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Article

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METAVERSE MARKETING: A BUSINESS-TO-BUSINESS ANALYSIS OF BRAND STRATEGIES AND GENERATION Z ENGAGEMENT IN THE SPORTS INDUSTRY

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Abstract

This research explores the interplay between the services the Metaverse industry provides, including brand gamification, Metaverse marketing factors (novelty, interactivity, Influencer), and their impact on brand advocacy and loyalty among Generation Z within the sports industry. Employing a quantitative approach, the researchers collected data from 384 participants. The findings reveal significant positive relationships between brand gamification and Metaverse novelty and interactivity. The outcomes of Metaverse devices exhibited that consumers developed a strong affinity for specific brands due to the influence of social media influencers. In addition, the vibrant and dynamic realm of the Metaverse has generated a wave of positive brand sentiment among individuals. The research examined the efficiency of transforming brand experiences inside the Metaverse into gamified systems, significantly influencing people and increasing their affection for the brands within the sports industry. Metaverse is a critical tool for Generation Z as this group seeks immersive, active, and engaging experiences, and effective branding in Metaverse can provide a solid appeal to this tech-savvy youth. The findings of this research provide significant managerial implications for both the Metaverse market and the sports industry, highlighting the significance of leveraging the Metaverse for enhanced brand engagement and loyalty among Generation Z.

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Keywords: metaverse marketing, Business-to-Business Marketing, brand gamification, sports brands, Generation Z, virtual marketing, brand loyalty

JEL Classification: L82, M3, O33

Introduction

The Metaverse, in business-to-business marketing, represents a digital universe that goes beyond traditional video games, virtual reality frameworks, and digital marketing to provide users with a humanistic and realistic engaging experience (Anwar et al., 2025; Kazmi et al., 2021). The global Metaverse industry has exceeded \$83.9 billion in 2023, and it is expected to grow 48.0% from 2023 to 2030. The forecasted revenue of the Metaverse industry will reach \$1303.4 billion by 2030 (Eyada, 2023). In the digital age, we have a great potential to make meaningful relationships that cross the physical boundaries of race, gender and handicap. The Metaverse enables people to interact with one another without prejudice, fostering digital environments (Radanliev et al., 2023; Duffett et al., 2023). The Metaverse industry provides different components, including hardware (VR, AR and MR devices) and software for commercial, industrial, manufacturing, and consumer services. The platform offers a digital foundation for developing and using decentralized applications. The Metaverse technology enables decentralized finance (DeFi) applications and services, solidifying its presence in the DeFi space (Haider and Ahmed, 2023; Teng et al., 2023; Zalan and Barbesino, 2023).

In business-to-business (B2B) marketing, the Metaverse offers sports fans unprecedented means to engage with their favorite teams in ways beyond unparalleled realism and interactivity (Dwivedi et al., 2023). In the virtual environment, through computer-generated settings, fans can interact with each other via virtual sports communities and obtain personalized sports gear and tickets for virtual events (Kazmi et al., 2021). Metaverse is being used by big sports brands and companies like Nike, Adidas and Puma to upgrade their marketing methods, where they open virtual shops and create experiences that people find attractive. This trend will only continue to expand, and with the Metaverse on display, \$1303.4 billion presents a market opportunity for 2030. The Metaverse in the B2B space is advised to carefully consider the strategies and goals they select to use in Metaverse marketing. Additionally, it creates a pathway for the increase of virtual sports goods by permitting fans to obtain and trade custom accessories alongside virtual beneficiary tickets in fascinating virtual sporting contests (Anwar et al., 2025).

Metaverse B2B marketing provides brands with a unique possibility to interact with their customers innovatively and create emotional ties to the audience through virtual environments (Dwivedi et al., 2023; Eyada, 2023). Through the analysis of the high-reaching implications that Metaverse B2B marketing has for brand engagement, loyalty and advocacy, sports brands can fine-tune their B2B marketing strategies to target their audience economically, creating unshakable consumer loyalty and amplifying brand advocacy (Ahmed et al., 2019; Dwivedi et al., 2023). The fact that Generation Z is the first group of people to have had easy access to technology helps us understand the more significant amount of knowledge an average person in this generation may have regarding behavioral reactions

to technology and other terms for similar concepts, including Metaverse (Eyada, 2023; Ivanova et al., 2023). Virtual reality (VR) and augmented reality (AR) also significantly changed how younger people think and interact with technology, which differs from the previous generations. Research demonstrates that immersive virtual experiences will likely inspire more vital interpersonal actions, such as interaction and purchasing, among Generation Z (Hadi et al., 2023; Kim and Park, 2023). The young generation, i.e., the next Z generation, also referred to as the cohort of social media-savvy demographics, have a strong proclivity for using varied social platforms and getting highly influenced by their peers regarding shopping decisions (Niu et al., 2023).

In the context of B2B marketing, Kim et al. (2022) highlight that Generation Z highly relies on social media platforms and is influenced in their purchase decisions mainly by peers using such means. In B2B marketing, scholarly debate has concentrated on humans who engage in VR and AR abilities (Kazmi et al., 2021). As revealed in the findings of Chiu and Ho (2023), people within Generation Z can be attracted to immersive virtual experiences, which are also a significant factor in influencing such consumers. The Metaverse offers brands engrossing opportunities to form deep emotional affiliations with consumers, which translate into augmented brand involvement, undeterred loyalty, and raving recommendations (Ahmed et al., 2017). In addition, virtual storefronts can also be created using the Metaverse, which supports Influencer B2B marketing programs, loyalty schemes, and even training and education decks for employees, partners, and consumers (Bousba and Arya, 2022). Metaverse influencer marketing, as we understand it today, includes developing partnerships with influencers to promote a brand, forming channels for immersive engagement between brands and consumers, and charting new paths of monetization schemes alongside offering expertise on unfamiliar terrain (Chiu and Ho, 2023).

1. Theoretical review and hypotheses development

The current literature review on the present brands aims to assess gamification (Hussain et al., 2018) alterations in Metaverse novelty, vividness, interactivity, and Influencer B2B marketing toward letting the respondents become advocates of a particular brand and achieve brand loyalty.

The Metaverse is a kind of universe that simulates real life – only it is virtual. Through this interface, users can interact with one another and virtual objects in the digital realm. In the realm of B2B marketing, Mittal and Bansal (2023) claimed that leveraging novelty identification in Metaverse has proved viable in increasing B2B customer engagement and elevating brand recall. This is due to Metaverse's unique and immersive nature, which differentiates it from traditional marketing strategies. Additionally, it has been established that the novelty of Metaverse leads to excessive brand involvement, which translates into a spike in brand advocacy and loyalty (Gursoy et al., 2023). The Metaverse correctly gives new things an essential element, capturing customers' attention and creating interest in the brand. In line with Barhorst et al. (2021), the research showed that the chances of B2B customers interacting with a brand rise when exposed to a unique and different virtual experience. Brand gamification and Metaverse novelty have a convoluted affinity. Gamification of brand experiences enhances novelty by engaging users in interactive and rewarding settings, incorporating aspects such as challenges and accomplishments that alter standard interactions (Mittal and Bansal, 2023; Satar et al., 2023).

H1: Incorporating gamified elements into brand experiences within the Metaverse enhances novelty perceptions among users, leading to increased brand advocacy and brand loyalty (Hussain et al., 2018; Arya et al., 2023).

H2: A positive relationship exists between novelty brand advocacy and brand loyalty (Ahmed et al., 2017; Mittal and Bansal, 2023).

The degree of perceptual richness the Metaverse exhibits is crucial in fostering B2B customer engagement and augmenting brand recognition (Mittal and Bansal, 2023). Vividness pertains to the intricacy, chromaticity, and tactility of rendering the simulated setting (Wongkitrungrueng and Suprawan, 2023). From the perspective of empirical relevance, Bousba and Arya (2022) state that an intense vividness of the Metaverse positively impacts engagement towards a brand. Amongst the many attributes one can point to, vividness is a critical valued meta side, as it enables one to feel a member of highly committed and sincere exchanges. According to Pizzi et al. (2020), those respondents who again saw the high level of immersive and vividness of their brand experience were more likely to remember the brand name and develop a more favorable attitude towards it. The Vividness of Metaverse is highly associated with brand gamification, which is a critical factor in producing and maintaining an immersive virtual environment (Dwivedi et al., 2023). Added to this is the vividness; also, as with gamified factors, the emotional involvement is affected due to apparent stimuli and incentives, the outcomes of which are the user's experience intensity-wise and emotional responses (Wongkitrungrueng and Suprawan, 2023).

H3: Incorporating gamified elements within brand experiences in the Metaverse positively influences Metaverse's vividness and leads to increased brand advocacy and brand loyalty (Hussain et al., 2018; Gursoy et al., 2023).

H4: There is a positive relationship between vividness brand advocacy and brand loyalty (Ahmed et al., 2017; Kumar et al., 2024).

In B2B marketing, interaction within a Metaverse is essential to its effectiveness. As per Dwivedi et al. (2023), empirical evidence points to the level of interactivity in the Metaverse that contributes significantly to the quality of user experience. Further to Mittal and Bansal (2023), empirical findings indicate that higher interactivity within the Metaverse positively correlates with B2B consumer engagement, leading to further brand advocacy and loyalty. What makes interactivity important in the Metaverse is that it helps drive the customer's active involvement in the brand and its product. In the same manner, Wongkitrungrueng and Suprawan (2023) researched that customers who were more active while interacting with the brand were more likely to have a more positive attitude toward the brand and buy from it in the future. Metaverse's interactivities, however, are slightly contradictory to the influence of gamification. An exciting level of engagement is facilitated by motivating users with interactive challenges and quests (Satar et al., 2023). Second, gamification elements stimulate interactive play, making users actively participate in the Metaverse, thereby creating lasting engagement (Stylos and Vassiliadis, 2025). Third, gamification encourages community by fostering social networking and collaboration within virtual communities; Bogicevic et al. (2021) submitted that it invigorates user engagement in online communities.

H5: Integrating gamified elements into brand experiences within the Metaverse positively influences Metaverse interactivity, which leads to increased brand advocacy and brand loyalty (Dwivedi et al., 2023).

H6: There is a direct positive relationship between interactivity, brand advocacy, and brand loyalty (Ahmed et al., 2019; Samarah et al., 2022).

In recent B2B marketing practices, influencer marketing has developed as one of the common trends. Influencer marketing involves utilizing influential people's expertise to advertise a brand or product, primarily through social media platforms such as Instagram and Twitter (Haikel-Elsabeh, 2023). Considering influencer marketing on Instagram, Gross and von Wangenheim's (2022) empirical evidence shows that influencer marketing is a feasible strategy for increasing brand awareness and interaction levels. This further has possible brand advocacy and loyalty creation. Hence, applying influencer marketing is a significant component that is preferable in the Metaverse, which may use the power of social proof to increase brand awareness and validation. As was revealed in a recent study by Kim and Park (2023), virtual influencer campaigns have been proven effective in increasing brand awareness and stimulating users' engagement. This proposition implies that virtual influencer marketing in the Metaverse can be a practical approach through which brands can advertise their products and foster brand loyalty.

H7: There is a positive relationship between influencer marketing, brand advocacy, and brand loyalty (Ahmed et al., 2017; Chiu and Ho, 2023; Haikel-Elsabeh, 2023).

In B2B marketing, Metaverse marketing, and brand gamification have evolved into a strategic tool that revolutionizes a brand's relationship with its audience in virtual settings (Hussain et al., 2021). Brand gamification in Metaverse marketing focuses on the potential to improve user experiences, build loyal brands, and create memorable interactions (Arya et al., 2023). Brand gamification within the Metaverse, where user interaction and immersion are fundamental, exploits aspects such as challenges, rewards, and competition to create strong connections (Hussain et al., 2018). Brand gamification scores in increasing engagement because it provides engaging experiences driven by the fundamental needs of individuals for accomplishment and recognition (Tsou and Putra, 2023). Gamified interactions engage the users, meaning they participate in implementing brand narratives and experiences. Gamified brand encounters lead to accomplishment and satisfaction, reinforcing loyalty. Gamified experiences make the users emotionally invest in them, making them closer to the brand (Stylos and Vassiliadis, 2025).

H8: Gamification indirectly impacts brand loyalty and brand advocacy through the mediation of the Metaverse dimensions of interactivity, novelty and vividness (Hussain et al., 2018; Merhabi et al., 2021).

A positive mode of word-of-mouth transmission using customers' recommendations, which increases the brand's reputation and sales, has become increasingly important for B2B marketing (Bousba and Arya, 2022). In the past three years, several studies have been on brand advocacy and emerging technologies such as Metaverse marketing. In the same address, consumer happiness, trust, and loyalty lead to brand advocacy, as Quaye et al. (2022) established. B2B suggests that relations between customers and their preferred personal communication would increase brand advocacy (Choi et al., 2021). Moreover, such as the relationship between brand personality and brand advocacy, and brand value was net positively correlated to brand advocacy, and brand trust partially mediated the effect. This implies that consumers value unique brands (Ahmadi and Ataei, 2024). The conceptual review paper by Arya et al. (2023) focused on the Metaverse marketing gamified brand advocacy. This outlines that customers can be brand advocates when their relationships with

a brand are strong and a personalized communication effort is created and developed. Gamification and influencer marketing in the Metaverse enhance customer engagement and brand advocacy (Mittal and Bansal, 2023).

Brand loyalty is a traditional subject in B2B marketing. Within three years, several researchers explored the issues surrounding brand loyalty and the impact of emergent technologies in Metaverse marketing. Samarah et al. (2022) focused on brand loyalty and social media. The social media involvement of brand loyalty positively correlated with experiences beyond expectations. The research by Mostafa and Kasamani (2021) was aimed at exposing the relationship between brand authenticity, experience and loyalty. Brand loyalty was positively correlated with brand experience and authenticity, mediated by emotional relationships (Ahmed et al., 2017). One of the main results of Metaverse marketing is increased brand loyalty (Hussain et al., 2021). The researchers sought to understand how Metaverse marketing impacts gaming brand loyalty (Rane et al., 2023). Lastly, recent research shows that social media engagement, brand experience, authenticity, and emotional connectivity influence brand loyalty. The B2B marketing in the Metaverse, specifically VR, AR, mixed reality (MR), and virtual worlds, enables firms to create emotional connections and brand loyalty (Zeng et al., 2023).

2. Research methodology

For this research, we employed a quantitative survey method to collect data from participants belonging to the Generation Z population. We used an online survey through Google Survey Form to ensure speed, economy, control over respondents, and high-quality data. We used purposive selection to choose the optimum sample to study how Metaverse marketing aspects affect brand gamification, advocacy, and loyalty. The study required respondents to have taken a Metaverse virtual tour in the past year. The survey link was disseminated on social media from March to May 2023 to reduce bias. We examined how Metaverse marketing parameters affected brand gamification, advocacy, and loyalty in B2B marketing using 384 responses for the sports industry's celebrated brands. Respondents were presented with a Metaverse sports video from which data was collected. The video featured Metaverse sports so respondents could answer the questionnaires correctly and provide their views on Metaverse marketing factors, brand gamification, brand loyalty, and advocacy. Participants completed a post-film screening survey administered with questionnaires on the interest variables. Various questionnaires dealt with Metaverse marketing (interactivity, vividness, novelty, and influencer marketing), brand gamification, loyalty, and advocacy (Ahmed et al., 2017).

Based on relevant literature, we constructed tools and scales to measure Metaverse marketing elements (vividness, novelty, influencer, interaction), brand gamification, brand loyalty, and brand advocacy for this research (Mittal and Bansal, 2023). Bousba and Arya (2022) provided the influencer marketing scale. The brand loyalty and advocacy scales were adopted (Quaye et al., 2022; Mittal and Bansal, 2023), measuring repeat purchase intention, brand preference, and premium willingness – a brand advocacy scale to assess the likelihood of brand referrals and good word-of-mouth.

Smart-PLS 4.0 and structural equation modeling (SEM) were employed to analyze data from the completed surveys and test hypotheses (Kamis et al., 2020; Ahmed et al., 2024). Using

SEM, the partial least squares (PLS) for data analysis helped identify relationships. This approach allows for the analysis of variables within the model and the direct/indirect effects of Metaverse marketing on brand gamification, loyalty, and advocacy (Ahmed et al., 2017). We tested hypotheses and assessed associations' power and significance in research model variables using Smart PLS 4 SEM (Guenther et al., 2023).

3. Empirical results and findings

Table no. 1 represents the demographics and behavioral attributes of the selected sample from Generation Z. It indicates their gender, favorite sports brand, Metaverse brand recall, and influencer preferences in various contexts.

Table no. 1. Demographic analysis of participants

Factors	Frequency	Percentage
Gender		
Female	173	45%
Male	211	55%
Favorite Sports Brand		
Nike	136	35%
Adidas	78	20%
Puma	34	8%
Under Armour	112	29%
Others	24	8%
Metaverse and Sports brand recall		
Nike	170	44%
Adidas	102	26.5%
Others	112	29.5%
Metaverse Influencer preference		
Sports Influencers	126	33%
Fashion Influencers	85	22%
Gaming Influencers	38	10%
Fitness Influencers	58	15%
No Preference	77	20%

Factor loadings associated with each latent construct reflective indicator were assessed to determine the validity and reliability scores of the measurement model. The intensity of the relationship between each indicator and its intrinsic construct is similarly determined using factor loadings. Furthermore, comprehensive assessments of convergent and discriminant validity were conducted to guarantee the overall integrity of the measurement models (Ahmed et al., 2024).

The factor loading values range between 0.786 to 0.915, which indicates that the brand advocacy, brand loyalty and Metaverse dimensions possess high indicator loadings. This means that the indicators and latent constructs are highly related. This enables us to present more data for the argument presented above that exactly these indicators are, in fact, capable of capturing participants' perceptions towards such traits from a Metaverse standpoint. This reduced number of deleted factors was reasonably attributed to the criterion for elimination,

and many deletions were due to their low factor loading being lower than 0.7 (Singkheepapha et al., 2022).

Based on table no. 2, a comprehensive evaluation of the validity and reliability is performed. The Cronbach’s alpha values across the latent construct ranged from 0.794 to 0.91, with acceptable and high levels of internal consistency, respectively. The composite reliability values, including rho and rho_c, were within the 0.795-0.914 range, which demonstrated a reliable measurement model that exceeds the cutoff point of 0.7, indicating great construct relying on Single Component Analysis (SCA) test result for each item; given hereunder are general guidelines: primarily under review is relative straightforwardness or final for convergent validity, average variance extracted (AVE) values ranged between 0.753 and 0.853. Although these values were slightly below what is usually considered desirable (0.50), they remained significant anyway. High internal consistency, composite reliability, and acceptable AVE values suggest the successful extraction of underlying constructs through a measurement model (Ahmed et al., 2019; Cheung et al., 2024).

Table no. 2. Constructs validity and reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite-reliability (rho_c)	Average variance extracted (AVE)
Brand Advocacy (BA)	0.894	0.896	0.922	0.703
Brand Gamification (BG)	0.916	0.918	0.941	0.799
Brand Loyalty (BL)	0.794	0.795	0.907	0.829
Influencer (INFL)	0.892	0.894	0.925	0.755
Interactivity (INTER)	0.837	0.841	0.902	0.754
Novelty (NOV)	0.893	0.896	0.926	0.758
Vividness (VIVID)	0.898	0.909	0.929	0.766

Table no. 3 illustrates the discriminant validity assessment results using the Fornell-Larcker method. This method examines the square root of the AVE for each construct and compares it with the correlations between constructs. The diagonal values in the table represent each construct’s square roots of the AVE (Ahmed et al., 2017). When the square root of the AVE is higher than the correlations, discriminant validity is established, indicating that the construct is distinct from other constructs (Cheung et al., 2024). In the provided matrix, the square root of the AVE for each construct is found on the diagonal. These values represent the variance proportion in the indicators the latent construct explains. Off-diagonal values represent the correlations between constructs. It is important to note that in some cases, the correlation values between constructs are higher than the corresponding square root of AVE values. It might raise concerns about potential issues with discriminant validity (Ahmed et al., 2017).

Table no. 3. Fornell-Larcker discriminant validity

	BG	BA	BL	INFL	INTER	NOV	VIVID
BG	0.894						
BA	0.571	0.838					
BL	0.765	0.602	0.911				
INFL	0.757	0.648	0.797	0.869			
INTER	0.778	0.524	0.673	0.689	0.868		
NOV	0.808	0.614	0.701	0.730	0.676	0.870	
VIVID	0.334	0.639	0.409	0.483	0.325	0.534	0.875

Standardized Root Mean Square Residual (SRMR) measures the mean standardized difference between actual observed and estimated covariance matrices. Smaller numbers represent a more ideal fit. In this case, different models have moderately low SRMR values, with under 0.08 being recorded for both the mentioned fit indices (Ahmed et al., 2024). According to the findings presented in table no. 4, both models capture the data reasonably well, with a slightly more significant value for the estimated model than the saturated ones. Normed Fit Index (NFI) comparatively analyses the rate at which fit is improved compared with a base model. The values approaching 1 suggest a greater extent of accuracy or suitability. The NFI values of both models are close to 1, which implies that the estimated model retains a significant fraction of improvement in fit exhibited by the saturated model (Ahmed et al., 2017).

Table no. 4. Model fit indices for path analysis

	Saturated model	Estimated model
SRMR	0.058270804	0.062505282
d_ ULS	0.915233073	0.047395259
d_ G	0.586522241	0.623397942
Chi-square	693.0309439	715.7285724
NFI	0.91063519	0.900566021

Table no. 5 presents the values of the Variance Inflation Factor (VIF) associated with inner model constructs that were frequently utilized as evaluative factors for potential non-random selfness bias (Kamis et al., 2020; Cheung et al., 2024). VIF values indicate the level of collinearity between constructs; a high value may suggest issues related to shared method variation or common method bias. These VIF values exceed the 3.0 threshold value. While they exhibit moderate multicollinearity among the factors, it does not reach a critical level.

Table no. 5. Inner VIF values for common data bias

	BA	BL	INTER	NOV	VIVID
BG			1	1	1
BA					
BL					

	BA	BL	INTER	NOV	VIVID
INFL	2.6272	2.6272			
INTER	2.2072	2.2072			
NOV	2.7372	2.7372			
VIVID	1.4622	1.4622			

The findings in table no. 6 and figure no. 1 demonstrated that the coefficient of the determination value shows that “Brand Advocacy” (BA) is attributed to the independent variables in the framework with a value of 0.574. With an adjusted R-squared of 0.565, even considering the model’s complexity, the model explains about 56.5 percent of the variance. Similarly, the independent variables can account for 67.3% of the variation in brand loyalty. Beyond that, the model provides a substantial account for the variability of Interactivity and Novelty based on the R-squared values of 0.605 and 0.653, respectively. The R-squared values of 0.603 and 0.651 imply a considerable amount of explanatory power left, even when accounting for the complexity of the model. On the contrary, the Adjusted R-squared value for “Vividness” (VIVID) is 0.111, indicating that the model’s independent variables only explain about 11.1% of the variability.

Table no. 6. Coefficient of determinations

Constructs	R-square	R-square adjusted
BA	0.574	0.565
BL	0.680	0.673
INTER	0.605	0.603
NOV	0.653	0.651
VIVID	0.111	0.107

The F-squared values in the given matrix demonstrate the practical importance of independent variables in explaining variance among dependent variables (Ahmed et al., 2024). F-squared values range from 0 to 1, where higher values indicate significant importance. In this context, table no. 7 exhibited that the F-square value below 0.02 indicates a small effect, while values between 0.02 and 0.15 represent moderate effects, and those above 0.15 signify significant effects (Ahmed et al., 2024). These values give information about the importance and practical relevance of the independent variables in the model.

Table no. 7. F-square values

Constructs	BA	BL	INTER	NOV	VIVID
BG			0.53	0.583	0.125
INFL	0.08	0.35			
INTER	0.02	0.04			
NOV	0.01	0.04			
VIVID	0.26	0.00			

The “Q square (Q^2)” analysis is a method for assessing a model’s predictive relevance and robustness that is becoming more common in predictive SEM or PLS regression (Ahmed et al., 2024). Table no. 8 demonstrates that the actual data is contrasted with the model results. Q^2 predict assesses the model’s capacity to predict the variance of the dependent variable as compared to its mean value. Large Q^2 values imply better predictive power (Ahmed et al., 2024). The magnitudes of Root Mean Square Error (RMSE) and Mean Absolute Error (MAE) indicate average prediction errors; the lower the value, the higher the predictive accuracy.

Table no. 8. Q-square analysis

Constructs	Q^2 predict	RMSE	MAE
BA	0.405	0.779	0.636
BL	0.683	0.57	0.395
INTER	0.597	0.642	0.482
NOV	0.651	0.597	0.472
VIVID	0.097	0.959	0.764

The path analysis results reveal significant insights into the relationships between variables. Brand Gamification (BG) towards Interactivity (INTER) and Novelty (NOV) exhibit strong positive relationships, with coefficients of 0.778 and 0.808, respectively. The findings presented in table no. 9 and figure no. 1 are substantiated by p-values of 0, indicating high statistical significance. Similarly, Influencer (INFL) towards Brand Loyalty (BL) displays a positive connection with a coefficient of 0.541 and a p-value of 0. The influence of Vividness (VIVID) on Brand Advocacy (BA) is evident, with a coefficient of 0.402 and a p-value of 0. Equally noteworthy is the positive relationship between Brand Gamification (BG) and Vividness (VIVID) (coefficient: 0.334, p-value: 0). While Influencer (INFL) towards Brand Advocacy (BA) and Interactivity (INTER) towards Brand Loyalty (BL) both contribute positively, the latter exhibits a lower coefficient (0.296 vs. 0.172) but a more significant p-value (0 vs. 0.003). Novelty (NOV) moderately impacts Brand Loyalty (BL) (coefficient: 0.197, p-value: 0.026). Additionally, Interactivity (INTER) towards Brand Advocacy (BA) and Novelty (NOV) towards Brand Advocacy (BA) show insignificant connections (coefficients: 0.121 and 0.102, p-values: 0.098 and 0.3, respectively). Lastly, Vividness (VIVID) towards Brand Loyalty (BL) indicates a minimal negative effect (coefficient: -0.013) that is statistically insignificant (p-value: 0.855). These findings underscore the intricate web of relationships between variables and provide valuable insights for understanding the dynamics within the Metaverse marketing context.

Table no. 9. Path analysis

	Original sample (O)	T statistics	P values
BG->INTER	0.778	22.346	0.000
BG->NOV	0.808	31.097	0.000
INFL->BL	0.541	7.268	0.000
VIVID->BA	0.402	6.954	0.000
BG->VIVID	0.334	4.277	0.000

	Original sample (O)	T statistics	P values
INFL->BA	0.296	3.67	0.000
INER->BL	0.172	2.934	0.003
NOV->BL	0.197	2.221	0.026
INTER->BA	0.121	1.656	0.098
NOV->BA	0.102	1.036	0.300
VIVID->BL	-0.013	0.183	0.855

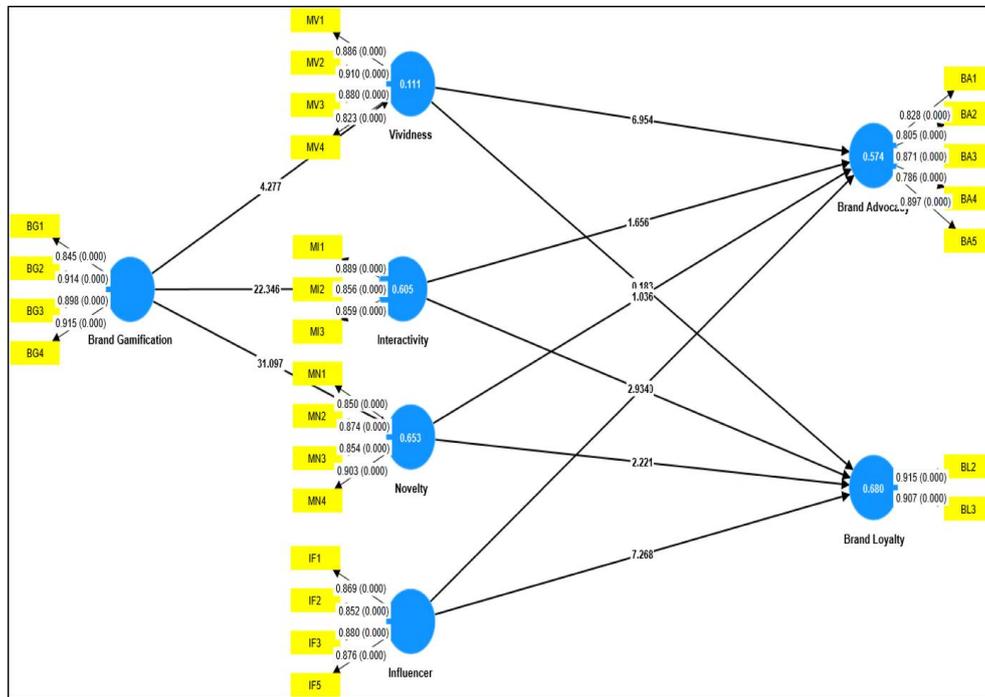


Figure no. 1. Structural model of the study

Table no. 10 and figure no. 1 further indicate that mediation effects are significant for the path analysis from Brand Gamification (BG) to Brand Advocacy (BA) and Brand Loyalty (BL). However, table no. 11 and figure no. 1 elaborate that Interactivity (INTER) and Novelty (NOV) significantly mediate the path of Brand Gamification (BG) and Brand Loyalty (BL). Vividness (VIVID) has significant mediation between Brand Gamification (BG) and Brand Advocacy (BA).

Table no. 10. Indirect path analysis

	Original sample (O)	T statistics	P values
BG -> BA	0.311	3.935	0.000
BG -> BL	0.288	4.314	0.000

Table no. 11. Indirect, specific path mediation

	Original sample (O)	T statistics	P values
BG -> INTER -> BL	0.134	2.831	0.005
BG -> NOV -> BA	0.082	1.029	0.304
BG -> NOV -> BL	0.159	2.200	0.028
BG -> VIVID -> BL	-0.004	0.177	0.860
BG -> VIVID -> BA	0.134	3.307	0.001
BG -> INTER -> BA	0.094	1.654	0.098

Discussions

Metaverse has created a new age of brand-consumer interaction in B2B digital marketing and digital transformation (Ahmed et al., 2019). This study deep-dives into the complexity of Metaverse marketing, aimed at demystifying the intricate relationships among the core elements underlying brand engagement for Generation Z. The results, from the path coefficients and their corresponding p-values, highlighted fascinating insights about the dynamics of brand gamification, interactivity, novelty, influencer marketing, and vividness in the Metaverse. By integrating gamified elements, brands create immersive, challenging, and rewarding environments, driving deeper user engagement. Moreover, in the realm of B2B marketing, gamification was also found to be a catalyst for novelty, as brand gamification impacts Metaverse novelty. In the B2B marketing Metaverse realm, influencers emerge as influential architects of brand loyalty since the influencer connects with the brand loyalty. Their ability to forge genuine connections with users cultivates lasting brand loyalty. Simultaneously, influencers have a significant impact on brand advocacy. Overwhelmingly vivid environments might translate to something other than higher advocacy, indicating that an optimal level of visual richness is necessary. Surprisingly, vividness exhibited a negative insignificant correlation with brand loyalty, suggesting that excess visual stimuli might distract from the core brand message, potentially diluting user loyalty (Ahmed et al., 2017). In B2B marketing, interactivity within the Metaverse plays a significant, yet nuanced role. It positively influences brand loyalty, indicating that interactive features foster a sense of belonging and commitment. However, its impact on brand advocacy is subtler, implying that while interactive elements enhance loyalty, advocacy might require additional factors beyond mere interactivity (Ahmed et al., 2017). While this study provides invaluable insights, it has limitations. The Metaverse is a rapidly evolving landscape, and user behaviors might have changed since the data collection. Additionally, the study primarily focused on Generation Z, limiting the generalizability of the findings across diverse age groups. In B2B marketing, this research unravels the complex tapestry of brand engagement within the Metaverse. Brands must strategically employ gamification, influencers, vividness, and interactivity, recognizing the delicate equilibrium necessary for optimal engagement (Hussain et al., 2018). As the Metaverse continues to reshape digital interactions, further research exploring evolving user behaviors and emerging technologies remains imperative for staying ahead in the ever-changing B2B digital marketing arena (Ahmed et al., 2019).

Conclusions

The research has investigated the impact of Metaverse marketing, focusing on brand gamification, brand loyalty, and brand advocacy in sports brands in B2B marketing. B2B marketers currently need the research as it highlights the brand-consumer relationship in a Metaverse context, a futuristic B2B marketing aspect. Metaverse, as a channel of challenges and quests for consumers involving various brands and branding aspects, creates active consumer engagement. Moreover, gamification further influences the perception of interactivity, vividness and novelty. In B2B marketing, the Metaverse, influencers became powerful catalysts connecting brands and users through real-world connections. Therefore, this developed capability of brand loyalty will emphasize a new paradigm change in how trust and loyalties are established. Nevertheless, the study also highlights how careful this balance is and why partnerships must be authentic regarding influencer persona and brand ethics. Alternatively, interactivity created an atmosphere of loyalty and membership. It was subtler regarding advocacy, which implied that immersive experiences need multi-dimensional characteristics to create a practical sense of advocacy. Through this research, brands can use the compass that will lead them into uncharted waters of Metaverse as they embark on their journey. Nevertheless, it is essential to point out the boundaries and mention such ones as changes in Metaverse over time or the specific population in question.

This research has significant managerial implications for B2B marketers aiming to communicate with Generation Z through Metaverse marketing strategies that show potential within sports brands. B2B marketers must capitalize on collaborations with influencers that Generation Z can relate to and identify themselves, representing the desire for authenticity. Through true partnerships, users and sports brands can maintain lasting ties. Marketers should channel all their efforts into design developments that turn out to be aesthetically pleasing environments where that motivate Generation Z people; hence, they promote sports brands. A high level of graphics, animations, and interactive design can promote user experience, resulting in advocacy. B2B Marketers can benefit from this by providing personalized experiences that allow users to be in command of their adventure into Metaverse. The study proposes that marketers develop integrated B2B marketing campaigns that combine brand gamification, influencer collaborations, interactivity, novelty, and vividness to create immersive experiences for Generation Z.

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