse brand Engagement and Metaverse brand awareness ( $\beta=0.229$ ,  $t=4.093$ ,  $p<0.01$ ), which supports H6. Furthermore, Metaverse consumer awareness ( $\beta=0.229$ ;  $t=5.386$ ,  $p<0.01$ ), trust and credibility ( $\beta=0.163$ ,  $t=3.377$ ,  $p<0.01$ ), and emotional connection ( $\beta=0.175$ ,  $t=3.445$ ,  $p<0.01$ ) are all significantly and positively related to Metaverse brand engagement, which supports H7, H8, and H9. Additionally, these insights are supported by existing research on how engaging and user-friendly experiences within the Metaverse enhance a consumer's brand perceptions. For instance, Nayak et al. [80] explains that Metaverse-based brand engagement is a path for stimulating purchase intention in the globe and strengthening knowledge of the brand. Another study by Kaur et al. [81] empirically uncovers how such engagement drives consumer behavior in the Metaverse, increasing awareness and emotional attachment with the brand. Overall, all these studies reinforce the view that Metaverse brand engagement is a critical antecedent in the hierarchy of the relational approach for a consumer and a brand, allowing the latter to achieve awareness, trust, and emotional connection.

**Table 4. Hypothesis testing result**

Path	Original Sample	Sample Mean	Std. Dev	T Statistics	P Values
UA → MBA	0.320	0.323	0.052	6.129	0.000
UA → MCA	0.171	0.173	0.051	3.388	0.001
UA → MTC	0.245	0.256	0.054	4.490	0.000
UA → MEC	0.147	0.154	0.052	2.816	0.005
UA → MBE	0.152	0.150	0.045	3.397	0.001
MBA → MBE	0.229	0.229	0.056	4.093	0.000
MCA → MBE	0.229	0.230	0.042	5.386	0.000
MTC → MBE	0.163	0.165	0.048	3.377	0.001
MEC → MBE	0.175	0.175	0.051	3.445	0.001

#### 4-3-Mediation Effect

Finally, the mediation effect was determined using the Preacher & Hayes [82] bootstrapping the indirect effect method. The mediation effect result (Table 5) shows that Metaverse brand awareness, customer awareness, trust and credibility, and emotional connection mediate between the use of avatar and Metaverse brand engagement. The indirect path UA→MBA→MBE ( $t=3.393$ ,  $p<0.01$ ), UA→MCA→MBE ( $t=2.991$ ,  $p<0.01$ ), UA→MTC→MBE ( $t=2.575$ ,  $p<0.05$ ) and UA→MEC→MBE ( $t=2.191$ ,  $p<0.05$ ) all are statistically significant.

**Table 5. Indirect effect result**

Indirect Path	Original Sample	Sample Mean	Std Dev	T Statistics	P Values
UA → MBA → MBE	0.073	0.074	0.022	3.393	0.001
UA → MCA → MBE	0.039	0.040	0.013	2.991	0.003
UA → MTC → MBE	0.040	0.042	0.016	2.575	0.010
UA → MEC → MBE	0.026	0.027	0.012	2.191	0.029

## 5- Discussion

This paper is an exploratory analysis of how avatars in Metaverse marketing influence Malaysian consumers. It concerns how avatars affect Metaverse brand awareness, consumer involvement, trust, credibility, and emotional involvement, which may affect the brand's engagement.

The hypotheses used in this analysis align with past studies on the role of avatars in marketing in the Metaverse, especially their positive impacts on brand awareness, consumer engagement, and trust. For instance, Hypothesis 1 states that the avatars positively affect brand awareness through immersion, thereby confirming the effect of the overall immersion virtual experience's recall and recognition [83]. Avatars engage in personalized communication to eliminate the adverse effects of online shopping, e.g., the products being misrepresented [84]. The finding reveals how imperative it is to consider the context, i.e., Malaysia, where virtual experiences largely facilitate and vitalize brands and a cause-and-effect relationship is noticed, with brands that are easy to recognize also being easy to recall [85]. It also tells us that Malaysia has a moderate stand in terms of technology, which could mean that the avatar effect would not be widespread in creating brand awareness, thereby restricting its impact on a brand's awareness and the possible creation of interactive brand experiences.

Hypothesis 2 results reveal that the presence of Avatars leads to an increase in consumer awareness, which is in line with the findings of gamified Metaverse activities that regard personalization of consumers through the Avatars as a key factor that affects both active participation and behavioral intentions in several ways [83]. Moreover, the avatars have been reported to reduce the occurrence of online shopping fraud in Malaysia as they are immersed-related [86]. The implication of these findings is that using avatars would enhance conversion, particularly in new markets. Nonetheless, the varied rate of engagement could be due to the prevailing shopping habits in Malaysia compared to other regions represented by very advanced digital markets such as Hong Kong [87].

The outcome for the third hypothesis concerning the effect of avatars on trust and credibility is congruent with the work on consumer-avatar relations and studies that describe trust as a mediator of purchase intentions [88]. The use of avatars, particularly in a country like Malaysia, where people are worried about the privacy issues, can be very efficient in terms of making the brands more human and increasing the consumers' loyalty towards the brand. This uniformity shows the power of trust in the virtual environment, especially when consumers are cautious about the risks to their privacy [89]. Nonetheless, regional variations, especially in SEA, can attenuate the effects of trust-building because of insufficient knowledge and cultural processes of relationship building as observed in the existing literature [27, 86].

Moreover, the result of Hypothesis 4 examines the capacity of avatars in motivating behavioral intentions that comprise purchase behavior. Our present study result is consistent with Metaverse and avatar self-integration studies, in which avatars lead to greater perceived fun and a sense of connection with a brand [90]. It is aligned with the studies, noting that interaction with avatars promotes emotional connection based on personalization and self-representation [91], [92]. Studies also show that avatars increase the purchase intent by conveying emotional certainty and customization with high levels of readiness to acquire after the experience of engagement through the avatar [91]. Nevertheless, in Southeast Asia, the effects of technology may be attenuated by technological constraints and cultural adjustments concerning physical stores [27, 87], which results in lower purchase intentions in these countries compared to markets where technology is more advanced.

Furthermore, Hypothesis 5 implies that avatars create positive engagement between brands and consumers. Avatars increasingly and meaningfully engage brands and consumers in the present digital times. These digital entities are animated characters, chatbots, virtual influencers, or AI-powered customer service agents [69, 90]. These are instrumental in making digital interactions more human and at the same time establishing strong emotional connections while delivering hyper-personalized experiences on a huge scale [13]. Thus, avatars serve as a link between technological and meaningful human interaction. Avatars are online characters or interfaces that use AI algorithms to communicate with users through web browsers, mobile phones, or any other digital sources. The one-to-one and immediate communication between the user and the avatar is the main advantage that is supposed to make the service very personal [86, 91]. As regards the digital environment, avatars will play a leading role in both brand perception and interaction distinctly.

Hypotheses 6, 7, 8, and 9 measured the connection of Metaverse brand awareness (MBA), customer awareness (MCA), trust and credibility (MTC), and emotional connection (MEC) on Metaverse brand engagement (MBE) among Malaysian consumers. Results are in accord with the results of similar studies, particularly the ones that indicate that virtual brand visibility in the Metaverse is associated with higher user interaction [85, 92]. For example, the centrality of brand and customer awareness with respect to engagement is underlined by H6 and H7, as it points out the digital growth opportunities in the Malaysian market [89]. H8 condones the essence of trust in promoting engagement, which is appropriate for addressing privacy concerns in Malaysia [93]. H9 affirms that emotional connections reinforce brand engagement because emotional connections can improve loyalty in online settings [94].

The research has explored the effect of using avatars in Metaverse marketing amongst Malaysian consumers. Avatars are observed to significantly influence the relationship in the Metaverse, subtly shaping Metaverse brand awareness, consumer engagement, trust and credibility, and emotional connection. Due to this fact, consumers with exploratory

aspirations seek to gain novel experiences even within the current setting [95]. Consequently, the avatars as Metaverse Marketing entail a sturdy brand interaction that is found to adjust the experience towards a high standard to experience better things than those who are high in actual selves.

### ***5-1- Theoretical and Managerial Implications***

The present study results extend a greater understanding of the existing theory, which was implemented from the perspective of the Metaverse marketing among Malaysian consumers. This research has extended the contribution of TPB, and this study systematically models how awareness, trust, and emotion combine to form a consumer's intention to interact with a brand through their avatar, thereby justifying the concept of avatars as the future of brand engagement in the Metaverse space. This contribution will allow future research to understand the scope of information and brand engagement in the Metaverse. Most research employed the central route to understanding the effectiveness of advertising and websites [96]. Thus, this research extends the previous knowledge of TPB [97] from the Metaverse experience perspective.

Those avatars have a major impact on the essence of brand engagement, where brand awareness, consumer engagement, trust, and emotional connection stand in the metaverse, was the main point brought up by the research. And this is the obviousness of avatars' power as one of the major means for brands and consumers to have very close relationships in Malaysia. The marketing practices need to be such that avatars and virtual experiences match the tastes and metrics of the target population to foster emotional connection, trust, and engagement in the Metaverse. On the other hand, one may find marketers who employ a strategy where they assign the topmost priority to making the avatar-based experiences immersive and enjoyable for all the consumers; consequently, these marketers get higher consumer engagement and loyalty when the virtual trade environment, which is now digital, is the only time. Hence, avatars and other digital characters will be fully embraced by the Malaysians in the Metaverse, and brands will have to adapt to the changing trends of consumer behavior and preferences at an international level.

## **6- Conclusion**

This research examined the importance of avatars in Metaverse marketing from the standpoint of brand engagement in Malaysian consumers. It highlights the importance of identifying the practical applications of these virtual world experiences, specifically in terms of how they influence daily conduct in the major areas like shopping, entertainment, work, and healthcare. Results show that the adoption of avatars is a primary driver of consumer behavior, and the effect can be seen through various essential mediating factors. Results further establish that avatar use in metaverse marketing has a positive influence on brand awareness, trust and credibility, and emotional connections that are firm and long-lasting. These factors, vital for brand engagement, are found to drive higher levels of Metaverse brand engagement, proving that there is a pathway between the avatar connection and the brand's establishing of trust and brand building.

Although this research specifically looked at how avatars are used in metaverse marketing, the results take TPB a step beyond by showing that awareness, trust, and emotion are important factors in shaping Malaysian consumers' intentions to interact with brands through avatars in the Metaverse. This suggests a different approach where avatars are at the core of the next-level brand engagement, announcing a shift from the typical advertising methods and making the emotional and relational aspects of virtual interactions more prominent.

Although this research is very beneficial in many aspects, there are some limitations that will nevertheless open paths for more research in the future. First, the research on the Malaysian market implies that the findings may not be applied to other cultural contexts generally; future studies should take a comparative, cross-cultural approach to check the outcomes and broaden them. Second, the study is performed in a cross-sectional way; hence, it only represents a single point in time in a continually transforming technological context. To elucidate how consumer perceptions and behaviors change as Metaverse technologies become more advanced and as user adoption grows, it is seen that there must be longitudinal studies.

In conclusion, this study suggests that avatars are not just an emergent marketing tool but have a deeper connection when it comes to brand identity and social exchange in the Metaverse. With the digital world widening its horizon, finding out the intricate play of the use of avatars in the Metaverse for advertising, consumer psychology, and cultural context will be a must for the brands that are seeking to establish true and long-term relationships.

## **7- Declarations**

### ***7-1- Author Contributions***

Conceptualization, A.Sa. and A.Si.; methodology, A.Sa.; software, A.Sa.; validation, A.Sa., M.T., and S.R.; formal analysis, A.Sa. and A.Si.; investigation, S.R. and H.O.; resources, S.R. and H.O.; data curation, M.T. and H.O.; writing—original draft preparation, A.Sa., A.Si., and S.R.; writing—review and editing, A.Sa., D.R., and M.T.; visualization, A.Sa.; supervision, A.Sa.; project administration, A.Sa. and D.R.; funding acquisition, A.Sa. All authors have read and agreed to the published version of the manuscript.

**7-2- Data Availability Statement**

The data presented in this study are available on request from the corresponding author.

**7-3- Funding**

The authors received no financial support for the research, authorship, and/or publication of this article.

**7-4- Institutional Review Board Statement**

Not applicable.

**7-5- Informed Consent Statement**

Informed consent was obtained from all subjects involved in the study.

**7-6- Conflicts of Interest**

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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## Appendix I: Measurement Tool

Variable Name	Measurement Item	Source
Use of Avatars in Metaverse	<ol style="list-style-type: none"> <li>1. My avatar is the extension of myself.</li> <li>2. I do care how my avatar looks.</li> <li>3. I put a lot of work customizing my avatar.</li> <li>4. I have a strong connection with my avatar.</li> </ol>	Kalyvaki et al. (2023) [64]
Metaverse Brand Awareness	<ol style="list-style-type: none"> <li>1. Using brands can help me connect with other people and social groups</li> <li>2. I buy brands to be able to associate with specific people and groups.</li> <li>3. I feel a bond with people who use the same brands as I do.</li> <li>4. By choosing certain brands, I choose who I want to associate with.</li> <li>5. My choice of a brand says something about the people I like to associate with.</li> </ol>	Simonetti et al. (2025) [66]
Metaverse Customer Awareness	<ol style="list-style-type: none"> <li>1. I would buy a product just because it has status.</li> <li>2. I choose brands that help to express my Identity to others.</li> <li>3. I choose brands that are associated with the social class I belong to.</li> </ol>	Simonetti et al. (2025) [66]
Metaverse Trust & Credibility	<ol style="list-style-type: none"> <li>1. I trust the intentions of virtual influencers.</li> <li>2. Virtual influencers appear honest and sincere.</li> <li>3. I believe that virtual influencers have my best interests in mind.</li> </ol>	Dang et al. (2025) [67]
Metaverse Emotional Connection	<ol style="list-style-type: none"> <li>1. I frequently mention my LAZADA friends when I meet my acquaintances.</li> <li>2. I have been actively involved in promoting LAZADA.</li> <li>3. Activities on LAZADA is part of my life.</li> </ol>	Kim et al. (2025) [68]
Metaverse Brand Engagement	<ol style="list-style-type: none"> <li>1. I am interested in new products with status.</li> <li>2. I would pay more for a product if it had status.</li> <li>3. The status of the product is relevant to me.</li> <li>4. A product is more valuable to me if it has some snobbish appeal.</li> </ol>	Simonetti et al. (2025) [66]