

Effect of Virtual Reality on Purchase Intention Among Customers of H-Medix Retail Industry in Abuja, Nigeria: A Mediating Role of Emotional Engagement

Pere Abinabo, Prof. Aliyu Mamman, Associate Prof. Jibrin Nuhu Shagari

Department of Business Management, Faculty of Management Science, Federal University Dutsin-Ma, Katsina State, Nigeria

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ABSTRACT

The purpose of this study is to empirically examine how virtual reality affects purchase intention among customers of H-Medix retail industry in Abuja, Nigeria. The research hinged on Stimulus–Organism–Response Theory. The study adopts a descriptive cross-sectional survey research design. Data were collected from online customers of 17 H Medix retail outlets in Abuja, Nigeria, using a structured questionnaire with a total sample size of 320 respondents involved in the study. The data are analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), which is suitable for predictive analysis and theory extension in emerging research contexts. The findings revealed that for the direct relationship, product visualisation, immersive experience and interactivity have positive and significant influence on purchase intention. While the indirect effect of immersive experience, interactivity and product visualisation also have positive and significant effects on emotional engagement. For the mediating effect emotional engagement positive and significantly mediate relationship between immersive experience and purchase intention, emotional engagement positive and significantly mediate relationship between interactivity and purchase intention, emotional engagement positive and significantly mediate relationship between product visualisation and purchase intention. Therefore, it is recommended that the management of H-Medix should strengthen emotional engagement by creating personalized customer experiences, empathetic communication, and interactive digital content that foster positive feelings and trust with regular monitoring of customer emotions and feedback to ensure the retail experience remains engaging and capable of driving purchase intentions.

Keywords: Virtual Reality, Purchase Intention, Immersive Experience, Purchase Intention, Emotional Engagement

INTRODUCTION

In recent years, the retail industry has experienced significant transformation due to the rapid growth of internet penetration, smartphone adoption, and increased social media engagement among consumers. The emergence of digital transformation has changed consumer interactions with brands and purchasing processes, prompting retailers to adopt digital marketing strategies to stay competitive and improve customer experience and performance. However, the influence of digital marketing on purchase intention is not always direct, as consumers often undergo psychological and emotional processes before making final purchase decisions. This justifies the introduction of emotional engagement as a mediating variable in this study. The importance of purchase intention in relation to Virtual Reality (VR) in the retail industry lies in its ability to help retailers understand how immersive technologies influence consumers' willingness to buy products and services.

Virtual reality enhances the shopping process by creating interactive and immersive retail environments where consumers can virtually examine products, explore stores, and make informed decisions. According to a study conducted by Lu and Hsiao (2022), the United States revealed the highest level of VR influence, with evidence from retail applications like Walmart, Amazon, and IKEA demonstrating that VR significantly enhances purchase intention, producing considerable financial value estimated at around \$2 billion annually across large-scale global retail ecosystems. Followed by China with Alibaba e-commerce conversion uplift from

immersive tech from 5%–20% increase in purchase intention and United Kingdom retailers and fashion brands, improving consumer confidence.

The importance of Virtual reality cannot be overemphasized, it allows consumers to virtually experience products before purchase for instance, trying clothes, viewing furniture in a room, or exploring stores digitally. It improves consumer trust and reduces risk perception while strengthening emotional engagement as well as increases customer engagement with retail brands through immersive experiences such as virtual stores or interactive product demonstrations, consumers spend more time engaging with retail platforms. Higher engagement improves brand recall and positively influences buying decisions. This study employed product visualization, immersive experiences and interactivity to measure VR. This is because the dimensions are collectively explained how VR enhances consumer understanding, emotional engagement, and interaction, which ultimately strengthens purchase intention in the retail industry. In virtual retail environments, product visualization, immersive experiences and interactivity dimensions complement one another to create a more enjoyable, informative, and realistic shopping experience.

Product visualization has to do with digital display of physical products using advanced visual tools to help businesses demonstrate, market, and evaluate products without relying solely on physical prototypes. Immersive experiences are the state of complete engagement with all of attention focused on a certain task. The primary purpose of it is to digitalize exhibitions with a view to increasing visitors' sense of immersion (Yoon & Son, 2021). Interactivity is the degree to which consumers can actively participate in and influence communication with a product. Interactive platforms allow consumers to ask questions, compare options, and receive personalized information (Oladunjoye & Tshidzumba, 2022). VR and purchase intention are closely related in modern retail and e-commerce environments. Its technology creates realistic shopping experiences that positively influence consumers' willingness to buy products. VR plays a crucial role in increasing purchase intention in retail by way of enhancing product visualization, improving customer experiences and providing personalized shopping environments. However, despite these benefits the growth of VR is hindered by limited internet access, distrust in online payment systems and a general lack of awareness about the benefits of online shopping as well as high implementation costs, limited consumer access, technical issues, user discomfort, privacy concerns, lack of physical product interaction, and resistance to technology adoption. It is against this background, the present study seeks to contribute to the existing body of knowledge by examining the mediating role of emotional engagement in the relationship between virtual reality and purchase intention among customers of H-Medix retail industry in Abuja, Nigeria

Statement of the Problem

Virtual Reality (VR) is revolutionizing the retail industry by creating immersive shopping environments that enhance product visualization and customer interaction. Through virtual product demonstrations and interactive experiences, VR enables customers to evaluate products more effectively, which may positively influence their purchase intentions. Despite the increasing adoption of VR technologies in retail industries across the world, limited empirical evidence exists regarding their effect on consumer purchase intention in Nigeria, particularly within H-Medix Retail Industry in Abuja. Furthermore, little is known about how customers perceive VR-enabled shopping experiences and the extent to which such experiences shape their purchasing decisions. As consumers increasingly demand engaging and personalized shopping experiences, retail analysts recognize VR as an important tool for digital transformation. Although H-Medix has adopted online retailing and other digital service platforms, the potential contribution of VR to enhancing customer purchase intention has not been adequately examined. This knowledge gap makes it difficult for management to determine whether investments in VR technologies can improve customer satisfaction, increase sales, and strengthen competitive advantage. Therefore, there is a need to investigate the influence of Virtual Reality on purchase intention among customers of H-Medix Retail Industry in Abuja, Nigeria.

Extant literatures (Afrouzeh et al., 2024; Chhaniwal et al., 2025; Collien & Areeprayolkij, 2025; Liao et al., 2019) have examined virtual reality and purchase intention; their studies were conducted in developed countries such as the United Kingdom, Tehran, and Taiwan. The findings of these studies may not be directly applicable to the Nigerian context due to differences in cultural values, economic conditions, technological infrastructure, and consumer lifestyles. Consumer behaviour, technology adoption rates, purchasing power,

and retail practices in Nigeria differ significantly from those of the countries where these studies were undertaken. This has created a contextual gap exists in the literature, hence this study is conducted to provide findings that are more relevant to H-Medix and the Nigerian retail industry

The relationship between virtual reality (VR) and purchase intention (PI) among retail customers remains insufficiently understood, particularly in the context of developing African economies where empirical evidence is limited. Although existing studies (Afrouzeh et al., 2024; Chhaniwal et al., 2025; Collien & Areeprayolkij, 2025; Mkedder et al., 2024) have consistently reported positive associations between VR and PI, many of these studies are characterized by relatively small sample sizes, which may weaken the robustness of their findings. Such predominantly positive results may provide a skewed representation of reality, potentially leading to inaccurate conclusions and raising concerns about publication bias. Consequently, decisions based on this incomplete body of evidence may result in ineffective managerial practices. To address this gap, the present study examines the mediating role of emotional engagement (EE) in the relationship between VR and PI, thereby providing a more comprehensive understanding of VR's influence on consumer purchase intentions

The objective of this study is to examine the extent to which virtual reality dimensions (product visualization, immersive experiences, and interactivity) influence purchase intention among customers of H-Medix retail stores in Abuja, Nigeria. The study also seeks to evaluate the effects of these virtual reality dimensions on customers' emotional engagement. Furthermore, it aims to determine whether emotional engagement mediates the relationship between virtual reality (product visualization, immersive experiences, and interactivity) and purchase intention among H-Medix customers.

This study contributes practically by providing retail managers with insights into how virtual reality can enhance emotional engagement and increase customers' purchase intentions. Methodologically and theoretically, it advances the literature by conceptualizing VR through product visualization, immersive experiences, and interactivity, while examining emotional engagement as a mediator. The study also fills a significant research gap by offering empirical evidence from the Nigerian retail sector.

LITERATURE REVIEW

Purchase Intention

Purchase intention is a behavioural measure reflecting the consumer's likelihood of buying a product or service (Collien & Areeprayolkij, 2025). Wismiarsi et al. (2024) defined purchase intention as a customer's inclination to buy a particular product or service or brand after carefully assessing the factors that justify the purchase. Purchase intention encompasses three dimensions: the desire to buy, consideration of the product as a purchase option, and the likelihood of recommending it to others. Customers' intentions to purchase are often driven by the extent to which the product aligns with their needs and preferences. As a result, consumers make product choices based on their behavioural patterns and evaluations.

Peña-García et al. (2020) defined purchase intention as a consumer's willingness to buy a product based on personal needs and perceptions of the product and company. This intention is affected by factors such as product knowledge, packaging, design, endorsements, price, and availability. In particular, attractive packaging can enhance purchase intention, whereas poor packaging and insufficient product information may reduce consumers' likelihood of making a purchase (Chhaniwal et al., 2025). The study operationalizes purchase intention as consumer's conscious plan, willingness to buy a particular product or service in the future. It reflects the extent to which a customer is prepared to make a purchase after evaluating available information, personal needs, preferences, and perceptions of the product.

Virtual Reality

Virtual Reality (VR) has emerged as a transformative technology in digital marketing, enabling businesses to create immersive and interactive brand experiences that foster deeper consumer engagement. The VR market continues to grow significantly, with research highlighting its effectiveness in strengthening brand consumer

relationships and delivering memorable marketing experiences (Chhaniwal et al., 2025). Virtual reality stores are defined as simulated shopping environments that utilize VR-enabled wearable devices to provide consumers with immersive and interactive purchasing experiences. Consequently, retailers increasingly adopt VR technologies to develop engaging shopping environments, with applications expanding across global markets. Despite this growth, consumer responses to VR retail experiences remain insufficiently understood, particularly within emerging economies where empirical evidence is still limited (Mkedder et al., 2024).

Afrouzeh et al. (2024) defined virtual reality as an environment created by computer or mobile devices, in which the user feels they are in a real environment. This technology is the science of combining humans with information, a way to visualize, manipulate, and interact with an artificial world using computers and complex data derived from simpler technologies (computer science, 3D graphics, robotics, etc.) to create a digital environment in which users are fully immersed and can interact.

For the purpose of this study virtual reality is a technology that creates a computer-generated, immersive, and interactive shopping environment that allows consumers to experience products or services virtually before making a purchase decision. The essence of it is to visualise products more realistically, interact with products in a simulated environment and develop stronger emotional engagement and confidence in their purchase decisions.

Product Visualization

According to Michalski (2024), product visualization refers to the creation of visual representations of products and services to facilitate their design, demonstration, and promotion. Traditionally, this process involved the use of physical prototypes, mock-ups, or scaled models. However, advances in information technology have enabled the development of digital product visualizations using specialized software and systems. These multimedia tools allow organizations to create, modify, and distribute visual content such as images, videos, and animations, thereby enhancing the communication of product features, benefits, and usage information to stakeholders.

Fikriyah and Alam (2025) defined product visualization as visual and physical appearance and communication cues of a brand or retailer, through creative efforts and merchandise displays in shop windows. This is not like the traditional product photography or videos, 3D visualization allows users to rotate products 360 degrees, zoom in on specific details, change colours or configurations, and even see products in different environments or contexts. However, the present study adopts the above definition. This is because it reflects the consumer oriented perspective of product visualization, emphasizing the role of visual communication and product presentation in influencing customer behaviour. Given that virtual reality enhances the visual representation of products through immersive and interactive displays, this definition provides an appropriate basis for examining how product visualization stimulates emotional engagement and subsequently influences purchase intention among customers.

Immersive Experiences

One of the primary purposes of digital exhibitions is to increase visitors' sense of immersion. Zafar and Anees (2026) defined immersive experience as a psychological state characterized by perceiving oneself to be enveloped by an environment that provides a continuous stream of stimuli and experiences, further stating that immersion as the state of complete engagement with all of attention focused on a certain task.

He (2026) defined immersion as a psychological state where individuals are deeply engaged in a specific environment, integrating sensory perception, cognitive focus, and emotional resonance, and losing awareness of external distractions. In live streaming commerce, immersion is shaped by real-time interaction, dynamic product demonstration, and situational atmosphere, distinguishing it from traditional e-commerce's static information presentation. This study defined immersive experience as an activity, environment, or situation that deeply engages a person's senses, attention, and emotions, making them feel fully involved in or surrounded by it. The idea is that the participant feels less like an observer and more like an active part of the experience, for instance using a virtual reality headset that makes you feel as if you are inside a digital world.

Playing a video game with realistic graphics, sound, and storytelling that captures your full attention. The idea is that the participant feels less like an observer and more like an active part of the experience.

Interactivity

Wismiarsi et al. (2024) define Interactivity refers to the degree to which customers can actively engage with and manipulate elements within a virtual reality environment during the shopping process. In the context of VR, interactivity enables customers to explore products, access information, and experience product features in real time, thereby enhancing their shopping experience and increasing their intention to purchase products. In a similar vein, Wismiarsi et al. (2024) characterize interactivity as the extent to which users can shape the design and content of mediated environments at a given moment. Blattberg and Deighton (1991) define interactivity as the extent of two-way communication and active participation between customers and a virtual shopping environment. This means that within VR based retail settings, interactivity allows customers to control their shopping experience through actions such as rotating products, navigating virtual stores, and testing product features, which can positively influence their purchase intention by reducing uncertainty and improving decision-making. It is pertinent to note that the level of user involvement and responsiveness provided by a virtual reality platform during customer-product interactions remain important. Through immersive and interactive features, customers can actively participate in product evaluation and virtual demonstrations, leading to stronger engagement and a higher likelihood of developing positive purchase intentions. The study defined interactivity as the capability of a virtual reality system to respond to users' actions and inputs immediately, creating a dynamic and engaging shopping experience. In relation to purchase intention, higher levels of interactivity enable customers to interact with products more realistically, fostering greater confidence, satisfaction, and willingness to make a purchase.

Emotional engagement

Over the last decade, emotional engagement has emerged as an important concept in the literature due to its influence on customer purchase intentions and brand loyalty. Emotions are integral to human cognition and behaviour, affecting the ways individuals process information and make decisions. Rather than relying solely on logical reasoning, individuals frequently incorporate emotional responses into their decision-making processes. As a result, emotional engagement has become a critical construct for understanding behavioural outcomes in various contexts (Chen et al., 2025).

Şengöz (2024) defines emotional engagement as the profound emotional bonds and interactions individuals experience when responding to events, stimuli, or relationships. These engagements encompass diverse emotional states, including happiness, empathy, excitement, sadness, anger, and compassion. Such emotions exert a substantial influence on behaviour, decision-making, and interpersonal relationships. The intensity and quality of emotional experiences determine how people perceive and respond to their environment. Emotional engagement has been shown to enhance motivation, loyalty, satisfaction, and well-being across domains such as marketing, education, healthcare, leadership, and personal relationships (Chen et al., 2025). This study defines emotional engagement as the extent to which consumers form affective connections with a brand, product, or marketing communication, resulting in emotional responses that positively influence their attitudes and increase their intention to purchase. Through feelings such as trust, enjoyment, excitement, and attachment, emotional engagement strengthens consumers' motivation to choose and buy a product or service.

Review of Empirical Studies

The effect of Product Visualization on purchase intention

Li et al. (2024) evaluate the effect of visualization of production process on consumers' purchase intentions in farmer-assisted live streaming; using 333 Consumers in China from multiple social media platforms Structural equation modelling and the AMOS programme were used to test the hypothesis. The results revealed a positive relationship between the video presentation about the agricultural production process and consumers' purchase intention, which is mediated by consumers' trust. Meanwhile, packaging functionality moderates the relationship between agricultural product visualization and consumers' purchase intentions as well as the

indirect effect of consumers' trust. Fikriyah and Alam (2025) examine the influence of product visualization and customer reviews on purchasing decisions: Muslim Fashion on TikTok Shop Indonesia with a total sample of 153 respondents. The study used Structural Equation Modelling (SEM). The results of the study show that product visualization and customer reviews have a significant effect on purchasing decisions. Arouya et al. (2025) assess the impact of product visualization modalities on user-friendly description in online configurators, using data from 516 respondents. The study employs regression analysis to examine the effectiveness of each modality. The findings reveal that static and semi-interactive modalities, such as 2D visualization and virtual images, consistently enhance user-friendly product space description capability across all its considered aspects. In contrast, more complex modalities, such as 3D walkthroughs, show mixed results.

The effect of Immersive Experiences on purchase intention

Yoon and Son (2021) in their study the roles of digital exhibition in enhancing immersive experience and purchase intention with a sample size of 200 respondents. The findings indicate that animated images and storytelling descriptions not only enhance immersion and WTP but also are more effective when adopted together. Zafar and Anees (2026) conducted a study harnessing immersive and intelligent technologies to drive consumer purchase intention, the study collected data from 325 online consumers in major Pakistani cities using SmartPLS (PLS-SEM) to assess both measurement and structural models. The results indicate that both augmented reality experiences and artificial intelligence capabilities significantly enhance user engagement, and user engagement has a strong positive effect on Purchase Intention. Mediation analysis reveals that user engagement partially mediates the relationships between augmented reality experiences and Purchase Intention and artificial intelligence capabilities and Purchase Intention, confirming the central role of engagement in converting technological interactions into purchase behaviour of consumer purchase intention. Zhen and Yuanfeng (2024) explored the impact of immersive experiences on consumer purchase intentions in e-commerce live streaming: an examination of hedonic, utilitarian, and social values in China, using 405 respondents from online. Structural equation modelling was employed for data analysis. The results indicate that immersive experiences positively influence all three dimensions of perceived value, with the greatest impact on social value. Additionally, hedonic, utilitarian, and social values all positively affect purchase intentions, with hedonic value having the strongest influence.

The effect of Interactivity on purchase intention

Liu, X., & Zhang, L. (2024) investigate impacts of different interactive elements on consumers' purchase intention in live streaming e-commerce with sample size of 326 from LSE consumers as respondents. The study used a structural equation model to evaluate hypotheses. The results reveal that consumer-streamer interaction and consumer-consumer interaction positively influence consumers' purchase intention. Social presence mediates the relationship between the three types of interactions and consumers' purchase intention, while trust plays a mediator role in both consumer-streamer and consumer-consumer interactions that affect consumers' purchase intention. Susceptibility to informative influence has a significant positive moderating effect between consumer-streamer interaction and purchase intention. Jiang et al. (2010) in their study effects of interactivity on website involvement and purchase intention using 186 participants employed SEM for the analysis. The results indicate that websites with a high level of active control lead to cognitive involvement and, in some instances, affective involvement. Websites with reciprocal communication lead to affective involvement for functional products but not expressive products. Responses from the participants also reveal that an increase in website involvement leads to higher purchase intention. Wismiarsi et al. (2024) examine the influences of content interactivity on purchase intention: An engagement mediation, with a total sample size of 199 valid respondents participated in the survey. The study used Smart PLS/SEM for the path coefficient analysis, the result highlights the positive effects of content interactivity in enhancing purchase intentions through social media engagement. Although content interactivity did affect consumers' purchasing intentions, social media engagement had a stronger influence.

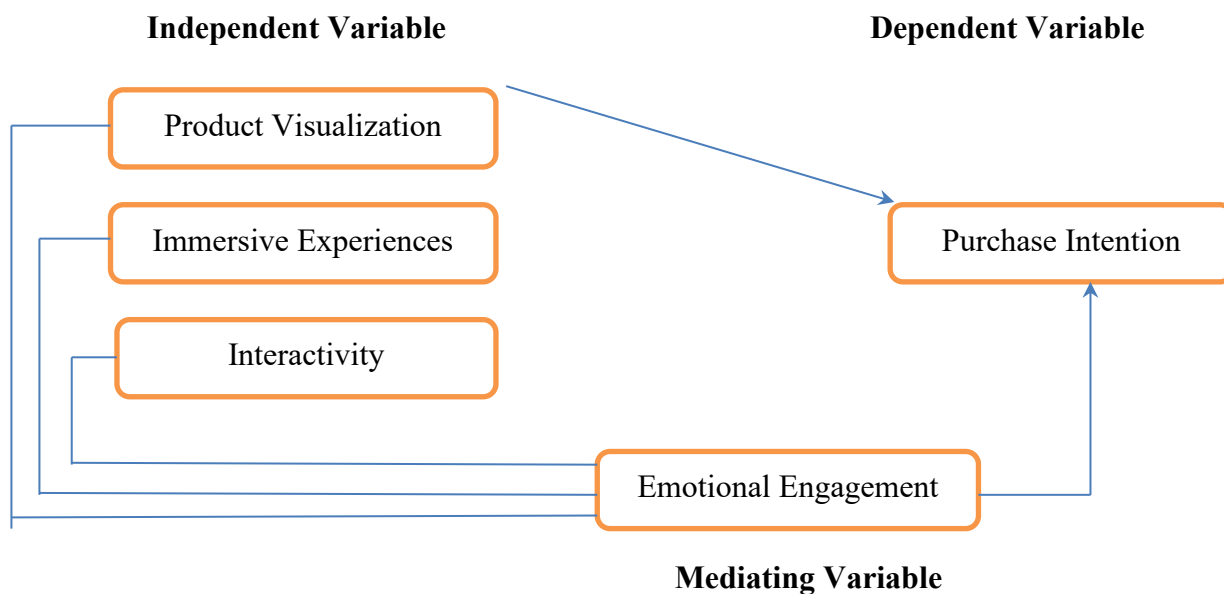
Mediating Effect of Emotional engagement

Sansone and Balconi (2022) studied ADV at the time of COVID-19 brain effect between emotional engagement and purchase intention. The findings suggest that leveraging the negative emotional potential of

COVID-19 may not shift the explicit purchase intentions but could nonetheless boost emotional engagement, benefitting the final evaluation of the brand at an implicit level. De-Matos et al. (2023) in their study relationships between consumer engagement and purchase intention of ecological products with a sample 107 respondents, the study used multiple regressions for the analysis. The findings indicate that conscious participation positively affects the purchase intention of these products, and that consumers who regularly buy the products are more engaged, enthusiastic and conscious, and perceive greater value in the products. Meanwhile, consumers who rarely buy the products have high purchase intentions, but are more sensitive to the price, as these products are more expensive than traditional products on the market. Zed et al. (2026) studied the influence of visual attention, emotional engagement, and brand familiarity on purchase intention: a case study of Starbucks consumers in Indonesia, using 210 respondents. The study used Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings revealed that customers focus on visually greatly influencing their desire to buy, indicating that compelling visual elements such as product presentation, packaging, and store ambiance capture consumer focus and enhance their willingness to buy. Emotional engagement also demonstrates a strong influence, suggesting that consumers' affective connection with Starbucks' brand identity and experience significantly drives their purchasing decisions. Additionally, brand familiarity positively affects purchase intention by reinforcing trust and reducing uncertainty in consumer choices

Conceptual framework

The conceptual framework shows the interconnections between the independent, dependent and mediating variables in the study, the virtual reality (VR) depicting direct effect on both purchase intention (PI) and emotional engagement with emotional engagement (EE) further influencing mediating variables demonstrating its function.



(Source: Researcher, 2026)

The conceptual framework for this study illustrates the independent variable is virtual reality, which is proxy by (product visualization, immersive experiences and interactivity) and the dependent variable is purchase intention, while emotional engagement is the mediating variable

Hypothesis

Guided by the existing scholarly evidence, the subsequent hypotheses are clearly articulated for empirical testing

H₁: Emotional engagement has positive effects on purchase intention.

H₂: Immersive experiences have a positive influence on emotional engagement.

H₃: Immersive experiences have a positive effect on purchase intention.

H₄: Interactivity has a positive and significant effect on emotional engagement.

H₅: Interactivity has a positive and significant effect on purchase intention.

H₆: Product visualisation has a positive and significant effect on emotional engagement.

H₀₇: Product visualisation has a positive and significant effect on purchase intention.

H₀₈: Emotional engagement mediates the relationship between immersive experiences and purchase intention

H₀₉: Emotional engagement mediates the relationship between interactivity and purchase intention

H₀₁₀: Emotional engagement mediates the relationship between product visualisation and purchase intention

THEORETICAL FRAMEWORK

The study uses the Stimulus–Organism–Response (S–O–R) Theory. S–O–R theory was developed by Mehrabian and Russell (1974). This theory posits that environmental stimuli influence individuals' internal emotional and cognitive states, which in turn determine their behavioural responses. It further stated that behaviour is not a direct reaction to external stimuli; rather, it is shaped by the individual's psychological processing of those stimuli. Despite its widespread application, the S–O–R theory has been criticized for oversimplifying consumer behaviour through a linear stimulus-response framework and for inadequately accounting for individual differences, cognitive evaluations, and the dynamic nature of technology-mediated interactions (Jacoby, 2002; Eroglu et al., 2001). Critics argue that consumers' responses are influenced by multiple psychological and contextual factors beyond emotional reactions, suggesting that the theory may not fully explain behaviour in complex digital environments such as virtual reality. However, regardless of these criticisms, the theory is best fit for this study. This is because it clearly explains the relationship between virtual reality, emotional engagement, and purchase intention. In the context of this study, virtual reality (VR) serves as the stimulus (S) because it provides customers with an immersive and interactive shopping experience. Emotional engagement represents the organism (O), as it reflects the emotional reactions and psychological involvement generated by the VR experience. Purchase intention constitutes the response (R), representing the behavioural outcome that results from customers' emotional engagement with the virtual environment.

METHODOLOGY

This study adopted a descriptive survey design with a cross-sectional approach to examine the influence of virtual reality on purchase intention among customers of H-Medix products and services in Abuja, Nigeria. The design was considered appropriate because it facilitates the collection of data at a single point in time, making it both cost-effective and efficient for investigating relationships among variables. The target population comprised online retail customers of the 17 H-Medix products and services in Abuja. These respondents were selected because they interact with digital retail platforms where virtual reality applications enhance product visualization, customer engagement, and shopping experiences. Data were collected through an online questionnaire distributed via email, social media platforms, company websites, and customer databases, enabling broad access to respondents who actively engage in online shopping activities. A convenience sampling technique was employed to select participants for the study. This approach was suitable because the population of online customers is large, dynamic, and lacks a complete sampling frame for probability-based selection. The technique also enabled the researcher to reach readily accessible and willing respondents through digital channels. The exact population size was unknown, the study assumed an infinite population. The sample size was determined using the Krejcie and Morgan (1970) formula at a 95% confidence level ($Z = 1.96$) and a population proportion of 80%, resulting in a minimum sample size of 320

respondents. To address possible non-response and incomplete questionnaires, an additional 50% was added in accordance with the recommendations of Saunders et al. (2009) and Israel (1992), yielding a final sample size of 389 respondents. Data were gathered using a structured and validated self-administered questionnaire comprising closed-ended items measured on a five-point Likert scale. While descriptive statistics, including frequencies and percentages, were used to analyze respondents' demographic characteristics. Structural Equation Modeling (SEM) with SmartPLS 4 was employed to test the study hypotheses and assess the relationships among the constructs.

$$S = \frac{X^2 x P x (1 - P)}{d^2}$$

S = required sample size

X² = Chi-square value for 1 degree of freedom at desired confidence level (for 95%,)= 1.96

P = population proportion (use 0.5 when unknown for maximum variability)

d = margin of error (commonly 0.05)

1-p=0.5

$$S = \frac{(1.96)^2 x 0.80 x (1 - 0.80)}{(0.05)^2}$$

$$S = \frac{3.8416 x 0.8 x 0.2}{0.0025}$$

$$S = \frac{3.8416 x 0.16}{0.0025}$$

$$S = \frac{0.614656}{0.0025}$$

$$S = 245.8624$$

$$S = 246$$

Model specification

To estimate the relationships among the study variables, Purchase Intention (PI) is specified as the dependent variable, Virtual Reality (VR) as the independent variable represented by Product Visualisation (PV), Immersive Experience (IE), and Interactivity (INTR), while Emotional Engagement (EE) serves as the mediating variable.

$$PI = f(VR) \dots \dots \dots (1)$$

Where:

PI= Purchase Intention

VR= Virtual Reality

Virtual Reality is operationalized through its three dimensions:

$$VR = f(PV, IE, INTR) \dots \dots \dots (2)$$

Where:

PV = Product Visualisation

IE = Immersive Experience

INTR = Interactivity

Substituting Equation (2) into Equation (1), the functional model becomes:

$$PI = f(PV, IE, INTR) \dots\dots\dots (3)$$

This implies that Purchase Intention is a function of Product Visualisation, Immersive Experience, and Interactivity.

Direct Structural Model

The direct effects of the Virtual Reality dimensions on Purchase Intention are specified as:

$$PI = \beta_0 + \beta_1 PV + \beta_2 IE + \beta_3 INTR + \varepsilon \dots\dots\dots (4)$$

Where:

β_0 = Intercept (constant)

β_1 = Product Visualization → Purchase Intention

β_2 = Immersive Experience → Purchase Intention

β_3 = Interactivity → Purchase Intention

ε = Structural disturbance term

Introduction of Mediating Structural Model

Emotional Engagement is assumed to be influenced by the dimensions of Virtual Reality. Its functional relationship is expressed as::

$$EE = f(PV, IE, INTR)$$

The corresponding structural equation is:

$$EE = \beta_0 + \beta_4 PV + \beta_5 IE + \beta_6 INTR + \varepsilon \dots\dots\dots (5)$$

Where:

EE = Emotional Engagement

The influence of Virtual Reality dimensions on Emotional Engagement is specified as:

$$EE = \beta_0 + \beta_4 PV + \beta_5 IE + \beta_6 INTR + \varepsilon \dots\dots\dots (6)$$

Where:

β_4 = PV → EE

β_5 = IE → EE

$$\beta_6 = \text{INTR} \rightarrow \text{EE}$$

Purchase Intention is subsequently modelled as a function of both the Virtual Reality dimensions and Emotional Engagement:

$$\text{PI} = \beta_0 + \beta_1 \text{PV} + \beta_2 \text{IE} + \beta_3 \text{INTR} + \beta_7 \text{EE} + \varepsilon \quad (7)$$

Where:

$$\beta_7 = \text{EE} \rightarrow \text{PI}$$

Indirect Effects

The indirect (mediating) effects are estimated as the products of the relevant path coefficients:

Product Visualization

$$\text{PV} \rightarrow \text{EE} \rightarrow \text{PI} = \beta_4 \times \beta_7 \quad (8)$$

Immersive Experience

$$\text{IE} \rightarrow \text{EE} \rightarrow \text{PI} = \beta_5 \times \beta_7 \quad (9)$$

Interactivity

$$\text{INTR} \rightarrow \text{EE} \rightarrow \text{PI} = \beta_6 \times \beta_7 \quad (10)$$

Total Effects

The total effect of each Virtual Reality dimension on Purchase Intention is computed as the sum of its direct and indirect effects:

$$\text{Total Effect PV} = \beta_1 + (\beta_4 \times \beta_7) \quad (11)$$

$$\text{Total Effect IE} = \beta_2 + (\beta_5 \times \beta_7) \quad (12)$$

$$\text{Total Effect INTR} = \beta_3 + (\beta_6 \times \beta_7) \quad (13)$$

Parameters

PI = Purchase Intention

EE = Emotional Engagement

PV = Product Visualization

IE = Immersive Experience

INTR = Interactivity

β_0 = Constant

$\beta_1 - \beta_3$ = Direct path coefficients

$\beta_4 - \beta_6$ = Paths from the independent variables to the mediator

β_7 = Path from Emotional Engagement to Purchase Intention

ε = Structural disturbance term

The study estimates the structural relationships using Partial Least Squares Structural Equation Modelling (PLS-SEM) implemented in SmartPLS 4. The direct effects of Product Visualisation, Immersive Experience, and Interactivity on Purchase Intention are represented by the path coefficients β_1 , β_2 , and β_3 . The indirect (mediating) effects are estimated as $\beta_4\beta_7$, $\beta_5\beta_7$, and $\beta_6\beta_7$, respectively. The total effects are obtained by summing the corresponding direct and indirect effects. The significance of the structural paths and mediation effects will be assessed using the bootstrapping procedure in SmartPLS 4.

RESULTS AND DISCUSSION

Rate of Response

Out of the 369 questionnaires distributed, 346 were returned by respondents, resulting in an overall response rate of 93.77%. After excluding 23 incomplete submissions, a total of 320 questionnaires were deemed suitable for analysis, producing a usable response rate of 86.72%. Such a response rate is widely recognized as adequate for organizational and social science research (Dillman et al., 2014; Saunders et al., 2019).

Table 1 Response Rate of the Questionnaires

Response Rate Category	Frequency / Rate
No. of distributed questionnaires	369
Returned questionnaires	346
Usable questionnaires	320
Excluded questionnaires	23
Questionnaires not returned	26
Overall Response Rate	93.77%
Valid (Usable) Response Rate	86.72%

(Source: Author 2026)

Measurement Model Assessment

The evaluation of reflective constructs in PLS-SEM involves testing the measurement model for reliability and validity. Indicator reliability is assessed through outer loadings within the acceptable range of 0.40–0.70, while internal consistency is determined using Cronbach's Alpha and Composite Reliability values ranging from 0.70 to 0.90. Convergent validity is confirmed when the AVE exceeds 0.50, and discriminant validity is established when the square root of the AVE for each construct is higher than its correlations with other constructs, as specified by the Fornell-Larcker criterion (Hair et al., 2010; 2014; 2018; Henseler et al., 2009).

Individual Item Reliability

This assesses the degree to which a measurement item is strongly associated with and accurately reflects the latent construct it is intended to measure. In PLS-SEM, it is assessed through indicator outer loadings, with higher loadings indicating that the item reliably represents the construct (Hair et al., 2017; 2022). The study employed 30 questionnaire items with 6 items measuring independent variables (product visualization, interactivity and immersive experiences), the dependent variable (purchase intention), and the mediating variable emotional engagement (EE). Out of the 30 items the study did not remove a single item because the loadings were well above 0.70. According to Hair et al. (2014) indicators with outer loadings between 0.40 and 0.70 should only be removed when their exclusion enhances composite reliability (ρ_A and $\rho_C \geq 0.70$) and AVE (≥ 0.50). As shown in Table 2 and Figure 1 the indicators all indicator loadings exceeded the recommended threshold of 0.70, indicating that the items adequately represented their respective constructs and demonstrated satisfactory reliability (Hair et al., 2022).

Internal Consistency Reliability

The measurement model's reliability was determined through the assessment of Cronbach's alpha and composite reliability, both of which are commonly used to evaluate internal consistency among measurement items. This is not like Cronbach's alpha that assumes equal indicator contributions; composite reliability permits indicators to have different loadings (Hair et al., 2014). The adoption of both reliability indices is supported by methodological literature and enhances confidence in the study findings (Hair et al., 2022). As revealed in Table 2, all constructs achieved values substantially above the recommended threshold of 0.70, with Cronbach's alpha values ranging from 0.985 to 0.987 (Nunnally, 1978; Hair et al., 2014). Additionally, rho_A and rho_C values between 0.985 and 0.987, together with composite reliability values ranging from 0.988 to 0.989, indicate excellent internal consistency across all constructs (Hair et al., 2014, 2018, 2021).

Table 2 Individual Item Reliability, Internal Consistency Reliability, Convergent Validity and Discriminant Validity

	Outer loadings	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)
EE		0.987	0.987	0.989	0.937
EE1	0.968				
EE2	0.971				
EE3	0.968				
EE4	0.969				
EE5	0.963				
EE6	0.970				
IE		0.986	0.987	0.988	0.934
IE1	0.963				
IE2	0.968				
IE3	0.966				
IE4	0.966				
IE5	0.971				
IE6	0.966				
INTR		0.985	0.985	0.988	0.930
INTR1	0.969				
INTR2	0.961				
INTR3	0.965				
INTR4	0.962				
INTR5	0.966				
INTR6	0.963				
PI		0.987	0.987	0.989	0.940
PI1	0.968				
PI2	0.971				
PI3	0.963				
PI4	0.968				
PI5	0.974				
PI6	0.971				
PV		0.986	0.986	0.988	0.933
PV1	0.966				
PV2	0.969				
PV3	0.965				
PV4	0.973				
PV5	0.961				
PV6	0.962				

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

The estimated results of the PLS-SEM for the model described in Equation 1 are presented in Figures 1 and 2. The computations and model estimations were conducted utilizing SmartPLS statistical software

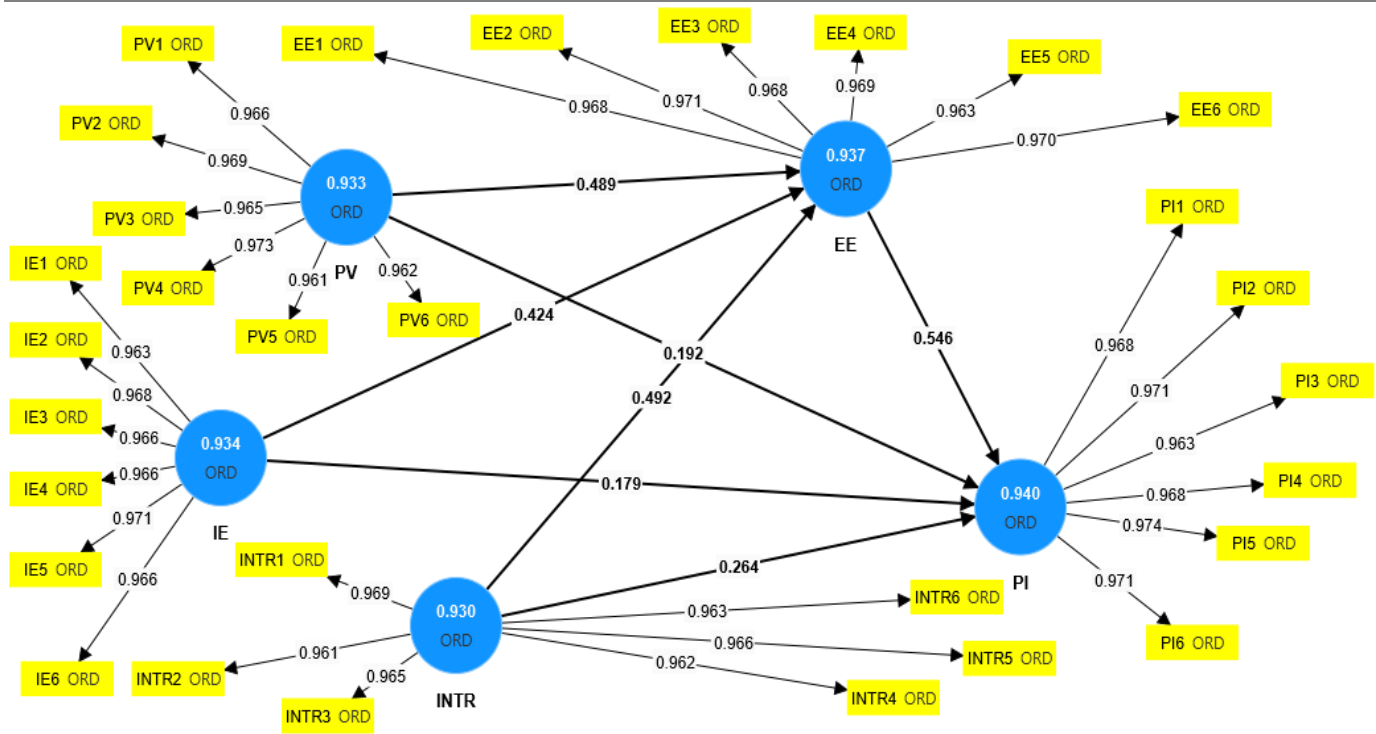


Figure 1: Path Diagram of Measurement (Outer) Model Convergent Validity

Convergent validity evaluates whether the indicators of a construct are highly correlated and consistently reflect the same underlying theoretical concept (Hair et al., 2022; Fornell & Larcker, 1981). It is commonly assessed using the Average Variance Extracted (AVE), derived from the squared factor loadings. As recommended by Hair et al. (2014), an AVE of 0.50 or above indicates satisfactory convergent validity. As presented in Table 2, all constructs attained AVE values ranging from 0.930 to 0.940, accounting for 93.6% of the variance in their indicators and confirming adequate convergent validity.

Discriminant Validity

Discriminant validity measures how well a construct is empirically distinct from other constructs in a model, ensuring that each captures a unique dimension of the studied phenomenon without excessive overlap. This study assessed discriminant validity using the Fornell-Larcker criterion and Heterotrait-Monotrait Ratio (HTMT) (Hair et al., 2014). As noted by Hair et al. (2022) and Henseler et al. (2015), discriminant validity is established when the indicators of a construct exhibit the highest loadings on their respective constructs relative to all other constructs. Additionally, according to the Fornell-Larcker criterion, the square root of a construct's AVE must exceed its correlations with other constructs.

Table 3 Depicting Discriminant Validity- Fornell-Lacker Criterion

	EE	IE	INTR	PI	PV
EE	0.968				
IE	0.410	0.967			
INTR	0.471	0.004	0.964		
PI	0.831	0.398	0.513	0.969	
PV	0.453	-0.032	-0.045	0.422	0.966

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

As presented in Table 3, the square root of the AVE values for EE (0.968), IE (0.967), INTR (0.964), PI (0.969), PI (r = 0.831) and PV (0.966) are greater than their corresponding inter-construct correlations. This confirms that each construct shares more variance with its own indicators than with other constructs, thereby establishing satisfactory discriminant validity (Hair et al., 2014, 2018, 2021).

Discriminant Validity: Heterotrait-Monotrait Ratio (HTMT)

In PLS-SEM, HTMT is widely used as a robust criterion for assessing discriminant validity by determining whether constructs measure different concepts. Discriminant validity is considered adequate when HTMT values remain below the recommended thresholds of 0.85 or 0.90. Furthermore, the confidence intervals obtained through bootstrapping should exclude 1 to provide evidence that the constructs are sufficiently distinct.

Table 4 Discriminant Validity: Heterotrait-Monotrait Ratio (HTMT)

	EE	IE	INTR	PI	PV
EE					
IE	0.415				
INTR	0.478	0.017			
PI	0.842	0.403	0.520		
PV	0.459	0.032	0.046	0.428	

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

As presented in Table 4, the HTMT ratios varied from 0.017 to 0.842 and remained within the acceptable limits of 0.85 and 0.90. Since all values were below the prescribed thresholds, discriminant validity is supported, indicating that each construct captures a unique concept and is sufficiently separate from the others.

Structural (or Inner) Model

After verifying the reliability and validity of the measurement model, the next step involved analysing the structural model to determine the impact of product visualization, immersive experiences and interactivity on purchase intention, using a sample of 320 respondents, a bootstrapping procedure with 5,000 resamples was conducted based on the guidelines provided by Hair et al. (2011, 2012, 2014, 2017) and Henseler et al. (2012). The hypothesised relationships were tested, and the model's explanatory and predictive performance was assessed using β values, t-values, p-values, R^2 , Q^2 , and effect size (f^2) measures.

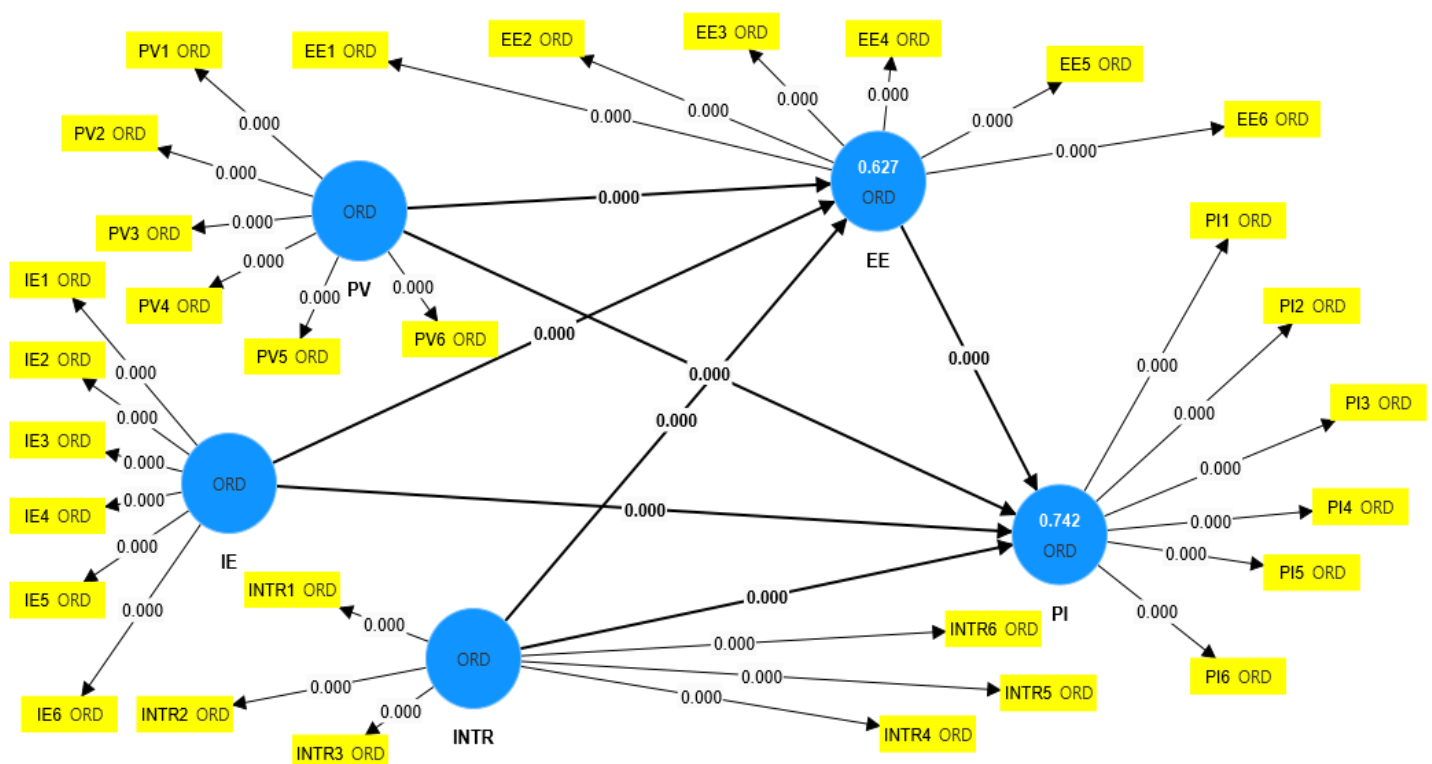


Figure 2: Path Diagram of Structural (Inner) Model

Hypothesis testing for direct and indirect Relationship

This section assesses the direct influence of the virtual reality construct on the endogenous variable, purchase intention. As outlined in the research framework, Table 5 provides a summary of the estimated β coefficients, t-statistics, and p-values for the direct paths under investigation. The null hypothesis (H_0) states that product visualization, immersive experiences, and interactivity have no significant impact on purchase intention, implying that the estimated path coefficients are not statistically significant.

Table 5 Path Coefficients for Direct Effects in the Inner Model

Path coefficient	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Remarks
EE -> PI	0.546	0.545	0.049	11.248	0.000	Accepted
IE -> EE	0.424	0.424	0.035	12.235	0.000	Accepted
IE -> PI	0.179	0.18-	0.038	4.758	0.000	Accepted
INTR -> EE	0.492	0.492	0.035	13.986	0.000	Accepted
INTR -> PI	0.264	0.264	0.041	6.398	0.000	Accepted
PV -> EE	0.489	0.489	0.036	13.589	0.000	Accepted
PV -> PI	0.192	0.193	0.039	4.989	0.000	Accepted

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

The study hypothesized (H_1) that virtual reality (product visualization, immersive experiences, and interactivity) would exert a significant and positive influence on purchase intention. However, the results presented in Table 5 reveal that H_{01} , which states that emotional engagement, has positive and significant effect on purchase intention. The findings show a positive and significant influence ($\beta = 0.546$, $t = 11.248$, $p < .001$). Since the p-value is below 0.05 and the t-value exceeds 1.96, the effect is statistically significant, indicating that emotional engagement significantly influences purchase intention among customers of H-Medix retail industry in Abuja. H_{02} , Immersive experiences has a positive and statistically significant influence on emotional engagement ($\beta = 0.424$, $t = 12.235$, $p < .001$). As the p-value is less than 0.05 and the t-statistic exceeds the critical value of 1.96, the relationship is statistically significant. Therefore the null hypothesis was rejected, indicating that there is statistically significant relationship between Immersive experiences and emotional engagement. H_{03} , Immersive experiences has a positive and statistically significant influence on purchase intention with path coefficient ($\beta = 0.179$, $t = 4.758$, $p < .001$). For the fact that p-value is below 0.05, and the t-value is well above 1.96, indicating that the effect is statistically significant. This means that the null hypothesis was rejected; there is statistically significant relationship between Immersive experiences and purchase intention. H_{04} , Interactivity also has positive effect on emotional engagement ($\beta = 0.492$, $t = 13.986$, $p < .001$). This represents large effect among the predictors in the model. Since the p-value is less than 0.05 and the t-statistic is greater than 1.96, the effect is statistically significant. Thus, the null hypothesis was rejected. H_{05} , Interactivity also has positive effect on purchase intention with ($\beta = 0.264$, $t = 6.398$, $p < .001$). Since the p-value is less than 0.05 and the t-statistic exceeds the critical value of 1.96, the relationship is statistically significant. Therefore the null hypothesis was rejected, indicating that there is a statistically significant relationship between interactivity and purchase intention. H_{06} , Product visualization has a positive and statistically significant influence on emotional engagement with a path coefficient ($\beta = 0.489$, $t = 13.589$, $p < .001$). Since the p-value is less than 0.05 and the t-statistic exceeds the critical value of 1.96, the relationship is statistically significant. Therefore the null hypothesis was rejected, indicating that there is a statistically significant relationship between product visualization and emotional engagement. H_{07} , Product visualization has a positive and statistically significant influence on purchase intention with ($\beta = 0.192$, $t = 4.989$, $p < .001$), as the p-value is below 0.05, and the t-value is greater than 1.96, it indicates that the effect is statistically significant. This led to rejection of the null hypothesis and the alternative one accepted, indicating that there is a statistically significant relationship between Product visualization and purchase intention.

Hypothesis Testing for Mediating Effects

According to Hair et al. (2014), mediation occurs when an independent variable influences a dependent variable through a third, mediating construct. In this study, the objective is to determine whether product visualisation, Immersive Experiences and interactivity as indicators of virtual reality indirectly influence purchase intention through emotional engagement. This mediating relationship is described and illustrated in Figure 2. Hair et al. (2014) propose calculating the mediating role as the product of the two path coefficients linking the independent variable to the mediator and the mediator to the dependent variable. Accordingly, the indirect effect path in this study is product visualisation, Immersive Experiences and interactivity-> emotional engagement->purchase intention. The alternative hypothesis (H) proposes that if mediation exists within this model structure, the below Table 6 presents the results of this test.

Table 6 Path coefficient for indirect effects of the structural model

Path coefficient	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Remarks
IE -> EE -> PI	0.231	0.231	0.027	8.452	0.000	Accepted
INTR -> EE -> PI	0.268	0.268	0.031	8.772	0.000	Accepted
PV -> EE -> PI	0.267	0.266	0.031	8.582	0.000	Accepted

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

As depicted in table 6, H08: emotional engagement is positive and significantly mediates the relationship between immersive experience and purchase intention with ($\beta = 0.231$, $t = 8.452$, $p > .001$). The positive t-statistic suggests that as immersive experience increases; purchase intention also increases by 0.231, therefore the hypothesis eight is rejected. H09: emotional engagement also has a positive and significantly mediated relationship between interactivity and purchase intention with ($\beta = 0.268$, $t = 8.772$, $p > .001$). The positive t-statistic suggests that as interactivity increases; purchase intention also increases by 0.268; therefore hypothesis nine is rejected. H010, emotional engagement serves as mediator between product visualisation and purchase intention with ($\beta = 0.267$, $t = 8.582$, $p > .001$). For the fact that the p-value is less than 0.05 and the t-statistic exceeds the critical value of 1.96, there is a mediating effect in the relationship. Therefore the null hypothesis was rejected.

Coefficient of Determination: R-Squared

The coefficient of determination (R^2) represents the proportion of variance in the dependent variable accounted for by the independent variables. Hair Jr. et al. (2017) highlight R^2 as a key indicator of a structural model's explanatory power. According to Hair et al. (2021), R^2 values of 0.75, 0.50, and 0.25 indicate substantial, moderate, and weak explanatory strength, respectively, whereas Cohen (1988) interprets values of approximately 0.26, 0.13, and 0.02 as large, medium, and small effects.

Table 6 Coefficient of Determination: R-Squared

	R-square	R-square adjusted
EE	0.627	0.624
PI	0.742	0.739

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

As shown in Table 6, the model explained 62.7% of the variance in Effort Expectancy ($R^2 = 0.627$; Adjusted $R^2 = 0.624$) and 74.2% of the variance in Purchase Intention ($R^2 = 0.742$; Adjusted $R^2 = 0.739$). The small differences between the R^2 and adjusted R^2 values indicate model stability. Based on established PLS-SEM

guidelines, the results suggest that the model exhibits moderate-to-substantial explanatory power for EE and substantial explanatory power for PI, consistent with thresholds (Hair et al., 2014, 2018, 2021).

F-square effect size

The f-square (f^2) statistic was used to evaluate the individual contribution of each exogenous construct to the variance explained in customer retention. It represents the incremental change in the explained variance resulting from the inclusion of a predictor in the model.

Table 7 showing f-square effect size

Relationship	f-square	Size
EE -> PI	0.430	Large
IE -> EE	0.482	Large
IE -> PI	0.084	Small
INTR -> EE	0.648	Large
INTR -> PI	0.164	Medium
PV -> EE	0.639	Large
PV -> PI	0.087	Small

Source: Author's Computation (2026) using Smart PLS 4.0.9.9 released 2023

As shown in Table 7, EE- PI ($f^2 = 0.430$), IE- EE ($f^2 = 0.482$), INTR -EE ($f^2 = 0.648$), and PV- EE ($f^2 = 0.639$) exhibited large effect sizes. In addition, INTR-PI ($f^2 = 0.164$) demonstrated a medium effect size. Conversely, IE- PI ($f^2 = 0.084$) and PV- PI ($f^2 = 0.087$) showed small effect sizes. These results suggest that the strongest contributions to the model are derived from the effects of interactivity and perceived value on effort expectancy, as well as the effect of effort expectancy on purchase intention.

DISCUSSION OF THE FINDINGS

The aim of this research was to investigate the mediating role of emotional engagement in the relationship between virtual reality and purchase intention among customers of H-Medix retail industry in Abuja. Based on the hypothesis test results and mediation theory by Hair et al. (2014), the study examined direct, indirect and mediated effects of virtual reality (VR) proxied by product visualisation (PV), immersive experience (IE) and interactivity (INTR) on purchase intention (PI) through the mediating construct of emotional engagement (EE).

Emotional engagement has a positive and statistically significant effect on purchase intention among customers of H-Medix in Abuja. This means that as customers experience higher levels of emotional engagement with the retail experience, there is likelihood of intending to purchase increases substantially. The strong statistical significance of the relationship reinforces the argument that emotional responses are not peripheral but central drivers of consumer behaviour in digital retail environments. This study's finding corroborates (Sansone & Balconi, 2022; Zed et al., 2026) results which stated that emotional engagement has a positive and statistically significant effect on purchase intention among customers. The result also supports Consumer Emotion Theory, which argues that emotions play a critical role in shaping decision-making by influencing perceptions of value, trust, and satisfaction.

Immersive experience has a positive and statistically significant influence on purchase intention. This means that enhanced immersive experiences significantly increase customers' emotional involvement with products and services. This finding is consistent with the Stimulus–Organism–Response (S–O–R) Theory who argued that environmental stimuli influence individuals' internal psychological and emotional states, which subsequently shape behavioural outcomes. The current study align with (Yoon & Son, 2021; Zafar & Anees,

2026; Zhen & Yuanfeng, 2024) who found that Immersive experience is positive and significant influence on purchase intention

The positive relationship found between Interactivity and purchase intention aligns with earlier studies (Jiang et al., 2010; Liu & Zhang, 2024; Wismiarsi et al., 2024) who emphasized that Interactivity has a significant effect on purchase intention. The finding demonstrates that interactivity is a critical driver of emotional engagement in virtual reality environments highlighting the importance of incorporating highly interactive features into VR applications, as these features encourage active customer participation and foster stronger emotional connections. The findings support technology acceptance frameworks, indicating that perceived security and ease of access have a strong influence on customer engagement. The findings support Flow Theory, indicating that active participation and control over an experience increase an individual's level of immersion and emotional involvement. Interactive features allow consumers to actively engage with products, explore information, and personalize their experiences, thereby fostering deeper emotional engagement.

Product visualization has a positive and statistically significant influence on purchase intention. This confirms that product visualization is an important factor influencing consumers' purchase intentions. The findings support earlier works (Arouya et al., 2025; Fikriyah & Alam, 2025; Li et al., 2024) who found that Product visualization is a positive and statistically significant influence on purchase intention. This finding highlights the value of virtual reality technologies in providing realistic and informative products. The result aligns with Information Processing Theory, which posits that consumers rely on available information to evaluate products before making purchasing decisions. Product visualization provides rich and detailed information that facilitates product assessment, improves comprehension, and reduces perceived risk.

Emotional engagement positively and significantly mediates the relationship between immersive experience and purchase intention. The finding highlights the pivotal role of emotional engagement in converting immersive virtual reality experiences into purchase intentions. It confirms that emotional engagement acts as a bridge between immersive experiences, product visualisation, interactivity and purchase intention. This finding supports the Stimulus–Organism–Response (S–O–R) Theory who states that environmental stimuli influence consumers' internal emotional states, which subsequently drive behavioural responses. The current study is consistent with earlier works (Sansone & Balconi, 2022; Zed et al., 2026) who found that emotional engagement serves as a mediator among the variables under study and on purchase intention.

CONCLUSION AND RECOMMENDATION

Conclusion

The study concludes that all the measurement of virtual reality on purchase intention is positive with emotional engagement mediating the relationship among the variables. This means that customers who experience higher levels of visualization, immersion, and interactivity are more emotionally engaged, which subsequently enhances their purchase intentions.

Recommendation

- i. The management of H-Medix should strengthen emotional engagement by creating personalized customer experiences, empathetic communication, and interactive digital content that foster positive feelings and trust with regular monitoring of customer emotions and feedback to ensure the retail experience remains engaging and capable of driving purchase intentions.
- ii. The management of H-Medix should invest in immersive digital features such as interactive product displays, virtual consultations, and engaging website interfaces to enhance customer involvement. These experiences can strengthen customers' connection with products and increase their intention to purchase
- iii. The management of H-Medix should enhance interactivity by integrating features such as real-time customer support, personalized product recommendations, and interactive product exploration tools.

These features will encourage active customer participation, strengthen emotional engagement, and increase purchase intention.

- iv. H-Medix should invest in high-quality product visualization tools, such as 3D product displays and virtual product demonstrations, to provide customers with realistic and detailed product information. This will enhance customers' understanding of products, reduce uncertainty, and strengthen their purchase intentions.
- v. H-Medix should design immersive and interactive VR experiences that deliberately evoke positive emotions through storytelling, personalization, and engaging product presentations. Strengthening emotional engagement should be a core strategy, as it directly translates immersive stimuli into higher purchase intention.

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