

International Journal of Electronic Marketing and Retailing

ISSN online: 1741-1033 - ISSN print: 1741-1025

<https://www.inderscience.com/ijemr>

Virtual influencer marketing: mediating roles of product involvement and brand familiarity

Ricardo Biason, Ahmed K. Elnagar, Clarissa Tolete, Hala A.S. Elsaadany, Shahedul Hasan, Larissa Santos

DOI: [10.1504/IJEMR.2026.10077973](https://doi.org/10.1504/IJEMR.2026.10077973)

Article History:

Received:	07 August 2025
Last revised:	06 January 2026
Accepted:	21 January 2026
Published online:	29 April 2026

Virtual influencer marketing: mediating roles of product involvement and brand familiarity

Ricardo Biason*

Faculty of Business Management,
Majan University College,
Muscat, Oman
and
Graduate School of Business Management,
Philippine Christian University,
Manila, Philippines
Email: ricardobiason@gmail.com
*Corresponding author

Ahmed K. Elnagar

Administrative and Financial Sciences and Technology Department,
Applied College,
Taibah University,
Madinah, Saudi Arabia
Email: aelnagar@taibahu.edu.sa

Clarissa Tolete

Graduate School of Business Management,
Philippine Christian University,
Manila, Philippines
Email: clarissa.tolete@pcu.edu.ph

Hala A.S. Elsaadany

Administrative and Financial Sciences and Technology Department,
Applied College,
Taibah University,
Madinah, Saudi Arabia
Email: helsaadani@taibahu.edu.sa

Shahedul Hasan

Department of Marketing,
University of Dhaka,
Dhaka, Bangladesh
Email: shahedul.hasan@smef.gov.bd

Larissa Santos

Department of Marketing,
College of Economics and Business Administration,
University of Technology and Applied Sciences,
Salalah, Oman
and
Graduate School of Business Management,
Philippine Christian University,
Manila, Philippines
Email: larissa.Santos@utas.edu.om

Abstract: Grounded in the stimulus-organism-response framework, this study addresses the limited research on the mediating roles of product involvement (PIN) and brand familiarity (BF) in virtual influencer marketing (VIM) outcomes. Virtual influencers (VIs) are an effective marketing tool, particularly on social media. This study examines how VIM affects purchase intention (PI) for sports goods in the Philippines, with PIN and BF as mediators. Data were collected from 319 Filipino consumers and analysed using partial least squares-structural equation modelling. The results reveal that VIM significantly affects PIN, BF, and PI; additionally, PIN and BF mediate the relationship between VIM and PI. These results highlight the effectiveness of VIs in the sports goods sector for building brand trust and creating emotional connections with consumers. VIs also drives PI by increasing PIN and BF. Marketers can use VIs to strategically increase PI by encouraging higher PIN and BF among consumers.

Keywords: virtual influencer marketing; VIM; virtual influencers; purchase intention; product involvement; brand familiarity; brand trust; sports goods; social media; stimulus-organism-response framework; S-O-R framework; Philippines; partial least squares-structural equation modelling; PLS-SEM.

Reference to this paper should be made as follows: Biason, R., Elnagar, A.K., Tolete, C., Elsaadany, H.A.S., Hasan, S. and Santos, L. (2026) 'Virtual influencer marketing: mediating roles of product involvement and brand familiarity', *Int. J. Electronic Marketing and Retailing*, Vol. 17, No. 6, pp.1–23.

Biographical notes: Ricardo Biason has taught in the United Arab Emirates, Oman, Ethiopia, and the Philippines, bringing diverse international experience to his teaching and professional practice. In addition to his academic background, he brings corporate and industry experience, which enriches his perspective on marketing and business. As an entrepreneur, he has founded and managed several startups and business ventures, bridging theory and practice. His research interests include consumer behavior, digital marketing, influencer marketing, marketing analytics, and social media marketing.

Ahmed K. Elnagar is an Associate Professor of Management and Hospitality at the Applied College, Taibah University, Saudi Arabia, and at the Faculty of Tourism and Hotels, Suez Canal University, Egypt. He earned his PhD from Suez Canal University. His research focuses on sustainability, total quality management, human resources, and smart technologies in tourism and hospitality. He has published in Scopus-indexed journals and serves as a reviewer for several international journals. Dr. Elnagar also has extensive administrative experience in academic program development, quality assurance, and accreditation. His work integrates academic scholarship with practical leadership in higher education.

Clarissa Tolete is an adjunct faculty member at the Graduate School of Business Management, Philippine Christian University, Manila, and at Adamson University. She is also an entrepreneur and a Licensed Financial Advisor at Sun Life of Canada, Philippines, Inc. Her academic and professional experience contributes valuable practical perspectives on consumer behaviour, marketing, and business decision-making.

Hala A.S. Elsaadany is a faculty member specialising in administrative, financial sciences, and technology. Her work integrates financial management with emerging technology tools for business and education. Her research interests include consumer behaviour, total quality management, human resource management, customer relationship management, strategic management, and sustainability.

Shahedul Hasan is an MBA graduate from the Department of Marketing at the University of Dhaka. His research interests include services marketing, consumer behavior, halal marketing, big data analytics, artificial intelligence, and entrepreneurship.

Larissa Santos is a seasoned academic with a robust background in business management, specialising in international marketing. Currently pursuing a PhD and holding a Master's in Business Administration, she has served as a Lecturer at the University of Technology and Applied Sciences, Salalah, Oman. Her diverse teaching portfolio spans business management, marketing, entrepreneurship, and human resource management. Recognised with multiple awards for her excellence in work, she is also a sought-after speaker on digital pedagogy and educational technology. Her dedication to academic excellence is reflected in her active roles in curriculum development and student mentorship.

1 Introduction

As social media gains traction and advertising agencies allocate larger proportions of their media budgets to these platforms, the advertising sector seeks efficient methods to maximise returns on investment (Appel et al., 2020). Influencer marketing has become a prominent advertising strategy that focuses on influential individuals instead of broad mass audiences (Casaló et al., 2020). This digital marketing technique involves identifying opinion leaders or influencers and incorporating them into a brand's social media communications (Belanche et al., 2021). Influencers use both digital and traditional communication channels to shape brands' marketing tactics and increase brand communities (Costello, 2020).

Companies often select and compensate online influencers – individuals, groups, or virtual avatars with large social media followings – using pay-per-post schemes. Human influencers face increasing competition from virtual influencers (VIs) (Allal-Chérif et al., 2024), which are computer-generated human replicas used in social media marketing as substitutes for real people (Ozdemir et al., 2023). With the benefits and drawbacks of human influencers removed, artificial intelligence-powered VIs present a novel means of engaging customers, particularly younger generations (Wang et al., 2025; Yu et al., 2024).

By expanding reach and engagement, VIs enhances brands' marketing performance (Kim et al., 2024). VIs has established partnerships with major businesses, command premium market prices, and improve marketers' financial performance (Fauser et al.,

2023). Consequently, virtual influencer marketing (VIM) is becoming increasingly popular among both consumers and marketers, serving as a powerful tool for connecting brands with their target audiences (Tafesse and Wood, 2021). Regarding source credibility, influencer characteristics and perceived credibility indirectly affect consumer engagement, purchase intention (PI), and brand trust (Sokolova and Kefi, 2020). As social media influencers (SMIs) dominate the digital environment and influencer marketing continues to increase, marketers must increase their involvement in this marketing strategy.

VIs operate through several psychological and perceptual mechanisms. Four key components characterise how VIs affect consumer behaviour: parasocial interaction (PAR), perceived realism (PR), attractiveness (AT), and trustworthiness (TR) (Yap and Ismail, 2022). PAR refers to the one-sided psychological relationship that consumers form with VIs, in which followers perceive the influencer as a ‘friend’ or trusted companion despite the absence of real-life interaction. This connection can strengthen emotional engagement and influence decision-making (Yap and Ismail, 2022). PR is the extent to which consumers believe the VI behaves, appears, and communicates in a human-like manner. High realism increases believability and facilitates deeper consumer involvement with the message (Casaló et al., 2020). AT refers to the VI’s physical appeal or charm, which often enhances persuasion through the peripheral route of processing, particularly for low-involvement consumers (Sokolova and Perez, 2021). Attractive influencers tend to generate higher engagement and more favourable attitudes towards a brand. TR reflects the perceived honesty, integrity, and dependability of the VI. Consumers are more likely to accept a VI’s message and develop brand trust if the influencer is perceived as credible and sincere (Sokolova and Kefi, 2020). These four components form the conceptual basis for evaluating the extent to which VIM influences consumer behaviour (Sokolova and Perez, 2021). Yap and Ismail (2022) find that parasocial relationships with VIs on Instagram enhance the PI of Generation-Y consumers. In addition, Casaló et al. (2020) demonstrate that PR increases trust and positive consumer attitudes.

This conceptualisation provides the foundation for hypothesising how VIM affects PI, particularly in terms of brand familiarity (BF) and product involvement (PIN). However, few studies have investigated the extent to which social influencer marketing and VIM affect PI using both PIN (Chiu and Ho, 2023) and BF (McClure and Seock, 2020) as mediators. Additionally, limited research exists on PI for sports products in the Philippines (Giango et al., 2022), although several studies have examined the influence of SMIs on PI in context of the Philippines (Singco et al., 2023; Soria, 2024).

This study identifies the influence of VIM on PI for sports products in the Philippines. In particular, it aims to examine the effects of VIM on PIN, BF, and PI; explore the relationships among PIN, BF, and PI; and investigate the mediating roles of PIN and BF in the relationship between VIM and PI. This study contributes to the growing field of media business studies by applying the stimulus-organism-response (S-O-R) framework (Russell and Mehrabian, 1974) to VIM, a rapidly evolving media-based strategy increasingly used across digital and social media platforms (Allal-Chérif et al., 2024; Tafesse and Wood, 2021). Theoretically, this approach expands existing models by positioning PIN and BF as mediators, providing a more nuanced understanding of how VIM affects consumer PI (Chiu and Ho, 2023; Jacob and Tan, 2021). Empirically grounded in the Philippine sports goods sector, this study offers

insights into how media technologies can increase consumer engagement and branding outcomes.

The results are extremely relevant to media managers, influencer marketers, and advertising strategists who seek to optimise campaign design in a fragmented and competitive digital environment. The findings demonstrate how VIs can be selected and deployed to align tactics with psychological drivers of consumer behaviour.

2 Literature review

2.1 Theoretical basis

Consumers' purchasing purpose influences how they process information and form brand preferences; lower involvement leads to automatic processing and higher involvement prompts deliberate decision-making. This phenomenon, known as PIN, significantly affects customer behaviour, including PI (Peng et al., 2019). In high-involvement purchases, consumers actively seek and analyse product information while forming opinions, whereas in low-involvement scenarios, they engage in minimal evaluation (Lee et al., 2017). Lee et al. (2017) note that consumers engaging in high-involvement purchases are more likely to evaluate products more thoroughly and consider alternative options when the product holds substantial relevance or value.

BF refers to the extent of a consumer's accumulated direct or indirect brand-related experiences (Jacob and Tan, 2021), or the extent to which a consumer recognises or recalls a brand. In social media and influencer marketing, familiarity shapes consumer behaviour because it enhances the credibility and effectiveness of promotional messages (Martínez-López et al., 2020). Consumers are more likely to trust familiar brands, especially when these brands are promoted by VIs, which leads to increased PI (Lim et al., 2017). Familiarity increases consumers' ability to recall advertisements for known brands, decreases their susceptibility to rival advertising, and strengthens PI through repeated interactions (Azzari and Pelissari, 2020). Therefore, familiarity serves as a psychological shortcut that reduces uncertainty and facilitates decision-making in digitally mediated environments.

We propose a modified conceptual framework based on the S-O-R model developed by Russell and Mehrabian (1974), which is fundamental for understanding consumer behaviour. This model indicates that individuals' emotional states (organism) are influenced by their surroundings (stimulus), which, in turn, shape their behavioural responses (response; Manthiou et al., 2017). Therefore, it provides insights into the psychological changes elicited by environmental stimuli (Lin et al., 2020). The S-O-R model is particularly relevant to this study because it conceptualises VIM as the external stimulus, PIN and BF as internal organismic states, and PI as the behavioural response.

In addition to the S-O-R model, this study adopts the elaboration likelihood model (ELM) to examine how persuasive communication through VIM shapes consumer PI on social media. The ELM posits that attitudes form through either the central route, which involves thoughtful, analytical processing of information, or the peripheral route, which relies on heuristics, such as attractiveness or familiarity (Petty and Cacioppo, 1986).

In the social media context, the peripheral route, which is triggered by cues such as influencer attractiveness or parasocial connection, often dominates because users experience information overload and require reduced cognitive effort (Moradi and

Zihagh, 2022; Shi et al., 2018). However, when consumer involvement with the product or brand is high, the central route of persuasion is activated (Moradi and Zihagh, 2022). For example, consumers may process VI content more profoundly if they are personally engaged with the promoted product (high PIN), or if they are already familiar with the brand (BF).

Recent reviews and empirical studies confirm the relevance of the ELM in explaining consumer engagement and behavioural intentions on social media platforms (Moradi and Zihagh, 2022; Shi et al., 2018). Shi et al. (2018) also reveal that both central cues – such as message quality and value congruence – and peripheral cues, such as homophily and relationship strength, significantly affect content sharing behaviour on social networking sites. This dual-pathway framework helps explain how VIM may affect consumers differently depending on their levels of involvement or BF, thereby reinforcing the mediating logic of our model.

2.2 Hypotheses development and conceptual framework

2.2.1 Influence of VIM

High product engagement tactics, such as telepresence, co-creation, and creativity, significantly influence consumer responses. By contrast, low-involvement tactics, which rely on interaction – a less cognitively demanding process – enhance brand engagement and indirectly affect consumer behaviour (Cowan and Ketron, 2019). Kim et al. (2024) reported that VIs indirectly shape customer engagement, PI, and brand trust through their perceived realism and persuasive attributes. Yap and Ismail (2022) demonstrate that parasocial connections significantly influence the PI of Generation-Y consumers through VI interactions on Instagram. Additionally, well-known brands exert a stronger positive effect on PI and brand trust than lesser-known brands (Ha and Perks, 2005). These results lead to Hypotheses 1, 2, and 3.

- Hypothesis 1 (H1): VIM positively influences PIN.
- Hypothesis 2 (H2): VIM positively influences PI.
- Hypothesis 3 (H3): VIM positively influences BF.

2.2.2 Influence of PIN and BF

The interaction between affective and cognitive PIN affects PI (Drossos et al., 2014). Numerous studies confirm a positive relationship between PIN and PI (for example, Zhu et al., 2019). However, Serravalle et al. (2023) find no significant direct relationship between PIN and PI. Although PIN generally influences PI, these effects may be conditioned by moderating variables such as situational or contextual factors (Peng et al., 2019). Other researchers identify a significant positive relationship between BF and consumers' PI (for example, Jacob and Tan, 2021). According to Ha and Perks (2005), BF influences consumers' PI and develops brand trust. Thus, we propose Hypotheses 4 and 5.

- Hypothesis 4 (H4): PIN positively influences PI.
- Hypothesis 5 (H5): BF positively influences PI.

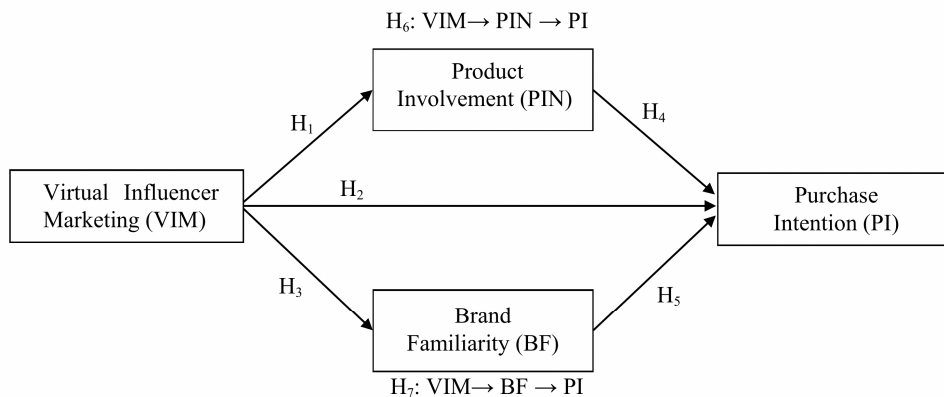
2.2.3 Mediating roles of PIN and BF

Fauser et al. (2023) observe wide variability in consumers' acceptance of and trust in VIs' product endorsements. Ozdemir et al. (2023) reveal that PI, brand trust, consumer engagement, and related responses are not directly determined by influencer type – whether human, humanised virtual, or animated virtual – nor solely by sponsorship disclosure. However, these factors indirectly affect PI, brand trust, and consumer engagement when mediated by the source's credibility. Chiu and Ho (2023) report that knowledge of VIs does not affect Generation Z's PI, regardless of their involvement with different products. Jia et al. (2022) identify an indirect relationship between perceived influence and virtual engagement with PI, which is mediated by brand image and perceived value. Yunpeng and Khan (2023) state that BF significantly mediates the relationship between affective and behavioural brand experiences. Based on these findings, we propose Hypotheses 6 and 7.

- Hypothesis 6 (H6): PIN mediates the relationship between VIM and PI.
- Hypothesis 7 (H7): BF mediates the relationship between VIM and PI.

Figure 1 presents the conceptual framework of the study. We hypothesise that VIM influences PI directly and indirectly through two mediating variables: PIN and BF. H1 to H7 represent the proposed direct and indirect relationships.

Figure 1 Conceptual framework



Note: H: hypothesis; VIM: virtual influencer marketing; PIN: product involvement; PI: purchase intention; BF: brand familiarity.

3 Materials and methods

3.1 Sampling procedure

The target population comprised respondents from Manila, the capital and primary hub of the Philippines. This group comprised Filipino consumers who had exposure to or interest in sports goods, which aligns with the study's focus. Respondents were primarily recruited from Metro Manila, the capital region and commercial centre that contains a

significant concentration of retail outlets, shopping malls, and e-commerce users engaged in sports-related purchases (Philippine Statistics Authority, 2023). To ensure relevance, the study targeted digitally active consumers who possibly had experience with or awareness of VIM campaigns in the sports goods sector.

We used convenience sampling, a commonly applied approach in contemporary marketing research when probability sampling is impractical or respondents are accessed online (Kim et al., 2024), to collect data from sample respondents. This method was chosen because of the easy access to respondents who actively engage with VIs on social media. Convenience sampling allowed us to collect data quickly and efficiently within the target population. Data were obtained between July and September 2024 using a structured questionnaire distributed via online channels, such as e-mail and social media platforms (Facebook and LinkedIn), in which sports enthusiasts and brand followers frequently interact with sponsored and influencer content. Following Hair et al. (2019), a minimum sample of 200 respondents was considered sufficient for applying partial least squares-structural equation modelling (PLS-SEM). We obtained valid responses from 319 participants, exceeding the recommended threshold. Of these, two-thirds were men, and most were aged 19–30 years (Supplementary Table S1).

3.2 *Measurement items*

Measurement items for this study's constructs were obtained from previous research. Four groups of items for VIM – parasocial interaction (PAR1–PAR5), perceived realism (PR1–PR5), attractiveness (AT1–AT5), and trustworthiness (TR1–TR5) – were adopted from Yap and Ismail (2022). Items for PIN (PIN1–PIN6) were sourced from Akbar and El-Gohary (2022) and Zaichkowsky (1994), while items for BF (BF1–BF6) were taken from Akbar and El-Gohary (2022) and Kent and Allen (1994). Items for PI (PI1–PI5) were sourced from Kok Wei and Li (2013). The questionnaire comprised two sections. The first section collected demographic information from respondents, including gender, age, education, and occupation. The second section required respondents to answer the measurement items using a five-point Likert scale. A pilot test was conducted with 25 respondents, and the questionnaire was refined based on their feedback.

We modelled VIM as a reflective-reflective second-order construct that comprises four dimensions: PAR, PR, AT, and TR. This approach follows Sarstedt et al. (2019) and assumes that changes in the overall perception of VIM are consistently reflected across its subdimensions.

3.3 *Data analysis*

We analysed the data using IBM SPSS version 25 (IBM Corp., Armonk, NY, USA) and SmartPLS version 4. The hypothesised relationships were tested using PLS-SEM, which is appropriate for studies involving small samples (Hair et al., 2011). Furthermore, we examined the hypothesised mediating relationships among the variables, for which PLS-SEM is also a highly suitable statistical approach.

3.4 *Ethical approval*

This study received ethical approval from the Ethics Committee of the Institute for Research, Innovation, and Sustainability at the Philippine Christian University in Manila

(Approval No. 0217-2025). Participants were informed of the purpose of the data collection prior to the study, and they provided written informed consent.

4 Results

4.1 Measurement model analysis

In Table 1, all items' standardised factor loadings were statistically significant and greater than 0.70, which indicates that the items converged on their latent constructs. According to Hair et al. (2019), Cronbach's alpha values should exceed 0.70 to be considered acceptable. Additionally, all average variance extracted (AVE) values were greater than 0.50, which demonstrates that the latent construct accounted for approximately half the variance in the observed variables on average. The construct reliability (CR) values reveal that each measure was consistently represented by its corresponding latent construct. Therefore, the factor loadings, AVE values, and CR values met the statistical criteria, indicating that this study's constructs had adequate convergent validity.

Discriminant validity was assessed using the heterotrait-monotrait (HTMT) ratio and the Fornell-Larcker criterion. According to Hair et al. (2019), HTMT values below 0.90 indicate that the constructs are distinct. Discriminant validity is also achieved when the square root of the AVE is greater than the correlation coefficients for all constructs (Fornell and Larcker, 1981). As shown in Table 2, the square roots of the AVE values for all constructs are greater than their respective correlation coefficients, indicating that the constructs are distinct and capture phenomena that other constructs do not.

In the second stage, we evaluated the reliability and validity of all second-order constructs. VIM is a reflective-reflective second-order construct that comprises four first-order constructs: PAR, PR, AT, and TR. Sarstedt et al. (2019) propose a disjoint two-stage approach for generating second-order constructs. Table 3 reveals that all higher-order and first-order constructs demonstrated convergent validity.

Table 4 presents the discriminant validity of the second-order constructs in relation to the other first-order constructs. The results demonstrate that discriminant validity is also present in this case.

4.2 Structural model analysis

We performed a structural model analysis to estimate the significance of the path coefficients and test the proposed hypotheses, following the PLS-SEM guidelines of Hair et al. (2011). Bootstrapping with 5,000 subsamples was used, and the structural model was estimated using SmartPLS version 4 (Ringle et al., 2024). The R-squared values indicate that 37.1% of the variation in BF, 54.2% of that in PIN, and 77.9% of that in PI are explained by the model. Table 5 presents the direct paths, β , t-statistics, and p-values. The results highlight that VIM exerts a significant positive effect on PIN ($\beta = 0.737$, $t = 17.681$, $p < 0.001$, $f^2 = 1.186$) and BF ($\beta = 0.563$, $t = 10.129$, $p < 0.001$, $f^2 = 0.464$). Additionally, PI was significantly and positively influenced by BF ($\beta = 0.602$, $t = 9.411$, $p < 0.001$, $f^2 = 0.655$) and PIN ($\beta = 0.171$, $t = 2.316$, $p < 0.05$, $f^2 = 0.035$). Furthermore, VIM also significantly positively affected PI ($\beta = 0.201$, $t = 3.854$, $p < 0.001$, $f^2 = 0.084$). Therefore, H1–H5 was supported.

Table 1 CR and validity (first-order constructs)

Construct	Item	Factor loading	Mean	SD	Cronbach's alpha	CR	AVE
Parasocial interaction (PAR)	PAR1: How interested are you in virtual influencers?	0.932	2.966	1.123	0.951	0.962	0.836
	PAR2: How likely are you to follow a virtual influencer?	0.899					
	PAR3: How likely are you to comment about a virtual influencer?	0.929					
	PAR4: How likely are you to share a post by a virtual influencer?	0.903					
	PAR5: How likely are you to talk about a virtual influencer?	0.908					
Perceived realism (PR)	PR1: To what extent do you believe a virtual influencer's behaviour is real?	0.814	2.582	1.037	0.931	0.947	0.783
	PR2: To what extent do you believe a virtual influencer's posture is real?	0.881					
	PR3: To what extent do you believe a virtual influencer's gestures are real?	0.9					
	PR4: To what extent do you believe a virtual influencer's facial expressions are real?	0.915					
	PR5: To what extent do you believe a virtual influencer's emotions are real?	0.909					
Attractiveness (AT)	AT1: To what extent do you find a virtual influencer attractive?	0.941	3.093	1.047	0.969	0.976	0.889
	AT2: To what extent do you consider a virtual influencer to be classy?	0.95					
	AT3: To what extent do you believe a virtual influencer is good-looking?	0.924					
	AT4: To what extent do you think a virtual influencer is stylish?	0.942					
	AT5: To what extent do you find a virtual influencer appealing?	0.958					
Trustworthiness (TR)	TR1: To what extent do you consider a virtual influencer dependable?	0.962	2.700	1.034	0.978	0.983	0.918
	TR2: To what extent do you believe a virtual influencer is honest?	0.952					
	TR3: To what extent do you consider a virtual influencer reliable?	0.963					
	TR4: To what extent do you perceive a virtual influencer as sincere?	0.942					
	TR5: To what extent do you perceive a virtual influencer as trustworthy?	0.973					
Product involvement (PIN)	PIN1: To what extent do you find the products advertised by virtual influencers relevant to your needs?	0.886	2.969	0.952	0.93	0.945	0.742
	PIN2: To what extent do you find the products advertised by virtual influencers exciting?	0.866					

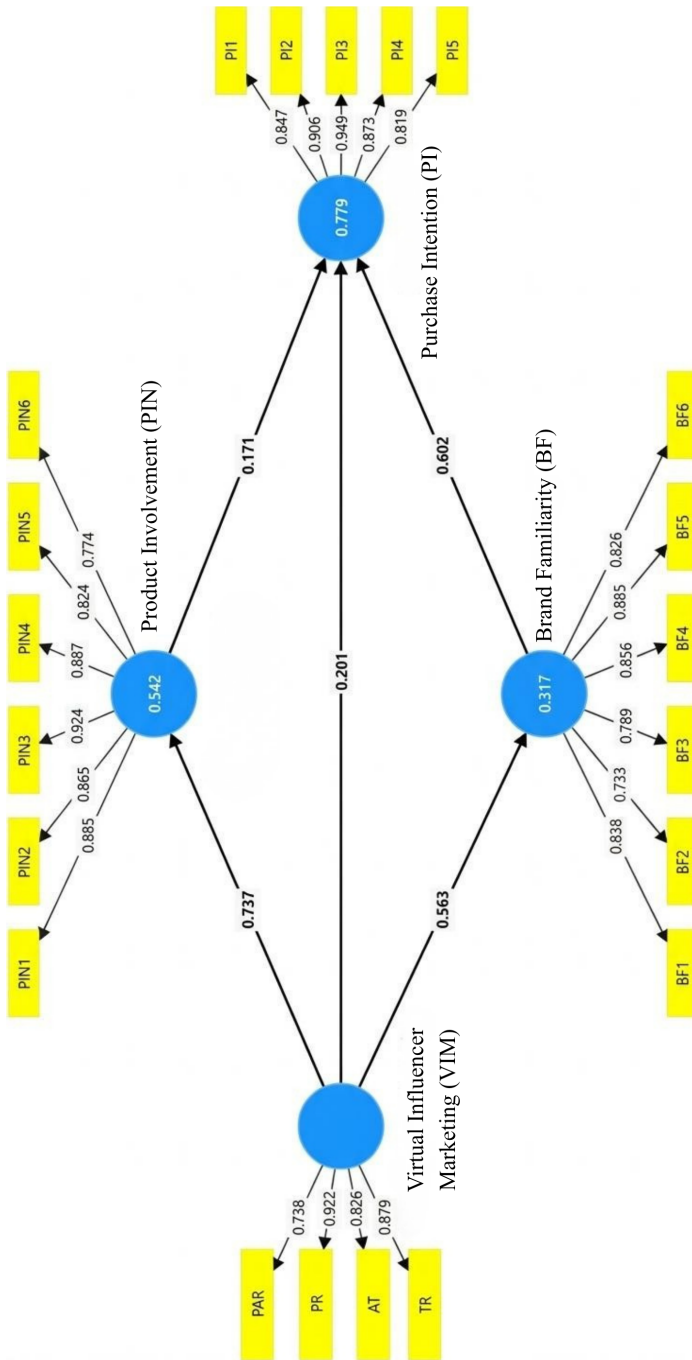
Note: SD: standard deviation; CR: construct reliability; AVE: average variance extracted.

Table 1 CR and validity (first-order constructs) (continued)

<i>Construct</i>	<i>Item</i>	<i>Factor loading</i>	<i>Mean</i>	<i>SD</i>	<i>Cronbach's alpha</i>	<i>CR</i>	<i>AVE</i>
Product involvement (PIN)	PIN3: To what extent do you consider the products advertised by virtual influencers as important?	0.925					
	PIN4: To what extent do you find the products advertised by virtual influencers appealing?	0.889					
	PIN5: To what extent do you regularly use the products advertised by virtual influencers?	0.822					
	PIN6: How much do you like products promoted by virtual influencers compared with similar brands?	0.771					
	BF1: How familiar are you with the brands advertised by virtual influencers?	0.846	3.091	0.924	0.905	0.926	0.678
	BF2: Have you used the brands advertised by virtual influencers?	0.737					
Brand familiarity (BF)	BF3: Are you able to identify a brand from its logo when it is advertised by a virtual influencer?	0.797					
	BF4: To what extent do you feel that the values of the brands advertised by virtual influencers align with your own?	0.852					
	BF5: Do you like the brands advertised by virtual influencers?	0.885					
	BF6: To what extent do you feel an emotional connection to the brands advertised by virtual influencers?	0.817					
	P11: Would you consider the product advertised by a virtual influencer as your first choice?	0.844	3.027	0.927	0.927	0.945	0.775
Purchase intention (PI)	P12: Would you encourage your relatives or friends to buy the product advertised by a virtual influencer?	0.903					
	P13: How likely are you to recommend the product advertised by a virtual influencer to someone?	0.95					
	P14: How likely are you to say positive things about the product advertised by a virtual influencer?	0.875					
	P15: How likely are you to consider buying the product advertised by a virtual influencer?	0.825					

Note: SD: standard deviation; CR: construct reliability; AVE: average variance extracted.

Figure 2 Measurement model



Note: PIN: product involvement; PI: purchase intention; BF: brand familiarity; PAR: parasocial interaction; PR: perceived realism; AT: attractiveness; TR: trustworthiness.

Table 2 Discriminant validity (first-order constructs)

<i>HTMT</i>	<i>AT</i>	<i>BF</i>	<i>PAR</i>	<i>PR</i>	<i>PIN</i>	<i>PI</i>	<i>TR</i>
AT							
BF	0.586						
PAR	0.542	0.218					
PR	0.690	0.554	0.575				
PIN	0.760	0.821	0.385	0.719			
PI	0.584	0.896	0.445	0.664	0.838		
TR	0.536	0.459	0.621	0.872	0.633	0.599	
<i>Fornell-Larcker criterion</i>	<i>AT</i>	<i>BF</i>	<i>PAR</i>	<i>PR</i>	<i>PIN</i>	<i>PI</i>	<i>TR</i>
AT	0.943						
BF	0.567	0.824					
PAR	0.534	0.208	0.914				
PR	0.660	0.544	0.552	0.885			
PIN	0.732	0.771	0.376	0.683	0.861		
PI	0.566	0.842	0.426	0.637	0.783	0.880	
TR	0.528	0.455	0.598	0.837	0.609	0.573	0.958

Note: HTMT: heterotrait-monotrait; BF: brand familiarity; PI: purchase intention; PR: perceived realism; AT: attractiveness; TR: trustworthiness; PAR: parasocial interaction; PIN: product involvement.

The mediation analysis results revealed that VIM significantly and positively influenced PI through PIN ($\beta = 0.126, t = 2.382, p < 0.5$). Additionally, VIM exerted a significant positive indirect effect on PI through BF ($\beta = 0.339, t = 8.720, p < 0.001$). Therefore, H6 and H7 were supported. Figure 2 presents the results of the measurement model.

These significant relationships suggest that VIM can enhance consumers' PIN and BF. Therefore, brands collaborating with VIs should improve audience engagement and strengthen PIs.

Table 3 CR and validity after generating the second-order constructs

<i>Construct</i>	<i>Item</i>	<i>Scale type</i>	<i>Factor loading</i>	<i>Cronbach's alpha</i>	<i>CR</i>	<i>AVE</i>
VIM (higher-order construct)	PAR	Reflective	0.738	0.930	0.908	0.713
	PR		0.922			
	AT		0.826			
	TR		0.879			
Product involvement (PIN)	PIN1	Reflective	0.885	0.930	0.945	0.742
	PIN2		0.865			
	PIN3		0.924			
	PIN4		0.887			
	PIN5		0.824			
	PIN6		0.774			

Table 3 CR and validity after generating the second-order constructs (continued)

<i>Construct</i>	<i>Item</i>	<i>Scale type</i>	<i>Factor loading</i>	<i>Cronbach's alpha</i>	<i>CR</i>	<i>AVE</i>
Brand familiarity (BF)	BF1	Reflective	0.838	0.905	0.926	0.677
	BF2		0.733			
	BF3		0.789			
	BF4		0.856			
	BF5		0.885			
	BF6		0.826			
Purchase intention (PI)	PI1	Reflective	0.847	0.927	0.945	0.775
	PI2		0.906			
	PI3		0.949			
	PI4		0.873			
	PI5		0.819			

Note: CR: construct reliability; AVE: average variance extracted; VIM: virtual influencer marketing; PR: perceived realism; AT: attractiveness; TR: trustworthiness.

Table 4 Discriminant validity after generating the second-order constructs

<i>HTMT</i>	<i>BF</i>	<i>PIN</i>	<i>PI</i>	<i>VIM</i>
BF				
PIN	0.821			
PI	0.896	0.838		
VIM	0.564	0.786	0.721	
<i>Fornell-Larcker criterion</i>	<i>BF</i>	<i>PIN</i>	<i>PI</i>	<i>VIM</i>
BF	0.823			
PIN	0.775	0.861		
PI	0.848	0.785	0.880	
VIM	0.563	0.737	0.666	0.844

Note: HTMT: heterotrait-monotrait; BF: brand familiarity; PIN: product involvement; PI: purchase intention; VIM: virtual influencer marketing.

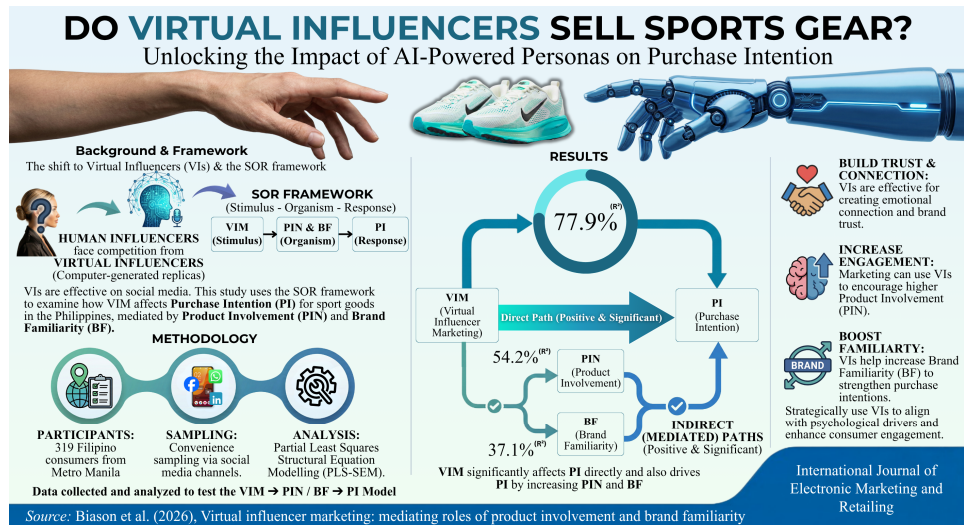
Table 5 Results of the structural model

<i>Direct paths</i>	β	<i>t</i>	<i>p</i>	f^2	<i>Result</i>
H1. VIM → PIN	0.737	17.681	0.000	1.186	Supported
H2. VIM → PI	0.201	3.854	0.000	0.084	Supported
H3. VIM → BF	0.563	10.129	0.000	0.464	Supported
H4. PIN → PI	0.171	2.316	0.021	0.035	Supported
H5. BF → PI	0.602	9.411	0.000	0.655	Supported
<i>Indirect paths</i>					
H6. VIM → PIN → PI	0.126	2.382	0.017	-	Supported
H7. VIM → BF → PI	0.339	8.720	0.000	-	Supported

Note: H: hypothesis; VIM: virtual influencer marketing; PIN: product involvement; PI: purchase intention; BF: brand familiarity.

To facilitate interpretation of the structural relationships and mediating mechanisms, Figure 3 provides a visual synthesis of the direct and indirect effects of VIM on PI.

Figure 3 Visual summary of the effects of VIM on PI through product involvement and brand familiarity



5 Discussion

Influencer marketing is an effective branding and marketing strategy that increases brand salience and attracts social media users, particularly younger generations, to companies. Although numerous studies examine how SMIs affect consumers' desire to make purchases, (e.g., Leung et al., 2022), this study contributes to the literature by analysing the effect of VIM on PI for sports goods in the Philippines. Four variables are considered, including the mediating effects of PIN and BF, and seven hypotheses are developed, all of which are supported by the results.

First, VIM positively and significantly affects PIN, PI, and BF, which is consistent with the results of previous studies (Kim et al., 2024; Yap and Ismail, 2022). Yuan and Lou (2020) reveal that influencer fairness and trustworthiness improve the PARs that followers have with influencers, increasing followers' interest in products endorsed by influencers. De Veirman et al. (2017) demonstrate that Instagram influencers with large followings are considered likeable because they are popular, which allows them to use word-of-mouth marketing on a large scale. Furthermore, Balaban et al. (2022) illustrate that SMIs' trustworthiness is positively affected by their parasocial connections, which create favourable views towards the business and increase both the intention to purchase promoted goods and the intention to share content on social media. AT is also crucial in emotional advertising appeal and positively influences consumers' attitudes toward the brand (Sokolova and Kefi, 2020). According to Yap and Ismail (2022), VIs' involvement on Instagram with Generation-Y customers significantly affects their PI because of parasocial connections. Customers' perceptions of a brand and their purchase decisions

are significantly affected by the influencer's natural qualities, such as popularity, competence, and credibility.

Second, the effect of PIN and BF on PI is both positive and significant. This finding is consistent with Leung et al. (2022), who demonstrate that influencers' attributes strengthen endorsement effectiveness and positively shape consumers' PIs. PIN serves as a precursor to consumers' purchase engagement. According to Drossos et al. (2014), when viewers become involved with a product in online advertising, they are more motivated and able to assimilate information quickly. Consequently, consumers pay greater attention to advertisements and process the content more profoundly when a high-involvement product is offered.

By contrast, Cabeza-Ramírez et al. (2022) reveal no connection between PI and the product. This may be because individuals who are highly active in the fashion industry follow influencers primarily to remain informed about trends. However, Mou et al. (2019) state that customers are more inclined to favour products when they have active involvement with them. Consumers' desire to purchase a product is influenced by their strong emotional connections with the product.

According to the involvement hypothesis, when consumers experience a high degree of product engagement, they allocate more cognitive resources to processing information, which strengthens their attitudes and leads to higher PI and actual buying behaviour (Petty and Cacioppo, 1986). Prior empirical work confirms that deeper PIN measured both affectively and cognitively, enhances consumers' perception of product attributes and increases their likelihood of purchasing (Zaichkowsky, 1994). In the VIM context, this indicates that campaigns designed to increase high involvement, such as interactive demonstrations and co-creation experiences, are especially effective at altering perceptions and driving PI. Ha and Perks (2005) demonstrate that BF affects customers' PI and increases brand trust.

Third, PIN and BF serve as mediators. Consistent with these findings, Rachmawati et al. (2019) highlight that the relationship between product knowledge and purchase decisions can be processed through PIN, even when product knowledge does not affect purchase decisions directly. By contrast, another finding demonstrates that having an SMI and a parasocial relationship are not necessary conditions for being an Instagram follower. However, a moderating effect of PIN is observed, because followers who report high involvement only exhibit significant parasocial relationships with SMIs (Balaban et al., 2022). Yunpeng and Khan (2023) find that BF mediates the relationship between emotional and behavioural brand experiences. Jia et al. (2022) claim that brand image and anticipated value indirectly affect the relationship between perceived effect and online interaction with PI.

5.1 Managerial implications

The results are based on a thorough analysis and reliable data; therefore, they should be helpful to executives, marketing managers, social media managers, digital marketing managers, legislators, and brand managers. The findings provide practical guidance for marketers. Campaigns using VIs should focus on building BF and enhancing PIN, as these mechanisms are central to translating VI exposure into stronger consumer PIs. First, influencers can increase their parasocial ties with followers by developing visually appealing personas that convey similarities. Relationship building also depends on procedural fairness, which refers to whether interactions with influencers are two-way

and partly reciprocal, and interpersonal fairness, which concerns how influencers treat followers. To maintain long-lasting relationships with followers, influencers should treat them appropriately and respectfully by considering their expectations and feelings (Yuan and Lou, 2020).

Second, this study offers management insights into influencer advertising, including follower considerations, content briefings, and celebrity selection. Companies may select influencers who provide unique content to improve elasticity and invest in those with a larger following. In addition to evaluating influencers' reach, such as the number of followers, and whether they behave appropriately and maintain reciprocity in their relationships with supporters, businesses and marketers seeking influencer marketing should also consider influencers' expertise in specific fields (distributive fairness) and the morality of their knowledge sharing (informational equality). Businesses can increase their flexibility by selecting influencers who share unique content. They should encourage influencers to include hyperlinks to brands and URL links in their posts to increase the sponsor brand's visibility (Leung et al., 2022).

Third, because the survey focused on PI for sports products in the Philippines, managers can selectively identify the social media platforms and sites that are primarily used in the Philippines, as well as the characteristics of the influencers preferred by the target audience. This approach enables a more accurate assessment of the effect of advertising messages. Therefore, marketing managers should select the appropriate influencer based on audience segmentation by generational cohort.

Finally, this study illustrates a dual effect on PI for high-involvement products: a direct effect and an indirect influence through a message's perceived credibility. Therefore, managers should identify an ideal product with a specific attribute related to audience engagement, such as technical or ecological characteristics.

5.2 Theoretical implications

This study contributes to the marketing literature by examining companies' use of influencer marketing to evaluate its effectiveness in driving PI. First, the analysis of post attributes highlights the unique aspects of the influencer marketing approach. Unlike celebrity endorsers, influencers create original content for brands, and the level of originality in their shared material serves as a distinctive attribute. Second, PIN and BF are positioned as mediators, diverging from prior research that treated these variables as moderators. This approach allows for a more comprehensive analysis of their mediating effects. Finally, the results have implications for media literacy, particularly in designing programmes aimed at increasing critical consumption among young audiences, whose media consumption often includes significant exposure to SMI content.

6 Conclusions

This study aimed to examine the effects of VIM on PIN, BF, and PI for sports products in the Philippines, with particular attention to the mediating roles of PIN and BF. The results support all seven proposed hypotheses, revealing that VIM significantly affects PIN, BF, and PI, both directly and indirectly through the mediators.

The study results contribute to the literature and provide valuable theoretical and practical insights for marketing and brand managers. These findings can guide the development of effective strategies for selecting VIs by considering their key attributes.

Theoretically, this research advances the understanding of VIM by positioning PIN and BF as mediators within the S-O-R framework. Practically, it offers actionable insights for marketing managers who seek to leverage VIs to enhance consumer engagement and PIN.

Despite these contributions, a few limitations should be acknowledged. First, focussing on PAR, PR, TR, and AT as the key determinants of how VIs influence PIN, BF, and PI provides opportunities for broader exploration. Future studies can examine additional influencer attributes, such as consistency, (e.g., derived from previous posts), personality traits, (e.g., humour and confidence), perceived authenticity, originality, and endorsement history. Understanding these factors can help businesses increase their influencer marketing strategies efficacy.

Second, the use of convenience sampling limits the ability to establish causality in empirical investigations. Future research could address this limitation by employing cross-sectional or longitudinal study designs, which will enable a more robust analysis of the relationships observed in this study and provide comparative insights. Mixed-method approaches that integrate quantitative and qualitative techniques can further enrich the understanding of how VIM differs from traditional marketing in influencing PI.

Third, the study does not consider the cost structures associated with influencer marketing, including expenses incurred on live-streaming platforms and for hiring influencers. Marketing costs can vary significantly across influencers, which is a crucial consideration for businesses when formulating strategies. Future studies can investigate the relationship between product sales and influencer marketing costs, providing recommendations for maximising profitability and optimising influencer strategies.

Finally, although generating consumer engagement, such as followers, feedback, and reports, is a key objective of influencer marketing, not all types of engagement equally translate into purchase behaviour. Variations in consumer interaction with different influencers or posts may result in different search behaviours and purchase likelihoods. With advanced tracking technologies, businesses can monitor website traffic and click-through rates to identify the specific contributions of individual marketing campaigns. Further research can examine the factors influencing click-through and sales-based elasticity to determine how specific influencer marketing strategies directly affect a business's bottom line.

Overall, this study establishes a foundation for future research on VIM and offers valuable guidance for practitioners who aim to optimise digital marketing strategies in the sports goods sector.

Acknowledgements

The authors would like to thank their respective universities for the support and resources that facilitated the completion of this research, as well as Dr. Junnell Guia and the Institute for Research, Innovation, and Sustainability at Philippine Christian University, Manila.

Disclaimer

The authors received no financial support for this study.

Data availability statement

The dataset supporting the findings of this study is publicly available in Mendeley Data at <https://data.mendeley.com/datasets/m8mf7cs5ss/2>.

Declarations

All authors declare that they have no conflicts of interest.

References

- Akbar, T.A. and El-Gohary, H. (2022) 'Brand humour advertisements on a social network platform and their impact on online consumer engagement: the case of Instagram', in Information Resources Management Association (Ed.): *Research Anthology on Social Media Advertising and Building Consumer Relationships*, pp.1048–1073, IGI Global, Hershey, DOI: 10.4018/978-1-6684-6287-4.ch057.
- Allal-Chérif, O., Puertas, R. and Carracedo, P. (2024) 'Intelligent influencer marketing: how AI-powered virtual influencers outperform human influencers', *Technological Forecasting and Social Change*, Vol. 200, p.123113, DOI: 10.1016/j.techfore.2023.123113.
- Appel, G., Grewal, L., Hadi, R. and Stephen, A.T. (2020) 'The future of social media in marketing', *Journal of the Academy of Marketing Science*, Vol. 48, No. 1, pp.79–95, DOI: 10.1007/s11747-019-00695-1.
- Azzari, V. and Pelissari, A. (2020) 'Does brand awareness influence purchase intention? The mediation role of brand equity dimensions', *Brazilian Business Review*, Vol. 17, No. 6, pp.669–685, DOI: 10.15728/bbr.2020.17.6.4.
- Balaban, D.C., Szambolics, J. and Chirică, M. (2022) 'Parasocial relations and social media influencers' persuasive power: exploring the moderating role of product involvement', *Acta Psychologica*, Vol. 230, p.103731, DOI: 10.1016/j.actpsy.2022.103731.
- Belanche, D., Casalo, L.V., Flavián, M. and Ibáñez-Sánchez, S. (2021) 'Building influencers' credibility on Instagram: effects on followers' attitudes and behavioral responses toward the influencer', *Journal of Retailing and Consumer Services*, Vol. 61, p.102585, DOI: 10.1016/j.jretconser.2021.102585.
- Cabeza-Ramírez, L.J., Sánchez-Cañizares, S.M., Santos-Roldán, L.M. and Fuentes-García, F.J. (2022) 'Impact of the perceived risk in influencers' product recommendations on their followers' purchase attitudes and intention', *Technological Forecasting and Social Change*, Vol. 184, p.121997, DOI: 10.1016/j.techfore.2022.121997.
- Casalo, L.V., Flavián, C. and Ibáñez-Sánchez, S. (2020) 'Influencers on Instagram: antecedents and consequences of opinion leadership', *Journal of Business Research*, Vol. 117, pp.510–519, DOI: 10.1016/j.jbusres.2018.07.005.
- Chiu, C.L. and Ho, H.C. (2023) 'Impact of celebrity, micro-celebrity, and virtual influencers on Chinese Gen Z's purchase intention through social media', *SAGE Open*, Vol. 13, No. 1, DOI: 10.1177/21582440231164034.

- Costello, J. (2020) 'Influencer marketing: lessons learned and moving forward', in Costello, J. and Yesiloglu, S. (Eds.): *Influencer Marketing*, pp.286–301, Routledge, Abingdon-on-Thames, DOI: 10.4324/9780429322501-21.
- Cowan, K. and Ketrion, S. (2019) 'A dual model of product involvement for effective virtual reality: the roles of imagination, co-creation, telepresence, and interactivity', *Journal of Business Research*, Vol. 100, pp.483–492, DOI: 10.1016/j.jbusres.2018.10.063.
- De Veirman, M.D., Cauberghe, V. and Hudders, L. (2017) 'Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude', *International Journal of Advertising*, Vol. 36, No. 5, pp.798–828, DOI: 10.1080/02650487.2017.1348035.
- Drossos, D.A., Kokkinaki, F., Giaglis, G.M. and Fouskas, K.G. (2014) 'The effects of product involvement and impulse buying on purchase intentions in mobile text advertising', *Electronic Commerce Research and Applications*, Vol. 13, No. 6, pp.423–430, DOI: 10.1016/j.elerap.2014.08.003.
- Fausser, P.D.S., Schmäh, P.D.M., Chen, X.C., Michel, T. and Lee, S. (2023) 'Virtual influencer marketing and its impact on customer purchase behaviour', *International Journal of Business and Applied Social Science*, Vol. 9, No. 6, pp.29–36, DOI: 10.33642/ijbass.v9n6p4.
- Fornell, C. and Larcker, D.F. (1981) 'Structural equation models with unobservable variables and measurement error: algebra and statistics', *Journal of Marketing Research*, Vol. 18, No. 3, pp.382–388, DOI: 10.1177/002224378101800313.
- Giango, M.K., Hintapan, R., Suson, M., Batican, I., Quiño, L., Capuyan, L., Anoo, J.M., Batoon, J., Aro, J.L., Maturan, F., Yamagishi, K., Gonzales, G., Burdeos, A. and Ocampo, L. (2022) 'Local support on sports tourism development: an integration of emotional solidarity and social exchange theory', *Sustainability*, Vol. 14, No. 19, p.12898, DOI: 10.3390/su141912898.
- Ha, H.Y. and Perks, H. (2005) 'Effects of consumer perceptions of brand experience on the web: brand familiarity, satisfaction and brand trust', *Journal of Consumer Behaviour*, Vol. 4, No. 6, pp.438–452, DOI: 10.1002/cb.29.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011) 'PLS-SEM: indeed a silver bullet', *Journal of Marketing Theory and Practice*, Vol. 19, No. 2, pp.139–152, DOI: 10.2753/MTP1069-6679190202.
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019) 'When to use and how to report the results of PLS-SEM', *European Business Review*, Vol. 31, No. 1, pp.2–24, DOI: 10.1108/EBR-11-2018-0203.
- Jacob, M.R. and Tan, P.H.P. (2021) 'The influence of country image, brand familiarity, product quality, and social influence towards purchase intention: the case study of Samsung', *JMBI UNSRAT*, Vol. 8, No. 1, DOI: 10.35794/jmbi.v8i1.34047.
- Jia, X., Alvi, A.K., Nadeem, M.A., Akhtar, N. and Zaman, H.M.F. (2022) 'Impact of perceived influence, virtual interactivity on consumer purchase intentions through the path of brand image and brand expected value', *Frontiers in Psychology*, Vol. 13, p.947916, DOI: 10.3389/fpsyg.2022.947916.
- Kent, R.J. and Allen, C.T. (1994) 'Competitive interference effects in consumer memory for advertising: the role of brand familiarity', *Journal of Marketing*, Vol. 58, No. 3, pp.97–105, DOI: 10.1177/002224299405800307.
- Kim, I., Ki, C.W., Lee, H. and Kim, Y.K. (2024) 'Virtual influencer marketing: evaluating the influence of virtual influencers' form realism and behavioral realism on consumer ambivalence and marketing performance', *Journal of Business Research*, Vol. 176, p.114611, DOI: 10.1016/j.jbusres.2024.114611.
- Kok Wei, K. and Li, W.Y. (2013) 'Measuring the impact of celebrity endorsement on consumer behavioural intentions: a study of Malaysian consumers', *International Journal of Sports Marketing and Sponsorship*, Vol. 14, No. 3, pp.2–22, DOI: 10.1108/IJSMS-14-03-2013-B002.

- Lee, W.I., Cheng, S.Y. and Shih, Y.T. (2017) 'Effects among product attributes, involvement, word-of-mouth, and purchase intention in online shopping', *Asia Pacific Management Review*, Vol. 22, No. 4, pp.223–229, DOI: 10.1016/j.apmr.2017.07.007.
- Leung, F.F., Gu, F.F., Li, Y., Zhang, J.Z. and Palmatier, R.W. (2022) 'Influencer marketing effectiveness', *Journal of Marketing*, Vol. 86, No. 6, pp.93–115, DOI: 10.1177/00224292211102889.
- Lim, X.J., Radzol, A.M., Cheah, J. and Wong, M.W. (2017) 'The impact of social media influencers on purchase intention and the mediation effect of customer attitude', *Asian Journal of Business Research*, Vol. 7, No. 2, pp.19–36, DOI: 10.14707/ajbr.170035.
- Lin, J., Lin, S., Turel, O. and Xu, F. (2020) 'The buffering effect of flow experience on the relationship between overload and social media users' discontinuance intentions', *Telematics and Informatics*, Vol. 49, p.101374, DOI: 10.1016/j.tele.2020.101374.
- Manthiou, A., Ayadi, K., Lee, S., Chiang, L. and Tang, L. (2017) 'Exploring the roles of self-concept and future memory at consumer events: the application of an extended Mehrabian-Russell model', *Journal of Travel and Tourism Marketing*, Vol. 34, No. 4, pp.531–543, DOI: 10.1080/10548408.2016.1208786.
- Martínez-López, F.J., Anaya-Sánchez, R., Fernández Giordano, M. and Lopez-Lopez, D. (2020) 'Behind influencer marketing: key marketing decisions and their effects on followers' responses', *Journal of Marketing Management*, Vol. 36, Nos. 7–8, pp.579–607, DOI: 10.1080/0267257X.2020.1738525.
- McClure, C. and Seock, Y.K. (2020) 'The role of involvement: investigating the effect of brand's social media pages on consumer purchase intention', *Journal of Retailing and Consumer Services*, Vol. 53, p.101975, DOI: 10.1016/j.jretconser.2019.101975.
- Moradi, M. and Zihagh, F. (2022) 'A meta-analysis of the elaboration likelihood model in the electronic word of mouth literature', *International Journal of Consumer Studies*, Vol. 46, No. 5, pp.1900–1918, DOI: 10.1111/ijcs.12814.
- Mou, J., Zhu, W. and Benyoucef, M. (2019) 'Impact of product description and involvement on purchase intention in cross-border e-commerce', *Industrial Management and Data Systems*, Vol. 120, No. 3, pp.567–586, DOI: 10.1108/IMDS-05-2019-0280.
- Ozdemir, O., Kolfal, B., Messinger, P.R. and Rizvi, S. (2023) 'Human or virtual: how influencer type shapes brand attitudes', *Computers in Human Behavior*, Vol. 145, p.107771, DOI: 10.1016/j.chb.2023.107771.
- Peng, L., Zhang, W., Wang, X. and Liang, S. (2019) 'Moderating effects of time pressure on the relationship between perceived value and purchase intention in social e-commerce sales promotion: considering the impact of product involvement', *Information and Management*, Vol. 56, No. 2, pp.317–328, DOI: 10.1016/j.im.2018.11.007.
- Petty, R.E. and Cacioppo, J.T. (1986) 'The elaboration likelihood model of persuasion', in *Communication and Persuasion*, pp.1–24, Springer, New York, DOI: 10.1007/978-1-4612-4964-1_1.
- Philippine Statistics Authority (2023) *Philippine Statistical Yearbook 2023 [Government Statistical Report]*, Philippine Statistics Authority [online] <https://psa.gov.ph/system/files/psy/2023-Philippine-Statistical-Yearbook.pdf> (accessed 3 June 2024).
- Rachmawati, E., Suliyanto and Suroso, A. (2019) 'Mediation product involvement against purchasing decisions', in Inam, A. et al. (Eds.): *Proceedings of the 6th International Conference on Community Development (ICCD 2019)*, Atlantis Press, Dordrecht, pp.195–197, DOI: 10.2991/iccd-19.2019.52.
- Ringle, C.M., Wende, S. and Becker, J.-M. (2024) *SmartPLS (Version 4) [Computer Software]*, SmartPLS GmbH [online] <https://www.smartpls.com> (accessed 15 October 2024).
- Russell, J.A. and Mehrabian, A. (1974) 'Distinguishing anger and anxiety in terms of emotional response factors', *Journal of Consulting and Clinical Psychology*, Vol. 42, No. 1, pp.79–83, DOI: 10.1037/h0035915.

- Sarstedt, M., Hair, J.F., Cheah, J.H., Becker, J.M. and Ringle, C.M. (2019) 'How to specify, estimate, and validate higher-order constructs in PLS-SEM', *Australasian Marketing Journal*, Vol. 27, No. 3, pp.197–211, DOI: 10.1016/j.ausmj.2019.05.003.
- Serravalle, F., Vanheems, R. and Viassone, M. (2023) 'Does product involvement drive consumer flow state in the AR environment? A study on behavioural responses', *Journal of Retailing and Consumer Services*, Vol. 72, p.103279, DOI: 10.1016/j.jretconser.2023.103279.
- Shi, J., Hu, P., Lai, K.K. and Chen, G. (2018) 'Determinants of users' information dissemination behavior on social networking sites: an elaboration likelihood model perspective', *Internet Research*, Vol. 28, No. 2, pp.393–418, DOI: 10.1108/IntR-01-2017-0038.
- Singco, M.Y.A., Lopez, I.D.A. and Cabauatan, R. (2023) 'The effect of influencer marketing on purchase intentions and brand attitude of consumers in the Philippines', *International Journal of Research in Engineering, Science and Management*, Vol. 6, No. 12, pp.50–62 [online] <https://journal.ijresm.com/index.php/ijresm/article/view/2881> (accessed 10 June 2024).
- Sokolova, K. and Kefi, H. (2020) 'Instagram and YouTube bloggers promote it, why should I buy? How credibility and parasocial interaction influence purchase intentions', *Journal of Retailing and Consumer Services*, Vol. 53, p.101742, DOI: 10.1016/j.jretconser.2019.01.011.
- Sokolova, K. and Perez, C. (2021) 'You follow fitness influencers on YouTube. But do you actually exercise? How parasocial relationships, and watching fitness influencers, relate to intentions to exercise', *Journal of Retailing and Consumer Services*, Vol. 58, p.102276, DOI: 10.1016/j.jretconser.2020.102276.
- Soria, N.J. (2024) 'Impacts of social media influencers on consumer behavior: a case study in Davao City, Philippines', *European Journal of Management and Marketing Studies*, Vol. 8, No. 4, DOI: 10.46827/ejms.v8i4.1655.
- Tafesse, W. and Wood, B.P. (2021) 'Followers' engagement with Instagram influencers: the role of influencers' content and engagement strategy', *Journal of Retailing and Consumer Services*, Vol. 58, p.102303, DOI: 10.1016/j.jretconser.2020.102303.
- Wang, Y., Huam, H.T. and Hamid, A.B.A. (2025) 'Virtual influencer effects in China's Gen Z market: how core characteristics and dual moderation shape purchase intentions', *Acta Psychologica*, Vol. 259, p.105477, DOI: 10.1016/j.actpsy.2025.105477.
- Yap, Y.R. and Ismail, N. (2022) 'Factors of virtual influencer marketing influencing Generation Y consumers' purchase intention in Malaysia', *International Journal of Internet Marketing and Advertising*, Vol. 17, Nos. 3/4, pp.437–458, DOI: 10.1504/IJIMA.2022.126735.
- Yu, J., Dickinger, A., So, K.K.F. and Egger, R. (2024) 'Artificial intelligence-generated virtual influencer: examining the effects of emotional display on user engagement', *Journal of Retailing and Consumer Services*, Vol. 76, p.103560, DOI: 10.1016/j.jretconser.2023.103560.
- Yuan, S. and Lou, C. (2020) 'How social media influencers foster relationships with followers: the roles of source credibility and fairness in parasocial relationship and product interest', *Journal of Interactive Advertising*, Vol. 20, No. 2, pp.133–147, DOI: 10.1080/15252019.2020.1769514.
- Yunpeng, S. and Khan, Y.A. (2023) 'Understanding the effect of online brand experience on customer satisfaction in China: a mediating role of brand familiarity', *Current Psychology*, Vol. 42, No. 5, pp.3888–3903, DOI: 10.1007/s12144-021-01706-7.
- Zaichkowsky, J.L. (1994) 'The personal involvement inventory: reduction, revision, and application to advertising', *Journal of Advertising*, Vol. 23, No. 4, pp.59–70, DOI: 10.1080/00913367.1943.10673459.
- Zhu, W., Mou, J. and Benyoucef, M. (2019) 'Exploring purchase intention in cross-border e-commerce: a three stage model', *Journal of Retailing and Consumer Services*, Vol. 51, pp.320–330, DOI: 10.1016/j.jretconser.2019.07.004.

Supplementary**Table S1** Demographic profiles of the respondents

<i>Variable</i>	<i>Category</i>	<i>N</i>	<i>Percentage (%)</i>
Gender	Men	215	67.4
	Women	104	32.6
Age	19–30 years	169	52.98
	31–40 years	131	41.07
	41 years and above	19	5.95
Highest education attainment	High school	37	11.60
	Some college (did not complete a degree)	67	21.00
	Bachelor's degree	168	52.66
	Master's degree or higher	47	14.73
Occupation	Student	62	19.44
	Professional (employed in a skilled or specialised field)	196	61.44
	Entrepreneur (self-employed or business owner)	26	8.15
	Unemployed	35	10.97