

Exploring Metaverse Adoption Intentions among Nigerian Media Organisations

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Abstract

The Metaverse presents significant opportunities for transforming media practices and audience engagement, particularly in emerging markets like Nigeria. However, little is known about the intention to adopt the technology among media organisations. Therefore, this study was conducted to explore Metaverse adoption intentions among Nigerian media organisations by integrating insights from the Extended Unified Theory of Acceptance and Use of Metaverse Technology (UTAUMT). The study was based on a survey of 205 media professionals in Nigeria who use Metaverse. Results of the survey show key adoption influencing factors include performance expectancy, social influence, and facilitating conditions. Findings further show that performance expectancy and hedonic motivation significantly predicted adoption intention. The practical implication of the results of the study is that it can be relied upon to take decisions on adoption and use of Metaverse across different industries. This study offers the need for strategic integration and makes case for addressing organisational barriers and cultural issues while efforts are made to foster innovation in fast-paced digitised Nigerian media landscape.

1. Introduction

Technological advancements have led to transformation in different sectors including the media industry. These technologies have led to sweeping changes in the way and manner humans live, act, and communicate. One of such innovations is Metaverse; an immersive, interconnected, and virtual digital possibility seen as a groundbreaking invention of twenty-first century. The world has continually embraced technological innovation and so is the idea of virtual reality (VR) that has become popular among technology users in the digital age and time. Concerns about VR's groundbreaking impact have resulted in series of debates among experts and even among pop culture enthusiasts. Cultural production is an aspect that has seen the impact of VR as demonstrated in academic publications, newspaper articles, and TV news reports as well as the Internet and social media memes. The Metaverse offers unparalleled opportunities and opens numerous vistas for creation and distribution of content coupled with audience interaction and analytics. Its virtual environment known to be three-dimensional allows users to engage using avatars and in real time.

Following a seeming global acceptance of the Metaverse technology and the possibilities created, media organisations in Nigeria are seemingly exploring the integration into their systems. The adoption and integration of Metaverse has had a fundamental impact on information exchange altering ways people access and engage with content. This impact is obvious in journalism and sports. Across these areas, Instagram and X (both social media

platforms) offer instant updates and create endless platforms for fans, teams and athletes to interact across a spectrum of issues (Bahir, 2023). These issues range from team growth, statistics, moves, and transfers. Consequent upon this connectivity between stakeholders, viewers' experience is enhanced ensuring a more participatory and immersive space for sport lovers. Advertising, particularly in developing countries is also not left out as the adoption of new media technologies characterised practice. According to Mande et al. (2023), the adoption and use of these technologies enhances innovative strategies that also facilitate outreach, provides the space to reach target demographics and yielding return on investment for investors.

The media sector has benefited from the convergence of Metaverse and related new media technologies causing a paradigm shift for practitioners and the organisations. By virtue of its transformation of social engagement and information distribution systems, modern communication frameworks are required in order to align with its attributed (Raji et al., 2024). Media organisations in Nigeria can benefit from the numerous opportunities offered by Metaverse because with it are endless possibilities such as increased interactivity, content delivery, strategies diversification, new avenues opening, and more. These are in addition to offerings such as dynamic advertising, virtual events, and storytelling that are increasingly immersive providing the media outlets the opportunities for competitiveness in a rapidly digitised media world. In essence, Metaverse offer countries in the Global South, opportunities to measure up with those in the Global North.

Nonetheless, there are associated challenges with the Metaverse's unique immersive qualities. Some of the issues revolve around ethical dilemmas, social division, and media addiction closely linked with user engagement and these are unique angles that define the intricacies associated with incorporating technologies of this nature (Bojić et al., 2024). Accordingly, Li (2023) aver that an understanding of Metaverse's dual nature being that it has both opportunities and challenges requires that a creative approach is advanced towards its adoption. The researcher further admonishes that societal welfare must be considered while priority attention is given to technological innovation as seen in the case of the adoption of Metaverse. Additionally, Metaverse with all its potential also have numerous obstacles particularly within the context of the Nigerian landscape. Lack of technical know-how, infrastructure deficit, and high cost of acquisition are some of the hurdles that face the seamless integration of technologies like Metaverse. This is also based on previous studies that identified similar challenges as being the bane of ICTs adoption in media in the country (Ja'afaru, 2018; Igyuve et al., 2020; Oyedokun, 2022). Furthermore, regulatory ambiguities and resistance from socio-cultural and ethno-religious organisations complicates the possibility of a widespread acceptance of the technology.

Against all odds, media organisations in Nigeria are starting to explore the potential of a possible Metaverse adoption. This is even in the face of the glaring opportunities and challenges. The technology has great potentials relating to content delivery systems, audience engagement, and the multiple streams of revenue generation for media houses in the country. Juxtaposed with the challenges of high acquisition costs, infrastructural deficit, cultural considerations, limited technical expertise, the opportunities and offerings remain valid and difficult to resist. Therefore, this study was conducted to gauge the perception of stakeholders in respect of the willingness of media organisations in Nigeria to adopt Metaverse. It also sought to identify opportunities and challenges and, in the process, provide insights to aid the adoption and acceptance of Metaverse in the country's media sector. This is especially the case considering the relevance of technology in a rapidly digitised and evolving world of technological advancements.

2. Statement of the Problem

Immersive and interactive capacities are some of the offerings of Metaverse technology and with this come the revolution in the media world and that of global communication connectivity. Augmented Reality (AR), Virtual Reality (VR), 3D games or movies, interactive simulations, theme parks are some of the associated possibilities in the Metaverse technology package by which users engage with content in dynamic and unique ways. This remains the valid angle from which Metaverse is seen to create more engaging and interesting contents, virtual newsrooms and immersive journalism. Stănescu (2022) observes that Metaverse is an important technology in twenty-first century media landscape particularly in immersive journalism creating the space to provide clear explanations to stories and also create a wider readership. Furthermore, the researcher reveals that Metaverse enables and revolutionise the way a lot of things are done particularly in aspects such as editorial meetings and advertising which are now effectively conducted with the use of the Metaverse technology. The adoption and use of Metaverse in media and entertainment industry is demonstrated in empirical evidence that point to the usefulness in media across the world (Alsoud et al., 2024; Burak, 2024; Fang, 2024; Huang et al., 2025; Sritong et al., 2024). Despite global advances in Metaverse adoption, little is known about Nigerian media houses' readiness, perceptions, and barriers militating against the acceptance and use. This study was conducted to address these gaps.

3. Research Questions

- i. What are the perceptions of Nigerian media houses about the Metaverse?
- ii. Are Nigerian media houses willing to integrate the Metaverse into their operations?

- iii. What are the challenges and opportunities associated with the adoption of Metaverse by Nigerian media organisations?

4. Conceptual Review

The concept of Metaverse and associated ones such as extended reality, virtual reality, augmented reality, and mixed reality are conceptualised under this section. Metaverse is seen as a post-reality and advanced universe that converges digital and physical environment into a platform that is immersive, persistent and with multiple users. With the technology, users, virtual environments, and digital objects are able to interact within elements of both the virtual and real worlds. The technologies that power this interconnected digital world include Augmented Reality, Virtual Reality (VR) and Mixed Reality (MR) and these are considered as the very foundation of Metaverse technology. The idea is that living and human actions are digitised and take the form of reality. Against this backdrop, Metaverse is described as a virtual world in which people are able to live, travel and perform some functions (Sipper, as cited in Sipper, 2022). Those herein referred to as “people” are users of the technology. Its impact is felt across different industries. Therefore, as the Nigerian media takes on the adoption of the technology, it becomes imperative to have a clear understanding of how associated technologies such as AR, VR and MR function to shape media practices in general, audience engagement, and content delivery in particular.

Extended Reality (XR) is also known as Cross Reality and it is an umbrella term used to refer to immersive technologies that include Augmented Reality (AR), Virtual Reality (VR) and Mixed Reality (MR). Basically, XR provides space for the creation of digital, electronic environment interactions between and among users with the use of virtual representation of objects and data (Adil et al., 2024). Cases of XR technology interactions involve humans interacting with partial or full synthetic real environment constructed with the use of technology system. The concept of XR within the framework of Metaverse is that the technologies that create a scenario where virtual and real worlds are blended seamlessly eventually develop a sort of challenge whereby users are unable to differentiate between physical objects and 3D ones (Adil et al., 2024). This implies that the world or extended reality creates a possibility for confusion.

The understanding of Virtual Reality (VR) is unique and it is about digitally created environment that is completely separate. In this context, users of VR are immersed in completely virtual world wherein they experience interaction that imitates or mimics real and physical surrounding (Slater & Sanchez-Vives, 2016). Amplification of VR experience is made possible through equipment that is multisensory and these include omnidirectional treadmills and headsets that enhance user immersion through movement, touch, sound, and sight (Pellas et al., 2021). According to Lamb (2023), VR is characterised by its ability to stimulate real world interactions and create a complete sense of immersion which makes it a valuable tool in different aspects. In media and journalism, there has been an increase in the use of VR and research efforts have also been devoted to ensure that development and adoptions are properly documented (Tribusean, 2020).

Embedding digital elements and juxtaposing them into the real-world environment is the pattern in which Augmented Reality (AR) approaches physical spaces. Within the AR context, virtual contents are transformed into the physical world and in the process create blended experience where digital and physical elements are seen side-by-side (Ibáñez & Delgado-Kloos, 2018). The result of this technological possibility is layered digital artifacts that are spatially projected and mediated by devices such as smart glasses, tablets, smartphones, and contact lenses (Mystakidis et al., 2021). It is also possible to implement AR headsets with pass-through modes wherein real-world input captured by cameras is displayed. This is where the AR concept becomes useful to the media and journalism because digital images captured with the use of cameras are largely featured in news stories in print, broadcast, and even online journalism.

Another concept for review here is Mixed Reality known by its acronym (MR). This has evolved over time and so it is complex due to its processes which is a reflection of the trends in immersive technologies (Speicher, Hall, & Nebeling, 2021). It is considered as an advanced form of AR because there is a real-time interaction between digital projections and physical environment. For example, within the context of a virtual game, it is possible for a non-player character to recognise physical objects like furniture and make use of them within the game – as in hiding behind a desk or even under a table. In the MR world, specialised glasses are also required (Baltzer et al., 2025). In this study, MR is seen as an umbrella term for AR and VR. It is also imperative in media and journalism practice for the purpose of immersive storytelling and impact on the audience.

Conceptualisation of the processes involved in the interaction of these immersive with physical environment requires a consideration of the Milgram and Kishino's Reality-Virtuality Continuum. Within the framework of this continuum physical environments are presented as spectrums on the left end while considered as fully virtual environments on the right. In the near left end is placed the construct that represents AR while on the far right is VR and MR. These technologies are considered as both cutting-edge and disruptive, however playing significant role in the creation of new communication setting wherein journalism is automated (Vincente & Pérez-Seijo, 2023). This is an indication that the technologies are useful in journalism and media world as they can be leveraged to create content and engage audience in greater interactive dimensions.

5. Review of Literature

Studies on Metaverse are relative but this does not take away the emerging and greater interest among scholars. Several researchers have made attempts to demystify the concept and its applicability in the media world. Several other attempts have also been made to study its applications across different industries and sectors. Metaverse is a creation that is based on XR technologies where multisensory interactions take place between users, virtual environments and digital objects as elements. Engaging and immersive experiences of users are based on these interactions. In XR systems, stereoscopic displays are considered as critical because with them are depth perception as created in different images for each eye (El Beheir et al., 2019). A user's field of view can be covered with XR display that comes in high resolution from between 90 to 180 degrees making it engaging and ensuring visual immersion for them. Furthermore, it is said that binaural and spatial audio provide superior auditory experiences that walks users through virtual spaces, giving the sound cues marginal advantage (Hong et al., 2019).

Aside the all-important sensory input of XR, there is the virtual environment-active interaction side of the system made possible through devices like motion controllers. With these devices, users are able to grab, touch, operate and manipulate virtual objects (Maereg et al., 2019). This capability ensures that users are not passive recipients but active participants thereby creating a space wherein engagement is enhanced in virtual environment. This makes the system and technology important in training and human capacity development and necessary for journalists and persons in different other fields of importance – engineering, aviation, medicine and more. It is important to note that research efforts are ongoing to improve user experience. For instance, there are some about wearable and tracking devices such as gloves and haptic suits to create spaces for more natural interfaces for interaction in virtual spaces (Maereg et al., 2019). Important areas of study also include simulating smell in XR environments (Cheok & Karunanayaka, 2018).

Users are not required to be stationary within the context of interaction in XR environments. Rotational and positional tracking systems are used to translate physical movement into virtual spaces (Atsikpasi & Fokides, 2021). Within these systems, sensors in the headset (inside-out) and external cameras (outside-in) are used to track moves made by users. The motion tracking capabilities are important specifications and are also indicated by the degrees of freedom (DoF) of a headset. While early headsets supported three rotational DoFs, contemporary models support up to six DoFs, including lateral movement along the x, y, and z axes (Atsikpasi & Fokides, 2021). Innovations like unidirectional treadmills are pushing the boundaries of perpetual movement in VR environments (Boletsis, 2016).

Within the understanding of Metaverse lies complex the other issue – virtual reality. The recent popularity of virtual reality began in 2014, with Facebook's \$2 billion purchase of Oculus, a VR startup company focusing on gaming. This move aimed to introduce virtual reality technologies to the market as consumer products and to utilise them as "social software." Indeed, both Facebook's public discourse and that of other large companies that followed suit placed a greater emphasis on the social dimensions of VR than on its potential for gaming (Egliston & Carter, 2022). Concurrently, Facebook underwent a rebranding initiative, adopting the name "Meta," which signaled a clear pivot towards virtual reality and an ambition to engage with the creation and predominance of the interconnected virtual environments referred to as the "Metaverse" (Blackman, 2024).

The Metaverse represents a significant technological breakthrough, characterised as a persistent, immersive virtual environment where users interact with one another via avatars in real time. It is founded on cutting-edge technologies like virtual reality VR, AR, and blockchain, offering a seamless integration of both physical and digital realms (Anagu et al., 2024, Raji et al., 2024). The Metaverse transcends mere concept; it is an evolving ecosystem that accommodates a multitude of applications, ranging from education to entertainment and media. The emphasis by researchers has been its capacity to facilitate new forms of interaction, promote innovative models of business and overall transformation of conventional business industries (Sukhee et al., 2024).

Adoption of Metaverse technology has become an area of interest across the globe and in different industries. On a global scale, there is a gradual movement towards the adoption of Metaverse in the quest to engage audience members and improve content creation methods and techniques. Roblox and Horizons are examples of some of the platforms that have environments in which virtual events and immersive storytelling are prioritised. The philosophy behind the creation of these platforms is to attract and maintain the attention and interest of tech-savvy audience serving experiences that transcend formats offered in the traditional media (Bahir, 2023). Media outlets are provided with the option of real-time engagement and connection with audience in dynamic and more personalised ways. However, there are variations to this adoption across different regions and factors such as investment capacity, technological infrastructure, and audience readiness are significant considerations (Li, 2023).

Technology adoption in the media industry in Nigeria is also an important matter of discourse. Sometimes it could simply be about their use in the newsroom operations of the media organisations (Igyuve et al., 2020) or in the general news gathering and reporting by the mediums (Ja'afaru, 2018). That stated, it is important to note that the media sector of Nigeria is dynamic and resilient and it has come to be recognised as it also functions in a distinct context having a diverse and heterogeneous audience, economic obstacles and cultural richness. In

Nigeria, there is a kind of media diversity that has defined its operation and functions. On this note, different media genres; print (newspaper and magazine), radio, and television operate alongside digital platforms offering a wide range of contents designed for the satisfaction of the consumers (Mande et al., 2023). Content creation and distribution has further been enhanced by virtue of the emergence of new media which has also enabled interactive engagements, real-time update, and ease-of-access especially across social media platforms. Irrespective of these gains, the media sector has continued to face challenges including regulatory bottlenecks, infrastructural deficiencies and limited digital literacy (Ja'afaru & Inobemhe, 2024; Maurantonio, 2023).

There is also a need to state the implication of Nigeria's media drive toward Metaverse adoption and utilisation. It is instructive to note here that the act of Metaverse adoption and incorporation into the media sphere is potentially going to transform the sector in a profound way. The idea of Metaverse adoption, content distribution is revolutionised and this presents opportunities for interactive and captivating experiences for the audience. Additionally, innovative business models that are about tailored advertising, digital collectibles, and virtual events could also emerge from this adoption. Equity, accessibility and regulatory governance issues are also associated with the adoption and integration of Metaverse. The integration of the technology could also benefit virtually all segments of the society. It is also considered as a way to prevent the ever-widening digital disparity. Industry leaders and policy makers are, therefore, admonished to build synergy and collaborate to set frameworks that drive innovation while emphasising the need for user privacy and ethical standards (Li, 2023).

Nevertheless, certain challenges and opportunities are associated with the adoption and integration of Metaverse in the Nigerian media sector. It reveals a complex interplay of opportunities and challenges for the media industry. Issues such as internet connectivity and limited network access, infrastructural decay, coupled with the high costs of acquisition of Metaverse associated technologies like AR and VR come as critical barriers to the use of these technologies. The absence of skill sets for many professionals who lack the necessary technical know-how for effective utilisation of Metaverse systems, technologies and platforms presents complex challenges (Bojić et al., 2024). Conversely, exciting opportunities are also associated with the Metaverse idea as immersive storytelling enhances audience engagement and interaction, broaden revenue sources, and engage with the digital economy. For example, Media organisations in Nigeria could also leverage interactive news reporting, virtual event hosting and augmented advertising tactics (Raji et al., 2024).

6. Empirical Review

Metaverse as used in the media industry is an area of media and communication research that has received increased attention of researchers in recent times. These studies are also based on the unfolding events in AI and VR. Aspects of such studies have been devoted to exploring organisations that have interests in changes and their implementations especially that of innovation and technology. In a study conducted by Kumar et al. (2025), the goal was to examine the factors that influence the implementation of the enterprise Metaverse within select organisations. The study is mixed-methods oriented based on twenty-two interviews conducted between March and April, 2023 coupled with the use of structural equation modelling and artificial neural network. Findings reveal that enterprise Metaverse implementation is based on real-time analytics capability, stakeholder pressure, industry pressure and operational excellence. Furthermore, it was revealed that the success and failure of the system depends on the way it is implemented. In comparison with the current study, population gap is identified and the focus on the Nigerian media industry bridges that gap.

Sritong et al. (2024) carried out a study on the adoption of Metaverse technology within the Bangkok metropolitan areas. The study was based on the theoretical framework of the Unified Theory of Acceptance and use of Technology 2 (UTAUT2) coupled with the role of consumer engagement (CE) and social media marketing (SMM). It also gauged the intention to use (IU) Metaverse in the country. The study relied on data from about 403 internet users in Thailand. Findings show a significant relationship among the constructs and demonstrate that SMM has direct influence on UTAUT2 and CE. Accordingly, the influence on UTAUT2 is given as ($\beta = 0.787$) while that on CE is ($\beta = 0.211$). Furthermore, the moderation analysis demonstrates that SMM was associated with IU in the Bangkok area. Instructively, the study reveals that age is a factor in respect of the association between SMM and IU which was mediated through UTAUT2 and CE respectively. The study was not specifically about any industry and may have missed the opportunity to show practical knowledge as applied to the area and this constitutes the research gap bridged in this current study's focus on the media industry in Nigeria.

A similar study conducted by Hasani, Rezania and Mohammadi (2024) is one with focus on the adoption of Metaverse by small and medium-sized enterprises. Specifically, the researchers focused on identifying factors that influences the adoption intention of the technology as well as its impact on the performance of the SMEs. This study is based on survey techniques through online, telephone as well as in-person (face-to-face) data gathering methods. It was based on the theoretical framework of the technology-organisation environment (TOE). Findings of the study demonstrate that the factors of significance that may have influenced Metaverse's adoption intention among the SMEs include financial performance, service experience, and customer engagement among others. Accordingly, factors such as security and anxiety were examined. Consequently, the study show that factors such

as anxiety, privacy, and security had no impact on the adoption intention among the SMEs. Another significant result from the study is that social networks remain a factor of note and SMEs that possess that alongside effective communication channels may rely on such to foster positive word-of-mouth to disseminate information related to Metaverse. The study was not grounded theory-focused one and so this constitutes the major research gap. Conversely, this current is based on theoretical frameworks of UTAUT2 and UTAUMT upon which ideas and findings are systematised.

The adoption of Metaverse in corporations was another study conducted by Irfan (2024) using the technological acceptance framework and moderated self-determination theory to assess its adoption in corporations in Indonesia. The researcher relied on valid data from 344 respondents elicited through the use of survey data collection instrument – the questionnaire. In the study, the roles of technology reliability (TR), social influence (SOC), and immersive experience feature (IMF), and customisation capacity (CUS) on perceived usefulness (PU) were examined in order to understand the factors that influence usage intention (UI) of Metaverse in the corporations. Findings of the study demonstrate that TR, IMF and CUS significantly enhanced PU which is considered as a strong indicator of UI. The essence is that PU drives adoption of technology as seen in the case of Metaverse adoption among corporations in Indonesia. In respect of the study under review, the population gap is identified and this current study's focus on Nigeria helps bridge the gap.

Furthermore, a study was conducted by Shin and Jo (2024). In the study, the researchers sought to decipher behavioural intention that may bifurcate users into experienced and inexperienced cohorts in respect of Metaverse. The study relied on survey data from 372 respondents. Whereas 65 percent of the respondents are experienced users, 35 percent are inexperienced. Findings of the study affirm that perceived usefulness, perceived ease-of-use and perceived enjoyment significantly influenced satisfaction. On the other hand, further results from the study reveal that for users considered as inexperienced, there is a significant impact of PU on both adoption intention and satisfaction while only satisfaction was bolstered by perceived enjoyment. Reviewed studies are similar to this current study based on the focus on the adoption of Metaverse technology. However, the research gap is specific focus on other industries while this current study's attempt to bridge the gap resulted in its focus on media organisations in Nigeria.

7. Theoretical Framework

7.1 UTAUT2 Model

The UTAUT2 model utilises performance expectancy, effort expectancy, social influence, and facilitating conditions as vital elements that predict user adoption intentions of new technologies while conducting forecasts (Nguyen et al., 2023). Hedonic motivation together with price value and self-efficacy are incorporated into the model to monitor intrinsic and extrinsic motivational patterns that influence technology adoption. The components of UTAUT2 provide comprehensive information about technology acceptance behaviours because they reflect the effects of demographic elements including experience and gender alongside age (Dao et al., 2023).

The demographic variables used to explain UTAUT2 adoption do not appear essential when studying Nigerian media organisations' decision to accept Metaverse technology. Due to its status as an innovative boundary-defying technology, Metaverse can exert more influence on organisation strategies and person preferences than demographic influences. The UTAUT2 framework undergoes reformulation in this study to emphasise media-specific concepts that best represent Metaverse behaviour patterns in the Nigerian media industry. The current version of this model named UTAUT2 incorporates hedonic motivation and price value and habit among other elements that influence technology adoption decisions of individuals (Venkatesh et al. 2012). Price value as well as habit receive no attention in this research because Metaverse remains new in Nigerian media houses.

7.2 The Extended Unified Theory of Acceptance and Use of Metaverse Technology (UTAUMT)

The research explores Metaverse technology adoption within Nigerian media organisations through an Extended Unified Theory of Acceptance and Use of Metaverse Technology (UTAUMT). Research based on Extended Unified Theory of Acceptance and Use of Metaverse Technology (UTAUMT) examines the effects of Metaverse Performance Expectancy (MPE), Metaverse Effort Expectancy (MEE), Metaverse Social Influence (MSI), Metaverse Hedonic Motivation (MHM), Metaverse Price Value (MPV), Metaverse Self-Efficacy (MSE) and Metaverse Facilitating Conditions (MFC) on media organisation adoption.

The UTAUMT framework incorporates specific Metaverse traits which refer to its deep engagement and ability to create transformative content. The confidence in Metaverse capabilities for enhancing both content delivery and audience-to-content interactions represents performance expectancy among media professionals. Metaverse tools become easier to use through excellent user experience according to effort expectancy measurements. The concept of social influence examines how market trends along with peer advice drives

adoption selection while facilitating conditions represent the availability of required infrastructure and resources needed to implement the Metaverse.

The UTAUMT framework provides an approach to study every factor influencing Metaverse acceptance among Nigerian media organisations. The framework considers separately both the particular advantages and difficulties which affect media organisations through enhanced relationship building and infrastructure usage constraints. This research focuses on Metaverse-related elements to present actionable advice about how media organisations can integrate this technology into their operating processes. The research foundation outlines the hypotheses which will be described in detail later in this text. The study draws its basis from the Extended Unified Theory of Acceptance and Use of Metaverse Technology. The Metaverse adoption analysis for Nigerian media organisations requires testing three research hypotheses which focus on the key elements affecting their adoption decisions according to UTAUMT.

8. Research Framework and Formulation of Hypotheses

Grounded in the Extended Unified Theory of Acceptance and Use of Metaverse Technology (UTAUMT), the following hypotheses are formulated to examine the factors that impact the Metaverse adoption among Nigerian media organisations:

8.1 Metaverse Performance Expectancy (MPE)

Media professionals determine MPE as the assessment of Metaverse usage potential to increase organisational efficiency. The beliefs about Metaverse improvements in content delivery along with enhanced audience activation and cutting-edge advertising practices make up what MPE stands for in media operations.

H1: Metaverse Performance Expectancy (MPE) has a positive impact on the Behavioral Intention to adopt Metaverse (MBI) in media organisations.

8.2 Metaverse Effort Expectancy (MEE)

Metaverse Effort Expectancy describes how straightforward media users find working with Metaverse technology to be. Nigerian media organisations must focus on the ease with which team members master Metaverse tools and create immersive content as well as manage virtual communication.

H2: Metaverse Effort Expectancy (MEE) positively influences the Behavioral Intention to adopt Metaverse (MBI) in media organisations.

8.3 Metaverse Social Influence (MSI)

MSI measures how much outside professional remarks affect organisational adoption decisions. External opinions of leaders as well as stakeholders and members of a particular industry influence decisions about adoption. Significant personnel within the industry significantly influence media adoption choices of their organisations.

H3: Metaverse Social Influence (MSI) positively drives Behavioral Intention to adopt Metaverse (MBI) in media organisations.

8.4 Metaverse Facilitating Conditions (MFC)

MFC encompasses the availability of essential resources, infrastructure, and technical support required for Metaverse implementation. These conditions considerably increase the likelihood of adoption by lessening perceived obstacles.

H4: Metaverse Facilitating Conditions (MFC) positively affect the Behavioral Intention to adopt Metaverse (MBI) in media organisations.

8.5 Metaverse Hedonic Motivation (MHM)

MHM denotes the pleasure or satisfaction gained from engaging with the Metaverse. In the media context, this relates to the creative satisfaction media professionals achieve while producing immersive content or interacting within virtual settings. MHM stands for the satisfaction they experience while using the Metaverse platform. In the media house, this is the creative satisfaction derived from production activities carried out by media

professionals in their respective media work. People achieve fulfillment by either creating immersive content or maintaining interactions in virtual spaces.

H5: The positive effect of Metaverse Hedonic Motivation (MHM) drives Behavioral Intention to Adopt Metaverse (MBI) among media organisations.

8.6 Behavioural Intention to Adopt (MBI)

The level of probability that media organisations will adopt technology becomes the focus of Behavioural Intention (MBI). Media organisations accept and implement Metaverse technologies based on what their employees think and believe.

H6: Behavioral Intention to Adopt (MBI) positively influences the Use Behaviour (MUB) of Metaverse in media organisations.

9. Methods

9.1 Research Design

This research employed survey-based methodology for data collection because it is robust and provides an efficient system to obtain statistical information across various groups of people. The design structure fits perfectly for analysing UTAUT model constructs while identifying their connection patterns. Individuals in the research target population are professional from the Nigerian media sector.

9.2 Study Population, Sample Size and Sampling Technique

The population of this study comprised of registered media professionals in Nigeria of which the official figure based on the Nigerian Union of Journalist compendium is 5,945. The sample determined from the population was 270 using the Cronbach's sample size determination formula with 90 % confidence level and margin error of 0.05 (5 %). The researchers used simple random sampling technique to select respondents from among the media professionals.

9.3 Data Collection

Data were collected between September and December 2024 using a structured online questionnaire distributed via Google Forms. The instrument comprised two sections: demographic information and items measuring research constructs on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The questionnaire was adapted from validated UTAUT and UTAUT2 scales, modified for the Metaverse context. Three media and technology adoption experts reviewed the instrument for content validity. A pilot test with 30 media professionals confirmed reliability (overall Cronbach's $\alpha = 0.9$). Ethical procedures included informed consent, voluntary participation assurances, anonymity guarantees, and withdrawal rights.

Prior to the data collection for this study, the researcher ensured compliance to the minimum ethical guidelines. In line with research ethics, survey participants/respondents were asked to consent by checking the space for informed consent. Contained in the consent statements include awareness in respect of the objectives and purpose of the research, willingness to participate in the research voluntarily. In addition, participants were also assured of anonymity and confidentiality of the information provided. Information about the willingness and freedom to withdraw from the study at any point in the survey process and period was also part of the ethical statement provided to the participants while gathering data for this study.

9.4 Data Analysis

Researchers analysed survey data using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software (version 4). This analytical method proved appropriate because of its strength to analyse complex models together with its assessment capability of measurement and structural models. The researchers investigated the construct validity and reliability through assessment. Composite reliability, Cronbach's alpha and Average Variance Extracted (AVE) were used to assess internal consistency and convergent validity. The Fornell-Larcker and Heterotrait-Monotrait (HTMT) ratio and Structural Model Assessment Path coefficients, R^2 values were used to test the proposed hypotheses in the analysis.

Data analysis of this study was based on data collected from 205 respondents from the Nigerian media professionals who used Metaverse in entertainment/media content marketing. The researchers obtained the data using an online questionnaire from September to December 2024 from randomly selected users. The survey

questionnaire is separated into two main sections. The first section is about demographic information, while in the second section comprised varied range of items related to the research model. The instrument was scaled using a five-point Likert scale. The survey questionnaire was designed based on earlier validated instruments. A test involving 30 media professionals was conducted to assess clarity, reliability, and consistency of the instrument.

10. Results

Data from the survey are presented under using tables and frequencies.

Table 1 Demographic information of the respondents

	Frequency	Percentage
Gender		
Male	129	62.9
Female	76	37.2
Age		
20-25	12	6
26-30	85	41
31-35	65	32
36-40	24.6	12
Above 40	18.4	9
Qualification levels		
MSc & above	51	25.1
BSc/ HND	111	54.3
ND	43	20.6
Designation		
Editor	28	13.7
Content Creator	44	21.6%
IT Specialist	25	12.3%
Journalist	107	52.4%
Years of work experience		
21 years above	31	15%
16-20 years	46	23%
11-15 years	40	19%
6-10 years	66	32.4%
Under 5 years	22	10.6%
Media Organisation (s)		
Champion Newspapers	30	14.7%
Daily Trust newspaper	11	5.3%
ASHENEWS	30	14.6%
IBBUL CLICKFM	38	18.4%
Africa Independent Television	35	17%
NBS	27	13%
TV Platinum	9	4.6%
Platinum TV	21	10%
One Page Africa	4	2.4%
	205	100

10.1 Reliability and Convergent Validity

Accordingly, the findings reveal that Cronbach's alpha of all latent factors is above 0.70 as recommended by (Hair et al., 2019). The factor loadings are recommended to eliminate items with values below 0.71 and the current study shows that all the items are above 0.71. Further, the average variance extracted is greater than 0.50 for all constructs. Therefore, the study met each prerequisite for internal and convergent validity shown in Table 2.

Table 2 *Convergent Validity*

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Average variance extracted (AVE)
Metaverse Performance Expectancy (MPE)	0.895	0.896	0.826
Metaverse Effort Expectancy (MEE)	0.833	0.834	0.751
Metaverse Social Influence (MSI)	0.764	0.792	0.676
Metaverse Facilitating Conditions (MFC)	0.858	0.861	0.779
Metaverse Hedonic Motivation (MHM)	0.879	0.88	0.805
Behavioral Intention to Adopt (MBI)	0.816	0.819	0.731

Table 2 presents the measurement model assessment results. All constructs demonstrated satisfactory internal consistency, with Cronbach's alpha values exceeding the recommended 0.70 threshold (Hair et al., 2019), ranging from 0.764 for social influence to 0.895 for performance expectancy. Composite reliability values similarly exceeded 0.70, ranging from 0.792 to 0.896, further confirming internal consistency. Convergent validity was established as all Average Variance Extracted (AVE) values exceeded 0.50, ranging from 0.676 to 0.826, indicating that each construct explains more than half of the variance in its indicators. Additionally, all factor loadings exceeded 0.71, meeting the stringent threshold for indicator reliability. These results collectively confirm the measurement model's reliability and convergent validity.

The Fornell-Larcker criterion and Heterotrait-monotrait ratio conclusively established the strong discriminant validity of all constructs, with values well within the acceptable 0.85 cutoffs confirming discriminant validity (Fornell & Larcker, 1981) as shown in Tables 3 below

Table 3 *Discriminant validity (Fornell-Larcker)*

Constructs	MPE	MEE	MSI	MFC	MHM	MBI
Metaverse Performance Expectancy (MPE)	0.84					
Metaverse Effort Expectancy (MEE)	0.859	0.865				
Metaverse Social Influence (MSI)	0.604	0.564	0.849			
Metaverse Facilitating Conditions (MFC)	0.831	0.794	0.634	0.823		
Metaverse Hedonic Motivation (MHM)	0.59	0.576	0.841	0.641	0.87	
Behavioral Intention to Adopt (MBI)	0.246	0.419	0.211	0.15	0.745	0.328

Table 4 presents the structural model results and hypothesis testing outcomes. Three of five hypotheses were supported. Performance expectancy (H1) and hedonic motivation (H5) emerged as the strongest predictors of adoption intention, both with identical path coefficients ($\beta = 0.528$, $p < 0.001$), indicating highly significant positive relationships. Social influence (H3) also significantly predicted adoption intention ($\beta = 0.371$, $p < 0.001$), though

with a smaller effect size. These three significant paths demonstrate that media professionals' adoption intentions are driven primarily by perceived organisational benefits, creative satisfaction, and peer influence.

Conversely, effort expectancy (H2: $\beta = 0.103$, $p = 0.224$) and facilitating conditions (H4: $\beta = 0.039$, $p = 0.644$) showed non-significant effects on adoption intention, failing to meet the conventional significance threshold of $p < 0.05$. The weak path coefficients and high p-values suggest these factors do not meaningfully influence adoption decisions in the Nigerian media context, pointing to context-specific challenges that require further investigation.

Table 4 Results of hypothesis testing

	Beta	M	STDEV	T-Value	P-Value	Decision
MPE – MBI	0.528	0.525	0.067	7.871	0.000	Accepted
MEE – MBI	0.103	0.106	0.085	1.216	0.224	Rejected
MSI – MBI	0.371	0.371	0.083	4.449	0.000	Accepted
MFC – MBI	0.039	-	0.084	0.462	0.644	Rejected
MHM – MBI	0.528	0.525	0.067	7.871	0.000	Accepted

Structural Equation Model (SEM) Path Diagram

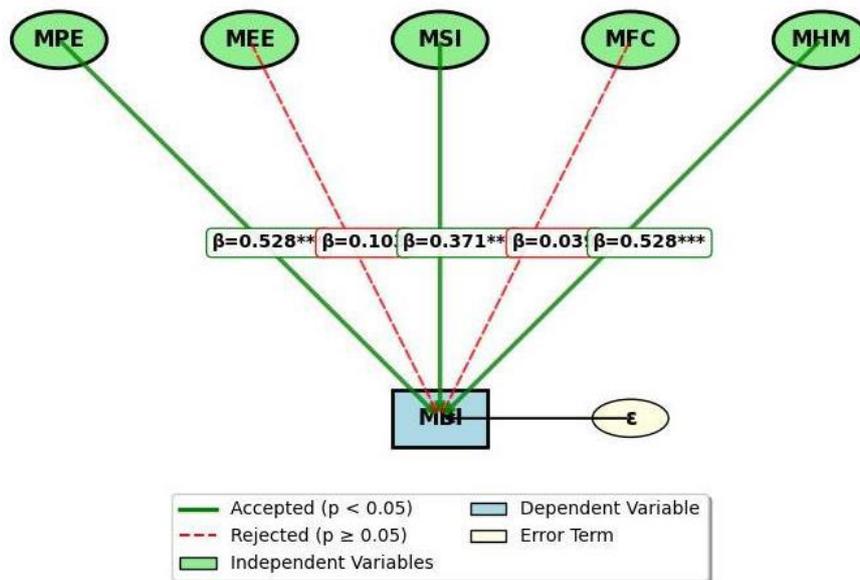


Fig. 1 Structural equation model pathway
Source: Researchers' elaboration

The model was evaluated to test the hypotheses and determine the significance of the path coefficients. Figure 1 outlines the correlation of the study and is examined using the path coefficient (Hair et al., 2019).

11. Discussion

Findings show that performance expectancy emerged as the strongest predictor of adoption intention ($\beta = 0.528$, $p < 0.05$), indicating that Nigerian media professionals believe Metaverse can enhance organisational performance through improved content delivery and audience engagement. These finding aligns with Nguyen et al. (2023) and supports the notion that perceived organisational benefits drive technology adoption in professional settings. Interestingly, hedonic motivation equally strongly predicted adoption intention ($\beta = 0.528$, $p < 0.05$), suggesting that creative satisfaction from producing immersive content carries as much weight as functional benefits in shaping adoption decisions. This dual influence is consistent with Dao et al. (2023) and highlights a critical insight: Nigerian media professionals value both the practical advantages and the intrinsic creative fulfillment that

Metaverse technologies offer. The equivalence of these two factors suggests that successful adoption of strategies must simultaneously emphasise productivity gains and creative innovation opportunities.

Beyond individual perceptions, social influence significantly affected adoption intention ($\beta = 0.371$, $p < 0.05$), confirming that endorsements from industry peers, leaders, and stakeholders shape adoption decisions. This finding aligns with Li (2023) and underscores the collectivist nature of technology adoption in organisational contexts where peer advocacy and industry trends accelerate integration. The significant role of social influence suggests that adoption decisions are not made in isolation but are heavily influenced by the broader professional ecosystem. Media organisations contemplating Metaverse adoption are likely monitoring competitors, seeking validation from industry leaders, and responding to normative pressures within their professional networks. Collectively, these three significant predictors reveal that adoption intentions are driven by a combination of perceived utility, creative appeal, and social validation.

Contrary to expectations, effort expectancy did not significantly influence adoption intention ($\beta = 0.103$, $p = 0.224$). This surprising result contradicts findings from more developed contexts (Sukhee et al., 2024) and may reflect Nigeria-specific challenges. Limited digital literacy, inadequate technical training, and unfamiliarity with immersive technologies may render perceived ease-of-use less relevant when fundamental technical competencies are lacking. In contexts where basic technological infrastructure and skills are problematic, concerns about whether a system is “easy to use” become secondary to more fundamental questions about access and capability. Media professionals may recognise adoption benefits while acknowledging that effort-related concerns are overshadowed by more pressing barriers such as lack of training programmes and technical support systems.

Similarly, facilitating conditions showed non-significant effects ($\beta = 0.039$, $p = 0.644$), further contradicting expectations from prior research (Bojić et al., 2024). This finding likely reflects Nigeria's infrastructure realities: inadequate internet connectivity, limited access to VR/AR equipment, and insufficient technical support are so pervasive that they are viewed as given constraints rather than variables influencing adoption intention. Rather than treating infrastructure as a factor that can be evaluated and used to influence decisions, Nigerian media professionals may perceive these conditions as fixed environmental realities. Consequently, media organisations may express adoption intentions despite poor facilitating conditions, hoping for future infrastructure improvements or planning to address these challenges incrementally once adoption decisions are made.

These findings reveal critical contextual differences between Nigerian media organisations and those in more developed markets. While technology adoption models developed in Western contexts emphasise ease-of-use and infrastructure availability as key predictors, these factors appear less relevant in environments where systemic barriers are ubiquitous. The results highlight the need for substantial infrastructure investment and capacity building before Metaverse adoption can succeed. Without addressing these foundational challenges, even strong adoption intentions driven by performance expectations and creative motivation may not translate into successful implementation.

12. Theoretical Implications

This research delivers substantial improvements to theoretical studies of media technology acceptance and Metaverse implementation. The research implements Extended Unified Theory of Acceptance and Use of Metaverse Technology (UTAUMT) to create a solid analytical framework for analysing media industry Metaverse adoption factors. The validated frameworks demonstrate performance expectancy and social influence and facilitating conditions to be essential constructs while their Metaverse-specific outcomes consist of interoperability alongside sense of presence and immersive engagement. The research shows how these frameworks work for analysing the special characteristics of the Metaverse environment.

The study makes significant progress by understanding how physical spaces merge with virtual ones especially when it comes to immersive media practices. Evidence from this research enhances knowledge about Metaverse capabilities to enhance actual life encounters through pioneering inventions including digital events while enabling storytellers to blend real-world and virtual story elements and enabling advertisers to use dynamic immersive content. Through research the study demonstrates how Metaverse technologies join the digital domain and physical world while showing their power to change media engagement for audiences.

The research enhances sector-specific knowledge through the modification of theoretical models which makes them applicable to deal with industry-defining challenges and opportunities within media industries. This study selects media-specific elements such as content creation dynamics and audience interactivity and immersive storytelling effects instead of using conventional generalisable constructs found in typical technology adoption theories. The approach serves to develop media technology theories by providing better understanding of how advanced technologies modify organisational operational methods.

The study proves that cultural norms and organisational policies play fundamental roles for Metaverse acceptance. The study addresses cultural resistance and infrastructural difficulties while giving theoretical information about how sociocultural and organisational components influence technology acceptance. The study

maintains special importance within the Nigerian socio-economic context since the structural and cultural environment impacts technology advancement velocity and characteristics.

13. Practical Implications

Nigerian media organisations together with marketers can benefit from the study through specific recommendations that demonstrate Metaverse utilisation possibilities. Media companies can develop exciting and immersive storytelling through interventions of interoperability with presence systems that enable seamless commercial transactions. The analysis stresses that media organisations need to adopt trending technologies to create new digital content which matches audience. The market presence of media organisations improves through their provision of Metaverse-based propositions that include virtual event hosting and augmented reality advertising with interactive journalism elements.

Conclusion

Findings of the study reveal how Metaverse technologies have the capacity to transform Nigerian media operations by transforming content distribution along with audience participation and financial profitability. The UTAUMT frameworks helps the research both discover essential adoption components such as performance expectancy and interoperability alongside sense of presence yet recognises barriers from faulty infrastructures and technical skills shortages and cultural reluctance. It has both theoretical and practical significance through its Metaverse construct validation as well as proposed strategies which benefit both media professionals and policymakers. The quantitative methodological approach studied Nigerian media institutions but sets the groundwork to support additional research projects in various industries and regions. Focused action to resolve existing barriers will make the Nigerian media industry a leading force in modern digital environment development.

The research provides valuable findings about Metaverse technology adoption in the Nigerian media landscape but points to several additional study directions. The research base has various pathways which will enhance our understanding of Metaverse applications across different contexts while resolving the current study's detected constraints. The limitations of this study border on the sample which is limited to selected media houses in Nigeria and reliance on self-reported data. This may not, however, weigh significantly on the overall outcome of the study. Further research should extend the evaluation of Metaverse adoption from media to healthcare and educational institutions and retail outlets. Metaverse technology adoption factors and potential benefits become more visible when we evaluate how independent sectors connect with them. The educational investigations should focus on virtual learning while healthcare research should focus on remote clinical interactions and training methods.

To ensure accurate transferability of results it becomes crucial to expand research boundaries through geographical exploration. The research analyses Metaverse adoption by Nigerian media organisations yet comparative studies across different countries with various technological advancement and cultural settings would supply critical understanding of worldwide Metaverse trends. Nations that share similar infrastructure-related challenges must explore their solutions which develop practical methods for developing countries to apply. Researchers should conduct controlled experiments to determine and measure the influence that particular Metaverse technologies have upon audience involvement as well as content delivery mechanisms and financial outcomes.

Research utilising prospective approaches should include qualitative instruments like focus groups for understanding how users experience the Metaverse along with their strategic methods for adopting it. Media professionals utilising these techniques would reveal their motivations along with their experience-based challenges and processes of innovation while working with immersive technologies. Also, the adoption of Metaverse could be further understood through incorporation of different theoretical perspectives which include innovation diffusion theory and task-technology fit theory.

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Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: **study conception and design:** SGJ, EJA; **data collection:** EJA; **analysis and interpretation of results:** KI, SGJ, EJA; **draft manuscript preparation:** EJA, SGJ. All authors reviewed the results and approved the final version of the manuscript.

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