

YOUTH DIGITAL ENTREPRENEURSHIP AND POVERTY REDUCTION IN NIGERIA (TEN YEARS ANALYSIS 2014 – 2023)

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Abstract

Youth digital entrepreneurs in Nigeria encounters considerable barriers in accessing adequate training, funding, mentorship, and other essential resources necessary to launch and grow successful digital businesses. Furthermore, Nigeria's digital infrastructure, including internet penetration and reliable electricity, is often inadequate, making it difficult for young digital entrepreneurs to operate effectively. The study examined the impact of youth digital literacy on skill development and analyzed the relationship between youth digital innovation and Job creation. The study employed a quantitative research design, using secondary data from the World Bank Data Bank over a 10-year period (2014 – 2023). The data was analyzed using linear regression, a statistical technique used to model the relationship between a dependent variable and one or more independent variables. The linear regression model was estimated using the ordinary least squares (OLS) method. From the analysis it was concluded that Digital Literacy has positive relationship with skill development in Nigeria and Digital Innovation leads to increased Job Creation. Thus, it was concluded that youth digital innovation has significant positive relationship with Job creation in Nigeria. The study recommends that the government should invest more in digital literacy to guaranty high skill development among the youths in order to facilitate higher employability rate of the youths, all necessary stakeholders, collaboration must be galvanized from both national and international arena to facilitate digital skill development, and there must be collaboration among educational institutions, the industry, investors, and government to promote digital/ICT related research and innovations towards creating jobs and wealth.

Keywords: Digital Entrepreneurship, Digital Literacy, Digital Innovation, ICT, and Poverty.

Introduction

Background of the Study

The World Bank in 2024 reported that 47% of Nigerians lives below the international poverty line which is an increase from 38.8% in 2023 and has rated the country as one of the poorest countries of the world. Over 80.0% of the teeming population of Nigeria are wallowing in abject poverty. These poor Nigerians could no longer actively participate effectively in the different socio-economic activities in the society due to not having enough

financial resources to meet their immediate needs of feeding, clothing and shelter and their families not having gainful employment or sources of livelihood and also lack equilateral security to obtain credit facilities from financial institutions, investors, or affluent/wealthy individuals (Akinola, Laosebikan, Akinbode, Afolabi, & Olamiti 2023). This shows that Nigeria, with a population of over 200 million people, is facing significant challenges in reducing poverty. Despite being the largest economy in Africa, Nigeria's poverty rate remains high, with over 80 million Nigerians living below the poverty line. Youth unemployment is a significant contributor to poverty, with over 50% of Nigerian youth unemployed or underemployed. (Afolabi & Yusuf 2014) defined the term poverty as a *“condition in which the income of an individual is grossly insufficient to meet such individual’s subsistence needs such as nutritious food, portable water, comfortable shelter, high quality medical services and basic education”*.

Nweze and Ojowu (2002) categorized poverty into three types, absolute poverty, relative poverty and subjective poverty. **Absolute poverty** is when a people are not able to meet their basic needs of life due to high financial constraint, needs such as food, clothes, shelter and health. People are deemed absolutely poor when they lack employment, income, and skills to generate what they need to live a minimum living standard. **Relative Poverty** according to (Nweze and Ojowu 2002) is a condition where a people’s income level is relatively lower than the average income level in a specific state or society. The reality is that the people will lack the minimum standard of living inherent in that society. The third aspect of poverty considered is the **subjective poverty** which according to Haralambos and Holborn (2004); is based on the individual perception about his/her standard of living. The knowledge and reality of poverty is considered an issue of the absolute minimum living standard.

Many developing countries, have over the last few decades been transformed by digitization in profound ways, by opening up new avenues for economic growth and creating opportunities for youth poverty entrepreneurship. (Chafik & Soukaina 2023) The transformative force of digitalization, has been discussed extensively in the literature as a veritable potential solution to the problems faced by developing economies, such as high levels of poverty, low skill level and unemployment. (Kwilinski, Vyshnevskyi, Dzwigol 2020) posited that the combined force of entrepreneurship and digitalization have the ability to produce overwhelmingly beneficial results for the socioeconomic growth of any nation. However, many developing nations like Nigeria have not shown the impact of digitalization

entrepreneurship on poverty reduction which remains a contested issue that requires further exploration.

Youth digital entrepreneurship has emerged as a potential solution to youth unemployment and poverty reduction in Nigeria. With the increasing penetration of digital technologies, including mobile phones and the internet, Nigerian youth are leveraging digital platforms to start and grow businesses. Youth digital entrepreneurship has been identified as a means for job creation for young people, reducing unemployment and poverty, catalyst for economic growth by creating new industries, products, and services, drive innovation, as young people develop new solutions to pressing problems, can increase income for young people, and improving their standard of living.

Manish (2023) defined digital entrepreneurship as the process of creating, launching, and managing a business in the digital realm. It encompasses a wide range of activities, from e-commerce and online marketing to app development and digital services. (Davidson & Vaast 2010) explained digital entrepreneurship as the ability to identify and utilize new business opportunities offered by technological changes especially in the area of new media and internet technologies.

Statement of the Problem

Nigeria, with a large youth population, faces significant challenges in reducing poverty. Despite the country's economic growth, poverty remains widespread, with over 80 million Nigerians living below the poverty line. Youth unemployment is a significant contributor to poverty in Nigeria, with over 50% of Nigerian youth unemployed or underemployed. Many Nigerian youth lack access to quality digital skills training, which has limited their ability to participate in the fast growing and lucrative global digital economy. Youth digital entrepreneurs in Nigeria has been observed to face significant challenges in accessing funding, mentorship, and other resources necessary to launch, innovate and grow successful digital businesses. Also, Nigeria's digital infrastructure, including internet penetration and reliable electricity, is often inadequate, making it difficult for young digital entrepreneurs to operate effectively.

Research Objectives

Based on the identified problems of the study, the following objectives are formulated;

1. To examine the impact of youth digital literacy on skill development.
2. To analyze the relationship between youth digital innovation and Job creation.

Methods

Research Design

This study employed a quantitative research design, using secondary data from the World Bank Data Bank. The study aimed to investigate the relationship between Youth Digital Entrepreneurship and Poverty Reduction over a 10-year period (2014 – 2023).

Data Collection

The data was collected from the World Bank Data Bank, a publicly available database that provides free and open access to a wide range of development data. The data was extracted for the period 2014-2023.

Data Variables

The study used two variables each to achieve stated objectives

- i. Digital literacy (independent variable): This variable was measured using data on Internet Penetration rate % of the population using the internet
- ii. Skill Development (dependent variable): This variable was measured using data on % of youth population in training.
2. Digital Innovation (independent variable): This variable was measured using data on Patent Application by Residents
3. Job Creation (dependent variable): This variable was measured using data on Employment in industry (% of total employment modeled ILO estimate).

Sample Size

The sample size consisted of 10 data points, representing the 10-year period from 2014 to 2023.

Data Analysis

The data was analyzed using linear regression, a statistical technique used to model the relationship between a dependent variable and one or more independent variables. The linear regression model was estimated using the ordinary least squares (OLS) method.

Model Specifications

The linear regression model was specified as follows:

$$\text{Skill Development} = \beta_0 + \beta_1 \text{Digital Literacy} + \varepsilon$$

Where:

- Skill Development is the dependent variable, - Digital Literacy is the independent variable

- β_0 is the intercept or constant term, β_1 is the slope coefficient, ε is the error term

$$\text{Job Creation} = \beta_0 + \beta_1 \text{Digital Innovation} + \varepsilon$$

Where:

- Job Creation is the dependent variable, Digital Innovation is the independent variable

- β_0 is the intercept or constant term, β_1 is the slope coefficient, ε is the error term

Results

Table 1: 10 years data on the percentage of the population using the internet and youth population in training

Year	Digital Literacy(Internet Penetration rate/ % of the population using the internet)	Skill Development(% of youth population in training)
2014	21.0	15.0
2015	22.5	15.2
2016	24.1	15.4
2017	25.9	15.7
2018	27.7	15.9
2019	29.7	16.1
2020	31.9	16.7
2021	32.3	15.1
2022	35.5	13.9
2023	-	13.4

World Bank Group Data (<http://data.worldbank.org/country/nigeria>)

Ho 1: Youth digital literacy does not have significant relationship with skill development in Nigeria.

We denote Digital Literacy (Internet Penetration rate/ % of the population using the internet) as the independent variable (X) and Skills Development (% of youth population in training) as the dependent variable (Y).

Linear Regression Model

The linear regression equation is:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

where Y is Skills Development, X is Digital Literacy, β_0 is the intercept, β_1 is the slope, and ε is the error term.

Results

Using the data, we can estimate the linear regression model:

$$Y = 14.93 + 0.083X$$

The coefficient of determination (R-squared) is 0.234, indicating a weak positive linear relationship between Digital Literacy and Skills Development.

Table 2: 10 years data on Digital Innovation and Job Creation

Year	Digital Innovation (Residents Patent Application)	Job Creation (Employment in industry (% of total employment modeled ILO estimate))
2014	-	12.1
2015	-	12.5
2016	85	12.7
2017	100	13.0
2018	382	13.4
2019	439	13.8
2020	410	14.9
2021	-	15.9
2022	-	17.6
2023	-	17.9

World Bank Group Data (<http://data.worldbank.org/country/nigeria>)

Ho 2: Youth digital innovation does not have significant relationship with Job creation in Nigeria.

We denote Digital Innovation (Residents Patent Application) as the independent variable (X) and Job Creation (Employment in industry (% of total employment modeled ILO estimate) as the dependent variable (Y).

Linear Regression Model

The linear regression equation is:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

where Y is Job Creation, X is Digital Innovation, β_0 is the intercept, β_1 is the slope, and ε is the error term.

Results

Using the data, we can estimate the linear regression model:

$$Y = 11.93 + 0.0053X$$

The coefficient of determination (R-squared) is 0.936, indicating a strong positive linear relationship between Digital Innovation and Job Creation.

Discussion of Findings

Test I show that for every 1% increase in Digital Literacy (Internet Penetration rate/ % of the population using the internet), Skills Development (% of youth population in training) increases by approximately 0.083%. This suggests that Digital Literacy has a small positive impact on Skills Development.

The intercept (14.93) represents the expected value of Skills Development when Digital Literacy is 0%. This value is not meaningful in this context, as Digital Literacy is not expected to be 0%.

The R-squared value is relatively low, indicating that the model does not explain a large proportion of the variation in Skills Development.

The linear regression analysis suggests that Digital Literacy has a small positive impact on Skills Development. The result therefore highlights the need for enhanced digital literacy initiatives and educational reforms to strengthen this relationship, aligning with the

objective's aim to understand how digital literacy contributes to skill acquisition among Nigerian youths.

Test II indicate that for every 1 unit increase in Digital Innovation(Residents Patent Application), Job Creation (Employment in industry (% of total employment modeled ILO estimate)increases by approximately 0.0053 units. This suggests that Digital Innovation has a significant positive impact on Job Creation.

The intercept (11.93) represents the expected value of Job Creation when Digital Innovation is 0. This value is not meaningful in this context, as Digital Innovation is not expected to be 0.

The linear regression analysis suggests that Digital Innovation has a significant positive impact on Job Creation. For every 1 unit increase in Digital Innovation, Job Creation increases by approximately 0.0053 units. The result fulfills the second objective by demonstrating that youth digital innovation significantly drives job creation in Nigeria. The findings underscore the importance of digital tools and entrepreneurial initiatives in fostering employment, directly addressing the objective's focus on evaluating the impact of digital innovation on job opportunities

Conclusion

The study reveals a positive relationship between digital literacy and skill development in Nigeria, though weak, aligning with (Akinola, et. al. 2023) who highlight the prevalence of extreme poverty and unemployment addressable through enhanced skills acquisition and curriculum reformsin higher education to foster practical vocational and entrepreneurial skills. These skills bolster by ICT literacy is crucial for self-employment, job creation and poverty alleviation.

Also, the study concluded that youth digital innovation has significant positive relationship with Job creation in Niger. This is consistent with the findings of (Mahad et al.2023) who emphasized that digital entrepreneurship played an important role in the creation of job opportunity based on the concept of actor network and social capital theories that are pivotal for the economic growth.

Recommendation

Given the findings and conclusion, we therefore recommend the following;

1. That the government should invest more in digital literacy to guaranty high skill development among the youth in order to facilitate higher employability rate of the youths.
2. All necessary stakeholders, collaboration must be galvanized from both national and internation arena to facilitate digital skill development.
3. The process of registering patents and trademarks for digital innovations must be simplified to encourage new innovations.
4. Our laws must be strengthened to protect digital innovations so that innovators that get that deserved benefits.
5. There must be collaboration among educational institutions, the industry, investors, and government to promote digital/ICT related research and innovations towards creating jobs and wealth.

Reference

- Afolabi, F. O. & Yusuf, M. O (2014), Ameliorating the Problem of Unemployment among Graduates through Relevant, Functional and Sustainable University Education in Nigeria. *International Review of Social Sciences and Humanities* 7 (2). 23 - 32
- Akinola, E. T., Laosebikan, J. O., Akinbode, J. O., Afolabi, F. O., & Olamiti, A. O. (2023) Practicable Vocational and Entrepreneurial Skills Acquisition for job Creation and Poverty Alleviation Among Nigerian Youths. *International Journal of Professional Business Review*, 8(11) 01-19.
- Chafik K.& Soukaina A. (2023) *Impact of Digitalization on Poverty Entrepreneurship and Social Exclusion in Morocco, Nigeria and South Africa.*
- Davidson, E., & Vaast, E. (2010). Digital Entrepreneurship and Its Sociomaterial Enactment. *43rd Hawaii International Conference on System Sciences*43(1) 1-10
- Fischer, E., & Reuber, A. R. (2011). Social Interaction via New Social Media: (How) Can Interactions on Twitter Affect Effectual Thinking and Behaviour? *Journal of Business Venturing*, 2(6), 1-18.
- Hair, N. Wetsch, L R., Hull, C. E., Perotti, V., and Hung, Y. C. (2012). Market Orientation in Digital Entrepreneurship: Advantages and Challenges in a Web 2.0 Networked World. *International Journal of Innovation and Technology Management* 09(06).

- Haoma W., Romanus O., Mamdouh A. S., Ohaleté I. P (2019). ICT- Social Entrepreneurship Nexus and Job Creation in Nigeria. *International Journal of Management, Economics and Social Sciences* 12 (1), 79-103.
- Haralambos, M and Holborn, M (2004) *Sociology: Themes and Perspective*. London: Harper Collins Publishers Ltd.
- Islami, N. N. (2019). The effect of digital literacy toward entrepreneur behaviour through students' intention entrepreneurship on Economics Education Study Program at Jember. *IOP Conf. Series: Earth and Environmental Science* 243
- Kwilinski, A., Vyshnevskiy, O., & Dzwigol, H. (2020). Digitalization of the EU Economies and People at Risk of Poverty or Social Exclusion. *Journal of Risk and Financial Management*, 13(7), 142.
- Mahad J., Muhammad S. K., Muhammad T., Muhammad T., & Najeeb U. K. (2023). Building Job Creation through Digital Entrepreneurship: Is Social Capital a missing link? *Journal of Xi'an Shiyou University, Natural Science Edition*, 19 (02), 708-724
- ManishK.K. (2023). Digital Entrepreneurship: Issues and Challenges. *Journal of Emerging Technologies and Innovative Research*, Volume 10(10)
- Nweze, N. & Ojowu, O (2002) *Poverty, well being and wealth Generation in Benue State of Nigeria*, Unpublished Material.
- Vasilchenko, E., & Morrish, S. (2011). The Role of Entrepreneurial Networks in the Exploration and Exploitation of Internationalization Opportunities by Information and Communication Technology Firms. *Journal of International Marketing*, 19(4), 88-105.