






REVIEW

Ethical use of data in the metaverse for corporate social responsibility

Uso ético de los datos en el metaverso para la responsabilidad social de las empresas

Samuel Ejiro Uwhejevwe-Togbolo¹  , Ubogu Festus Elugom¹ , Nelson Iguemedere Ofomaja²

¹Department Of Accounting, Dennis Osadebay University, Asaba Delta State, Nigeria.

²Department Of Mechanical Engineering, Delta State School Of Marine Technology, Burutu Delta State, Nigeria.

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ABSTRACT

The study examined ethical use of data in the metaverse for corporate social responsibility (CSR). The study noted that Metaverse, is an emerging technology with vast potential for businesses, social interactions, and entertainment. Nevertheless, with the increasing use of data in this digital realm, it is crucial to ensure the ethical use of data and prioritize Corporate Social Responsibility (CSR). Thus, metaverse has garnered a lot of interest recently. It describes a group virtual shared environment that is produced through the combination of virtual, augmented, and physical reality settings. The metaverse can be conceptualized as an immersive, persistent, and networked virtual environment where users can explore different virtual environments, interact with one another, and take part in a variety of activities. Consequently, in the metaverses, CSR plays a crucial role. These elements consist of safeguarding user privacy and data security, battling false and misleading information, encouraging diversity and inclusion, addressing the impact on the environment, supporting moral business conduct, and enhancing stakeholder trust. The study concluded that Corporate social responsibility is crucial when it comes to the moral use of data in the metaverse. Companies can foster trust with their users and help the metaverse succeed as a whole by making sure that user data is gathered, stored, and used ethically. It was recommended that firms should consider the environmental impact of the metaverse and adopt sustainable practices to minimize negative consequences on the environment.

Keywords: Ethical; Metaverse; Data; Corporate Social Responsibility; Virtual.

RESUMEN

El estudio examinó el uso ético de los datos en el metaverso para la responsabilidad social de las empresas (RSE). El estudio señala que el metaverso es una tecnología emergente con un enorme potencial para las empresas, las interacciones sociales y el entretenimiento. Sin embargo, con el creciente uso de datos en este ámbito digital, es crucial garantizar el uso ético de los datos y dar prioridad a la Responsabilidad Social Corporativa (RSC). Así, el metaverso ha suscitado mucho interés recientemente. Describe un entorno virtual compartido en grupo que se produce mediante la combinación de entornos de realidad virtual, aumentada y física. El metaverso puede conceptualizarse como un entorno virtual inmersivo, persistente y en red en el que los usuarios pueden explorar distintos entornos virtuales, interactuar entre sí y participar en diversas actividades. Por consiguiente, en los metaversos, la RSC desempeña un papel crucial. Estos elementos consisten en salvaguardar la privacidad y la seguridad de los datos de los usuarios, combatir la información falsa y engañosa, fomentar la diversidad y la inclusión, abordar el impacto sobre el medio ambiente, apoyar la conducta empresarial moral y aumentar la confianza de las partes interesadas. El estudio concluye que la responsabilidad social de las empresas es crucial cuando se trata del uso moral de los datos en el metaverso. Las empresas pueden fomentar la confianza de sus usuarios y contribuir al éxito del metaverso en su conjunto asegurándose de que los datos de los usuarios se recopilan, almacenan y utilizan de forma ética.

Se recomienda a las empresas que tengan en cuenta el impacto medioambiental del metaverso y adopten prácticas sostenibles para minimizar las consecuencias negativas sobre el medio ambiente.

Palabras clave: Ética; Metaverso; Datos; Responsabilidad Social Corporativa; Virtual.

INTRODUCTION

The Metaverse, a collective virtual shared space, is rapidly gaining prominence and transforming the way we live, work, and interact. The way we interact with the world, industries, and society is changing at a rapid pace due to technological innovation.⁽¹⁾ These cutting-edge innovations have the power to completely transform the ways in which we work, live, communicate, and solve challenging issues. As more companies and individuals adopt the technology, it becomes increasingly crucial to report the ethical use of data in this immersive environment.

It is reliable that the Metaverse, is an emerging technology with vast potential for businesses, social interactions, and entertainment. Nevertheless, with the increasing use of data in this digital realm, it is crucial to ensure the ethical use of data and prioritize Corporate Social Responsibility (CSR). CSR involves a company's commitment to operate in an economically, socially, and environmentally responsible manner. The study is set to fill the gap in exploring the ethical use of data in the metaverse in corporate social responsibility.

The concept of corporate social responsibility (CSR) holds that businesses should consider the social, environmental, and ethical ramifications of their decisions in addition to their bottom line. Within the metaverse, corporate social responsibility (CSR) entails making certain that user data is gathered, stored, and used in an ethical and open manner. This entails getting user consent before collecting data, protecting data security and privacy, and being open and honest about the data's use.

DEVELOPMENT

Concept of Metaverse

The idea of the "metaverse" has garnered a lot of interest recently. It describes a group virtual shared environment that is produced through the combination of virtual, augmented, and physical reality settings. The metaverse can be conceptualized as an immersive, persistent, and networked virtual environment where users can explore different virtual environments, interact with one another, and take part in a variety of activities.⁽²⁾ The Metaverse is credited to Neal Stephenson's 1992 novel "Snow Crash" and the 1999 film "The Matrix" are two examples of science fiction literature and cinema that influenced the concept of the metaverse. Through these works, the idea of a digital world that users can access and navigate just like a physical space has gained popularity.⁽³⁾

Advances in artificial intelligence (AI), augmented reality (AR), and virtual reality (VR) have made the metaverse concept more attainable in recent years. In order to provide a more seamless and engaging virtual world experience, businesses like Microsoft and Facebook (now Meta) have made significant investments in the study and development of immersive technologies.⁽⁴⁾ Allowing users to engage in a variety of activities, including work, education, shopping, socializing, gaming, and entertainment, all on a single, connected platform is one of the main objectives of the Metaverse. This would provide a platform for creative business models and fresh entertainment genres in addition to facilitating more effective networking, collaboration, and learning opportunities.⁽⁵⁾

Understanding CSR

The concept CSR refers to a company's dedication to environmentally and socially responsible business practices following the ethics of business policy establishing the company.⁽⁶⁾ Like in many other nations, Nigeria has seen a notable increase in the significance of CSR due to growing stakeholder demands for ethical and responsible corporate behavior.⁽⁶⁾ Again, CSR describes a company's commitment to conducting business in an ethically and environmentally responsible manner, taking into account the needs of all parties involved, including the community, suppliers, customers, and employees. As the digital era arrived, the idea of SR expanded to include virtual environments. The virtual world known as the metaverse has the power to fundamentally alter how we socialize, work, and interact with one another.⁽⁶⁾ The notion of CSR is gaining significance in the virtual world of the metaverse as businesses keep growing their presence there.

CSR in the Metaverse

In the metaverses, CSR plays a crucial role. These elements consist of safeguarding user privacy and data security, battling false and misleading information, encouraging diversity and inclusion, addressing the impact on the environment, supporting moral business conduct, and enhancing stakeholder trust. Below is a discussion

of the constituents.⁽⁷⁾

1. Safeguarding user privacy and data security: In the Metaverse, protecting user privacy and data security is of utmost importance. CSR programs can assist businesses in creating and putting into place strong data protection and privacy policies. This entails getting user consent before collecting data, setting time limits for data storage, and making sure data is encrypted to guard against illegal access.⁽⁷⁾

2. Battling false and misleading information: The Metaverse is vulnerable to the propagation of false information because it depends so heavily on data. CSR programs can develop content moderation guidelines, support fact-checking, and encourage transparency in order to stop the spread of false information. Users will benefit from a safe and dependable virtual environment as a result.

3. Encouraging diversity and inclusion: CSR programs have the potential to advance inclusion and diversity in the Metaverse. Businesses can spend money addressing potential biases in algorithmic decision-making, guaranteeing equal access to opportunities, and developing inclusive virtual environments.

4. Addressing the impact on the environment: The Metaverse's heavy reliance on data can have a major negative impact on the environment and energy use. To lessen the Metaverse's negative environmental effects, CSR projects can concentrate on lowering data centers' carbon footprints, utilizing energy-efficient technologies, and funding renewable energy sources.

5. Supporting moral business conduct: CSR programs can promote moral business conduct in the Metaverse. Companies can create and implement codes of conduct that guarantee ethical labor practices, ethical material sourcing, and open reporting of their social and environmental impacts.

6. Enhancing stakeholder trust: Companies can show that they are committed to ethical business practices and responsible data use by putting CSR initiatives into action in the Metaverse. This can support a more robust and sustainable Metaverse ecosystem by fostering trust among stakeholders, such as clients, staff, and investors.⁽⁷⁾

Ensuring the ethical use of data in the Metaverse is a critical function of CSR.⁽⁸⁾ Businesses may support a more responsible and sustainable virtual environment by tackling concerns like user privacy, misinformation, diversity, environmental impact, and ethical business practices. The references given shed important light on the significance of CSR in the Metaverse and its possible effects on different stakeholders as well as the ecosystem as a whole.

Integrating CSR into the Metaverse

Businesses can integrate CSR principles into their virtual operations as they establish their presence in the metaverse.⁽⁹⁾ This may entail a variety of actions, like:

1. Environmental Sustainability: Companies can encourage eco-friendly behavior in the metaverse by using eco-friendly materials when creating virtual spaces, cutting down on energy usage, and offering incentives for users to adopt sustainable practices.

2. Ethical Business Practices: Organizations can make sure that their online operations follow moral guidelines on things like fair labor standards, data privacy, and intellectual property rights.

3. Community Engagement: Companies can interact with users and other stakeholders in the metaverse by arranging events, funding projects, and lending their support to charitable causes in the virtual world.

4. Diversity and Inclusion: Businesses can foster diversity and inclusion in the metaverse by constructing areas that accommodate users of various backgrounds, cultures, and skill levels, as well as by guaranteeing that all users have equal access to opportunities.

5. Employee Wellbeing: Companies can help their staff members feel better by offering virtual workspaces that encourage a good work-life balance, mental health resources, and a sense of community and camaraderie among coworkers.⁽⁹⁾

Benefits of CSR in the Metaverse

It is necessary for businesses and society at large to embrace the CSR which may enable them gain a great deal from CSRs by integration into the metaverse. Amongst the gains are:

i. Improved Reputation: Businesses can gain a good reputation and draw in partners, investors, and clients who respect ethical and sustainable business practices by showcasing their dedication to corporate social responsibility (CSR) in the metaverse.⁽¹⁰⁾

ii. Enhanced Innovation: Businesses that embrace corporate social responsibility (CSR) in the metaverse can cultivate an innovative culture that inspires staff members and other stakeholders to look for novel approaches to solving social and environmental problems.

iii. Strengthened Stakeholder Relationships: Businesses can cultivate mutual understanding and loyalty by interacting with stakeholders in the metaverse to strengthen relationships with suppliers, customers, staff, and the community.⁽¹⁰⁾

- iv. **Competitive Advantage:** Businesses can stand out from rivals and obtain an advantage in the quickly changing virtual market by putting a high priority on corporate social responsibility in the metaverse.
- v. **Sustainable Growth:** Businesses can ensure the long-term success of their virtual endeavors by implementing CSR principles into their metaverse operations. This way, they can help create a more equitable and sustainable digital world.⁽¹⁰⁾

Triple Pundit Model of CSR Framework

It is crucial to take into account the Triple Pundit Model of CSR, which consists of People, Profit, and Planet, in order to comprehend the ethical use of data in the Metaverse.⁽¹¹⁾ The following essential components can be added to this framework to apply it to the Metaverse:

- i. **People:** In the Metaverse, it's critical to guarantee the privacy rights and data security of individual users. Businesses need to get user consent, implement strict data protection procedures, and openly explain their data usage guidelines.
- ii. **Profit:** Businesses need to find a way to prioritize ethical data use while still making a profit. Responsible data collection and storage methods, preventing data breaches, and spending money on cutting-edge security measures can all help achieve this.
- iii. **Planet:** It's important to consider how the Metaverse will affect the environment. To reduce their negative environmental effects, businesses should adopt sustainable practices and take into account the energy consumption and carbon footprint of their virtual environments.⁽¹¹⁾

Ethical Use of Metaverse in CSR

CSR may be greatly impacted by the metaverse, a collective virtual shared space that arises from the convergence of physically persistent virtual reality and virtually enhanced physical reality.⁽¹⁰⁾ It is critical to think about the ethical ramifications of using the metaverse in the context of corporate social responsibility (CSR) as businesses investigate the metaverse's potential for operations, marketing, and customer engagement.⁽¹⁰⁾ This revelation sparked a discussion about the moral implications of using the metaverse for corporate social responsibility (CSR), which has various effects on businesses as listed below:

1. **Privacy and Data Protection:** Organizations working in the metaverse need to give user privacy and data protection first priority. Strict ethical guidelines and legal requirements should be followed when gathering and using personal data in virtual environments. Ethical metaverse use in CSR requires user consent, transparency about data practices, and strong security measures.
2. **Inclusivity and Diversity:** Corporate initiatives should make use of the metaverse to advance inclusivity and diversity. Businesses must make sure that virtual environments are friendly and available to people with a variety of backgrounds. This entails tackling problems like accessibility for people with disabilities, representation, and creating a feeling of community among all participants.⁽¹⁰⁾
3. **Environmental Impact:** Businesses should evaluate and lessen the environmental effects of using the metaverse for virtual gatherings, events, and immersive experiences. This entails taking into account the energy usage of virtual platforms, carbon emissions related to server infrastructure, and sustainable development and usage practices in the metaverse.
4. **Digital Well-Being:** Promoting users' digital well-being is another area where metaverse ethics come into play. Businesses ought to give people's mental health and security in virtual environments top priority. This entails tackling problems like addiction, cyberbullying, and encouraging sensible metaverse usage habits.
5. **Authenticity and Truthfulness:** Businesses must respect the values of authenticity and truthfulness when using the metaverse for marketing or brand representation. Undermining CSR initiatives and eroding trust are two consequences of misleading or deceptive practices used in virtual experiences. To use the metaverse ethically for CSR, virtual interactions must be conducted with honesty and integrity.⁽¹⁰⁾

Aids of Ethical Metaverse Use for CSR

No doubt the ethical metaverse use for CSR is enormous such that the metaverse collaborate in support of CSR initiatives as it drives innovation in the way companies engage in their CSR.⁽¹²⁾

1. **Global Engagement:** Businesses can use the metaverse to interact creatively and effectively with audiences around the world, promoting mutual understanding and cooperation in support of corporate social responsibility programs.⁽¹²⁾
2. **Accessibility:** People who might encounter physical obstacles in conventional settings can find greater accessibility in virtual environments, which enables them to participate in CSR events and programs more widely.⁽¹²⁾
3. **Innovation:** Companies can create memorable experiences that increase awareness of and encourage positive change on social and environmental issues by utilizing the metaverse ethically.

4. Community Building: Through the provision of a forum for discussion, instruction, and group action, virtual spaces within the metaverse can aid in the development of communities centered around CSR causes.⁽¹²⁾

Challenges and Risks

It is on connected that challenges and risk may be implanted in the metaverse use for CRS like any other initiative that has been established in time past.

1. Digital Divide: This could make differences in access to metaverse experiences even more pronounced, possibly preventing members of some groups from fully engaging in corporate social responsibility (CSR) programs carried out in virtual settings.⁽¹³⁾

2. Security Concerns: Maintaining user data security and stopping cyberattacks in the metaverse are constant challenges that call for strong security measures to protect people and business interests.⁽¹³⁾

3. Regulatory Compliance: For businesses looking to ethically incorporate the metaverse into their CSR strategies, navigating changing regulatory frameworks pertaining to virtual environments presents compliance challenges.⁽¹³⁾

4. Misinformation and Manipulation: The possibility of misinformation and manipulation in online environments emphasizes the significance of moral standards that place a premium on veracity and the responsible distribution of content.⁽¹³⁾

As a result, CSR necessitates a deliberate strategy that puts an emphasis on digital well-being, inclusivity, environmental sustainability, privacy protection, authenticity, and truthfulness.⁽¹⁴⁾ Through the adoption of these moral principles and the utilization of the metaverse's resources, businesses can enhance their corporate social responsibility initiatives in ways that appeal to a wide range of stakeholders and reduce related hazards.⁽¹⁴⁾

CONCLUSION

The swift expansion of the Metaverse demands a resolute dedication to the ethical utilization of data. Businesses can ensure responsible user data handling, foster transparency, and improve the general well-being of people and the environment by implementing CSR principles into their daily operations. In order to handle the ethical issues surrounding data use in this virtual environment, companies, legislators, and users must collaborate as the Metaverse develops.

Again, Corporate social responsibility is crucial when it comes to the moral use of data in the metaverse. Companies can foster trust with their users and help the metaverse succeed as a whole by making sure that user data is gathered, stored, and used ethically. Getting user consent, protecting data privacy and security, being open about data collection methods, minimizing data collection, and creating ethical AI systems are all part of this. Companies can contribute to building a secure and prosperous metaverse for all users by following these ethical guidelines.

Recommendations

The following recommendations were made owing to the study:

1. Adopt stringent data protection measures, including obtaining user consent and transparently communicating data usage policies.

2. Balance revenue generation with responsible data collection and storage practices.

3. Invest in advanced security measures to prevent data breaches and protect user data.

4. Consider the environmental impact of the Metaverse and adopt sustainable practices to minimize negative consequences on the environment.

5. Collaborate with policymakers, users, and industry peers to create a shared understanding of ethical data use in the Metaverse.

REFERENCES

1. Oyighan D, Ukubeyinje SE, Oladokun, BD, Kakwagh, VV. Emerging Technologies: Leveraging Digital Literacy for Self-Sufficiency Among Library Professionals. *Metaverse Basic and Applied Research*. 2024; 3: 59. doi: 10.56294/mr202459

2. Shahper R, Alexander, R. What is novel about the Metaverse?, *International Journal of Information, Management*, 2023; 73: 102684. <https://doi.org/10.1016/j.ijinfomgt.2023.102684>.

3. Stelios A.K.I. The 4 Epochs of the Metaverse. *Journal of Metaverse Review*. 2023; 3: 152-165,

4. Yaqoob I. Salah K. Jayaraman R. Omar M. Metaverse applications in smart cities: Enabling technologies, opportunities, challenges, and future directions, *Internet of Things*. 2023; 23: 100884. <https://doi.org/10.1016/j.iot.2023.100884>.

iot.2023.100884.

5. Kaddoura S, Al Hussein F. The rising trend of Metaverse in education: challenges, opportunities, and ethical considerations. *PeerJ Comput Sci.* 2023; 139:1252. doi: 10.7717/peerj-cs.1252.

6. Uwhejevwe-Togbolo SE, Ojinta CM, Okoli PC. Corporate Social Responsibility and Tax Aggressiveness amidst Subsidy Removal amongst Listed Firms in Nigeria. *International Journal of Academic Accounting, Finance & Management Research.* 2023; 7: 9-16

7. Wynn M, Jones P. New Technology Deployment and Corporate Responsibilities in the Metaverse. *Knowledge.* 2023; 3(4):543-556. <https://doi.org/10.3390/knowledge3040035>

8. Anshari M, Syafrudin M, Fitriyani NL, Razzaq A. Ethical Responsibility and Sustainability (ERS) Development in a Metaverse Business Model. *Sustainability.* 2022; 14(23):15805. <https://doi.org/10.3390/su142315805>

9. Andreas B, Yaroslav U. Exploring the Potential of the Metaverse in Operations Management: Towards Sustainable Practices. This final project work has been carried out at the School of Engineering at Jönköping University in the subject area Production Systems. 2023; 1-50

10. Ho, KA. Implementation Strategy of Vietnamese Enterprises in Corporate Social Responsibility. *Jyväskylä: JAMK University of Applied Sciences,* 2022; 83.

11. Wilkinson C. Corporate Digital Responsibility: The Influence of Digitalisation on Sustainable Corporate Development. *KCC Kompetenz Centrum.* 2023; 1-50.

12. Kulkarni M. Digital accessibility: Challenges and opportunities. *IIMB Management Review.* 2019; 31(1): 91-98. <https://doi.org/10.1016/j.iimb.2018.05.009>.

13. Gupta A, Khan HU, Nazir S, Shafiq M, Shabaz M. Metaverse Security: Issues, Challenges and a Viable ZTA Model. *Electronics.* 2023; 12(2):391. <https://doi.org/10.3390/electronics12020391>

14. Chen CC, Khan A, Hongsuchon T, Ruangkanjanases A, Chen YT, Sivarak O, Chen SC. The Role of Corporate Social Responsibility and Corporate Image in Times of Crisis: The Mediating Role of Customer Trust. *Int J Environ Res Public Health.* 2021 Aug 4;18(16):8275. doi: 10.3390/ijerph18168275. PMID: 34444023; PMCID: PMC8394849.

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AUTHORSHIP CONTRIBUTION

Conceptualization: Samuel Ejiro Uwhejevwe-Togbolo, Ubogu Festus Elugom, Nelson Iguemedere Ofomaja.

Research: Samuel Ejiro Uwhejevwe-Togbolo, Ubogu Festus Elugom, Nelson Iguemedere Ofomaja.

Methodology: Samuel Ejiro Uwhejevwe-Togbolo, Ubogu Festus Elugom, Nelson Iguemedere Ofomaja.

Project management: Samuel Ejiro Uwhejevwe-Togbolo, Ubogu Festus Elugom, Nelson Iguemedere Ofomaja.

Original drafting: Samuel Ejiro Uwhejevwe-Togbolo, Ubogu Festus Elugom, Nelson Iguemedere Ofomaja.

Writing-revising and editing: Samuel Ejiro Uwhejevwe-Togbolo, Ubogu Festus Elugom, Nelson Iguemedere Ofomaja.