Full Length Research

The Effect of Innovation and Technology in Social Entrepreneurship: A Study of Selected Social Ventures in Nigeria

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Abstract: In recent years, Nigeria has witnessed a burgeoning interest in social entrepreneurship as a means to address pressing societal challenges while fostering economic development. This study explores the transformative effects of innovation and technology on the landscape of social entrepreneurship in Nigeria. As the country grapples with complex social issues, the integration of innovative solutions and technological advancements has emerged as a promising avenue for social entrepreneurs to create lasting impact. This research employs a multidisciplinary approach, drawing insights from the fields of business, technology, and social sciences. It examines case studies, and conducts surveys from social entrepreneurs, stakeholders, and beneficiaries to assess the influence of innovation and technology on the success and scalability of social enterprises in Nigeria. The study also considers the role of government policies, funding opportunities, and
support networks in facilitating the adoption of innovative technologies within the social entrepreneurship sector. The findings reveal that the infusion of technology and innovation has significantly enhanced the effectiveness of social entrepreneurship initiatives in Nigeria. Innovations such as mobile payment platforms, blockchain, and data analytics have improved financial inclusion, healthcare delivery, and access to quality education. This research underscores the importance of fostering an ecosystem that encourages innovation and technology adoption within the realm of social entrepreneurship in Nigeria. It highlights the need for collaboration between government, private sector stakeholders, and civil society organizations to provide access to funding, mentorship, and infrastructure for technology-driven social enterprises. This study contributes valuable insights to the on-going discourse on the role of innovation and technology in advancing social entrepreneurship and development in Nigeria.

**Keywords:** Innovation: Technology: Social Entrepreneurship: Social Enterprise: Nigeria.


### 1.1 Introduction

Nigeria, known as the "Giant of Africa," is the continent's most populous country, with a broad range of cultures, languages, and customs. However, underneath this cultural richness lies a complex tapestry of social and economic problems that have remained unresolved for decades (Morse & MacNamara, 2020). Despite having one of Africa's major economies, Nigeria suffers from high levels of poverty, unemployment, limited access to education and healthcare, and a broad economic disparity (Justine et al., 2012; Amaihian et al., 2022). All of these problems are exacerbated by factors such as political instability, corruption, and infrastructure problems. Faced with these difficult challenges, social entrepreneurship has emerged as a ray of hope for tackling Nigeria's severe social and environmental crises (Bornstein & Davis, 2010). In recent years, social entrepreneurship has gained momentum as a creative and sustainable business model technique of using creative and sustainable business models to tackle social and environmental problems (Byerly, 2014).

According to Thorgren & Omorede (2018), entrepreneurs in Nigeria have been using their creativity, passion, and resources to create positive change in their communities, while also seeking financial sustainability (Edeworet et al., 2014).

The rise of social entrepreneurship in Nigeria may be ascribed to a number of reasons, including increased awareness of social issues, a growing young population, and the emergence of new business models that combine profit with social impact. Shu’ara (2021a) stated that many Nigerian entrepreneurs have realized the opportunity to combine financial acumen with a social conscience, tackling environmental and social problems while creating income and promoting economic prosperity. Bank (2008) says, one famous illustration of this trend is the emergence of microfinance institutions and community-based groups that provide financial services to underprivileged populations, empowering people and communities to break the cycle of poverty.

Gabriel & Drayton (2016) pointed that projects focusing on renewable energy, healthcare access, and education are cropping up around the country, led by social entrepreneurs who employ technology and creativity to produce scalable and sustainable solutions. Innovation and technology have emerged as powerful
catalysts in the ever-changing environment of social entrepreneurship, accelerating revolutionary change and rethinking how we solve serious societal problems (Pirson et al., 2019; Ataman et al., 2017).

Within the field of social entrepreneurship, the combination of innovation and technology has ushered in a new era of possibilities, one in which creative ideas are harnessed to produce significant impact and address the most difficult challenges confronting our global society. At its very core, social entrepreneurship strives to create positive social and environmental change through the application of entrepreneurial principles and economic acumen (Shu’ara, 2021b; Jooda et al., 2022). In the past, initiatives in this sector of the economy have been influenced by a desire for social justice, a dedication to sustainable development, and a profound sense of duty to underprivileged people. However, the scene has altered considerably in recent years, with technology-driven innovation playing a critical role in expanding the reach and efficacy of social businesses (Gomber et al., 2018).

This study explores the dynamic relationship between innovation, technology, and social impact using case studies, real-world examples, and a deep dive into the growing landscape of social entrepreneurship. We will investigate how these factors have changed the ways in which we tackle societal issues, as well as provide a glimpse into an exciting future in which innovation and technology continue to drive good change in the realm of social entrepreneurship.

1.2 Statement of Research Problem

The overarching challenge addressed by this research is to comprehensively examine and understand the multifaceted and dynamic relationship between technology, innovation, and social entrepreneurship, in order to elucidate the specific ways in which technological advancements and innovative practices influence the growth, sustainability, and effectiveness of social enterprises, and to identify potential barriers and opportunities that arise at the intersection of these domains.”

1.3 Research Questions and Objectives

1. To what extent does technology and innovation influence social enterprise in Nigeria?
2. What are the barriers limiting the impacts of technology and innovation at social enterprise in Nigeria?
3. What are the opportunities of innovation and technology in promoting growth and effectiveness in social enterprise?

1.4 Research Objectives

The objectives of this research study are as follows;

1. To determine the impacts of innovation and technology on social enterprises in Nigeria.
2. To identify the barriers limiting the impact technology and innovation on social enterprises in Nigeria.
3. To identify the opportunities of innovation and technology in social enterprises in fostering growth and effectiveness.
2.0 Literature Review

2.1 Innovation and Technology in Business

According to Guan & Ma (2003), the primary factor in explaining competitiveness is innovation. Companies' competitiveness symbolizes their capacity to operate in global marketplaces, remain profitable, and compete successfully. You may also add to produce value addition and employment generation. As a result, businesses must expand with the goal of becoming more competitive every day, driving the firm to win the competition that is fuelled by the rising quality of life that humans seek (Davidsson & Klofsten, 2003). Technological innovation was viewed as a development only as isolated results of research development in the 1950s; today, it is viewed as a process for dealing with and resolving problems with a focus on the market and its various agents; it involves the exchange of tacit and explicit knowledge, which facilitates learning from various approaches. Today, one of the cornerstones to corporate success is proper IT management. Nieto & Quevedo (2005) stated that a company's technology might be produced internally through research or obtained from other sources. As a result, in order for the company to establish and sustain a technological advantage that allows it to be competitive, it must maintain market dominance through its own research and development (Malik & Malik, 2022). Because the aforementioned is attributable to the purchase of market-available technology, it is accessible to any rival and so does not serve to give the firm extra benefits.

In today's dynamic and competitive corporate world, innovation and technology have become essential foundations of success (Darling et al., 2007). According to Wirtz et al. (2010) the fast progress of technology has altered how businesses operate, interact, and provide value to their consumers. In this age of digital disruption and rapid change, organizations seeking growth, sustainability, and a competitive edge must embrace innovation and leverage cutting-edge technology. According to Jarvenpaa & Ives (1994), businesses around the world are negotiating a complex network of possibilities and challenges in this age of digital change. Witkowski (2017) pointed that innovation is no longer restricted to product development; it now encompasses all aspects of a company, from procedures and customer experience to business models and supply chains. The combination of innovation and technology has resulted in a powerful synergy that allows businesses to rethink established strategies, improve efficiency, and remain ahead of the competition (Zahra, et al., 1995).

2.2 Overview of Social Entrepreneurship

Social entrepreneurship emerged as a new phrase in the 1970s and became popular in the 1980s. In the 1980s, Bill Drayton, the author of ASHOKA, pioneered what is now known as social entrepreneurship (Daru & Gaur, 2013). Nonetheless, the term did not become widely known in academics until the late 1990s. Provoked by student demand, Greg Dees was the one who originally presented the course in social entrepreneurship at Harvard University in the mid-1990s (Nash, 2016). Other highly regarded US colleges, such as Harvard, Yale, and Berkley, swiftly followed suit in including social entrepreneurship in their programs. Several scholars have made social entrepreneurship a top goal in recent years.

In recent years, a powerful and transformative phenomenon has taken hold in the world of business and social change in social entrepreneurship (Martin & Osberg, 2007). This burgeoning movement represents a paradigm shift in the way we address complex societal issues, blending the principles of entrepreneurship with a strong commitment to creating social and environmental impact. Social entrepreneurship, a term coined in the early
1990s, has gained prominence and recognition as a promising approach to addressing some of the most pressing challenges facing humanity (Bornstein & Davis, 2010). As a word, social entrepreneurship refers to a business model developed by a non-governmental organization that focuses on addressing social concerns and their demands through market-oriented techniques and methods or processes of generating money that contribute to societal stability (Zainea et al., 2020). Social entrepreneurship is defined by the School of Social Innovation as innovative activities that inspire social change in order to address a specific social problem. The emphasis here is on societal outcomes rather than only on individual income growth (Hietschold et al., 2023).

2.3 Impact of Innovation and Technology in Social Entrepreneurship

The spread of mobile technology and the internet has profoundly changed how information is distributed and accessed in Nigeria (Achimugu et al., 2009). Nigeria, with over 173 million mobile phone customers in 2023, is one of Africa’s leading mobile markets. Because of this extensive connectedness, social entrepreneurs are now able to reach previously unreachable communities, disseminate educational resources, and collect essential data for decision-making. Matthew (2023) pointed that innovative platforms and applications, such as those that provide health information, financial literacy, and vocational training, have arisen in order to bridge Nigeria's knowledge division. These internet technologies allow social entrepreneurs to interact with people who are underprivileged, educate them on relevant topics, and encourage behavior change (Chatterjee et al., 2021).

Innovation and technology have played a significant role in fostering inclusive economic growth by creating opportunities for income generation and employment (Calza & Goedhuys, 2016; Arejiogbe et al., 2023). Nigeria's youthful demographic profile, characterized by a large population of young people, presents both a challenge and an opportunity. According to Calvo et al. (2019) start-ups and social enterprises in Nigeria are capitalizing on this demographic dividend by providing digital skills training, mentorship, and access to online marketplaces. For instance, Andela, a company founded in Lagos, has created a platform for training software developers who work remotely for international tech companies. This not only creates employment opportunities but also positions Nigeria as a global technology hub. Access to finance has long been a challenge for social entrepreneurs in Nigeria. Harris (2021) said, traditional financial institutions often hesitate to provide funding for ventures with both social and financial goals. However, innovation in financing models has begun to bridge this gap. Innovations such as Crowd funding platforms, impact investment funds, and venture philanthropy have gained traction in the Nigerian social entrepreneurship ecosystem (Eggers & Macmillan, 2013).

Nigeria's fintech sector has also been important in facilitating new funding structures, such as mobile money platforms, peer-to-peer lending, and digital payment systems have simplified the process of raising capital, disbursing loans, and collecting payments from recipients (Patwardhan, 2018). These developments democratize access to financial resources while decreasing reliance on traditional banking systems. In order to scale the impact of social entrepreneurship initiatives, innovation, and technology are essential (Cunha et al., 2015). Digital tools and platforms make it easier to replicate successful models across several areas and communities.
2.4 Challenges of Innovation and Technology on Social Enterprises

Although the use of innovation and technology in social entrepreneurship has great potential, it also presents challenges and ethical issues (Gupta, et al., 2020). The digital gap, which excludes people with disabilities with insufficient access to technology and digital literacy, is one of the problems limiting the effective use of innovation and technology in social ventures. It is critical to ensure that the advantages of innovation and technology reach all areas of society in order to avoid disadvantaged groups from being excluded. Furthermore, in the digital era, data privacy and security are critical, and social entrepreneurs must manage these issues properly (Ogbari et al., 2022; Onakpa & Alfred, 2022). All technology-driven social companies must examine the ethical use of data, the preservation of user information, and the avoidance of cyber risks.

Nigeria’s lack of adequate infrastructure is one of the biggest obstacles to the effective use of innovation and technology in social enterprise (Okeke & Eme, 2014). Nigeria has recurring issues with its infrastructure for transportation, internet access, and power supply. These problems make it difficult to seamlessly incorporate technology into social enterprise operations (Jayachandran et al., 2022). Power supply in Nigeria has a history of being patchy, despite the fact that it is essential for operating technology-driven organizations. The use of generators and regular power outages raise operating costs for social enterprises. As a result, many businesses find it difficult to keep up with their essential information technology (IT) systems. Effective use of digital gadgets requires access to reliable and fast internet (Moin et al., 2019). In many rural and underdeveloped areas of Nigeria, where many social entrepreneurs are active, internet access is still patchy. The availability and impact of technology-driven solutions are limited by this technological gap (Mirvis & Googins, 2018). The logistics and distribution of goods and services are affected by inadequate transportation infrastructure, which makes it difficult for social enterprises to function. For instance, bad road networks in distant places might make last-mile deliveries hard (Allen et al., 2018).

Another key challenge limiting the effective use of innovation and technology in Nigerian social enterprises is access to funding (Davis, 2002). A lot of social entrepreneurs have trouble getting the money they need to develop and implement technology-driven solutions. The investment environment in Nigeria frequently grants established companies preference over social entrepreneurs. According to Minhas (2013), many potential technological innovations in social entrepreneurship remain underfunded as a result of investors' possible hesitation to invest in projects with social impact goals. Social enterprises struggle to secure affordable finance due to banking institutions' high interest rates and rigid borrowing criteria (Guclu et al., 2002). This financial burden reduces the resources available for technology adoption and development. Agrawal & Jespersen (2023) stated that the availability of venture capital firms that focus on social impact investments is limited in Nigeria.

2.5 Opportunities in using Technology and Innovation in Social Enterprise

Using innovation and technology in social enterprise in Nigeria presents several opportunities for addressing societal challenges, improving livelihoods, and driving economic growth (Egharevba et al., 2022). Telehealth and telemedicine technologies can enable remote consultations and diagnosis, extending access to healthcare services to rural and remote communities (Haleem et al., 2021). Remote monitoring devices can help patients manage chronic conditions, reducing the burden on healthcare systems. Mobile health apps can also provide valuable health information, reminders, and support to individuals. Telehealth and telemedicine technology can
offer remote consultations and diagnostics, allowing people who live far away to get access to healthcare services (Haleem et al., 2021). Remote electronic monitoring devices can also assist patients in managing chronic diseases, hence lessening the strain on healthcare systems (Sneha & Varshney, 2009). Individuals can benefit from mobile health applications in terms of health information, reminders, and support. These applications can help both patients and healthcare providers communicate better, promote preventive care, and support healthy lives (Phillips et al., 2019).

Allan (2005) noted that one of the distinguishing characteristics of social entrepreneurs is their dedication to making a positive impact. Embracing technology may significantly raise the level of the assessment of impact and communication, increasing transparency and accountability. Data analytics technologies enable social enterprises to collect and analyze data about their day-to-day activities and outcomes (Haugh & Talwar, 2016). Businesses can make informed decisions, adjust strategies, and show the impact of their activities with donors and stakeholders by using data-driven insights. This amount of transparency provides a sense of confidence and loyalty (Epstein & Yuthas, 2014). Blockchain technology, which is also recognized for its immutability and transparency, has the potential to transform impact assessment and funding in social enterprises as well (Morkunas et al., 2019).

Other potential benefits of incorporating innovation and technology in social ventures include digital marketing strategies such as search engine optimization (SEO), social media advertising, and content marketing, which may help a social enterprise reach a wider audience (Aisaiti et al., 2019). These methods enable organizations to efficiently create awareness of their mission, attract supporters, and advertise their products or services.

According to Tay et al. (2022) financial inclusion is an important component of social impact, particularly in developing countries. Fintech (financial technology) solutions may assist social entrepreneurs in promoting financial inclusion and economic empowerment. Mobile banking and digital wallet tools, for example, offer an opportunity to provide financial services to underserved groups. Social entrepreneurs can work with financial institutions and fintech firms to provide secure and accessible financial services to those who lack access, therefore eradicating poverty and improving livelihoods. Hayhurst (2014) pointed that social businesses, particularly those focusing on education and skill development, tend to use technology to provide access to high-quality education and training.

3.0 Methodology

This research study is limited to qualitative research method. The study employed the case study research design due to the qualitative research method utilized. Case study research design is a qualitative research method that focuses on the in-depth investigation of a single individual, group, organization, event, or phenomenon. Under this study the research, different social enterprises were purposively and randomly selected by the researcher to gain concrete, contextual, in-depth knowledge of the impact of innovation and technology in social entrepreneurship in Nigeria. This research study was carried out in Nigeria. There are over 10 social enterprises in Nigeria, such of which includes; Andela, Flutterwave, WeMove Europe, Farmcrowdy, BudgetIT, Jobberman, LifeBank, Piggievest, Paystack among others.
The research study employed the simple random sampling technique. Andela and Cchub was randomly selected from the different social enterprises in Lagos, Nigeria. The researcher used primary and secondary sources of data to gather information during the research study. Under the primary data, the researcher used the observation and interview methods in investigating the impact of innovation and technology in social entrepreneurship in Nigeria. On the other hand, the secondary sources of data include journal papers, newspapers, articles from internets and library materials.

4.0 Case Study Analysis

4.1 Andela

Andela is a company that was founded in 2014 with the mission of identifying and developing software engineering talent in Africa and connecting them with global tech companies in need of skilled developers. The company was co-founded by Jeremy Johnson, Iyinoluwa Aboyeji, Ian Carnevale, Nadayar Enegesi, Christian McKenzie, and Brice Nkengsa. Here's everything you need to know about Andela:

Figure 1: Inside Epic Tower of Andela Nigeria, Lagos.

Andela is actively involved in the tech community in Africa. The company organizes events, hackathons, and workshops to foster the growth of the tech ecosystem on the continent.
Andela's primary mission is to close the global technology skills gap by providing access to a pool of talented software developers in Africa. Andela recruits highly intelligent individuals from various African countries through a competitive selection process. Once selected, these individuals go through a rigorous training program to become world-class software developers. The training typically covers various programming languages and technologies. After completing their training, Andela developers are paired with partner companies from around the world. These companies are typically based in North America and Europe and include both start-ups and established tech giants. Andela developers work remotely for their partner companies, which allow these companies to tap into Africa's talent pool without having to establish physical offices on the continent.

Andela operates on a revenue-sharing model with its partner companies. The partner companies pay Andela for the developer's services, and Andela, in turn, compensates the developers. Andela has received significant funding from investors, including venture capital firms like Spark Capital and Chan Zuckerberg Initiative, to support its growth. The company has also expanded its operations to various African countries, including Nigeria, Kenya, Rwanda, Uganda, and Egypt.

Figure 2: Andela Talent Accelerator, Lagos.

Figure 3: Andela Developers

Figure 4: Mark Zuckerberg at Andela, Lagos.
Andela has had a notable impact on the African tech ecosystem by providing opportunities for talented developers who might not have otherwise had access to such opportunities. It has also contributed to changing the perception of Africa's potential in the global tech industry.

4.2 Findings Based on Observations

- Innovation and technology have enabled Andela to identify and select top software engineering talent across Africa efficiently. Online coding assessments, video interviews, and automated screening processes have made it possible to assess and choose candidates from a wide geographical area. It has also helped them to provide high quality, scalable training for developers. Technology tools and platforms have made it possible for Andela to operate as a distributed organization. They use collaboration tools, video conferencing, project management software, and communication platforms to enable remote work and collaboration among their teams.

- Innovation and technology have enabled Andela to gather and analyze data on developer performance, training progress, and customer feedback. This data-driven approach helps in making informed decisions to continuously improve their programs and services.

- Through technology, Andela has been able to explore new markets and opportunities. They can assess the demand for software engineering talent in different regions and tailor their services accordingly, contributing to their growth and impact.

- Lack of awareness is one barriers limiting innovation and technology. Not everyone is aware of Andela due to lack of internet access or education. Resistance to change and a lack of awareness can be barriers to innovation adoption.

- Andela uses technology to improve its talent matching algorithms. Machine learning and data analytics can help identify the best developers for specific client projects, leading to more efficient and effective team compositions.

4.3 Co-Creation Hub (CcHub)

Co-Creation Hub (CcHub) is a leading innovation center and social innovation hub located in Nigeria. Founded in 2010 by BosunTijani and Femi Longe, CcHub has played a pivotal role in fostering technology innovation and entrepreneurship in Nigeria and across Africa. CcHub's primary mission is to catalyze and support tech innovation and entrepreneurship to address social and developmental challenges in Nigeria and beyond. It aims to create an enabling environment for start-ups, entrepreneurs, and innovators to thrive. CcHub is headquartered in Yaba, Lagos, Nigeria, which is often referred to as the "Silicon Valley of Nigeria" due to its concentration of tech start-ups and innovation hubs. CcHub offers a vibrant co-working space that provides start-ups and tech entrepreneurs with a collaborative environment to work, share ideas, and network. It has become a hub for Nigeria's tech community.
Over the years, CcHub has supported hundreds of start-ups and projects that have made a significant impact in various sectors, including health, education, agriculture, fintech, and more. CcHub has been at the forefront of driving innovation and technology adoption in Nigeria and Africa as a whole. It has played a vital role in nurturing the continent's tech ecosystem, promoting entrepreneurship, and creating solutions to some of the region's most pressing challenges.

4.4 Findings Based on Observations

- CcHub runs various programs to support start-ups and early-stage companies. These programs include incubation and acceleration programs that offer funding, mentorship, business development support, and access to a network of investors and partners.
- CcHub has established several innovation labs and hubs focused on specific sectors, such as healthcare, education, and fintech. These labs bring together start-ups, experts, and stakeholders to tackle sector-specific challenges.
CcHub conducts research on technology trends, innovation, and entrepreneurship in Africa. They also engage in advocacy efforts to promote policies and initiatives that support the growth of the tech ecosystem.

Securing consistent and sustainable funding is a perennial challenge for innovation hubs like CcHub. They often rely on grants, partnerships, and corporate sponsorships, which may not always be sufficient to support their programs and initiatives.

CcHub collaborates with local and international organizations, governments, universities, and businesses to create opportunities for tech-driven solutions to address societal challenges.

5.0 Conclusion of the Study

In conclusion, Nigeria stands at a pivotal juncture in its journey towards socioeconomic development and poverty alleviation. Social entrepreneurship, driven by innovation and technology, holds the potential to catalyze transformative change and empower marginalized communities across the country. The dynamic synergy between innovative business models, digital connectivity, and the commitment of Nigerian social entrepreneurs is poised to address pressing social and environmental challenges, from healthcare access to education, environmental sustainability, and economic inclusion. Despite surge in the activities of social entrepreneurs in the country, digital illiteracy, unstable internet connectivity, and epileptic power supply posed a significant threat to the survival of start-ups, and incur more financial cost to operations of those social enterprises. It is without doubt that technology and innovation have played a strategic role in fostering the development of social enterprise and innovative start-ups in Africa, and in Nigeria in particular.

6.0 References of the Study


