

**ENGENDERING SUSTAINABLE DEVELOPMENT THROUGH  
DIGITAL ENTREPRENEURSHIP IN NIGERIA****Moses Iorhemba Akurega**Department of Mass Communication  
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desmondoo@yahoo.com**Abstract**

*The rapid developments in digital technologies and their increased utilization by entrepreneurs especially SMEs has given flue to a digital economy known as digital entrepreneurship. This study investigates how digital entrepreneurship can be engaged to engender sustainable development in Nigeria. The study, premised on the Uses and Gratifications theory and Technology Acceptance model, employed the qualitative design with in-depth interview as the instrument to sample the opinions of 30 respondents on the level of adaptation of digital technology by SMEs in the Federal Capital Territory (FCT) and the influence of digital entrepreneurship on sustainable development in Nigeria. The study found that SMEs in the FCT actively espouse digital technologies to the operations of their businesses and that the adaptation of digital technologies by SMEs in the FCT have grown from 30 percent in the last three years to about 70 percent in 2023. Another important finding is that the use of digital technology has high prospects to significantly contribute to the attainment of long-term goals of entrepreneurs desirous of creating social and environmental value through innovative business models. Empirical evidence from this study points to the efficacy of digital entrepreneurship as the driving force behind the rise, growth and sustenance of SMEs, the engine of development of any nation. This study therefore concludes that digital entrepreneurship is a viable option for engendering sustainable development in Nigeria. The study recommends that given the importance and potentials of digital technologies to sustainable national development, government at national and sub-national levels should create the enabling environment through the provision of functional and accessible infrastructure necessary for SMEs to easily adopt digital technologies in the running of their businesses.*

**Keywords:** Business Models, Digital Entrepreneurship, Nigeria, SMEs, Sustainable Development

## 1.0 Introduction

Digital technologies have revolutionized businesses and enabled firms to go beyond traditional challenges of engagements on a scale hitherto unknown thus giving rise to what is popularly referred to as digital entrepreneurship. This explains why Richter, Kraus, Brem, Durst, & Giselbrecht (2017) posits that “the rapid developments in information and communication technologies and their increased utilization motivate the vision of an evolving digital economy.” Akuma, Okocha & Kente (2023) state that the use of new media tools such as internet, social media, and digital devices such as mobile smart phones have altered the way and manner in which businesses are conducted today. To Joshi, Kathuria, & Das (2018, p.18), the quick diffusion of ICTs has produced significant “changes in how goods and services are produced, the nature of the goods and services produced, and the means by which goods and services are brought to the market and distributed to customers.”

In their view, Ghezzi & Cavallo (2020) posit that:

digital Entrepreneurship is the smart application of the powerful “digital technologies to business; it is about creating added value for your customers using information and communication technology with the aim of making business gains and includes redefining the value chain, disrupting existing value propositions and creating new ones leveraging the power of digital technologies. (p. 23)

This suggests that digital entrepreneurship can be deployed to enhance the growth and development of startups. Indeed, Baranauskas & Raisiene, (2023) assert that entrepreneurship, particularly digital entrepreneurship, holds the key to the world’s social problems especially widening income disparity. To He, Liu, Phang, & Luo (2022) and Vrontis, Thrassou, Efthymiou, Uzunboylu, Weber, Shams, & Tsoukatos (2022), digital technology facilitates the development of new business models and the creation of new knowledge and skills that help in developing features and benefits that include environmental and social. Agreeing with these views Fernades, Pires, & Alevs (2022) aver that the growth and development of digital economy is occasioned by the entrepreneurial activity enhanced by digital technologies. They therefore recognize digital economy as one of the most substantial economic developments since the industrial revolution, characterized by the capability to transform economies, jobs and even society as a whole. Munoz (2023) asserts that through digital technologies, global economy is expected to rake in about sixty billion Dollars in revenue by 2025. For Nigeria with her large, young and entrepreneurial population, World Bank (2019) notes, digital entrepreneurship could have been an engine of the country’s growth but lack of early-stage financing and limited market opportunities outside

of Lagos and Abuja remain a major constraint leading to a situation where the country is capturing only a fraction of its digital economic potential. However, as Baran & Aleksandra (2021) observe, Nigeria, the biggest economy in Africa, is well positioned to develop a strong digital economy by actually taking advantage of the opportunities that abound in its Small and Medium Scale Enterprises (SMEs) which, Taiwo, Ayodeji, & Yusuf (2013) put at over 30 million employing 84.01 percent of the labour force, contributing 84.47 percent to the Gross Domestic Product (GDP) and 7.27 percent to national export of the economy. Indeed, Etale & Light (2021) state that SMEs, both formal and informal, have employed over sixty percent of the labour force in Nigeria. They however observe that over seventy percent of the SMEs in the country largely depended on manual and little or no automation in their operations. This points to the fact that these drivers of the economy deserve the enabling environment for the adaptation of digital economy to enhance national development but the regulatory environment in the country is negatively influencing entrepreneurial activities.

Weighing in on the challenges associated with digital entrepreneurship in Nigeria, Ochinanwata, Theodore & Paul (2021) posit that:

It is truly challenging to protect digital products and digital knowledge through intellectual property rights and other forms of protection such as secrecy. This can create a problem for digital start-ups to raise capital from banks and other traditional providers of corporate finance.

To Steininger, Kathryn, & Jörn (2022), country specific regulation is a major source of risk. Akpan & Ibindunni (2021) Fernades et al (2022), and Angelidou, et al (2018) aver that today's technological and digital advancements have influenced many industries to adapt or transform their traditional strategies, procedures, and business models not only to tackle the digital challenges but also to seize emerging opportunities. Manea, et al (2021) in particular, observe that “steady advances in digital technologies such as internet of things, artificial intelligence, and big data have created room for new digital startups.” Soluk, Kammerlander, & Darwin (2021) maintain that the transformational capabilities of digitalization modify the structure of entrepreneurship and improves responses to sustainability development challenges. Concurring with this view, Zhang et al (2022) identify digital entrepreneurship as not only one key driver of economic prosperity but also a reasonable vehicle with which to help emerging economies grow and overcome the major challenges posed by poverty in developing countries. This suggests that digital entrepreneurship can be used as a catalyst for Nigeria's development.

As Baran & Aleksandra (2021) noted:

the development and use of digital technologies create new opportunities for entrepreneurs enabling new businesses' development and business improvement that ensure economic, environmental, and social sustainability.

However, the extent to which digital entrepreneurs especially small and medium enterprises (SMEs) have enhanced sustainability development in Nigeria is uncertain. Thus, this study seeks to ascertain how digital entrepreneurship can engender sustainable development in the country.

Over the last few decades, digital technologies have not only impacted world economics positively but have also drastically changed the way businesses are run and/or operated (UNCTAD & Nations, 2021). Indeed, Elia, Margherita, & Passiante (2020) assert that the application of digital technologies to enterprise is not only drastically changing the nature and structure of organisations but is also reshaping the world economic landscape. Bouncken & Karus (2021) observe that digital technologies are changing the way firms produce, market and distribute goods and services and contribute to economic growth and living standards by creating wider set of opportunities for entrepreneurs to explore. In other words, digital technologies are playing a key role in entrepreneurial ecosystems. What this suggests is that digital technology is a savory of entrepreneurial activities. However, despite its importance in business, little or no attention has been paid to the impact of digital technologies on entrepreneurship leading to a dearth of empirical evidence to support the idea that digital entrepreneurship can actually engender national development. Therefore, this study investigates the efficacy of digital entrepreneurship in engendering Nigeria's development.

### **1.1 Objectives of the Study**

The broad objective of this study is to evaluate how digital entrepreneurship can engender Nigeria's development but more specifically, the study seeks to:

1. ascertain the level of adaptation of digital technology by SMEs in Nigeria
2. find out how digital entrepreneurship influences sustainable value propositions among SMEs in Nigeria
3. establish the influence of digital entrepreneurship on sustainable development in Nigeria

### **2.0 Conceptual Clarification**

Three key concepts in this study need some clarification to enhance our comprehension. They are: sustainable development, digital entrepreneurship and Small and Medium Scale Enterprises (SMEs).

*Sustainable Development:* sustainable development refers to development that satisfies the needs of the present generation without

compromising the capacity of future generations to meet their own needs. In this study, the concept has a focus on economic development, social development and environmental protection for future generations. To Karimi and Walter (2022), any entrepreneur who structures their business to the service of both their self-interest and the collective interest of the society by addressing the unaddressed social and environmental necessities can be described as a sustainable development entrepreneur. Agreeing with this view, Passaro, Quinto, Rippa, & Thomas (2020) affirm that sustainability denotes that business models have to be reformed to concentrate on maximizing value for all parties involved, rather than just the corporation thus enhancing value taking that culminates into sustainable development. Fernandes et al (2023) note that today, sustainability has become such a major issue in all aspects of human and organizational practices that it incorporates the amalgamation of economic, environmental, and social drives. Anand, Padmaja, Ralf, and Fanny (2021) observe that “economic sustainability is allied to resource efficiency in order to attain profitability in the long term.” Collaborating this view, Manea et al (2021) state that “in business, sustainability implies finding solutions and making decisions grounded on the relationships among profit, planet, and people.” What this implies is that using digital technology, businesses can be run they provide profit and yet enhance sustainable development.

*Digital Entrepreneurship*: in general, an entrepreneurial activity that transfers an asset, service or major part of the business into digital can be characterized as digital entrepreneurship. However, in this study, the concept describes the act of combining business, market knowledge and network technology to reinvent traditional business practices using digital technologies in order to find customers, reduce cost and collaborate with others. Soluk et al (2021) posit that business-related use of computer-based solutions such as smartphone apps benefits firms in more ways than one. They identify such benefits to include: lower costs; increased revenues; competitive advantage; and the opportunity to build new business models. Also contributing, Kammerland, Konig, and Richards (2018) avow that by using digital technologies in their operations, enterprises can generate stable worth and increase their capacity to compete in the business world which might help them to become more effective and place them in a vantage position to contribute to national development. This implies that the adoption of digital technologies is key to national development.

*Small and Medium Scale Enterprises (SMEs)*: generally, SMEs are any enterprises with maximum asset base of less than or equal to two hundred million

(N200, 000, 000) excluding working capital and whose staff strength is not less than ten (10) and not over three hundred (300). Conceptually however, SMEs are those businesses whose operating capital and staff strength are small. Taiwo et al (2013), quoting the Third National Development Plan, defines a small business as a “manufacturing or service organisation whose employee is not more than 10. The individual research unit of Obafemi Awolowo (1987) cited in Taiwo et al (2013) defines it as “one whose total assets or capital is less than N50, 000 and employee fewer than 50 full time workers.”

Establishing the importance of SMEs to the nation’s development, Etale & Light (2021) cites Ariyo (2005) as stating that “the SME sector provides an average of 50 percent of Nigeria’s employment and 50 percent of its industrial output.” Another important contribution of SMEs to national development is their capacity to make income distribution more equitable thus ensuring long term social stability by easing export reallocation and by lessening economic disparities between urban and rural areas (UNCTAD, 2001).

## **2.1 Literature Review**

### **Digitalization of Entrepreneurship**

Although the importance of digital technology has been recognized in the entrepreneurship literature, relatively little is known about how and to what extent it has been adapted into the nation’s entrepreneurial activities. Manjon, et al (2022) posit that digitalization refers to the acceptance or greater usage of digital technology by governments, corporations, firms, and organisations into their operations. Examples of such innovations, as listed by Prendes-Espinosa, et al (2021) include but are not limited to: cognitive computing and cloud-based applications, edge technology and 3D printing. Contributing to the level of adaptation of digital technology into entrepreneurship, Lamba & Jain (2021) contend that the capabilities of digital technologies provide alternatives and point new paths for the creation, delivery, and capture of value among entrepreneurs. However, George, et al (2021) observe that the transition of economic activity leads to the development of fundamental innovative business models that require the improvement of certain organizational expertise to be effectively implemented. This implies that for seamless adaptation of digital technologies to take place, some basic developments and certain level of competencies need to be in place.

Duspara, et al (2016) hold the view that for digital entrepreneurship to thrive, it is important to implement strategies that can enable sustainable development based on new technologies, knowledge and investments, and a sound legal and administrative support to small entrepreneurs to stimulate their ideas. To them, grater use of advanced digital technologies by SMEs can boost both growth and employment.

According to Van-Welsum (2016),

digital entrepreneurship may level the playing field in certain sectors, creating opportunities to work from remote areas, at different hours, from the home, or on the go. It can play an important role in promoting gender equality and social and economic inclusion, stimulate local development, and contribute to sustainable development, especially when new technologies are combined with the availability of open and public data.

In their view, Fernades et al (2022) opine that digital technologies create avenue for consumers to influence product design, production and delivery. This explains why Zhai, et al (2022) assert that consumers are no longer mere recipients but active participants in production processes thus helping entrepreneurs to customize their offerings. To Gregori & Holzmann (2020), by developing and using of digital technologies, digital entrepreneurship does not only create new business opportunities but also promote sustainability and support the development of value propositions that combine environmental, social, and economic value.

### **Influence of Digital Technologies on Sustainable Value Propositions among SME**

Zhang et al (2022) examined the impact of digital technology on national entrepreneurship and the interactions between digital technology and other ecosystem elements. Empirical results from their study show that the level of digital technology is positively associated with the output of national entrepreneurial ecosystems, and this positive relationship is strengthened in nations with a supportive culture, high-quality institutions, supportive policies, accessible resources, and well-developed service industries. These findings demonstrate the importance of digital technology and provide fresh insights into the interdependence between elements and causal mechanisms in national entrepreneurial ecosystems. Agreeing with this view, Omoyele, et al (2022) note that digital technologies provide unique combinations of sustainable business model components such as integrated value proposition, comprehensive value creation, and multifaceted value capture. However, describing the advantages and disadvantages of digital technology, Wurth, Stam, & Spigel (2021) conclude that there is no one-size-fits-all solution to sustainability via digital technology. To Stam & van de Ven (2021) entrepreneurship is essential for a region's or country's development. Agreeing with this view, Bouncken & Kraus (2021) observe that digital technologies and their applications have begun to modify the

description and construction of organizations and to change the economic landscape thus, enhancing economic growth and living standards. Also contributing, UNCTAD & Nations (2021) consider digital technology as an external enabler of entrepreneurial activities among other enablers such as culture, institutions, and demand. However, Elia et al (2020) posit that there is a lack of empirical evidence to support the idea that digital technology helps to promote entrepreneurship in a country or region. Contributing to the discourse, Bouncken and Kraus (2021) note that entrepreneurial ecosystem studies have recognized that digital technology enhances the connection between different ecosystem actors and changes the nature of interactions among actors in the business ecosystem. From the foregoing, it can be inferred that digital technologies are not only modifying production, marketing and distribution of goods and services but also opening up a broader set of opportunities for entrepreneurs to exploit

To He et al (2022), “digitization grows around the principles of inheritability, variability, availability, connections, interactions, and accessibility.” George et al (2021) see entrepreneurship as the ‘discovery and exploitation of profitable opportunities’ often demonstrated within smaller enterprises. Elia, et al (2020) observe that microbusinesses are a special genre of small enterprises that are the predominant form of organisation available in the rural areas of developing countries around the globe. While Omoyele, et al (2022) consider the small size of microenterprises as a substantial constraint on their available resources for competition, they however note that this can also be seen as an advantage, as microenterprises can have structural advantages over larger firms owing to their greater flexibility and their ability to respond quickly particularly in times of change.

## **2.2 Theoretical Foundation**

The Uses and Gratifications theory and the Technology Acceptance Model provided a framework for this study.

### **Uses and Gratifications Theory**

The Uses and Gratifications theory provided a framework for this study. This theory, propounded in 1974 by Katz, Blumler and Gurevitch, is a mass communication theory that focuses on the needs, motives and gratifications of media users. The theory is an approach to understanding why and how people actively select specific media to satisfy existing needs. Devadas (2022) posits that the theory is an audience-centered approach to understanding mass communication but notes that the theory differs from other media effects theories that interrogate what media do to people rather than focusing on what people do with media. Karimi, et al (2014) say this communication theory is positivistic



in approach, based in the socio-psychological communication tradition, and focuses on communication at the mass media scale.

Vinney (2019) traces the origin of the Users and gratifications theory to the 1940s when scholars began to study why people choose various forms of media. She however notes that in the 1970s, researches turned their attention to the outcomes of media use and the social and psychological needs that media gratify. Tajar & Mehrad (2016) state that the theory relies on two principles: media users are active in their selection of the media they consume, and they are aware of the reasons for selecting different media. In other words, the Uses and gratifications theory sees users as active agents who have control over their media consumption.

The five key assumptions of the theory as outlined by Vinney (2019) are:

- i. Media use is goal-directed. People are motivated to consume media.
- ii. Media is selected based on the expectation that it will satisfy specific needs and desires.
- iii. Media influence on behavior is filtered through social and psychological factors. Thus, personality and social context impact the media choices one makes and one's interpretation of media messages.
- iv. Media are in competition with other forms of communication for an individual's attention. For example, an individual may choose to have an in-person conversation about an issues of watching a documentary about the issue.
- v. People are usually in control of media and therefore are not particularly influenced by it.

An earlier study published in the journal, *Cyber Psychology & Behaviour*, on uses and gratifications of the internet found seven gratifications but the ones that of interest to this study are: information seeking aesthetic experience, monetary compensation, relationship maintenance, and virtual community. Two other relevant gratifications of internet use, content and process gratifications, had been found in a study published in the journal *Decision Science*. On the strength of these studies, Vinney (2019) concludes that people look to the media particularly internet to fulfill social and communal needs.

Offering a critique of the uses and gratifications theory, Devadas (2022) posits that in spite its popularity in media research, the theory tends to downplay the importance of media as such, it may overlook the unconscious influence of the media on the people. Secondly, while the audience may not be passive, there is no guarantee that they may be active either. Finally, the theory has been criticized for been too broad to be a theory rather, it should be considered as an approach to media use.

This theory was chosen as the most relevant to the study because it discusses the gratifications digital technology can bring to entrepreneurship in Nigeria and how entrepreneurs can leverage on it to change the way they conduct business to enhance the nation's development.

### **Technology Acceptance Model**

This model, developed by Davis in 1989, outlines two fundamental factors that influence one's intention to accept and use new technology, which Charness & Boot (2016) identify as: perceived ease of use and perceived usefulness. George & Elias (2021) observe that the key feature of this model is its emphasis on the perceptions of the potential user. To Ola-Akuma, et al (2023), this model "specifies the causal relationship between the system design features, perceived usefulness, perceived ease of use, attitude toward using and actual behaviour." They further note that when users are presented with a new technology, the decision about how and when to use it is informed by perceived usefulness; the degree of believability that such use will improve their job performance, and perceived ease of use; the degree to which a person believes that using a particular system would be effortless.

One limitation of this model as identified by Ajibade (2018) is that, underlines of behaviour cannot be reliably quantified in empirical investigation, owing to a number of different subjective factors such as norms and values of societies and personal attributes and personality traits. Hence, Shan & King (2015) argue that the spat that a relative or friend could influence the use of technology through exacting social pressure is highly falsifiable. In spite its obvious weakness, the model has been used in a number of studies on digital technology (Ola-Akuma et al., 2023; Lee et al., 2006; Koufaris, 2002). This model is relevant to this study because the believe that the adaption of digital technologies by entrepreneurs is key to their performance and national development.

### **3.0 Methodology**

The research employed qualitative design and used purposive sampling technique to select three area councils namely: Abuja Municipal Area Council (AMAC); Bwari; and Gwagwalada where Thirty SME operators (10 in each of the selected area councils) were selected through convenience sampling. This sample size is considered adequate for the study because it aligns with that of Okocha & Akpe (2022) who also used a sample size of 30 respondents to represent a population of their study that was purposively drawn from Nigeria's six geo-political zones. The recruitment criteria ensured that only owners of start-ups who have been conducting their businesses in the FCT in the last three years were interviewed over a period of two weeks, from 8th to 22nd May, 2023, based on the research objectives stated with each interview session lasting for

25 minutes using an interview guide to ascertain the extent to which digital entrepreneurship can enhance sustainable development in Nigeria.

#### 4.0 Data Analysis

The responses from the interviewees were collated, analyzed and presented below:

#### Socio-Demographic Distribution of Interviewees

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Males	20	67
Female	10	33
<b>Total</b>	<b>30</b>	<b>100</b>
<b>Age Range</b>	<b>Frequency</b>	<b>Percentage</b>
25-35	9	30
35-45	10	33
45-55	6	20
55-65	5	17
<b>Total</b>	<b>30</b>	<b>100</b>
<b>Educational Attainment</b>	<b>Frequency</b>	<b>Percentage</b>
Bachelor Degree	15	50
Master Degree	8	27
Others	7	23
<b>Total</b>	<b>30</b>	<b>100</b>
<b>Area of Operation</b>	<b>Frequency</b>	<b>Percentage</b>
Abuja municipal Area council	10	33
Bwari	10	33
Gwagwalada	10	33
<b>Total</b>	<b>30</b>	<b>100</b>
<b>Years of Experience</b>	<b>Frequency</b>	<b>Percentage</b>
3-6	8	27
7-10	12	40
11 and above	10	33
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Field Survey, 2023

The Table above has five sub-sections that deal with the socio-demography of interviewees ranging from gender, age, educational attainment, area of operation, and years of experience. The first sub-table indicated in the first column the viable. The second column states the frequency, while the third column shows the percentages of the samples.

Data in the Table show that by gender, 20 of the 30 interviewees were males and the remaining 10 were females. This implies that more men own and operate SMEs in the FCT. By age range, data reveal that the highest age bracket is between 25-35 years while the lowest age bracket is from 55-65. This means that

the interviewees are old enough to take management decisions that can enhance the fortunes of their enterprises.

The third sub-table indicates the educational attainment of the respondents. The highest educational qualification was master degree while the lowest stated qualification was bachelor degree. This indicates that the interviewees are educated enough to understand the issue at stake in this study.

The fourth sub-table deals with the primary area of operation. The three primary areas where the interviewees operate are: Abuja Municipal Area Council, Bwari, and Gwagwalada.

The fifth and final sub-table reveals the years of experience of the participants. The lowest among same was between 3 to 5 years, while the highest was 7-10 years. This means the interviewees have the requisite experience to chose which strategies that are germane to the growth of their businesses.

The interviewees who were tagged E1 to E30 responded to most of the questions asked and provided valuable information on the impacts of digital entrepreneurship on sustainable development in Nigeria.

### **Ro1: Adaption of digital technologies by SMEs in the FCT**

Although responses from the interviewees revealed differing levels of awareness of digital technologies, the consensus is a high level of awareness of digital technologies among SME operators in the FCT. E12 in particular, declared that most, if not all owners of SMEs in the FCT are aware of digital technologies. Moreover, interviewees could lucidly and laconically define and identify digital technologies. Remarkable responses from interviewees identifying digital technologies are:

“These are digital tools, systems and devices that can generate, store and process data. Examples include but not limited to; social media”- (E15).

These are online tools used by entrepreneurs. They are: Blockchain- (E24), Internet-of-things (E14), Tablets-(E7), Big data- (E9).

Regarding the level of adaptation of digital technology by SMEs in the FCT, twenty-nine interviewees affirmed that SMEs in the FCT, having realized the fillip digital technologies can bring to their operations, are rapidly adapting such ones as micro-blogging, internet-of-things, social media especially Facebook and Instagram, online games, and mobile phones. E13 in particular, asserted that the ease with which business is operated using digital technologies has spurred many SMEs in the FCT to adapt the technology. To E30, “the adaptation of digital technologies by SMEs in the FCT have grown from 30 percent in the last three years to about 70 percent in 2023.”

## **Ro2: Influence of digital entrepreneurship on sustainable value propositions among SMEs in the FCT**

Interviewees were opinionated about the influence of digital entrepreneurship on sustainable value propositions among SMEs in the FCT. They could easily outline the basic attributes of digital entrepreneurship to include the application of digital technologies to the operation of business. A précis of the responses revealed that digital entrepreneurship, to them, entails building new business models using digital technologies in order to enhance the fortunes of the enterprises. Three of the most remarkable responses are:

“Digital entrepreneurship is the application of digital technology by entrepreneurs to the running of their firms.”- (E20).

“This is the digitalization of entrepreneurship through the application of new technologies.”- (E18).

“The most basic characteristic of digital entrepreneurship is business-related use of computer-based solutions that benefit firms in more ways than one”- (E5).

“Digital entrepreneurship can be identified by the benefits digitalization brings to businesses including lower costs; increased revenues and competitive advantage”- (E1).

More importantly, all interviewees believed that digital entrepreneurship has positive influence on the value proposition among SMEs because digital technology has enhanced the connection between different ecosystem actors and changes the nature of interactions among actors in the business ecosystem. E30 commented that digital technologies such as: Big-data, Blockchain, and Internet-of-things are technologies that can be used to promote entrepreneurship thus enhancing value takings. E26 specifically stated that:

“digital technologies provide matchless combinations of supportable business model components such as integrated value proposition, comprehensive value creation, and multifaceted value capture.”

E12 stated that digital entrepreneurship has had tremendous influence on sustainable value propositions of SMEs that have adapted them through reduction in cost of running their business

## **Ro3: Influence of digital entrepreneurship on sustainable development in Nigeria**

Majority of the interviewees asserted that digital entrepreneurship has not only enhanced the fortunes of existing businesses through improved production, marketing and interactivity but is also creating opportunities for new entrepreneurs with concomitant impact on national development. The interviewees further maintained that the introduction of digital technologies to

entrepreneurship has given a big fillip to value creation and opened up the business environment for entrepreneurs to exploit. More specifically, E21 posited that digital entrepreneurship has reduced the cost of marketing and distribution thus promoting profit earnings that indorses national development.” Two other important comments on the influence of digital entrepreneurship on national development are:

“Introduction of digital technologies into entrepreneurship has forced many SMEs to transmuted their traditional strategies and procedures and sequester emerging opportunities thus enhancing sustainable development.” (E2).

“Digitalization of entrepreneurship reduces cost, enables interconnectivity and interdependence, conditions that are germane for sustainable development.” (E10)

#### **4.1 Discussion of Findings**

This study, being qualitative, generated data from the reviewed literature and from the views and opinions from interviews with owners of SMEs in the FCT. The data were used to fulfill the broad objective of the study- ascertain if digital entrepreneurship can engender sustainable development in Nigeria. Data in this study reveal that entrepreneurs in the FCT are not only aware of digital technologies but can also identify them as well as their application to the running of businesses. More significantly, it was found that SMEs in the FCT actively espouse digital technologies to the operations of their businesses. Another important finding is that the adaptation of digital technologies by SMEs in the FCT have grown from 30 percent in the last three years to about 70 percent in 2023. These findings corroborate that of Manjon, et al (2022) who insist that digital entrepreneurship simply refers to acceptance or greater usage of digital technology by corporations, firms, and organisations into their operations. The findings agree with that of George et al (2021) that the transition of economic activity leads to the deployment of fundamental innovative business models that require the improvement of certain organizational expertise to be effectively implemented. The findings also support theoretical assumption that the willingness to adopt new technology is informed by the perceived ease of use and the perceived usefulness (Technology Acceptance Model). The findings are in tandem with the postulations of the Uses and Gratifications theory that, media is selected based on the expectation that it will satisfy specific needs and desires in the present case, the specific need to be satisfied is sustainable national development through digital entrepreneurship. SMEs in Nigeria need to adopt digital technologies to shore up their value propositions.

The study showed that digital entrepreneurship powers sustainable value propositions among SMEs in the FCT through improved production, marketing and interactivity, shoring up their presence in the market and enhancing the

competitiveness of their firms in today's business environment. On the other hand, the finding is diametrically opposed to that of Omoyele, et al (2022) who consider the small size of microenterprises as a substantial constraint on their available resources for competition. On the whole, the study established that digital entrepreneurship has had tremendous influence on sustainable value propositions of SMEs that have adapted them through reduction in cost of running their businesses. This finding tallies with that of Bouncken and Kraus (2021) who noted that digital technology enhances the connection between different ecosystem actors and changes the nature of interactions among actors in the business ecosystem. The finding also agrees with Van-Welsum (2016) assertion that digital entrepreneurship does not only level the playing field in certain sectors but is actually creating opportunities to work from remote areas, at different hours, from the home, or on the go thus improving productivity and value propositions. The finding corroborates Ola-Akuma, Okocha, and Kente (2023) and theoretical position that when users are presented with a new technology, the decision about how and when to use it is informed by perceived usefulness.

Summarily, 29 respondents in this study assert that digitalization of entrepreneurship is influencing sustainable development in the FCT and by extension in Nigeria by boasting the fortunes of existing businesses through improved production, marketing and interactivity, creating opportunities for new entrepreneurs with concomitant impact on their capacity to create employment opportunities. Digital entrepreneurship has influenced SMEs to transmute their traditional strategies and procedures and sequester emerging opportunities, reduces cost, enables interconnectivity and interdependence, conditions that are germane for development. This finding agrees with Stam & van de Ven (2021) position that entrepreneurship is essential for a region's or country's development but disagrees with Elia et al (2020) who posit that there is a lack of empirical evidence to support the idea that digital technology helps to promote entrepreneurship in a country or region. The finding tallies with Joshi, et al (2018) position that the quick diffusion of ICTs has produced significant "changes in how goods and services are produced, the nature of the goods and services produced, and the means by which goods and services are brought to the market. More significantly, the finding confirms Van-Welsum (2016) stand that digital entrepreneurship plays an important role in promoting gender equality and social and economic inclusion, stimulate local development, and contribute to sustainable development.

## 5.0 Conclusion

Digital technologies have not only revolutionized communication and other fields but has also permeated the business world changing the complexion of enterprise to what is today known as digital entrepreneurship, which is fast heightening business sustainability. Digital entrepreneurship entails using new and innovative technologies as well as novel methods of locating customers; producing and supplying products; sniveling new opportunities and competitive advantage; discovering new potentials for partnerships thus, generating value by reducing operating costs. The use of digital technology has high prospects to significantly contribute to the attainment of long-term goals of entrepreneurs desirous of creating social and environmental value through innovative business models. Empirical evidence from this study points to the efficacy of digital entrepreneurship as the driving force behind the rise, growth and sustenance of SMEs, the engine of development of any nation. This study therefore concludes that digital entrepreneurship is a viable option for engendering sustainable development in Nigeria.

## 5.1 Recommendations

The following recommendations are made:

- i. SMEs in the FCT and other parts of the country should intensify the application of digital technologies in the running of their enterprises for better competitiveness.
- ii. Using digital technologies, entrepreneurs should sniff out new opportunities for corroboration and integration with sister firms for enhanced and sustainable value proposition.
- iii. Given the importance and potentials of digital technologies to sustainable national development, government at national and sub-national levels should create the enabling environment through the provision functional and accessible infrastructure for SMEs to easily adopt digital technologies in the running of their businesses.

## References

- Ajibade, P. (2018). Technology acceptance model limitations and criticisms: exploring the practical application and use in technology-related studies, mixed-method, and qualitative researches. <http://digitalcommons.unl.edu/libphilprac/1941>
- Akpan, Ikpe J., & Ayodotun I. (2021). Digitization and technological transformation of small business for sustainable development in the less developed and emerging economies: A research note and call for papers. *Journal of Small Business & Entrepreneurship*, 1–7



- Akuma, R., Okocha, D., & Kente, J. (2023). Examination of the effects of new media in revolutionizing entrepreneurship in Bauchi state Nigeria. <https://doi.org/10.4018/978-1-6684-5770-2.ch010>
- Anand, A., Padmaja, A., Ralf, B., & Fanny, S. (2021). Trends and patterns in sustainable entrepreneurship research: A bibliometric review and research agenda. *Journal of Business Venturing* 36: 106092
- Angelidou, M., Artemis, P., Nicos, K., Christina, K., Panagiotis, T., & Anastasia P. (2018). Enhancing sustainable urban development through smart city applications. *Journal of Science and Technology Policy Management* 9: 146–69
- Baran, G. & Aleksandra B. (2021). Digital platform ecosystems as living labs for sustainable entrepreneurship and innovation: A conceptual model proposal. *Sustainability* 13: 6494
- Baranauskas, G., & Raišienė, A. G. (2022). Transition to digital entrepreneurship with a quest of sustainability: Development of a New Conceptual Framework. *Sustainability*, 14(3), 1104
- Bouncken, B., & Kraus, S. (2021). Entrepreneurial ecosystems in an interconnected world: emergence, governance and digitalization. *Review of Managerial Science*, 0123456789, <https://doi.org/10.1007/s11846-021-00444-1>
- Brown, D (2020). Global perspective perceptions of SME growth constraints. *Nigeria Journal of Small Business Management*, 40 (1), 58-65
- Charness, N. & Boot, W. (2016). *Handbook of Psychology and Aging (8<sup>th</sup> Ed.)*
- Devadasi, M. (2022). Uses and gratifications of educational apps: A study of COVID-19 Pandemic. *Computers and Education Open*.
- Duspara, L., Knežević, S. & Duspara, M. (2016). Structure of manufacturing enterprises and their impact on economy in Brodsko Posavska County, in: 5. Medunarodni znanstveni simpozij “Gospodarstvo istocne Hrvatske – Vizija i razvoj” – 5<sup>th</sup> International Scientific Symposium “Economy of Eastern Croatia – Vision and Growth”, Osijek, June 2-4, 2016, 155-16
- Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological Forecasting and Social Change*, 150 (in press). <https://doi.org/10.1016/j.techfore.2019.119791>
- Etale, M. & Light, B. (2021). An evaluation of the impact of small and medium

- scale enterprises (SMEs) development on development and economic growth in Nigeria. *International Journal of Small Business and Entrepreneurship Research*, 9, (1), 54-70
- Fernades, C., Pires, R., Alevs, G. (2022). Digital entrepreneurship and # sustainability: the state of art and research agenda. <https://dio.org/10.3390/economics11010003>
- George, G., Merrill, R., & Schillebeeckx, S. (2021). Digital sustainability and entrepreneurship: How digital innovations are helping tackle climate change and sustainable development. *Entrepreneurship Theory and Practice*, 45(5), 999-1027
- George, G., Merrill, R., & Schillebeeckx, S. (2021). Digital sustainability and entrepreneurship: How digital innovations are helping tackle climate change and sustainable development. *Entrepreneurship Theory and Practice*, 45(5), 999-1027
- George, G., Ryan K., & Simon J. (2021). Digital sustainability and entrepreneurship: How digital innovations are helping tackle climate change and sustainable development. *Entrepreneurship: Theory and Practice* 45, 999–1027
- Ghezzi, A., & Cavallo, A. (2020). Agile business model innovation in digital entrepreneurship: Lean startup approaches. *Journal of Business Research*, 110, 519-537
- He, T., Liu, J., Phang, W., & Luo, J. (2022). Toward social enterprise sustainability: The role of digital hybridity. *Technological Forecasting and Social Change*, 175, 121-360
- Joshi, M., Kathuria, R., & Das, S. (2019). Corporate entrepreneurship in the digital era: the cascading effect through operations. *The Journal of Entrepreneurship*, 28(1), 4-34
- Kamal, S., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society*, 60, 101- 212
- Kammerland, N., Konig, A., & Richards, A. (2018). Why do incumbents respond heterogeneously to disruptive innovations? The interplay of domain identity and role identity. *J. Management Studies*, 55 (7), 1122-1165
- Karimi, L., Khodabandelou, R., Ehsani, M. & Ahmad, M. (2014). Applying the uses and gratifications theory to compare higher education students' motivation for using social networking sites: experience from Iran, Malaysia, United Kingdom and South Africa. *Contemporary Education Technology*, 5 (1), 53-72
- Karimi, J., & Walter, Z. (2021). The role of entrepreneurial agility in digital entrepreneurship and creating value in response to digital disruption in the newspaper industry. *Sustainability*, 13(5), 2741.

- Lamba, P. S., & Jain, N. (2021). Emerging social power of coaches in digital entrepreneurship. *Journal of Asia Entrepreneurship and Sustainability*, 17(7), 73-104
- Manea, D., Nicolae I., Vasile D., & Dorel-Mihai P. (2021). Circular economy and innovative entrepreneurship, prerequisites for social progress. *Journal of Business Economics and Management* 22: 1342–59
- Manjon, M., Aouni, Z., & Crutzen, N. (2022). Green and digital entrepreneurship in smart cities. *The Annals of Regional Science*, 68(2), 429-462
- Mehrad, J. & Tajer, P. (2016). Uses and gratifications theory in connection with knowledge and information science: A proposed conceptual model. *International Journal of Information Science and Management*, 14 (2), 1-14
- Munoz, M. (2023). *Digital Entrepreneurship and the Global Economy* (1st Ed.). Routledge
- Ochinanwata, P., Theodore C., & Paul, A. (2021). Public–private entrepreneurial Financing partnership model in Nigeria. *Thunderbird International Business Review* 63, 3
- Ola-Akuma, O., Okocha, O., & Kente J. (2023). Examination of effect of new media in revolutionizing entrepreneurship in Bauchi State, Nigeria. <http://orcid.org/0000-0001-5070-280X>
- Okocha, D. O., & Akpe, S. M., (2022). Fake news and misinformation on COVID-19: implications for media credibility in Nigeria. *Health & New Media Research*, 6 (1), 139-161.
- Omoyele, S., Babarinde, A., Adelrke, k., & Aigbedion, I. (2022). Digital entrepreneurship and sustainable business model: evidence amongst SMEs in Lagos state, Nigeria. *Journal of Positive School Psychology*, 6 (8), 4430-4440
- Passaro, R., Quinto, I., Ripa, P. & Thomas, A. (2020). Evolution of collaborative networks supporting startup sustainability: evidences from digital firms. *Sustainability*, 12 (22), 9437
- Prendes-Espinosa, P., Solano-Fernandez, I., & Gracia-Tudela, P. (2021). Digital to promote digital entrepreneurship: the relation with open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7 (1), 63
- Richter, C., Kraus, S., Brem, A., Durst, S., & Giselbrecht, C. (2017). Digital entrepreneurship: Innovative business models for the sharing economy. *Creativity and Innovation Management*, 26(3), 300-310
- Soluk, J. & Kammerlander. N. (2021). Digital entrepreneurship in developing

- countries: The role of institutional voids. *Technological forecasting and social change*, doi: 10.1016/j.techfore.20.12087621
- Soluk, J., Kammerlander, N., & Darwin, S. (2021). *Technological forecasting and social change*, 170, DOI 120876
- Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics*, 56 (2), 809–832. doi:<https://doi.org/10.1007/s11187-019-00270-6>
- Steininger, M., Kathryn B., & Jörn H. (2022). Digital entrepreneurship: What is new if anything? *Business & Information Systems Engineering*, 64, 1–14
- Taiwo, M., Ayodeji, A., & Yusuf, B. (2013). Impact of small and medium scale enterprises on economic growth and development. *American Journal of Business and Management*, 1 (1), 18–22
- UNCTAD, & Nations, U. (2021). *Digital Economy Report 2021*. Geneva. <https://unctad.org/webflyer/digital-economy-report>.
- UNCTAD, & Nations, U. (2021). *Digital Economy Report 2021*. Geneva. <https://unctad.org/webflyer/digital-economy-report-2021>
- Van-Welsum, D. (2016). Enabling digital entrepreneurs, world development report, background Paper – Digital Dividends, 1-12
- Vinney, C (2019). What is uses and gratification theory? Definition and examples. [thought.com/uses-and-gratifications-theory-462833](https://www.thought.com/uses-and-gratifications-theory-462833)
- Vrontis, D., Thrassou, A., Efthymiou, L., Uzunboylu, N., Weber, Y., Shams, S., & Tsoukatos, E. (2022). Editorial introduction: Business under crisis-avenues for innovate entrepreneurship sustainability. In *Business Under Crisis*, iii, 1-17. Palgrave Macmillan, cham
- World Bank (2019). Nigeria Digital Economy Diagnostic Report
- Wurth, B., Stam, E., & Spigel, B. (2021). Toward an entrepreneurial ecosystem research program. *Entrepreneurship Theory and Practice*. doi:<https://doi.org/10.1177/1042258721998948>
- Zhai, Y., Yang, L., Han, M., & Ruoyu Ji. (2022). Digital entrepreneurship: Global maps and trends of research. *Journal of Business & Industrial Marketing*.
- Zhang, J., Gorp, D., & Kievit, H. (2022). Digital technology and national entrepreneurship: an ecosystem perspective. *The Journal of Technology Transfer*, <http://doi.org/10.1007/s10961-022-09934-0>