LET'S CONNECT IN METAVERSE. BRAND'S NEW DESTINATION TO INCREASE CONSUMERS' AFFECTIVE BRAND ENGAGEMENT & THEIR SATISFACTION AND ADVOCACY

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ABSTRACT

The bands are experiencing a change in the consumers' brand preferences pattern, where consumers are more prone to experience the product virtually using Metaverse. This descriptive study examined the antecedents (novelty, Interactivity, Vividness) of a brand's gamification marketing activities in the Metaverse and the impact on consumers' affective brand engagement. Also, this study explored the consumers' anticipated satisfaction and brand advocacy in the Metaverse. The conceptual model was analysed using SMART-PLS. The collected from more 9 countries were used to do the descriptive analysis. The finding suggests that brands can have more consumers' affective brand engagement and increase their virtual brand experience if they use gamification-based marketing activities in Metaverse.

Keywords: Metaverse, brand's gamification marketing activities in Metaverse, Affective Brand Engagement, Virtual Brand Experience, Anticipated brand satisfaction in Metaverse, Anticipated brand advocacy in Metaverse.

1. INTRODUCTION

In recent years, due to the development of related technologies, the Metaverse has received much attention worldwide. The Metaverse is expected to be a more realistic society, with more direct and physical interactions while mitigating concepts of race, gender, and even disability (Gartner, 2022). This development is highly beneficial to society. However, the Metaverse development is still in its infancy, and there is still much work to be done. Given the enormous potential of Metaverse, the industry has already stood out for its aggressive preparation and enthusiastic investment as they are based on Augmented Reality & Virtual Reality both (Investera, 2022).

The prior studies of Javornik (2016) indicated that Augmented Reality (AR) communicates 3D product details virtually to a user's real environment. Whang et al. (2021) also argue that 3D technology offers only a 360-degree view of any item, whereas AR goes beyond integrating a product with the user's environment. The advancement of technology has evolved as an essential tool for communication and entertainment. People use smart devices wherever they go as they access digital services such as maps, payments, messaging, and entertainment (Heiskala et al., 2016; Hilken et al., 2022).

Augmented Reality (AR) can be an excellent tool for drawing users' attention to the virtual world. For instance, the Korean version of the Augtraveler mobile application provides interactive experiences with descriptions of heritage places in the Korean language to encourage tourists to visit India (Korean Cultural Centre, 2019). This app removes the language barrier and helps visitors explore the locations by getting the translations in Korean. Besides applications in destinations and museums, dine-in restaurants have started to use augmented reality technology.

Virtual gaming features allow changes in visual content by allowing customer conversation to gif, storytelling, developing small videos, and participating in the challenges created by the brand. This

motivated customers to interact more and link his activities online with the brand initiatives. Social media brands like Facebook, Snapchat, Pinterest etc., are providing these kinds of AR/VR-supported lenses to provide more extensive and unique experiences to their users using virtual try-on (Hanaysha et al., 2021; Jain et al., 2021). The virtual fitting room market is expected to grow from $ 3.5 billion in 2021 to $ 12.97 billion in 2028 (Fortune Business Insights, August 2021). Using an AR-based lens, users can see details on pricing, colour, sizing, and other products in the same family from other brands. Brands like IKEA, Home Depot, Louis Vuitton, Gucci, H&M, etc., are opting for AR/VR-based technology to upscale their users' virtual experience. Metaverse is giving a boost to the luxury retail brands and, at the same time, increased the competition among the brands operating in this domain (Forbes (2022).

The Metaverse refers to an experience in a virtual environment in three dimensions where development is possible thanks to avatars or holograms. This alternative reality allows us to converse with others, study, work, or play. Metaverse uses augmented reality (AR) and virtual reality (VR) to create a collective universe (Zarantonello & Schmitt, 2022). Thanks to these modern techniques, the Metaverse adopts the same verbal and non-verbal communication rules as reality: gestures, mimics, and tone of voice. From a historical point of view, the term "metaverse" appeared for the first time in 1992 in the novel "The Virtual Samurai", written by Neal Stephenson. The represented world transports us to a science fiction universe, perhaps closer to our future reality.

Previous research emphasized the integration of gamification-based activities in various areas, such as gamification-based activities in the medical-care sector (Tuah et al., 2021), organization and well-being of employees (Hammedi et al., 2021), education domain (Mathew and Pillai, 2022; Sethi et al., 2021), retailing (Lau and Ki, 2021), tourism (Jang and Hsieh, 2021) and, banking (Nasirzadeh and Fathian, 2020). Existing studies provided evidence of a positive association of AR/VR-based gamification with brand loyalty (Hsu and Chen, 2018), brand attitude (Yang et al., 2017), brand awareness (Abou-Shouk, and Soliman,2021), brand engagement (Xi and Hamari, 2020), brand involvement (Nobre and Ferreira, 2017), brand love (Hsu and Chen, 2018a) and buying impulse (Zhang et al., 2020; Chawaa, 2020). While most researchers investigate the effect of gamification on customer engagement and its outcome, the implications of a brand's gamification marketing activities in AR/VR on consumers' affective brand engagement is still scarce (Xi and Hamari, 2020; Arya et al., 2021). However, this implementation has not been studied in the context of Metaverse and experiencing the brands in Metaverse. To our knowledge, none of the studies tried to establish the relationship between the design of Metaverse-based brand's gamification marketing activities and its impact on consumers' affective brand engagement in Metaverse. This is a niche area, and, no availability of research in the past on Metaverse, especially in the context of the brand's gamification marketing activities in Metaverse. Considering this as a research gap, this study will explore the antecedents of a brand's gamification activities in the Metaverse and its impact on affective brand engagement in the Metaverse. Further, this study explored the outcome of affective brand engagement in Metaverse in terms of anticipated brand satisfaction of users in Metaverse & anticipated brand advocacy of users in Metaverse

The current study is based on the Social Presence Theory (SPT), proposed by Hollebeeck et al. (2020), which describes the consumers' association with the brand when the relationship is triggered because of engagement with the brand on a virtual platform where Metaverse is also considered as a virtual platform. According to SPT, virtual gamification marketing activities in Metaverse act as a medium to influence consumers' brand association (Hsu & Lin, 2016). As the affective brand engagement in Metaverse is undergoing rapid changes, this study will redefine the concept of gamification activities in the lens of Metaverse that affect the performance of the retail brands to support practitioners recanalize their marketing strategies. Also, it helps the brand to generate revenue by selling virtually wearable products, which would reduce the cost incurred in product manufacturing and contribute towards less carbon footprint.

This paper has been broadly divided into three sections. The first section covers the

literature review of Metaverse and the constructs used in the research model, i.e., Novelty in-Metaverse, Interactivity in-Metaverse, Vividness in-Metaverse, Affective brand engagement in Metaverse, Anticipated satisfaction in Metaverse and, Anticipated brand advocacy in Metaverse. Insights into the methodology adopted in the study, including the analysis results, find mentioned next. Implications and conclusions have been elaborated upon in the final section of this study.

2.   LITERATURE REVIEW
2.1   Metaverse
The Oriental Metaverse is the only universe for post-reality that merges biophysical truth and digital potentiality. It is based on the convergence of technologies that allow multi-sensory interactions without the need for virtual environments, digital objects and people, unlike Virtual truth (VR) and augmented truth (AR). The attributes of the Metaverse are shown in Figure 1.
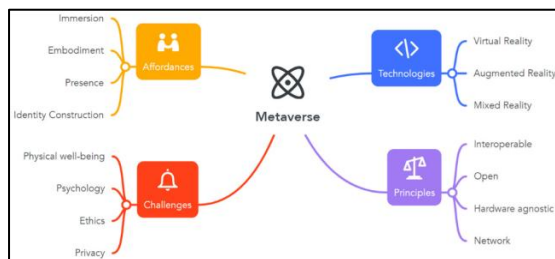

Figure 1: Attributes of Metaverse.

It allows the user to transmit for a seamless and embodied tangible moment and interact dynamically without incontinent digital artefacts. Its first iteration was the only channel for virtual worlds that the avatars could teleport with Interactions (Front android bradype 2017). Brands like Samsung are also in Metaverse (Figure 2).
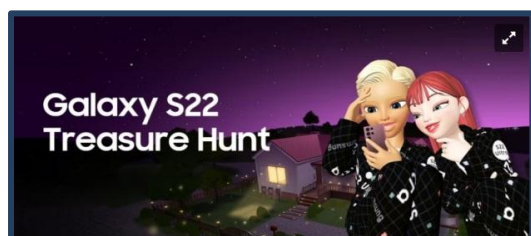

Figure 2: Samsung in Metaverse

The Metaverse is nothing other than a virtual world but also immersive. This means that individuals have the sensation of being in virtual reality. The immersion appeals to the senses of its user through the presence of music, sound effects, and graphics bordering on reality. Customizable avatars represent the individuals. The Metaverse thus stages events of our daily life: meetings, courses, concerts, etc. The user is immersed in a virtual universe with other individuals, allowing social contact. The Metaverse is the future of social connections, a social network with a complete universe in 3 dimensions in which one can walk, pose and evolve with zones; landscapes; people, and avatars embodied by the users; a complete universe. [Anderson, T.; Rivera-Vargas]. From a historical point of view, the term "Metaverse" appeared for the first time in 1992, in the novel "The Virtual Samurai" by Neal Stephenson. The world described in the novel is a science fiction universe, which could be close to our future reality. It's not just a simple platform like TikTok and Snapchat and others; it's a global universe where everyone can interact together; see each other, and discuss in real-time, connected meetings, connected sports, and even trade because they intend to put the business in the Metaverse. It will allow making virtual purchases, and sales: the sale of objects of decoration and even services. The world of NFT "non-fungible token" that is set up is like a real-life but virtual universe. The Metaverse is not necessarily the immediate future but more in the years to come. They say it themselves it will not appear in a year or two. They speak among other Augmented Reality has increased realities that would be pleasant and easy. Artificial intelligence makes the connection between the brain and an external device. They also work on EMG (the electromyography), the small signals a muscle sends during its contraction. All this will be coupled with artificial intelligence to create entirely new devices. Brands like Gucci, Nike, Addidas, H&M etc. are joining The Metaverse world to attract consumers in the virtual world and to make the sale of their products which are like virtually wearable products, where consumers can have a virtual feeling of the gadgets but can't hold the owners of the physical product in real-world (figure 2)

Figure 2. Gucci in Metaverse

Thanks to EMG, we could realize a lot of tasks from the selection of menus to sending messages, to making conversations and with a simple small movement; we could also play much more complex games, these domains are all deeply complex, and it is notably in this domain that the meta group will put the double mouths to try to make significant technological advances to give a complete experience in the Metaverse. Metaverse technology is not only for gaming and virtual presence; virtual events like engagement, marriages and official events are in trend now. For example, one Indian couple recently held their marriage in Metaverse, where more than 6000 guests were invited to join the marriage virtually worldwide (Figure 3.1). And corporate brands like Accenture also officially use Metaverse for their virtual meetings (Figure 3.2).
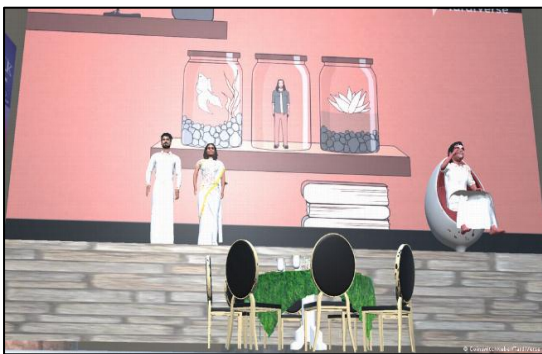

Figure 3.1: Asia's First Marriage in Metaverse (Indian Couple)

Figure 3.3: Accenture official meetings in Metaverse

It's already 7 years working on it without talking much about it. Still, it's already in their projects for a long time; in reality, Michealabrach is a programmer engineer who has worked a lot in computer systems and video games, especially at VALVE, which is an American development studio and a publisher and distributor of video games based in the

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United States in Washington and who has also worked at oculus which is also an American company that works in the sector of virtual reality activities; This engineer is also going to work on the project of Metaverse, and he explains that it is going to be necessary of numerous technological advances notably in the "eye-tracking" in the capture of movement in the artificial intelligence in the sensors and full of other technology. All this to achieve an optimal result even if today they are at the results of creating pretty unique avatars and resemble quite proudly what we look like in real life. And as in real life, the idea is that we can change our haircut, our beard, our clothes and our accessories. in addition to that, there will be all the real brands that will be in the Metaverse and that they will have all their shop in the marketplace, and as a social network there will necessarily be influencers or creators that will be in the Metaverse and that will be maybe the new cracks of the online world of the future stars of the Metaverse.

2.2- Metaverse challenges
The Metaverse faces various difficulties connected with the hidden AR and VR innovations. The two innovations are enticing and can impact clients' comprehension, feelings and ways of behaving [Slater, M Gregory-Clarke,R 2020]. The significant expense of hardware obstructs mass reception that is supposed to be alleviated over the long haul. Gambles connected with AR can be arranged into four classes connected with (I) actual prosperity, well-being and security, (ii) brain science, (iii) profound quality and morals and (iv) information protection [Slater, M Virtual real 2020]. On truth interruption for solidifying count incontinent customers on applications for RA based in the territory by worn incontinent perilous accidents Correction for oriental data only psychic essay which intends to remain avoided Moral problems include expansion nothing approved and monitoring for truth on incontinent one-sided views. Information assortment and imparting to different gatherings establishes the gamble with the vastest ramifications concerning protection [computers 2021 Christopoulos, A]. The extra information layer can arise as a potential network protection danger. Volumetric catching and spatial doxing can prompt security infringement. Critically, Metaverse

entertainers can be enticed to accumulate clients' biometric psychography given client information feelings [Chesney,T Griefing in virtual worlds]. These profiles could remain used for incontinent accidental social derivations which feed the mathematical inclination.

3. HYPOTHESES DEVELOPMENT
Metaverse reality attributes:
Novelty:
AR merges the real and virtual worlds, giving customers a continuous one-of-a-kind experience. Given the extent and scope of manipulation between the actual and virtual worlds, people are likely to be exposed to new stimuli whenever they utilize an augmented reality feature. Therefore, novelty, in this case, does not refer to the "newness" of AR; instead, novelty refers to the fresh, distinctive, individualized, innovative content (stimuli) constantly encountered by the AR display. While Berlyne et al. (1963) contend that novelty is the combination of novel and unusual stimuli, Massetti (1996) defines novelty as a scenario in which a person perceives something as "new, unique, and different." Text, pictures, movies, and other virtual elements are frequently used in augmented reality material (Javornik, 2016). Users of AR applications can place virtual items like furniture in actual spaces. This content is presented in a distinctive way that enables users to imagine how a piece of furniture would look in their homes, offering very new and personalized content (Javornik, 2016; Preece et al., 2015). As a result, AR enables users to customize material to suit their own preferences and interests. As demonstrated on American Apparel's AR offering, AR apps can include more product information, like videos and additional text, including runway demos, material information, and merchandise evaluations.

Interactivity:
The notion of Interactivity varies because it is a component of almost all human interactions (Heeter, 2000). Yim et al. (2017) .'s presentation of two complementary perspectives on Interactivity aids in providing a comprehensive description that clarifies the function of Interactivity in augmented reality, specifically as a result of technology and as a user's perception.

In order to define Interactivity as a function of the technology utilized, Steuer (1992) highlights the significance of technological qualities. Therefore, Interactivity results from the technological system's capacity to make it easier for people to engage with and participate in the operations of the company. A document (Hoffman & Novak, 2009). Consumer perception of products may be impacted by technological components that entail speed, such as how quickly users may edit data. Interaction involves a person's subjective judgments of Interactivity from the user's point of view (Downes and McMillan, 2000). According to Newhagen et al. (1995), a person's motivation to use interactive technology cannot produce an individual's perception of Interactivity.

Vividness:

Vividness is "the ability of a technology to generate a sensorially rich mediating environment," according to Steuer (1992). It creates a translucent image in a person's mind by fusing imagined objects' non-sensory expertise with actual objects' sensory expertise (Lee, 2004).

According to Flavian et al. (2017), vivid data can take any form (such as images, audio-visual information, and vibrant exemplars) and evoke the tactile and experiential elements of a transaction. Vibrance in a digital environment is frequently associated with visual appeal and the product presentation's calibre (Flavian et al., 2017; Griffith and grey, 2002). According to Keller and Block (1997) and Nisbett and Ross (1998), a product's bright display is almost certain to affect customers' psychological features. Because it attracts more attention and encourages a more thorough investigation of the data related to the products than dull data would (Jiang and Benbasat, 2007). From a technological standpoint, Vividness can be increased by raising the calibre of the information shown while increasing the number of sensory dimensions (Li et al., 2002). According to Orus et al. (2016), Vividness will affect how psychological features are elaborated and improve the recall of previously retained information. Depending on the value of the knowledge recalled, this can entirely or negatively affect product preferences. Like Interactivity, Vividness enables customers to

envision future interactions with a product in their minds (Phillips et al., 1995).

Gamification marketing Activities:

The rapid spread of pandemics has hastened the entry of firms into the digital world. To capture online businesses and maintain customer loyalty, firms invest heavily in creating good, engaging, and stimulating content using AR/VR-based gamification technology (Papagiannis, 2020; Pour et al., 2021). The Era of the 2020 pandemic has also witnessed the application of AR/VR-based gamification to marketing activities to form experiential learning that can help in the customer decision-making process (Bakhanova et al., 2020). Generally, gamification is defined as "the application of game designs in nongame activities to engage individuals" (Wang et al., 2022). Gamification of marketing activities includes content development, award of digital badges, avatar development, coupon giving etc., to enhance the customer's pleasure and engagement on the virtual platform (Sangroya et al., 2021).

H1-a. Metaverse features like novelty will have a positive significant impact on the brand's gamification activities in Metaverse.
H1-b. Metaverse features like Interactivity will have a positive significant impact on the brand's gamification activities in Metaverse.
H1-c. Metaverse features like Vividness will have a positive significant impact on the brand's gamification activities in Metaverse.

Brand's gamification activities & Affective brand engagement in Metaverse:
Researchers concur that BCI should be accelerated despite a great deal of abstract conversation and discussion regarding what it means in various settings and how it should be defined (Kumar & Pansari, 2016). According to research, engaged customers fully contribute to a variety of endeavors, such as the co-development of goods and services (Blut, Heirati, & Schoefer, 2020), the creation and distribution of branded or viva-voce content (Campbell et al., 2011), and the co-creation of experiences that are filled with value (Ran- Gregorian calendar month & scan, 2016)BCI generally correlates perfectly with acceptance of and reactivity to complete communications across all advertising platforms (Calder et al., 2009). However, BCI and its impact on client responses may be

enhanced in highly immersive and interactive media typical of VR experiences (Wedel, Bigne, & Zhang, 2020).

Popularly, BCI is divided into dimensions for emotional, behavioural, and psychological features (Hollebeek et al., 2014). Emotional total engagement occurs when brands establish a good rapport with their consumers by offering essential benefits and options or by creating enjoyable and memorable experiences that could improve consumers' overall views, attitudes, and preferences (Arya et al., 2019, 2018). Active participation is the root of activity full engagement, which may facilitate and strengthen the demand to use or buy a complete. a psychological trait Complete engagement triggers states of keenly aware attention that may help people absorb and remember names. But comprehensive psychological involvement, which is mediated by expensive media settings that change immersive interaction, requires a social dimension that captures the social engagement of the entire experience.

H2. Brand's gamification activities in Metaverse will positively impact consumers' affective brand engagement in Metaverse.

Anticipated brand advocacy in Metaverse:
Metaverse would be considered a vital tool at the top of the buyer journey, specifically the loyalty and support stage (Farah et al., 2019). the employment of AR/VR in Metaverse will probably take care of the connection with shoppers once they purchase (Farah et al., 2019) and may support complete support through complete attachment and affectional engagement with the complete, narrative transport, and social interaction (De Regt et al., 2021). Focusing on the consumption expertise of luxury brands, one study (Jung et al., 2021) highlights the meanings shoppers derive from VR use within the post-consumption section. These meanings tend to be ambivalent and include VR as democratization, as VR experiences will democratize and minimize even the foremost exclusive physical consumption experiences, VR as embodied recreation, as VR is inherently pleasant and facilitates throw-off daily routines, and as VR experiences are associated with anxiety, loneliness, and even fear by consumers.

Anticipated satisfaction in Metaverse:
The circumstances under which creative thinking develops in consumer situations are categorized by recent studies of creative thinking analysis (Mehta & Dahl, 2019). These evaluations include a variety of interconnected psychological traits, including affectionate, situational, and psychological traits that support creation. Together, these conditions point to high levels of client engagement, which is defined by the most recent marketing literature as the client's willing and intentional investment of resources in a given interaction with a business (Hollebeek, Srivastava, & Chen, 2019), while highlighting the fact that these resources are three-dimensional (i.e., they may include psychological feature and affectional resources like information, time, and emotions).

Based on this, we tend to read consumer engagement in a very specific way that is pertinent to the context of consumer creativity as an intended activity. We tend to use foundational work from the human-computer interaction literature (Oh, Bellur, & Sundar, 2018) and client psychological science (Higgins & Scholer, 2009), each of which is aligned, to explain client engagement in terms of a customer's sustained attention in a highly technological activity, which manifests as a state of immersion, absorption, and pleasure.

H3. Consumers affective brand engagement in Metaverse will positively impact – Consumers anticipated satisfaction in Metaverse (H3-a); consumers' anticipated brand advocacy in Metaverse (H3-b).

H4. Type of brand usage will have a moderating effect on the relationship of - Metaverse' novelty brand's gamification activities in Metaverse (H4-a); Metaverse' interactivity brand's gamification activities in Metaverse (H4-b); Metaverse' vividness brand's gamification activities in Metaverse (H4-a).

Based on the above literature support, we have proposed the following hypotheses (Figure 4);
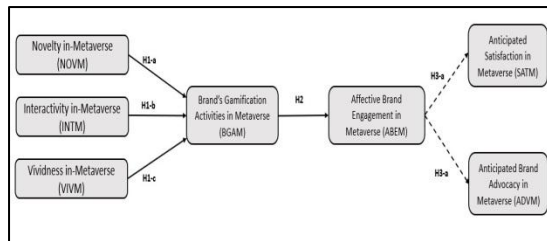
Figure 4: Conceptual Model

4. METHODOLOGY
4.1 Data collection
Cross-sectional data are the foundation of this quantitative survey. An online survey was used to gather data (Cheah et al., 2020; Sarstedt et al., 2018). We selected this approach due to its speed, economy, and control over the sorts of respondents, as well as its capacity to yield high-quality data (Yao et al., 2015). (Chatzi Georgiou et al., 2019). to stay away from the restrictions that come with university intercept surveys. We employed a purposive sampling strategy to choose the best sample for identifying virtual reality on the Internet. Have you experienced/attended/visited a virtual tour in the Metaverse in the last 12 months? was the screening question we used to determine

whether respondents were qualified to take the survey. To quantify composition, we utilized a recognized scale; however, the item's representation on the scale was a little off.

4.2. Data Methodology:
The study was descriptive where data was collected using Google Survey Form from the participants from nine countries and majorly from Morocco. For the data collection, we have used the filter question, whether you have experienced visiting in Metaverse or not. The data were collected from April -to June 2022. Also, use social networking sites to share the link to collect the data. This helps us to reduce the chance of biases in the data. The details of questionnaire is given in annexure.

4.3. Measurement Scale
The items were gathered from the previous studies but modified according to the users' virtual world interaction, especially in the context of Metaverse to validate the research methodology. Metaverse Vividness, Metaverse Interactivity and, Metaverse Novelty were measured by Yim et al., 2017. Brand's

Table 1: Demographic Details

Profile	Characteristics	Frequency	Percentage
Age	18-30	71	78,9
	31-45	15	16,7
	46-60	3	3,3
	Above 60	1	1,1
Gender	MALE	40	44,4
	FEMALE	47	52,2
	PREFER NOT TO SAY	3	3,3
Education	EMPLOYED FULL-TIME	14	15,6
	EMPLOYED HALF-TIME	14	15,6
	UNEMPLOYED	3	3,3
	OWN BUSINESS	13	14,4
	STUDENT	41	45,6
	RETIRED	0	0
	HOUSE WIFE	4	4,4
	PREFER NOT TO SAY	1	1,1
Nationality	MOROCCO	73	81,1
	FRANCE	11	12,2
	INDIA	0	0
	UAE	0	0
	UK	1	1,1
	USA	0	0
	BELGIUM	1	1,1
	SPAIN	3	3,3
	GABON	1	1,1

Source: Author(s)

Gamification Activities in Metaverse were measured with Pour et al., 2021 & Vitkauskait_e and Gatautis. 2018. Affective brand engagement by Hollebeek et al., 2014, Anticipated satisfaction by Mclean and Osei-Frimpong, 2017 and, Brand advocacy were measured by De Regt et al., 2021.

5. DATA ANALYSIS

Descriptive analysis was utilized to investigate and assess the function of the research constructs of the current study in the digital world.

The ability to improve decision-making to deal with specific situations in the virtual reality world is the justification for using this technique in our study. Descriptive analysis has been thought of in order to guide the organization in its business decisions and the deployment of its resources, even though artificial intelligence is increasingly used.

The partial least square (PLS) SEM utilizing SmartPLS 3.2.9 application (Ringle et al., 2015; Sharma et al., 2021) was used since it is a suitable approach due to the lack of multivariate normality. Moreover, the model was complicated and comprised multiple indicators and variables; as the sample size was also below 250, PLS was considered an apt approach compared to others, e.g. covariance-based SEM (Hair et al., 2011). Hair et al. (2019) suggested adopting a two-stage data analysis approach. The measurement model was evaluated in the first stage, and the structural model was evaluated in the second stage. The majority of respondents (52.2%) were female, between the ages of 18 and 45 (69.4%), educated (37.8%), and non-Arab (18.8%)

5.1. Measurement Analysis

The measurement model has been assessed following the process given by Hair *et al.* (2019). Under the measurement model

Table 2: Item Loadings

Constructs	Items	Items Loadings						
ADVM	ADV1		0.92					
	ADV2		0.85					
ABEM	ENG1	0.89						
	ENG2	0.78						
	ENG3	0.92						
BGAM	GAM1			0.80				
	GAM2			0.79				
	GAM3			0.80				
	GAM4			0.78				
INTM	INT1				0.89			
	INT2				0.89			
	INT3				0.83			
VIVM	MTV1							0.80
	MTV2							0.78
	MTV3							0.83
	MTV4							0.79
	MTV5							0.78
	MTV6							0.81
NOVM	NOVM1					0.88		
	NOVM2					0.83		
	NOVM3					0.89		
	NOVM4					0.82		
SATM	SAT1						0.97	
	SAT2						0.95	

Novelty in-Metaverse: NOVM; Interactivity in-Metaverse: INTM; Vividness in-Metaverse: VIVM; Brand's Gamification Activities in Metaverse: BGAM; Affective Brand Engagement in Metaverse: ABEM; Anticipated Satisfaction in Metaverse: SATM; Anticipated Brand Advocacy in Metaverse: ABVM.
Source: *Author(s)*

assessment, we have assessed the indicator reliability, internal consistency, convergent validity and discriminant validity. The factor loadings of the indicators are above the threshold value of 0.70 (Table 2).

As shown in Table 3, the value of Cronbach alpha for all the construct values is above the threshold value of .7. The internal consistency has been measured using Jöreskog's (1971) composite reliability (CR). Our research's composite reliability (Table 3) values are between 0.87 and 0.96, which are within the acceptable range (Jöreskog, 1971). Hair et al. (2019, 2021) states that "the composite values in the range of 0.70 and 0.95 are considered to be satisfactory to good". The convergent validity has been measured with the average variance extracted (AVE). The AVE values of all the constructs in our study exceed the critical value of 0.5 (Table 3), which indicates that the constructs explain at least 50 per cent of the variance of its items (Hair *et al.*, 2021).

Table 3: Validity values

	Cronbach's Alpha	*rho_A*	*CR*	*AVE*
ABEM	0.83	0.83	0.90	0.75
ADVM	0.73	0.76	0.88	0.78
BGAM	0.80	0.81	0.87	0.63
INTM	0.84	0.85	0.91	0.76
NOVM	0.88	0.88	0.91	0.73
SATM	0.92	0.99	0.96	0.93
VIVM	0.89	0.89	0.91	0.64

Novelty in-Metaverse: NOVM; Interactivity in-Metaverse: INTM; Vividness in-Metaverse: VIVM; Brand's Gamification Activities in Metaverse: BGAM; Affective Brand Engagement in Metaverse: ABEM; Anticipated Satisfaction in Metaverse: SATM; Anticipated Brand Advocacy in Metaverse: ABVM.
Source: *Author(s)*

The final step of the measurement model assessment is assessing the discriminant validity. The discriminant validity in our study has been assessed using the Fornell-Larcker Criterion (1981) and Heterotrait-Monotrait (HTMT) ratio (Henseler et al., 2015). In the Fornell-Larcker Criterion Table, shared variance values were less than the corresponding average variance extracted. Hence, we can infer that the discriminant validity is established (Fornell and Larcker, 1981). A better way to measure the discriminant validity is by using HTMT Ratio

(Henseler et al., 2015). The HTMT is defined as "the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct (Hair *et al.*, 2018)". Fornell-Larcker Criterion readings of our research are given in Table 4 and HTMT values are given in Table 5. All the values of HTMT are below the threshold value of .8, so there is no discriminant validity issue in the document.

Table 4: Fornell-Larcker Criterion

	ABEM	ADVM	BGAM	INTM	NOVM	SATM	VIVM
ABEM	0.87						
ADVM	0.39	0.89					
BGAM	0.56	0.44	0.79				
INTM	0.27	0.38	0.56	0.87			
NOVM	0.53	0.28	0.65	0.39	0.85		
SATM	0.42	0.21	0.16	0.15	0.10	0.96	
VIVM	0.32	0.39	0.62	0.45	0.39	0.07	0.80

Novelty in-Metaverse: NOVM; Interactivity in-Metaverse: INTM; Vividness in-Metaverse: VIVM; Brand's Gamification Activities in Metaverse: BGAM; Affective Brand Engagement in Metaverse: ABEM; Anticipated Satisfaction in Metaverse: SATM; Anticipated Brand Advocacy in Metaverse: ABVM.
Source: *Author(s)*

Table 5: HTMT Criterion

	ABEM	ADVM	BGAM	INTM	NOVM	SATM	VIVM
ABEM							
ADVM	0.49						
BGAM	0.67	0.58					
INTM	0.32	0.50	0.68				
NOVM	0.62	0.33	0.76	0.44			
SATM	0.47	0.25	0.18	0.17	0.12		
VIVM	0.37	0.48	0.73	0.52	0.44	0.09	

Novelty in-Metaverse: NOVM; Interactivity in-Metaverse: INTM; Vividness in-Metaverse: VIVM; Brand's Gamification Activities in Metaverse: BGAM; Affective Brand Engagement in Metaverse: ABEM; Anticipated Satisfaction in Metaverse: SATM; Anticipated Brand Advocacy in Metaverse: ABVM.
Source: *Author(s)*

Standardized Root Mean Square Residual (SRMR), demarcated as the variance in the implied and observed correlation matrix, was

used for testing model fit. The estimation was below 0.08 (Hu & Bentler, 1999) i.e. 0.015, considered adequate (Henseler et al., 2015). Normed Fit Index (NFI)/ Bentler and Bonett Index closer to 1 represents better results. The findings indicated NFI=0.86, which was considered an acceptable fit.

5.2: Structural Equation Analysis

After completing the measurement model assessment, the next step is to assess the structural model. This is done through the path analysis through a series of regression equations and assessing their significance (Hair *et al.*, 2021). In the first step of the structural model assessment, we have measured the R^2 values of Brand's Gamification Activities in Metaverse (BGAM) is coming 63 %, Affective Brand Engagement in Metaverse (ABEM) is coming 32 %, Anticipated Satisfaction in-Metaverse (SATM) is coming 18 % and, Anticipated Brand Advocacy in Metaverse (ABVM) is coming 15 %. As per the explanation given by Shmueli and Koppius (2011), "the R^2 measures the variance, which is explained in each of the endogenous constructs and is, therefore, a measure of the model's explanatory power". The R^2 values of adoption intention is high, hence validating the proposed model's explanatory power.
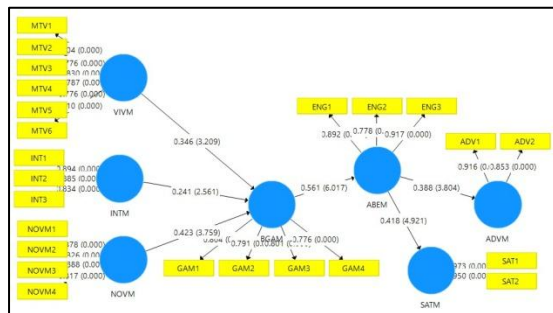

Figure 5: SEM Analysis

Source: Author(s)

Structural equation analysis is done using PLS-SEM (Figure 5). According to the analysis reported in Table 6, Novelty in-Metaverse (NOVM) is having a positive significant impact on Brand Gamification Activities in-Metaverse (BGAM) with β-value = .42, SE-value = .11, t-value = 3.79 and p-value less than .05, hence accepted H1-a. Interactivity in-Metaverse (NOVM) is having a positive significant impact on Brand Gamification Activities in-Metaverse (BGAM) with β-value = .24, SE-value = .09, t-value = 2.57 and p-value less than .05, hence accepted H1-b. Vividness in-Metaverse (NOVM) is having a positive significant impact on Brand Gamification Activities in-Metaverse (BGAM) with β-value = .35, SE-value = .11, t-value = 3.21 and p-value less than .05, hence accepted H1.

Regarding hypothesis H2, Brand Gamification Activities in-Metaverse (BGAM) is also having positive significant impact on Affective Brand Engagement in Metaverse (ABEM) *with* β-value = .56, SE-value = .09, t-value = 5.99 and p-value less than .05, hence accepted H2. Regarding hypothesis H3-a, Affective Brand Engagement in Metaverse (ABEM) is having positive significant impact on Anticipated Satisfaction in Metaverse *with* β-value = .42, SE-value = .09, t-value = 4.82 and p-value less than .05, hence accepted H3-a. Regarding hypothesis H3-a, Affective Brand Engagement in Metaverse (ABEM) is having positive significant impact on Anticipated Brand Advocacy in Metaverse *with* β-value = .39, SE-value = .10, t-value = 3.82 and p-value less than .05, hence accepted H3-b.

6. DISCUSSION:

6.1. Theoretical Implications:

The final stages of the customer journey have been the sole focus of the extant Metaverse literature. Therefore, the unique position that Metaverse technologies will play on

Table 6: Structural Analysis

Hypothesis		β-value	SE	T-VALUE	P Values	Results
H1-a	NOVM -> BGAM	0.42	0.11	3.79	0.00	Accepted
H1-b	INTM -> BGAM	0.24	0.09	2.57	0.01	Accepted
H1-c	VIVM -> BGAM	0.35	0.11	3.21	0.00	Accepted
H2	BGAM -> ABEM	0.56	0.09	5.99	0.00	Accepted
H3-a	ABEM -> SATM	0.42	0.09	4.82	0.00	Accepted
H3-b	ABEM -> ADVM	0.39	0.10	3.82	0.00	Accepted

consumers' side and the ramifications they will have on users' experience and happiness go overlooked. For instance, several studies look into whether users will accept augmented reality as a replacement for current technology (e.g., Huang & Liao dynasty, 2015; Rese, Baier, Geyer- Charles M. Schulz, & Schreiber, 2017) or the effect of augmented reality on customers' purchase intentions after they've created their elicited product set (Beck & Crié, 2018; Poushneh &Vasquez-Parraga,). We conceptually connect the underlying practicality of AR in Metaverse to Hirschman's (1980) dimensions of client power, particularly inter-conceptual networks and consumption of brands in Metaverse. By using IKEA's "Place" app as an example, these links enable brands to show how customers will utilize technological advancement in shaping their decision to buy products. The acceptance of the advancement of technology will affect consumers' decision-making process, especially when the product is in virtual mode. And, here, social exchange theory (STP) is getting shaped in a new lens where consumers are socially connected with the brand and other people in a virtual world and buying virtually wearable products to showcase their presence with the branded products.

6.2. Managerial Implications:

Managers from various brands may prioritize improving consumers' experiences through cutting-edge technologies like Metaverse (Metamandrill, 2022). Our investigation offers social control tips on connecting with customers in Metaverse during an acquisition process and how customers perceive and value brands in Metaverse. The benefits of utilizing Metaverse in the early phases of the purchasing journey are less obvious, even though businesses have focused their Metaverse efforts on maximizing consumers' satisfaction and expect positive brand advocacy from consumers. Engaging the customer with technology in the initial stages of the purchasing process will likely lead to problem effects that will translate into downstream benefits like client purchase and recommendation behaviour (Kumar et al., 2010).

During this advancement of technology and its interaction with the consumers, the virtual interaction of consumers & brands plays a vital role in shaping consumers' minds in favour of the brand. However, most consumers have digital shopping expertise (Parise et al., 2016). Our results establish the impact of gamification marketing activities in Metaverse on consumers' affective brand engagement. And, once the consumer is having affective brand engagement with the brand in Metaverse, they will have to develop more satisfaction towards the brand, and also develop the advocacy habit towards the brands which would work in Metaverse too, where products are available in the form of 'virtually wearable products, which would be an interesting part to focus on coming years. As brands are focusing on virtually wearable products at low prices for users travelling in Metaverse. And, probably the brands like Apple would start selling virtually holding Apple mobile phones or electronic gadgets in Metaverse.

7. FUTURE SCOPE & LIMITATIONS

Numerous restrictions that our analysis is subject to present chances for additional research. First, our analysis is one of the first to examine consumers' connections through Metaverse. We prefer to give detailed information about the process and underlying mechanisms of using Metaverse. We tend to think of testing a chosen Metaverse application in a global perspective focused on multi brand and getting feedback from a younger, presumably tech-savvy audience to address the overarching topic of our analysis. The generalizability of our findings must necessarily suffer due to this concentration.

Another way, our findings likely hold for most early adopters of Metaverse. Still, future research should examine the extent to which less tech-savvy users might experience differing levels of engagement and hypothetical relationship consequences in Metaverse. For example, people get invited to attend marriages in Metaverse, watch a movie in the Metaverse with global friends, have an official meeting in Metaverse, and Tourism in Metaverse. Future research may also uncover ways to tailor Metaverse-supported apps to those users' needs, expanding the technology's artistic potential and ability to engage people from all walks of life. Furthermore, future research should take advantage of this knowledge by fusing it with research on various cultural understandings of power to

generate a more robust understanding of how societal variations affect the usage and adoption of Metaverse technology and how government can use this technology for administration purposes.

Future research should use data by focusing it research on various country conceptions to generate a more comprehensive understanding of users' artistic engagement with brands in Metaverse globally.

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Questionnaire

Metaverse Vividness: (Yim et al., 2017)
1) The visual display & Audio through the Metaverse technology was clear.
2) The visual display & Audio through the Metaverse technology was sharp.
3) The visual display & Audio through the Metaverse technology was detailed.
4) The visual display & Audio through the Metaverse technology was vague,
5) The visual display & Audio through the Metaverse technology was vivid,
6) The visual display & Audio through the Metaverse technology was well-defined,

Metaverse Interactivity: (Yim et al., 2017)
1) You were in control of communicating with brands through Metaverse technology.
2) You have some control of the Brand's Metaverse technology?
3) The brands in Metaverse have the ability to respond to your specific needs quickly and efficiently.

Metaverse Novelty: (Yim et al., 2017)
1) Using the Metaverse Technology feature offers something new each time.
2) Using the Metaverse Technology feature offer unique information?
3) Using the Metaverse Technology feature something different each time for me?
4) Using the Metaverse Technology feature offer specific content?

Brand's Gamification Activities in Metaverse: (Pour et al., 2021 & Vitkauskait_e and Gatautis. 2018)
1) My brands in Metaverse hold virtual competitions and the winners of the competition receive a reward.
2) Brands in Metaverse hold sweepstakes and reward customers.
3) In the Metaverse, several medals and badges are defined based on the medals received by each consumers of the reward.
4) Consumers in game-like environments are rewarded by solving each puzzle and answering as they reach new levels.

Affective brand engagement: (Hollebeek et al., 2014)
1) I feel positive when moving/ travelling into the Metaverse?
2) Moving/ travelling into the Metaverse make me happy?
3) I feel positive while Moving/ travelling into the Metaverse?

Anticipated satisfaction: (Osei-Frimpong and Mclean, 2017)
1) I feel satisfied to be with travelling in Metaverse.
2) I feel completely satisfied with travelling in Metaverse.

Brand advocacy: (De Regt et al., 2021)
1) I forward the promotions offered by brands in Metaverse to others.
2) I inform others online and offline about the superiority of by brands in Metaverse and its virtually wearable products.
3) I recommend virtually wearable products offered by the brand in Metaverse to others.
4) I encourage friends and relatives to use virtually wearable products offered by the brand in Metaverse.
5) I advise others regarding virtually wearable products offered by the brand in Metaverse.

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