



ORIGINAL

Impact of metaverse and corporate social responsibility on agriculture production and accounting firm performance output of Nigerian firms

Impacto del metaverso y la responsabilidad social de las empresas en la producción agrícola y el rendimiento contable de las empresas nigerianas

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ABSTRACT

The study objective is to examine the impact of the metaverse and corporate social responsibility (CSR) on agriculture production and accounting firm performance output of Nigerian firms. The study ascertained that metaverse is described as a communal virtual shared environment that is produced when physically persistent virtual reality (VR) and virtually augmented physical reality collide while CSR assists firms in becoming socially responsible to the public, their stakeholders, and themselves. The study findings recognized that firms that effectively use technology to showcase their dedication to ethical CSR practices will likely draw investors who support the Sustainable Development Goals (SDGs). Thus, the production of agricultural products and the performance of accounting businesses within Nigerian firms are significantly impacted by both the metaverse and CSR. Their integration improves community ties, stimulates creativity, increases productivity, supports sustainability, and eventually results in a stronger economic framework within Nigeria's crucial agriculture industry. It was concluded in the study that the synergistic impact that improves the performance of accounting firms and agricultural production is produced when CSR initiatives are combined with metaverse technologies. Businesses can create creative solutions to address social concerns that farmers confront, including market access or teaching about sustainable practices, by utilizing the metaverse technology included in CSR frameworks.

Keywords: Metaverse; CSR; Agriculture Production; Accounting Firm; Nigeria.

RESUMEN

El objetivo del estudio es examinar el impacto del metaverso y la responsabilidad social corporativa (RSC) en la producción agrícola y el rendimiento contable de las empresas nigerianas. El estudio determinó que el metaverso se describe como un entorno comunal virtual compartido que se produce cuando la realidad virtual (RV) físicamente persistente y la realidad física virtualmente aumentada colisionan, mientras que la RSC ayuda a las empresas a ser socialmente responsables ante el público, sus partes interesadas y ellas mismas. Los resultados del estudio reconocieron que las empresas que utilizan eficazmente la tecnología para mostrar su dedicación a las prácticas éticas de RSC probablemente atraerán a inversores que apoyen los Objetivos de Desarrollo Sostenible (ODS). Así pues, tanto el metaverso como la RSC influyen significativamente en la producción de productos agrícolas y en los resultados de las empresas nigerianas en materia de contabilidad. Su integración mejora los lazos comunitarios, estimula la creatividad, aumenta la productividad, apoya la sostenibilidad y, en última instancia, da lugar a un marco económico más fuerte dentro de la crucial industria

agrícola de Nigeria. En el estudio se concluye que el impacto sinérgico que mejora el rendimiento de las empresas contables y la producción agrícola se produce cuando las iniciativas de RSC se combinan con las tecnologías metaversas. Las empresas pueden crear soluciones creativas para abordar las preocupaciones sociales a las que se enfrentan los agricultores, como el acceso al mercado o la enseñanza de prácticas sostenibles, utilizando la tecnología metaversa incluida en los marcos de RSC.

Palabras clave: Metaverso; RSE; Producción Agrícola; Empresa Contable; Nigeria.

INTRODUCTION

The term metaverse is described as a communal virtual shared environment that is produced when physically persistent virtual reality (VR) and virtually augmented physical reality collide. It includes VR, augmented reality (AR), and further immersive digital experiences. Innovative techniques in agriculture, such as precision farming, remote monitoring, and improved farmer training via simulations, can be made possible via the metaverse. ⁽¹⁾ While the business concept known as corporate social responsibility (CSR) assists firms in becoming socially responsible to the public, their stakeholders, and themselves. CSR programs can have a substantial impact on agricultural productivity in Nigeria, where agriculture is a vital sector of the economy, by promoting sustainable practices, strengthening brand reputation, and improving community connections. ^(2,3)

Thus, supply chain management, training and education, and precision agriculture are just a few of the innovations that can result from incorporating metaverse technologies into agricultural processes. ⁽⁴⁾ Moreover, farmers may now see data on crop health, weather patterns, and soil health in real time by using AR and VR technologies. Better decision-making and more effective resource allocation are made possible by this data-driven strategy. Additionally, by integrating the metaverse, farmers will have access to immersive training environments that simulate real-world trials without the hazards involved. Farmers may become more skilled as a result, increasing farm output. Once more, by enabling stakeholders to follow products from farm to table, virtual platforms can improve supply chain transparency. ⁽⁵⁾ This openness can decrease food waste and increase consumer trust.

The study is aimed to examine the impact of the metaverse and CSR on agriculture production and accounting firm performance output in Nigerian firms. This gap need to be unbundled as accounting firm assist the agriculturist to interact with cost and effect of agricultural produce. Accounting firms assist farmers by providing a broad range of specialized services that are suited to the particular difficulties encountered in the agribusiness industry. Technology integration, financial management and reporting, tax planning and compliance, business advising services, and industry-specific knowledge are just a few of the major categories into which some of these services can be divided. ⁽⁶⁾

Agriculture will be able to expand beyond its current boundaries as a result of these services and the professional advice offered by accounting firms. Therefore, farmers require accurate financial reporting in order to assess the status of their business and make informed decisions. Accounting services offer direction to the agricultural management so that farmers may keep accurate records of their income, expenses, and transactions. This includes keeping an eye on accounts payable and receivable. ⁽⁷⁾ The agribusiness firm receives advice from the accounting firm regarding agricultural taxation, which can be complicated due to the numerous credits, deductions, and incentives available exclusively to farmers. In addition to providing standard accounting services, accounting firms provide support strategies for income tax compliance and tax reduction. To reiterate, they also provide strategic support in areas like risk management, cost analysis, and succession planning that can increase profitability and sustainability. ⁽⁶⁾

Accounting firms assist farmers in implementing cloud-based solutions and cybersecurity safeguards to secure sensitive financial data from cyber threats as technology plays an ever-more-important role in agriculture. ⁽⁸⁾ Because of this, accounting specialists frequently have substantial expertise working with agribusiness clients or have backgrounds in agriculture themselves. Because of their experience, they are able to offer customized guidance that takes industry-specific factors into account, such as comprehending how market movements affect commodity prices and negotiating laws that have an impact on agricultural output. ^(9,10) As a result, accounting firms provide all-encompassing assistance to farmers in a variety of ways, freeing them up to concentrate on their primary business activities while accounting for the financial well-being of their agribusiness.

Consequent upon this activities by the accounting firm preform for the purposes of quality agricultural output to improving the agricultural industry through their professionalism in financial spectrum. The metaverse and CSR has may be a divine model in which this ride can be performed using the VR and AR in the metaverse in attaining this professionalism. Hence the study objective and aim is using the metaverse and CSR on quality agriculture production in association with the accounting firms in Nigeria through the VR and AR technology to improve the agribusiness.

Concept of Metaverse

The term metaverse refers to a grouping of virtual places with mixed realities where people can interact with one another. These interactive public virtual spaces typically include digital content and a customized avatar. The array of metaverse-related technologies currently includes mobile applications and video games in addition to AR and VR. Anyone can access the metaverse, a 3D version of the Internet that doesn't require a VR headset, with a computer, tablet, or smartphone. In these virtual worlds, digital economies where people can manufacture, buy, and exchange goods emerge.^(11,12)

The concept of the metaverse has attracted a lot of attention lately. It depicts a shared virtual environment for groups created by combining augmented, virtual, and physical reality settings. A persistent, networked, and immersive virtual environment that allows users to explore many virtual worlds, communicate with one another, and engage in a range of activities is known as the metaverse.^(3,15) The 1992 book "Snow Crash" by Neal Stephenson and the 1999 motion picture "The Matrix" are recognized as two of the science fiction works of literature and film that shaped the idea of the metaverse. The notion of a digital environment that people can enter and explore in the same way as a physical location has grown in acceptance as a result of these works.⁽³⁾

Concept of CSR

The term CSR refers to a firm's dedication to environmentally and socially responsible business practices. As businesses become more aware of their social and environmental responsibilities, CSR has become more and more important in today's firm operations. The idea of CSR has grown in importance, especially in light of recent changes like the elimination of subsidies. Globally, CSR has become more and more significant in firm operations. It is now expected of businesses to do more for society than just maximize their profits. CSR has increased dramatically as firms try to strike a balance between their social and environmental obligations and their financial objectives. As awareness of businesses' roles in sustainable development has grown, CSR in Nigeria has changed throughout time.⁽¹³⁾

CSR is a duty that is required to be performed by firms operating both inside and outside of a community. The idea of CSR is to make firm to carry out their social responsibility which is considered to be the actions of firm in the development and growth of the community in which they operate.⁽¹⁴⁾

The idea behind CSR is that firms should make decisions that take into account not just their financial line but also the social, environmental, and ethical implications. CSR in the metaverse means ensuring that user data is collected, handled, and shared in an open, moral, and ethical way. This calls for obtaining user consent prior to data collection, safeguarding the security and privacy of data, and being transparent and truthful about the use of the data.⁽³⁾

The Impact of CSR on Agricultural Production in the Metaverse

CSR programs may have a significant impact on Nigeria's agricultural output. Businesses that participate in CSR frequently support environmentally friendly farming methods that preserve resources. This assures agricultural producers of long-term viability while simultaneously helping the environment.⁽¹⁶⁾ Therefore, the goal of CSR initiatives is to better local communities through initiatives like healthcare and education that can result in a workforce that is more productive. Because of better working circumstances, healthier communities are probably going to create higher-quality agricultural products.⁽¹⁷⁾

Again, firms who put a high priority on CSR might spend money on sophisticated irrigation systems or premium seeds that are available to nearby farmers. Productivity levels can be directly raised by these investments.⁽¹⁸⁾

The Impact of CSR on Accounting Firm Output in the Metaverse

The CSR as earlier stated, describes the actions and regulations that businesses take to improve society. As businesses negotiate this new digital terrain, corporate social responsibility (CSR) in the context of the metaverse includes ethical considerations, sustainability, inclusion, and community engagement. Accounting firms face distinct possibilities and problems in the metaverse, which can impact their overall effectiveness and productivity.⁽²⁶⁾

Building reputation and confidence among stakeholders and clients is one important way that CSR affects accounting firms' output in the metaverse. Businesses that actively participate in socially conscious activities are probably going to develop closer bonds with their customers. Increased client retention, referrals, and eventually higher revenues can result from this confidence. Businesses that emphasize ethical behavior are more likely to draw clients that appreciate integrity in the virtual world where transparency is essential. Talent acquisition and retention are still another crucial factor. It may be attractive to prospective employees that the metaverse offers a more flexible work environment. A dedication to corporate social responsibility is a selling point for accounting firms. Firms may attract top people who share these values by cultivating an inclusive workplace culture that emphasizes diversity and social responsibility. The company's creativity and production may both benefit from this inflow of talented workers.⁽²⁶⁾

Furthermore, for accounting companies that operate in the metaverse, integrating sustainable practices as part of CSR campaigns might result in operational efficiencies. For instance, cutting energy use by holding virtual meetings rather than in-person ones reduces expenses and lessens the influence on the environment. Businesses who use sustainable business models or green technologies may find themselves in a competitive advantage as clients are more and more looking for partners who practice environmental stewardship.⁽¹⁹⁾ All things considered, including CSR into corporate plans promotes creativity in the provision of services. Accounting companies can create new services that support social responsibility objectives by utilizing technology in the metaverse, such as carbon footprint assessments or sustainability reporting services. These businesses can set themselves apart from rivals and increase total productivity by developing their offerings in response to societal needs.⁽¹⁹⁾

It is important to recognize that accounting firms can build significant relationships with communities within the metaverse that go beyond traditional client relationships. Engaging in neighborhood-based projects or contributing to neighborhood causes raises brand awareness and cultivates benevolence among users in online environments. Engaging in such activities not only benefits the community but also helps businesses gain a favorable reputation in their sector.⁽¹⁹⁾ In conclusion, CSR has a major impact on accounting firms' output in the metaverse through a number of means, including boosting trust and reputation, drawing in talent, increasing operational efficiency through sustainable practices, encouraging service delivery innovation, and promoting community involvement. Long-term success in balancing profitability and social responsibility will depend on accounting companies' ability to integrate corporate social responsibility (CSR) into their basic strategy as they navigate this rapidly changing digital landscape.

The Influence of Metaverse on Accounting Firm Performance

The metaverse may potentially bring about changes for accounting businesses that work in or near the agricultural industry. Accounting firms can now give their agricultural clients greater financial performance insights thanks to the metaverse's powerful visualization capabilities, which analyze enormous datasets.⁽¹⁹⁾

In remote work contexts, the metaverse also makes it possible for accountants to collaborate with clients beyond geographic boundaries. Increased productivity and client satisfaction may result from this flexibility. Furthermore, the utilization of immersive experiences in client engagements enables accounting firms to more effectively engage clients during presentations or consultations with financial strategies customized for agricultural enterprises.⁽²⁰⁾

Synergy between CSR Initiatives and Metaverse Technologies

The synergistic impact that improves the performance of accounting firms and agricultural production is produced when CSR initiatives are combined with metaverse technologies. Businesses can create creative solutions to address social concerns that farmers confront, including market access or teaching about sustainable practices, by utilizing the metaverse technology included in CSR frameworks.⁽²¹⁾ Accounting firms that work with clients who embrace metaverse technology and CSR principles can also support this synergy, as these clients may find it simpler to report on sustainability indicators because of the improved data gathering methods these technologies offer.⁽²¹⁾

It has also been recognized that firms that effectively use technology to showcase their dedication to ethical corporate social responsibility (CSR) practices will likely draw investors who support the Sustainable Development Goals (SDGs). Thus, the production of agricultural products and the performance of accounting businesses within Nigerian firms are significantly impacted by both the metaverse and CSR. Their integration improves community ties, stimulates creativity, increases productivity, supports sustainability, and eventually results in a stronger economic framework within Nigeria's crucial agriculture industry.⁽²²⁾

Metaverse Synergy between Agriculture Production and Accounting Firm Performance Output in Nigerian Firms

The fusion of physically persistent virtual reality with virtually improved physical reality has produced the metaverse, a communal virtual shared place that is starting to impact a number of industries, including accountancy and agriculture. In Nigeria, where agriculture is a major economic driver, using metaverse technologies can boost agricultural output while also boosting the performance of accounting firms that support these farms. Through the establishment of virtual agricultural environments, farmers can experiment with various farming techniques without facing any real-world repercussions thanks to the metaverse. They may now efficiently experiment with crop rotations, pest management techniques, and resource allocation.⁽²³⁾ Farmers are able to make well-informed decisions that result in higher yields by employing data analytics within these simulations. Farmers can remotely check the health of their crops, which is an acknowledgement to the Internet of Things (IoT), therefore, IoT is a collection of gadgets integrated into the metaverse. Temperature, crop growth phases, and soil moisture content can all be measured in real time using sensors. This data is essential for prompt interventions that increase output.⁽²⁴⁾

The metaverse provides farmers with immersive training programs that teach best practices in sustainable agriculture, efficient resource management, and pest control through interactive experiences that are more engaging than traditional learning methods. Farmers can also use the metaverse platforms to connect directly with consumers or retailers in virtual marketplaces, which reduces the need for middlemen and enables better pricing strategies based on direct consumer feedback.⁽²⁵⁾ The performance of accounting firms is also impacted by the metaverse, as big data analytics within the metaverse can be used to more effectively analyze financial trends related to agricultural production. By comprehending market dynamics through extensive data visualization tools available in virtual environments, accountants can offer their clients better strategic advice.⁽²⁴⁾

Consequently, an enhanced teamwork between accounting firms and agribusiness is made possible by the metaverse by providing virtual meeting spaces that allows the team members to share insights in real time, regardless of geographic barriers. This leads to increased efficiency in project management and client service delivery. As a result, VR tools allow accounting firms to interact more interactively with their agricultural clients. For example, they can present financial reports or forecasts using 3D models that simplify complex information.⁽²⁶⁾ This is just one example of the remote work capabilities that the metaverse enables, helping accounting firms to save overhead costs related to physical office spaces while maintaining high productivity.⁽²⁶⁾

Synergistic Effects between Agriculture Production and Accounting Firms

Accounting businesses are in a good position to offer the complex financial solutions that agricultural farmers need when they incorporate new technology from the metaverse to increase productivity. Due to environmental concerns, there is a growing emphasis on sustainability in agriculture.⁽¹¹⁾ Accounting companies may help farmers report their sustainability measures accurately by providing them with cutting-edge metaverse tools. On the other hand, the technical developments in the metaverse will enhance agricultural yields through synergy and open up new investment options. To assess these chances for possible returns, accountants need to have a thorough understanding of both industries.⁽⁶⁾

As providers of professional services, accounting firms typically consider the risk management techniques for their clients. Since both the accounting industry and the agriculture are at risk from the effects of climate change, joint efforts will enable their shared platforms in the metaverse to enable improved risk assessment models that will be advantageous to both farmers and accountants.⁽¹⁸⁾ Nonetheless, accounting firms are typically adept at risk management.

Therefore, in Nigeria's economic environment, utilizing the metaverse's capabilities offers a big chance to boost agricultural productivity while also raising accounting firms' performance outcomes.⁽¹⁹⁾

CONCLUSION

The study is centered on the metaverse and CSR on agricultural production and accounting firm output of Nigerian firms. The study established the fact that metaverse technology has a way of improving the efficiency of the firms through the use of the metaverse technology in the real world situation. This can be done within the metaverse world using the VR and AR including other digital technology. While the CSR in the metaverse ensures that user data is collected, handled, and shared in an open, moral, and ethical way. This calls for obtaining user consent prior to data collection, safeguarding the security and privacy of data, and being transparent and truthful about the use of the data. The study concluded that, the metaverse may potentially bring about changes for accounting businesses that work in or near the agricultural industry. Accounting firms can now give their agricultural clients greater financial performance insights which is a credit to the metaverse's powerful visualization capabilities, which analyze enormous datasets. Furthermore, the synergistic impact that improves the performance of accounting firms and agricultural production is produced when CSR initiatives are combined with metaverse technologies. Businesses can create creative solutions to address social concerns that farmers confront, including market access or teaching about sustainable practices, by utilizing the metaverse technology included in CSR frameworks.

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CONFLICT OF INTEREST

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