

**ADVANCING THE LAW ON THE SAFE USAGE OF VIRTUAL REALITY SPACES IN  
NIGERIA**

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**A PROJECT WORK WRITTEN IN, AND SUBMITTED TO THE FACULTY OF LAW,  
UNIVERSITY OF BENIN, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR  
THE AWARD OF THE DEGREE OF BACHELOR OF LAWS (LL.B) OF THE  
UNIVERSITY OF BENIN, BENIN CITY.**

**OCTOBER 2023**

## **CERTIFICATION**

I, Emmanuel Vovwero OBRUCHE, (Mat No Law1704761) hereby certify that apart from references made to other people's works as duly acknowledged herein, this entire project is the product of my personal research, and has neither in part nor in whole been presented for another degree elsewhere.

.....

Emmanuel Vovwero OBRUCHE

## **APPROVAL**

We certify that this project work was completed and written by Emmanuel Vovwero OBRUCHE (Mat No Law1704761) in partial fulfilment of the requirements for the award of the Bachelor of Law (LL.B) Degree of the University of Benin.

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## **DEDICATION**

This project is dedicated to God Almighty, the Father of all mercies who daily loads us with all heavenly blessings and who has kept me through my stay in the University of Benin, and my lovely parents who have provided me with all the love and support I need.

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Constitution of the Federal Republic of Nigeria 1999 (As Amended)

Copyright Act, Cap. C28, LFN 2004

Criminal Code Act, Cap. C38, LFN 2004

Cybercrimes (Prohibition, Prevention, etc.) Act 2015

Economic and Financial Crimes Commission (Establishment) Act, Cap. E1, LFN 2004

Finance Act 2019 Finance Act 2023

National Information Technology Development Agency (NITDA) Act 2007

Nigeria Data Protection Regulation 2019

World Intellectual Property Organization Copyright Treaty, 1996, UNTS vol. 2186

## **TABLE OF ABBREVIATIONS AND ACRONYMS**

AR – Augmented Reality

CEO – Chief Executive Officer

EFCC - Economic and Financial Crimes Commission

NDPR - Nigeria Data Protection Regulation

NFTs – Non-Fungible Tokens

NITDA - National Information Technology Development Agency

SEP – Significant Economic Presence

VP – Vice President

VR – Virtual Reality

VRS – Virtual Reality Spaces

WIPO – World Intellectual Property Organization

## **Abstract:**

The Metaverse, a virtual reality environment where users may interact and take part in different activities, has drawn a lot of interest as a promising breakthrough in technology. There are potential and problems associated with the Metaverse as it develops and grows, especially in terms of safety and regulation. This thesis explores the legal framework in Nigeria for regulating and promoting the safe usage of the Metaverse. This study examines the applicability of current laws in addressing safety issues in the metaverse, drawing on the National Information Technology Development Agency (NITDA) Act, Cybercrime (Prohibition, Prevention, etc.) Act, Nigerian Communications Act, Data Protection Regulation, and Copyright Act. The study reviews how NITDA regulates new technologies, promotes safe information technology practices, and considers how it may be used in the metaverse. It examines how the Cybercrime Act's provisions can be used to combat online threats and crimes, with a particular emphasis on unauthorized access, fraud, and identity theft.

The study also considers the function of the Nigerian Communications Commission (NCC) in upholding user safety and privacy in the Metaverse, as well as the regulatory reach of the Nigerian Communications Act. The Nigeria Data Protection Regulation (NDPR) is reviewed in connection to the Metaverse's protection of personal data and privacy rights, including challenges and potential solutions for applying data protection measures in a virtual environment. The implications of the Freedom of Information Act for obtaining public information linked to Metaverse platforms are also examined, as is the applicability of the Copyright Act in safeguarding artists' and performers' intellectual property rights in virtual spaces.

This thesis intends to give insights into the regulation and promotion of safe Metaverse usage in Nigeria by examining these statutory regulations and investigating their possible applicability. It outlines gaps, difficulties, and solutions for policymakers, regulators, and stakeholders in Nigeria in order to create a safe and inclusive Metaverse environment.

Keywords: Metaverse, regulation, safety, Nigeria, NITDA Act, Cybercrime Act, Nigerian Communications Act, Data Protection Regulation, Freedom of Information Act, Copyright Act.

## CHAPTER ONE

### GENERAL INTRODUCTION

#### 1.1 Background of Study

The foundations of the internet can be traced back to the late 1960s where it was mainly developed to facilitate communication between computers used for government research programs. Its rapid development was fueled by the cold war and it was only available to the military and a select few of Educational and Research Institutes that are contractors of the military. However, in the 1980s and 1990s, the internet became more accessible and widely used by people in America and around the world. Nigeria was introduced to the internet in 1995, and Nigerians have embraced it with arms wide open.

Despite the rich history of internet usage in Nigeria, it was not until 2007, that an Act to regulate and promote the safe usage of Information Communication Technology was enacted<sup>1</sup>. This is the National Information Technology Development Agency (NITDA) Act 2007. That is a whopping 12 years before this crucial enactment was made. As a result of this delay in the enactment of an Act specifically tailored to regulate the internet, resort has been made to other laws such as the Nigeria Criminal Code. (1990)<sup>2</sup>, the Economic and Financial Crimes Commission (Establishment) Act<sup>3</sup>, etc. in order to combat issues such as internet fraud, identity theft, breach of data privacy etc. that are associated with internet usage. However, a more comprehensive law is needed, hence the enactment of the National Information Technology Development Agency (NITDA) Act 2007. This has been followed by other Acts that are crucial to the regulation of

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<sup>1</sup> National Information Technology Development Agency Act 2007. (Act No. 28)

<sup>2</sup> Criminal Code Act, Cap. C38, LFN 2004

<sup>3</sup> Economic and Financial Crimes Commission (Establishment) Act, Cap. E1, LFN 2004

internet usage in Nigeria such as the Cybercrime (Prohibition, Prevention, etc.) Act<sup>4</sup>. The enactment of these Acts however is one that has been considered long overdue before their enactment. It is therefore against this background that this long essay sought to proffer a legal perspective on the role the law can play in the development and regulation of the safe usage of Virtual Reality Spaces (VR), as it will be in the best interests of Nigeria as a nation to be proactive as regards the promotion and regulation of Virtual Worlds as a safe space for Nigerians to enter into.

Virtual Worlds, also known as Virtual Reality Spaces, are web-generated virtual spaces where people connect and participate in various activities. They have emerged as a transformational technological concept with tremendous potential. It consists of a huge virtual environment in which users may explore, create, transact, and interact in manners previously unimaginable. As these virtual Worlds grow in appeal, they present a number of opportunities as well as distinct concerns, especially in terms of user safety and legal structures.

Understanding and resolving the legal ramifications of these Virtual Worlds is critical in Nigeria, a country noted for its booming information and communication technology (ICT) environment. The National Information Technology Development Agency (NITDA) Act of 2007 established the NITDA as a regulatory agency in charge of regulating the nation's ICT environment. As these Virtual Worlds grow more integrated into the technological ecosystem, it is critical to evaluate NITDA's role in managing these developing technologies as well as ensuring safe information technological practices inside the virtual world. Furthermore, the Cybercrime (Prohibition, Prevention, etc.) Act of 2015 addresses the growing concerns about online risks and crimes. This thesis will investigate its application to Virtual Worlds and the legal remedies available for countering such cybercrimes within virtual spaces by evaluating the provisions of

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<sup>4</sup> Cybercrimes (Prohibition, Prevention, etc.) Act 2015

the Act, which include unlawful entry, fraud, and identity theft. Additionally, since these Virtual Worlds include considerable data exchange and interaction, protecting personal data and privacy rights becomes a major issue.

The Nigeria Data Protection Regulation (NDPR)<sup>5</sup> issued by NITDA in 2019 sets standards and principles for securing personal data. This thesis examines the NDPR's applicability in protecting user privacy inside Virtual Reality Spaces, as well as possible problems and solutions for applying data protection measures in this virtual field. Also, knowing the implications of the Copyright Act<sup>6</sup> is critical in figuring out how intellectual property rights will be protected within these Virtual Reality Spaces and the regulation of content production and distribution in virtual worlds are key topics to investigate.

This long essay contributes to an understanding of the regulation and promotion of safe Metaverse usage in Nigeria by assessing the existing legal provisions, their possible implementation, and any gaps or issues they have. It highlights legal basis and areas for reform, providing policymakers, regulators, and stakeholders with insights and recommendations to build a safe and inclusive Virtual environment. In summary, the objective of this long essay is to investigate the legislative structure controlling the Metaverse in Nigeria, evaluate its sufficiency in assuring user safety, and recommend solutions for effective regulation and advancement of secure usage within this burgeoning virtual reality space.

## **1.2 Statement of the Problem**

Virtual reality (VR) technology has grown significantly over the years and has become a vital aspect of several industries, including entertainment, education, and healthcare. Nigeria, like other countries, has embraced VR technology and its potential benefits while also uncovering

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<sup>5</sup> Nigeria Data Protection Regulation 2019

<sup>6</sup> Copyright Act, Cap. C28, LFN 2004

certain ethical and legal issues. The absence of frameworks to ensure the ethical use of Virtual Reality Spaces is a serious challenge that requires consideration. The purpose of this research is to investigate and establish legal perspectives on the application of virtual reality technology in Nigeria.

The advent of Virtual Reality (VR) technology has marked the beginning of an era where people can fully immerse themselves in digital experiences and connect with others. VR has found applications, in domains such as gaming, entertainment, education, healthcare and business. However as virtual reality becomes more integrated into our lives, it brings along a set of legal and ethical concerns that require attention.

The fundamental issue addressed by this thesis is the lack of a comprehensive legal framework controlling Virtual Reality Spaces<sup>7</sup>. The present legal framework is inadequate to deal with the peculiar issues brought about by virtual reality technology, leaving users susceptible to a variety of risk factors and abuses of their rights. Physical harm, such as motion sickness and injuries caused by collisions with real-world objects while immersed in VR environments, is one of these risks, as are psychological and privacy concerns, such as the possibility of emotional distress, addiction, and unauthorized data collection within these virtual spaces. Cases of sexual exploitation and harassment are also a major source of worry in the virtual environment<sup>8</sup>. According to the BBC, child abuse materials have been discovered on VR headsets<sup>9</sup>, and police data reveals that pedophiles are using VR headsets to watch and save child abuse imagery<sup>10</sup>. Another source of worry in VR is computer-generated sexualized pictures of minors. Simulated

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<sup>7</sup> Roman Dremluga, Olga Dremluga and Andrei Iakovenko, 'Virtual Reality: General Issues of Legal Regulation' (2020) 13 *Journal of Politics and Law* 75.

<sup>8</sup> Brenda K Wiederhold, 'Sexual Harassment in the Metaverse' (2022) 25 *Cyberpsychology, Behavior, and Social Networking* 479.

<sup>9</sup> Angus Crawford, 'Child Abuse Material Found on vr Headsets, Police Data Shows' *BBC News* (22 February 2023) <<https://www.bbc.com/news/uk-64734308>> accessed 18 September 2023..

<sup>10</sup> *ibid*

sexual abuse targeting child avatars has been prevalent in virtual spaces like the VR game Second Life for a number of years and it was the focus of investigation by the German police to bring perpetrators to justice in 2007<sup>11</sup>. Therefore, adult users adopting or creating child-like avatars to be utilized in simulated sexual behavior in VR is predictable. Although real children are not directly harmed, these practices might normalize the concept of child sexual assault. It's unclear if current laws against the possession of obscene photos of children would apply to computer-generated representations of child avatars, regardless of whether the images are actual children<sup>12</sup>.

According to the New York Post, in 2021, Nina Jane Patel, co-founder and VP of a Virtual Reality Space Research Institute Kabuni, revealed her experience of being "verbally and sexually harassed" within 60 seconds of signing onto Meta's "Horizon Worlds." She said that between three and four male avatars "virtually gang raped" her and took images of her screaming nasty insults<sup>13</sup>.

Furthermore, virtual reality blurs the distinction between reality and fiction, posing concerns regarding responsibility and accountability for activities taken in virtual worlds. On the lack of thorough regulation of virtual reality applications, Catherine Allen, a specialist on VR and CEO of an immersive technology business, Limina Immersive, stated: "This is an emerging, fast growing threat that politicians and technology companies need to take seriously..... Online

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<sup>11</sup> 'BBC NEWS | Technology | Second Life "Child Abuse" Claim' (*Bbc.co.uk*2023) <<http://news.bbc.co.uk/1/hi/technology/6638331.stm>> accessed 8 August 2023.

<sup>12</sup> Emma Barrett and Steve Pettifer, 'Online Safety: Child Abuse and Exploitation in EXtended Reality' (*blog.policy.manchester.ac.uk*13 June 2022) <<https://blog.policy.manchester.ac.uk/posts/2022/06/online-safety-child-abuse-and-exploitation-in-extended-reality/>> accessed 21 September 2023.

<sup>13</sup> Hannah Frishberg, 'Mother Opens up about Being "Virtually Gang Raped" in Metaverse' (*New York Post*February 2022) <<https://nypost.com/2022/02/01/mom-opens-up-about-being-virtually-gang-raped-in-metaverse/>> accessed 9 October 2023.

offenders will flock to places where there is little scrutiny or regulation and we can see this happening in VR."<sup>14</sup>

Sexual harassment is a serious matter on the internet, but experiencing it in VR adds another dimension that intensifies the situation<sup>15</sup>. This is due to the VR's immersive aspect, which makes the user experience more realistic compared to the ordinary web.

Intellectual property issues, such as copyright infringement in user-generated VR material, must also be carefully considered. For example, what is the legal status on copyrighted goods taken from the real-world environment and resold as Non-Fungible Tokens (NFTs) in the virtual world without the copyright owner's consent? What recourse do the copyright owner have? Some of these questions will be addressed in this thesis.

In this quickly growing industry, the lack of clear legal norms has serious consequences that affect individuals and corporations. Users must have confidence that their mental and physical health will be safeguarded while using VR, and technological firms must traverse a complicated legal framework in order to develop and promote VR goods and services. The lack of a strong legal framework can stifle creativity and capital investment for the VR business, restricting its ability to improve various facets of society.

Another point of interest of this long essay is the problem of taxation of digital business transactions and digital assets within the Metaverse. Companies all over the world have started taking advantage and incorporating the opportunities and possibilities of the metaverse into their business and business transactions within the metaverse are on the rise. For example, the telecommunication giant MTN became the first African company to buy 144 plots of virtual land

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<sup>14</sup> Angus Crawford, 'Child Abuse Material Found on vr Headsets, Police Data Shows' *BBC News* (22 February 2023) <<https://www.bbc.com/news/uk-64734308>> accessed 18 September 2023.

<sup>15</sup> Mark A Lemley and Eugene Volokh, 'Law, Virtual Reality, and Augmented Reality' (2017) 166 *SSRN Electronic Journal*.

from Africare in 2022. Interest in the metaverse appears to be only growing, with immense activity coming from the markets of North America, Europe and Asia<sup>16</sup>. According to DappRadar, virtual land sold for \$105.87 million in the final week of November 2021<sup>17</sup>, and such an initiative by one of Africa's top network operators puts African interest in the metaverse squarely in the race. Ariana Grande had a multi-day tour in the Metaverse in October 2021, which was aired on the Fortnite platform to 78 million fee-paying spectators globally, garnering the music star above \$20 million from virtual concerts and merchandise sales.

The sale of digital assets, non-fungible-tokens (NFTs), such as digital arts, music, fashion goods, and so on, is increasing, bringing in billions of dollars for owners of digital assets or NFTs. For example, in December 2021, digital artist Pak's piece 'Merge' got US\$91.8 million on NFT platform Nifty Gateway. The digital art set a new record for the highest-priced painting sold by a living artist. The question that naturally arises from these is how should these earnings be taxed, and if there are appropriate legislative or regulatory frameworks in place to effectively tax these transactions taking place in these virtual worlds. This is an important issue that needs to be addressed as proper taxation of these transactions in these Virtual Reality Spaces are sure to increase Government revenue by a significant percentage.

To address these challenges, this thesis will undertake a comprehensive analysis of the existing legal framework surrounding VR, identifying gaps and recommending areas in need of reform<sup>18</sup>.

This Study will also explore international best practices and draw on insights from other jurisdictions and how they are grappling with the issue of regulating VR to inform

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<sup>16</sup> Naïma Aïdi, 'Tourism and the Metaverse: Towards a Widespread Use of Virtual Travel?' (*The Conversation* 16 August 2022) <<https://theconversation.com/tourism-and-the-metaverse-towards-a-widespread-use-of-virtual-travel-188858>> accessed 8 August 2023.

<sup>17</sup> Hristina Yardnova (ed), 'Over \$100 Million in Metaverse Land Sales Last Week' (*Dappradar.com* 30 November 2021) <<https://dappradar.com/blog/over-100-million-in-metaverse-land-sales-last-week>> accessed 9 October 2023.

<sup>18</sup> Mark A Lemley and Eugene Volokh, 'Law, Virtual Reality, and Augmented Reality' *University of Pennsylvania Law Review* (2017) 166 SSRN Electronic Journal.

recommendations for advancing VR law in Nigeria. This is important because of the borderless nature of these Virtual Worlds and law made for its regulation should be one that is in line with international best practices. By proposing a coherent and adaptable legal framework, this research aims to ensure that the safe usage of virtual reality spaces is not only protected but also encouraged, facilitating the responsible growth of this transformative technology.

### **1.3 Research Questions**

To guide this study, the following research questions are formulated:

1. What are the current laws, in Nigeria that pertain to Virtual Reality technology?
2. What are the main legal and regulatory obstacles and deficiencies when it comes to ensuring usage of VR spaces in Nigeria?
3. What are the primary legal and regulatory hurdles and gaps in tax law, for taxing digital assets and transactions in Nigeria?
4. How can the legal framework be advanced to ensure responsible utilization of VR technology especially concerning privacy, liability and intellectual property?

### **1.4 Aim and Objectives of Research**

The major goal of this research is to advance the legal frameworks that regulate the usage of Virtual Reality environments in Nigeria. This study aims to accomplish the following precise objectives:

1. To critically examine the present legal and regulatory framework in Nigeria relating to virtual reality technology and its uses.

2. To identify the legal and regulatory gaps and issues associated with virtual reality usage, especially concerning the subjects of user privacy, accountability, and intellectual property, as well as in the Nigerian taxation laws related to digital assets and commercial transactions in the VR.
3. To serve as a basis for future discussions about the promotion, development, and regulation of the safe usage of Virtual Reality Spaces in Nigeria.
4. To propose legal reforms and recommendations aimed at addressing these gaps and promoting the safe and responsible use of VR technology in Nigeria.

### **1.5 Scope and Limitations**

It is important to acknowledge the scope and limitations of this research. The study will focus primarily on the legal aspects of virtual reality space usage in Nigeria. The study does not encompass an exhaustive analysis of every legal issue related to or that can be conceived within the virtual reality as will be a Herculean Labour that is beyond what the pages of this thesis can hold. For example, this thesis does not examine the important aspect of the law of torts and the remedies available to victims of tortious wrong within these Virtual Reality Spaces as that is a very wide area of law capable of having its own dedicated books. This thesis rather seeks to focus on key thematic areas related to user safety, data protection, intellectual property, and content moderation and taxation.

#### **1.5.1 Scope of the Study:**

1. Legal Aspects: The paper focuses mainly on the legal aspects of virtual reality (VR) environments in Nigeria. It explores into VR legislation, regulations, and legal procedures, with a focus on security for users, privacy of data, intellectual property, and content moderation as

well as taxation. It does not include the socio-political aspects of things that may affect these Virtual Reality Spaces. The study focuses on Nigeria and its system of law. It covers existing Nigerian rules and regulations which may be applicable to VR, and it additionally addresses prospective areas where new legislation may be required. Key thematic areas include: User Safety, Data Privacy, Intellectual Property, Content Moderation and Taxation

### **1.5.2 Limitations of the Study:**

1. **Dynamic Nature of VR:** VR technology is continuously evolving, and new applications and challenges may emerge even after the completion of this research and as such this research may not be able to bring within its purview such future developments and the legal implications they may carry with them.
2. **Interdisciplinary Complexity:** VR intersects with various fields, including law, politics, technology, sociology, ethics, and psychology. The study does not comprehensively cover all interdisciplinary aspects due to its legal focus.
3. **International Comparisons:** While the study briefly explores international best practices, it does not conduct an exhaustive comparative analysis of VR regulations in other countries, but rather draws insight from a few other jurisdictions and focuses mainly on the Nigerian legal position.
4. **Limited Legal Resources:** The availability of legal documents, cases, and precedents related specifically to VR in Nigeria may be limited, which could affect the depth of legal analysis. This is because this area of the law is still young and developing. It is still in its formative stages and there is not much well-grounded and comprehensive legal literature on the subject.

5. Policy Implementation: The study may not address the challenges related to the effective implementation and enforcement of new VR regulations, such as administrative rules and requirements which can be a complex issue.

It is crucial to acknowledge these limitations and consider them when extrapolating the findings of this study.

### **1.6 Significance of the Study**

The significance of this long essay on advancing the law on safe usage of virtual reality spaces in Nigeria is multifaceted and holds importance in several key areas:

1. Legal Framework Enhancement: The study contributes to the development and improvement of the legal framework surrounding virtual reality in Nigeria. By identifying gaps and proposing legal reforms, this research can assist policymakers and lawmakers in creating more comprehensive and effective regulations that ensure user safety and protect their rights within Virtual Reality Spaces.

2. User Protection: The study's findings can directly benefit users of virtual reality technology in Nigeria. By advocating for safer usage and legal protections, this research aims to help enhance the physical and psychological well-being of individuals, especially vulnerable group like minors engaging within virtual environments, ensuring their rights and interests are safeguarded.

3. Data Privacy: As concerns about data privacy grow more pressing in the digital age, this research can help design rules and regulations that safeguard the privacy and security of users' data within virtual worlds, aligning Nigerian legislation with international data protection standards.

4. International Best Practices: This study provides helpful perspectives into how other jurisdictions handle VR legislation by evaluating international best practices. These findings can

help Nigerian policymakers by informing them and providing a foundation for harmonizing local rules with global norms.

5. Stakeholder Guidance: This research can help stakeholders in the VR ecosystem, such as technology companies, creators of VR content, and VR platform operators, obtain a better knowledge of their legal obligations and rights. This knowledge can help the sector encourage responsible and ethical behavior within these Virtual Worlds.

6. Academic and Legal Discourse: This study contributes to the academic and legal discourse surrounding virtual reality and technology law in Nigeria. It provides a foundation for future research, discussions, and debates on the evolving role of law in Virtual Reality Spaces.

7. National Innovation: By fostering a safe environment for VR development and use, this implementation of the recommendations of this thesis can stimulate innovation within the Nigerian tech industry. It may attract investment and talent to the country's VR sector, contributing to economic growth and competitiveness.

In summary, the significance of your study lies in its potential to shape the legal landscape, protect users, foster innovation, and provide guidance to stakeholders in the dynamic field of virtual reality in Nigeria. It aligns with the broader goals of enhancing technology regulation and promoting responsible and safe engagement with emerging digital technologies.

### **1.7 Research Methodology**

This Research adopts the doctrinal research approach and a multifaceted methodology designed to comprehensively investigate and address the complex legal issues surrounding VR technology in Nigeria. It comprehensively addresses the legal and practical dimensions of advancing the law

on safe usage of virtual reality (VR) spaces in Nigeria. This approach combines analytical methods and a comparative analysis of international best practices.

The methodology encompasses several key components:

**Literature Review:** An extensive review of some of the existing literature by authors of repute is conducted to establish a foundational understanding of VR technology, legal challenges, and the regulatory landscape in Nigeria and abroad.

**Legal Analysis:** Nigerian laws, regulations, and case precedents (if any) relevant to VR are critically examined, highlighting relevant provisions and identifying gaps and limitations within the current legal framework. Additionally, the Nigerian regulatory framework is compared with international models for VR regulation to assess different approaches and extract valuable insights. An evaluation of data privacy implications within VR environments, including data handling practices and compliance with data protection laws. Examination of content moderation practices within VR platforms, addressing issues related to harmful content and user behavior. The extant provisions of the law as regards intellectual property protection and taxation is also examined.

This methodology ensures a comprehensive and informed approach to advancing the legal framework for VR in Nigeria, promoting safety, privacy, and responsible use within this evolving technological landscape.

## **1.8 Conclusion**

This chapter has outlined the aim, research questions, and methodology for the study on advancing the law on the safe usage of Virtual Reality spaces in Nigeria. The research aims to

contribute valuable insights and recommendations to the ongoing discourse surrounding VR technology in the legal context. The subsequent chapters will delve in deeper details into each aspect of the research, providing a comprehensive analysis and findings.

## CHAPTER TWO

### CONCEPTUAL AND THEORETICAL FRAMEWORKS

#### 2.1 Conceptual Clarification:

To get a clear understanding of the topic involves a nuanced exploration of legal and regulatory aspects within the context of virtual reality (VR). To provide a clear conceptual framework, it's essential to break down or define key concepts and terms:

**Virtual Reality (VR):** VR refers to immersive, computer-generated environments that replicate real-world or fictional settings. Users interact with these digital environments through specialized hardware, creating an immersive experience. Crystal Nwaneri in his article defined virtual reality as an immersive three-dimensional computer-generated environment.<sup>19</sup> The Meriam Webster Dictionary defines Virtual Reality as ‘an artificial environment which is experienced through sensory stimuli (such as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment’.<sup>20</sup> Virtual Reality Spaces can be accessed through the use of what is known as Virtual Reality Devices (VR Devices) such as VR headsets, VR controllers, VR sensors that tracks users’ movements, VR

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<sup>19</sup> Crystal Nwaneri, 'Ready Lawyer One: Legal Issues in the Innovation of Virtual Reality' (2017) 30(2) Harvard Journal of Law & Technology 601.

<sup>20</sup> ‘Merriam-Webster Dictionary’ (*Merriam-webster.com* 5 October 2023) <<https://www.merriam-webster.com/dictionary/virtual%20reality>> accessed 8 October 2023.

body suits that enable users to feel and response to stimuli such as touch, etc. The convergence multiple Virtual Reality Spaces such as Second Life, Fornite and Meta's Horizon World is what is known as the Metaverse, a word coined by Meta CEO Mark Zuckerberg. The development of the Metaverse has been made possible by the emergence of web3 which is the next phase of web development. Users live and interact in the metaverse with a computer-generated representation called an avatar. The metaverse is capable of having it economy and it uses crypto currencies for its transactions. The sale of Non-Fungible Tokens is especially common in the Metaverse. Non-fungible tokens (NFTs) are one-of-a-kind digital assets that may be stored and sold on a blockchain. NFTs can symbolize anything from art to music to videos to games to collectibles. NFTs are not interchangeable and have varying values based on their rarity, quality, and popularity. Some NFTs are valued several million dollars because digital art collectors and investors view them as important pieces of digital art or culture.

By conceptually clarifying these elements, the research seeks to provide a comprehensive understanding of the study's scope and objectives, emphasizing the importance of legal clarity, user protection, and responsible innovation within the VR landscape in Nigeria.

### **2.2.1 Historical Foundation and Theoretical Framework:**

The Metaverse is a word that alludes to a completely immersive internet in which users may interact with multiple locations utilizing persistent avatars and sophisticated digital technologies. that is, a combination of many virtual reality spaces is what is referred to as the Metaverse. The metaverse idea has an extensive and diverse past, extending back to the nineteenth century.

Sir Charles Wheatstone invented binocular vision in 1838, which was the starting point for producing 3D pictures by merging two views for each eye<sup>21</sup>. This idea inspired the development of stereoscopes, which are devices that produce the appearance of depth by combining two slightly differing pictures. Stereoscopes are the forerunners of current virtual reality headsets.

Stanley Weinbaum released *Pygmalion's Spectacles* in 1935, a science fiction story in which the main character sees a fictional world through a pair of spectacles that enable the senses of sight, sound, taste, smell, and touch. This story is one of the earliest to describe a virtual reality technology capable of simulating all senses<sup>22</sup>.

In 1956, Morton Heilig created the first VR machine, called the Sensorama Machine, which simulated the experience of riding a motorcycle in Brooklyn by combining 3D video, audio, scents, and a vibrating chair. He also patented the first head-mounted display in 1960, which combined stereoscopic 3D images with stereo sound.

In 1978, MIT created the Aspen Movie Map, which enabled users to take a computer-generated tour of the town of Aspen, Colorado. This was the first time that VR was used to transport users to another place.

Neal Stephenson in 1992, coined the term "metaverse" in his novel *Snow Crash*, in which he depicted a virtual world where humans interact with each other and software agents using avatars. This novel influenced many future visionaries and entrepreneurs who wanted to build linkages between the virtual and physical worlds.

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<sup>8</sup> Nicholas J Wade, 'Charles Wheatstone (1802 – 1875)' (2002) 31 *Perception* 265.

<sup>22</sup> Bernard Marr, 'A Short History of the Metaverse' *Forbes* (12 October 2022)

<<https://www.forbes.com/sites/bernardmarr/2022/03/21/a-short-history-of-the-metaverse/?sh=4858745c5968>>  
accessed 10 October 2023.

In 1998, Sportsvision broadcast the first live NFL game with a yellow yard marker, which was an example of overlaying graphics over real-world views. This technique quickly spread to other sports broadcasting and became a common feature of augmented reality.

In 2002, Michael Grieves introduced the concept and model of digital twins, which are digital counterparts of physical objects or systems that can be used for simulation, optimization, or monitoring. Digital twins are an important component of the Metaverse, as they enable users to interact with real-world data and processes in a virtual environment.

In 2008, Satoshi Nakamoto published a paper on Bitcoin, which is a decentralized cryptocurrency that uses blockchain technology to verify and record transactions. Bitcoin and other cryptocurrencies are essential for enabling economic activity and value exchange in the metaverse.

In 2021, Facebook announced its rebranding as Meta, which reflects its ambition to become a leader in building and connecting the Metaverse. Meta also unveiled its vision and roadmap for creating an open and interoperable platform for immersive experiences across various domains and devices.

In Nigeria, previous legal hurdles and debates surrounding technology and online activities, such as cybercrime and data breaches, have established the historical groundwork for tackling comparable concerns inside VR settings. Recent changes in ethical and cultural viewpoints, such as conversations about privacy, security of data, and digital rights, explains the need for legal developments in VR.

Understanding these historical backdrop helps to highlight the urgency and significance of developing legislative and regulatory framework in Nigeria for safe VR usage. It shows how the

convergence of technology, law, and social norms has developed over time, necessitating proactive legal solutions to evolving difficulties and possibilities created by virtual reality.

### 2.2.2 Theoretical Framework

The theoretical framework draws on a number of major ideas and concepts to drive the intellectual underpinnings and analytical structure of the research:

**a. Legal Theory:** The research is based on a range of legal theories that include legal principles, precedents, and doctrines. Legal positivism, natural law, and legal realism, as well as pure law theory and the social theory of law, offer essential viewpoints for interpreting and constructing the legal framework that governs virtual reality. These ideas influence the examination of current laws as well as the formulation of new legislative measures<sup>23</sup>.

**Pure law theory:** Hans Kelsen established the pure law theory, which claims that law is a system of norms formed from a basic norm or grundnorm, which is the ultimate basis of legal validity. According to the view, law does not consist of morality, sociology, or the political process, and that legal science should only analyze the logical arrangement and coherence of legal standards. The ideas of this theory may be applicable to the Metaverse because it may give a means to build a universal and consistent legal system in the metaverse, despite the varied and intricate makeup of the various virtual worlds and the different ethics or moral standards of the diverse communities of user within the Metaverse. However, this theory may face some difficulties, such as determining the metaverse's grundnorm, dealing with conflicts or gaps

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<sup>23</sup> Schuyler Moore, 'Law in the Metaverse' *Forbes* (23 December 2021) <<https://www.forbes.com/sites/schuylermoore/2021/12/22/law-in-the-metaverse/?sh=5d0b9e1045d1>> accessed 10 October 2023.

between different legal systems in the metaverse, and accounting for moral or social principles that may have an impact on the creation and interpretation of legal norms in the metaverse<sup>24</sup>.

**Positivism theory:** This school of thought, which was influenced by the works legal scholars such as John Austin and H.L.A. Hart, contends that law is a set of commandments or regulations imposed by a sovereign authority and supported by punishments<sup>25</sup>. According this theory, law is a reflection of reality rather than value, and legal legitimacy is determined by social approval or acknowledgment rather than moral accuracy or inherent rights. This theory may be applicable to the metaverse because it may provide a method for identifying and enforcing the law in the metaverse based on observable user and operator behavior and practices. This theory However, may run into certain challenges, such as defining and locating who the sovereign authority is in the metaverse, measuring and ensuring public acceptance or recognition of the law in these virtual worlds, and dealing with ethical or human rights concerns that may arise in the realm of the metaverse.<sup>26</sup>

**Natural law theory:** This Thomas Aquinas and Lon Fuller-inspired perspective contends that law is the product of reason or morality innate to human nature or divine intent<sup>27</sup>. According to the view, law is a question of value rather than truth, and legal legitimacy is determined by moral virtue or natural justice rather than social tradition or compulsion. This theory may be significant to the metaverse because it can provide a means to analyze and critique metaverse legislation based on universal rules and values that apply to all humans. However, as with the other theories,

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<sup>24</sup> Michael D Bayles, 'What Is Jurisprudence About? Theories, Definitions, Concepts, or Conceptions of Law?' [2017] Routledge eBooks 3 <<https://www.taylorfrancis.com/chapters/edit/10.4324/9781315085944-2/jurisprudence-theories-definitions-concepts-conceptions-law-michael-bayles>> accessed 10 October 2023.

<sup>25</sup> John Austin and H L A Hart, *The Province of Jurisprudence Determined ; and the Uses of the Study of Jurisprudence* (Hackett Publishing 1998).

<sup>26</sup> Michael D Bayles, 'What Is Jurisprudence About? Theories, Definitions, Concepts, or Conceptions of Law?' [2017] Routledge eBooks 3 <<https://www.taylorfrancis.com/chapters/edit/10.4324/9781315085944-2/jurisprudence-theories-definitions-concepts-conceptions-law-michael-bayles>> accessed 10 October 2023.

<sup>27</sup> Aquinas Saint Thomas, Dominicans. English Province and Leo Xiii, *The Summa Theologica* (Catholic Way Publishing 2014).

this theory may face some challenges, such as how to justify and discover the reason or morality that underpins the legal rules within the metaverse, how to find common ground and reconcile the many different and opposing moral views of fundamental liberties in these virtual worlds, and how to balance and respect the autonomy and security of metaverse users and developers<sup>28</sup>.

**The Sociological Theory:** This is a school of legal theory that investigates the link between society and the law, as well as the social variables that impact the formulation, understanding and execution of the law. The sociological theory of law will aid in appreciating the start and development of the metaverse as a social phenomenon, as well as the function and importance of law in regulating and enabling metaverse interactions and transactions. The consequences and implications of the metaverse on current legal systems and institutions, as well as any conflicts or problems that may develop from the coexistence or collision of distinct legal regimes or norms in the metaverse, may be explored via the lens of the sociological theory of law. The sociological theory of law may be useful in understanding the social and cultural components of the metaverse, such as the metaverse's principles, standards, practices, and norms. The sociological theory of law may also be used to investigate the diversity and complexity of metaverse societies. The sociological theory of law may also consider obstacles and concerns like as inequality, discrimination, exclusion, and exploitation that may originate or be exacerbated by the metaverse. Relative to these theories of law are concepts such as:

**Privacy Theory:** The theoretical framework integrates concepts from privacy theories, such as the right to privacy, informational self-determination, and privacy as a fundamental human right.

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<sup>28</sup> Michael D Bayles, 'What Is Jurisprudence About? Theories, Definitions, Concepts, or Conceptions of Law?' [2017] Routledge eBooks 3 <<https://www.taylorfrancis.com/chapters/edit/10.4324/9781315085944-2/jurisprudence-theories-definitions-concepts-conceptions-law-michael-bayles>> accessed 10 October 2023.;

These theories guide the examination of data privacy concerns and inform recommendations for robust data protection within VR environments.

**Ethical Frameworks:** Ethical theories like utilitarianism, deontology, and virtue ethics are considered when addressing ethical concerns within VR. These frameworks help evaluate the ethical implications of VR technology and content moderation.

**Regulatory Theory:** Regulatory theories, particularly regulatory capture and public interest theory, offer insights into the motivations and impacts of regulatory decisions. They guide the examination of how VR regulations are formulated and their effects on various stakeholders.

**Comparative Law:** Comparative law principles are utilized to compare Nigerian VR regulations with those of other jurisdictions. This approach helps identify best practices and potential legal models for Nigeria's VR regulatory framework.

By incorporating these theories and concepts, the research builds a comprehensive theoretical framework that guides the analysis of existing laws, the assessment of ethical considerations, and the formulation of recommendations for advancing the legal framework for VR in Nigeria. This multi-faceted approach ensures a well-rounded understanding of the complex legal and societal issues surrounding virtual reality.

### **2.3 Literature Review:**

Virtual Reality (VR) technology has seen rapid advancements in recent years, expanding its applications beyond gaming and entertainment to include education, training, and therapy. However, as VR technology becomes more widespread, concerns about its safe usage have emerged. Addressing this issue of the effective regulation of Virtual Reality Spaces has been the focus of several legal literature from eminent scholars both domestic and international. This part

sought to analyze briefly some of these literatures and bring to light some insights from them that can aid in understanding this discourse as well also show some weaknesses in these literatures which this thesis hopes to improve upon. This literature review is set out thematically as follows:

### **Ethical Implications of VR Realism**

The ethical implications of realism are one of the primary problems in the safe use of VR settings. In their paper "The Ethics of Realism in Virtual and Augmented Reality,"<sup>29</sup> Slater et al. examine these consequences. They contend that the immersive nature of VR can blur the distinction between reality and virtuality, possibly leading to ethical difficulties such as deceit, violation of privacy, and psychological injury. This underscores the importance of legal structures capable of addressing these specific difficulties. According to the authors, depending on how Virtual Reality and Augmented Reality(AR)<sup>30</sup> are built and utilized, they can have positive and adverse impacts on consumers' psychological, social interactions, and moral well-being. The authors suggest a four-dimensional framework for analyzing the ethical elements of VR and AR: realism, interaction, agency, and effect.<sup>31</sup>

- Realism is the degree to which the virtual world reflects actual life or the user's expectations. It can have an effect on the user's perception of presence, embodiment, and identity in VR and AR.
- Interactivity is the capacity of a user to change and communicate with their virtual environment and other entities. It has the ability to influence the user's sense of involvement, engagement, and responsibility in VR and AR.

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<sup>29</sup> Mel Slater and others, 'The Ethics of Realism in Virtual and Augmented Reality' (2020) 1 *Frontiers in virtual reality* <<https://www.frontiersin.org/articles/10.3389/frvir.2020.00001/full>> accessed 10 October 2023.

<sup>30</sup> Augmented Reality is the convergence of Virtual Reality and Reality. i.e., virtual objects can be interlaced within real and physical places with these virtual objects observed with the use of VR devices such as VR Headsets. For example, a home décor idea can be made more vivid and interactive by decorating a room with virtual articles of decoration.

<sup>31</sup> Mel Slater and others, 'The Ethics of Realism in Virtual and Augmented Reality' (2020) 1 *Frontiers in virtual reality* <<https://www.frontiersin.org/articles/10.3389/frvir.2020.00001/full>> accessed 10 October 2023.

- Agency refers to a user's capacity to control their own actions and its consequences in a virtual environment. It can have an effect on the user's sense of freedom, autonomy, and empowerment in VR and AR.

- Impact is the extent that the virtual experience exerts a long-term impact on the user's actual life. It has the potential to influence the user's emotional, mental, behavioral, and sociological outcomes in VR and AR.

The authors posit that all four of these factors may be employed to evaluate the possible advantages and disadvantages of VR and AR apps, as well as establish ethical design, standards and guidelines for VR and AR developers and users. Overall, the work sheds a lot of insight on what policymakers should prioritize when developing regulations for safe Metaverse usage.

### **Balancing User Privacy and Innovation**

In the area of user privacy, Crystal Nwaneri, in his article 'Ready Lawyer One: Legal Issues in the Innovation of Virtual Reality'<sup>32</sup> investigates the legal consequences of virtual reality technology. The article focuses on current and future legal challenges in virtual reality development, such as guarding company secrets, intellectual property rights, privacy hazards, and mental and physical dangers. The article also discusses the prospect of businesses exploiting customer information for research and marketing reasons. The author emphasizes the need of informing users about the privacy risks associated with virtual reality technology, particularly the potential to detect head and eye movements. Overall, the article provides an in-depth examination of the legal issues surrounding this emergent technology.

Another important work in on regulating VR spaces and the balance between user privacy and innovation is by Ellyse Dick of The Information Technology and Innovation Foundation (ITIF)

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<sup>32</sup> Crystal Nwaneri, 'Ready Lawyer One: Legal Issues in the Innovation of Virtual Reality' (2017) 30(2) Harvard Journal of Law & Technology 601.

in a very insightful article discusses this balance in their report "Balancing User Privacy and Innovation in Augmented and Virtual Reality"<sup>33</sup>. The author explained key thematic as it relates to virtual/augmented reality and user privacy and the issues that may arise thereby with users interacting with these technologies. The author listed the various ways by which users' data are being received and processed by this technology viz; observable, observed, computed and associated. This is no different from how users' data are processed in the conventional web, however, data collection on the Metaverse is to a greater degree, hence, users are more at risk to breach of privacy within the Metaverse and malicious use of personal data can be very devastating when compared to the conventional internet. They gave an example of fraudsters using the observable data of users to impersonate such users. Also, there is the case of the security of biometric data as well as financial data stored on the metaverse such as fingerprints, iris scans, bank card details etc. which if it falls into the hands of scammers can do a lot of damage. It is also possible as is the practice of some technology companies to sell user data to third party advertisers for the purpose of targeted advertising without the user's notice or consent. Thus, there is the need for regulation tailored specifically to address this issue of privacy, as the author points out that current regulations have gaps in them that may not adequately cater for the unique environment of the Metaverse. The author went further to argue that while protecting user privacy is crucial, it should not stifle innovation in VR technology as the collection and use of such user's data is important to the development of these technologies, what is important is that data collected should not be abused. This suggests that any legal advancements should consider both user protection and technological progress. Overall, the article is a valuable resource for understanding the importance and implications of user's data in the developing world of virtual

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<sup>33</sup> Ellyse Dick, 'Balancing User Privacy and Innovation in Augmented and Virtual Reality' (*Itif.org* 4 March 2021) <<https://itif.org/publications/2021/03/04/balancing-user-privacy-and-innovation-augmented-and-virtual-reality/>> accessed 10 October 2023.

and augmented reality. However, the article neglects to consider the consequences of an absolute protection of user's data from access by law enforcement agencies as the author advocates for end-to-end data encryption. However, when understood that malicious actors such as terrorists can use this type of security to the advancement of their unwholesome agenda, one cannot help but have a rethink on the issue. Thus, there must be a balance as the author rightly stated. Rights are absolute, they must all have their legal limit. This research will attempt to propose a better alternative to the issue of privacy within the Metaverse.

### **Legal Realities in Nigeria's VR Sector**

In Nigeria, the article "Immersion: Legal Realities in Nigeria's Virtual and Augmented Reality Entertainment Sector"<sup>34</sup> by Chuks Okoriekwe of LeLaw Barristers & Solicitors is a comprehensive analysis of the legal issues and challenges that arise from the development and use of virtual and augmented reality (VAR) products and services in Nigeria's entertainment industry. The author highlights that while Nigeria has several laws governing technology use, such as the NITDA Act, Cybercrime Act, Nigerian Communications Act, Data Protection Regulation, Freedom of Information Act, and Copyright Act, there may be gaps when it comes to regulating emerging technologies like VR. what the author clearly posit in his article is that there is the need to legislate new law or amend and expand existing laws to make specific provisions for the regulation of the metaverse as it is better that the law is clear than for it to be obscure. It needless to say that the author is on point.

On the area of intellectual property rights, the article analyzes the intellectual property rights (IPRs) issues that may arise from the creation and use of VAR products and services, such as

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<sup>34</sup> Chuks Okoriekwe, 'Immersion: Legal Realities in Nigeria's Virtual and Augmented Reality Entertainment Sector' (*Mondaq.com* 29 May 2020) <<https://www.mondaq.com/nigeria/broadcasting-film-tv-radio/939736/immersion-legal-realities-in-nigerias-virtual-and-augmented-reality-entertainment-sector>> accessed 10 October 2023.

infringement, fair use, licensing, or assignment. The article also considers the challenges of enforcing IPRs in the VAR space, such as identifying infringers, proving ownership, or determining jurisdiction since the Metaverse is transnational, this suggests that for effective regulation in this regard, Nigeria must work closely with other jurisdictions and international bodies or organizations. The article asserts that copyrights protect the original and creative works of authorship that are expressed in the VR products and services, such as games, videos, images, sounds, or texts. The article suggests that obtaining copyrights in Nigeria may be easy and automatic, as long as the work is fixed in a tangible medium and has some degree of originality. The article also alerts of the increased possibility of copyright infringement occurring when a VR operator or user reproduces, distributes, performs, displays, or makes derivative works of a copyrighted work without consent from the copyright owner.

Also, Safari Kasiyanto and Mustafa R, in 'The Legal Conundrums of the Metaverse'<sup>35</sup> posits that in terms of property law, the digital nature of items in the metaverse makes standard property law systems, that are meant to distribute rights to use tangible goods that can be found in a specific location, problematic to apply. Intellectual property law, on the contrary, may be more useful in the metaverse since it oversees the ownership of intangible items as well as the rights and derivative forms that come with them. However, adapting real-world rules to virtual worlds may have drawbacks, particularly in terms of how the law operates.

### **Feasibility of Adopting VR as a Framework**

Also in Nigeria, in an article that focuses on the usefulness and benefits of VR technology, Ajah et al. examine the feasibility of adopting Virtual and Augmented Realities (VAR) as a framework that could effectively redirect policy and action in their study "Investigating the

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<sup>35</sup> Safari Kasiyanto and Mustafa R, 'The Legal Conundrums of the Metaverse' (2022) 1(2) Journal of Central Banking Law and Institutions 299.; Timir Chheda, Comment, Intellectual Property Implications in a Virtual Reality Environment, 4 J. MARSHALL REV. INTELL. PROP. L. 483 (2005).

awareness of virtual and augmented realities as a criminal justice response to the plight of awaiting-trial inmates in Ebonyi State, Nigeria"<sup>36</sup>. The article provides a background on the problems and challenges facing the Nigerian Criminal Justice System (NCJS), especially the high rate of prison overcrowding and the long duration of pretrial detention. The article also reveals that most inmates are aware of VR and have positive opinions about its potential to address their challenges and problems. The article also indicates that the educational qualification of awaiting-trial inmates does not influence their views on VR introduction.

The article concludes by summarizing the main contributions and implications of the study, as well as suggesting some recommendations and directions for future research. The article argues that VR can be a state-of-the-art technology that can enhance the treatment and reintegration of inmates, as well as reduce procedural laxities in the NCJS. The article calls for the amendment of the Nigerian Criminal Justice Act 2015 to include VR as a curative measure to the plight of awaiting-trial inmates. It is important to note however, that while the goal to which the article aims at is a positive one, the article fails to acknowledge the complexities of the use of VR technology in criminal trials in Nigeria. This is more so because the demeanor of the defendant and other witnesses to the trial is a vital source of information to the judge in determining whether or not they are indeed telling the truth, and these facial and bodily cues of the defendant and witnesses can easily be observed by the judge in a live trial. However, the same cannot be said of a Virtual Trial as the level to which these technologies can be manipulated is still yet unknown and is still a

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<sup>36</sup> Benjamin Okorie, 'Behind Bars but Not Sentenced: The Role of Computerized Central Repository in Addressing Awaiting-Trial Problems in Ebonyi State, Nigeria - Benjamin Okorie Ajah, Uzochukwu Chukwuka Chinweze, Ifeyinwa Angela Ajah, Dominic Chukwuemeka Onyejegbu, Aloysius C. Obiwulu, Emeka M. Onwuama, John Thompson Okpa, 2022' (*SAGE Open*2022) <<https://journals.sagepub.com/doi/full/10.1177/21582440221079822>> accessed 10 October 2023.

subject of further studies. Overall, their findings suggest that VR could be used as a tool for social good if properly regulated.

### **VR Technology and Taxation**

An interesting aspect to consider when discussing the regulation of VR spaces is taxation and it has therefore been the focus of many legal scholars. In the scholarly research “Taxing the Metaverse<sup>37</sup>” by Christine Kim, the author proposes a new taxation model for the metaverse, which is a network of virtual worlds where users can engage in economic activity with real value. The article argues that the current US tax system is not well suited for the metaverse, as it defers taxation of income and wealth within the metaverse until a realization or cash-out event. The article claims that this approach creates a tax haven and distorts economic behavior. The article suggests that income and wealth within the metaverse should be subject to immediate taxation, such as a mark-to-market system, which would tax gains and losses as they accrue, regardless of whether they are realized or not. The article contends that this system would be more efficient and fairer, as it would eliminate tax deferral and align taxation with economic reality. The author acknowledges the challenges and limitations of immediate taxation, such as valuation and liquidity issues, and proposes some solutions, such as using unliquidated tax reserve accounts (ULTRAs) to defer payment until liquidation, and using blockchain technology to track and verify transactions and values in the metaverse.

The article applies its proposed taxation model to various scenarios and examples of metaverse assets, such as self-created virtual assets (like NFTs), loot drops, intra-metaverse exchanges, inter-metaverse exchanges, and cash-for-virtual goods exchanges. The article illustrates how immediate taxation would work in each case.

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<sup>37</sup> Kim, Young, ‘Taxing the Metaverse’ (*Ssrn.com*23 August 2023)  
<[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4549974](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4549974)> accessed 10 October 2023.

In conclusion, advancing the law on safe usage of VR spaces in Nigeria will require addressing ethical implications, balancing user privacy with innovation, filling gaps in existing laws, considering the potential benefits of VR for social good, and understanding how VR can impact taxation. Further research is needed to develop comprehensive legal frameworks that can ensure the safe usage of VR spaces.

## **CHAPTER THREE**

### **LEGAL AND INSTITUTIONAL FRAMEWORK**

A perfect position to start in answering the research questions posed by this thesis in chapter two is to first identify and analyze the extant law guiding the use of information communication technology, the internet and web in Nigeria. This is because VR technology is just an offshoot of the umbrella information communication technology industry which is made possible by the emergence of web3. Hence, this will go in-depth into how Statutes such as the National Information Technology Development Agency (NITDA) Act 2007<sup>38</sup>, Cybercrime (Prohibition, Prevention, etc.) Act 2015<sup>39</sup>, National Data Protection Regulation 2019<sup>40</sup>, Company Income Tax Act<sup>41</sup>, Capital Gain Tax Act<sup>42</sup>, Finance Act 2019 Finance Act 2023<sup>43</sup> and the Companies Income

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<sup>38</sup> National Information Technology Development Agency (NITDA) Act 2007

<sup>39</sup> Cybercrime (Prohibition, Prevention, etc.) Act 2015

<sup>40</sup> National Data Protection Regulation 2019

<sup>41</sup> Company Income Tax Act

<sup>42</sup> Capital Gain Tax Act

<sup>43</sup> Finance Act 2019 Finance Act 2023

Tax (Significant Economic Presence) Order 2020<sup>44</sup> (SEP Order) touches on the issue of the Metaverse.

According to s.34 of NITDA 2007, “Information Technology” encompasses all forms of technology used to create, store, exchange and use information in its various forms (business data, voice, conversation, still images, motion pictures, multimedia presentations and other forms including those not yet conceived). S.6 (a)-(n) of NITDA 2007 provides for the Functions of the Agency. Below are paragraphs relevant to this research:

The Agency shall:

- (a) Create a framework for the planning, research, development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria and all matters related thereto and for that purpose, and which without detracting from the generality of the foregoing shall include providing universal access for Information Technology and systems penetration including rural, urban and under-served areas;
- (b) Provide guidelines to facilitate the establishment and maintenance of appropriate for information technology and systems application and development in Nigeria for public and private sectors, urban-rural development, the economy and the government;
  - (i) Introduce appropriate regulatory policies and incentives to encourage private sector investment in the information technology industry;
  - (l) Advice the Government on ways of promoting the development of information technology in Nigeria including introducing appropriate information technology legislation, to enhance national security and vibrancy of the industry;

A committee reading of section 34 and s.6 (a)(b)(i) and (l) which show clearly that the provisions of Act apply to both present and future technologies used for the dissemination of digital information and it is the duty of the National Information Technology Development Agency to make regulations to encourage innovation in the information technology industry and also to ensure the safety of the users of these technologies in Nigeria. VR technology, its gadgets as well as its software are not new, they have been around for a while and they are here to stay. The government is not to play a passive role in the promotion and regulation of VR technology but

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<sup>44</sup> Companies Income Tax (Significant Economic Presence) Order 2020

rather an active one. This is because of the rapid pace at which the Metaverse is growing and evolving. Regulations and or legislative enactment(s) for the regulation of the Metaverse is already behind as the ethical issues that are bedeviling the use of the internet and the web as we know it is already taking a trend in this emerging technology and without the timely intervention of policy makers, it will be more than can be imagined and the government cannot afford to sit back while practices of cybercrime crime in VR spaces become the norm, as Catherine Allen an expert on VR and CEO of an immersive technology company Limina Immersive puts it "This is an emerging, fast growing threat that politicians and technology companies need to take seriously..... Online offenders will flock to places where there is little scrutiny or regulation and we can see this happening in VR."<sup>45</sup>

S.6(1) of NITDA 2007 provides that the Agency is saddled with the responsibility of advising the government on ways of promoting the development of information technology in Nigeria including introducing appropriate information technology legislation, to enhance national security and vibrancy of the industry. The role the agency has to play in the regulation of this emerging technology is especially important when looked from the angle of how malicious actors such as pedophiles, scammers and even terrorists can take advantage of the laissez faire environment of the Metaverse and use it to facilitate their unwholesome agenda. It is therefore in the best interest of Nigeria as a nation to effectively regulate the metaverse through the machinery of the law.

The Provision of the Cybercrime (Prohibition and Prevention) Act 2015 are as follows:

- S.23. (1) Any person who intentionally uses any computer system or network in or for-
- (a) producing child pornography;
  - (b) offering or making available child pornography;
  - (c) distributing or transmitting child pornography;

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<sup>45</sup> Angus Crawford, 'Child Abuse Material Found on vr Headsets, Police Data Shows' *BBC News* (22 February 2023) <<https://www.bbc.com/news/uk-64734308>> accessed 18 September 2023.

- (d) procuring child pornography for oneself or for another person;
- (e) possessing child pornography in a computer system or on a computer-data storage medium:

commits an offence under this Act and shall be liable on conviction –

S.24. Any person who knowingly or intentionally sends a message or other matter by means of computer systems or network that -

(a) is grossly offensive, pornographic or of an indecent, obscene or menacing character or causes any such message or matter to be so sent; or

(b) he knows to be false, for the purpose of causing annoyance, inconvenience danger, obstruction, insult, injury, criminal intimidation, enmity, hatred, ill will or needless anxiety to another or causes such a message to be sent:

commits an offence under this Act and shall be liable on conviction to a fine of not more than N7,000,000.00 or imprisonment for a term of not more than 3 years or to both such fine and imprisonment.

(2) Any person who knowingly or intentionally transmits or causes the transmission of any communication through a computer system or network -

(a) to bully, threaten or harass another person, where such communication places another person in fear of death, violence or bodily harm or to another person;

(b) containing any threat to kidnap any person or any threat to harm the person of another, any demand or request for a ransom for the release of any kidnapped person, to extort from any person, firm, association or corporation, any money or other thing of value; or

(c) containing any threat to harm the property or reputation of the addressee or of another or the reputation of a deceased person or any threat to accuse the addressee or any other person of a crime, to extort from any person, firm, association, or corporation, any money or other thing of value:

commits an offence under this Act and shall be liable on conviction-

All of the above crimes prohibited by the Act are already gaining stride as a mainstay in Virtual environments where there is little or no regulation and it can only get worse unless there is timely intervention on the part of the government and other stakeholders.

S.42 of the Cybercrime (Prohibition, Prevention, etc.) Act 20115 provides for the establishment of the Cybercrime Advisory Council. By virtue of S.43(b) and (c) of the Act, the council has for its function to “formulate and provide general policy guidelines for the implementation of the provisions of this Act;” and “advise on measures to prevent and combat computer related offences, cybercrimes, threats to national cyberspace and other cyber security related issues;” respectively. It is very clear that the wording of both S.6 of NITDA 2007 and S.43 of Cybercrime Act 2015 on the functions of the National Information Technology Development

Agency and the Cybercrime Advisory Council respectively are open ended with regards to information communication technologies and computer related and cyber security related issues and this clearly brings the regulation of Virtual Reality Spaces in Nigeria within the purview of the jurisdiction of these regulatory bodies in their varied capacity as it is both a part of information technology and its operations are cyber.

The National Information Technology Development Agency (NITDA)'s Nigeria Data Protection Regulation (NDPR) 2019 establishes a wide framework for protecting individuals' rights to data privacy. It applies to all activities which involves the processing of personal data irrespective of the medium by which data handling is being or is to be carried out.

In the context of virtual reality spaces, this regulation is highly relevant. Virtual reality often involves the collection and processing of personal data, including potentially sensitive information such as biometric data. This could include data about a person's movements, interactions, and even emotional responses within the virtual environment<sup>46</sup>. Under the NDPR, organizations that control personal data (including those operating in virtual reality spaces) are required to publicize their respective data protection policies, which must comply with the regulation<sup>3</sup>. This includes principles of lawful processing, procuring consent, ensuring data security, handling objections by the data subject, and more.

Art.5.2 of the NDPR provides:

Principles governing Consent (Art. 2.2(a) NDPR)

The following principles shall govern the giving and obtaining of consent:

a) Transparency: There must be an explicit privacy policy stating the type of Personal Data collected, how the Personal Data is processed, who processes the Personal Data, the security standard implemented etc.;

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<sup>46</sup> Ellyse Dick, 'Balancing User Privacy and Innovation in Augmented and Virtual Reality' (*Itif.org* 4 March 2021) <<https://itif.org/publications/2021/03/04/balancing-user-privacy-and-innovation-augmented-and-virtual-reality/>> accessed 10 October 2023.

- b) No implied consent: silence, pre-ticked boxes or inactivity do not constitute consent; and
- c) No bundled consent: consent request from general terms and conditions should be separated from consent request. There must be consent for different types of data uses.

Art. 5.3 went further thus:

When Consent is required

5.3.1 Consent is required:

- a) for any direct marketing activity, except to existing customers of the Data Controllers who have purchased goods or services;
- b) for the Processing of Sensitive Personal Data;
- c) for further processing;
- d) for the processing of the personal data of a minor;
- e) before personal data is processed in a country which is not in the Whitelist of Countries published by NITDA from time to time.
- f) before the Data Controller makes a decision based solely on automated Processing which produces legal effects concerning or significantly affecting the Data Subject.

Art: 5.5 is even more imperative in the following:

Processing of a Child's Data (Art. 3.1 NDPR)

A child for the purpose of the NDPR shall be any person below thirteen (13) years. A data controller or processor whose processing activity targets children shall ensure its privacy policy is made in a child-friendly form with the aim of making children and their guardians have clear understanding of the data processing activity before grant of consent.

Needless to say, that these provisions of the NDPR and its application is of paramount importance and benefit for the adequate safeguarding and protection of personal data within the Metaverse<sup>47</sup>. The compliance of tech companies is mandatory and failure to comply with this regulation makes them liable both to civil and criminal charges.

Art. 10.1.4 provides for sanctions for breach of Privacy of Personal Data in the following:

Administrative Sanctions

Where NITDA has ascertained through the foregoing tools of enforcement or by the Administrative Redress Panel established, pursuant to Article 4.2 of the NDPR, that a party is in breach, NITDA may issue an order for compliance with relevant provisions to curtail further breach. NITDA, shall issue a monetary fine following an administrative

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<sup>47</sup> Yinka Awosanya, 'NITDA Is on a Mission to Safeguard the Data Privacy Rights of Nigerians' (*TechPoint Africa* 20 March 2019) <<https://techpoint.africa/2019/03/21/nitda-ndpr-data-privacy/>> accessed 10 October 2023.

process that complies with principles of fair hearing and judicial safeguards. A decision on the money value shall be based on the following considerations:

- a) nature, gravity and severity of the breach;
- b) the number of data subjects affected;
- c) damage suffered by data subjects;
- d) opportunity for curtailment left unexplored and
- e) whether the breach is the first by the offending entity.

NITDA may also issue other administrative orders to include:

- i. Suspension of service pending further investigations;
- ii. Order for parties in breach to appear before a panel to determine liability of officers in line with Article 4.2;
- iii. public notice to warn the public to desist from patronizing or doing business with the affected party;
- iv. Refer the matter to appropriate professional bodies for possible sanction of its members involved in the breach.

Art. 10.1.5 provides for Criminal Prosecution as follows:

Where NITDA has determined that a party is in breach of the NDPR, especially where such breach affects national security, sovereignty and cohesion, it may seek to prosecute officers of the organization as provided for in section 17(1) and (3) of the NITDA Act 2007. NITDA shall seek a fiat of the Honorable Attorney General of the Federation or may file a petition with any authority in Nigeria. This may include: The Economic and Financial Crimes Commission, Department of State Security, Nigerian Police Force, Independent Corrupt Practices (and other related offences) Commission or the Office of National Security Adviser.

Therefore, any advancement in the law on safe usage of virtual reality spaces in Nigeria would need to take into account the provisions of the NDPR. This would help ensure that users' personal data is protected and that their privacy rights are respected in virtual reality spaces.

By virtue of s.14(2) of the constitution of the Federation Republic of Nigeria 1999 (As Amended), the security and welfare of the citizens of Nigeria is the primary purpose of the Government. The Provisions of S.14(2) are as follows:

- (2) It is hereby, accordingly, declared that:
  - (a) sovereignty belongs to the people of Nigeria from whom government through this Constitution derives all its powers and authority;
  - (b) the security and welfare of the people shall be the primary purpose of government:

Thus, the security and welfare of Nigeria whether real and virtually is the primary purpose of government and the government is therefore to ensure that the Metaverse is safe for usage in Nigeria. Virtual Reality Spaces has proven to be one where users can be very vulnerable to increased cyber-attacks in a variety of ways such as the case of virtual sexual assault and pedophilia. It is the duty of government to protect Nigerian from these foreseeable issues that is concern in the Metaverse.

In terms of taxation, the metaverse, which has already proven to be highly profitable and strong, promises to become increasingly so in the years to come, and taxation of digital assets and trades within it is expected to be an excellent source of revenue for the government if proper administration of taxes is put in place within it<sup>48</sup>. In general, the term "digital economy" refers to any economic activity that is supported or facilitated by digital technology such as the web, mobile smartphones, and other online resources. It is the network of transactions, relationships, and processes that give value to consumers and society via the use of digital inputs such as data, facilities, and services. All businesses that create or use digital products, services, and tools to meet the needs of their customers or clients are included in the digital economy. It is therefore limitless, ever-changing, data-driven and mobile.

The current valuation of the Metaverse is estimated to be around \$65.5 billion in 2022<sup>49</sup>. It is expected to rise to \$82 billion by the end of 2023. According to Bloomberg, the Metaverse market may reach \$783.3 billion in 2024<sup>50</sup>. As for future projections, Goldman Sachs projects

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<sup>48</sup> Kim, Young, 'Taxing the Metaverse' (*Ssrn.com*23 August 2023)

<[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4549974](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4549974)> accessed 10 October 2023.

<sup>49</sup> Safari Kasiyanto and Mustafa R, 'The Legal Conundrums of the Metaverse' (2022) 1(2) *Journal of Central Banking Law and Institutions* 299.; 'Metaverse Market Size 2022-2030 | Statista' (*Statista*2022)

<<https://www.statista.com/statistics/1295784/metaverse-market-size/>> accessed 10 October 2023.

<sup>50</sup> 'Metaverse May Be \$800 Billion Market, next Tech Platform | Insights | Bloomberg Professional Services' (*Bloomberg Professional Services*2 December 2021) <<https://www.bloomberg.com/professional/blog/metaverse-may-be-800-billion-market-next-tech-platform/>> accessed 10 October 2023.; Goldman Sachs and others, 'Framing the Future of Web 3.0' (2021).

that between 15% and 33% of the global spend on digital transactions will eventually switch to the Metaverse<sup>51</sup>. Citigroup predicts that the market value of the Metaverse will reach \$8 trillion to \$13 trillion by 2030<sup>52</sup>.

Section 4 of the Finance Act, 2019, amended the provisions of Section 13 of CITA to make companies involved in digital, electronic or online business in Nigeria, and having significant economic presence in Nigeria liable to tax. The power to determine what constitutes significant economic presence in Nigeria under the Finance Act lies with the Minister of Finance. Pursuant to this, the Nigerian Minister of Finance, Mrs. Zainab Ahmed issued the Companies Income Tax (Significant Economic Presence) Order 2020 (SEP Order) with a commencement date of 3 February 2020. The SEP Order provides that the profits of Non-Resident Companies (NRC) which has significant economic presence in Nigeria derived in Nigeria, accruing from undertaking any of the following activities would be taxable under the CITA: the order provides thus:

- Operation in Nigeria's digital economy; or
  - Provision of technical, management, consultancy, or professional services in Nigeria.
- Operation in the Nigerian digital economy includes:
- a) Streaming or downloading of digital content to anyone in Nigeria;
  - b) transmission of data collected about users in Nigeria;
  - c) provision of goods or services directly or indirectly through a digital platform in Nigeria; or
  - d) provision of intermediation services via digital platforms, websites, or other online applications that link suppliers and customers in Nigeria.<sup>53</sup>

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<sup>51</sup> Laurence Brothers, '4 Bold Predictions about the Metaverse and Business' (*Toptal Toptal Insights Blog* 2022) <[<sup>52</sup> Chris Morris, 'Citi Says Metaverse Economy Could Be Worth \\$13 Trillion by 2030' \(\*Yahoo Finance\* April 2022\) <\[<sup>53</sup> S.1 Companies Income Tax \\(Significant Economic Presence\\) Order, 2020\]\(https://finance.yahoo.com/news/citi-says-metaverse-economy-could-142208855.html?guccounter=1&guce\_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce\_referrer\_sig=AQAAALVgXT2bJcBkZPdxYnr1lRvnWXA\_YECnZC3s8E3ibnSkPXGNmTCvamm0fgJNdj1CN73SQxyc9Ea9cQNiPywbBjrwRu8DdwRAJ6ITZ41563c7ZRAIsuZiFJ6mxmVDYH8eZwABgi53-J\_8QR4q\_R8XDXlr3K\_loanffxfVe3Kr7sTr> accessed 10 October 2023.</a></p></div><div data-bbox=\)](https://www.toptal.com/insights/innovation/metaverse-and-business#:~:text=Experts%20anticipate%20rapid%20metaverse%20growth,to%20%2413%20trillion%20by%202030.> accessed 10 October 2023.</a></p></div><div data-bbox=)

By virtue of the provisions of the Finance Act and the SEP Order made pursuant to the Finance Act, NRCs operating in the Nigerian digital economy are now captured within the income tax bracket thereby reducing the level of tax leakages due to the absence of appropriate legislation. A close analysis of (a) to (d) which show clearly that digital transactions within the Metaverse falls within the tax net of s.13 of CITA as amended by s.9 of the Finance Act 2019.

Former President Muhammadu Buhari signed the Finance Act 2023 into law, introducing tax reforms aimed at modernizing Nigeria's fiscal framework. The Act includes a 10% tax on gains from the disposal of digital assets, recognizing the economic potential of cryptocurrencies and ensuring their contribution to the country's development. This by virtue of s.2 of the Finance Act 2020 that amended section 3(a) of the Capital Gain Tax Act to include "digital assets" in the list of taxable assets subject to capital gain.

In *South Dakota v. Wayfair, Inc.*,<sup>54</sup> 585 U.S. \_\_\_\_ (2018), 138 S. Ct. 2080, The U.S. Supreme Court by a majority decision 5-4 eliminated the requirement that a seller have physical presence in the taxing state to be able to collect and remit sales taxes to that state. It expanded states' abilities to collect sales taxes from e-commerce and other remote transactions.

There is yet to be any case in Nigeria on the issue of taxation of digital assets but the amendment to the tax law in Nigeria by the Finance Acts can be considered a step in the right direction.

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<sup>54</sup> South Dakota v. Wayfair, Inc. 585 U.S. \_\_\_\_ (2018), 138 S. Ct. 2080

## CHAPTER FOUR

### ADVANCING THE LAW ON SAFE USAGE OF VIRTUAL REALITY SPACES IN NIGERIA

The provisions of the Company Income Tax Act, Capital Gain Tax Act as amended by the Finance Act 2019 and Finance Act 2023, and the Companies Income Tax (Significant Economic Presence) Order 2020 (SEP Order) can be said to pave a way for the applicability of Nigerian Tax Laws to the Metaverse since assets within the metaverse can be classified as digital assets, these provisions cannot be said to have totally covered the field as it relates to the taxation of these virtual economies. For example, while this provision provides for the taxation of companies with digital assets deriving a substantial profit from Nigeria, it is silent on the case of an individual's earnings from digital assets or services like we saw in the case of Ariana Grande earning over \$20 million from virtual concerts<sup>55</sup> or even the sales of digital assets, non-fungible-tokens (NFTs) such as digital arts, music, fashion products etc. Also, to properly tax virtual and digital economies, there needs to be in place an efficient and effective Tax Administration, hence the need for a comprehensive law to provide for the effective taxation of the metaverse in order to increase Government revenue, there is the need of an efficient and effective Tax Administration, therefore the need of a comprehensive tax law to provide for this specifically in order to achieve the goal of increasing Government revenue. The Provisions of the Personal Income Tax Act (PITA) should therefore be amended to include digital assets amongst the sources taxable for an individual and specifically make provision for its applicability to Virtual Reality Spaces.

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<sup>55</sup> Sean Keach, 'Ariana Grande "Set to Rake in \$20MILLION" for Her Virtual Fortnite Concerts This Week...' (*The Sun* 3 August 2021) <<https://www.thesun.co.uk/tech/15767714/ariana-grande-fortnite-earnings-rift-tour-virtual/>> accessed 10 October 2023.

It has been made clear in Chapter 3 that the provisions of Statutes and Regulations such as the National Information Technology Development Agency (NITDA) Act 2007, Cybercrime (Prohibition, Prevention, etc.) Act 2015, National Data Protection Regulation 2019, Company Income Tax Act, Capital Gain Tax Act as amended by the Finance Act 2019 and Finance Act 2023, and the Companies Income Tax (Significant Economic Presence) Order 2020 (SEP Order) are relevant to and can be applied to the regulation of Virtual Reality Spaces in Nigeria for the safe usage of these virtual environments and the taxation of virtual economies. It is also obvious that they have gaps and are inadequate for a thorough and an effective regulation and control of the Metaverse. This is because of a number of reasons namely:

Firstly, this is so because of the dynamic nature of the Metaverse. The Metaverse is still largely under development and evolving. Future developments may bring more unforeseen and unique challenges which the current legislations and regulatory frameworks governing the internet may not be able to address adequately. The current laws on the internet and cybersecurity does not specifically make provisions concerning virtual reality spaces. Therefore, any application of these statutes to the Metaverse can only be made by association. However, there is the need for specific provisions made in relation to the Metaverse as it is better that the law is clear than for it to be obscure.

Secondly, there is the issue of the vast and borderless nature of the Metaverse. Hence, there will always be the lingering question as to whose law should the Metaverse be subject to. Therefore, any comprehensive statute that can effectively regulate the Metaverse must be one that is in line with international best practice.

Thirdly, Virtual Environments and the nature of activities carried out in them are not necessarily and exactly the same as those carried out on the regular internet or web. This is because of the

immersive nature of Virtual Worlds and the emergence of web3. Thus, applying the law as meant for the internet as we know it is sure to create a lot of loopholes in its application to the Metaverse. For example, while one may safely sit at home and stare into his/her computer screen while surfing the internet, in the case of virtual reality, one is in the computer generated 3d virtual environment itself appearing as an avatar to carry on whatsoever business he/she is there for. Therefore, the degree to which one may be abused in this virtual environment may not be as envisaged by the current laws on cybercrime, for while s. 23 of the Cybercrime Act for example has made dealing with child pornography a crime, it has nothing to say with actual sexual harassment, attacks and or defilement of child avatars or avatars that appear like children and women.

The concern of the regulation of the Metaverse is not peculiar to Nigeria as a nation who wants to ensure the safety of its citizens, but rather one that is shared by several other nations and international organizations. For example, the British parliament just passed the Online Safety Bill<sup>56</sup> and it is awaiting royal assent. The bill is one that comprehensively provides for the regulation of internet services, whether users generated or computer generated and virtual and augmented reality applications has been added to the definition of internet services. The bill places the duty of ensuring the safety of users both children and adults on technology companies with the Office of Communications (OFCOM) as the regulatory authority to ensure that these tech companies comply with the regulations.

Accordingly, Lord Stephen Parkinson, a member of the Parliament's upper house and minister at the Department for Culture, Media and Sport, stated, during a July debate on the bill. “The Metaverse is in scope of the bill, which, as the noble Lords know, has been designed to actually

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<sup>56</sup> ‘Online Safety Bill - Parliamentary Bills - UK Parliament’ (*Parliament.uk*2021) <<https://bills.parliament.uk/bills/3137>> accessed 10 October 2023.

be tech neutral and to maintain a future proofed solution, to ensure that it keeps pace with emerging technologies”. In Clause 10 of an amendment proposed by Baroness Kidron, Lord Stevenson of Balmacara, And the Lord Bishop of Oxford Lord Bethell, explaining the scope and purport of the bill as regards safeguarding children on the internet asserted in Page 9, line 11, (b)(vii) that:

“The different ways in which the service is used including but not limited to via virtual and augmented reality technologies, and the impact of such use on the level of risk of harm that might be suffered by children;”

By virtue of the provisions of the bill, tech companies are mandated to use age recognition technologies to ensure that children are restricted from accessing harmful content on the internet and the Metaverse.

On the Issues around trademarks, patents and intellectual property, there is the need for proper legislation to be able to decide on legal disputes in the virtual world. Ali bin Khatam, Senior Advocate General at Dubai Public Prosecution, said of protecting IP in the metaverse in the following:

"It is not an easy issue legally speaking..... The metaverse raises questions such as who is protecting the trademarks in virtual reality and if companies need to register their trademarks in the metaverse. We must have legislation and solutions to these issues,”<sup>57</sup>

From a legal standpoint the Berne Convention for the Protection of Literary and Artistic Works<sup>58</sup>, which has already been ratified by 181 countries, including Nigeria, says that signatories must provide writers exclusive rights over their works regardless of form or medium of expression.

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<sup>57</sup> Ali Al Shouk, ‘UAE Authorities Look at How to Police “Dark Side” of the Metaverse’ (*The National* 22 February 2023) <<https://www.thenationalnews.com/uae/2023/02/22/uae-authorities-look-at-how-to-police-dark-side-of-the-metaverse/#:~:text=Ali%20bin%20Khatam%2C%20senior%20advocate,their%20trademarks%20in%20the%20metaverse.>> accessed 10 October 2023.

<sup>58</sup>Berne Convention for the Protection of Literary and Artistic Works, 1886, UNTS vol. 116

Other international treaties, most notably the WIPO Copyright Treaty<sup>59</sup>, which was approved in 1996 and adapts the Berne Convention to the internet world complemented the Berne Convention. The WIPO Copyright Treaty (WCT) is a subset of the Berne Convention that addresses the digital protection of works and the rights of their authors.<sup>60</sup>

The Treaty addresses two major areas of copyright protection: (i) computer programs, regardless of their manner or form of expression; and (ii) collections of data or other material ("databases"). This agreement (Article 1(4) of the WIPO Copyright Treaty) makes it readily apparent that storing a copy of a copyrighted work in digital format in a medium that is computer-readable (such as an NFT or a file, the content of which can be viewed in the metaverse) constitutes an adaptation that requires the copyright holder's prior consent. It is very easy to counterfeit items in metaverse by copying an existing trademark in real life to metaverse. In *Hermes Int'l v. Rothschild*<sup>61</sup>, a New York court ruled in favour of luxury company Hermes International against the digital artist behind 'MetaBirkin' nonfungible tokens. A Manhattan federal jury concluded that Mason Rothschild's sale of an NFTs representing a Hermes Product violated Hermes' rights to the "Birkin" trademark in the case. Physical Birkin bags can range in price from \$12,000 to close to \$200,000. Rothschild initially sold the NFTs for approximately \$450 each, but their resale value skyrocketed into the tens of thousands of dollars<sup>62</sup>. A blockchain expert testified during the trial that Rothschild made around 55.2 Ethereum tokens worth about \$87,700 today<sup>63</sup>. The nine-person jury awarded Hermes \$133,000 in total damages.

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<sup>59</sup> World Intellectual Property Organization Copyright Treaty, 1996, UNTS vol. 2186

<sup>60</sup> Ali Al Shouk, 'UAE Authorities Look at How to Police "Dark Side" of the Metaverse' (*The National* 22 February 2023) <[<sup>61</sup> 22-CV-384 \(JSR\)](https://www.thenationalnews.com/uae/2023/02/22/uae-authorities-look-at-how-to-police-dark-side-of-the-metaverse/#:~:text=Ali%20bin%20Khatam%2C%20senior%20advocate,their%20trademarks%20in%20the%20metaverse.> accessed 10 October 2023.</a></p></div><div data-bbox=)

<sup>62</sup> 'Hermes Int'l v. Rothschild, 22-CV-384 (JSR) | Casetext Search + Citator' (*Casetext.com* 18 May 2022) <<https://casetext.com/case/hermes-intl-v-rothschild-5>> accessed 10 October 2023.

<sup>63</sup> *ibid*

Dubai's Virtual Assets Regulatory Authority (VARA), for example, became the world's first regulator to join the metaverse. The regulatory body built its metaverse headquarters in the virtual environment "The Sandbox," a SoftBank-backed Ethereum blockchain-based program that allows users to produce, trade, and acquire digital assets. VARA is controlled by the Dubai Virtual Asset Regulation Law No. (4) of 2022, the emirate's first law governing virtual assets<sup>64</sup>.

The Virtual Assets Regulatory Authority (VARA) of Dubai has issued regulations targeted at developing its virtual asset business while combatting ongoing criminal financial operations in virtual space. Prime example of such regulation is the 2023 Regulations on Virtual Assets and Related Activities. The new rule includes seven major virtual asset activities, covering everything from financing and lending to management and investing, with the purpose of increasing investor trust and expanding the market in Dubai<sup>65</sup>. The new laws include rulebooks and guidelines that clarify terminology, fees for conducting virtual financial transactions, and fines that can total upwards of \$13 million.

It is needless to say in the light of the current trends, that it is imperative that Nigeria as a Nation should borrow a leaf from these jurisdictions that are pioneering the regulation of the Metaverse, for it better that the law is proactive than passive. As it has been made obvious from the above, the role of the law in ensuring the safe usage of the Metaverse cannot be overstated; the law in a comprehensive and well spelt out manner is needed for the safe usage of the Metaverse. This is because an absence of regulation of the Metaverse can lead to a state of lawlessness in the Metaverse contrary to the state objectives and directive principles of Nigeria as a nation.

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<sup>64</sup> Traffic Digital, 'Dubai's Virtual Assets Regulatory Authority Becomes World's First Regulator to Make Its Debut in Metaverse' (*Mediaoffice.ae*2020) <<https://mediaoffice.ae/en/news/2022/May/03-05/Dubai-Virtual-Assets-Regulatory-Authority-becomes-world-first>> accessed 10 October 2023.

<sup>65</sup> Gabriella Savastano, Yasmin Johal and Theodora Okocha, 'What's New in the UAE Virtual Asset Space - Regulatory Updates' (*Lexology*19 June 2023) <<https://www.lexology.com/library/detail.aspx?g=b79d1330-ac92-44c1-9012-a8ac59a4723b>> accessed 10 October 2023.

## CHAPTER 5

### CONCLUSION AND RECOMMENDATIONS

The advancement of the law concerning the safe usage of virtual reality (VR) spaces in Nigeria is imperative in a digital landscape marked by rapid technological progress. This study has examined the existing legal framework, international best practices, institutional structures, and industry perspectives to provide a comprehensive understanding of the challenges and opportunities within the Nigerian VR ecosystem. This new technology offers a lot of opportunities and benefits and everyone from individuals to businesses and organizations to even State actors are jumping on the bus. For Example, the International Police (INTERPOL) is actively utilizing the potential of VR for its benefit by training officers and engaging in conferences hosted on Virtual Reality Spaces<sup>66</sup>. Countries such as China are actively engaged in building VR and Web3 infrastructures as they seek to benefit from the next economic trend and strengthen their overall digital economy<sup>67</sup>. Chinese companies are investing massively in the research and development of VR gear and applications<sup>68</sup>. VR in classrooms is now a common feature of the learning environment in China and in 2018, the Chinese Government built its first VR theme park, thus investing in VR tourism<sup>69</sup>. It is against the backdrop that the Nigerian Policy makers are enjoined to invest in the advancement of the Metaverse and VR technology in Nigeria.

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<sup>66</sup> 'INTERPOL Launches First Global Police Metaverse' (*Interpol.int*2022) <<https://www.interpol.int/en/News-and-Events/News/2022/INTERPOL-launches-first-global-police-Metaverse>> accessed 10 October 2023.

<sup>67</sup> 'The Virtual Reality Industry (VR) in China - Marketing China' (*Marketing China*5 July 2023) <<https://marketingtochina.com/virtual-reality-industry-china/>> accessed 10 October 2023.

<sup>68</sup> Josh Ye, 'China Aims to Ship 25 Million Virtual Reality Devices by 2026' (*Reuters*November 2022) <<https://www.reuters.com/technology/china-aims-ship-25-million-virtual-reality-devices-by-2026-2022-11-01/>> accessed 10 October 2023.

<sup>69</sup> 'The Virtual Reality Industry (VR) in China - Marketing China' (*Marketing China*5 July 2023) <<https://marketingtochina.com/virtual-reality-industry-china/>> accessed 10 October 2023.

## **5.1 Recapitulation of Findings**

The examination of Nigeria's current legal framework revealed significant gaps in addressing the unique issues presented by VR, particularly concerning user safety, data privacy, intellectual property rights, and taxation. Comparative analyses of international VR regulations demonstrated the need for tailored Nigerian policies to foster responsible innovation and protect user interests effectively. Insights from industry stakeholders underscored the practical challenges faced by developers and users within the VR sector. This has been made very clear and thorough in review from Chapter 1-4.

The Study also relied on some of the various legal school of thought such as legal positivism, natural law, legal realism, Pure Law and Sociological Theory of Law to explore the jurisprudential foundations underpinning VR regulation. Recognizing VR's inherent complexities, it is essential to align legal principles with societal needs and technological realities and advancement, ensuring laws are not only just but also adaptive and forward-looking.

## **5.2 Recommendations**

Building upon the findings and acknowledging the historical, legal, jurisprudential and institutional context, the following recommendations are presented to advance the law on the safe usage of VR spaces in Nigeria:

1. Enact Comprehensive VR Legislation: The Nigerian government should formulate dedicated legislation addressing VR-specific concerns, encompassing user safety standards, data privacy regulations, intellectual property protection, and ethical content guidelines. In addition, Any Law or Regulation to be enacted must take into consideration the various societal factors that will surely influence the applicability of such law. The law should be just and balanced as Aristotle

posits that Justice is a mean<sup>70</sup> i.e., a balance between two extremes. The NITDA can use its position as regulators to propose to the National Assembly appropriate Legislation for enacted to regulate the Metaverse.

2. Amend Existing Laws: Existing Laws can be amended, to explicitly include provisions relevant to VR technologies, ensuring comprehensive legal coverage.

3. Institutional Strengthening: The capabilities of regulatory bodies and law enforcement agencies can be enhanced by advanced training such as the Interpol is already doing to effectively monitor and enforce VR-related laws. Training programs and collaborations with tech experts can bolster their understanding of evolving VR technologies. Also, the establishment of a VR Regulatory Body specialized on the matters of the Metaverse can be considered. The creation of a specialized regulatory body for VR, tasked with crafting and implementing industry-specific regulations, collaborating with stakeholders, and conducting regular assessments of compliance will be of great benefit to the nation at large as the effective regulation of the Metaverse.

4. Industry Collaboration and User Education: User Education Campaigns should be launch nationwide to create awareness informing users about VR risks, safety measures, and their rights concerning privacy and data protection as well as the opportunities available within it beyond just entertainment. We can see NITDA already doing this about VR to an extent<sup>71</sup>, however, more can be done in this area.

5. Industry Standards: Encourage the VR industry to establish self-regulatory standards, promoting responsible content creation, user safety protocols, and data privacy measures, concern and motivation.

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<sup>70</sup> Aristotle, 'The Nicomachean Ethics' (W D Ross and L Brown eds, Oxford University Press 2009).

<sup>71</sup> 'National Center for Artificial Intelligence and Robotics – NITDA' (*Nitda.gov.ng*2023) <<https://nitda.gov.ng/ncair/>> accessed 10 October 2023.

6. Research and Development: Government should allocate more funding for research initiatives to promote innovation while exploring the ethical, societal, and legal dimensions of emerging VR technologies, ensuring laws remain adaptive to future innovations. A good step in this direction is the establishment of The National Centre for Artificial Intelligence and Robotics (NCAIR)<sup>72</sup> by NITDA which focuses in research and developments in areas such as Artificial Intelligence, Robotics, Virtual Reality etc.

7. International Collaboration: The government and regulatory bodies should join collaborations with international organizations and regulatory bodies to stay updated on global VR trends and best practices, aligning Nigerian regulations with international standards.

### **5.3 Conclusion**

In conclusion, this study serves as a foundational guide for policymakers, legal professionals, and industry stakeholders navigating the complex terrains of VR regulation in Nigeria. By implementing these recommendations, Nigeria can foster an environment where VR innovation thrives, user rights are safeguarded, and the nation stands at the forefront of responsible and secure VR usage in the digital age. This will mark a significant step towards a more inclusive, innovative, and legally sound digital future for all Nigerians.

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<sup>72</sup> ibid

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