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Harnessing Internal Wealth Creation through Information and Communication Technologies Skills Development

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Abstract

The study examines the role of ICT skills in internal wealth creation in Bayelsa State. The issues of employment in Nigeria are highly significant among young people, and this study is anticipating ICT skill development as a possible remedy to the problem of unemployment in Nigeria and Bayelsa state in particular. The study is a descriptive research design, which involved a sampled of 120 respondents, comprising IT practitioners, academia, and staff of the Bayelsa State Ministry of Youth and Sport. A validated questionnaire was used to gather relevant data. The method of analysis was characterized by mean and standard deviation as they were used to answer research questions, while the PPMC was used to test the hypothesis at the 0.05 level of statistical significance. The study result ($r = 0.746$, p-value $= 0.013 < 0.05$) presents a strong positive significant relationship between ICT skill development and internal wealth creation in Bayelsa State. The study recommended that Bayelsa State should invest in youth ICT skills training programmes that are more advanced.

Introduction

Information and communication technology (ICT) has emerged as a critical component for social progress, economic expansion, and individual empowerment in the rapidly evolving 21st-century world. Recognizing the important role that ICT plays in today's environment is crucial, particularly in creating job opportunities and empowering youth. According to Titus (2020), the information and communication technology (ICT) industry has had a substantial impact on the global environment, opening up new opportunities and upending established industries. However, in today's knowledge-driven economy, possessing pertinent ICT skills has become crucial for achieving societal and personal goals. Youth in Bayelsa, in particular, face challenges such as early unemployment and a lack of formal economic opportunities. People who possess ICT abilities may create independent revenue streams, actively participate in the digital economy, and access remote job possibilities.

Digital literacy, programming, data analysis, and cybersecurity are just a few of the many talents that make up information and communication technology (ICT) capabilities (Zaremohzzabieh et al., 2014). These skills are essential not just in the modern workforce but also greatly influence productivity gains, innovation promotion, and economic growth. ICT-skilled individuals are better positioned to significantly impact their communities and society at large as the global economy becomes more digitally integrated (Ketteni, Mamuneas, &Stengos, 2011).

The information and communication technology (ICT) sector is a globally expanding job generator that is growing quickly. Jobs in industries such as software engineering, data analytics, cybersecurity, and digital marketing become available right away. Additionally, it creates jobs indirectly by supporting other sectors of the economy, including healthcare, education, and finance, via automation and digitization. Building a strong ICT environment in Bayelsa, where traditional industries struggle, might be one way to provide young people in the area with employment opportunities. However, Okechukwu and Chogozie-Okwum (2014) acknowledged that ICT integration into several sectors has radically changed traditional work duties and created new job prospects. Technology may help create jobs in some sectors, including software creation and the use of ICT in healthcare, banking, and agriculture. People may increase their chances of finding employment and significantly contribute to the economic development of their local regions by learning ICT skills, which enable them to successfully adapt to the changing demands of the labour market (Ikemelu, 2011).

Like many growing countries, Nigeria has a significant issue with youth unemployment.

The advancement of a nation and the preservation of social balance depends critically on promoting youth growth and development, through skill development. Once again, Bayelsa State presents a unique opportunity to exploit the development of ICT skills as a means of empowering the young, given its growing population. This phenomenon has the potential to have many effects, such as improving individual incomes and standards of living as well as promoting economic diversity, reducing poverty, and furthering social development in the area (Ikemelu, 2010). Ikemelu (2010), Ketteni Mamuneas and Stengos (2011), Okechukwu and Chogozie-Okwum (2014), and Song, Zhang, and Gao (2020) are just a few of the studies that have looked at various aspects of ICT skills in connection to economic growth, job creation, and poverty reduction. However, no studies have been done to look at the possibility of creating wealth internally, especially in Bayelsa State, by giving young people modern ICT skills. It is on this ground that this study specifically ascertained the ICT skills development that guarantees internal wealth creation in Bayelsa State, Nigeria.

Research Questions

To guide the study, we raised the following questions given the above specific objectives:

1. What are those ICT skills development that guarantees internal wealth creation in Bayelsa State?

1.3. Hypotheses

H_{o1}: There tends to be no significant relationship between ICT skills development and internal wealth creation in Bayelsa State.

Literature Review

Information and Communication Technologies Skills

According to Zaremohzzabieh *et al.* (2014), information and communication technology (ICT) skills include the knowledge and skills needed to use technological tools for communication, data processing, problem-solving, and knowledge production. This covers both fundamental abilities like software and operating systems as well as more complex ones like programming, data analysis, and cybersecurity.ICT abilities enable people by giving them the know-how and resources they need to function in the digital environment. These abilities, which range from basic computer literacy to sophisticated programming, allow people to actively engage in the contemporary information society, supporting self-reliance and personal growth. ICT proficiency is essential for promoting economic progress in both established and developing countries.

Digitally competent workers are more suited to contribute to sectors of the economy that depend on automation, innovation, and technology (Roztocki et al., 2019).

Consequently, this boosts output, encourages entrepreneurship, and draws capital to the digital economy. ICT proficiency is essential for promoting innovation. These abilities enable one to design software, produce new technologies, and contribute to the ongoing advancement of digital solutions. Innovation has a critical role in fostering competitiveness and long-term economic growth in both established and developing economies.

Proficiency in ICT enables smooth communication and teamwork. Through the use of many digital communication tools and platforms, people can establish global connections, exchange ideas, and work together on projects beyond geographic borders. For the economy to become more globalised and knowledge-based, this interconnection is essential. ICT proficiency

is essential for changing conventional teaching strategies in the field of education (Song, Zhang, and Gao, 2020). With the use of these abilities, teachers may integrate technology into their lessons, increasing student interaction, engagement, and accessibility. As a result, students acquire critical digital literacy abilities that equip them for the needs of the contemporary workforce.

Academics have recognised the significant advantages that ICT skills provide to people, businesses, and countries. According to Maneschijn et al. (2013), ICT proficiency improves employability and gives people a competitive advantage in the labour market. Industries are becoming more and more dependent on technology in both established and developing countries, and people with ICT skills are in high demand across a range of industries (UNESCO, 2023; Maneschijn et al., 2013). An ICT-savvy staff increases productivity and efficiency, which benefits organisations. Task automation, data analysis, and more efficient communication all increase corporate performance and business operations (Falck et al., 2021).

By giving people the means to engage in the digital economy, particularly those in developing countries, ICT skills promote economic inclusion (Roztocki et al., 2019). Reducing inequities and promoting economic progress at all societal levels depend on this inclusion. Innovation is intimately related to the growth of ICT capabilities. According to Sein and Harindranath (2004), countries that place a high priority on developing these abilities are better positioned to take the lead in technical developments, research, and development, which will enhance their status internationally. Once more, having ICT skills makes it possible for people and countries to interact internationally, promoting cooperation, commerce, and knowledge sharing. Because it creates potential for international partnerships and collaborations, this interconnection is especially advantageous for rising countries.

Internal Wealth Creation

According to Pender *et al.* (2012), internal wealth creation is the act of creating and amassing economic value within a certain community, region, or country by using its resources, capabilities, and human capital. Internal wealth creation focuses on creating and using local assets to promote sustainable economic development and prosperity, as opposed to external wealth, which often entails resource exploitation or dependence on outside capital. Internal wealth creation is a notion that goes beyond the conventional emphasis on accumulating money externally and instead emphasizes self-sufficiency and value creation from the inside. It's about using internal resources, talents, and skills to promote well-being in the person and the community.

Investing in education, skill development, and personal advancement may help create internal wealth as it produces a workforce that is skilled and flexible (Song et al., 2020; Winters et al., 2009). People are now more equipped to support the economy, provide new possibilities, and maintain sustainable means of subsistence. In the same vein, promoting originality, risk-taking, and invention cultivates a society that is independent financially. This gives people the ability to launch companies, make money, and support regional economic growth. Once again, long-term prosperity is ensured without depleting vital resources by maximizing waste reduction, fostering environmental stewardship, and using local resources effectively. This encourages independence and fortitude in the face of adversity.

According to Pender et al. (2012), internal wealth building is a long-term process that calls for deliberate work and commitment rather than a fast cure. It requires personal dedication, encouraging neighbourhoods, and supporting laws that advance social cohesiveness, education,

and sustainable resource management. Through a change in emphasis from accumulating money externally to creating internal capability, we may foster a future that is more egalitarian, robust, and gratifying for people all across the globe.

The acquisition of ICT skills is a crucial component of the internal wealth-building process for Nigerian youth (Pender et al., 2012). We can enable Nigerian youth to take advantage of the possibilities presented by the developing knowledge economy by providing them with ICT skills. They will be able to engage in online platforms, remote employment, and digital entrepreneurship as a result, opening up new revenue streams and business prospects. Additionally, young people in Nigeria who are developing their ICT abilities may support regional economic development in several ways. For instance, it may draw investors and digital businesses to the area, generating employment possibilities and promoting economic growth. Furthermore, the cooperation of public and private organizations, international development agencies, and civil society organizations in ICT skill development will establish a favourable environment that fosters the effective growth and application of ICT skills among young Nigerians (Zaremohzzabieh et al., 2014).

This all-encompassing strategy for developing ICT skills will not only provide young people in Bayelsa with practical knowledge and technical proficiency, but it will also encourage an innovative, flexible, and entrepreneurial mentality. This would enable young people in Nigeria to actively participate in the development of both their local communities and the region as a whole. Thus, the best course of action for young people in Nigeria is to give priority to learning ICT skills while enlisting the cooperation and assistance of many stakeholders.

Empirical Review

Ikemelu (2010) looked at how information technology (IT) may help Nigerians become wealthier and experience less poverty. Nwafor Orizu College of Education, Nsugbe, in the Nigerian state of Anambra, conducted the research, which used a descriptive survey design. The sample population consisted of 103 respondents in total. The data was gathered via a questionnaire. The data analysis methods employed were mean standard deviation and analysis of variance (ANOVA) at the 0.05 level of significance. The results showed how important information technology (IT) is to Nigeria's efforts to reduce poverty and create prosperity. KetteniMamuneas and Stengos (2011) conducted a comparative analysis of the effects of information and communication technologies (ICT), which include hardware, software, and communication equipment, on the economic development of advanced industrialized nations. We can directly estimate the output elasticities of ICT and human capital for every nation and period in our sample by using nonparametric methodologies. According to our findings, nations with strong ICT capital have high human capital output elasticities. Furthermore, ICT production elasticities are high in human capital-rich nations, indicating a complementarity between the two.

Okechukwu and Chogozie-Okwum (2014) investigated the ideas of instructional technology as well as information and communication technology using qualitative research methods. It also examines ICT usage in the field of educational technology, ICT use as a catalyst for economic expansion, and, lastly, ICT use as a tool for creating jobs in the field of educational technology. Information and communication technology is a true instrument for creating income and jobs, according to the study's conclusion.

Song, Zhang, and Gao (2020) investigated the impact of human capital investment on economic development in China. The research explicitly illustrates the influence of human

capital investment on regional economic development and analyses the link between investment income and regional economic growth using data from 31 provinces, cities, and autonomous areas collected between 2007 and 2017. The research findings indicate that there is a noteworthy positive correlation between the amount of investment in human capital and the rise of per capita GDP in the area.

Methods and Materials

The study used a survey research design. The study sampled 120 respondents drawn from ICT operators, academia, and the staff of the Ministry of Youth in Bayelsa State. The researchers gathered relevant data using a research instrument titled ICT skills and youth empowerment. The instrument was validated by an expert in the faculty of management science at Niger Delta University. Cronbach's alpha was used to test the internal consistency of the instrument. The test yielded a coefficient of 0.74, which implies that the instrument was reliable. The mean and standard deviation were used to answer research questions, while the paired t-test was used to test the hypotheses at the 0.05 level of statistical significance.

Result and Discussions

Research Question: What are those ICT skills developments that guarantee internal wealth creation in Bayelsa State?

Table 1: Mean and standard deviation of ICT skills development and internal wealth creation

SN	Items	N	Mean	Std Dev.
1	ICT abilities that include both hardware and software, such as file management, internet navigation, and simple troubleshooting, are associated with internal wealth development.	120	3.1	0.56765
2	Skills that enable youths to engage in social media and online collaboration have a link to internal wealth creation.	120	3.4	0.5164
3	Internal wealth creation has a relationship with developing software applications in various languages (Python, Java, JavaScript, etc.) and creating and maintaining websites and web applications.	120	3.1	0.73786

4	Database design, development, and management are associated with internal creating wealth.	120	3.1	0.8756
5	The skill that enhances the installation and maintenance of computer networks; and understanding cyber security principles has a relationship with internal wealth creation.	120	2.9	0.73786
6	Skills in cleaning, analysing, and presenting data through tools like Excel, Tableau, or Python libraries serve as a means of creating wealth for youths.	120	3.1	0.56765
7	Understanding AI and ML techniques in various applications serves as a means of creating wealth for youth.	120	3.4	0.5164
8	Understanding and using blockchain technology for secure transactions and data management is related to internal wealth creation.	120	3.1	0.73786
9	Developing and managing IoT devices and systems is related to internal wealth creation.	120	3.2	0.42164
10	The ability to design, develop, and maintain complex software systems and advanced network protection systems from cyberattacks serves as a means of creating wealth for youths.	120	3.3	0.67495
	Grand	**120**	**3.17**	**0.64**

Table 1 above pertains to the ten items used to answer the research question. Each item above has mean scores above the criterion mean of 2.5. This suggests that the ability, knowledge, and skills relating to computer operations, social media and online collaboration, programming, coding, and web development and design; database management; networking and cybersecurity; data analysis and visualisation; artificial intelligence and machine learning; blockchain technology; the internet of things (IoT); software engineering and cybersecurity; and information security have a link with wealth creation for youths in Bayelsa State.

Also, the standard deviation of 0.64 indicates the amount of variability or dispersion in the dataset, suggesting less variability and more consistency around the mean. Similarly, the grand mean of implies that respondents agree that the above ten skills have a link with internal wealth creation in Bayelsa State.

Hypothesis: There tends to be no significant relationship between ICT skills development and internal wealth creation in Bayelsa State.

Table 2: Pearson test of a significant relationship between ICT skills development and internal wealth creation.

Variables	N	Mean	Std. Dev.	r.	p-value	Decision
ICT Skills	120	31.70	2.71006	.746*	0.013	Sig.
Internal wealth creation	120	31.90	2.18327			

Table 2 above shows the significant relationship between ICT skills and internal wealth creation in Bayelsa State. The coefficient of correlation r = 0.746 suggests a strong positive relationship between the variables under consideration. Again, the p-value of 0.013 < 0.05 alpha implies that the relationship

between the two variables is statistically significant. Thus, the null hypothesis is rejected, and the alternative hypothesis, which states that there is a significant relationship between ICT skill development and internal wealth creation in Bayelsa State, is accepted.

Discussion of Findings

The results obtained from Table 1 offer significant insights regarding the correlation between ICT proficiency and the generation of internal wealth among the youth residing in Bayelsa State. Each of the ten ICT skills exhibits mean scores that exceed the criterion mean of 2.5. This finding implies a robust positive correlation between the possession of these ICT competencies and the capacity of young individuals in Bayelsa State to generate wealth. The mean scores surpass the criterion mean to suggest that participants consider these abilities to be essential elements associated with the generation of internal prosperity.

Moreover, the dataset exhibits a minimal degree of variability or dispersion, as evidenced by the low standard deviation of 0.64, which further denotes a high degree of consistency in the vicinity of the mean scores. The aforementioned consistency provides further support for the notion that the surveyed participants hold comparable viewpoints regarding the significance of these ICT competencies in the generation of internal wealth. The grand mean of 3.17 reinforces the consensus that the identified ICT skills are significantly linked to the generation of internal wealth in Bayelsa State, as the participants on average concur.

In addition to the results presented in Table 1, Table 2 offers statistical support for the correlation between ICT proficiency and the generation of internal wealth. The robust and positive relationship between the variables is indicative of the strong positive correlation coefficient ($r = 0.746$). Furthermore, since the p-value of 0.013 is below the alpha threshold of 0.05, this relationship can be considered statistically significant. The consequent approval of the alternative hypothesis and rejection of the null hypothesis provide support for the claim that a substantial correlation exists between the development of ICT skills and the generation of internal wealth among the youth residing in Bayelsa State.

Consistent with the findings of Okechukwu and Chogozie-Okwum (2014) and Ikemelu (2010), who discovered that ITC skills are a critical instrument in generating employment, reducing poverty, and fostering wealth creation, these results support this notion. The level of human capital investment has a substantial positive effect on the expansion of regional per capita GDP, according to a study by Song, Zhang, and Gao (2020) that is comparable. Ketteni-Mamuneas and Stengos (2011) further stated that nations endowed with substantial ICT capital experience pronounced output elasticities of human capital. Additionally, nations with high human capital have a high ICT output elasticity of demand, indicating that the two factors are complementary. The preceding empirical evidence emphasizes the significance of cultivating ICT competencies in Bayelsa State as a strategy to stimulate domestic wealth generation and economic empowerment.

Conclusion

The study examines the role of ICT skills in internal wealth creation in Bayelsa State. The study sampled 120 respondents, comprising IT practitioners, academia, and staff of the Bayelsa State Ministry of Youth and Sport. A validated questionnaire was used to gather relevant data. The mean and standard deviation were used to answer research questions, while the PPMC was used to test the hypothesis at the 0.05 level of statistical significance. Based on the research evidence, the study concludes that ICT skills such as computer operations, social media, programming, web development, database management, networking, cybersecurity, data analysis, artificial intelligence, machine learning, blockchain technology, IoT, software engineering, and information security have the potential to create wealth for youths and Bayelsa.

Recommendations

The following recommendations were put forth in consideration of the conclusion reached:

1. Bayelsa State should invest in youth ICT skills training programmes that are more advanced. Providing comprehensive training in domains including computer operations, programming, data analysis, and cybersecurity ought to be the primary emphasis. The design of these programmes must ensure that they provide young individuals with current and applicable skills that are in line with the ever-changing requirements of the digital economy.
2. To achieve a long-lasting and universally applicable effect, Bayelsa State should consciously strive to incorporate ICT competencies into its formal education system. It is necessary to revise the curriculum to include courses that pertain to fundamental ICT competencies. By nurturing a digitally literate and proficient populace, this integration will not only equip students for the future labour market but also contribute to the state's overall internal wealth creation.
3. To improve ICT infrastructure, the Bayelsa State government should investigate potential avenues for public-private collaborations. This encompasses enhancing internet connectivity, establishing technology centres, and ensuring access to essential learning and innovation tools and resources. Engaging in partnerships with private enterprises can expedite the establishment of a resilient ICT ecosystem, thereby cultivating an environment that is favourable for the generation of prosperity via technology-centric endeavours.
4. Recognizing the significance of ICT competencies in fostering entrepreneurship and generating wealth, targeted assistance initiatives are required. For aspiring entrepreneurs specializing in technology-based ventures, these programmes might provide mentorship, funding opportunities, and incubation centres. Facilitating the conversion of young individuals' ICT proficiencies into profitable entrepreneurial ventures will aid in the expansion of the digital economy within Bayelsa State.

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